



The Scottsdale Collection

Traffic Impact & Mitigation Analysis



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1. INTRODUCTION AND EXECUTIVE SUMMARY

1.1. PURPOSE OF REPORT AND STUDY OBJECTIVES

Lōkahi, LLC (Lōkahi) was retained by Stockdale Capital Partners, LLC to complete a Traffic Impact & Mitigation Analysis for The Scottsdale Collection development. The development is located on the southeast corner (SEC) of Scottsdale Road and Camelback Road in Scottsdale, Arizona.

The objective of this Traffic Impact & Mitigation Analysis is to analyze the traffic related impacts of the proposed development to the adjacent roadway network. See [Figure 1](#) for the vicinity map.

1.2. EXECUTIVE SUMMARY

The Scottsdale Collection development will be located on the southeast corner (SEC) of Scottsdale Road and Camelback Road, in Scottsdale Arizona. The project is located directly in the heart of the entertainment district in the City of Scottsdale.

The Scottsdale Collection development will, among other properties, include three development areas which proposes the following land uses:

- Parcel A (City Center)
 - Option 1
 - Hotel 214 rooms
 - Multi-Family Residential 106 units
 - Retail/Restaurant 41,109 square feet
 - Option 2
 - Multi-Family Residential 237 units
 - Retail/Restaurant 46,887 square feet
 - Option 3
 - Hotel 449 rooms
 - Retail/Restaurant 46,887 square feet
- Parcel B (The Mint)
 - Option 1
 - Multi-Family Residential 62 units
 - Retail/Restaurant 27,561 square feet
 - Option 2
 - Hotel 116 rooms
 - Retail/Restaurant 28,016 square feet
- Parcel C (The Maya)
 - Hotel 164 rooms



The following ten (10) parcels are additional properties identified for future development as part of The Scottsdale Collection:

1. Parcel 173-41-086A
2. Parcel 173-41-083A
3. Parcel 173-41-087
4. Parcel 173-41-145
5. Parcel 173-41-146
6. Parcel 173-41-174
7. Parcel 173-41-257
8. Parcel 173-41-258
9. Parcel 173-41-259
10. Parcel 173-41-265

The redevelopment of these sites is uncertain in terms of timing as well as land use. For the purposes of this report, since the sites are currently developed, the trips generated by these sites are incorporated in the existing traffic volumes. At a future date, when and if these sites are considered for redevelopment, an updated traffic study can be provided to address the proposed development.

This Traffic Impact and Mitigation Analysis includes:

- Level of service analysis of existing conditions for the weekday AM and PM peak hours
- Level of service analysis of existing conditions for a ‘event’ peak hour for the entertainment district
- Trip Generation calculations
- Most recent 3-year collision history
- Level of service analysis for the 5 year (2025) and the 10 year (2030) weekday AM and PM peak hours
 - 2025 No Build
 - 2025 Build
 - 2030 No Build
 - 2030 Build
- Level of service analysis for the 5 year (2025) and the 10 year (2030) ‘event’ peak hour

The ‘event’ peak hour captures the weekend peak generally experienced during weekend evenings.

The following are the twenty-six (26) intersections included in this study:

- Scottsdale Road and Camelback Road (1)
- Scottsdale Road and Shoeman Lane (2)



- Scottsdale Road and Drinkwater Boulevard (3)
- Scottsdale Road and 5th Avenue (4)
- Camelback Road and Brown Avenue (5)
- Shoeman Lane and Brown Avenue (6)
- Drinkwater Boulevard and Stetson Drive/5th Avenue (7)
- Camelback Road and Buckboard Trail/73rd Street (8)
- Indian Plaza and Buckboard Trail (9)
- Shoeman Lane and Buckboard Trail (10)
- Drinkwater Boulevard and 6th Avenue (11)
- Shoeman Lane and Wells Fargo Avenue (12)
- Stetson Drive and Wells Fargo Avenue (13)
- 6th Avenue and Wells Fargo Avenue (14)
- Camelback Road and Saddlebag Trail (15)
- Indian Plaza and Saddlebag Trail (16)
- Camelback Road and Civic Center Plaza (17)
- Indian Plaza and Civic Center Plaza (18)
- Stetson Drive and Civic Center Plaza (19)
- 6th Avenue and Civic Center Plaza (20)
- Camelback Road and 75th Street (21)
- Indian Plaza and 75th Street (22)
- Stetson Drive and 75th Street (23)
- 6th Avenue and 75th Street (24)
- Camelback Road and Miller Road (25)
- 6th Avenue and Miller Road (26)

During recent weeks Arizona was under “stay at home” orders due to COVID-19 and therefore, was experiencing a decline in traffic as well as non-typical traffic patterns. Therefore, this was discussed with Scottsdale Transportation staff and it was agreed that collecting data at this time is not ideal. Fortunately, there were numerous nearby recent traffic studies complete which included traffic count data. Adjustment factors including annual growth rates were applied to these traffic counts to create year 2020 existing traffic counts. Traffic count data from prior studies included most of the major intersections including arterial and collector roadways. However, traffic count data was not available for some of the minor intersections with local roadways. This includes the intersections in blue above and therefore, data and analysis are not provided in this report.

Prior traffic count data for all signalized intersections were available and are included throughout this Traffic Impact and Mitigation Analysis. The intersections where prior traffic count data was not available included only stop-controlled intersections with local roadways. Typically, at these types of intersections recommendations are minimal particularly in built out areas such as this.



Existing Capacity Analysis

The AM, PM, and ‘event’ peak hour existing conditions capacity analysis were completed for the existing study intersections. The results of the capacity analysis reveal the following locations with an existing level of service (LOS) E or F:

Scottsdale Road and Camelback Road (1) – Signalized

- EB left AM and PM peak hours operate at LOS E
- WB left PM peak hour operates at LOS E
- WB shared through-right PM peak hour operates at LOS E
- SB left AM and PM peak hours operate at LOS E

Scottsdale Road and Drinkwater Boulevard (3) – Signalized

- WB right AM and PM peak hours operate at LOS E and F, respectively

Drinkwater Boulevard and Stetson Drive/5th Avenue (7) – Signalized

- EB left AM peak hour operates at LOS E

Camelback Road and Miller Road (25) – Signalized

- Overall intersection PM peak hour operates at LOS E
- EB through PM peak hour operates at LOS E
- EB shared through-right PM peak hour operates at LOS E
- WB left PM peak hour operates at LOS F
- WB through PM peak hour operates at LOS E
- WB shared through-right PM peak hour operates at LOS E

Camelback Road and 75th Street (21) – Unsignalized

- NB shared left-through-right PM peak hour operates at LOS E

Trip Generation

Trip Generation for The Scottsdale Collection development includes the proposed City Center, Mint, and Maya Hotel developments.

Proposed City Center Development

The proposed City Center development has three (3) options. The trip generation was calculated for all options and as a conservative estimate the one that generated the most traffic volumes was analyzed. For the City Center development, this was Option 3 which includes a 449-room hotel with 46,887 square feet (SF) of retail/restaurant space.

The proposed development is anticipated to generate 5,450 weekday daily trips with 224 trips occurring during the AM peak hour, 417 trips occurring during the PM peak hour, and 168 trips occurring during the “event’ peak’ hour.



Proposed Mint Development

The proposed Mint development has two (2) options. The trip generation was calculated for all options and as a conservative estimate the one that generated the most traffic volumes was analyzed. For the Mint development, this was Option 2 which includes a 116-room hotel with 27,561 SF of retail/restaurant space.

The proposed Mint development is anticipated to generate 1,650 weekday daily trips with 67 trips occurring during the AM peak hour, 143 trips occurring during the PM peak hour, and 36 trips occurring during the 'event' peak hour.

Proposed Maya Hotel Development

The proposed Maya Hotel Development will be comprised of a 164-room hotel and is anticipated to generate 1,211 weekday daily trips with 65 trips occurring during the AM peak hour, 82 trips occurring during the PM peak hour, and 48 trips occurring during the 'event' peak hour.

Future Development

For the purposes of this report, it was determined that the ten (10) additional parcels identified for future development will generate a number of trips consistent with each parcel's existing land use. It is anticipated that the weekday daily trips, AM peak hour, and PM peak hour trips of the future developments will be similar to the existing land use and therefore, are captured in the existing traffic volumes.

Trip Generation Comparison

City Center

Existing Development vs. Proposed City Center Development

A comparison between the trips generated by the existing office development and the proposed City Center development was calculated. The proposed City Center development will produce 4,712 more weekday daily trips, with 133 more trips during the AM peak hour, 337 more trips during the PM peak hour and 164 more trips during the 'event' peak hour than the existing development.

Existing Zoning (1.3 F.A.R) vs. Proposed City Center Development

A comparison between the trips generated with the buildout under the existing zoning and the proposed City Center development was calculated. **The proposed City Center development will produce 413 less weekday daily trips, with 65 less trips during the AM peak hour, 121 less trips during the PM peak hour, and 129 more trips during the 'event' peak hour than the build out under the existing zoning.**





Mint

Existing Development vs. Proposed Mint Development

A comparison between the trips generated by the existing office and upscale night club development and the proposed Mint development was calculated. The proposed Mint development will produce 1,590 more weekday daily trips, with 37 more trips during the AM peak hour, 136 more trips during the PM peak hour and 137 less trips during the ‘event’ peak hour than the existing development.

Existing Zoning (1.3 F.A.R) vs. Proposed Mint Development

A comparison between the trips generated with the buildout under the existing zoning and the proposed Mint development was calculated. **The proposed Mint development will produce 1,830 less weekday daily trips, with 164 less trips during the AM peak hour, 164 less trips during the PM peak hour,** and 13 more trips during the ‘event’ peak hour than the build out under the existing zoning.

Maya Hotel

Existing Development vs. Proposed Maya Hotel Development

A comparison between the trips generated by the existing office and restaurant development and the proposed Maya Hotel development was calculated. The proposed Maya Hotel development will produce 1,157 more weekday daily trips, with 34 more trips during the AM peak hour, 76 more trips during the PM peak hour and 25 less trips during the ‘event’ peak hour than the existing development.

Existing Zoning (1.3 F.A.R) vs. Proposed Maya Hotel Development

A comparison between the trips generated with the buildout under the existing zoning and the proposed Maya Hotel development was calculated. **The proposed Maya Hotel will produce 566 less weekday daily trips, with 95 less trips during the AM peak hour, 62 less trips during the PM peak hour,** and 36 more trips during the ‘event’ peak hour than the build out under the existing zoning.

Future Conditions - Year 2025

Year 2025 analyses was completed with and without the build out of the proposed development. An annual growth rate of 2.0% as well as additional traffic volumes for known developments in the area were applied to the existing traffic volumes.





Year 2025 No Build Capacity Analysis

A capacity analysis was completed for the AM, PM, and ‘event’ peak hours for year 2025, without the build out of the proposed development. All movements operate at a LOS D or better or at the same level of service as the existing conditions, with the exception of the following:

Scottsdale Road and Camelback Road (1) – Signalized

- EB through PM peak hour operates at LOS E
- WB through PM peak hour operates at LOS E

Camelback Road and Brown Avenue (5) – Unsignalized

- NB shared left-right PM peak hour operates at LOS F

Camelback Road and 75th Street (21) – Unsignalized

- NB shared left-through-right PM peak hour operates at LOS F
- SB shared left-through-right PM peak hour operates at LOS F

Camelback Road and Miller Road (25) – Signalized

- EB through PM peak hour operates at LOS F
- EB shared through-right PM peak hour operates at LOS F
- SB through PM peak hour operates at LOS E
- NB shared left-through-right PM peak hour operates at LOS F
- SB shared left-through-right PM peak hour operates at LOS F

Year 2025 Build Capacity Analysis

A capacity analysis was completed for the AM, PM, and ‘event’ peak hours for year 2025, with the build out of the proposed development. All movements operate at a LOS D or better or at the same level of service as the year 2025 no build conditions.

Future Conditions - Year 2030

Year 2030 analyses was completed with and without the build out of the proposed development. An annual growth rate of 2.0% as well as additional traffic volumes for known developments in the area were applied to the existing traffic volumes.



Year 2030 No Build Capacity Analysis

A capacity analysis was completed for the AM, PM, and ‘event’ peak hours for year 2030, without the build out of the proposed development. All movements operate at a LOS D or better or at the same level of service as the existing conditions, with the exception of the following:

Scottsdale Road and Camelback Road (1) – Signalized

- Overall intersection PM peak hour operates at LOS E
- NB shared through-right PM peak hour operates at LOS E
- SB through PM peak hour operates at LOS E

Camelback Road and Miller Road (25) – Signalized

- NB through PM peak hour operates at LOS E

Camelback Road and 75th Street (21) – Unsignalized

- NB shared left-through-right AM peak hour operates at LOS E
- SB shared left-through-right AM peak hour operates at LOS E

Year 2030 Build Capacity Analysis

A capacity analysis was completed for the AM, PM, and ‘event’ peak hours for year 2030, with the build out of the proposed development. All movements operate at a LOS D or better or at the same level of service as the year 2030 no build conditions, with the exception of the following:

Scottsdale Road and Camelback Road (1) – Signalized

- EB through PM peak hour operates at LOS F
- NB left PM peak hour operates at LOS E
- NB through PM peak hour operates at LOS E



Recommendations

In summary and as included in the discussion and analyses throughout this report, the following are the recommended improvements with the build out of The Scottsdale Collection development:

- **Camelback Road and Brown Avenue (5)**
 - Construct 100-foot eastbound right turn deceleration lane.
 - Install signing to prohibit northbound left turning movement during peak hours (hours to be coordinated with the City of Scottsdale Transportation).
- **Civic Center Plaza and Driveway G (18)**

Buildout of full access driveway at the existing intersection of Civic Center Plaza and Indian Plaza.
- **Shoeman Lane and Driveway A (27)**

Buildout of full access driveway approximately 250 feet east of Scottsdale.
- **Scottsdale Road and Driveway B (28)**

Buildout of right-in/right-out driveway approximately 270 feet south of Camelback Road.
- **Brown Avenue and Driveway C (29)**

Buildout of full access driveway approximately 180 feet south of Camelback.
- **Brown Avenue and Driveway D (30)**

Buildout of full access driveway approximately 280 feet south of Camelback.
- **Saddlebag Trail and Driveway E (31)**

Buildout of access driveway allowing right in and lefts out approximately 140 feet south of Camelback Road.
- **Civic Center Plaza and Driveway F (32)**

Buildout of full access driveway approximately 160 feet south of Camelback Road.
- **Buckboard Trail and Driveway H (33)**

Buildout of access driveway approximately 400 feet south of Camelback Road.

As with any new development and potential change in traffic patterns, the following is recommended:

- **Monitor and Adjust Signal Timing**

Monitor traffic patterns in the area and if necessary, adjust nearby signal timing



2. PROPOSED DEVELOPMENT

The study area is located at the heart of the entertainment district in the City of Scottsdale, Arizona, approximately two miles west of State Route Loop 101 (SR 101L) and four and a half miles north of State Route Loop 202 (SR 202L). The proposed site will be located on the southeast corner of Scottsdale Road and Camelback Road.

The Scottsdale Collection development will, among other properties, include three development areas which proposes the following land uses:

- Parcel A (City Center)
 - Option 1
 - Hotel 214 rooms
 - Multi-Family Residential 106 units
 - Retail/Restaurant 41,109 square feet
 - Option 2
 - Multi-Family Residential 237 units
 - Retail/Restaurant 46,887 square feet
 - Option 3
 - Hotel 449 rooms
 - Retail/Restaurant 46,887 square feet
- Parcel B (The Mint)
 - Option 1
 - Multi-Family Residential 62 units
 - Retail/Restaurant 27,561 square feet
 - Option 2
 - Hotel 116 rooms
 - Retail/Restaurant 28,016 square feet
- Parcel C (Maya Hotel)
 - Hotel 164 rooms

The following ten (10) parcels are additional properties identified for future development as part of The Scottsdale Collection:

1. Parcel 173-41-086A
2. Parcel 173-41-083A
3. Parcel 173-41-087
4. Parcel 173-41-145
5. Parcel 173-41-146
6. Parcel 173-41-174
7. Parcel 173-41-257



8. Parcel 173-41-258
9. Parcel 173-41-259
10. Parcel 173-41-265

The redevelopment of these sites is uncertain in terms of timing as well as land use. For the purposes of this report, since the sites are currently developed, the trips generated by these sites are incorporated in the existing traffic volumes. At a future date, when and if these sites are considered for redevelopment, an updated traffic study can be provided to address the proposed development.

See **Figure 2** and **Appendix A** for the proposed site plan.

There are four (4) access points for the proposed City Center development. One (1) along Shoeman Lane and three (3) along Brown Avenue.

Shoeman Lane and Driveway A (27) is located approximately 250 feet east of Scottsdale Road and will allow all movements into and out of the site.

Scottsdale Road and Driveway B (28) is located approximately 270 feet south of Camelback Road and will allow right-in and right-out movements into and out of the site.

Brown Avenue and Driveway C (29) is located approximately 180 feet south of Camelback Road and will allow all movements into and out of the site.

Brown Avenue and Driveway D (30) is located approximately 280 feet south of Camelback Road and will allow all movements into and out of the site.

There are three (3) access points for the proposed Mint development. One (1) along Saddlebag Trail and the other two (2) along Civic Center Plaza.

Saddlebag Trail and Driveway E (31) is located approximately 140 feet south of Camelback Road. Saddlebag Trail is a one-way street and will only allow rights in and lefts out of the site.

Civic Center Plaza and Driveway F (32) is located approximately 160 feet south of Camelback Road and will allow all movements into and out of the site.

Civic Center Plaza and Driveway G (18) is located at the existing intersection of Civic Center Plaza and Indian Plaza and will allow all movements into and out of the site.



There is one (1) access point for the proposed Maya Hotel development. It is located along Buckboard Trail.

Buckboard Trail and Driveway H (33) is located approximately 400 feet south of Camelback Road. Buckboard Trail is a one-way street and will only allow rights in and rights out of the site.

See **Figure 3** for study area.

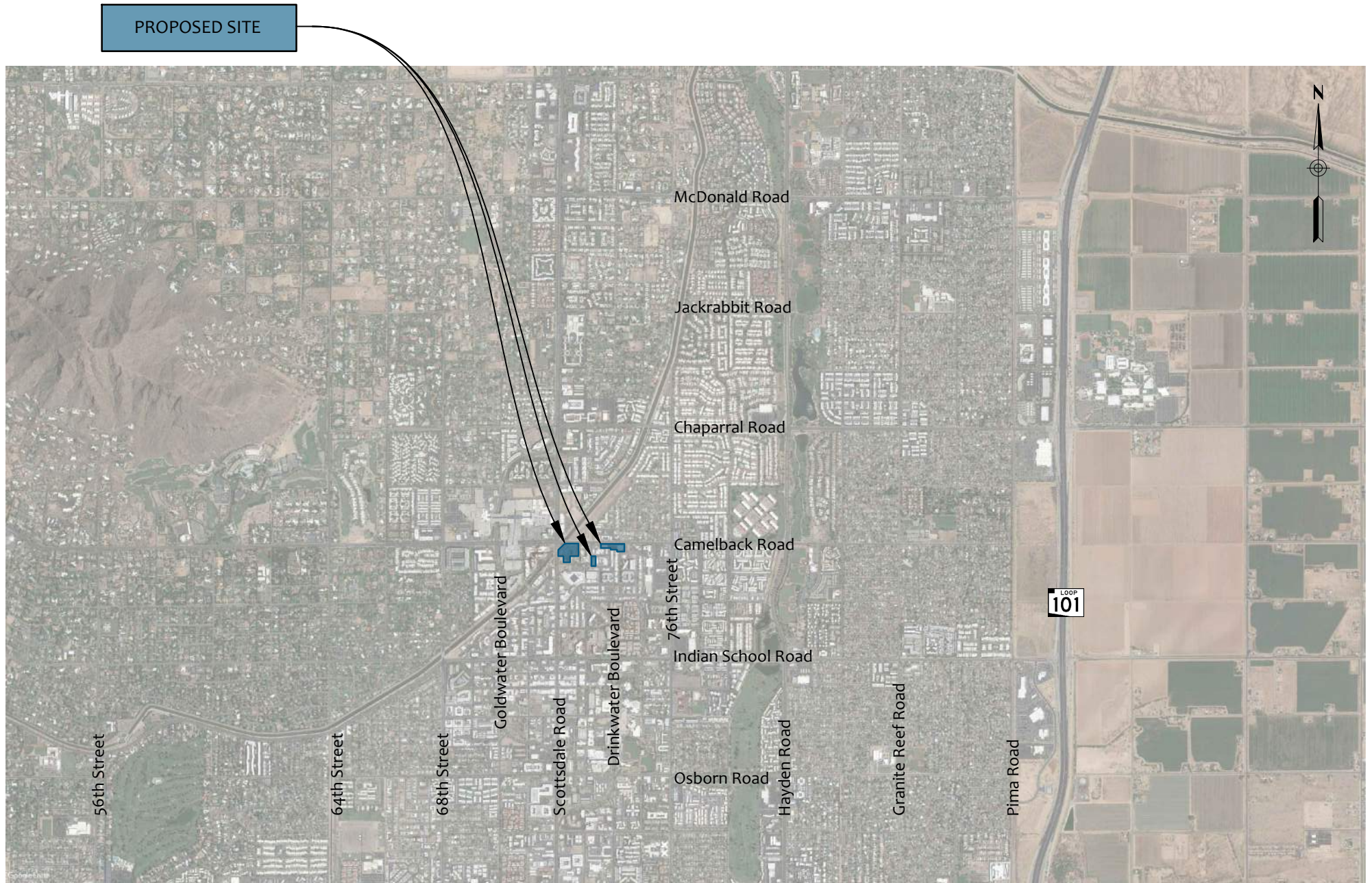


FIGURE 1 | VICINITY MAP

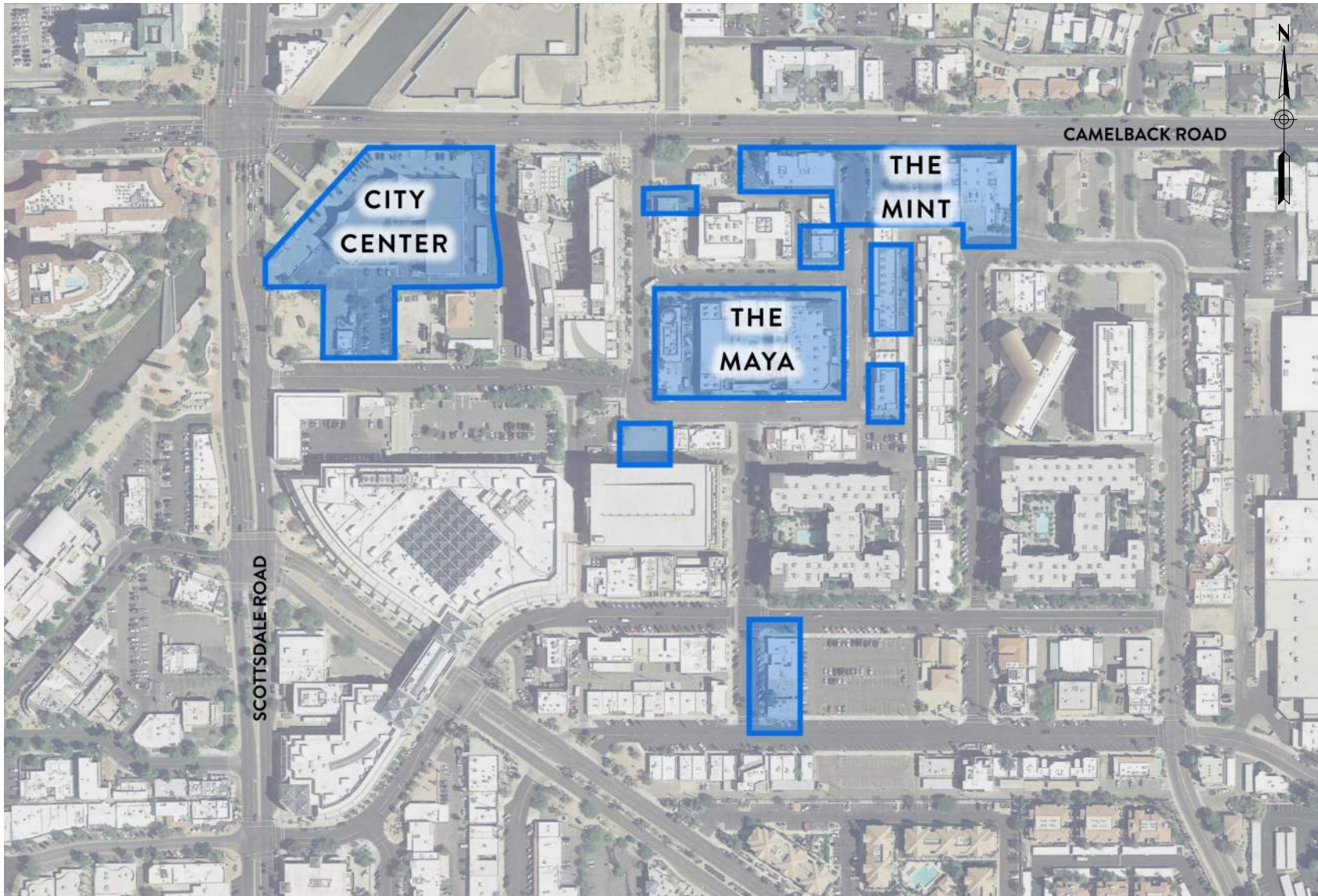


FIGURE 2 | SITE PLAN



Legend

- ◆ Intersection
- City Center
- Maya Hotel
- The Mint

FIGURE 3 | STUDY AREA



3. AREA CONDITIONS

The study area is located in the City of Scottsdale, Arizona. **Sections 3.1** and **3.2** provide detailed descriptions of the study roadway segments and intersections.

3.1. STUDY ROADWAY SEGMENTS

Camelback Road runs east-west and in the vicinity of the site provides two (2) through lanes for each direction of travel with a two-way left-turn lane. Along this section of roadway there are variable speed limit signs. The speed limit is typically posted at 35 miles per hour (mph) but is lowered to 25 mph on Friday and Saturday from 9:00 PM to 3:00 AM. There are bike lanes provided along both the north and south sides of the roadway. The City of Scottsdale classifies Camelback Road as a minor arterial within the study area, according to *The Scottsdale Master Transportation Plan*, dated July 2016. The City of Scottsdale's 2018 Average Daily Segment Traffic (ADT) Volumes map reports an ADT of 21,000 vehicles per day (vpd) along Camelback Road, between Scottsdale Road and Miller Road.

Scottsdale Road runs north-south and in the vicinity of the site provides three (3) through lanes for the northbound and two (2) through lanes for the southbound direction of travel, with a raised landscaped median. There is a posted speed limit of 30 mph. The City of Scottsdale classifies Scottsdale Road as a major collector within the study area, according to *The Scottsdale Master Transportation Plan*, dated July 2016. The City of Scottsdale's 2018 Average Daily Segment Traffic (ADT) Volumes map reports an ADT of 22,400 vpd along Scottsdale Road, between Camelback Road and Indian School Road.

Miller Road runs north-south and in the vicinity of the site provides two (2) through lanes for each direction of travel with a raised landscaped median. There is a posted speed limit of 35 mph. There are bike lanes provided along both the east and west sides of the roadway. The City of Scottsdale classifies Miller Road as a minor collector within the study area, according to *The Scottsdale Master Transportation Plan*, dated July 2016. The City of Scottsdale's 2018 Average Daily Segment Traffic (ADT) Volumes map reports an ADT of 12,800 vpd along Miller Road, between Camelback Road and Indian School Road.

Drinkwater Boulevard runs northwest and southeast and in the vicinity of the site provides two (2) through lanes for each direction of travel with a raised landscaped median. There is a posted speed limit of 35 mph. The City of Scottsdale classifies Drinkwater Boulevard as a couplet within the study area, according to *The Scottsdale Master Transportation Plan*, dated July 2016. The City of Scottsdale's 2018 Average Daily Segment Traffic (ADT) Volumes map reports an ADT of 8,300 vpd along Drinkwater Boulevard, between Scottsdale Road and Indian School Road.

Indian Plaza runs east-west and in the vicinity of the site provides one (1) through lane for each direction of travel. The roadway is divided into two separate segments. One segment runs between



Buckboard Trail and Saddlebag Trail. The other segment runs between Civic Center Plaza and 75th Street. There is an unposted speed limit of 25 mph. For the segment of Indian Plaza between Buckboard Trail and Saddlebag Trail, on street parking is provided on both sides of the roadway.

Shoeman Lane runs east-west and in the vicinity of the site provides one (1) through lane for each direction of travel between Scottsdale Road and Buckboard Trail. Between Buckboard Trail and Saddlebag Trail, Shoeman Lane is a one-way roadway, providing two (2) westbound through lanes. There is a posted speed limit of 25 mph. On-street parking is provided on both sides of the roadway.

5th Avenue runs northeast and southwest and in the vicinity of the site provides one (1) through lane for each direction of travel. There is an unposted speed limit of 25 mph. On-street parking is provided on the north side of the roadway.

Stetson Drive runs east-west and in the vicinity of the site provides one (1) through lane for each direction of travel. There is a posted speed limit of 25 mph. On-street parking is provided on both sides of the roadway.

6th Avenue runs east-west and in the vicinity of the site provides one (1) through lane for each direction of travel. There is posted speed limit of 25 mph. On-street parking is provided on both sides of the roadway between Drinkwater Boulevard and 75th Street.

Brown Avenue runs north-south and in the vicinity of the site provides one (1) through lane for each direction of travel. There is an unposted speed limit of 25 mph. On-street parking is provided on both sides of the roadway.

Buckboard Trail is a one-way roadway that runs northbound and in the vicinity of the site provides two (2) northbound through lanes. There is an unposted speed limit of 25 mph. On-street parking is provided on both sides of the roadway.

Wells Fargo Avenue runs north-south and in the vicinity of the site provides one (1) through lane for each direction of travel. There is an unposted speed limit of 25 mph. On-street parking is provided on both sides of the roadway.

Saddlebag Trail is a one-way roadway that runs southbound and in the vicinity of the site provides two (2) southbound through lanes. There is a posted speed limit of 25 mph. On-street parking is provided on both sides of the roadway.

Civic Center Plaza runs north-south and in the vicinity of the site provides one (1) through lane for each direction of travel. There is an unposted speed limit of 25 mph. On-street parking is provided on both sides of the roadway.



75th Street runs north-south and in the vicinity of the site provides one (1) through lane for each direction of travel. There is an unposted speed limit of 25 mph. On-street parking is provided on both sides of the roadway.

3.2. STUDY INTERSECTIONS

Scottsdale Road and Camelback Road (1) currently operates as a signalized intersection. The eastbound approach provides two (2) dedicated left turn lanes, two (2) through lanes, and one (1) dedicated right turn lane. The westbound approach provides one (1) dedicated left turn lane, one (1) through lane, and one (1) shared through-right turn lane. The northbound approach provides two (2) dedicated left turn lanes, two (2) through lanes, and one (1) shared through-right turn lane. The southbound approach provides two (2) dedicated left turn lanes, three (3) through lanes, and one (1) dedicated right turn lane.

Scottsdale Road and Shoeman Lane (2) currently operates as a stop-controlled T-intersection with stop control on the westbound approach. The westbound approach provides one dedicated right turn lane. The northbound approach provides two (2) through lanes and one (1) shared through-right turn lane. The southbound approach provides one (1) dedicated left turn lane, and two (2) through lanes.

Scottsdale Road and Drinkwater Boulevard (3) currently operates as a signalized intersection. The eastbound approach provides one (1) shared left-through-right turn lane. The westbound approach provides one (1) dedicated left turn lane, one (1) through lane, and one (1) dedicated right turn lane. The northbound approach provides one (1) dedicated left turn lane, one (1) through lane, and one (1) shared through-right turn lane. The southbound approach provides two (2) dedicated turn lanes, one (1) through lane, and one (1) shared through-right turn lane.

Scottsdale Road and 5th Avenue (4) currently operates as a signalized intersection. The eastbound approach provides one (1) shared left-through-right turn lane. The westbound approach provides one (1) dedicated left turn lane, and one (1) shared through-right turn lane. The northbound and southbound approaches provide one (1) dedicated left turn lane, one (1) through lane, and one (1) shared through-right turn lane.

Camelback Road and Brown Avenue (5) currently operates as a stop-controlled T-intersection with stop control on the northbound approach. The eastbound approach provides one (1) through lane and one (1) shared through-right turn lane. The westbound approach provides one (1) dedicated left turn lane, that is part of the two-way left-turn lane down the center of the street, and two (2) through lanes. The northbound approach provides one (1) shared left-right turn lane.

Shoeman Lane and Brown Avenue (6) currently operates as a stop-controlled T-intersection with stop control on the southbound approach. The eastbound approach provides one (1) shared left-



through lane. The westbound approach provides one (1) shared through-right turn lane. The southbound approach provides one (1) shared left-right turn lane.

Drinkwater Boulevard and Stetson Drive/5th Avenue (7) currently operates as a signalized intersection. The northeast bound and southwest bound approaches provide one (1) dedicated left turn lane, and one (1) shared through-right turn lane. The northwest bound approach provides one (1) dedicated left turn lane, two (2) through lanes, and one (1) dedicated right turn lane. The southeast bound approach provides one (1) dedicated left turn lane, one (1) through lane, and one (1) shared through-right turn lane.

Camelback Road and Buckboard Trail/73rd Street (8) currently operates as an offset signalized intersection. The eastbound approach provides one (1) dedicated left turn lane, and two (2) through lanes. The westbound approach provides one (1) through lane, and one (1) shared through-right turn lane. The northbound approach provides one (1) dedicated left turn lane, and one (1) dedicated right turn lane. The southbound approach provides one (1) shared left-right turn lane.

Indian Plaza and Buckboard Trail (9) currently operates as a stop-controlled T-intersection with stop control on the westbound approach. The westbound approach provides one (1) dedicated right turn lane. The northbound approach provides one (1) shared through-right turn lane.

Shoeman Lane and Buckboard Trail (10) currently operates as a stop-controlled T-intersection with stop control on the eastbound approach. The eastbound approach provides one (1) dedicated left turn lane. The northbound approach provides one (1) shared left-through lane.

Drinkwater Boulevard and 6th Avenue (11) currently operates as a two-way stop-controlled intersection with stop control on the northeast bound and southwest bound approaches. The northeast bound approach provides one (1) dedicated right turn lane. The southwest bound approach provides one (1) dedicated right turn lane. The northwest bound approach provides two (2) through lanes, and one (1) dedicated right turn lane. The southeast bound approach provides one (1) through lane and one (1) shared through-right turn lane.

Shoeman Lane and Wells Fargo Avenue (12) currently operates as a stop-controlled T-intersection with stop control on the northbound approach. The westbound approach provides one (1) through lane and one (1) shared through-right turn lane. The northbound approach provides one (1) dedicated left turn lane.

Stetson Drive and Wells Fargo Avenue (13) currently operates as an all-way stop controlled intersection. The eastbound and westbound approaches provide one (1) shared left-through-right turn lane. The northbound and southbound approaches provide one (1) shared left-through-right turn lane.



6th Avenue and Wells Fargo Avenue (14) currently operates as a stop-controlled T-intersection with stop control on the southbound approach. The eastbound approach provides one (1) shared left-through lane. The westbound approach provides one (1) shared through-right turn lane. The southbound approach provides one (1) shared left-right turn lane.

Camelback Road and Saddlebag Trail (15) currently operates as a T-intersection. The eastbound approach provides (1) through lane, and one (1) shared through-right turn lane. The westbound approach provides one (1) dedicated left turn lane, that is part of the two-way left-turn lane down the center of the street, and two (2) through lanes.

Indian Plaza and Saddlebag Trail (16) currently operates as a T-intersection. The eastbound approach provides one (1) dedicated right turn lane. The southbound approach provides one (1) shared left-through lane, and one (1) through lane.

Camelback Road and Civic Center Plaza (17) currently operates as a stop-controlled T-intersection with stop control on the northbound approach. The eastbound approach provides one (1) through lane and one (1) shared through-right turn lane. The westbound approach provides one (1) dedicated left turn lane, that is part of the two-way left-turn lane down the center of the street, and two (2) through lanes.

Indian Plaza and Civic Center Plaza (18) currently operates as a stop-controlled T-intersection with stop control on the southbound approach. The eastbound approach provides one (1) shared left-through lane. The westbound approach provides one (1) shared through-right turn lane. The southbound approach provides one (1) shared left-right turn lane.

Stetson Drive and Civic Center Plaza (19) currently operates as a two-way stop-controlled intersection with stop control on the northbound and southbound approaches. The eastbound and westbound approaches provide one (1) shared left-through-right turn lane. The northbound and southbound approaches provide one (1) shared left-through-right turn lane.

6th Avenue and Civic Center Plaza (20) currently operates as a stop-controlled T-intersection with stop control on the southbound approach. The eastbound approach provides one (1) shared left-through lane. The westbound approach provides one (1) shared through-right turn lane. The southbound approach provides one (1) shared left-right turn lane.

Camelback Road and 75th Street (21) currently operates as a stop-controlled T-intersection. The eastbound approach provides one (1) through lane and one (1) shared through-right turn lane. The westbound approach provides one (1) dedicated left turn lane, that is part of the two-way left-turn lane down the center of the street, and two (2) through lanes.



Indian Plaza and 75th Street (22) currently operates as a stop-controlled T-intersection with stop control on the southbound approach. The eastbound approach provides one (1) shared left-through lane. The westbound approach provides one (1) shared through-right turn lane. The southbound approach provides one (1) shared left-right turn lane.

Stetson Drive and 75th Street (23) currently operates as a stop-controlled T-intersection with stop control on the eastbound approach. The eastbound approach provides one (1) shared left-right turn lane. The northbound approach provides one (1) shared left-through lane. The southbound approach provides one (1) shared through-right turn lane.

6th Avenue and 75th Street (24) currently operates as an all-way stop-controlled intersection. The eastbound and westbound approaches provide one (1) shared left-through-right turn lane. The northbound and southbound approaches provide one (1) shared left-through-right turn lane.

Camelback Road and Miller Road (25) currently operates as a signalized intersection. The eastbound and westbound approaches provide one (1) dedicated left turn lane, one (1) through lane, and one (1) shared through-right turn lane. The northbound approach provides one (1) dedicated left turn lane, one (1) through lane, and one (1) dedicated right turn lane. The southbound approach provides one (1) dedicated left turn lane, one (1) through lane, and one (1) shared through-right turn lane.

6th Avenue and Miller Road (26) currently operates as a stop-controlled T-intersection with stop control on the eastbound approach. The eastbound approach provides one (1) shared left-right turn lane. The northbound approach provides one (1) dedicated left turn lane, and two (2) through lanes. The southbound approach provides one (1) through lane, and one (1) shared through-right turn lane.

3.3. SURROUNDING AREA LAND USE

The Scottsdale Collection development is located in the Entertainment District of Old Town Scottsdale. The Entertainment District is bordered by Camelback Road, 6th Avenue, Scottsdale Road, and Miller Road to the north, south, west, and east, respectively. The Scottsdale Fashion Square and Scottsdale Waterfront developments are located directly west, across Scottsdale Road. Additionally, several other commercial and residential developments border the Entertainment District to the east, north, and south. The Arizona Canal runs northeast beneath the intersection of Scottsdale Road and Camelback Road (1).

The proposed City Center is bordered by Camelback Road, Shoeman Lane, Scottsdale Road, and Brown Avenue to the north, south, west, and east, respectively. The W Hotel is located directly east, across Brown Avenue and the proposed Marquee development is located directly south, across Shoeman Lane.



The proposed Mint is bordered by Camelback Road to the north, Civic Center Plaza along the developments southern and eastern border, and Saddlebag Trail to the west. Additionally, commercial developments are located across all bordering roadways.

The proposed Maya Hotel is bordered by Indian Plaza, Shoeman Lane, Buckboard Trail, and commercial developments to the north, south, west, and east, respectively. The W Hotel is located directly west, across Buckboard Trail. Additionally, commercial developments are located across Indian Plaza and Shoeman Lane.

3.4. SITE ACCESSIBILITY

Pedestrian Facilities, Bicycle Facilities, and Shared-Use Paths

Continuous sidewalks are provided along the internal roadway network within the proposed development as well as on the adjacent roadways bordering the Entertainment District. Within the vicinity of the study area, bike lanes are currently provided along the north and south sides of Scottsdale Road and a bike route is provided along Drinkwater Boulevard and Scottsdale Road, south of Drinkwater Boulevard.

Additionally, the Arizona Canal is located directly west of the proposed site and provides approximately 70 miles of shared use paths.

Transit Facilities

Valley Metro Route 50 operates along Camelback Road within the study area. This route connects Phoenix to Old Town Scottsdale. According to the Valley Metro System Map, there are two (2) stops located near the intersection of Scottsdale Road and Camelback Road (1), one (1) stop located near the intersection of Scottsdale Road and 5th Avenue (4), and one (1) stop located near the intersection of Drinkwater Boulevard and Stetson Drive/5th Avenue (7). This route operates Monday through Friday, with the exception of the stop at Drinkwater Boulevard and Stetson Drive/5th Avenue (7) and the eastbound stop at Scottsdale Road and Camelback (1), which operate Monday – Sunday.

Valley Metro Route 72 operates along Scottsdale Road within the study area. This route connects the City of Chandler to the northern portion of the City of Scottsdale. According to the Valley Metro System Map, there are two (2) stops located near the intersection of Scottsdale Road and Camelback Road (1), one (1) stop located near the intersection of Scottsdale Road and Drinkwater Boulevard (3), and two (2) stops located near the intersection of Scottsdale Road and 5th Avenue (4). This route operates Monday through Friday, with the exception of the northbound stop at Scottsdale Road and Camelback Road (1), which operates Monday – Sunday.

In addition, the City of Scottsdale provides five trolley routes. The Old Town Route (OLDT) circulates around Old Town Scottsdale. A trolley stop is located near the intersection of Drinkwater



Boulevard and Stetson Drive/5th Avenue (7). This trolley route operates every 15 minutes between 10:00 AM and 9:25 PM Monday – Sunday.

3.5. COLLISION HISTORY

The most recent three-year collision history, from January 2017 to June 2019, was obtained from the City of Scottsdale. See **Appendix B** for collision data. The data included the following intersections and segments:

- Scottsdale Road and Camelback Road (1)
- Scottsdale Road and Shoeman Lane (2)
- Scottsdale Road and Drinkwater Boulevard (3)
- Camelback Road and Brown Avenue (5)
- Shoeman Lane and Brown Avenue (6)
- Drinkwater Boulevard and Stetson Drive/5th Avenue (7)
- Camelback Road and Buckboard Trail/73rd Street (8)
- Shoeman Lane and Buckboard Trail (10)
- Drinkwater Boulevard and 6th Avenue (11)
- Shoeman Lane and Wells Fargo Avenue (12)
- Stetson Drive and Wells Fargo Avenue (13)
- Camelback Road and Saddlebag Trail (15)
- Camelback Road and Civic Center Plaza (17)
- Stetson Drive and Civic Center Plaza (19)
- Camelback Road and Miller Road (25)

Scottsdale Road and Camelback Road (1)

During the three-year period, there were a total of 88 crashes, of which 1 resulted in an incapacitating injury, 5 non-incapacitating injuries, 6 possible injuries, and the remaining resulted in unknown or property damage only. There was a total of 44 rear ends, 16 sideswipes – same direction, 14 angle, 3 head-on, 3 unknown, 2 single vehicle, 3 left turn, 2 other, 1 rear-to-side and 1 rear-to-rear crash.

Scottsdale Road and Shoeman Lane (2)

During the three-year period, there were a total of 3 crashes, of which all resulted in unknown or property damage only. There was a total of 2 rear-to-side and 1 rear end crash.

Scottsdale Road and Drinkwater Boulevard (3)

During the three-year period, there were a total of 21 crashes, of which 2 resulted in a non-incapacitating injury, and the remaining resulted in unknown or property damage only. There was a total of 11 rear ends, 4 angle, 3 sideswipe - same direction, 2 left turn, and 1 rear-to-rear crash.



Camelback Road and Brown Avenue (5)

During the three-year period, there were a total of 4 crashes, of which all resulted in unknown or property damage only. There was a total of 2 rear ends, 1 angle, and 1 left turn crash.

Shoeman Lane and Brown Avenue (6)

During the three-year period, there were a total of 3 crashes, of which 1 resulted in a non-incapacitating injury, and the remaining were unknown or property damage only. There was a total of 1 rear end, 1 head-on, and 1 sideswipe – same direction crash.

Drinkwater Boulevard and Stetson Drive/5th Avenue (7)

During the three-year period, there were a total of 8 crashes, of which 2 resulted in possible injury, and the remaining were unknown or property damage only. There was a total of 3 angle, 3 sideswipe – same direction, 1 left turn, and 1 rear end crash.

Camelback Road and Buckboard Trail/73rd Street (8)

During the three-year period, there were a total of 20 crashes, of which 1 resulted in a non-incapacitating injury, 2 possible injury, and the remaining were unknown or property damage only. There was a total of 9 rear end, 5 sideswipe – same direction, 4 angles, 1 other and 1 unknown crash.

Shoeman Lane and Buckboard Trail (10)

During the three-year period, there were a total of 5 crashes, of which all resulted in unknown or property damage only. There was a total of 1 angle, 1 left turn, 1 rear end, 1 rear-to-side, and 1 other crash.

Drinkwater Boulevard and 6th Avenue (11)

During the three-year period, there were a total of 1 crash, of which 1 was unknown or property damage only. There was a total of 1 rear end crash.

Shoeman Lane and Wells Fargo Avenue (12)

During the three-year period, there were a total of 11 crashes, of which 1 resulted in possible injury, and the remaining were unknown or property damage only. There was a total of 4 angle, 3 rear end, 1 head-on, 1 sideswipe – same direction, 1 other, and 1 unknown crash.

Stetson Drive and Wells Fargo Avenue (13)

During the three-year period, there were a total of 8 crashes, of which 1 resulted in possible injury, and the remaining were unknown or property damage only. There was a total of 4 rear end, 2 rear-to-rear, 1 rear-to-side, and 1 unknown crash.

Camelback Road and Saddlebag Trail (15)

During the three-year period, there were a total of 18 crashes, of which 1 resulted in a non-incapacitating injury, 1 possible injury, and the remaining were unknown or property damage only.



There was a total of 7 angles, 6 rear end, 3 sideswipe – same direction, 1 rear-to-side, and 1 other crash.

Camelback Road and Civic Center Plaza (17)

During the three-year period, there were a total of 6 crashes, of which 1 resulted in a non-incapacitating injury, 1 possible injury, and the remaining were unknown or property damage only. There was a total of 2 angle, 2 rear-end, 1 left turn, and 1 sideswipe – same direction crash.

Stetson Drive and Civic Center Plaza (19)

During the three-year period, there were a total of 11 crashes, of which all resulted in unknown or property damage only. There was a total of 5 angle, 3 rear end, 2 other, and 1 rear-to-side crash.

Camelback Road and Miller Road (25)

During the three-year period, there were a total of 50 crashes, of which 7 resulted in a non-incapacitating injury, 6 possible injury, and the remaining were unknown or property damage only. There was a total of 19 angles, 15 rear end, 7 left turn, 3 sideswipe – same direction, 2 single vehicle, 2 head-on, and 2 other crashes.

3.6. COLLISION RATES

The City of Scottsdale's 2018 *Traffic Volume and Collision Rate Data* report provides collision rate and traffic volume information on major roadway segments and at major intersections within the City. Segment collisions are collisions that occur on a major street more than 100 feet from the major intersections that define the segment, including at minor intersections within the segment. Intersection collisions are collisions that occur at or within 100 feet of a major intersection.

The collision rates and city-wide rankings for the study roadway segments are shown in **Table 1**. The collision rates and city-wide rankings for the study intersections are shown in **Table 2**.

Table 1 – Collision Rates - Study Roadway Segments

Segment	From	To	Collision Rate	Rank
Camelback	Scottsdale	Miller	9.05	3
Scottsdale Road	Indian School	Camelback	6.6	5
Miller Road	Indian School	Camelback	3.64	26
Drinkwater	Indian School	Scottsdale	3.37	36
2018 City of Scottsdale Average Segment Collision Rate			1.53	



Table 2 – Collision Rates - Study Intersections

Intersection	Collision Rate	Rank
Scottsdale Road and Camelback	1.74	2
Miller Road and Camelback	1.28	12
2018 Average Intersection Collision Rate	0.58	



4. EXISTING CONDITIONS

4.1. EXISTING LAND USE – PLANNED DEVELOPMENT

The City Center

The existing site is currently occupied by an office complex and a vacant restaurant parcel. The proposed City Center development will be on 2.72 acres. According to the Maricopa County Assessor's website, the proposed development will be made up of 6 existing parcels that are zoned for Highway Commercial (C-3) land uses. See [Appendix C](#) for detailed parcel information.

The Mint

The existing site is currently occupied by an office complex and The Mint, an upscale night club. The proposed Mint development will be on 1.31 acres. According to the Maricopa County Assessor's website, the proposed development will be made up of 8 existing parcels that are zoned for Central Business (C-2) and Highway Commercial (C-3) land uses. See [Appendix C](#) for detailed parcel information.

Maya Hotel

The existing site is currently occupied by an office complex and The Dakota, an upscale night club. The proposed Maya development will be on 0.29 acres. According to the Maricopa County Assessor's website, the proposed development will be made up of 3 existing parcels that are zoned for Central Business (C-2) land uses. See [Appendix C](#) for detailed parcel information.

4.2. EXISTING LAND USE – FUTURE DEVELOPMENT

The following parcels are those identified for future development as part of The Scottsdale Collection development. For the purposes of this report, it was determined that the total developable area allowed under the current zoning will remain consistent with future development.

Parcel 173-41-083A, Parcel 173-41-086A, Parcel 173-41-087

The approximate combined 0.28-acre existing site is currently occupied by an office complex. According to the Maricopa County Assessor's website, the future development is currently zoned for Central Business (C-2) land use. This zoning is intended to accommodate recurring shopping and service needs and is typically associated with office and retail shopping developments. See [Appendix C](#) for detailed parcel information.

Parcel 173-41-145, Parcel 173-41-145

The approximate combined 0.10-acre existing site is currently occupied by Pretty Please Lounge, a nightclub. According to the Maricopa County Assessor's website, the future development is currently zoned for Central Business (C-2) land use. See [Appendix C](#) for detailed parcel information.



Parcel 173-41-174

The approximate combined 0.05-acre existing site is currently occupied by a retail store. According to the Maricopa County Assessor's website, the future development is currently zoned for Central Business (C-2) land use. See [Appendix C](#) for detailed parcel information.

Parcel 173-41-257

The approximate 0.29-acre existing site is currently occupied by El Hefe, a restaurant. According to the Maricopa County Assessor's website, the future development is currently zoned for Central Business (C-2) land use. See [Appendix C](#) for detailed parcel information.

Parcel 173-41-258

The approximate 0.14-acre existing site is currently occupied by INTL Nightclub. According to the Maricopa County Assessor's website, the future development is currently zoned for Central Business (C-2) land use. See [Appendix C](#) for detailed parcel information.

Parcel 173-41-259

The approximate 1.13-acre existing site is currently occupied by four (4) restaurants and one (1) bar. The existing developments include The District, Hi Fi Kitchen and Cocktails, Dierks Bentley's Whiskey Row, Bevvvy, and Maya Day and Nightclub. According to the Maricopa County Assessor's website, the future development is currently zoned for Central Business (C-2) land use. See [Appendix C](#) for detailed parcel information.

Parcel 173-41-265

The approximate 0.18-acre existing site is currently vacant commercial land. According to the Maricopa County Assessor's website, the future development is currently zoned for Vehicle Parking (P-2). land use. This zoning is intended to provide off-street parking. See [Appendix C](#) for detailed parcel information.

4.3. EXISTING TRAFFIC COUNTS

At the time of the report traffic conditions were not considered typical due to the Covid-19 pandemic and the closures associated with it. It was determined that the existing traffic volumes for the project would be pulled from reports that were recently completed in the area.

The *Traffic Impact and Mitigation Analysis for Marquee Office Building*, completed by United Civil Group, dated February 19, 2019 was used for the following four (4) intersections:

- Scottsdale Road and Camelback Road (1)
- Scottsdale Road and Shoeman Lane (2)
- Camelback Road and Brown Avenue (5)
- Shoeman Lane and Brown Avenue (6)



The *Southbridge Expansion Traffic Impact and Mitigation Analysis*, completed by CivTech, dated May 2019 was used for the following three (3) intersections:

- Scottsdale Road and Drinkwater Boulevard (3)
- Scottsdale Road and 5th Avenue (4)
- Drinkwater Boulevard and Stetson Drive/5th Avenue (7)

The *Traffic Impact Analysis for Waterview*, completed by EPS, dated June 2016 was used for the following one (1) intersection:

- Camelback Road and Buckboard Trail/73rd Street (8)

The *Don and Charlie's Hotel Traffic Impact and Mitigation Analysis*, completed by J2 Engineering and Environmental Design, dated July 3, 2018 was used for the following three (3) intersections:

- Camelback Road and 75th Street (21)
- Indian Plaza and 75th Street (22)
- Camelback Road and Miller Road (25)

The City of Scottsdale was able to provide counts for the following one (1) intersection:

- Stetson Drive and Civic Center Plaza (19)

At the time of the report we were unable to collect any existing count information for the following fourteen (14) intersections:

- Indian Plaza and Buckboard Trail (9)
- Shoeman Lane and Buckboard Trail (10)
- Drinkwater Boulevard and 6th Avenue (11)
- Shoeman Lane and Wells Fargo Avenue (12)
- Stetson Drive and Wells Fargo Avenue (13)
- 6th Avenue and Wells Fargo Avenue (14)
- Camelback Road and Saddlebag Trail (15)
- Indian Plaza and Saddlebag Trail (16)
- Camelback Road and Civic Center Plaza (17)
- Indian Plaza and Civic Center Plaza (18)
- 6th Avenue and Civic Center Plaza (20)
- Stetson Drive and 75th Street (23)
- 6th Avenue and 75th Street (24)



- 6th Avenue and Miller Road (26)

Typically, the turning movement counts would be analyzed for the highest 1-hour within each time period, but since the volumes for this project were pulled from different reports, taken at different times, the peak that was provided was analyzed.

This project is located in the heart of the entertainment district of Old Town Scottsdale. Due to the large number of night clubs and late-night activities located in this area it was determined that an additional ‘event’ peak hour analysis would be included in the report. From counts received from the City of Scottsdale, it was determined that a ‘event’ peak hour was 10:30-11:30 PM on a Friday evening. For this ‘event’ peak hour the following ten (10) intersections would be included in the analysis:

- Camelback Road and Buckboard Trail/73rd Street (8)
- Indian Plaza and Buckboard Trail (9)
- Shoeman Lane and Buckboard Trail (10)
- Shoeman Lane and Wells Fargo Avenue (12)
- Camelback Road and Saddlebag Trail (15)
- Indian Plaza and Saddlebag Trail (16)
- Camelback Road and Civic Center Plaza (17)
- Indian Plaza and Civic Center Plaza (18)
- Camelback Road and 75th Street (21)
- Indian Plaza and 75th Street (22)

Due to the fact that all the existing counts were only completed for the typical AM and PM peak hour periods, a factor was created using the ADT count along Camelback Road to determine the percentage difference between the typical PM peak hour and the ‘event’ peak hour. It was determined that the ADT along Camelback Road during the ‘event’ peak hour was approximately 22 percent of the ADT along Camelback Road during the typical PM peak hour. This factor was used to determine the existing traffic volumes for the ‘event’ peak hour.

The City of Scottsdale seasonal adjustment factors were used to adjust the traffic counts. The traffic volumes were adjusted based on the month the counts were taken.

See [Appendix D](#) for detailed count data.

In order to determine the existing traffic volumes, all existing count data was grown at a 2% annual average growth rate to the year 2020.

See [Figure 4](#) for the existing adjusted AM, PM, and ‘event’ peak hour weekday traffic volumes.

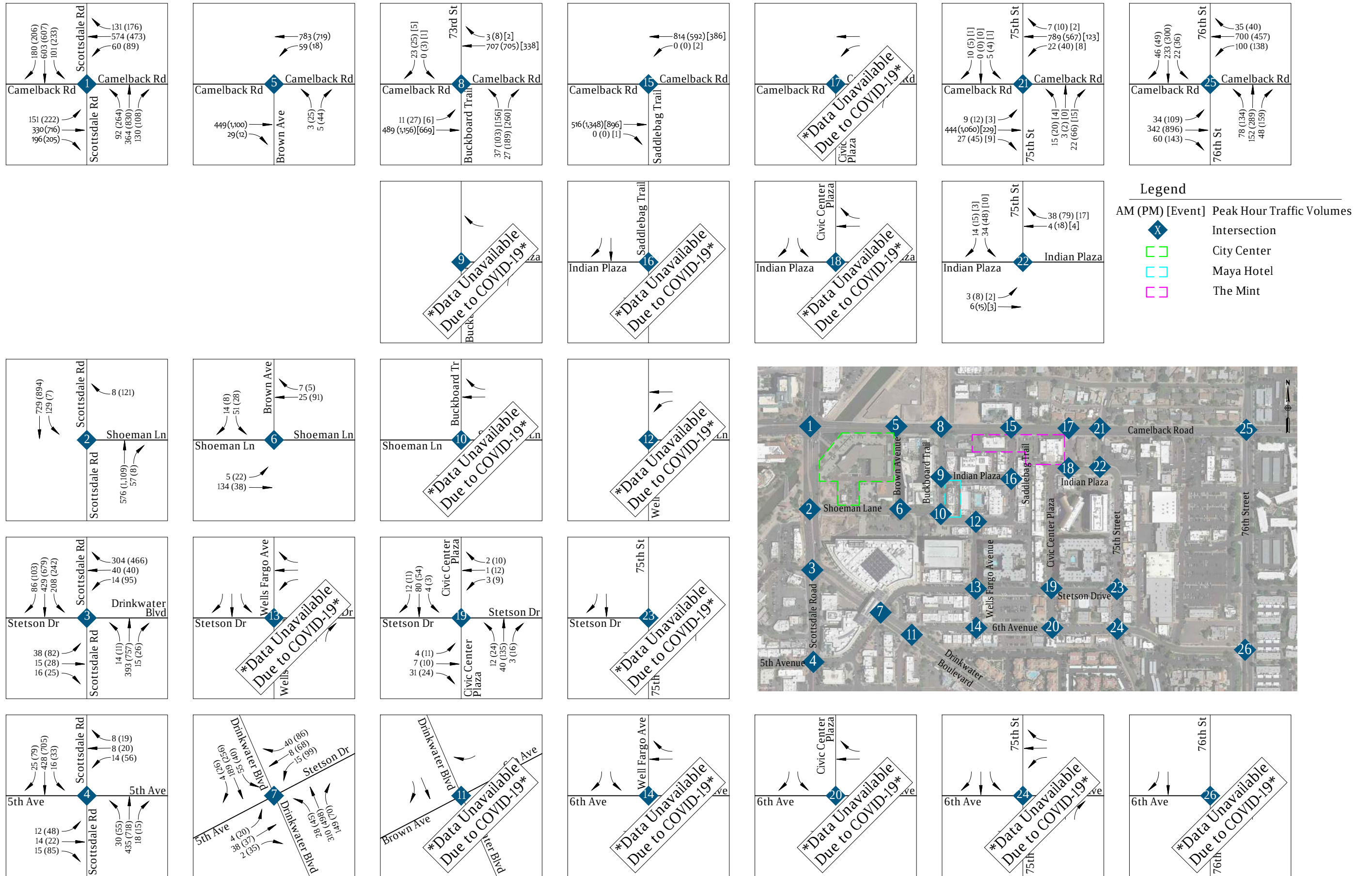


FIGURE 4 | EXISTING TRAFFIC VOLUMES



4.4. EXISTING CAPACITY ANALYSIS

The existing conditions capacity analysis was completed for the twelve (12) existing study intersections. An additional study intersection, Camelback Road and Saddlebag Trail (15) was included in the existing 'event' peak hour scenario. The capacity and level of service for the study area intersections were evaluated using the methodology presented in the 6th Edition of the *Highway Capacity Manual*. Traffic analysis software, Synchro Version 10.3, was used to perform the analyses using a Peak Hour Factor (PHF) of 0.92 and the existing signal timing provided by the City of Scottsdale. See [Appendix E](#) for the existing signal timing.

Table 3 is from the 6th Edition of the *Highway Capacity Manual* Exhibit 20-2, which lists the Level of Service (LOS) thresholds for signalized and unsignalized intersections.

Table 3 – Level of Service Criteria

Level of Service (LOS)	Control Delay per Vehicle (s/veh)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10	0 - 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

The results of the capacity analysis reveal the following locations with an existing level of service (LOS) E or F:

Scottsdale Road and Camelback Road (1) – Signalized

- EB left AM and PM peak hours operate at LOS E
- WB left PM peak hour operates at LOS E
- WB shared through-right PM peak hour operates at LOS E
- SB left AM and PM peak hours operate at LOS E

Scottsdale Road and Drinkwater Boulevard (3) – Signalized

- WB right AM and PM peak hours operate at LOS E and F, respectively

Drinkwater Boulevard and Stetson Drive/5th Avenue (7) – Signalized

- EB left AM peak hour operates at LOS E



Camelback Road and Miller Road (25) – Signalized

- Overall intersection PM peak hour operates at LOS E
- EB through PM peak hour operates at LOS E
- EB shared through-right PM peak hour operates at LOS E
- WB left PM peak hour operates at LOS F
- WB through PM peak hour operates at LOS E
- WB shared through-right PM peak hour operates at LOS E

Camelback Road and 75th Street (21) – Unsignalized

- NB shared left-through-right PM peak hour operates at LOS E

The existing AM and PM peak hour level of service and delay for all studied intersections are shown in [Table 4](#), [Table 5](#), and [Table 6](#). See [Table 7](#) for all studied intersections included in the ‘event’ peak hour.

See [Figure 5](#) for the existing AM, PM, and ‘event’ peak hour capacity analysis. The detailed capacity analysis sheets can be found in [Appendix F](#).



Table 4 – Existing Level of Service and Delay – Signalized Intersections

Intersection	Existing Conditions			
	AM PEAK		PM PEAK	
Signalized Intersections	LOS	DELAY	LOS	DELAY
Scottsdale Road and Camelback Road (1)				
Overall Intersection	D	41.7	D	38.2
Eastbound Left	E	58.5	E	60.5
Eastbound Through	D	47.3	D	48.5
Eastbound Right	D	51.3	D	39.6
Westbound Left	D	45.5	E	70.0
Westbound Through	D	53.7	D	54.4
Westbound Shared Through-Right	D	54.1	E	55.5
Northbound Left	D	38.8	C	26.7
Northbound Through	B	19.6	A	8.2
Northbound Shared Through-Right	C	20.1	A	9.4
Southbound Left	E	58.0	E	55.3
Southbound Through	D	38.0	D	43.0
Southbound Right	C	22.6	C	25.8
Scottsdale Road and Drinkwater Boulevard (3)				
Overall Intersection	B	15.9	B	19.7
Eastbound Shared Left-Through-Right	D	38.3	C	33.5
Westbound Left	D	36.5	C	31.7
Westbound Through	D	36.9	C	29.5
Westbound Right	E	61.2	F	84.2
Northbound Left	A	0.1	A	0.1
Northbound Shared Through-Right	A	0.4	A	0.8
Southbound Left	A	6.9	A	4.8
Southbound Shared Through-Right	A	0.4	A	0.6
Scottsdale Road and 5th Avenue (4)				
Overall Intersection	A	6.7	A	9.0
Eastbound Shared Left-Through-Right	C	26.0	C	25.5
Westbound Left	C	25.4	C	23.6
Westbound Shared Through-Right	C	25.6	C	23.0
Northbound Left	A	3.0	A	4.5
Northbound Shared Through-Right	A	9.7	B	11.5
Southbound Left	A	3.5	A	6.6
Southbound Shared Through-Right	A	1.0	A	2.1



Table 5 – Existing Level of Service and Delay - Signalized Intersections

Intersection	Existing Conditions			
	AM PEAK		PM PEAK	
Signalized Intersections	LOS	DELAY	LOS	DELAY
Drinkwater Boulevard and Stetson Drive/5th Avenue (7)				
Overall Intersection	D	43.3	C	32.9
Eastbound Left	E	61.1	D	41.8
Eastbound Shared Through-Right	D	50.0	C	28.9
Westbound Left	D	47.8	D	44.8
Westbound Through	D	45.4	D	44.2
Westbound Right	D	46.2	D	38.8
Northbound Left	A	6.0	A	9.9
Northbound Shared Through-Right	B	11.7	B	18.8
Southbound Left	A	5.9	A	8.9
Southbound Shared Through-Right	B	11.8	C	20.3
Camelback Road and Buckboard Trail/73rd Street (8)				
Overall Intersection	B	13.1	B	16.2
Eastbound Left	A	9.6	B	10.4
Eastbound Through	B	11.1	B	15.7
Westbound Shared Through-Right	B	12.2	B	12.3
Northbound Left	C	31.8	C	34.4
Northbound Right	C	31.1	C	25.6
Southbound Left	-	-	C	31.0
Southbound Right	C	31.0	A	7.4
Camelback Road and Miller Road (25)				
Overall Intersection	D	39.5	E	56.8
Eastbound Left	D	53.0	D	40.4
Eastbound Through	D	49.1	E	71.4
Eastbound Shared Through-Right	D	49.4	E	71.6
Westbound Left	D	42.6	F	89.2
Westbound Through	D	46.6	E	57.6
Westbound Shared Through-Right	D	46.4	E	57.7
Northbound Left	B	19.5	D	38.6
Northbound Through	C	22.8	D	38.7
Northbound Right	C	21.1	D	35.1
Southbound Left	B	16.2	C	34.1
Southbound Through	C	24.6	D	39.2
Southbound Right	C	21.1	C	31.2



Table 6 – Existing Level of Service and Delay - Unsignalized Intersections

Intersection	Existing Conditions			
	AM PEAK		PM PEAK	
Unsignalized Intersections	LOS	DELAY	LOS	DELAY
Scottsdale Road and Shoeman Lane (2)				
Westbound Right	A	9.5	B	11.7
Southbound Left	A	9.9	A	9.3
Camelback Road and Brown Avenue (5)				
Northbound Shared Left-Right	B	12.2	C	21.0
Westbound Left	A	8.7	B	11.5
Shoeman Lane and Brown Avenue (6)				
Eastbound Left	A	7.3	A	7.5
Southbound Shared Left-Right	A	9.7	A	9.6
Camelback Road and Saddlebag Trail (15)				
Westbound Left	-	-	-	-
Stetson Drive and Civic Center Plaza (19)				
Northbound Shared Left-Through-Right	A	9.6	B	10.9
Eastbound Left	A	7.2	A	7.3
Westbound Left	A	7.3	A	7.3
Southbound Shared Left-Through-Right	A	9.8	A	9.9
Camelback Road and 75th Street (21)				
Northbound Shared Left-Through-Right	C	18.9	E	44.8
Eastbound Left	A	9.7	A	8.8
Westbound Left	A	8.5	B	11.7
Southbound Shared Left-Through-Right	C	18.9	D	27.3
Indian Plaza and 75th Street (22)				
Eastbound Left	A	7.3	A	7.4
Southbound Shared Left-Right	A	8.8	A	9.2



Table 7 – Existing Level of Service and Delay - ‘event’ Peak Hour

Intersection	Existing Conditions	
	Special Peak	
Signalized Intersections	LOS	DELAY
Camelback Road and Buckboard Trail/73rd Street (8)		
Overall Intersection	B	19.9
Eastbound Left	B	13.2
Eastbound Through	B	17.0
Westbound Shared Through-Right	B	14.8
Northbound Left	C	28.4
Northbound Right	C	28.9
Southbound Left	C	24.7
Southbound Right	C	24.7
Unsignalized Intersections		
Camelback Road and Saddlebag Lane (15)		
Northbound Shared Left-Right	-	-
Westbound Left	A	9.6
Camelback Road and 75th Street (21)		
Northbound Shared Left-Through-Right	A	9.6
Eastbound Left	A	7.5
Westbound Left	A	7.8
Southbound Shared Left-Through-Right	A	9.7
Indian Plaza and 75th Street (22)		
Eastbound Left	A	7.3
Southbound Shared Left-Right	A	8.6





5. PROJECTED TRAFFIC

5.1. TRIP GENERATION

The trip generation for the proposed development was calculated utilizing the Institute of Transportation Engineers (ITE) publication entitled *Trip Generation, 10th Edition*. The ITE trip generation rates and fitted curve equations are based on studies that measure trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of lane use type. This publication is the standard for the transportation engineering profession.

The City Center

Existing Development

According to Maricopa County Assessor's website, the 2.72-acre site was occupied by the following land uses:

- Office 68,782 square feet
- Restaurant (Vacant) 1,020 square feet

As of July 2016, the restaurant parcel was vacant, previously The Upton, and so it was not included in the trip generation calculations. The trip generation for the existing land uses was calculated utilizing ITE Land Use 710 – General Office. In order to determine a rate for the 'event' peak hour the time of day distributions found in Appendix A of the *Trip Generation, 10th Edition* were used to determine what percentage of the weekday trips that occurred during the 'event' peak hour. Trip generation calculations are shown in **Table 8** below. Detailed trip generation calculations are provided in **Appendix G**.

Table 8 – Trip Generation – Existing City Center Development

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
				Total	Total	In	Out	Total	In	Out	Total	In	Out
General Office	710	68.78	1000 SF GFA	738	91	78	13	80	13	67	4	1	3
Total				738	91	78	13	80	13	67	4	1	3

Potential Development under Existing Zoning

The existing site is currently zoned for Highway Commercial (C-3) land uses. C-3 zoning is intended to permit most type of commercial activities located along major streets, including shopping and office uses. With a total lot area of 118,630 SF (2.72 acres), and a maximum floor-to-area (FAR) of 1.3, allows for 154,219 SF of developable area.

Utilizing ITE Land Use 710 General Office and Land Use 820 Shopping Center, the trip generation under the existing zoning was calculated as shown in **Table 9** below. Detailed trip generation calculations are provided in **Appendix G**.



Table 9 – Trip Generation (Existing Zoning)

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
				Total	Total	In	Out	Total	In	Out	Total	In	Out
General Office	710	77.11	1000 SF GFA	825	99	85	14	89	14	75	4	1	3
Shopping Center	820	77.11	1000 SF GLA	5,038	190	118	72	448	215	233	35	17	18
Total				5,863	289	203	86	537	229	308	39	18	21

Proposed Development

The proposed City Center development has three (3) options. The following are the land uses proposed for the three (3) possible options:

- **Option 1**
 - Hotel 214 rooms
 - Multi-Family Residential 106 units
 - Retail/Restaurant 41,109 square feet
- **Option 2**
 - Multi-Family Residential 237 units
 - Retail/Restaurant 46,887 square feet
- **Option 3**
 - Hotel 449 rooms
 - Retail/Restaurant 46,887 square feet

For the purposes of this report, as a conservative approach, the option with the highest trip generation, Option 3, was selected as the basis for the analysis.

The trip generation for the proposed City Center development were calculated utilizing ITE Land Use 310 – Hotel and Land Use 820 – Shopping Center. In order to determine a rate for the ‘event’ peak hour the time of day distributions found in Appendix A of the *Trip Generation, 10th Edition* were used to determine what percentage of the weekday trips occurred during the ‘event’ peak hour. Trip generation calculations are shown in **Table 10** below. Detailed trip generation calculations are provided in **Appendix G**.



Table 10 – Trip Generation – Proposed City Center

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
				Total	Total	In	Out	Total	In	Out	Total	In	Out
Hotel	310	449	Rooms	4,642	219	129	90	311	159	152	186	95	91
Shopping Center	820	46,887	1000 SF GFA	1,770	44	27	17	179	86	93	12	6	6
Total				6,412	263	156	107	490	245	245	198	101	97
Internal Interaction (10%)				-641	-26	-16	-11	-49	-25	-25	-20	-10	-10
Other Travel Modes (5%)				-321	-13	-8	-5	-25	-12	-12	-10	-5	-5
Total				5,450	224	133	91	417	208	208	168	86	82

Due to the mixture of residential, hotel, and commercial uses within the proposed development and the immediate area, some trips will occur without utilizing the adjacent street network by walking or by combining trips. Therefore, the number of actual trips generated by the proposed development will be lower than the anticipated total trip generation. It is appropriate to apply a 10 percent reduction to account for this internal capture.

Since the proposed development is located within the entertainment district of Old Town Scottsdale, users of the proposed development will have walkable access to alternative modes of transportation including the Old Town Trolley and the city buses. To account for alternative modes of transportation including walking, biking, and transit, a 5 percent reduction was applied to the total trip generation.

The proposed City Center development is anticipated to generate 5,450 weekday daily trips with 224, 417, and 168 vehicles during the AM, PM, and ‘event’ peak hours, respectively.

The Mint

Existing Development

According to Maricopa County Assessor’s website, the 1.31-acre site was occupied by the following land uses:

- Office 3,860 square feet
- Restaurant 11,168 square feet

From the Maricopa County Assessors site, it was determined that the 11,168 square foot restaurant is The Mint, which is an upscale night club. The operating hours for the existing Mint are from 10:00 PM to 2:00 AM so there are no trips generated for the typical AM and PM peak hours. The trip generation for the existing land uses was calculated utilizing ITE Land Use 710 – General Office and Land Use 925 – Drinking Place. In order to determine a rate for the ‘event’ peak hour the time of day distributions found in Appendix A of the *Trip Generation, 10th Edition* were used to determine what percentage of the weekday trips occurred during the ‘event’ peak hour. Trip generation calculations are shown in **Table 11** below. Detailed trip generation calculations are provided in **Appendix G**.



Table 11 – Trip Generation – Existing Mint Development

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
				Total	Total	In	Out	Total	In	Out	Total	In	Out
General Office	710	3.86	1000 SF GFA	45	30	26	4	5	1	4	0	0	0
Drinking Place	925	11.168	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	173	118	55
Total				45	30	26	4	5	1	4	173	118	55

Potential Development under Existing Zoning

The existing site is currently zoned for Highway Commercial (C-3) land uses. C-3 zoning is intended to permit most type of commercial activities located along major streets, including shopping and office uses. With a total lot area of 56,976 SF (1.31 acres), and a maximum floor-to-area (FAR) of 1.3, allows for 74,069 SF of developable area.

Utilizing ITE Land Use 710 General Office and Land Use 820 Shopping Center, the trip generation under the existing zoning was calculated as shown in **Table 12** below. Detailed trip generation calculations are provided in **Appendix G**.

Table 12 – Trip Generation (Existing Zoning)

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
				Total	Total	In	Out	Total	In	Out	Total	In	Out
General Office	710	37.03	1000 SF GFA	405	61	52	9	44	7	37	2	0	2
Shopping Center	820	37.03	1000 SF GLA	3,060	170	105	65	261	125	136	21	10	11
Total				3,465	231	157	74	305	132	173	23	10	13

Proposed Development

The proposed Mint development has two (2) options. The following are the land uses proposed for the two (2) possible options:

- **Option 1**
 - Multi-Family Residential 62 units
 - Retail/Restaurant 27,561 square feet
- **Option 2**
 - Hotel 116 rooms
 - Retail/Restaurant 28,016 square feet

For the purposes of this report, as a conservative approach, the option with the highest trip generation, Option 2, was selected as the basis for the analysis.

The trip generation for the proposed Mint development were calculated utilizing ITE Land Use 310 – Hotel and Land Use 820 – Shopping Center. In order to determine a rate for the ‘event’ peak hour the time of day distributions found in Appendix A of the *Trip Generation, 10th Edition* were used to



determine what percentage of the weekday trips occurred during the ‘event’ peak hour. Trip generation calculations are shown in **Table 13** below. Detailed trip generation calculations are provided in **Appendix G**.

Table 13 – Trip Generation – Proposed Mint

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
				Total	Total	In	Out	Total	In	Out	Total	In	Out
Hotel	310	116	Rooms	883	53	31	22	61	31	30	35	18	17
Shopping Center	820	28.016	1000 SF GFA	1,058	26	16	10	107	51	56	7	3	4
Total				1,941	79	47	32	168	82	86	42	21	21
Internal Interaction (10%)				-194	-8	-5	-3	-17	-8	-9	-4	-2	-2
Other Travel Modes (5%)				-97	-4	-2	-2	-8	-4	-4	-2	-1	-1
Total				1,650	67	40	27	143	70	73	36	18	18

Due to the mixture of residential, hotel, and commercial uses within the proposed development and the immediate area some trips will occur without utilizing the adjacent street network by walking or by combining trips. Therefore, the number of actual trips generated by the proposed development will be lower than the anticipated total trip generation. It is appropriate to apply a 10 percent reduction to account for this internal capture.

Since the proposed development is located within the entertainment district of Old Town Scottsdale, users of the proposed development will have walkable access to alternative modes of transportation including the Old Town Trolley and the city buses. To account for alternative modes of transportation including walking, biking, and transit, a 5 percent reduction was applied to the total trip generation.

The proposed Mint development is anticipated to generate 1,650 weekday daily trips with 67, 143, and 36 vehicles during the AM, PM, and ‘event’ peak hours, respectively.

Maya Hotel

Existing Development

According to Maricopa County Assessor’s website, the 0.29-acre site was occupied by the following land uses:

- Office 4,651 square feet
- Restaurant 4,692 square feet

From the Maricopa County Assessors site, it was determined that the 4,692 square foot restaurant is The Dakota, which is an upscale night club. The operating hours for the existing Dakota are from 8:00 PM to 2:00 AM so there are no trips generated for the typical AM and PM peak hours. The trip generation for the existing land uses was calculated utilizing ITE Land Use 710 – General Office and Land Use 925 – Drinking Place. In order to determine a rate for the ‘event’ peak hour the time of



day distributions found in Appendix A of the *Trip Generation, 10th Edition* were used to determine what percentage of the weekday trips occurred during the ‘event’ peak hour. Trip generation calculations are shown in below. Detailed trip generation calculations are provided in **Appendix G**.

Table 14 – Trip Generation – Existing Maya Hotel Development

Land Use	ITE Code	Qty	Unit	Weekday Total	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
					Total	In	Out	Total	In	Out	Total	In	Out
General Office	54	4.65	1000 SF GFA	54	31	27	4	6	1	5	0	0	0
Drinking Place	925	4.69	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	73	50	23
Total				54	31	27	4	6	1	5	73	50	23

Potential Development under Existing Zoning

The existing site is currently zoned for Highway Commercial (C-3) land uses. C-3 zoning is intended to permit most type of commercial activities located along major streets, including shopping and office uses. With a total lot area of 12,812 SF (0.29 acres), and a maximum floor-to-area (FAR) of 1.3, allows for 16,656 SF of developable area.

Utilizing ITE 820 Shopping Center, the trip generation under the existing zoning was calculated as shown in **Table 15** below. Detailed trip generation calculations are provided in **Appendix G**.

Table 15 – Trip Generation (Existing Zoning)

Land Use	ITE Code	Qty	Unit	Weekday Total	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
					Total	In	Out	Total	In	Out	Total	In	Out
Shopping Center	820	17	1000 SF GLA	1,777	160	99	61	144	69	75	12	6	6
Total				1,777	160	99	61	144	69	75	12	6	6

Proposed Development

The proposed Maya development includes the following proposed land use:

Hotel 164 rooms

The trip generation for the proposed Maya Hotel development were calculated utilizing ITE Land Use 310 – Hotel. In order to determine a rate for the ‘event’ peak hour the time of day distributions found in Appendix A of the *Trip Generation, 10th Edition* were used to determine what percentage of the weekday trips occurred during the ‘event’ peak hour. Trip generation calculations are shown in **Table 16** below. Detailed trip generation calculations are provided in **Appendix G**.



Table 16 – Trip Generation – Proposed Maya Hotel

Land Use	ITE Code	Qty	Unit	Weekday Total	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
					Total	In	Out	Total	In	Out	Total	In	Out
Hotel	310	164	Rooms	1,425	77	45	32	97	49	48	57	29	28
Total				1,425	77	45	32	97	49	48	57	29	28
Internal Interaction (10%)				-143	-8	-5	-3	-10	-5	-5	-6	-3	-3
Other Travel Modes (5%)				-71	-4	-2	-2	-5	-2	-2	-3	-1	-1
Total				1,211	65	38	27	82	42	41	48	25	24

Due to the mixture of residential, hotel, and commercial uses within the proposed development and the immediate area some trips will occur without utilizing the adjacent street network by walking or by combining trips. Therefore, the number of actual trips generated by the proposed development will be lower than the anticipated total trip generation. It is appropriate to apply a 10 percent reduction to account for this internal capture.

Since the proposed development is located within the entertainment district of Old Town Scottsdale, users of the proposed development will have walkable access to alternative modes of transportation including the Old Town Trolley and the city buses. To account for alternative modes of transportation including walking, biking, and transit, a 5 percent reduction was applied to the total trip generation.

The proposed Maya Hotel development is anticipated to generate 1,211 weekday daily trips with 65, 82, and 48 vehicles during the AM, PM, and 'event' peak hours, respectively.

Future Development

The future land use at each of the ten (10) additional parcels identified for future development as part of The Scottsdale Collection development is currently unknown. For the purpose of this report, it was determined that the future developments will generate a number of trips consistent with each parcel's existing land use and are therefore captured in the existing traffic volumes.

5.2. TRIP GENERATION COMPARISON

The City Center

Existing Development vs. Proposed Development

A comparison between the trips generated by the existing development (office complex) and the proposed City Center development is shown in **Table 17**.



**Table 17 – Trip Generation Comparison
(Existing vs. Proposed City Center)**

Land Use	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
	Total	Total	In	Out	Total	In	Out	Total	In	Out
Existing Land Use - General Office	738	91	78	13	80	13	67	3.69	1	2.69
City Center Option 3 - Hotel & Shopping Center	5,450	224	133	91	417	208	208	168	86	82
Difference	4,712	133	55	78	337	195	141	164	85	79

Table 17 shows that the proposed City Center development will produce 4,712 more weekday daily trips, with 133 more trips during the AM peak hour, 337 more trips during the PM peak hour, and 164 more trips during the ‘event’ peak hour than the existing development.

Existing Zoning (1.3 F.A.R) vs. Proposed Development

A comparison between the trips generated with the buildout under the existing zoning (C-3) and the proposed City Center development is shown in **Table 18**.

**Table 18 – Trip Generation Comparison
(Existing Zoning vs. Proposed City Center)**

Land Use	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
	Total	Total	In	Out	Total	In	Out	Total	In	Out
City Center - 1.3 F.A.R	5,863	289	203	86	537	229	308	39	18	21
City Center Option 3 - Hotel & Shopping Center	5,450	224	133	91	417	208	208	168	86	82
Difference	-413	-65	-70	5	-121	-21	-100	129	68	61

Table 18 shows that the proposed City Center development will produce 413 less weekday daily trips, with 65 less trips during the AM peak hour, 121 less trips during the PM peak hour, and 129 more trips during the ‘event’ peak hour than the build out under the existing zoning.

The Mint

Existing Development vs. Proposed Development

A comparison between the trips generated by the existing development (office complex and night club) and the proposed Mint development is shown in **Table 19**.

**Table 19 – Trip Generation Comparison
(Existing vs. Proposed Mint)**

Land Use	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
	Total	Total	In	Out	Total	In	Out	Total	In	Out
Existing Land Use - General Office & Drinking Place	45	30	26	4	5	1	4	173	118	55
The Mint Option 2 - Hotel & Shopping	1,650	67	40	27	143	70	73	36	18	18
Difference	1,605	37	14	23	138	69	69	-137	-100	-37



Table 19 shows that the proposed Mint development will produce 1,605 more weekday daily trips, with 37 more trips during the AM peak hour, 138 more trips during the PM peak hour, and 137 fewer trips during the ‘event’ peak hour than the existing development. It should be noted that the negative difference during the ‘event’ peak hour is due to the unique hours of operation for the existing Mint development.

Existing Zoning (1.3 F.A.R) vs. Proposed Development

A comparison between the trips generated with the buildout under the existing zoning (C-3) and the proposed Mint development is shown in **Table 20**.

**Table 20 – Trip Generation Comparison
(Existing Zoning (1.3 F.A.R) vs. Proposed Mint Development)**

Land Use	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
	Total	Total	In	Out	Total	In	Out	Total	In	Out
The Mint - 1.3 F.A.R	3,465	231	157	74	305	132	173	23	10	13
The Mint Option 2 - Hotel & Shopping	1,650	67	40	27	143	70	73	36	18	18
Difference	-1,815	-164	-117	-47	-162	-62	-100	13	8	5

Table 20 shows that the proposed Mint development will produce 1,815 less weekday daily trips, with 164 less trips during the AM peak hour, 162 less trips during the PM peak hour, and 13 more trips during the ‘event’ peak hour than the build out under the existing zoning.

Maya Hotel

Existing Development vs. Proposed Development

A comparison between the trips generated by the existing development (office complex and night club) and the proposed Maya Hotel development is shown in **Table 21**.

**Table 21 – Trip Generation Comparison
(Existing vs. Proposed Maya Hotel)**

Land Use	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
	Total	Total	In	Out	Total	In	Out	Total	In	Out
Existing Land Use - General Office & Drinking Place	54	31	27	4	6	1	5	73	50	23
The Maya - Hotel	1,211	65	38	27	82	42	41	48	25	24
Difference	1,157	34	11	23	76	41	36	-25	-25	1

Table 21 shows that the proposed Maya Hotel development will produce 1,157 more weekday daily trips, with 34 more trips during the AM peak hour, 76 more trips during the PM peak hour, and 25 fewer trips during the ‘event’ peak hour than the existing development. It should be noted that the negative difference during the ‘event’ peak hours is due to the unique hours of operation for the existing Dakota development.



Existing Zoning (1.3 F.A.R) vs. Proposed Development

A comparison between the trips generated with the buildout under the existing zoning (C-3) and the proposed Maya Hotel development is shown in **Table 22**.

**Table 22 – Trip Generation Comparison
(Existing Zoning (1.3 F.A.R) vs. Proposed Maya Hotel)**

Land Use	Weekday	AM Peak Hour			PM Peak Hour			Special Peak - 10:30 PM		
	Total	Total	In	Out	Total	In	Out	Total	In	Out
Maya Hotel - 1.3 F.A.R	1,777	160	99	61	144	69	75	12	6	6
The Maya - Hotel	1,211	65	38	27	82	42	41	48	25	24
Difference	-566	-95	-61	-34	-62	-27	-34	36	19	17

Table 22 shows that the proposed Maya Hotel will produce 566 less weekday daily trips, with 95 less trips during the AM peak hour, 62 less trips during the PM peak hour, and 36 more trips during the ‘event’ peak hour than the build out under the existing zoning.

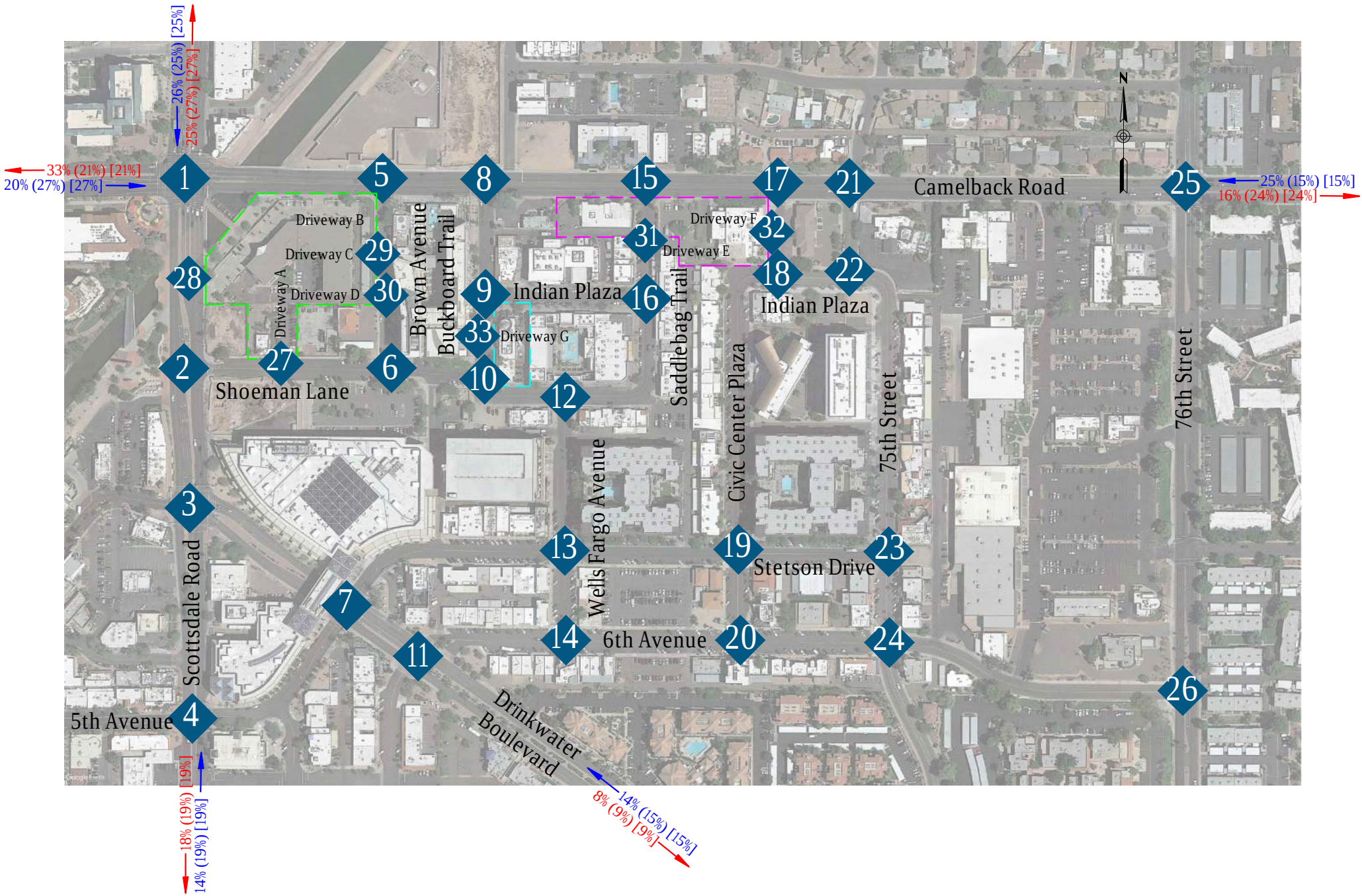
5.3. TRIP DISTRIBUTION AND ASSIGNMENT

The trip distribution procedure determines the general pattern of travel for vehicles entering and leaving the proposed development. The trip distribution for The Scottsdale Collection development is based on the distribution of the existing traffic. This project is being developed in a primarily developed area, so it can be assumed that the existing trip distribution will remain. The trip distribution is shown in **Figure 6**.

The trip assignment was generally based on proximity of the driveways, permitted turn movements, as well as ease and probability of use.

For the purposes of this report it is assumed that The Scottsdale Collection development will be a phased project. For the 5 year (year 2025) analysis it is assumed that both the City Center and the Maya Hotel parcels will be complete. For the 10 year (year 2030) analysis it is assumed that all three (3) of the proposed parcels will be developed.

It was assumed that once the proposed developments were constructed, the existing developments would be removed, so the difference in the existing versus the proposed was used as the site generated traffic volumes. The site generated traffic volumes for both the year 2025 and the year 2030 are shown in **Figure 7**, **Figure 8**, **Figure 9**, and **Figure 10**, respectively.



Legend

- AM(PM)[Event] Inbound Trip Distribution Percentages
- AM(PM)[Event] Outbound Trip Distribution Percentages

FIGURE 6 | TRIP DISTRIBUTION



FIGURE 7 | YEAR 2025 SITE TRAFFIC VOLUMES



FIGURE 8 | YEAR 2025 SITE TRAFFIC VOLUMES - SITE DRIVEWAYS



FIGURE 9 | YEAR 2030 SITE TRAFFIC VOLUMES

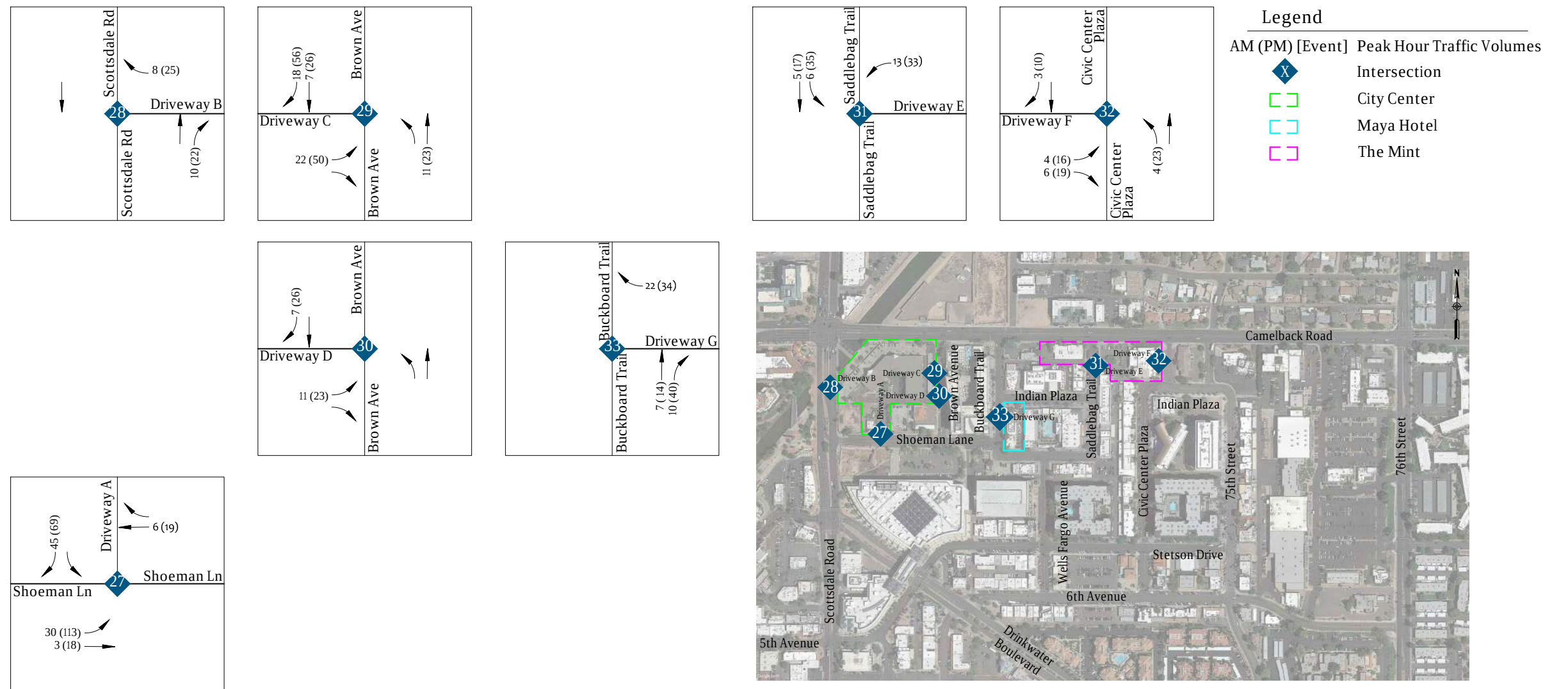


FIGURE 10 | YEAR 2030 SITE TRAFFIC VOLUMES - SITE DRIVEWAYS



6. FUTURE CONDITIONS (YEAR 2025)

The Scottsdale Collection development is anticipated to be constructed in phases. It is anticipated that the City Center and The Maya parcels will be completed by the year 2025. This section analyzes the effects the proposed development will have on the surrounding roadway network during the year of 2025.

6.1. CAPITAL IMPROVEMENT PROJECTS

The City of Scottsdale has plans to install a traffic signal at the intersection of Camelback Road and Saddlebag Trail (15). The signal is anticipated to be installed and incorporated in the year 2025 no build and build capacity analysis. The future traffic signal is anticipated to operate with a 120-second cycle length with optimized splits.

6.2. YEAR 2025 BACKGROUND TRAFFIC VOLUMES

According to the 2019 Maricopa Associations of Governments (MAG) socioeconomic projections within the proposed study area, it is estimated that in the year 2030 the population will be approximately 79,910. MAG estimates that the 2018 population of the surrounding area to be 68,987. This results in an approximate annual growth rate of 1.23%.

As a conservative approach, a 2.0% annual growth rate was utilized. See [Appendix H](#) for the MAG socioeconomic projections. The 2.0% annual growth rate is applied to all existing traffic volumes through the year 2025.

Additionally, several development projects within the vicinity of The Scottsdale Collection are in various stages of submittal and approval with the City of Scottsdale. The following project will be considered when projecting the future background volumes.

Gentry on the Green

The proposed Gentry on the Green development is anticipated to be located on the southeast corner (SEC) and southwest corner (SWC) of Camelback Road and 78th Street. The additional traffic volumes associated with the proposed development were from the *Gentry on The Green Traffic Impact and Mitigation Analysis*, dated November 8, 2019, completed by Lokahi, LLC. The proposed development will consist of 1,214 residential units, 10,000 square feet of restaurant, and 10,000 square feet of retail. The proposed site traffic volumes for the year 2025 analysis are from Figure 9 of the above-mentioned report. The Gentry on the Green site traffic volumes are shown in [Figure 11](#).

Waterview

The proposed Waterview development is anticipated to be located on the northwest (NWC) of 73rd Street and Camelback Road. The additional traffic volumes associated with the proposed development were from the *Waterview Traffic Impact Analysis*, dated June 2016, completed by EPS.



The proposed development will consist of 240 residential units, a 269-room hotel, 5,742 square feet of restaurant, and 4,171 square feet of retail. The proposed site traffic volumes are for the year 2025 analysis are from Figure 14 and Figure 15 of the above-mentioned report. The Waterview site traffic volumes are shown in **Figure 12**.

Marquee

The proposed Marquee Office Building development is anticipated to be located on the southeast corner (SEC) of Scottsdale Road and Shoeman Lane. The additional traffic volumes associated with the proposed development were from the *Traffic Impact and Mitigation Analysis for the Marquee Office Building*, dated February 19, 2019, completed by United Civil Group. The proposed development will consist of 250,900 square feet of office, and 21,000 square feet of retail. The proposed site traffic volumes for the year 2025 analysis are from Figure 6 of the above-mentioned report. The Marquee site traffic volumes are shown in **Figure 13**.

The year 2025 background traffic volumes include the grown traffic volumes as well as the site traffic volumes from the Gentry on the Green, Waterview and Marquee development. The year 2025 background traffic volumes are shown in **Figure 14** and **Figure 15**.

6.3. YEAR 2025 BUILD TRAFFIC VOLUMES

When the site traffic (**Figure 7** and **Figure 8**) is added to the year 2025 background traffic (**Figure 14** and **Figure 15**), the result is the 2025 build traffic volumes. This represents the traffic volumes with the build out of The Scottsdale Collection development. The year 2025 build traffic volumes are shown in **Figure 16** and **Figure 17**.

6.4. YEAR 2025 NO BUILD CAPACITY ANALYSIS

The capacity and level of service for the study area intersections were evaluated for the 2025 no build traffic volumes. A PHF of 0.92 was used.

The results of the year 2025 no build capacity analyses reveal that all study area intersections operate with movements of a LOS D or better or at the same level of service as the existing conditions, with the exception of the following:

Scottsdale Road and Camelback Road (1) – Signalized

- EB through PM peak hour operates at LOS E
- WB through PM peak hour operates at LOS E

Camelback Road and Brown Avenue (5) – Unsignalized

- NB shared left-right PM peak hour operates at LOS F



Camelback Road and 75th Street (21) – Unsignalized

- NB shared left-through-right PM peak hour operates at LOS F
- SB shared left-through-right PM peak hour operates at LOS F

Camelback Road and Miller Road (25) – Signalized

- EB through PM peak hour operates at LOS F
- EB shared through-right PM peak hour operates at LOS F
- SB through PM peak hour operates at LOS E

The year 2025 AM and PM peak hour level of service and delay for all studied intersections are shown in [Table 23](#), [Table 24](#), and [Table 25](#). See [Table 26](#) for all studied intersections included in the ‘event’ peak hour. See [Figure 18](#) for the year 2025 No Build AM, PM, and ‘event’ peak hour capacity analysis. The detailed capacity analysis sheets can be found in [Appendix I](#).

6.5. YEAR 2025 BUILD CAPACITY ANALYSIS

The capacity and level of service for the study area intersections were evaluated for the year 2025 build traffic volumes. A PHF of 0.92 was used.

The results of the year 2025 build capacity analyses reveal that all movements operate at a LOS D or better or at the same level of service as the 2025 no-build conditions.

The year 2025 AM and PM peak hour level of service and delay for all studied intersections are shown in [Table 23](#), [Table 24](#), and [Table 25](#). See [Table 26](#) for all studied intersections included in the ‘event’ peak hour.

See [Figure 19](#) and [Figure 20](#) year 2025 AM, PM, and ‘event’ peak hour capacity analysis. The detailed capacity analysis sheets can be found in [Appendix J](#).



Table 23 – Year 2025 Level of Service and Delay – Signalized Intersections

Intersection	Year 2025 No Build				Year 2025 Build			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
Signalized Intersections	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY
Scottsdale Road and Camelback Road (1)								
Overall Intersection	D	43.3	D	50.5	D	43.7	D	50.8
Eastbound Left	E	60.7	E	55.1	E	60.7	E	69.4
Eastbound Through	D	44.0	E	70.3	D	44.0	E	71.2
Eastbound Right	D	52.2	D	41.5	D	48.2	D	38.9
Westbound Left	D	46.7	E	56.3	D	48.4	E	77.6
Westbound Through	D	52.8	E	58.3	D	54.4	D	44.0
Westbound Shared Through-Right	D	53.1	E	59.0	D	54.7	D	44.4
Northbound Left	D	45.1	D	40.1	D	45.1	D	52.6
Northbound Through	C	25.8	C	32.3	C	26.2	C	28.3
Northbound Shared Through-Right	C	26.7	D	35.8	C	27.2	C	34.2
Southbound Left	E	58.8	E	58.4	E	56.8	E	75.6
Southbound Through	D	39.6	D	52.9	D	41.1	D	52.2
Southbound Right	C	22.3	C	30.7	C	23.0	C	28.0
Scottsdale Road and Drinkwater Boulevard (3)								
Overall Intersection	B	12.2	B	14.6	B	12.6	B	18.0
Eastbound Shared Left-Through-Right	D	36.5	C	28.7	D	36.0	C	26.9
Westbound Left	C	27.1	B	16.4	C	26.5	C	25.1
Westbound Through	C	27.4	B	15.5	C	26.8	C	23.2
Westbound Right	D	45.6	D	46.7	D	48.0	D	53.9
Northbound Left	A	0.1	A	3.7	A	0.1	A	6.2
Northbound Shared Through-Right	A	0.6	A	7.0	A	0.6	B	11.6
Southbound Left	A	7.8	B	14.2	A	8.1	B	16.5
Southbound Shared Through-Right	A	0.6	A	1.9	A	0.6	A	2.3
Scottsdale Road and 5th Avenue (4)								
Overall Intersection	A	7.1	A	9.6	A	7.0	A	9.8
Eastbound Shared Left-Through-Right	C	25.8	C	25.2	C	25.8	C	25.2
Westbound Left	C	25.2	C	23.2	C	25.2	C	23.2
Westbound Shared Through-Right	C	25.3	C	22.4	C	25.3	C	22.4
Northbound Left	A	3.2	A	5.1	A	3.2	A	5.1
Northbound Shared Through-Right	B	10.4	B	12.5	B	10.4	B	13.0
Southbound Left	A	4.0	A	8.1	A	4.1	A	8.5
Southbound Shared Through-Right	A	1.2	A	2.7	A	1.3	A	2.9



Table 24 – Year 2025 Level of Service and Delay – Signalized Intersections

Intersection	Year 2025 No Build				Year 2025 Build			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
Signalized Intersections	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY
Drinkwater Boulevard and Stetson Drive/5th Avenue (7)								
Overall Intersection	D	41.3	C	32.0	D	41.1	C	34.2
Eastbound Left	D	53.4	D	39.1	D	53.4	D	53.5
Eastbound Shared Through-Right	D	41.5	C	25.2	D	41.3	D	37.3
Westbound Left	D	45.6	D	42.3	D	45.5	D	43.7
Westbound Through	D	43.4	D	41.6	D	43.2	D	41.2
Westbound Right	D	52.9	D	37.0	D	52.3	D	36.2
Northbound Left	A	6.9	B	12.5	A	7.1	B	12.7
Northbound Shared Through-Right	B	11.7	C	28.1	B	11.7	C	23.9
Southbound Left	A	6.9	B	11.6	A	7.1	B	12.0
Southbound Shared Through-Right	B	11.9	C	30.8	B	11.9	C	26.1
Camelback Road and Buckboard Trail/73rd Street (8)								
Overall Intersection	B	19.2	C	24.2	B	19.4	C	25.0
Eastbound Left	C	20.9	C	28.9	C	21.3	C	31.2
Eastbound Through	B	16.3	C	25.9	B	16.4	C	27.0
Westbound Shared Through-Right	B	19.4	B	19.0	B	19.5	B	19.3
Northbound Left	C	25.6	C	27.3	C	25.9	C	27.9
Northbound Right	C	25.0	C	30.1	C	25.0	C	30.4
Southbound Left	C	25.7	C	25.8	C	25.7	C	25.8
Southbound Right	C	25.5	C	25.6	C	25.6	C	25.6
Camelback Road and Saddlebag Trail (15)								
Overall Intersection	A	1.0	A	1.2	A	1.0	A	1.4
Eastbound Shared Through-Right	A	0.9	A	1.4	A	0.9	A	1.7
Westbound Left	A	0.0	A	0.0	A	1.0	A	2.1
Westbound Through	A	1.1	A	0.7	A	1.1	A	0.7
Camelback Road and Miller Road (25)								
Overall Intersection	D	42.6	E	59.7	D	43.2	D	48.0
Eastbound Left	D	54.2	C	33.8	D	54.6	C	29.4
Eastbound Through	D	48.3	F	76.3	D	48.4	E	55.2
Eastbound Shared Through-Right	D	48.6	F	78.7	D	48.6	E	57.5
Westbound Left	D	41.1	E	62.1	D	41.4	D	54.7
Westbound Through	D	48.5	D	46.8	D	49.2	D	42.0
Westbound Shared Through-Right	D	48.2	D	46.9	D	48.9	D	41.9
Northbound Left	D	35.0	D	44.2	D	35.6	D	47.5
Northbound Through	C	34.0	D	52.8	C	34.5	D	44.0
Northbound Right	C	30.9	D	42.6	C	31.3	D	36.8
Southbound Left	C	23.0	D	40.9	C	23.5	D	41.3
Southbound Through	C	26.8	E	55.0	C	27.2	D	45.4
Southbound Right	C	22.7	D	35.4	C	23.0	C	30.9



Table 25 – Year 2025 Level of Service and Delay – Unsignalized Intersections

Intersection	Year 2025 No Build				Year 2025 Build			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
Unsignalized Intersections	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY
Scottsdale Road and Shoeman Lane (2)								
Westbound Right	A	9.9	B	14.8	B	10.2	C	17.2
Southbound Left	B	11.3	A	9.9	B	11.7	B	10.6
Camelback Road and Brown Avenue (5)								
Northbound Shared Left-Right	C	18.1	F	166.8	C	22.2	F	399.7
Westbound Left	A	9.9	B	13.9	B	10.1	C	15.4
Shoeman Lane and Brown Avenue (6)								
Eastbound Left	A	7.5	A	8.0	A	7.5	A	8.0
Southbound Shared Left-Right	B	12.2	B	12.7	B	12.3	B	12.9
Stetson Drive and Civic Center Plaza (19)								
Northbound Shared Left-Through-Right	A	9.7	B	11.2	A	9.7	B	11.2
Eastbound Left	A	7.2	A	7.3	A	7.2	A	7.3
Westbound Left	A	7.3	A	7.3	A	7.3	A	7.3
Southbound Shared Left-Through-Right	A	9.9	B	10.1	A	9.9	B	10.1
Camelback Road and 75th Street (21)								
Northbound Shared Left-Through-Right	D	29.5	F	195.7	D	30.9	F	248.1
Eastbound Left	B	10.8	A	9.5	B	10.9	A	9.6
Westbound Left	A	9.0	B	13.9	A	9.0	B	14.3
Southbound Shared Left-Through-Right	D	28.4	F	52.9	D	29.7	F	59.3
Indian Plaza and 75th Street (22)								
Eastbound Left	A	7.3	A	7.5	A	7.3	A	7.5
Southbound Shared Left-Right	A	8.9	A	9.3	A	8.9	A	9.3
Shoeman Lane and Driveway A (27)								
Eastbound Left	-	-	-	-	A	7.6	A	7.9
Southbound Shared Left-Right	-	-	-	-	A	9.3	A	9.8
Scottsdale Road and Driveway B (28)								
Westbound Right	-	-	-	-	A	9.8	B	11.5
Brown Avenue and Driveway C (29)								
Northbound Left	-	-	-	-	A	0.0	A	0.0
Eastbound Shared Left-Right	-	-	-	-	B	10.8	B	11.2
Brown Avenue and Driveway D (30)								
Northbound Left	-	-	-	-	A	0.0	A	0.0
Eastbound Shared Left-Right	-	-	-	-	B	10.5	B	0.1



Table 26 – Year 2025 Level of Service and Delay - ‘event’ Peak Hour

Intersection	Year 2025 Build		Year 2025 No Build	
	Special Peak		Special Peak	
Signalized Intersections	LOS	DELAY	LOS	DELAY
Camelback Road and Buckboard Trail/73rd Street (8)				
Overall Intersection	C	20.6	C	20.6
Eastbound Left	B	14.0	B	14.0
Eastbound Through	B	17.6	B	17.7
Westbound Shared Through-Right	B	15.2	B	15.3
Northbound Left	C	28.8	C	28.8
Northbound Right	C	30.6	C	30.7
Southbound Left	C	25.1	C	25.1
Southbound Right	C	25.0	C	25.0
Camelback Road and Saddlebag Trail (15)				
Overall Intersection	A	1.1	A	1.0
Eastbound Shared Through-Right	A	1.3	A	1.1
Westbound Left	A	1.5	A	0.0
Westbound Through	A	0.9	A	0.8
Unsignalized Intersections				
Camelback Road and 75th Street (21)				
Northbound Shared Left-Through-Right	B	10.0	B	10.1
Eastbound Left	A	7.6	A	7.6
Westbound Left	A	7.9	A	8.0
Southbound Shared Left-Through-Right	B	10.1	B	10.3
Indian Plaza and 75th Street (22)				
Eastbound Left	A	7.3	A	7.3
Southbound Shared Left-Right	A	8.6	A	8.6

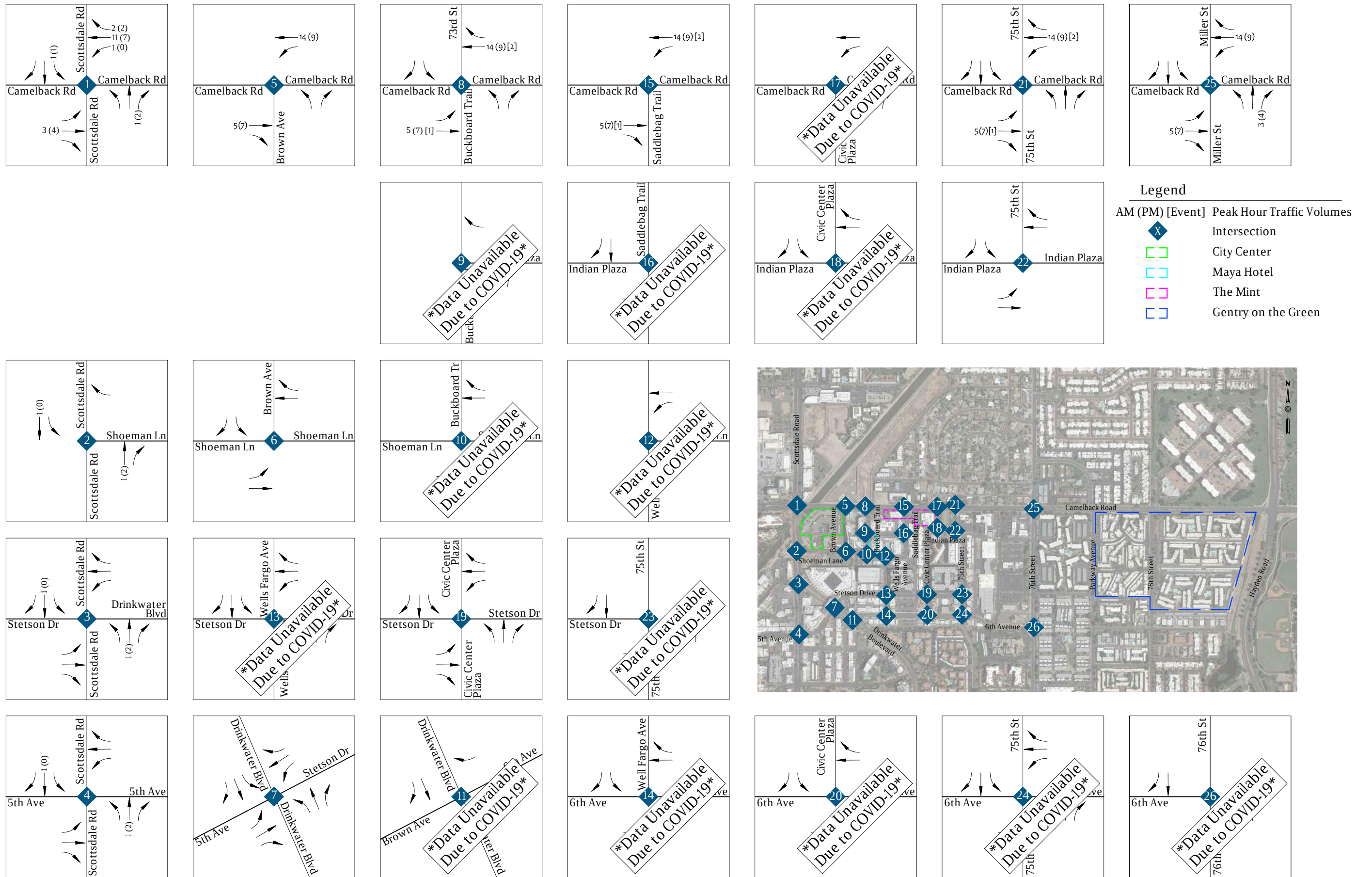


FIGURE 11 | YEAR 2025 GENTRY ON THE GREEN SITE TRAFFIC VOLUMES

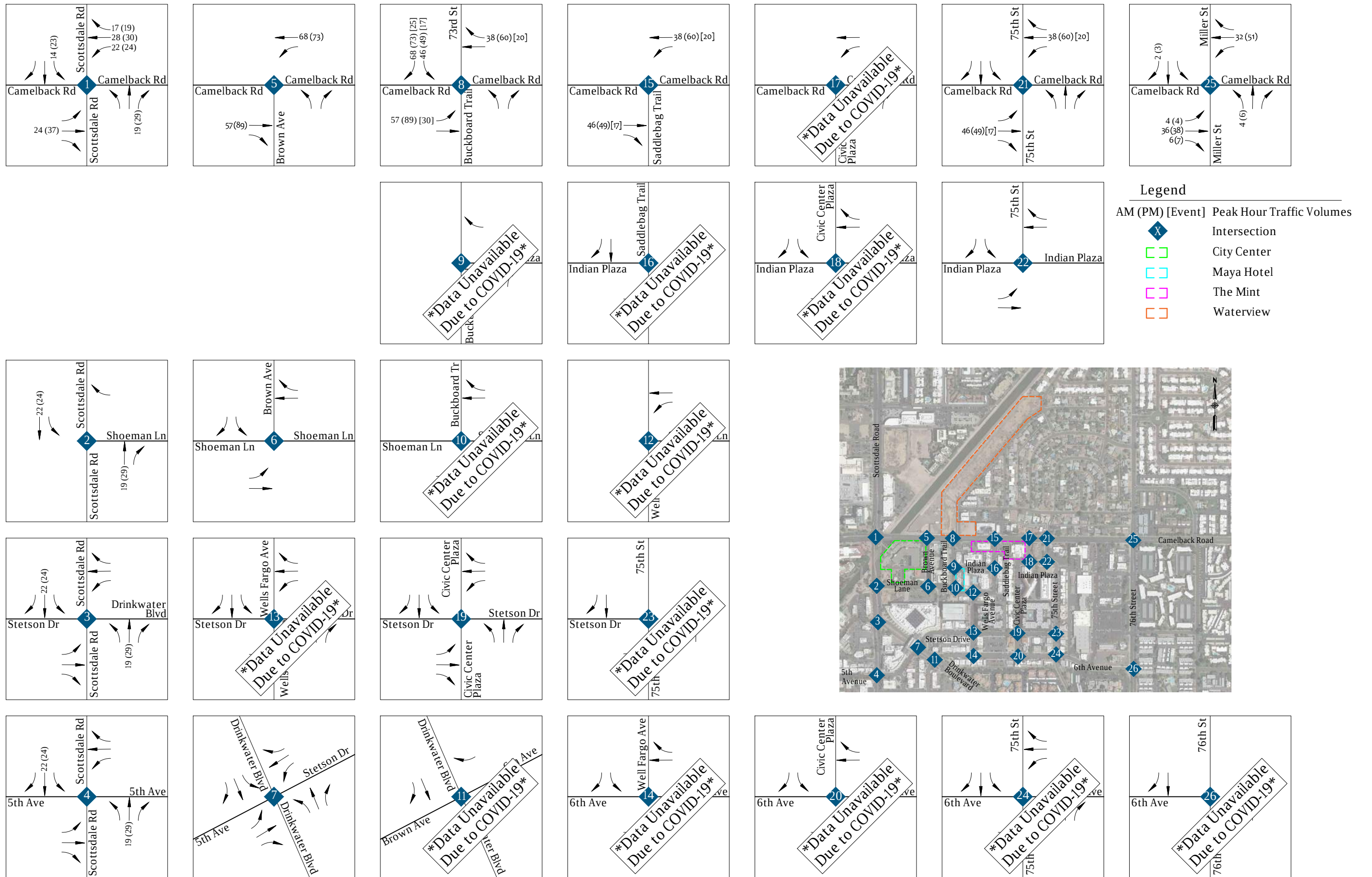


FIGURE 12 | YEAR 2025 WATERVIEW SITE TRAFFIC VOLUMES



FIGURE 13 | YEAR 2025 MARQUEE SITE TRAFFIC VOLUMES



FIGURE 14 | YEAR 2025 BACKGROUND TRAFFIC VOLUMES



FIGURE 15 | YEAR 2025 BACKGROUND TRAFFIC VOLUMES - SITE DRIVEWAYS

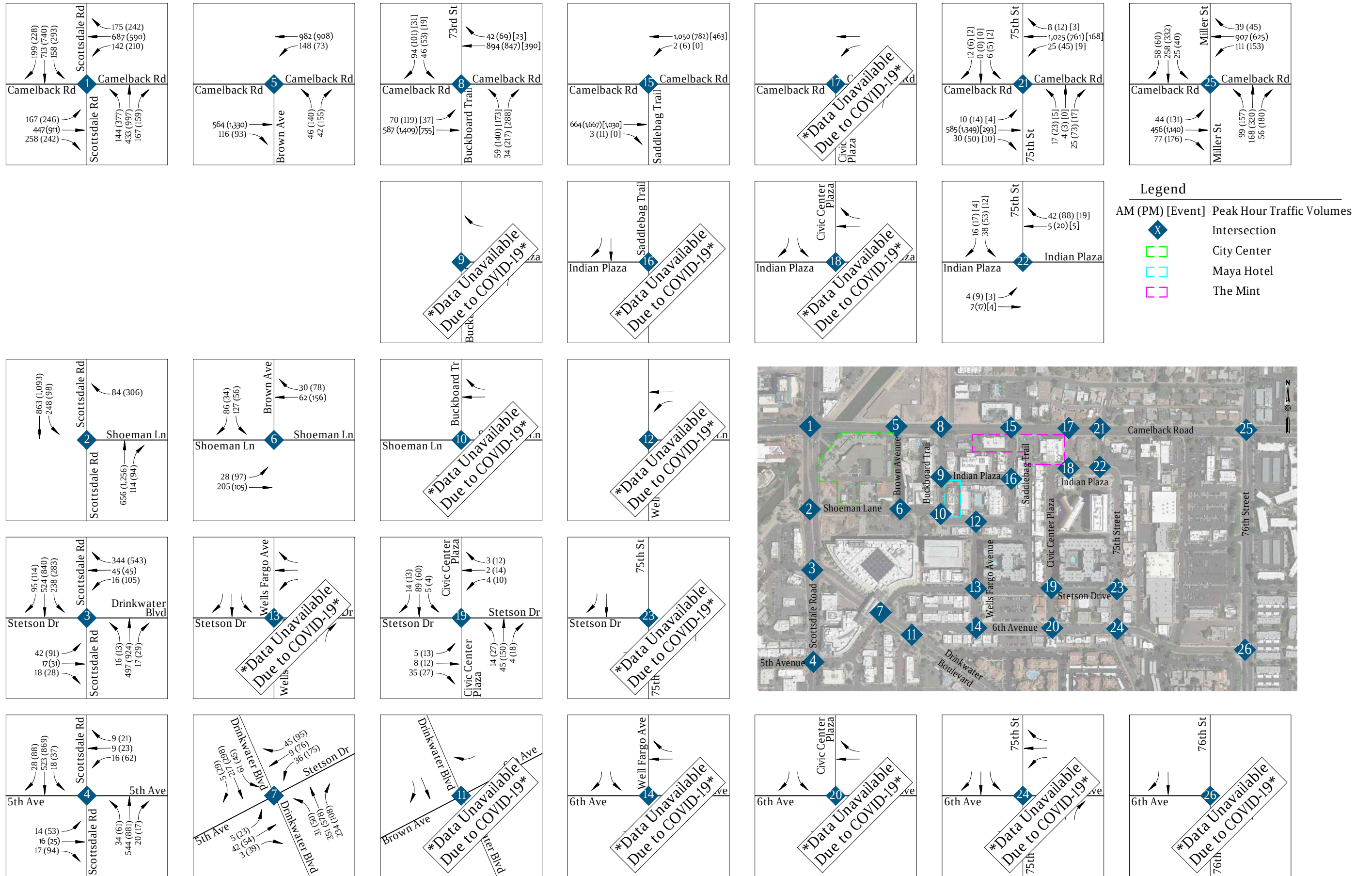


FIGURE 16 | YEAR 2025 BUILD TRAFFIC VOLUMES



FIGURE 17 | YEAR 2025 BUILD TRAFFIC VOLUMES - SITE DRIVEWAYS







FIGURE 20 | YEAR 2025 BUILD CAPACITY ANALYSIS - SITE DRIVEWAYS



7. FUTURE CONDITIONS (YEAR 2030)

It is anticipated that The Mint parcels will be completed by the year 2030. This section analyzes the effects the proposed development will have on the surrounding roadway network during the year of 2030.

7.1. YEAR 2030 BACKGROUND TRAFFIC VOLUMES

Similar to the year 2025 background traffic volumes described in detail in [Section 6.2](#), a 2.0% annual growth rate is applied to all existing traffic volumes through the year 2030. In addition, traffic volumes for several development projects within the vicinity of the proposed development were included in the background volumes. Detailed descriptions of these development and how they are accounted for is provided in [Section 6.2](#).

In addition to those previously added by the year 2025 an additional portion of the proposed Gentry on the Green project will be completed. The Gentry on the Green site traffic volumes are shown in [Figure 21](#).

The year 2030 background traffic volumes include the grown traffic volumes as well as the site traffic volumes from the Gentry on the Green, Waterview and Marquee development. The year 2030 background traffic volumes are shown in [Figure 22](#) and [Figure 23](#).

7.2. YEAR 2030 BUILD TRAFFIC VOLUMES

When the site traffic ([Figure 9](#) and [Figure 10](#)) is added to the year 2030 background traffic ([Figure 22](#) and [Figure 23](#)) the result is the 2030 build traffic volumes. This represents the traffic volumes with the build out of The Scottsdale Collection development. The year 2030 build traffic volumes are shown in [Figure 24](#) and [Figure 25](#).

7.3. YEAR 2030 NO BUILD CAPACITY ANALYSIS

The capacity and level of service for the study area intersection were evaluated for the 2030 no build traffic volumes. A PHF of 0.92 was used.

The results of the year 2030 no build capacity analyses reveal that all movements operate at a LOS D or better or at the same level of service as the 2025 no-build conditions, with the exception of the following:



Scottsdale Road and Camelback Road (1) – Signalized

- Overall intersection PM peak hour operates at LOS E
- NB shared through-right PM peak hour operates at LOS E
- SB through PM peak hour operates at LOS E

Camelback Road and Miller Road (25) – Signalized

- NB through PM peak hour operates at LOS E

Camelback Road and 75th Street (21) – Unsignalized

- NB shared left-through-right AM peak hour operates at LOS E
- SB shared left-through-right AM peak hour operates at LOS E

The year 2030 AM, PM, and ‘event’ peak hour level of service and delay for all signalized studied intersections are shown in [Table 27](#) and [Table 28](#). See [Table 29](#) for all unsignalized studied intersections. See [Figure 26](#) for the year 2030 no build AM, PM, and ‘event’ peak hour capacity analysis. The detailed capacity analysis sheets can be found in [Appendix K](#).

7.4. YEAR 2030 BUILD CAPACITY ANALYSIS

The capacity and level of service for the study area intersections were evaluated for the year 2030 build traffic volumes. A PHF of 0.92 was used.

The results of the year 2030 build capacity analyses reveal that all movements operate at a LOS D or better or at the same level of service as the 2030 no-build conditions, with the exception of the following:

Scottsdale Road and Camelback Road (1) – Signalized

- EB through PM peak hour operates at LOS F
- NB left PM peak hour operates at LOS E
- NB through PM peak hour operates at LOS E

The year 2030 AM, PM, and ‘event’ peak hour level of service and delay for all signalized studied intersections are shown in [Table 27](#) and [Table 28](#). See [Table 29](#) for all unsignalized studied intersections.

See [Figure 27](#) and [Figure 28](#) year 2030 AM, PM, and ‘event’ peak hour capacity analysis. The detailed capacity analysis sheets can be found in [Appendix L](#).



Table 27 – Year 2030 Level of Service and Delay – Signalized Intersections

Intersection	Year 2030 No Build				Year 2030 Build			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
Signalized Intersections	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY
Scottsdale Road and Camelback Road (1)								
Overall Intersection	D	46.9	E	57.9	D	44.7	E	77.9
Eastbound Left	E	65.8	E	55.5	E	65.8	E	61.2
Eastbound Through	D	42.7	E	69.4	D	42.9	F	155.2
Eastbound Right	D	48.1	D	39.4	D	47.3	D	45.9
Westbound Left	D	45.2	E	62.6	D	45.6	E	71.0
Westbound Through	D	54.1	E	61.3	D	53.4	E	70.0
Westbound Shared Through-Right	D	54.4	E	62.0	D	53.7	E	70.9
Northbound Left	D	52.9	D	50.8	D	45.0	E	55.2
Northbound Through	D	41.7	D	51.8	C	25.0	E	57.2
Northbound Shared Through-Right	D	43.1	E	60.1	C	26.4	E	67.1
Southbound Left	E	56.6	E	60.4	E	56.6	E	61.4
Southbound Through	D	43.1	E	61.8	D	47.8	E	67.7
Southbound Right	C	23.6	C	32.9	C	25.5	C	31.1
Scottsdale Road and Drinkwater Boulevard (3)								
Overall Intersection	B	13.1	B	15.6	B	13.1	B	17.8
Eastbound Shared Left-Through-Right	C	34.7	C	25.9	C	34.2	C	24.4
Westbound Left	C	24.7	B	12.9	C	24.1	B	11.2
Westbound Through	C	24.9	B	12.1	C	24.3	B	10.6
Westbound Right	D	50.1	D	35.4	D	50.5	C	32.1
Northbound Left	A	0.2	A	7.7	A	0.2	A	9.9
Northbound Shared Through-Right	A	0.8	B	15.4	A	0.8	C	22.7
Southbound Left	A	8.9	B	18.4	A	9.1	C	21.7
Southbound Shared Through-Right	A	0.7	A	2.9	A	0.8	A	3.9
Scottsdale Road and 5th Avenue (4)								
Overall Intersection	A	7.3	B	10.2	A	7.3	B	10.6
Eastbound Shared Left-Through-Right	C	25.6	C	25.3	C	25.6	C	25.3
Westbound Left	C	24.9	C	22.8	C	24.9	C	23.1
Westbound Shared Through-Right	C	25.1	C	21.9	C	25.0	C	21.9
Northbound Left	A	3.3	A	5.6	A	3.4	A	5.7
Northbound Shared Through-Right	B	10.7	B	13.5	B	10.8	B	14.2
Southbound Left	A	4.4	A	9.6	A	4.5	B	10.2
Southbound Shared Through-Right	A	1.4	A	3.2	A	1.4	A	3.4



Table 28 – Year 2030 Level of Service and Delay – Signalized Intersections

Intersection	Year 2030 No Build				Year 2030 Build			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
Signalized Intersections	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY
Drinkwater Boulevard and Stetson Drive/5th Avenue (7)								
Overall Intersection	D	40.5	C	33.5	D	40.2	D	35.5
Eastbound Left	D	52.9	D	47.4	D	52.9	D	52.3
Eastbound Shared Through-Right	D	39.6	C	31.2	D	39.4	C	34.8
Westbound Left	D	44.1	D	41.8	D	44.0	D	41.6
Westbound Through	D	44.7	D	39.5	D	41.5	D	38.6
Westbound Right	D	52.8	C	34.6	D	52.6	C	33.9
Northbound Left	A	7.9	B	14.8	A	8.1	B	16.5
Northbound Shared Through-Right	B	13.7	C	31.3	B	13.7	D	37.7
Southbound Left	A	7.9	B	13.7	A	8.1	B	15.2
Southbound Shared Through-Right	B	13.9	C	35.0	B	13.9	D	43.1
Camelback Road and Buckboard Trail/73rd Street (8)								
Overall Intersection	C	20.0	C	27.1	C	20.2	C	29.3
Eastbound Left	C	24.8	D	40.6	C	25.5	D	46.3
Eastbound Through	B	16.8	C	30.1	B	16.9	C	33.8
Westbound Shared Through-Right	C	20.4	C	20.0	C	20.6	C	20.4
Northbound Left	C	25.7	C	27.6	C	26.2	C	28.6
Northbound Right	C	25.0	C	31.0	C	25.0	C	31.3
Southbound Left	C	25.7	C	25.8	C	25.7	C	25.8
Southbound Right	C	25.9	C	25.9	C	26.0	C	26.0
Camelback Road and Saddlebag Trail (15)								
Overall Intersection	A	1.0	A	1.4	A	1.0	A	2.0
Eastbound Shared Through-Right	A	0.9	A	1.7	A	0.9	A	2.5
Westbound Left	A	0.0	A	0.0	A	1.0	A	2.7
Westbound Through	A	1.1	A	0.7	A	1.1	A	0.7
Camelback Road and Miller Road (25)								
Overall Intersection	D	44.2	E	78.9	D	44.8	E	67.7
Eastbound Left	D	53.9	D	35.9	D	54.3	C	32.2
Eastbound Through	D	47.2	F	115.3	D	47.2	F	95.6
Eastbound Shared Through-Right	D	47.4	F	122.0	D	47.4	F	102.8
Westbound Left	D	39.4	E	67.2	D	39.9	E	59.6
Westbound Through	D	50.5	D	49.7	D	51.3	D	44.9
Westbound Shared Through-Right	D	50.1	D	49.7	D	51.0	D	44.8
Northbound Left	C	34.5	D	48.7	D	35.1	D	53.9
Northbound Through	C	34.4	E	61.8	C	34.9	D	50.8
Northbound Right	C	31.0	D	45.2	C	31.4	D	39.5
Southbound Left	C	24.9	D	44.7	C	25.4	D	44.4
Southbound Through	C	34.8	E	65.9	C	35.4	D	53.3
Southbound Right	C	28.2	D	36.3	C	28.6	C	32.1



Table 29 – Year 2030 Level of Service and Delay - Signalized Intersections

Intersection	Year 2030 No Build				Year 2030 Build			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
Unsignalized Intersections	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY
Scottsdale Road and Shoeman Lane (2)								
Westbound Right	B	10.1	C	15.8	B	10.5	C	20.0
Southbound Left	B	11.5	B	10.1	B	11.9	B	11.2
Camelback Road and Brown Avenue (5)								
Northbound Shared Left-Right	C	19.7	F	275.7	D	25.3	F	608.0
Westbound Left	B	10.3	C	15.4	B	10.6	C	17.9
Shoeman Lane and Brown Avenue (6)								
Eastbound Left	A	7.5	A	8.0	A	7.5	A	8.1
Southbound Shared Left-Right	B	12.7	B	13.1	B	12.8	B	13.6
Stetson Drive and Civic Center Plaza (19)								
Northbound Shared Left-Through-Right	A	9.8	B	11.6	A	9.9	B	12.4
Eastbound Left	A	7.2	A	7.3	A	7.2	A	7.3
Westbound Left	A	7.3	A	7.3	A	7.3	A	7.3
Southbound Shared Left-Through-Right	B	10.1	B	10.2	B	10.1	B	10.5
Camelback Road and 75th Street (21)								
Northbound Shared Left-Through-Right	E	38.7	F	430.4	E	41.7	F	571.2
Eastbound Left	B	11.5	A	9.9	B	11.6	B	10.1
Westbound Left	A	9.2	C	15.5	A	9.3	C	16.2
Southbound Shared Left-Through-Right	E	37.9	F	76.5	E	40.4	F	96.0
Indian Plaza and 75th Street (22)								
Eastbound Left	A	7.3	A	7.5	A	7.3	A	7.5
Southbound Shared Left-Right	A	8.9	A	9.4	A	8.9	A	9.3
Shoeman Lane and Driveway A (27)								
Eastbound Left	-	-	-	-	A	7.6	A	8.0
Southbound Shared Left-Right	-	-	-	-	A	9.4	A	10.0
Scottsdale Road and Driveway B (28)								
Westbound Right	-	-	-	-	B	10.0	A	12.1
Brown Avenue and Driveway C (29)								
Northbound Left	-	-	-	-	A	0.0	A	0.0
Eastbound Shared Left-Right	-	-	-	-	B	10.9	B	11.3
Brown Avenue and Driveway D (30)								
Northbound Left	-	-	-	-	A	0.0	A	0.0
Eastbound Shared Left-Right	-	-	-	-	B	10.6	B	10.4
Saddlebag Trail and Driveway E (31)								
Westbound Left	-	-	-	-	A	8.7	A	9.1
Civic Center Plaza and Driveway F (32)								
Northbound Left	-	-	-	-	A	7.2	A	7.3
Eastbound Shared Left-Right	-	-	-	-	A	8.5	A	8.7



Table 30 – Year 2030 Level of Service and Delay - ‘event’ Peak Hour

Intersection	Year 2030 Build		Year 2030 No Build	
	Special Peak		Special Peak	
Signalized Intersections	LOS	DELAY	LOS	DELAY
Camelback Road and Buckboard Trail/73rd Street (8)				
Overall Intersection	C	21.3	C	21.1
Eastbound Left	B	14.1	B	14.1
Eastbound Through	B	18.3	B	18.0
Westbound Shared Through-Right	B	15.4	B	15.5
Northbound Left	C	29.4	C	29.1
Northbound Right	C	32.6	C	32.2
Southbound Left	C	25.1	C	25.1
Southbound Right	C	25.0	C	25.0
Camelback Road and Saddlebag Trail (15)				
Overall Intersection	A	1.1	A	1.0
Eastbound Shared Through-Right	A	1.3	A	1.1
Westbound Left	A	1.5	A	0.0
Westbound Through	A	0.8	A	0.8
Unsignalized Intersections				
Camelback Road and 75th Street (21)				
Northbound Shared Left-Through-Right	B	10.1	B	10.2
Eastbound Left	A	7.6	A	7.6
Westbound Left	A	8.0	A	8.0
Southbound Shared Left-Through-Right	B	10.4	B	10.4
Indian Plaza and 75th Street (22)				
Eastbound Left	A	7.3	A	7.3
Southbound Shared Left-Right	A	8.7	A	8.7



FIGURE 21 | YEAR 2030 GENTRY ON THE GREEN SITE TRAFFIC VOLUMES

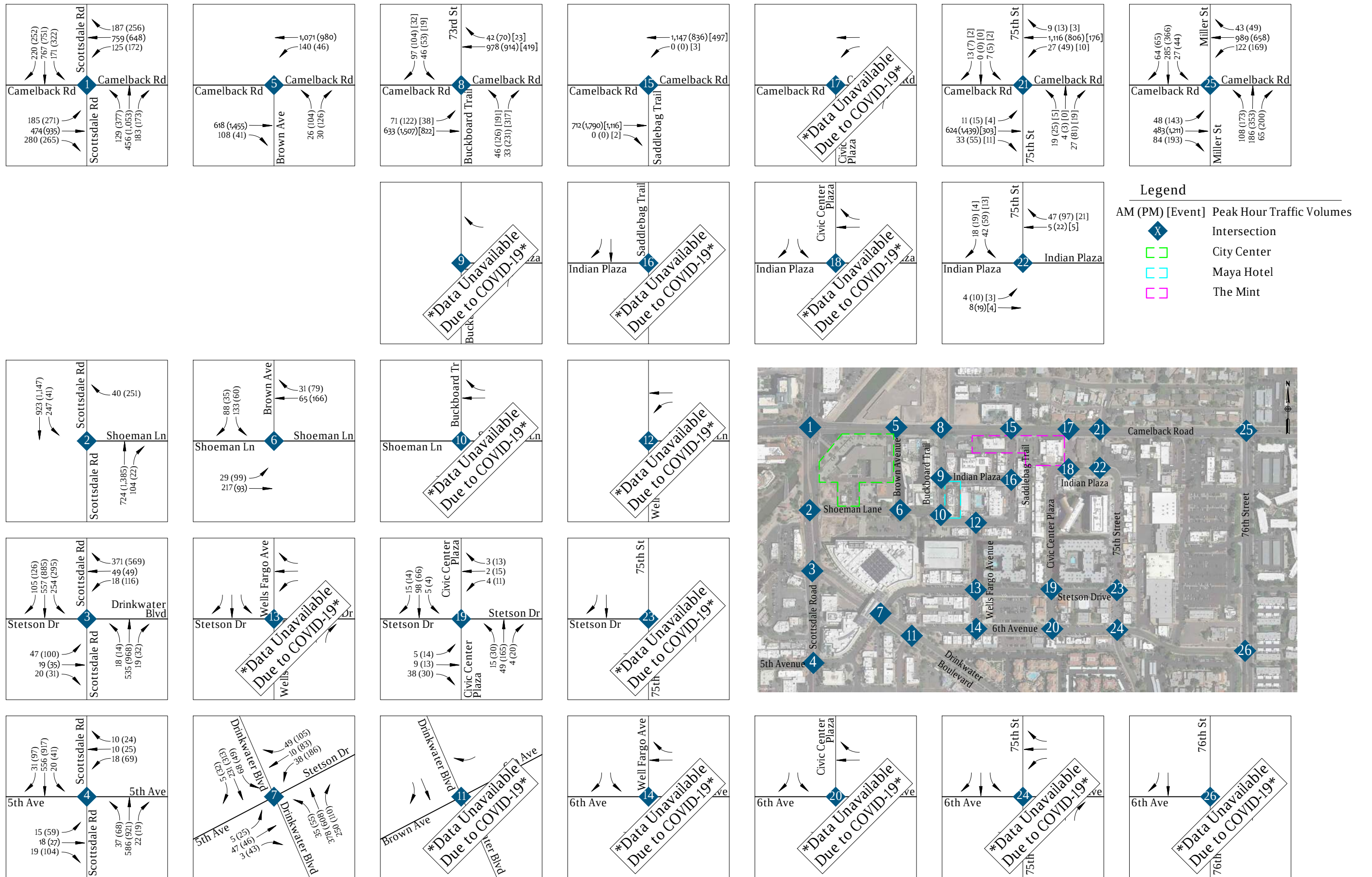


FIGURE 22 | YEAR 2030 BACKGROUND TRAFFIC VOLUMES

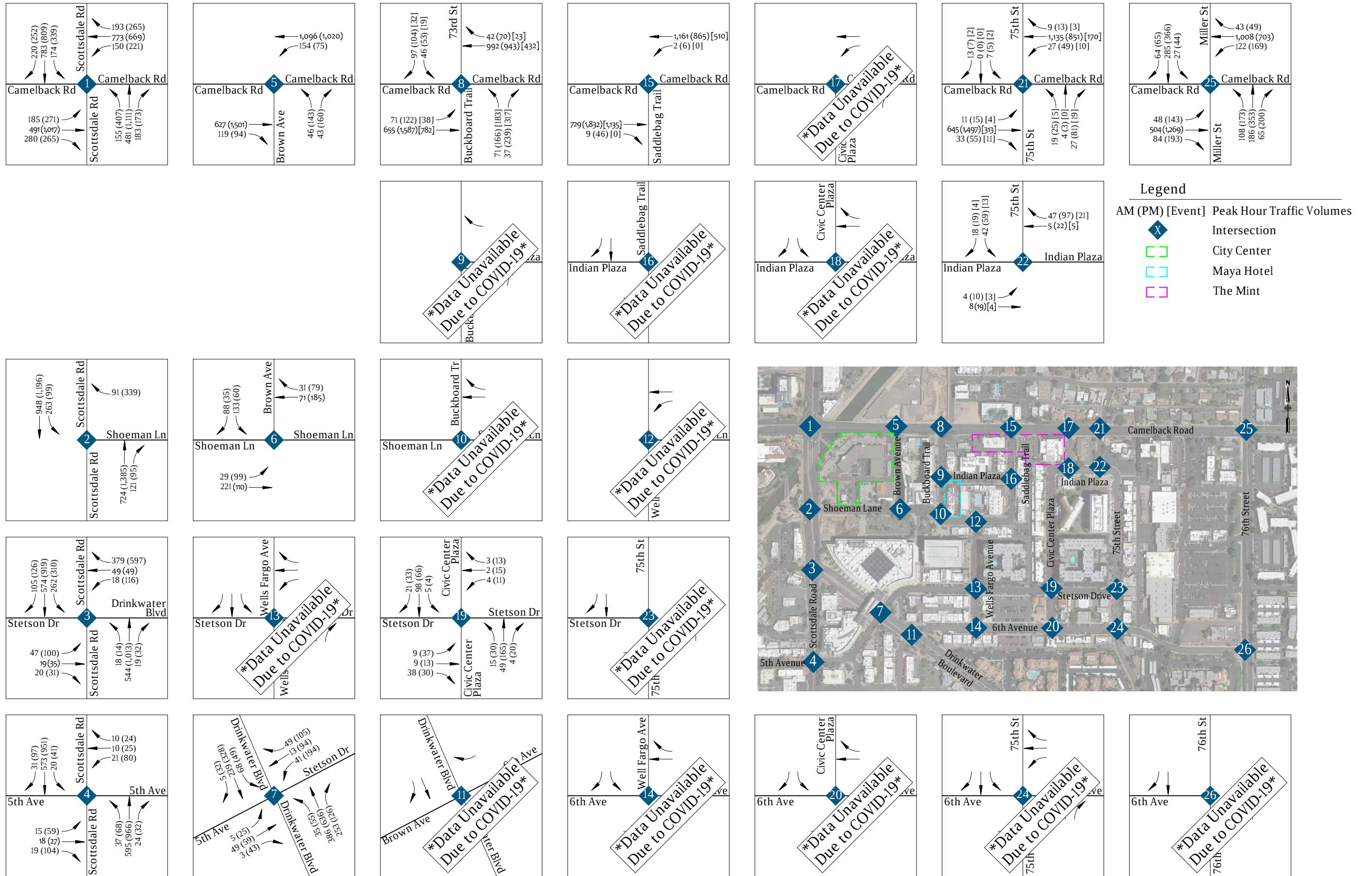


FIGURE 24 | YEAR 2030 BUILD TRAFFIC VOLUMES

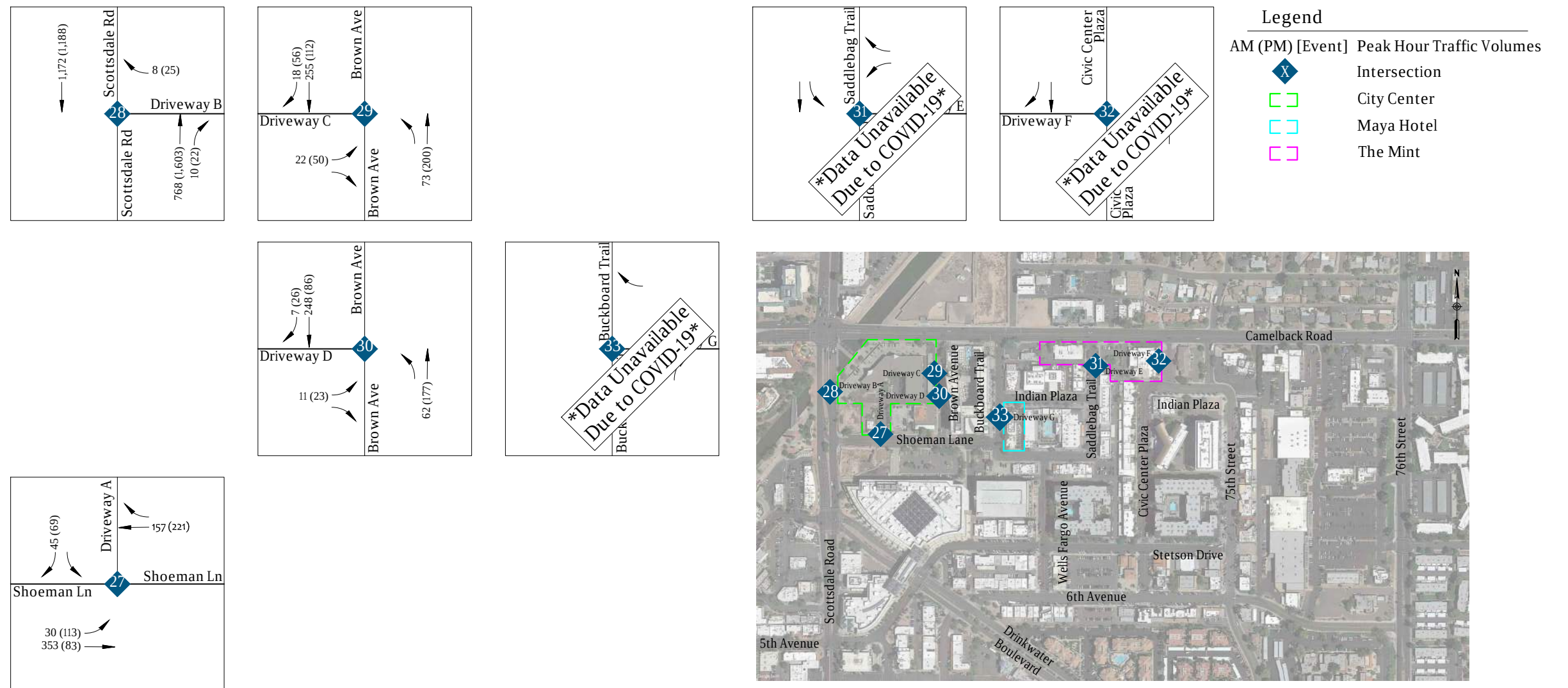


FIGURE 25 | YEAR 2030 BUILD TRAFFIC VOLUMES - SITE DRIVEWAYS





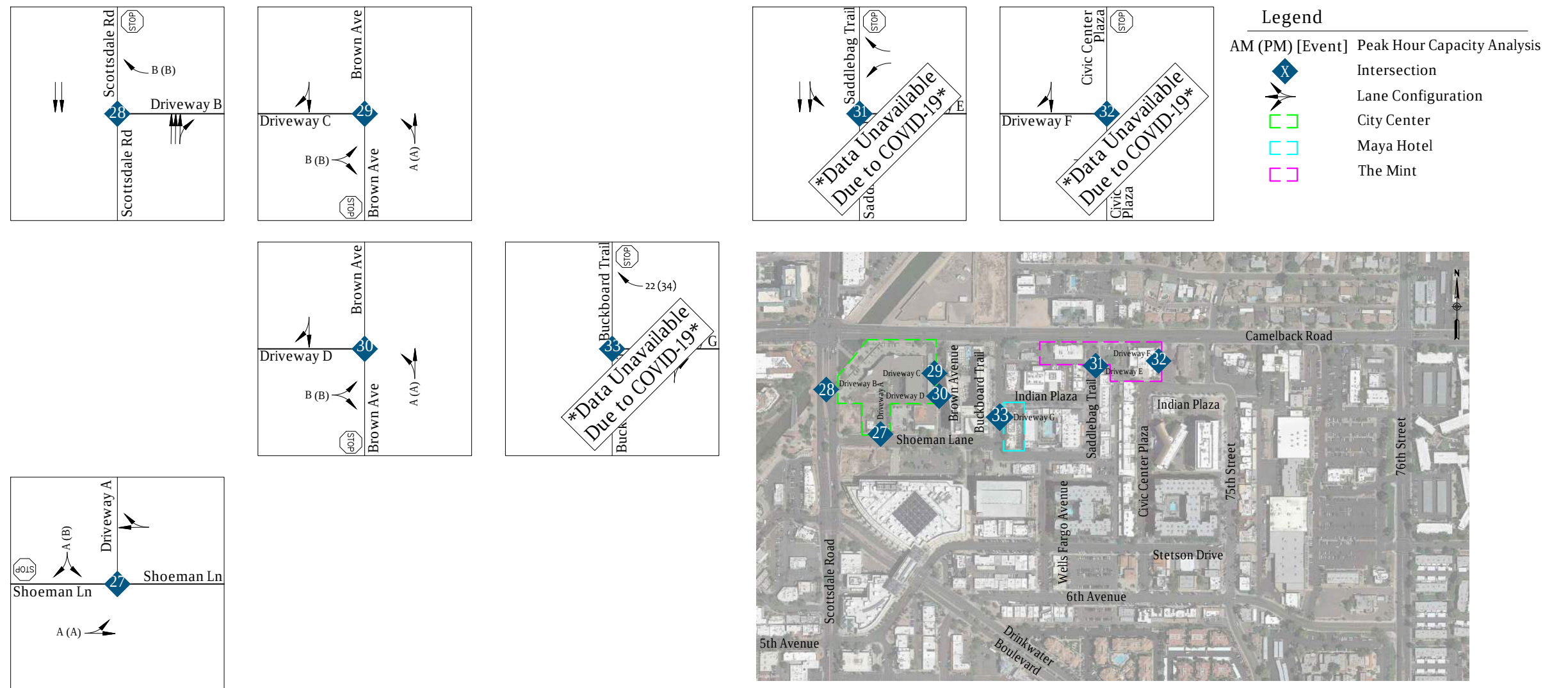


FIGURE 28 | YEAR 2030 BUILD CAPACITY ANALYSIS - SITE DRIVEWAYS



8. TURN LANE ANALYSIS

8.1. TURN LANE WARRANTS

Turn lanes or deceleration lanes, allow vehicles exiting a roadway to slow to a reduced speed to execute a turn without impeding the main flow of traffic. Some intersection traffic volumes were not available due to Covid-19, and therefore were excluded from this analysis.

The City of Scottsdale 2018 *Design Standards & Policies Manual* Section 5.3.206 deceleration lane criteria is analyzed below for the study intersections where traffic volumes were available.

Right Turn Lane

Deceleration lanes are required at all new driveways on major arterials and at new commercial/retail driveways on minor arterials. To determine the need for a deceleration lane on streets classified as a minor arterial or collector, use the following criteria:

- A. At least 5,000 vehicle per day are expected to be using the street.
- B. The roadway's 85th percentile speed limit is at least 35 mph.
- C. At least 30 vehicles will make right-turns into the driveway during a 1-hour period.

The site driveways were evaluated using the City of Scottsdale deceleration lane criteria. See [Table 31](#).

Table 31 –Right Turn Lane Criteria Analysis

Year	Scenario	On	At	No. Thru Lanes	Speed Limit	ADT	Peak Hour	Right Turn		
								Direction	Right	Warranted
2025	No Build	Camelback Road	Brown Ave	2	35	23,186	AM	EB	105	YES
							PM		40	
2030	Build	Camelback Road	Saddlebag Trail	2	25	25,599	AM	EB	9	NO
							PM		46	
2030	Build	Shoeman Lane	Driveway A	1	25	4,200	AM	SB	45	NO
							PM		69	
2030	Build	Scottsdale Road	Driveway B	3	30	27,306	AM	NB	10	NO
							PM		22	
2030	Build	Brown Ave	Driveway C	1	25	3,220	AM	SB	9	NO
							PM		28	
2030	Build	Brown Ave	Driveway D	1	25	3,220	AM	SB	7	NO
							PM		26	
2030	Build	Scottsdale Road	Shoeman Lane	3	30	27,306	AM	NB	121	NO
							PM		95	

According to the criteria listed above, an eastbound right turn lane along Camelback Road at Brown Avenue, is warranted with background (no-build) 2025 traffic volumes.



9. RECOMMENDATIONS & CONCLUSIONS

In summary and as included in the discussion and analyses throughout this report, the following are recommended improvements:

- **Camelback Road and Brown Avenue (5)**
 - Construct 100-foot eastbound right turn deceleration lane.
 - Install signing to prohibit northbound left turning movement during peak hours (hours to be coordinated with the City of Scottsdale Transportation).
- **Civic Center Plaza and Driveway G (18)**

Buildout of full access driveway at the existing intersection of Civic Center Plaza and Indian Plaza.
- **Shoeman Lane and Driveway A (27)**

Buildout of full access driveway approximately 250 feet east of Scottsdale.
- **Scottsdale Road and Driveway B (28)**

Buildout of right-in/right-out driveway approximately 270 feet south of Camelback Road.
- **Brown Avenue and Driveway C (29)**

Buildout of full access driveway approximately 180 feet south of Camelback.
- **Brown Avenue and Driveway D (30)**

Buildout of full access driveway approximately 280 feet south of Camelback.
- **Saddlebag Trail and Driveway E (31)**

Buildout of access driveway allowing right in and lefts out approximately 140 feet south of Camelback Road.
- **Civic Center Plaza and Driveway F (32)**

Buildout of full access driveway approximately 160 feet south of Camelback Road.
- **Buckboard Trail and Driveway H (33)**

Buildout of access driveway approximately 400 feet south of Camelback Road.

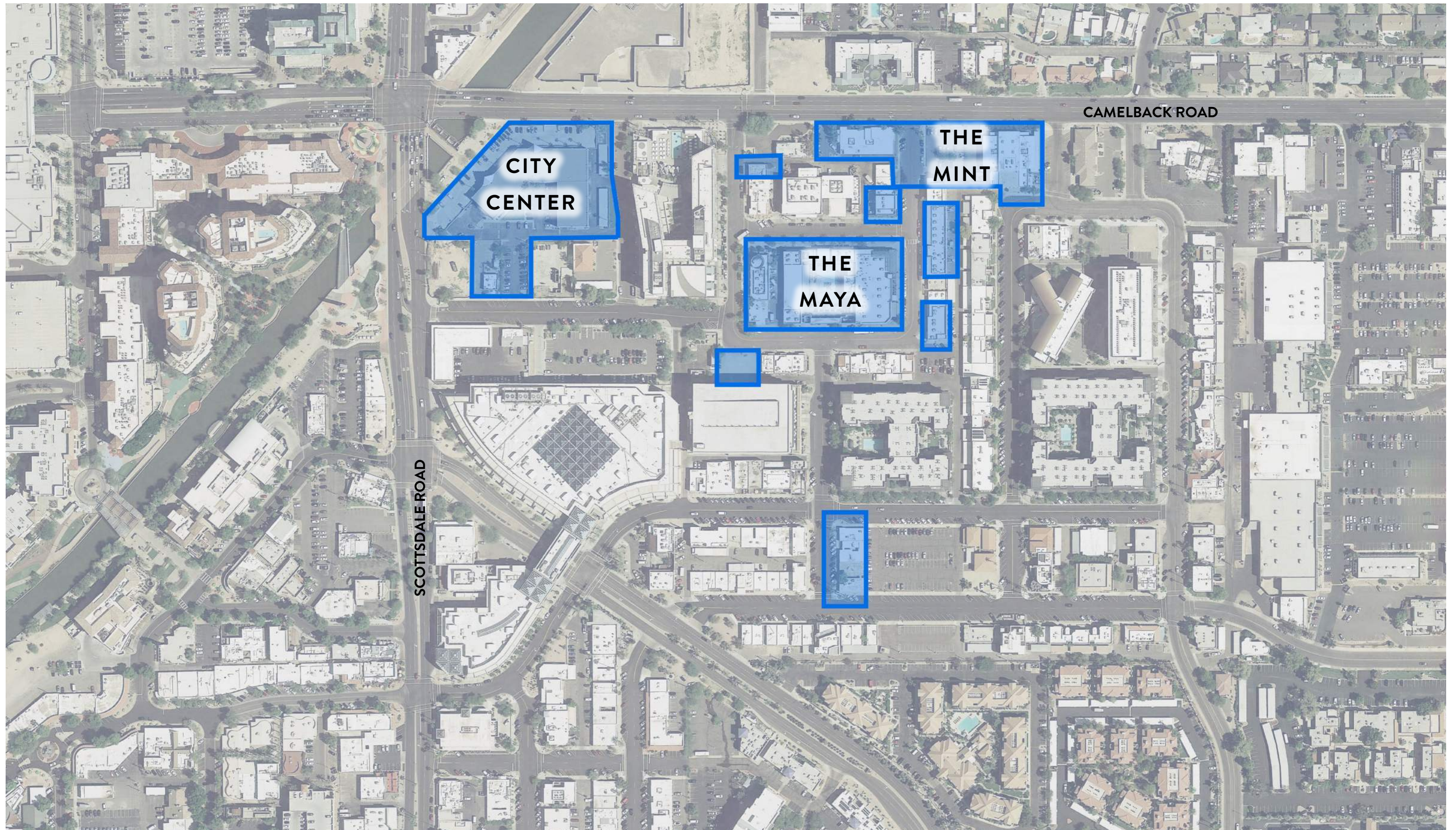
As with any new development and potential change in traffic patterns, the following is recommended:

- **Monitor and Adjust Signal Timing**

Monitor traffic patterns in the area and if necessary, adjust nearby signal timing



Appendix A – Proposed Site Plan



P R O P O S E D 1 0 . 2 5 A C R E S O F D E V E L O P M E N T



Appendix B – Crash Data

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1705925	170313	1649	SCOTTSDALE	RD	CAMELBACK	RD	E	101	1	1	1	0	0	97	1	1	3	WB	WB	4		Over 100 feet
1708619	170415	0252	SCOTTSDALE	RD	CAMELBACK	RD	W	134	1	1	1	4	0	97	1	1	3	WB	WB	4	DUI	Over 100 feet
1708913	170419	1213	SCOTTSDALE	RD	CAMELBACK	RD	N	379	99	99	1	99	97	2	2	1	1	SB	SB	4	MULTI VEH 3, HIT AND RUN	Over 100 feet
1716875	170730	2024	SCOTTSDALE	RD	CAMELBACK	RD	N	278	1	1	1	0	0	20	1	5	1	EB	SB	2		Over 100 feet
1718930	170826	2217	SCOTTSDALE	RD	CAMELBACK	RD	W	450	1	1		5		99		1		EB		6	DUI	Over 100 feet
1718986	170827	1616	SCOTTSDALE	RD	CAMELBACK	RD	W	382	2	1	2	0	0	2	1	1	1	EB	EB	4		Over 100 feet
1725990	171124	1210	SCOTTSDALE	RD	CAMELBACK	RD	N	196	2	1	2	0	0	2	1	1	3	NB	NB	4	MULTI VEH 3	Over 100 feet
1700014	170101	0215	SCOTTSDALE	RD	CAMELBACK	RD	AT		4	4	1	4	0	6	1	17	1	SB	SB	2	DUI, CAR/PEDESTRIAN	Within 100 feet
1700492	170107	1510	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	3	NB	NB	4		Within 100 feet
1702924	170205	0056	SCOTTSDALE	RD	CAMELBACK	RD	W	100	1	1	1	0	0	1	1	2	3	EB	EB	4		Within 100 feet
1704083	170218	1342	SCOTTSDALE	RD	CAMELBACK	RD	S	50	1	1	1	0	0	12	1	8	1	SB	SB	6		Within 100 feet
1704123	170219	0227	SCOTTSDALE	RD	CAMELBACK	RD	AT		3	3	1	0	0	6	1	1	4	WB	EB	5		Within 100 feet
1706081	170315	1433	SCOTTSDALE	RD	CAMELBACK	RD	W	30	1	1	1	0	0	12	1	8	2	EB	EB	2		Within 100 feet
1706735	170322	1854	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	7	1	5	1	EB	EB	2		Within 100 feet
1706823	170323	1814	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	4	0	7	1	5	1	EB	SB	2	DUI	Within 100 feet
1707573	170401	1743	SCOTTSDALE	RD	CAMELBACK	RD	E	5	3	3	1	0	0	20	1	17	5	NB	EB	97	CAR/BICYCLE	Within 100 feet
1708904	170419	0935	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	3	WB	WB	4		Within 100 feet
1708919	170419	1323	SCOTTSDALE	RD	CAMELBACK	RD	E	100	1	1	1	0	0	2	1	1	3	WB	WB	4		Within 100 feet
1710521	170509	1611	SCOTTSDALE	RD	CAMELBACK	RD	S	75	1	1	1	0	0	2	1	1	3	NB	NB	5	MULTI VEH 4	Within 100 feet
1710742	170512	1331	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	2	1	1	3	WB	WB	4	HIT AND RUN	Within 100 feet
1711859	170526	1339	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	3	1	1	WB	WB	6		Within 100 feet
1714621	170701	1925	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	1	NB	NB	4	MULTI VEH 3	Within 100 feet
1715297	170710	1311	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	6	1	4	1	NB	SB	3		Within 100 feet
1715390	170711	1654	SCOTTSDALE	RD	CAMELBACK	RD	W	30	1	1	1	0	0	4	1	2	3	WB	WB	4		Within 100 feet
1715474	170712	1649	SCOTTSDALE	RD	CAMELBACK	RD	AT		3	3	1	0	0	2	1	1	3	SB	SB	4		Within 100 feet
1717777	170811	1931	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	20	1	5	1	EB	SB	2		Within 100 feet
1718254	170818	0917	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	2	3	WB	WB	4		Within 100 feet
1721053	170923	0241	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	4	0	12	1	8	3	WB	WB	6	DUI	Within 100 feet
1721148	170924	1214	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	2	1	1	1	NB	NB	4	HIT AND RUN	Within 100 feet
1721949	171004	0642	SCOTTSDALE	RD	CAMELBACK	RD	AT		2	2		97		1		1		EB		5		Within 100 feet
1722048	171005	1104	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	4	3	WB	WB	4		Within 100 feet
1723222	171020	1604	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	2	1	1	1	WB	WB	4	HIT AND RUN	Within 100 feet
1723335	171022	0224	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	13	1	4	3	SB	WB	6	HIT AND RUN	Within 100 feet
1724942	171109	1559	SCOTTSDALE	RD	CAMELBACK	RD	N	100	1	1	1	0	0	2	1	1	3	SB	SB	4		Within 100 feet
1725138	171112	1335	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	99	0	1	1	10	3	NB	WB	8		Within 100 feet
1725993	171124	1306	SCOTTSDALE	RD	CAMELBACK	RD	N	55	1	1	1	0	0	2	1	1	3	NB	NB	4		Within 100 feet
1727974	171218	1233	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	13	1	4	4	SB	SB	6		Within 100 feet
1728024	171219	0801	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	8	WB	WB	4		Within 100 feet
1728291	171222	1258	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	12	1	8	1	WB	WB	6		Within 100 feet
1728592	171227	1732	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	97	1	10	3	SB	SB	4	HIT AND RUN	Within 100 feet
1805320	180308	1916	SCOTTSDALE	RD	CAMELBACK	RD	N	117	2	1	2	0	0	97	1	1	3	SB	SB	4		Over 100 feet
1807659	180405	1659	SCOTTSDALE	RD	CAMELBACK	RD	W	200	99	99		99	0	99	1	99	14	99		99	HIT AND RUN	Over 100 feet
1807689	180406	0059	SCOTTSDALE	RD	CAMELBACK	RD	S	212	99	3	99	4	99	17	97	17	1	WB	NB	97	CAR/PEDESTRIAN, DUI	Over 100 feet
1809042	180422	1844	SCOTTSDALE	RD	CAMELBACK	RD	N	218	99	99	2	99	0	12	1	8	1	SB	SB	6	HIT AND RUN	Over 100 feet
1811645	180525	2047	SCOTTSDALE	RD	CAMELBACK	RD	W	260	1	1	1	0	0	13	1	1	1	WB	WB	6		Over 100 feet
1813802	180622	1026	SCOTTSDALE	RD	CAMELBACK	RD	N	500	99	99		99	0	99	1	13	14	NB	99	2	HIT AND RUN	Over 100 feet
1816280	180724	1433	SCOTTSDALE	RD	CAMELBACK	RD	W	300	1	1		0	0	1	1	10	14	EB		9	HIT AND RUN	Over 100 feet
1817875	180814	0711	SCOTTSDALE	RD	CAMELBACK	RD	W	150	1	1	1	0	0	1	1	1	3	WB	WB	4	MULTI VEH 3	Over 100 feet
1818382	180820	1707	SCOTTSDALE	RD	CAMELBACK	RD	W	215	1	1		0		1		1		EB		1		Over 100 feet
1818611	180823	1710	SCOTTSDALE	RD	CAMELBACK	RD	W	284	1	1	1	3	0	2	1	1	3	WB	WB	4		Over 100 feet
1819491	180903	1543	SCOTTSDALE	RD	CAMELBACK	RD	N	400	99			99	0	99	1	16	14	99	EB	99	HIT AND RUN	Over 100 feet

1819539	180904	1102	SCOTTSDALE	RD	CAMELBACK	RD	S	200	1	1	1	0	0	2	1	1	3	SB	SB	4		Over 100 feet
1824841	181116	1517	SCOTTSDALE	RD	CAMELBACK	RD	W	1700	1	1		0	0	1	1	12	14	EB		6		Over 100 feet
1827225	181210	1900	SCOTTSDALE	RD	CAMELBACK	RD	W	1000	99	99		99	0	13	1	13	14	99	99	99	HIT AND RUN	Over 100 feet
1800834	180112	0849	SCOTTSDALE	RD	CAMELBACK	RD	S	50	1	1	1	0	0	12	1	8	1	SB	SB	6		Within 100 feet
1803329	180211	0024	SCOTTSDALE	RD	CAMELBACK	RD	AT		3	1	3	0	0	2	1	2	3	EB	EB	4		Within 100 feet
1804251	180223	1857	SCOTTSDALE	RD	CAMELBACK	RD	N	30	1	1	1	4	0	2	1	1	3	NB	NB	4	MULTI VEH 3, DUI	Within 100 feet
1805222	180307	1810	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	4	0	2	1	1	5	WB	WB	4	DUI	Within 100 feet
1805319	180308	1915	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	3	SB	SB	4		Within 100 feet
1805549	180311	1635	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	99	1	1	10	SB	EB	2		Within 100 feet
1806156	180318	1709	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	12	1	8	1	WB	WB	2		Within 100 feet
1806969	180328	1523	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	99	1	1	3	EB	EB	4	HIT AND RUN	Within 100 feet
1807630	180405	1347	SCOTTSDALE	RD	CAMELBACK	RD	S	50	1	1	1	0	0	12	1	8	1	NB	NB	6		Within 100 feet
1813799	180622	1019	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	2	1	1	3	NB	NB	2	HIT AND RUN	Within 100 feet
1814938	180706	1503	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	3	WB	NB	4		Within 100 feet
1816158	180723	0225	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	4	0	2	1	4	4	SB	SB	4	DUI	Within 100 feet
1816962	180802	1955	SCOTTSDALE	RD	CAMELBACK	RD	AT		2	1	2	0	0	2	1	1	3	EB	EB	4		Within 100 feet
1817168	180805	1612	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	99	1	1	3	NB	NB	4	HIT AND RUN	Within 100 feet
1818108	180817	0825	SCOTTSDALE	RD	CAMELBACK	RD	N	40	1	1	1	0	99	1	99	1	3	SB	SB	6	HIT AND RUN	Within 100 feet
1818771	180825	1712	SCOTTSDALE	RD	CAMELBACK	RD	E	10	1	1	1	0	0	1	1	1	3	WB	WB	4		Within 100 feet
1818776	180825	1736	SCOTTSDALE	RD	CAMELBACK	RD	W	40	1	1	1	99	0	12	1	8	1	WB	WB	6	HIT AND RUN	Within 100 feet
1818780	180825	1833	SCOTTSDALE	RD	CAMELBACK	RD	N	100	1	1	1	4	0	2	1	1	3	SB	SB	4	DUI	Within 100 feet
1818806	180826	0103	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	6	1	5	4	EB	EB	3	HIT AND RUN	Within 100 feet
1818975	180828	1151	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	1	1	1	3	EB	EB	4		Within 100 feet
1820122	180911	1936	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	4	1	4	3	EB	EB	4		Within 100 feet
1821386	180929	2058	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	3	NB	NB	4		Within 100 feet
1822524	181015	1733	SCOTTSDALE	RD	CAMELBACK	RD	S	100	2	1	2	0	0	2	1	1	2	SB	SB	4		Within 100 feet
1822701	181017	1841	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	99	0	20	1	5	1	EB	EB	2		Within 100 feet
1824061	181105	1657	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	2	1	99	5	NB	NB	4	HIT AND RUN	Within 100 feet
1824210	181107	1638	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	3	NB	NB	4		Within 100 feet
1825605	181127	1454	SCOTTSDALE	RD	CAMELBACK	RD	AT		3	2	3	0	0	6	1	1	1	SB	EB	2		Within 100 feet
1825690	181128	1653	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	4	1	1	5	WB	WB	4		Within 100 feet
1826167	181204	1726	SCOTTSDALE	RD	CAMELBACK	RD	AT		1	1	1	0	0	12	1	8	1	WB	WB	6		Within 100 feet
1827942	181228	1922	SCOTTSDALE	RD	CAMELBACK	RD	AT		99	99	1	99	0	12	1	8	1	SB	SB	6	HIT AND RUN	Within 100 feet
1904087	190221	1715	SCOTTSDALE	RD	CAMELBACK	RD	W	153	99			0	0	99	99	8	1	NB	EB	2		Over 100 feet
1906527	190325	1645	SCOTTSDALE	RD	CAMELBACK	RD	W	248	99			0	0	1	1	97	1	WB	WB	4		Over 100 feet
1923840	191114	2010	SCOTTSDALE	RD	CAMELBACK	RD	W	500	99			99	0	2	1	99	20	99	99	1		Over 100 feet
1926455	191221	1641	SCOTTSDALE	RD	CAMELBACK	RD	W	550	99			99	99	97	1	5	14	EB	SB	2		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1705265	170305	2359	SCOTTSDALE	RD	SHOEMAN	LN	E	50	1	1	1	0	0	97	1	10	14	SB	NB	8		Within 100 feet
1824483	181111	0059	SCOTTSDALE	RD	SHOEMAN	LN	AT		99	99	1	99	0	20	1	10	1	WB	WB	8	HIT AND RUN	Within 100 feet
1912638	190613	1746	SCOTTSDALE	RD	SHOEMAN	LN	N	216	99			0	0	97	1	1	3	NB	NB	4		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1705488	170308	1304	SCOTTSDALE	RD	DRINKWATER	BL	S	101	2	1	2	0	0	2	1	1	3	NB	NB	4		Over 100 feet
1700816	170111	1707	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	0	0	2	1	4	3	SB	SB	4		Within 100 feet
1710296	170506	1100	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	0	0	1	1	4	1	SB	SB	6		Within 100 feet
1713400	170615	1656	SCOTTSDALE	RD	DRINKWATER	BL	E	40	1	1	1	0	0	4	1	1	3	WB	WB	4		Within 100 feet
1715527	170713	0908	SCOTTSDALE	RD	DRINKWATER	BL	AT		99	99	99	0	0	20	1	4	1	WB	NB	2		Within 100 feet
1724075	171030	1506	SCOTTSDALE	RD	DRINKWATER	BL	N	100	3	3	1	0	0	2	20	17	5	SB	WB	2	CAR/BICYCLE	Within 100 feet
1724354	171102	1643	SCOTTSDALE	RD	DRINKWATER	BL	AT		2	1	2	0	0	2	1	4	3	WB	WB	4		Within 100 feet
1820781	180921	1921	SCOTTSDALE	RD	DRINKWATER	BL	S	150	99	99		99	0	1	1	10	14	NB	NB	9	HIT AND RUN	Over 100 feet
1802559	180202	2234	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	4	0	97	1	10	3	WB	WB	4	DUI	Within 100 feet
1802776	180204	2153	SCOTTSDALE	RD	DRINKWATER	BL	AT		99	99	1	99	99	12	99	7	1	SB	SB	6	HIT AND RUN	Within 100 feet
1802777	180204	2147	SCOTTSDALE	RD	DRINKWATER	BL	AT		99	99	99	4	0	2	1	4	3	SB	SB	4	DUI	Within 100 feet
1804567	180227	1922	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	0	0	2	1	1	1	SB	SB	4		Within 100 feet
1805041	180305	1609	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	0	0	1	1	1	3	NB	NB	4		Within 100 feet
1805286	180308	1226	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	0	0	2	99	4	1	WB	SB	2	HIT AND RUN	Within 100 feet
1808382	180414	1852	SCOTTSDALE	RD	DRINKWATER	BL	S	50	99	99	3	99	0	2	1	1	3	NB	NB	4	HIT AND RUN	Within 100 feet
1809090	180423	1420	SCOTTSDALE	RD	DRINKWATER	BL	AT		3	2	3	0	0	20	1	4	1	SB	NB	3		Within 100 feet
1811165	180519	2125	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	0	0	2	1	1	1	SB	SB	4		Within 100 feet
1813897	180623	1337	SCOTTSDALE	RD	DRINKWATER	BL	AT		99	99	1	99	0	20	1	4	1	WB	NB	2	HIT AND RUN	Within 100 feet
1816577	180728	1205	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	0	0	7	1	4	1	NB	NB	3		Within 100 feet
1825407	181124	1709	SCOTTSDALE	RD	DRINKWATER	BL	AT		1	1	1	0	0	7	1	6	4	SB	SB	6		Within 100 feet
1903445	190213	1622	SCOTTSDALE	RD	DRINKWATER	BL	N	200	99			0	0	2	1	1	3	SB	SB	4		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1700811	170111	1617	BROWN	AV	CAMELBACK	RD	AT		1	1	1	0	0	1	1	1	1	EB	EB	4		Within 100 feet
1715582	170713	2320	BROWN	AV	CAMELBACK	RD	AT		1	1	1	0	0	7	1	4	1	NB	EB	3		Within 100 feet
1819828	180908	0232	BROWN	AV	CAMELBACK	RD	E	75	2	2	2	0	0	20	1	97	1	NB	EB	2		Within 100 feet
1823366	181027	0233	BROWN	AV	CAMELBACK	RD	AT		1	1	1	0	0	99	2	4	1	WB	WB	4		Within 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1704979	170302	1316	BROWN	AV	SHOEMAN	LN	N	108	1	1	1	0	0	20	15	10	1	SB	NB	6		Over 100 feet
1823141	181024	0230	BROWN	AV	SHOEMAN	LN	E	50	3	1	3	0	4	17	17	1	17	EB	SB	5	DUI	Within 100 feet
1918812	190906	2149	BROWN	AV	SHOEMAN	LN	W	114	99			0	0	97	1	10	3	WB	EB	4		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1702674	170202	2025	DRINKWATER	BL	STETSON	DR	E	367	99	99	1	99	0	99	1	10	1	NB	EB	4	HIT AND RUN	Over 100 feet
1705716	170311	0213	DRINKWATER	BL	STETSON	DR	E	200	1	1	1	4	0	2	1	5	3	EB	EB	6	DUI	Over 100 feet
1715905	170717	1740	DRINKWATER	BL	STETSON	DR	AT		1	1	1	0	0	6	1	1	1	WB	SB	2		Within 100 feet
1717861	170813	0020	DRINKWATER	BL	STETSON	DR	AT		1	1	1	99	0	7	1	6	1	WB	WB	6		Within 100 feet
1720495	170915	2323	DRINKWATER	BL	STETSON	DR	AT		1	1	1	0	0	12	1	8	1	NB	NB	6		Within 100 feet
1724492	171104	0205	DRINKWATER	BL	STETSON	DR	AT		99	99	1	99	0	99	99	99	1	WB	SB	3	HIT AND RUN	Within 100 feet
1726745	171203	1300	DRINKWATER	BL	STETSON	DR	AT		2	2	1	0	0	20	1	1	1	SB	SB	2		Within 100 feet
1728330	171223	0011	DRINKWATER	BL	STETSON	DR	AT		2	1	2	0	0	1	1	1	1	EB	NB	2	MULTI VEH 3	Within 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1705579	170309	1540	BUCKBOARD	TR	CAMELBACK	RD	S	200	1	1	1	0	0	12	1	8	1	NB	NB	2		Over 100 feet
1709205	170423	0237	BUCKBOARD	TR	CAMELBACK	RD	E	112	1	1	1	99	0	2	1	1	3	EB	EB	4	HIT AND RUN	Over 100 feet
1718422	170820	0221	BUCKBOARD	TR	CAMELBACK	RD	S	150	2	1	2	0	4	1	17	1	17	NB	WB	99	CAR/PEDESTRIAN, DUI	Over 100 feet
1702999	170205	2251	BUCKBOARD	TR	CAMELBACK	RD	E	50	3	1	3	0	0	2	1	1	3	EB	EB	4	MULTI VEH 3	Within 100 feet
1710805	170513	0258	BUCKBOARD	TR	CAMELBACK	DR	E	50	99	99	1	99	0	2	1	1	3	EB	EB	4	HIT AND RUN	Within 100 feet
1710885	170514	0236	BUCKBOARD	TR	CAMELBACK	RD	S	50	99	99	1	99	0	20	1	5	3	NB	NB	2	HIT AND RUN	Within 100 feet
1718957	170827	0231	BUCKBOARD	TR	CAMELBACK	RD	AT		99	99	1	99	0	7	1	6	3	SB	NB	2	HIT AND RUN	Within 100 feet
1800432	180107	0006	BUCKBOARD	TR	CAMELBACK	RD	E	37	2	1	2	0	0	97	97	1	3	EB	EB	4		Within 100 feet
1802366	180131	1933	BUCKBOARD	TR	CAMELBACK	RD	AT		1	1	1	0	0	1	1	1	3	EB	EB	4		Within 100 feet
1805811	180314	2002	BUCKBOARD	TR	CAMELBACK	RD	E	25	1	1	1	0	0	12	1	8	1	WB	WB	6		Within 100 feet
1808246	180413	0850	BUCKBOARD	TR	CAMELBACK	RD	S	75	1	1	1	0	0	13	1	5	14	NB	NB	6		Within 100 feet
1809462	180427	2355	BUCKBOARD	TR	CAMELBACK	RD	AT		99	99	1	99	0	97	1	1	1	EB	EB	4	HIT AND RUN	Within 100 feet
1809608	180430	0221	BUCKBOARD	TR	CAMELBACK	RD	AT		1	1	1	4	0	1	1	1	3	NB	NB	4	HIT AND RUN, DUI	Within 100 feet
1812228	180601	2349	BUCKBOARD	TR	CAMELBACK	RD	AT		99	99	1	99	0	1	1	1	5	EB	EB	6	HIT AND RUN	Within 100 feet
1820801	180921	2340	BUCKBOARD	TR	CAMELBACK	RD	S	35	1	1	1	0	0	12	1	13	3	NB	NB	6		Within 100 feet
1821723	181004	1535	BUCKBOARD	TR	CAMELBACK	RD	AT		1	1	1	0	0	97	1	10	3	NB	NB	4		Within 100 feet
1823858	181102	1222	BUCKBOARD	TR	CAMELBACK	RD	AT		1	1	1	0	0	6	1	1	4	EB	NB	2		Within 100 feet
1825439	181125	0004	BUCKBOARD	TR	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	3	EB	EB	4		Within 100 feet
1916775	190810	2351	BUCKBOARD	TR	CAMELBACK	RD	S	120	99			0	0	12	1	8	3	NB	NB	6		Over 100 feet
1917732	190824	0146	BUCKBOARD	TR	CAMELBACK	RD	S	166	99			4	0	97	1	10	14	SB	NB	97		Over 100 feet

Year	Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
										Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
2017	1707268	170329	0342	BUCKBOARD	TR	SHOEMAN	LN	AT		99	99	1	99	0	5	1	4	4	NB	WB	2	HIT AND RUN	Within 100 feet
2017	1728262	171222	0143	BUCKBOARD	TR	SHOEMAN	LN	W	4	1	1	1	99	0	12	1	1	2	WB	WB	97		Within 100 feet
2017	1728906	171231	2056	BUCKBOARD	TR	SHOEMAN	LN	AT		1	1	1	0	0	20	1	4	4	EB	WB	3		Within 100 feet
2018	1807277	180401	0215	BUCKBOARD	TR	SHOEMAN	LN	E	65	1	1		4		97		13		WB		4	DUI	Within 100 feet
2019	1902947	190206	1845	BUCKBOARD	TR	SHOEMAN	LN	W	300	99			99	0	20	1	10	1	SB	WB	8		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1702642	170202	1302	DRINKWATER	BL	BROWN	AV	S	120	1	1	1	0	0	1	1	10	3	EB	SB	4		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1716284	170722	2207	WELLS FARGO	AV	SHOEMAN	LN	E	200	1	1	1	0	0	12	1	8	1	WB	WB	2		Over 100 feet
1701579	170121	0126	WELLS FARGO	AZ	SHOEMAN	LN	S	15	2	2	1	0	0	17	1	17	1	WB	SB	5	CAR/PEDESTRIAN	Within 100 feet
1702171	170127	2112	WELLS FARGO	AV	SHOEMAN	LN	AT		99	99	1	99	0	5	1	4	3	NB	WB	2	HIT AND RUN	Within 100 feet
1714103	170625	0255	WELLS FARGO	AV	SHOEMAN	LN	E	50	99	99	1	99	0	1	1	10	14	EB	WB	4	HIT AND RUN	Within 100 feet
1717259	170805	0126	WELLS FARGO	AV	SHOEMAN	LN	AT		1	1	1	0	0	7	1	4	1	SB	WB	97		Within 100 feet
1717831	170812	1704	WELLS FARGO	AV	SHOEMAN	LN	AT		1	1	1	0	0	12	1	8	1	WB	WB	6		Within 100 feet
1800009	180101	0053	WELLS FARGO	AV	SHOEMAN	LN	S	150	1	1	1	99	0	12	1	7	3	NB	NB	2	HIT AND RUN	Over 100 feet
1815029	180707	2246	WELLS FARGO	AV	SHOEMAN	LN	AT		1	1	1	0	0	20	1	3	4	NB	SB	2		Within 100 feet
1816812	180731	1917	WELLS FARGO	AV	SHOEMAN	LN	W	100	1	1		99	0	1	1	10	14	EB	99	4	HIT AND RUN	Within 100 feet
1827019	181215	0252	WELLS FARGO	LN	SHOEMAN	LN	AT		1	1	1	99	0	4	1	8	1	WB	WB	4		Within 100 feet
1916915	190812	1632	WELLS FARGO	LN	SHOEMAN	LN	S	222	99			0	0	97	1	99	14	99	NB	99		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1713576	170617	1711	WELLS FARGO	AV	STETSON	DR	E	173	2	1	2	0	0	20	1	10	1	SB	WB	4		Over 100 feet
1725922	171122	2257	WELLS FARGO	AV	STETSON	DR	W	274	1	1	1	0	0	97	1	10	3	WB	EB	4		Over 100 feet
1709689	170422	1011	WELLS FARGO	AV	STETSON	DR	AT		99	99		99	0	99	99	99	14	99	NB	99	HIT AND RUN	Within 100 feet
1710196	170505	1010	WELLS FARGO	AV	STETSON	DR	AT		1	1	1	0	0	20	2	13	1	NB	EB	4		Within 100 feet
1725572	171118	1056	WELLS FARGO	AV	STETSON	DR	W	40	1	1	1	0	0	97	1	10	2	NB	EB	8		Within 100 feet
1808478	180416	0232	WELLS FARGO	AV	STETSON	DR	W	200	1	1		4	0	97	1	10	14	SB	SB	9	DUI, HIT AND RUN	Over 100 feet
1909729	190505	0306	WELLS FARGO	AV	STETSON	DR	E	150	99			99	0	1	1	10	14	NB	NB	9		Over 100 feet
1925273	191205	2109	WELLS FARGO	AV	STETSON	DR	E	201	99			4	0	97	1	10	3	WB	EB	4		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1721626	170930	0232	SADDLEBAG	TR	CAMELBACK	RD	W	137	2	1	2	4	0	4	1	1	3	EB	EB	4	DUI, MULTI VEH 4	Over 100 feet
1701021	170114	0059	SADDLEBAG	TR	CAMELBACK	RD	E	20	1	1	1	4	0	97	1	10	3	NB	SB	2		Within 100 feet
1703148	170207	1826	SADDLEBAG	TR	CAMELBACK	RD	W	100	1	1	1	0	0	2	1	1	3	EB	EB	4		Within 100 feet
1708250	170410	1548	SADDLEBAG	TR	CAMELBACK	RD	AT		1	1	1	0	0	12	1	8	1	EB	EB	2		Within 100 feet
1714658	170702	0223	SADDLEBAG	TR	CAMELBACK	RD	AT		99	1	99	0	99	12	1	8	1	EB	EB	6	HIT AND RUN	Within 100 feet
1715210	170708	2313	SADDLEBAG	TR	CAMELBACK	RD	W	100	1	1	1	99	0	12	1	8	1	EB	EB	6	HIT AND RUN	Within 100 feet
1720039	170910	0157	SADDLEBAG	TR	CAMELBACK	RD	AT		1	1	1	4	0	12	1	8	1	EB	EB	6	DUI	Within 100 feet
1722799	171014	2308	SADDLEBAG	TR	CAMELBACK	RD	AT		1	1	1	0	0	20	1	4	1	WB	EB	2		Within 100 feet
1727359	171211	0412	SADDLEBAG	TR	CAMELBACK	RD	AT		1	1		99	0	1	1	13	14	NB	99	97	HIT AND RUN	Within 100 feet
1815088	180708	1819	SADDLEBAG	TR	CAMELBACK	RD	E	161	1	1	1	4	4	20	1	97	1	NB	EB	2	DUI	Over 100 feet
1816615	180728	2250	SADDLEBAG	TR	CAMELBACK	RD	E	280	99	99	99	0	0	2	1	1	3	EB	EB	4		Over 100 feet
1802725	180204	0201	SADDLEBAG	TR	CAMELBACK	RD	AT		99	99	99	99	0	2	1	1	3	EB	EB	4		Within 100 feet
1805506	180311	0030	SADDLEBAG	TR	CAMELBACK	RD	AT		1	1	1	0	0	20	1	4	1	WB	EB	2		Within 100 feet
1809057	180423	0055	SADDLEBAG	TR	CAMELBACK	RD	E	100	1	1		4	0	97	1	10	14	NB		8	DUI	Within 100 feet
1813340	180616	0233	SADDLEBAG	TR	CAMELBACK	RD	S	91	99	99	2	99	0	20	1	4	8	SB	WB	2	HIT AND RUN	Within 100 feet
1816443	180726	2166	SADDLEBAG	TR	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	1	EB	EB	4		Within 100 feet
1822917	181020	2241	SADDLEBAG	TR	CAMELBACK	RD	AT		3	3	1	0	0	97	1	1	4	EB	EB	2		Within 100 feet
1912123	190606	1643	SADDLEBAG	TR	CAMELBACK	RD	E	116	99			0	0	2	1	1	3	EB	EB	4		Over 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1701312	170117	1928	CIVIC CENTER	PZ	CAMELBACK	RD	AT		1	1	1	0	0	1	1	1	97	EB	EB	4		Within 100 feet
1707831	170404	1730	CIVIC CENTER	PZ	CAMELBACK	RD	AT		2	1	2	0	0	20	11	4	1	NB	EB	3		Within 100 feet
1724095	171005	0755	CIVIC CENTER	PZ	CAMELBACK	RD	AT		1	1	1	0	0	20	1	6	1	WB	WB	2		Within 100 feet
1724495	171104	0232	CIVIC CENTER	CT	CAMELBACK	RD	W	82	3	3	1	4	99	97	1	1	1	WB	WB	4	DUI	Within 100 feet
1808992	180422	0104	CIVIC CENTER	BL	CAMELBACK	RD	AT		1	1	1	0	0	12	1	8	3	EB	EB	2		Within 100 feet
1809847	180503	1340	CIVIC CENTER	PZ	CAMELBACK	RD	S	50	99	99		99	0	2	1	99	14	99	99	6	HIT AND RUN	Within 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1700228	170104	0218	CIVIC CENTER	PZ	STETSON	DR	E	200	1	1	1	4	0	2	1	1	1	EB	EB	4	DUI	Over 100 feet
1709200	170423	0205	CIVIC CENTER	PL	STETSON	DR	S	120	1	1		4	0	13	1	1	14	NB	SB	4	DUI	Over 100 feet
1715686	170715	0231	CIVIC CENTER	BL	STETSON	DR	W	500	99	99	1	99	1	97	1	10	1	NB	EB	97	HIT AND RUN	Over 100 feet
1707459	170331	1105	CIVIC CENTER	PZ	STETSON	DR	N	20	1	1	1	0	0	97	1	10	6	NB	WB	8		Within 100 feet
1718684	170824	0118	CIVIC CENTER	PL	STETSON	DR	W	50	1	1		4	0	2	1	1	14	EB	SB	97	DUI, HIT AND RUN	Within 100 feet
1721047	170923	0220	CIVIC CENTER	PZ	STETSON	DR	AT		99	99	3	99	0	20	1	5	17	SB	SB	2	HIT AND RUN	Within 100 feet
1727297	171210	0121	CIVIC CENTER	PZ	STETSON	DR	AT		1	1	1	0	0	97	1	1	1	NB	WB	2		Within 100 feet
1728288	171222	1232	CIVIC CENTER	PZ	STETSON	DR	AT		1	1	1	0	0	20	1	1	1	NB	EB	2		Within 100 feet
1826418	181208	0054	CIVIC CENTER	PZ	STETSON	DR	E	150	1	1	1	99	0	97	1	10	14	WB	WB	4	HIT AND RUN	Over 100 feet
1803845	180217	2302	CIVIC CENTER	DR	STETSON	DR	AT		1	1	1	0	0	20	1	4	1	SB	EB	2		Within 100 feet
1806087	180317	2131	CIVIC CENTER	PZ	STETSON	DR	AT		1	1	1	0	0	5	1	4	1	SB	EB	2		Within 100 feet

Report	Date	Time	N-S Street	Type	E-W Street	Type	Dir From	Dist From	Inj			Phys Cond		Violation		Action		Direction		Manner of Collision	Comments	Distance
									Max	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2			
1700981	170113	1703	MILLER	RD	CAMELBACK	RD	W	150	1	1	1	0	0	4	1	1	3	EB	EB	4	MULTI VEH 3	Over 100 feet
1704323	170221	1756	MILLER	RD	CAMELBACK	RD	W	660	1	1	1	0	0	2	1	2	3	EB	EB	4	MULTI VEH 3	Over 100 feet
1706176	170316	1426	MILLER	RD	CAMELBACK	RD	W	346	99	3	99	0	0	2	1	1	3	EB	EB	4		Over 100 feet
1713947	170623	1032	MILLER	RD	CAMELBACK	RD	W	200	3	3	1	0	0	99	99	19	5	WB	NB	2	CAR/PEDESTRIAN	Over 100 feet
1716682	170728	1028	MILLER	RD	CAMELBACK	RD	S	101	1	1	1	0	0	12	1	8	1	NB	NB	6		Over 100 feet
1727105	171207	1723	MILLER	RD	CAMELBACK	RD	W	400	1	1	1	0	0	20	1	4	2	NB	EB	2		Over 100 feet
1700481	170107	1310	MILLER	RD	CAMELBACK	RD	AT		3	1	3	0	0	1	1	5	17	SB	EB	1	CAR/PEDESTRIAN	Within 100 feet
1700779	170111	1034	MILLER	RD	CAMELBACK	RD	AT		99	99	99	0	0	6	1	1	1	WB	NB	2		Within 100 feet
1701723	170122	1822	MILLER	RD	CAMELBACK	RD	AT		99	99	1	99	0	20	1	4	1	NB	SB	3	HIT AND RUN	Within 100 feet
1706284	170317	1244	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	12	1	8	3	WB	WB	6		Within 100 feet
1707077	170326	1639	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	20	1	1	1	NB	WB	2		Within 100 feet
1708395	170412	1229	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	5	1	SB	WB	6		Within 100 feet
1708575	170414	1502	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	7	1	3	1	NB	SB	5		Within 100 feet
1708804	170417	1808	MILLER	RD	CAMELBACK	RD	AT		99	99	1	99	0	2	1	1	2	EB	EB	4	MULTI VEH 3, HIT AND RUN	Within 100 feet
1710343	170507	0046	MILLER	RD	CAMELBACK	RD	E	50	1	1	1	0	0	12	1	8	3	EB	EB	4		Within 100 feet
1710644	170511	0901	MILLER	RD	CAMELBACK	RD	AT		3	1	3	0	0	20	1	4	1	SB	EB	2		Within 100 feet
1716548	170726	1622	MILLER	RD	CAMELBACK	RD	W	100	1	1	1	0	0	2	1	2	3	EB	EB	4		Within 100 feet
1718846	170825	2139	MILLER	RD	CAMELBACK	RD	AT		3	1	3	0	0	20	1	4	18	EB	EB	1	CAR/PEDESTRIAN	Within 100 feet
1722983	171017	1335	MILLER	RD	CAMELBACK	RD	AT		2	1	2	0	0	6	1	1	1	NB	WB	2		Within 100 feet
1723670	171026	0441	MILLER	RD	CAMELBACK	RD	AT		2	1	2	0	0	6	1	1	1	SB	EB	2		Within 100 feet
1801093	180115	0950	MILLER	RD	CAMELBACK	RD	W	550	1	1		99	0	97	1	10	14	NB	NB	97	HIT AND RUN	Over 100 feet
1809189	180424	1712	MILLER	RD	CAMELBACK	RD	W	200	1	1	1	0	0	2	1	1	3	EB	EB	4	MULTI VEH 3	Over 100 feet
1817968	180815	1256	MILLER	RD	CAMELBACK	RD	S	338	2	1	2	0	0	7	1	4	1	SB	WB	2		Over 100 feet
1821451	180930	1615	MILLER	RD	CAMELBACK	RD	W	150	1	1	1	0	0	20	1	4	1	NB	EB	3		Over 100 feet
1825187	181121	1212	MILLER	RD	CAMELBACK	RD	W	107	1	1	1	0	0	2	1	1	3	WB	WB	4	MULTI VEH 3	Over 100 feet
1826239	181205	1607	MILLER	RD	CAMELBACK	RD	S	277	2	1	2	0	0	7	1	4	1	SB	SB	2		Over 100 feet
1807962	180409	1501	MILLER	RD	CAMELBACK	RD	AT		3	3	1	0	0	6	1	1	1	NB	EB	2	MULTI VEH 3	Within 100 feet
1801567	180121	1756	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	5	4	EB	NB	2	HIT AND RUN	Within 100 feet
1805317	180308	1733	MILLER	RD	CAMELBACK	RD	AT		99	1	99	0	99	1	2	3	1	EB	EB	4	HIT AND RUN	Within 100 feet
1805377	180307	1830	MILLER	RD	CAMELBACK	RD	S	10	2	2	2	0	0	1	1	17	17	EB	EB	97	MULTI VEH 3, HIT AND RUN, CAR/PEDE	Within 100 feet
1806409	180321	1710	MILLER	RD	CAMELBACK	RD	AT		3	3	2	5	0	6	1	1	4	EB	NB	2	MULTI VEH 3, DUI	Within 100 feet
1808261	180413	1249	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	7	1	5	1	NB	EB	2		Within 100 feet
1809401	180427	0859	MILLER	RD	CAMELBACK	RD	AT		3	3	1	0	0	8	1	17	5	WB	NB	2	CAR/BICYCLE	Within 100 feet
1816113	180722	1239	MILLER	RD	CAMELBACK	RD	AT		2	1	2	0	0	2	2	1	1	EB	SB	2		Within 100 feet
1816927	180802	1310	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	6	1	1	1	SB	EB	2	MULTI VEH 3	Within 100 feet
1817255	180806	1831	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	20	1	4	1	WB	WB	5		Within 100 feet
1818152	180817	1724	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	1	1	1	4	NB	NB	3		Within 100 feet
1820259	180913	1724	MILLER	RD	CAMELBACK	RD	W	25	1	1	1	0	0	2	1	1	1	EB	EB	4		Within 100 feet
1825112	181120	0923	MILLER	RD	CAMELBACK	RD	AT		1	1	1	0	0	2	1	1	1	NB	NB	4		Within 100 feet
1825630	181127	1903	MILLER	RD	CAMELBACK	RD	W	10	1	1	1	4	0	2	1	1	1	WB	WB	4	DUI	Within 100 feet
1826160	181204	1534	MILLER	RD	CAMELBACK	RD	AR		1	1	1	0	0	2	1	1	3	NB	NB	4		Within 100 feet
1901628	190122	1519	MILLER	RD	CAMELBACK	RD	S	200	99			0	0	20	1	4	1	EB	NB	3		Over 100 feet
1905901	190317	1213	MILLER	RD	CAMELBACK	RD	S	221	99			4	0	2	1	5	3	SB	SB	2		Over 100 feet
1906521	190325	1614	MILLER	RD	CAMELBACK	RD	W	354	99			0	0	1	1	1	3	EB	EB	4		Over 100 feet
1910689	190518	1403	MILLER	RD	CAMELBACK	RD	W	352	99			0	0	20	1	4	1	NB	EB	2		Over 100 feet
1911913	190603	1729	MILLER	RD	CAMELBACK	RD	W	125	99			0	0	20	1	4	1	WB	EB	3		Over 100 feet
1913464	190624	1726	MILLER	RD	CAMELBACK	RD	W	200	99			0	0	20	1	4	1	NB	EB	3		Over 100 feet
1918446	190902	0021	MILLER	RD	CAMELBACK	RD	S	200	99			4	0	97	1	10	14	EB	99	4		Over 100 feet
1919102	190911	1417	MILLER	RD	CAMELBACK	RD	S	307	99			0	0	20	1	4	1	EB	SB	3		Over 100 feet

1924769 191128 1203 MILLER RD CAMELBACK RD W 126 99 0 0 20 97 5 19 NB WB 2 Over 100 feet



Appendix C – Parcel Information

173-41-004 Commercial Parcel

This is a commercial parcel located at [7222 E SHOEMAN LN SCOTTSDALE 85251](#). and the current owner is TRIYAR CAPITAL LLC/BASELINE AQUISITION. It is located in the Shoeman Tract subdivision and MCR 4231. Its current year full cash value is \$801,400.

Property Information

[7222 E SHOEMAN LN SCOTTSDALE 85251](#)

MCR #	4231
Description:	SHOEMAN TRACT LOT 4 E 65' EX S 15' RD
Lat/Long	33.50092129 -111.92530486
Lot Size	8,905 sq ft.
Zoning	C-3
Lot #	4
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (12 Parcels)	SHOEMAN TRACT

Owner Information

[TRIYAR CAPITAL LLC/BASELINE AQUISITION](#)

Mailing Address	4501 N SCOTTSDALE RD STE 201, SCOTTSDALE, AZ 85251
In Care Of	STOCKDALE MANAGEMENT LLC
Deed Number	150857911
Last Deed Date	12/03/2015
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$801,400	\$757,600	\$721,500	\$509,700	\$509,700
Limited Property Value	\$345,443	\$328,993	\$313,327	\$298,407	\$284,197
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$62,180	\$59,219	\$56,399	\$53,713	\$51,155
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

173-41-005 Commercial Parcel

This is a commercial parcel located at [7216 E SHOEMAN LN SCOTTSDALE 85251](#). and the current owner is TRIYAR CAPITAL LLC/BASELINE AQUISITION. It is located in the Shoeman Tract subdivision and MCR 4231. Its current year full cash value is \$684,100.

Property Information

[7216 E SHOEMAN LN SCOTTSDALE 85251](#)

MCR #	4231
Description:	SHOEMAN TRACT LOT 4 W 64'
Lat/Long	33.50092635 -111.92547010
Lot Size	9,753 sq ft.
Zoning	C-3
Lot #	4
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (12 Parcels)	SHOEMAN TRACT

Owner Information

[TRIYAR CAPITAL LLC/BASELINE AQUISITION](#)

Mailing Address	4501 N SCOTTSDALE RD STE 201, SCOTTSDALE, AZ 85251
In Care Of	STOCKDALE MANAGEMENT LLC
Deed Number	150857911
Last Deed Date	12/03/2015
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$684,100	\$601,200	\$576,400	\$562,800	\$555,800
Limited Property Value	\$416,784	\$396,937	\$378,035	\$360,033	\$342,889
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$75,021	\$71,449	\$68,046	\$64,806	\$61,720
Property Use Code	2010	2010	2010	2010	2010
PU Description	Restaurant	Restaurant	Restaurant	Restaurant	Restaurant
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

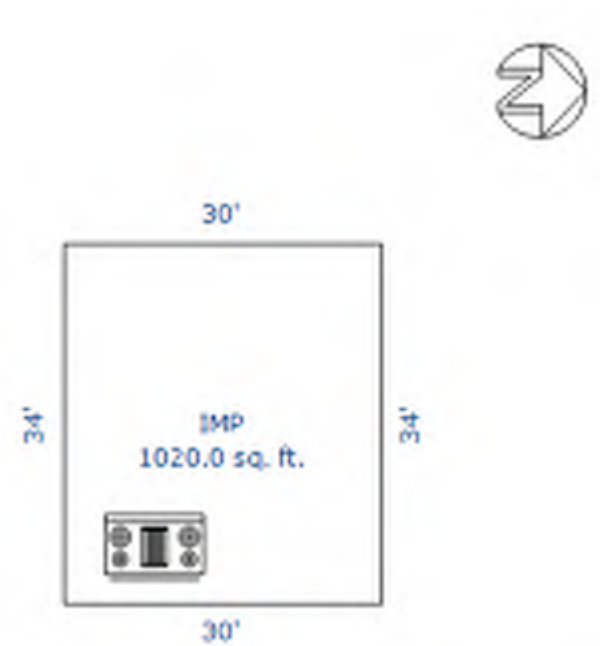
Additional Property Information

Additional commercial property data.

Description	Imp #	Occupancy	Rank	CCI	Age	Sq Ft.
Restaurant	000101	350	2	C	35	1,020
Site Improvements	000201	163	2	D	35	1

Building Sketches

Sketches that illustrate the external dimensions of a property.



173-41-015A Commercial Parcel

This is a commercial parcel and the current owner is TRIYAR CAPITAL LLC/BASELINE AQUISITION. It is located in the Shoeman Tract subdivision and MCR 4231. Its current year full cash value is \$1,005,400.

Property Information

MCR #	4231
Description:	SHOEMAN TRACT PT TR A W 131F OF E 268.5F OF N 135.3F EX E 26F RD & EX N 7F & EX ER DKT/PG 14489-115-116
Lat/Long	
Lot Size	11,172 sq ft.
Zoning	C-3
Lot #	
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (12 Parcels)	SHOEMAN TRACT

Owner Information

[TRIYAR CAPITAL LLC/BASELINE AQUISITION](#)

Mailing Address	4501 N SCOTTSDALE RD STE 201, SCOTTSDALE, AZ 85251
In Care Of	STOCKDALE MANAGEMENT LLC
Deed Number	150857911
Last Deed Date	12/03/2015
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$1,005,400	\$950,500	\$905,200	\$639,500	\$639,500
Limited Property Value	\$430,150	\$409,667	\$390,159	\$371,580	\$353,886
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$77,427	\$73,740	\$70,229	\$66,884	\$63,699
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

173-41-016B Commercial Parcel

This is a commercial parcel located at [7201 E CAMELBACK RD SCOTTSDALE 85251](#), and the current owner is TRIYAR CAPITAL LLC/BASELINE AQUISITION. It is located in the Shoeman Tract subdivision and MCR 4231. Its current year full cash value is \$12,262,900.

Property Information

[7201 E CAMELBACK RD SCOTTSDALE 85251](#)

MCR #	4231
Description:	SHOEMAN TRACT TRACT A EX E 268.5F & EX BEG SW COR TH E 245F N 110F W 143.08F TO NW LN TH SW 153F S 10F TO BEG & EX PER DKT/PG 3882-288 & EX PER DKT/PG 14489-118-119
Lat/Long	33.50224451 -111.92536800
Lot Size	51,713 sq ft.
Zoning	C-3
Lot #	
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (12 Parcels)	SHOEMAN TRACT

Owner Information

[TRIYAR CAPITAL LLC/BASELINE AQUISITION](#)

Mailing Address	4501 N SCOTTSDALE RD STE 201, SCOTTSDALE, AZ 85251
In Care Of	STOCKDALE MANAGEMENT LLC
Deed Number	150857911
Last Deed Date	12/03/2015
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$12,262,900	\$11,892,300	\$11,243,200	\$9,205,300	\$8,880,600
Limited Property Value	\$6,881,688	\$6,553,989	\$6,241,894	\$5,944,661	\$5,661,582
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$1,238,704	\$1,179,718	\$1,123,541	\$1,070,039	\$1,019,085
Property Use Code	1513	1513	1513	1513	1513
PU Description	Office	Office	Office	Office	Office
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

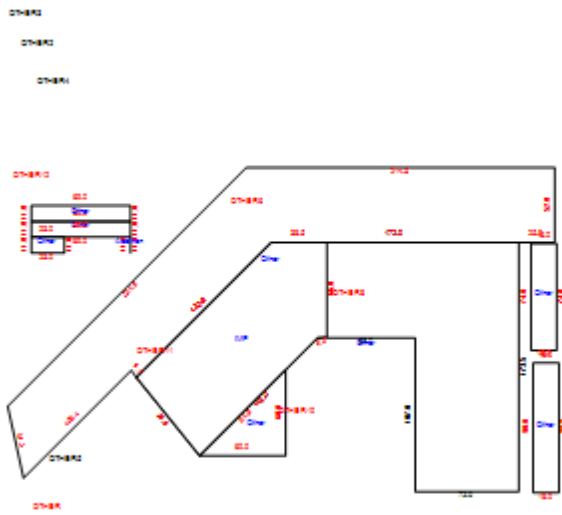
Additional Property Information

Additional commercial property data.

Description	Imp #	Occupancy	Rank	CCI	Age	Sq Ft.
Office Building	000101 344	3	B	28	68,782	
Parking Level	000102 577	1	B	37	30,292	
Parking Level	000103 577	1	B	37	25,960	
Site Improvements	000201 163	2	D	37	1	

Building Sketches

Sketches that illustrate the external dimensions of a property.



173-41-017A Commercial Parcel

This is a commercial parcel and the current owner is TRIYAR CAPITAL LLC/BASELINE AQUISITION. It is located in the Shoeman Tract subdivision and MCR 4231. Its current year full cash value is \$2,073,600.

Property Information

MCR #	4231
Description:	SHOEMAN TRACT TRACT A BEG SW COR TH E 245F TO NE COR LOT 4 N 110F N 84D 04' W 143.08F TO NW LN S 42D 11F W ALG NW LN 153F TO W LN TH S 10F TO BEG EX PER DKT/PG 14489-118-119
Lat/Long	
Lot Size	23,040 sq ft.
Zoning	C-3
Lot #	
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (12 Parcels)	SHOEMAN TRACT

Owner Information

[TRIYAR CAPITAL LLC/BASELINE AQUISITION](#)

Mailing Address	4501 N SCOTTSDALE RD STE 201, SCOTTSDALE, AZ 85251
In Care Of	STOCKDALE MANAGEMENT LLC
Deed Number	150857911
Last Deed Date	12/03/2015
Sale Date	n/a
Sale Price	n/a

Valuation Information

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Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$2,073,600	\$1,960,300	\$1,866,900	\$1,318,900	\$1,318,900
Limited Property Value	\$893,789	\$851,228	\$810,693	\$772,089	\$735,323
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$160,882	\$153,221	\$145,925	\$138,976	\$132,358
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

173-41-021A Commercial Parcel

This is a commercial parcel located at [4424 N BROWN AVE SCOTTSDALE 85251](#). and the current owner is TRIYAR CAPITAL LLC/BASELINE AQUISITION. It is located in the Shoeman Tract subdivision and MCR 4231. Its current year full cash value is \$1,264,200.

Property Information

[4424 N BROWN AVE SCOTTSDALE 85251](#)

MCR #	4231
Description:	SHOEMAN TRACT TR A S 151.3F OF W 131F OF E 268.5F EX E 26F RD & EX PER DKT/PG 14489-115-116
Lat/Long	33.50160944 -111.92448294
Lot Size	14,047 sq ft.
Zoning	C-3
Lot #	
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (12 Parcels)	SHOEMAN TRACT

Owner Information

[TRIYAR CAPITAL LLC/BASELINE AQUISITION](#)

Mailing Address	4501 N SCOTTSDALE RD STE 201, SCOTTSDALE, AZ 85251
In Care Of	STOCKDALE MANAGEMENT LLC
Deed Number	150857911
Last Deed Date	12/03/2015
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$1,264,200	\$1,195,100	\$1,138,200	\$804,100	\$804,100
Limited Property Value	\$544,829	\$518,885	\$494,176	\$470,644	\$448,232
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$98,069	\$93,399	\$88,952	\$84,716	\$80,682
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

173-41-182 Commercial Parcel

This is a commercial parcel located at [7320 E SHOEMAN LN SCOTTSDALE 85251](#). and the current owner is SHOEMAN LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$883,400.

Property Information

[7320 E SHOEMAN LN SCOTTSDALE 85251](#)

MCR #	8613
Description:	CAMELBACK PARK PLAZA
Lat/Long	33.50075082 -111.92334878
Lot Size	2,190 sq ft.
Zoning	C-2
Lot #	66
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[SHOEMAN LLC](#)

Mailing Address	7320 E SHOEMAN LN STE 204, SCOTTSDALE, AZ 85251-3324
Deed Number	040711426
Last Deed Date	06/23/2004
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$883,400	\$621,500	\$549,600	\$523,500	\$454,100
Limited Property Value	\$214,020	\$203,829	\$194,123	\$184,879	\$176,075
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$38,524	\$36,689	\$34,942	\$33,278	\$31,694
Property Use Code	1512	1512	1512	1512	1512
PU Description	Office	Office	Office	Office	Office
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

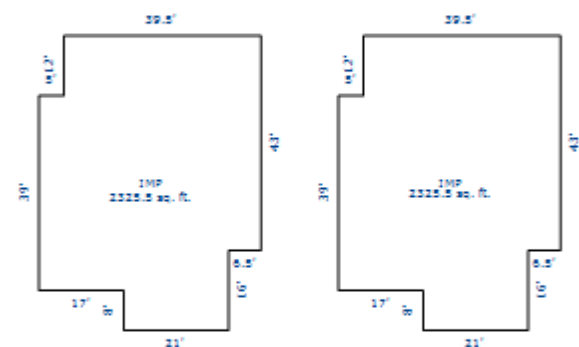
Additional Property Information

Additional commercial property data.

Description	Imp #	Occupancy	Rank	CCI	Age	Sq Ft.
Office Building	000101 344	2	C	36	4,651	
Site Improvements	000201 163	2	D	56	1	

Building Sketches

Sketches that illustrate the external dimensions of a property.



173-41-183 Commercial Parcel

This is a commercial parcel located at [7320 E SHOEMAN LN SCOTTSDALE 85251](#). and the current owner is SHOEMAN LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$138,800.

Property Information

[7320 E SHOEMAN LN SCOTTSDALE 85251](#)

MCR #	8613
Description:	CAMELBACK PARK PLAZA
Lat/Long	33.50075082 -111.92334878
Lot Size	2,104 sq ft.
Zoning	C-2
Lot #	67
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[SHOEMAN LLC](#)

Mailing Address	7320 E SHOEMAN LN STE 204, SCOTTSDALE, AZ 85251-3324
Deed Number	040711426
Last Deed Date	06/23/2004
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$138,800	\$115,200	\$109,700	\$108,000	\$108,000
Limited Property Value	\$98,146	\$93,472	\$89,021	\$84,782	\$80,745
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$17,666	\$16,825	\$16,024	\$15,261	\$14,534
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

173-41-260 Commercial Parcel

This is a commercial parcel located at [4415 N BUCKBOARD TR SCOTTSDALE 85251](#), and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Camelback Park Plaza Various Lots Replat subdivision and MCR 111846. Its current year full cash value is \$1,463,400.

Property Information

[4415 N BUCKBOARD TR SCOTTSDALE 85251](#)

MCR #	111846
Description:	CAMELBACK PARK PLAZA VARIOUS LOTS REPLAT MCR 1118-46
Lat/Long	33.50115010 -111.92354291
Lot Size	8,518 sq ft.
Zoning	C-2
Lot #	2
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (2 Parcels)	CAMELBACK PARK PLAZA VARIOUS LOTS REPLAT

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE STE 201, SCOTTSDALE, AZ 85251
Deed Number	120602980
Last Deed Date	07/10/2012
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$1,463,400	\$1,385,900	\$1,316,800	\$1,285,100	\$1,400,300
Limited Property Value	\$1,214,261	\$1,156,439	\$1,101,370	\$1,048,924	\$998,975
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$218,567	\$208,159	\$198,247	\$188,806	\$179,816
Property Use Code	2020	2020	2020	2020	2020
PU Description	Restaurant	Restaurant	Restaurant	Restaurant	Restaurant
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

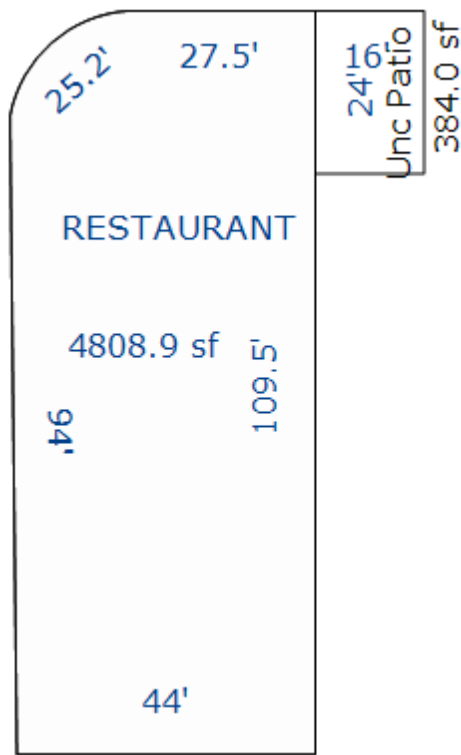
Additional Property Information

Additional commercial property data.

Description	Imp #	Occupancy	Rank	CCI	Age	Sq Ft.
Restaurant	000101	350	3	C	6	4,692
Site Improvements	000201	163	2	D	6	1

Building Sketches

Sketches that illustrate the external dimensions of a property.



173-40-123 Commercial Parcel

This is a commercial parcel located at [7373 E CAMELBACK RD SCOTTSDALE 85251](#), and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Indian Plaza Properties subdivision and MCR 7620. Its current year full cash value is \$3,006,600.

Property Information

[7373 E CAMELBACK RD SCOTTSDALE 85251](#)

MCR #	7620
Description:	INDIAN PLAZA PROPERTIES
Lat/Long	33.50220458 -111.92146018
Lot Size	32,019 sq ft.
Zoning	C-3
Lot #	
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (102 Parcels)	INDIAN PLAZA PROPERTIES

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE RD STE 201, SCOTTSDALE, AZ 85251
Deed Number	060358489
Last Deed Date	03/16/2006
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$3,006,600	\$2,850,400	\$2,755,400	\$2,633,300	\$2,833,000
Limited Property Value	\$2,432,595	\$2,316,757	\$2,206,435	\$2,101,367	\$2,001,302
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$437,867	\$417,016	\$397,158	\$378,246	\$360,234
Property Use Code	2020	2020	2020	2020	2020
PU Description	Restaurant	Restaurant	Restaurant	Restaurant	Restaurant
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

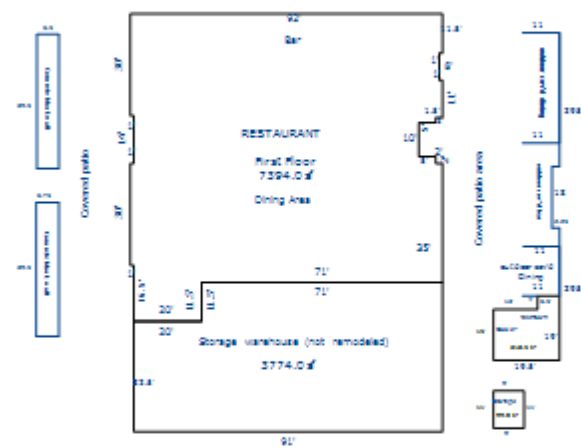
Additional Property Information

Additional commercial property data.

Description	Imp #	Occupancy	Rank	CCI	Age	Sq Ft.
Restaurant	000101	350	2	C	35	11,168
Site Improvements	000201	163	2	D	9	1

Building Sketches

Sketches that illustrate the external dimensions of a property.



173-41-119A Commercial Parcel

This is a commercial parcel and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$562,000.

Property Information

MCR #	8613
Description:	CAMELBACK PARK PLAZA LOTS 1 2 & 3 & TH POR ABAND ALLEY ADJ TO LOTS 1 2 & 3 EX TH POR E OF S 16F LO T 3
Lat/Long	
Lot Size	8,703 sq ft.
Zoning	C-2
Lot #	1
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE RD UNIT 201, SCOTTSDALE, AZ 85251
Deed Number	060358489
Last Deed Date	03/16/2006
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$562,000	\$513,100	\$488,700	\$454,500	\$454,500
Limited Property Value	\$332,359	\$316,532	\$301,459	\$287,104	\$273,432
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$59,825	\$56,976	\$54,263	\$51,679	\$49,218
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

173-41-149 Commercial Parcel

This is a commercial parcel located at [7343 E CAMELBACK RD SCOTTSDALE 85251](#), and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$485,000.

Property Information

[7343 E CAMELBACK RD SCOTTSDALE 85251](#)

MCR #	8613
Description:	CAMELBACK PARK PLAZA
Associated Parcels	173-41-149173-41-150173-41-151173-41-152173-41-153173-41-216
Lat/Long	33.50220005 -111.92253163
Lot Size	2,764 sq ft.
Zoning	C-2
Lot #	33
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE RD UNIT 201, SCOTTSDALE, AZ 85251
Deed Number	190371220
Last Deed Date	05/21/2019
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$485,000	\$535,100	\$449,100	\$433,900	\$399,400
Limited Property Value	\$308,222	\$293,545	\$279,567	\$266,254	\$253,575
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$55,480	\$52,838	\$50,322	\$47,926	\$45,644
Property Use Code	1511	1511	1511	1511	1511
PU Description	Office	Office	Office	Office	Office
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Decision	Decision

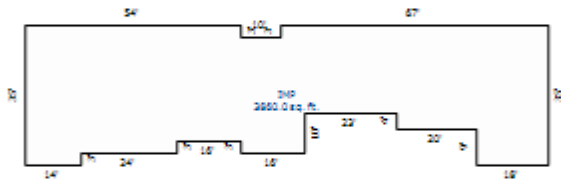
Additional Property Information

Additional commercial property data.

Description	Imp #	Occupancy	Rank	CCI	Age	Sq Ft.
Office Building	000101 344	2	C	28	3,860	
Site Improvements	000201 163	2	D	42	1	

Building Sketches

Sketches that illustrate the external dimensions of a property.



173-41-150 Commercial Parcel

This is a commercial parcel located at [7343 E CAMELBACK RD SCOTTSDALE 85251](#), and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$177,600.

Property Information

[7343 E CAMELBACK RD SCOTTSDALE 85251](#)

MCR #	8613
Description:	CAMELBACK PARK PLAZA
Associated Parcels	173-41-149173-41-150173-41-151173-41-152173-41-153173-41-216
Lat/Long	33.50220005 -111.92253163
Lot Size	2,564 sq ft.
Zoning	C-2
Lot #	34
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE RD UNIT 201, SCOTTSDALE, AZ 85251
Deed Number	190371220
Last Deed Date	05/21/2019
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$177,600	\$155,900	\$148,500	\$141,400	\$141,400
Limited Property Value	\$113,694	\$108,280	\$103,124	\$98,213	\$93,536
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$20,465	\$19,490	\$18,562	\$17,678	\$16,836
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Decision	Decision

173-41-151 Commercial Parcel

This is a commercial parcel located at [7343 E CAMELBACK RD SCOTTSDALE 85251](#), and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$177,500.

Property Information

[7343 E CAMELBACK RD SCOTTSDALE 85251](#)

MCR #	8613
Description:	CAMELBACK PARK PLAZA
Associated Parcels	173-41-149173-41-150173-41-151173-41-152173-41-153173-41-216
Lat/Long	33.50220005 -111.92253163
Lot Size	2,563 sq ft.
Zoning	C-2
Lot #	35
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE RD UNIT 201, SCOTTSDALE, AZ 85251
Deed Number	190371220
Last Deed Date	05/21/2019
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$177,500	\$155,900	\$148,400	\$141,300	\$141,300
Limited Property Value	\$113,694	\$108,280	\$103,124	\$98,213	\$93,536
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$20,465	\$19,490	\$18,562	\$17,678	\$16,836
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Decision	Decision

173-41-152 Commercial Parcel

This is a commercial parcel located at [7343 E CAMELBACK RD SCOTTSDALE 85251](#), and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$177,500.

Property Information

[7343 E CAMELBACK RD SCOTTSDALE 85251](#)

MCR #	8613
Description:	CAMELBACK PARK PLAZA
Associated Parcels	173-41-149173-41-150173-41-151173-41-152173-41-153173-41-216
Lat/Long	33.50220005 -111.92253163
Lot Size	2,563 sq ft.
Zoning	C-2
Lot #	36
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE RD UNIT 201, SCOTTSDALE, AZ 85251
Deed Number	190371220
Last Deed Date	05/21/2019
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$177,500	\$155,900	\$148,400	\$141,300	\$141,300
Limited Property Value	\$113,694	\$108,280	\$103,124	\$98,213	\$93,536
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$20,465	\$19,490	\$18,562	\$17,678	\$16,836
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Decision	Decision

173-41-153 Commercial Parcel

This is a commercial parcel located at [7343 E CAMELBACK RD SCOTTSDALE 85251](#), and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$178,600.

Property Information

[7343 E CAMELBACK RD SCOTTSDALE 85251](#)

MCR #	8613
Description:	CAMELBACK PARK PLAZA
Associated Parcels	173-41-149173-41-150173-41-151173-41-152173-41-153173-41-216
Lat/Long	33.50220005 -111.92253163
Lot Size	2,578 sq ft.
Zoning	C-2
Lot #	37
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE RD UNIT 201, SCOTTSDALE, AZ 85251
Deed Number	190371220
Last Deed Date	05/21/2019
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$178,600	\$156,800	\$149,300	\$142,100	\$142,100
Limited Property Value	\$114,713	\$109,250	\$104,048	\$99,093	\$94,374
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$20,648	\$19,665	\$18,729	\$17,837	\$16,987
Property Use Code	1074	1074	1074	1074	1074
PU Description	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial	Associated Commercial
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Decision	Decision

173-41-216 Commercial Parcel

This is a commercial parcel located at [7343 E CAMELBACK RD SCOTTSDALE 85251](#), and the current owner is EQUITY PARTNERS GROUP LLC. It is located in the Camelback Park Plaza subdivision and MCR 8613. Its current year full cash value is \$227,500.

Property Information

[7343 E CAMELBACK RD SCOTTSDALE 85251](#)

MCR #	8613
Description:	CAMELBACK PARK PLAZA
Associated Parcels	173-41-149173-41-150173-41-151173-41-152173-41-153173-41-216
Lat/Long	33.50220005 -111.92253163
Lot Size	3,222 sq ft.
Zoning	C-2
Lot #	
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	19/006
Subdivision (35 Parcels)	CAMELBACK PARK PLAZA

Owner Information

[EQUITY PARTNERS GROUP LLC](#)

Mailing Address	4501 N SCOTTSDALE RD UNIT 201, SCOTTSDALE, AZ 85251
Deed Number	190371220
Last Deed Date	05/21/2019
Sale Date	n/a
Sale Price	n/a

Valuation Information

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our [data sales](#).

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. [CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL](#)

Tax Year	2021	2020	2019	2018	2017
Full Cash Value	\$227,500	\$199,900	\$189,900	\$180,900	\$180,300
Limited Property Value	\$145,353	\$138,431	\$131,839	\$125,561	\$119,582
Legal Class	1.12	1.12	1.12	1.12	1.12
Description	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P	COMMERCIAL / OTHER R/P
Assessment Ratio	18%	18%	18%	18%	18%
Assessed LPV	\$26,164	\$24,918	\$23,731	\$22,601	\$21,525
Property Use Code	2630	2630	2630	2630	2630
PU Description	Parking	Parking	Parking	Parking	Parking
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Decision	Decision

Additional Property Information

Additional commercial property data.

Description	Imp #	Occupancy	Rank	CCI	Age	Sq Ft.
Site Improvements	000101 163	2	D	67	1	



Appendix D – Traffic Count Data

TRAFFIC IMPACT & MITIGATION ANALYSIS
FOR

Marquee Office Building
Southeast corner of Scottsdale Road & Shoeman Lane
Scottsdale, Arizona

Prepared for:

DAVIS Architects
74 E. Rio Salado Parkway, Suite 200
Tempe, AZ 85281

Prepared by:



ACCEPTED
CITY OF SCOTTSDALE
TRANSPORTATION DEPARTMENT

DATE: 7/1/2019

REVIEWER: DOUG OSTLER

Except:

To high utilization of driveway B vs. A.
High utilization of exiting traffic to use Brown Ave to
Camelback Rd to Scottsdale Rd to South vs
Gallaria Driveway to Stetson Rd to Drinkwater Blvd.

7-ZN-2015#2
02/26/2019

9-ZN-2020
9/25/2020

TRAFFIC IMPACT & MITIGATION ANALYSIS
FOR

Marquee Office Building
Southeast corner of Scottsdale Road & Shoeman Lane
Scottsdale, Arizona

February 19, 2019

Prepared for:

DAVIS Architects
74 E. Rio Salado Parkway, Suite 200
Tempe, AZ 85008

Prepared by:

United Civil Group
Project Number: TR18064



Conducted by:

Sarah Simpson, PhD, PE
President

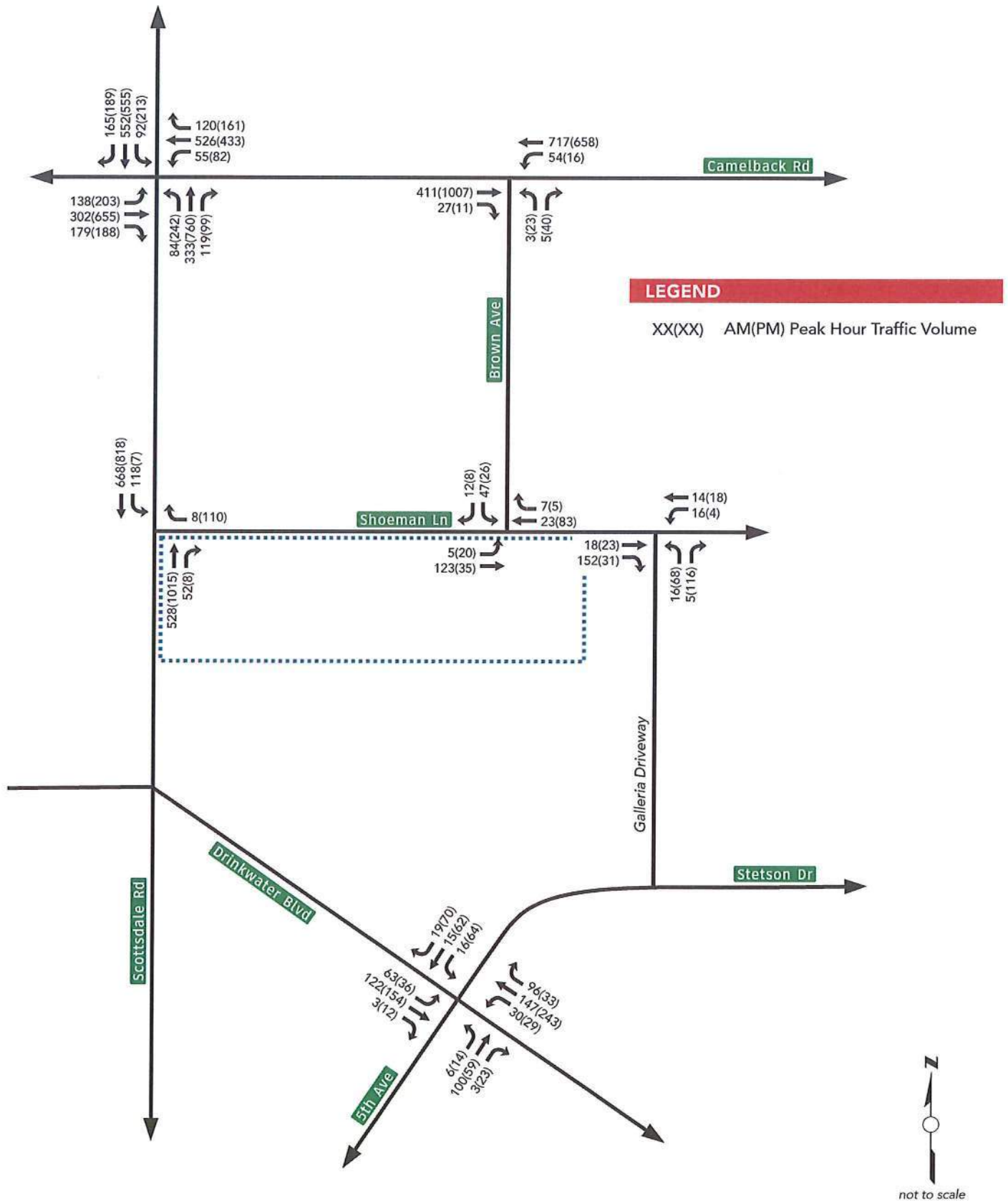


Figure 5: Existing Traffic Conditions - Year 2018



Southbridge Expansion

Traffic Impact Study

North of 5th Avenue and
West of Scottsdale Road
in Scottsdale, Arizona

May 2019
Project No. 18-1110

Prepared For:
Spring Creek Development
7134 East Stetson Drive, Fourth Floor
Scottsdale, AZ 85251

For Submittal to:
City of Scottsdale

Prepared By:



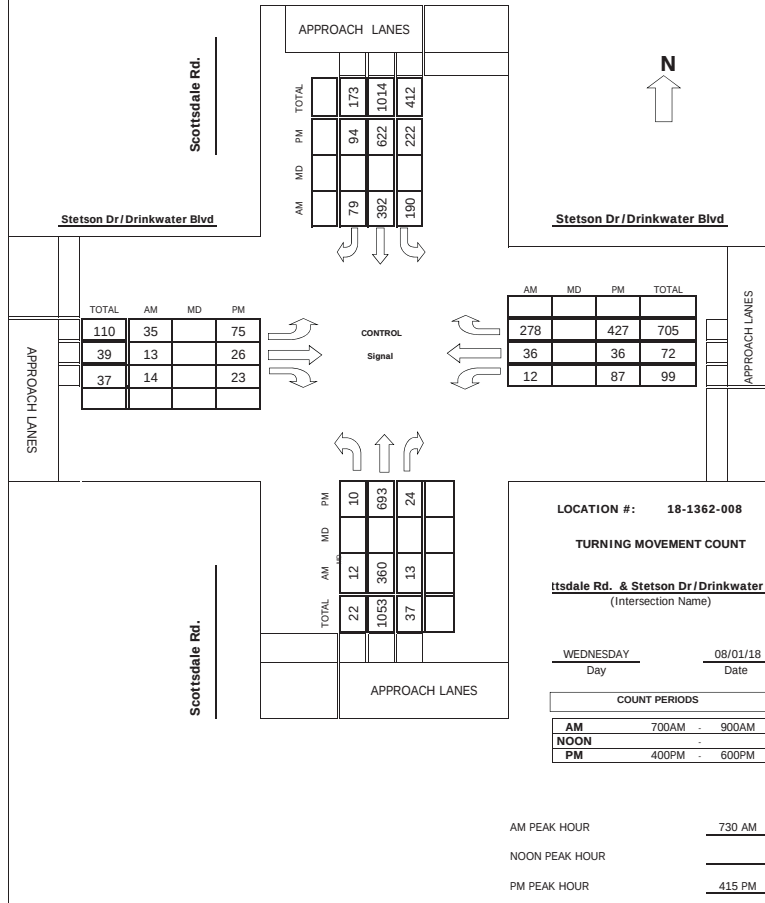
10605 North Hayden Road
Suite 140
Scottsdale, Arizona 85260
480-659-4250

Intersection Turning Movement
Prepared by:



Project #: 18-1362-008

TMC SUMMARY OF Scottsdale Rd. & Stetson Dr/Drinkwater Blvd



Pedestrian & Bicycle Study

N-S STREET: Scottsdale Rd.
E-W STREET: Stetson Dr/Drinkwater Blvd

Date: 08/01/18
Day: WEDNESDAY

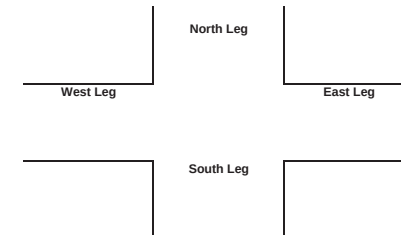
City: Scottsdale
Project #: 18-1362-008

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	14	1	2	2
7:15 AM	10	0	3	8
7:30 AM	11	1	6	6
7:45 AM	9	0	2	3
8:00 AM	5	1	5	2
8:15 AM	8	2	1	5
8:30 AM	4	1	4	5
8:45 AM	7	3	1	4
TOTAL	68	9	24	35

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	1	0
7:15 AM	1	0	1	0
7:30 AM	0	1	0	1
7:45 AM	1	2	0	0
8:00 AM	0	1	0	0
8:15 AM	1	0	0	1
8:30 AM	0	1	0	0
8:45 AM	0	0	1	1
TOTAL	3	5	3	3

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	12	1	4	5
4:15 PM	9	0	1	8
4:30 PM	11	1	5	5
4:45 PM	9	3	2	9
5:00 PM	5	2	6	6
5:15 PM	8	1	3	3
5:30 PM	5	1	2	2
5:45 PM	1	2	1	0
TOTAL	60	11	24	38

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	1	0	0
4:15 PM	0	0	2	1
4:30 PM	0	0	1	0
4:45 PM	0	0	0	1
5:00 PM	1	1	1	0
5:15 PM	0	1	0	1
5:30 PM	1	0	1	0
5:45 PM	0	0	0	0
TOTAL	3	3	5	3

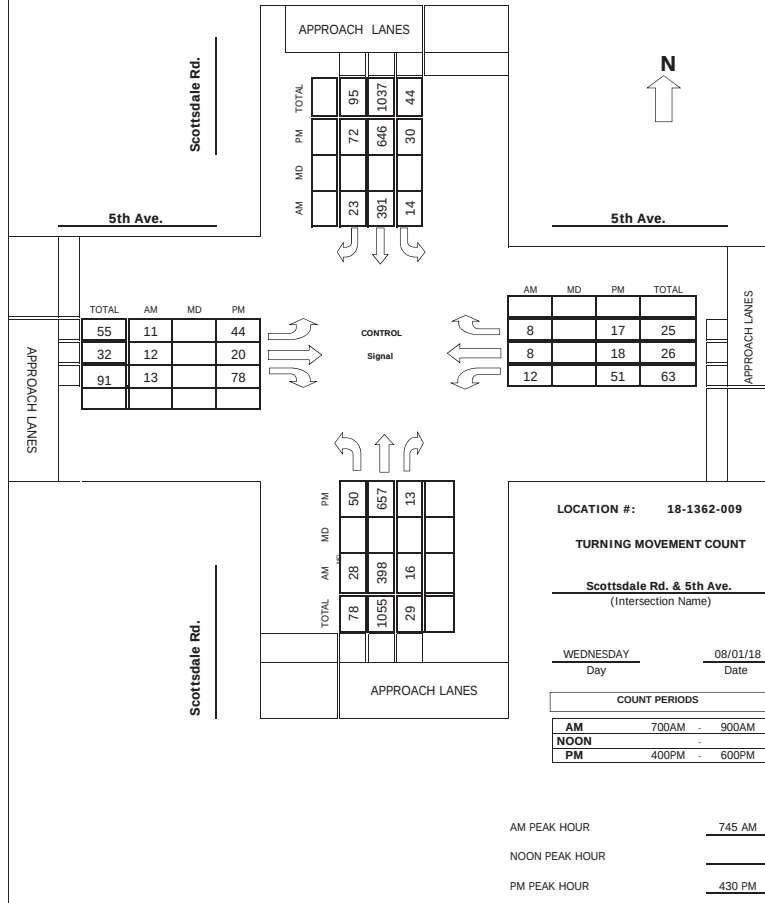


Intersection Turning Movement
Prepared by:



Project #: **18-1362-009**

TMC SUMMARY OF Scottsdale Rd. & 5th Ave.



Pedestrian & Bicycle Study

N-S STREET: Scottsdale Rd.
E-W STREET: 5th Ave.

Date: 08/01/18
Day: WEDNESDAY

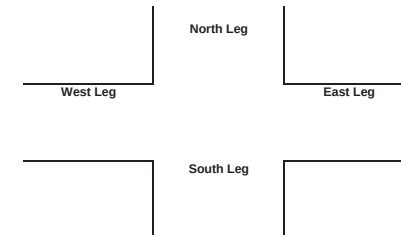
City: Scottsdale
Project #: 18-1362-009

PEDESTRIANS				
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	2	0	0	1
7:15 AM	5	1	1	2
7:30 AM	2	0	0	5
7:45 AM	3	1	1	2
8:00 AM	6	2	2	4
8:15 AM	2	1	1	1
8:30 AM	5	0	0	7
8:45 AM	2	1	1	4
TOTAL	27	6	6	26

BICYCLES				
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	1	0
7:30 AM	1	1	0	0
7:45 AM	0	0	0	0
8:00 AM	0	1	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	1	2	1	0

PEDESTRIANS				
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	1	2	8
4:15 PM	4	0	2	5
4:30 PM	1	3	3	9
4:45 PM	2	2	2	6
5:00 PM	3	1	1	3
5:15 PM	1	4	5	2
5:30 PM	0	1	1	5
5:45 PM	1	2	4	2
TOTAL	13	14	20	40

BICYCLES				
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	0	0	0
4:15 PM	0	0	1	1
4:30 PM	1	0	1	0
4:45 PM	0	0	0	0
5:00 PM	0	1	0	1
5:15 PM	0	0	0	0
5:30 PM	0	2	1	1
5:45 PM	0	0	0	0
TOTAL	2	3	3	3

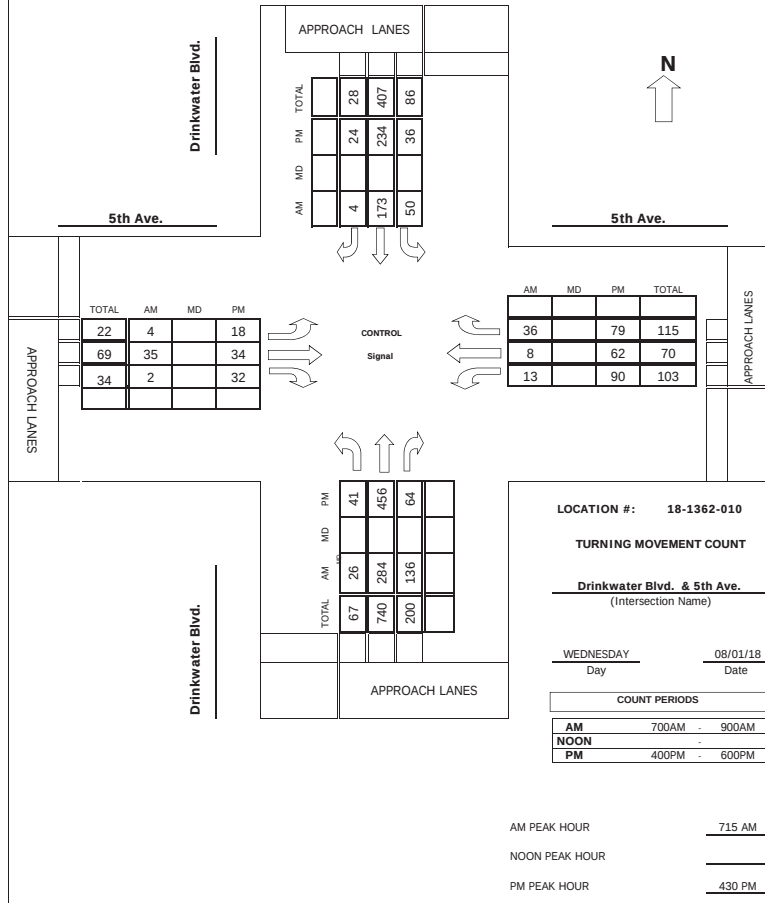


Intersection Turning Movement
Prepared by:



Project #: **18-1362-010**

TMC SUMMARY OF Drinkwater Blvd. & 5th Ave.



Pedestrian & Bicycle Study

N-S STREET: Drinkwater Blvd.
E-W STREET: 5th Ave.

Date: 08/01/18
Day: WEDNESDAY

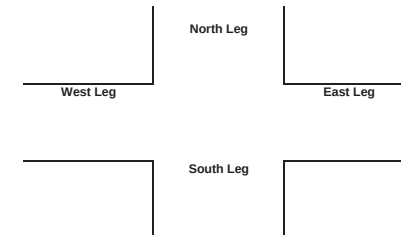
City: Scottsdale
Project #: 18-1362-010

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	1	1	0	0
7:15 AM	0	0	1	1
7:30 AM	1	0	1	2
7:45 AM	2	1	1	1
8:00 AM	3	0	0	0
8:15 AM	1	1	0	1
8:30 AM	2	2	0	3
8:45 AM	1	0	1	1
TOTAL	11	5	4	9

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	1	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	1	0	0	0
8:00 AM	0	0	0	0
8:15 AM	1	1	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	2	1	1	0

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	1	1	2
4:15 PM	4	0	1	1
4:30 PM	1	1	2	0
4:45 PM	2	2	3	1
5:00 PM	3	0	1	2
5:15 PM	1	1	2	1
5:30 PM	2	2	0	1
5:45 PM	1	1	1	1
TOTAL	15	8	11	9

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	1	1	1	0
4:30 PM	0	0	0	1
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	2	1
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	1	1	3	2



Waterview Scottsdale, Arizona

Traffic Impact Analysis – FIRST REVISION

June 2016

Prepared for:

STOCKDALE CAPITAL PARTNERS, LLC

For Submittal to:

CITY OF SCOTTSDALE

EPS Group Project Number: 15-301

Prepared by: Eric R. Maceyko, P.E., PTOE
Bryan A. Martin, P.E.



Expires: 6/30/2017

ACCEPTED
CITY OF SCOTTSDALE
TRANSPORTATION DEPARTMENT

DATE: 6/24/16

REVIEWER:

[Signature]



EPS Group, Inc. • 2045 South Vineyard Avenue, Suite 101 • Mesa, AZ 85210
Tel (480) 503-2250 • Fax (480) 503-2258
www.epsgroupinc.com

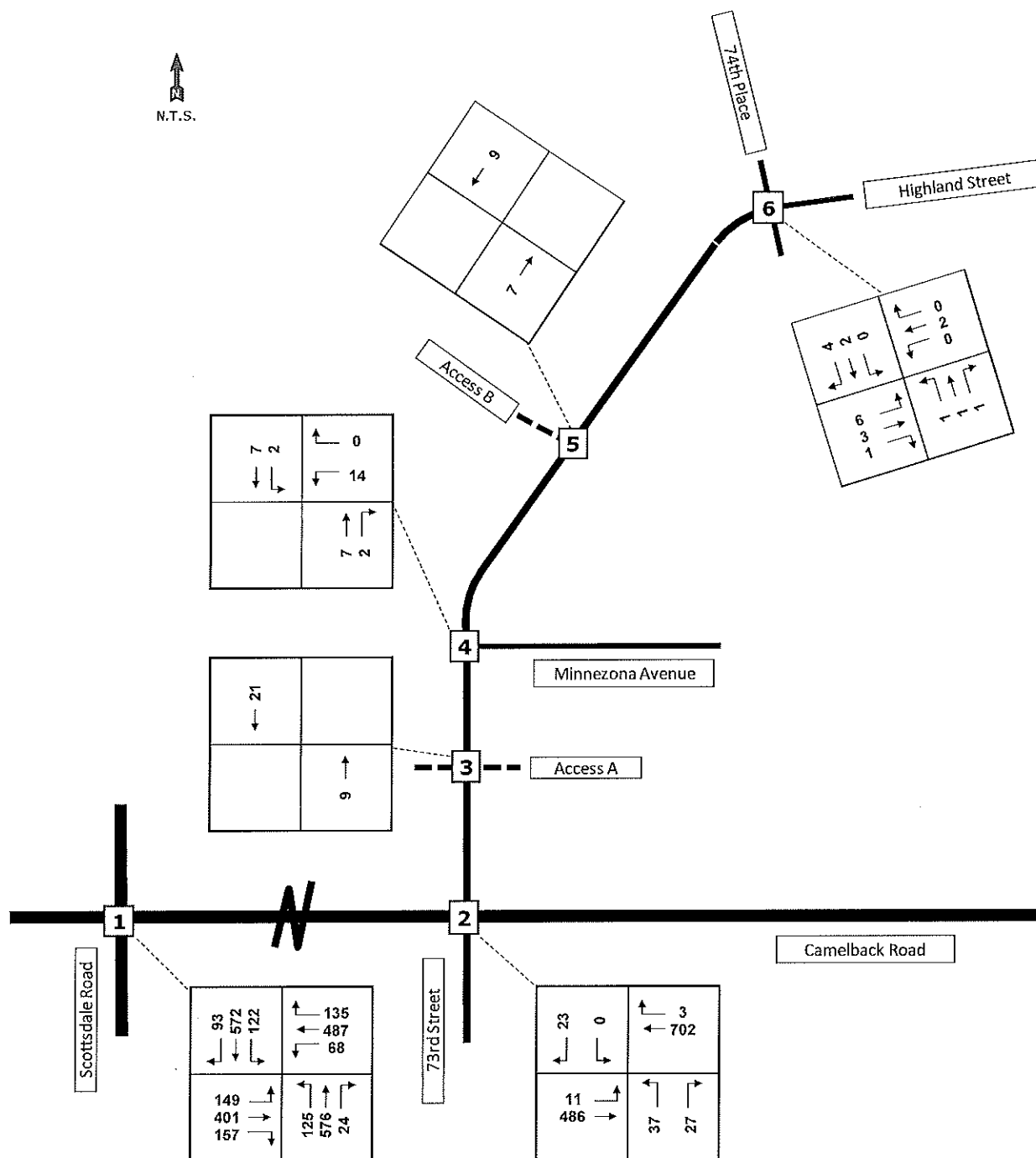


Figure 5: Existing Traffic Volumes – AM Peak Hour

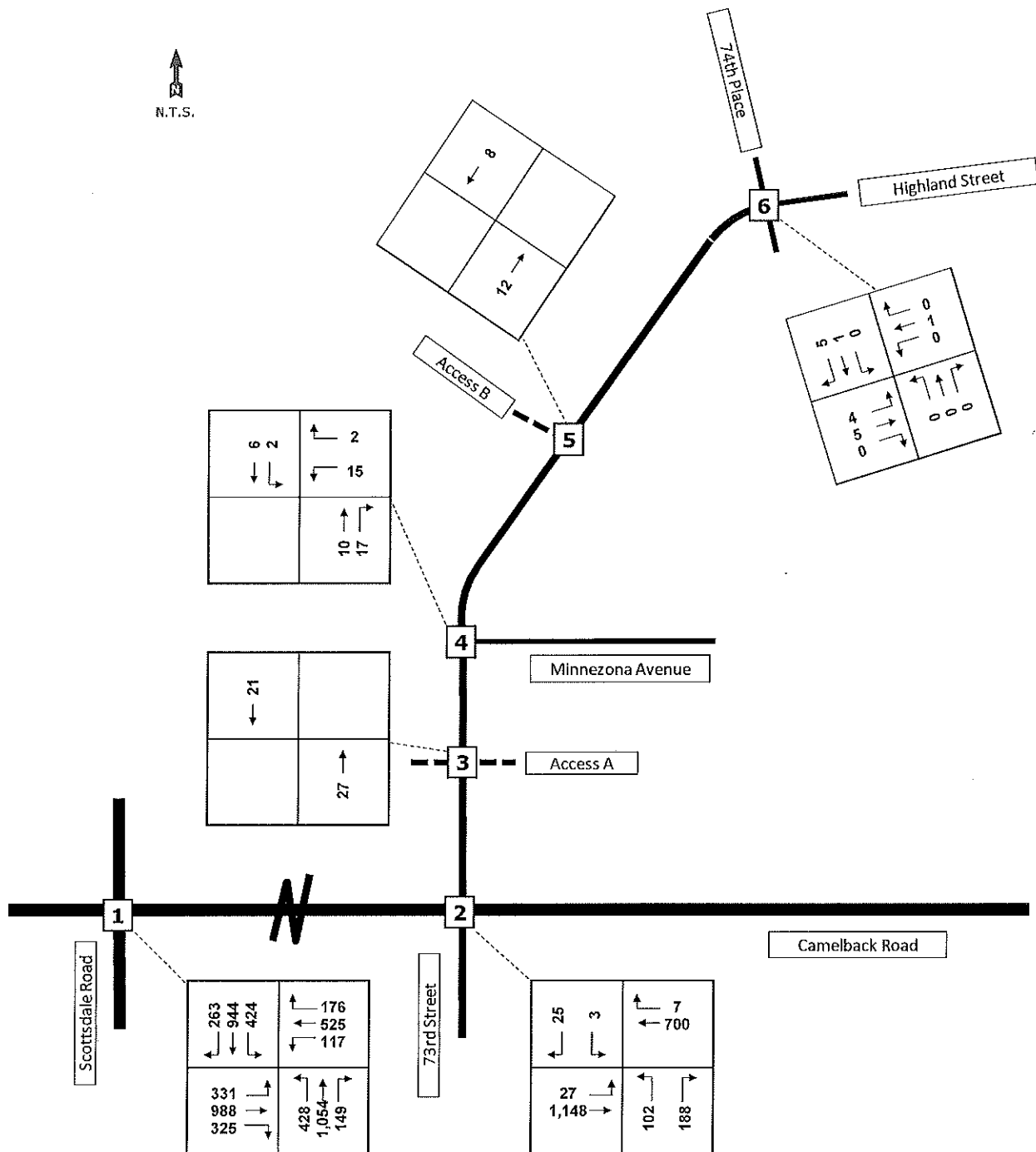


Figure 6: Existing Traffic Volumes – PM Peak Hour

Don and Charlie's Hotel

Traffic Impact and Mitigation Analysis



Prepared for:

Tyler Kent
OpWest Ventures
3920 E Thomas Road, #15330
Phoenix, AZ 85018

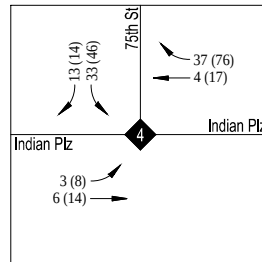
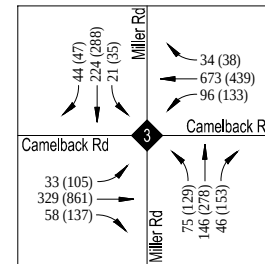
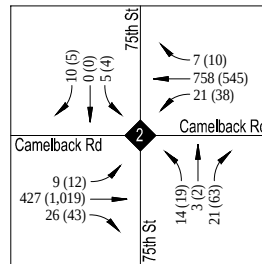
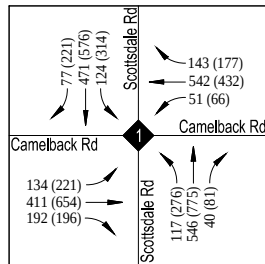
Prepared by:



J2 Engineering and Environmental Design
4649 E. Cotton Gin Loop, Suite B2
Phoenix, AZ 84040



Project Number: 17.1064
July 3, 2018



Legend

- AM (PM) Existing Peak Hour Traffic Volumes
- Intersection
- <ADT> Average Daily Traffic Volumes
- * ADT obtained from City of Scottsdale 2016 Segment Traffic Volumes

		J2 engineering and environmental design 4649 east cotton gin loop, suite B2 phoenix, arizona 85040 phone: 602.438.2221 www.j2design.us	
PROJECT NO.	171064	DRAWN BY	TG
DATE	MAY 2018	CHECKED BY	JB

Existing Traffic Volumes

Figure 6

Project #: 18-1034-002

TMC SUMMARY OF 75th St. & Camelback Rd.

75th St.

Camelback Rd.

APPROACH LANES

	AM	MD	PM	TOTAL
Left	10		5	15
Thru	0		0	0
Right	5		4	9

← ↓ →

N

↑

Camelback Rd.

	TOTAL	AM	MD	PM
Left	21	9		12
Thru	1446	427		1019
Right	69	26		43

CONTROL

2-Way Stop

NB-SB

	AM	MD	PM	TOTAL
Left	7		10	17
Thru	758		545	1303
Right	21		38	59

75th St.

APPROACH LANES

	AM	MD	PM
Left	14	3	2
Thru	33	5	84
Right	19		63

← ↓ →

APPROACH LANES

LOCATION #: 18-1034-002

TURNING MOVEMENT COUNT

75th St. & Camelback Rd.
(Intersection Name)

TUESDAY

Day

01/30/18

Date

COUNT PERIODS		
AM	700AM	- 900AM
NOON		-
PM	400PM	- 600PM

AM PEAK HOUR 745 AM

NOON PEAK HOUR

PM PEAK HOUR

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: 75th St.

DATE: 01/30/18

LOCATION: Scottsdale

E-W STREET: Camelback Rd.

DAY: TUESDAY

PROJECT# 18-1034-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	3	0	3	3	0	2	1	76	3	2	104	1	198
7:15 AM	1	0	4	0	0	1	1	79	2	3	135	2	228
7:30 AM	4	0	4	1	0	1	0	99	2	5	193	0	309
7:45 AM	5	1	5	2	0	2	1	112	9	5	205	2	349
8:00 AM	2	2	4	3	0	2	4	83	5	5	198	2	310
8:15 AM	5	0	6	0	0	2	2	100	5	6	203	1	330
8:30 AM	2	0	6	0	0	4	2	132	7	5	152	2	312
8:45 AM	5	0	7	0	0	3	2	134	11	7	185	2	356
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	27	3	39	9	0	17	13	815	44	38	1375	12	2392
Approach %	39.13	4.35	56.52	34.62	0.00	65.38	1.49	93.46	5.05	2.67	96.49	0.84	
App/Depart	69	/	28	26	/	82	872	/	863	1425	/	1419	

AM Peak Hr Begins at: 745 AM

PEAK

Volumes	14	3	21	5	0	10	9	427	26	21	758	7	1301
Approach %	36.84	7.89	55.26	33.33	0.00	66.67	1.95	92.42	5.63	2.67	96.44	0.89	

PEAK HR.

FACTOR:	0.864	0.750	0.819	0.927	0.932

CONTROL: 2-Way Stop (NB-SB)

COMMENT 1:
GPS: 33.502214, -111.920365

Intersection Turning Movement



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: 75th St. 0 DATE: 01/30/18 LOCATION: Scottsdale
E-W STREET: Camelback Rd. DAY: TUESDAY PROJECT#: 18-1034-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	6	0	16	0	0	0	4	221	6	5	107	3	368
4:15 PM	4	0	8	3	0	2	1	208	6	2	105	0	339
4:30 PM	5	0	7	0	0	2	2	224	8	3	126	2	379
4:45 PM	5	1	13	0	0	1	3	205	11	3	128	3	373
5:00 PM	6	0	14	1	0	0	3	297	12	10	152	6	501
5:15 PM	3	1	20	1	0	1	5	256	15	12	122	1	437
5:30 PM	7	1	16	1	0	3	1	224	10	8	140	1	412
5:45 PM	3	0	13	1	0	1	3	242	6	8	131	2	410
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	39	3	107	7	0	10	22	1877	74	51	1011	18	3219
Approach %	26.17	2.01	71.81	41.18	0.00	58.82	1.12	95.13	3.75	4.72	93.61	1.67	
App/Depart	149	/	43	17	/	125	1973	/	1991	1080	/	1060	

PM Peak Hr Begins at: 500 PM

PEAK

Volumes	19	2	63	4	0	5	12	1019	43	38	545	10	1760
Approach %	22.62	2.38	75.00	44.44	0.00	55.56	1.12	94.88	4.00	6.41	91.91	1.69	

PEAK HR.

FACTOR:	0.875	0.563	0.861	0.882	0.878

CONTROL: 2-Way Stop (NB-SB)

COMMENT 1: 0

GPS: 33.502214, -111.920365



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: 75th St.
E-W STREET: Camelback Rd.

Date: 01/30/18
Day: TUESDAY

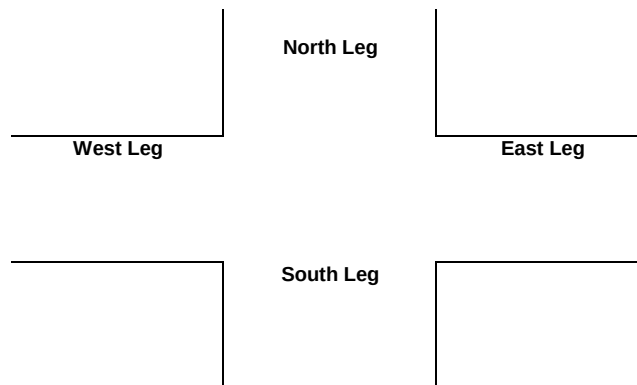
City: Scottsdale
Project #: 18-1034-002

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	1	2	0	0
7:15 AM	0	3	0	0
7:30 AM	0	2	0	0
7:45 AM	1	2	0	0
8:00 AM	0	0	0	0
8:15 AM	2	4	0	0
8:30 AM	0	5	0	0
8:45 AM	0	2	0	0
TOTAL	4	20	0	0

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	1	0	0
8:15 AM	0	1	0	0
8:30 AM	0	1	0	0
8:45 AM	0	0	0	0
TOTAL	0	3	0	0

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	7	0	0
4:15 PM	5	5	0	0
4:30 PM	3	7	0	1
4:45 PM	0	3	0	0
5:00 PM	0	7	0	0
5:15 PM	0	8	0	0
5:30 PM	1	3	0	0
5:45 PM	0	9	0	0
TOTAL	10	49	0	1

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	3	0	0
4:15 PM	0	0	0	0
4:30 PM	0	1	0	0
4:45 PM	0	3	0	0
5:00 PM	0	0	0	0
5:15 PM	0	2	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	0	9	0	0



Intersection Turning Movement

Prepared by:



Project #: 18-1034-003

TMC SUMMARY OF 76th St. (Miller Rd) & Camelback Rd.

76th St. (Miller Rd)

APPROACH LANES

	AM	MD	PM	TOTAL
Left	44		47	91
Thru	224		288	512
Right	21		35	56

Camelback Rd.

CONTROL
Signalized

APPROACH LANES

TOTAL	AM	MD	PM
138	33		105
1190	329		861
195	58		137

Camelback Rd.

AM	MD	PM	TOTAL
34		38	72
673		439	1112
96		133	229

APPROACH LANES

76th St. (Miller Rd)

APPROACH LANES

TOTAL	AM	MD	PM
204	75		129
424	146		278
199	46		153

LOCATION #: 18-1034-003

TURNING MOVEMENT COUNT

76th St. (Miller Rd) & Camelback Rd.
(Intersection Name)

TUESDAY **01/30/18**
Day Date

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR **745 AM**

NOON PEAK HOUR _____

PM PEAK HOUR **500 PM**

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: 76th St. (Miller Rd)

DATE: 01/30/18

LOCATION: Scottsdale

E-W STREET: Camelback Rd.

DAY: TUESDAY

PROJECT# 18-1034-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	13	29	10	4	25	8	6	68	8	14	99	2	286
7:15 AM	13	33	10	1	44	7	15	66	2	20	114	6	331
7:30 AM	19	39	13	3	53	22	11	83	9	27	181	6	466
7:45 AM	26	46	16	2	57	11	10	70	23	28	163	7	459
8:00 AM	18	38	15	4	57	13	5	70	9	20	188	4	441
8:15 AM	17	29	9	7	53	12	10	86	16	20	174	13	446
8:30 AM	14	33	6	8	57	8	8	103	10	28	148	10	433
8:45 AM	12	28	23	12	80	19	10	91	33	24	168	5	505
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	132	275	102	41	426	100	75	637	110	181	1235	53	3367
Approach %	25.93	54.03	20.04	7.23	75.13	17.64	9.12	77.49	13.38	12.32	84.07	3.61	
App/Depart	509	/	403	567	/	717	822	/	780	1469	/	1467	

AM Peak Hr Begins at: 745 AM

PEAK

Volumes	75	146	46	21	224	44	33	329	58	96	673	34	1779
Approach %	28.09	54.68	17.23	7.27	77.51	15.22	7.86	78.33	13.81	11.96	83.81	4.23	

PEAK HR.

FACTOR:	0.759	0.976	0.868	0.947	0.969

CONTROL: Signalized

COMMENT 1:
GPS: 33.502203, -111.917471

Intersection Turning Movement



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: 76th St. (Miller Rd)

DATE: 01/30/18

LOCATION: Scottsdale

E-W STREET: Camelback Rd.

DAY: TUESDAY

PROJECT# 18-1034-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	1	2	0	1	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	23	57	43	8	61	9	25	171	30	30	74	7	538
4:15 PM	27	50	21	10	50	11	21	173	27	31	84	8	513
4:30 PM	31	77	25	9	60	7	18	184	34	36	92	9	582
4:45 PM	27	68	29	5	67	7	24	174	24	24	117	5	571
5:00 PM	37	69	29	8	63	14	25	250	34	29	118	9	685
5:15 PM	32	72	55	9	72	9	20	228	42	35	109	12	695
5:30 PM	34	68	38	10	79	11	34	192	29	38	102	7	642
5:45 PM	26	69	31	8	74	13	26	191	32	31	110	10	621
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	237	530	271	67	526	81	193	1563	252	254	806	67	4847
Approach %	22.83	51.06	26.11	9.94	78.04	12.02	9.61	77.84	12.55	22.54	71.52	5.94	
App/Depart	1038	/	790	674	/	1032	2008	/	1901	1127	/	1124	

PM Peak Hr Begins at: 500 PM

PEAK

Volumes	129	278	153	35	288	47	105	861	137	133	439	38	2643
Approach %	23.04	49.64	27.32	9.46	77.84	12.70	9.52	78.06	12.42	21.80	71.97	6.23	

PEAK HR.

FACTOR:	0.881	0.925	0.892	0.978	0.951

CONTROL: Signalized

COMMENT 1: 0

GPS: 33.502203, -111.917471

9-ZN-2020

9/25/2020



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: 76th St. (Miller Rd)
E-W STREET: Camelback Rd.

Date: 01/30/18
Day: TUESDAY

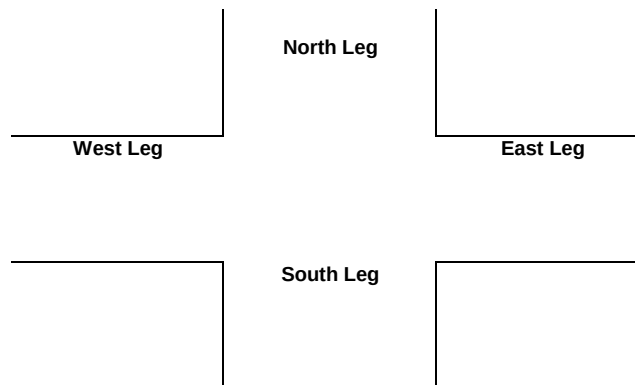
City: Scottsdale
Project #: 18-1034-003

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	2
7:30 AM	1	0	0	3
7:45 AM	0	0	1	1
8:00 AM	0	0	0	0
8:15 AM	3	2	1	4
8:30 AM	1	3	0	0
8:45 AM	1	2	0	1
TOTAL	6	7	2	11

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	1	0	0	1
7:45 AM	0	0	0	1
8:00 AM	0	1	1	0
8:15 AM	0	0	0	0
8:30 AM	0	1	0	0
8:45 AM	0	0	0	0
TOTAL	1	2	1	2

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	13	2	0
4:15 PM	1	3	1	2
4:30 PM	2	9	3	2
4:45 PM	3	2	2	0
5:00 PM	4	6	4	1
5:15 PM	6	11	2	5
5:30 PM	0	6	0	1
5:45 PM	0	4	1	2
TOTAL	16	54	15	13

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	2	1	0
4:15 PM	0	3	0	1
4:30 PM	0	1	0	0
4:45 PM	1	1	0	0
5:00 PM	0	1	1	0
5:15 PM	3	5	0	4
5:30 PM	0	0	2	1
5:45 PM	0	0	0	0
TOTAL	4	13	4	6



Intersection Turning Movement

Prepared by:



Project #: 18-1034-004

TMC SUMMARY OF 75th St. & Indian Plaza

75th St.

Indian Plaza

APPROACH LANES				
	TOTAL	PM	MD	AM
Left	27	14		13
Thru	0	0		0
Right	79	46		33

CONTROL
1-Way Stop
SB

	TOTAL	PM	MD	AM
Left	0	0	0	0
Thru	0	0	0	0
Right	0	0	0	0

75th St.

N

Indian Plaza

AM	MD	PM	TOTAL
37		76	113
4		17	21
0		0	0

APPROACH LANES

LOCATION #: **18-1034-004**

TURNING MOVEMENT COUNT

75th St. & Indian Plaza
(Intersection Name)

TUESDAY
Day

01/30/18
Date

COUNT PERIODS		
AM	700AM	- 900AM
NOON		-
PM	400PM	- 600PM

AM PEAK HOUR

745 AM

NOON PEAK HOUR

PM PEAK HOUR

500 PM

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: 75th St.

DATE: 01/30/18

LOCATION: Scottsdale

E-W STREET: Indian Plaza

DAY: TUESDAY

PROJECT# 18-1034-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	1	0	0	1	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	2	0	2	0	1	0	0	1	6	12
7:15 AM	0	0	0	4	0	0	0	1	0	0	0	5	10
7:30 AM	0	0	0	6	0	2	0	0	0	0	3	9	20
7:45 AM	0	0	0	12	0	3	1	1	0	0	0	11	28
8:00 AM	0	0	0	7	0	3	0	1	0	0	1	7	19
8:15 AM	0	0	0	6	0	5	1	4	0	0	2	10	28
8:30 AM	0	0	0	8	0	2	1	0	0	0	1	9	21
8:45 AM	0	0	0	14	0	3	1	0	0	0	1	11	30
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	0	0	59	0	20	4	8	0	0	9	68	168
Approach %	####	####	####	74.68	0.00	25.32	33.33	66.67	0.00	0.00	11.69	88.31	
App/Depart	0	/	72	79	/	0	12	/	67	77	/	29	

AM Peak Hr Begins at: 745 AM

PEAK

Volumes	0	0	0	33	0	13	3	6	0	0	4	37	96
Approach %	####	####	####	71.74	0.00	28.26	33.33	66.67	0.00	0.00	9.76	90.24	

PEAK HR.

FACTOR:	0.000	0.767	0.450	0.854	0.857

CONTROL: 1-Way Stop (SB)

COMMENT 1:
GPS: 33.501570, -111.920400

Intersection Turning Movement



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: 75th St.

DATE: 01/30/18

LOCATION: Scottsdale

E-W STREET: Indian Plaza

DAY: TUESDAY

PROJECT# 18-1034-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	1	0	0	1	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	0	7	0	2	1	4	0	0	5	15	34
4:15 PM	0	0	0	6	0	2	0	1	0	0	1	12	22
4:30 PM	0	0	0	6	0	3	1	3	0	0	2	12	27
4:45 PM	0	0	0	8	0	2	1	5	0	0	4	19	39
5:00 PM	0	0	0	14	0	6	4	6	0	0	3	16	49
5:15 PM	0	0	0	12	0	4	3	3	0	0	4	22	48
5:30 PM	0	0	0	10	0	3	1	3	0	0	5	23	45
5:45 PM	0	0	0	10	0	1	0	2	0	0	5	15	33
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	0	0	73	0	23	11	27	0	0	29	134	297
Approach %	####	####	####	76.04	0.00	23.96	28.95	71.05	0.00	0.00	17.79	82.21	
App/Depart	0	/	145	96	/	0	38	/	100	163	/	52	

PM Peak Hr Begins at: 500 PM

PEAK

Volumes	0	0	0	46	0	14	8	14	0	0	17	76	175
Approach %	####	####	####	76.67	0.00	23.33	36.36	63.64	0.00	0.00	18.28	81.72	

PEAK HR.

FACTOR:	0.000	0.750	0.550	0.830	0.893

CONTROL: 1-Way Stop (SB)

COMMENT 1: 0

GPS: 33.501570, -111.920400



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: 75th St.
E-W STREET: Indian Plaza

Date: 01/30/18
Day: TUESDAY

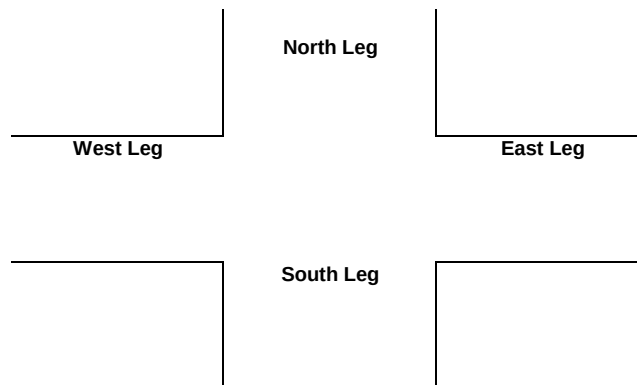
City: Scottsdale
Project #: 18-1034-004

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	2	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	2	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	4	0	0	0

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	0	0	0	0

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	0	0	0
4:15 PM	2	0	0	2
4:30 PM	3	0	0	0
4:45 PM	1	0	0	0
5:00 PM	2	0	0	2
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	5	0	0	4
TOTAL	14	0	0	8

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	1	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	1	0	0	0



Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, January 30, 2018

City: Scottsdale

Project #: 18-1043-001

Location: Camelback Rd. east of 75th St.

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			21	9	12:00			178	141
00:15			25	9	12:15			166	159
00:30			24	11	12:30			175	162
00:45			17	87	12:45			183	702
01:00			22	3	13:00			189	140
01:15			19	9	13:15			186	151
01:30			12	9	13:30			154	131
01:45			21	74	13:45			177	706
02:00			21	8	14:00			182	133
02:15			25	6	14:15			197	161
02:30			8	5	14:30			158	149
02:45			10	64	14:45			173	710
03:00			7	4	15:00			185	146
03:15			10	7	15:15			202	147
03:30			4	5	15:30			216	143
03:45			10	31	15:45			191	794
04:00			6	12	16:00			237	115
04:15			4	10	16:15			219	107
04:30			8	10	16:30			231	131
04:45			16	34	16:45			218	905
05:00			11	21	17:00			312	168
05:15			8	19	17:15			277	135
05:30			20	43	17:30			241	149
05:45			34	73	17:45			256	1086
06:00			41	43	18:00			283	138
06:15			46	67	18:15			213	148
06:30			53	70	18:30			179	133
06:45			74	214	18:45			141	816
07:00			82	107	19:00			170	114
07:15			83	140	19:15			128	110
07:30			104	198	19:30			135	107
07:45			119	388	19:45			110	543
08:00			90	205	20:00			126	68
08:15			106	210	20:15			115	50
08:30			138	159	20:30			113	81
08:45			141	475	20:45			120	474
09:00			115	162	21:00			129	51
09:15			125	129	21:15			116	70
09:30			97	108	21:30			102	46
09:45			104	441	21:45			71	418
10:00			96	99	22:00			67	37
10:15			114	107	22:15			59	33
10:30			96	130	22:30			75	27
10:45			137	443	22:45			59	260
11:00			132	113	23:00			66	23
11:15			142	138	23:15			47	33
11:30			156	177	23:30			27	18
11:45			153	583	23:45			36	176

Total Vol. 2907 3590 **6497** 7590 5133 **12723**

GPS Coordinates: 33.502221, -111.920379

Daily Totals

NB	SB	EB	WB	Combined
		10497	8723	19220

AM

Split %	44.7%	55.3%	33.8%
Peak Hour	11:45	07:30	11:45
Volume	672	825	1305
P.H.F.	0.94	0.97	0.97

PM

59.7%	40.3%	66.2%
17:00	12:00	17:00
1086	645	1679
0.87	0	

9-ZN-2020

9/25/2020

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, January 30, 2018

City: Scottsdale

Project #: 18-1043-002

Location: 75th St. Btwn Camelback Rd. & Indian Plaza

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	3	2			12:00	19	10		
00:15	3	0			12:15	18	12		
00:30	1	2			12:30	20	10		
00:45	0	7	1	5	12:45	12	69	19	51
01:00	7	0			13:00	24	4		
01:15	5	1			13:15	15	13		
01:30	2	3			13:30	12	7		
01:45	2	16	0	4	13:45	19	70	5	29
02:00	3	1			14:00	21	14		
02:15	4	1			14:15	15	11		
02:30	0	1			14:30	16	9		
02:45	2	9	0	3	14:45	18	70	10	44
03:00	1	0			15:00	12	13		
03:15	0	0			15:15	12	12		
03:30	1	0			15:30	14	7		
03:45	0	2	0	0	15:45	15	53	19	51
04:00	0	1			16:00	22	11		
04:15	0	0			16:15	12	8		
04:30	0	0			16:30	12	11		
04:45	1	1	2	3	16:45	19	65	14	44
05:00	2	0			17:00	20	22		
05:15	0	0			17:15	24	27		
05:30	2	2			17:30	24	18		
05:45	3	7	0	2	17:45	16	84	14	81
06:00	0	2			18:00	22	10		
06:15	4	3			18:15	17	8		
06:30	1	1			18:30	16	11		
06:45	2	7	2	8	18:45	12	67	12	41
07:00	6	5			19:00	19	12		
07:15	5	5			19:15	17	18		
07:30	8	7			19:30	12	12		
07:45	11	30	14	31	19:45	10	58	15	57
08:00	8	10			20:00	12	1		
08:15	11	11			20:15	9	6		
08:30	8	12			20:30	15	11		
08:45	12	39	18	51	20:45	11	47	6	24
09:00	5	7			21:00	7	6		
09:15	7	8			21:15	12	4		
09:30	4	7			21:30	9	4		
09:45	7	23	8	30	21:45	13	41	5	19
10:00	7	5			22:00	6	3		
10:15	15	9			22:15	10	6		
10:30	14	3			22:30	2	4		
10:45	10	46	8	25	22:45	5	23	0	13
11:00	13	8			23:00	8	4		
11:15	14	7			23:15	5	3		
11:30	13	11			23:30	1	3		
11:45	15	55	16	42	23:45	3	17	2	12

Total Vol. 242 204 **446** 664 466 **1130**

GPS Coordinates: 33.501870, -111.920400

Daily Totals

NB	SB	EB	WB	Combined
906	670			1576

AM

Split %	54.3%	45.7%	28.3%
Peak Hour	11:45	08:00	11:45
Volume	72	51	120
P.H.F.	0.90	0.71	0.97

PM

58.8%	41.2%	71.7%
16:45	16:45	16:45
87	81	168
0.91	0.75	

9-ZN-2020

9/25/2020



Intersection ID: 1903833
Count Date: 9/27/2019

N CIVIC CENTER PLAZA & E STETSON DR

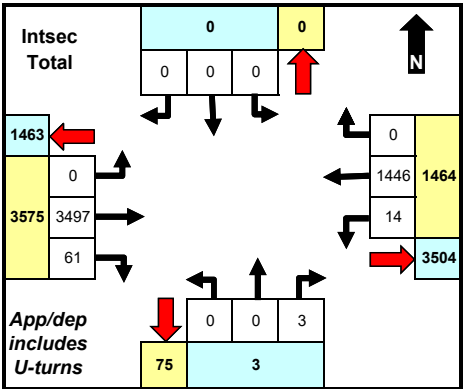
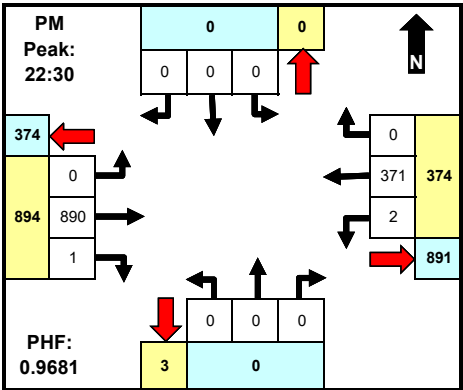
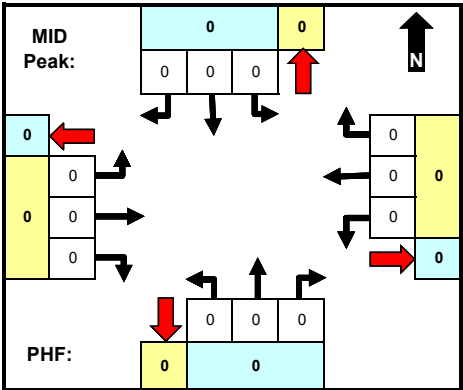
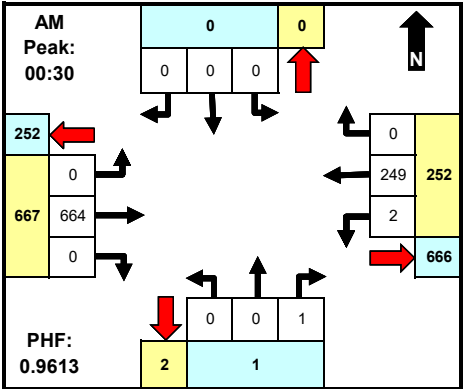
From North (SB)					From East (WB)					From South (NB)					From West (EB)					INTSEC
N CIVIC CENTER PLAZA					E STETSON DR					N CIVIC CENTER PLAZA					E STETSON DR					
LT	Thru	RT	U	Cw/kl	LT	Thru	RT	U	Cw/kl	LT	Thru	RT	U	Cw/kl	LT	Thru	RT	U	Cw/kl	TOTAL
1	12	1	0		0	0	3	0		4	23	0	0		1	2	4	0		51
0	10	1	0		0	1	0	0		2	16	0	0		0	0	1	0		31
0	9	2	0		1	0	0	0		1	9	0	0		0	0	4	0		26
0	6	0	0		0	0	0	0		2	11	0	0		2	1	7	0		29
0	9	0	0		0	2	0	0		0	11	1	0		1	2	2	0		28
0	10	0	0		3	1	0	0		1	11	1	1		3	0	5	0		36
0	7	0	0		1	1	0	0		1	15	1	2		2	0	5	0		35
0	3	0	0		3	0	0	0		3	17	3	2		4	1	3	0		39
1	8	0	0		2	0	0	0		3	20	0	0		0	2	5	0		41
0	4	1	0		1	1	0	0		7	20	3	0		1	0	4	0		42
0	3	0	0		0	0	0	0		2	12	1	0		1	0	2	0		21
0	2	0	0		1	0	0	0		1	15	1	1		0	1	1	0		23
0	0	0	0		0	1	0	0		2	3	0	0		0	1	2	0		9
0	0	0	0		0	0	0	0		0	2	0	0		1	0	0	0		3
0	1	0	0		0	0	0	0		0	1	0	0		0	1	0	0		3
0	0	0	0		0	0	0	0		0	0	0	0		2	0	0	0		2
0	1	0	0		0	0	0	0		0	0	0	0		0	0	0	0		1
0	0	0	0		0	0	0	0		0	1	0	0		0	1	0	0		2
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	1	0	0		0	0	0	0		1
0	1	0	0		0	0	0	0		1	4	0	0		0	0	0	0		6
0	2	0	0		0	0	0	0		0	0	0	0		0	0	0	0		2
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0	12	2	0		1	0	0	0		2	6	0	0		1	0	2	0		26
0	13	1	0		1	0	0	0		0	3	1	0		1	1	3	0		24
0	16	1	0		1	3	0	0		1	4	0	0		1	3	6	0		36
0	19	3	0		2	0	1	0		3	12	1	0		1	1	7	0		50
1	19	4	0		0	1	0	0		4	7	1	0		2	1	7	0		47
1	25	5	0		1	0	1	0		2	12	0	0		1	1	8	0		57
2	13	0	0		0	0	0	0		3	7	1	0		0	4	7	0		37
1	17	1	0		1	0	1	0		4	7	2	0		4	6	4	0		48
2	12	4	0		0	1	0	0		6	10	1	0		2	1	6	0		45
1	11	0	0		1	0	0	0		2	4	1	1		2	1	3	0		27
0	10	6	0		0	0	0	0		5	8	3	0		1	0	4	0		37
3	5	1	0		0	1	0	0		4	7	2	0		1	0	5	0		29
1	11	2	1		2	2	0	0		3	12	0	0		5	0	7	0		46
0	6	2	0		1	1	2	0		7	6	0	0		2	0	4	0		31
1	4	1	0		3	0	0	0		3	2	1	0		1	5	5	1		27
1	5	3	0		0	1	1	0		2	10	1	0		1	0	5	0		30
1	10	1	0		1	2	2	0		3	22	2	1		3	3	8	0		59
3	9	1	0		2	0	2	0		1	7	0	0		1	1	4	0		31
0	11	1	0		2	0	1	0		4	12	1	0		1	2	6	0		41
1	5	1	0		2	0	1	0		6	12	3	0		1	1	6	0		39
1	5	2	0		2	2	0	0		3	24	0	0		2	4	4	0		49
0	7	0	0		0	0	1	0		3	12	2	0		2	3	14	0		44
0	7	0	0		4	2	2	0		1	28	2	0		0	3	4	0		53
2	13	5	0		1	2	1	0		9	18	1	0		0	3	7	0		62
0	10	3	0		2	3	1	0		3	25	1	0		3	2	3	0		56
1	7	1	0		2	0	0	0		2	14	1	0		0	1	5	0		34
1	9	0	0		2	2	0	0		3	16	2	0		6	0	9	0		50
0	9	1	0		0	4	1	0		8	16	0	0		1	4	9	0		53
1	6	0	0		1	1	0	0		2	16	2	0		0	1	6	0		36
1	9	1	0		0	2	3	0		4	16	3	0		1	1	4	0		45
1	14	2	0		1	4	0	0		3	15	3	0		0	1	6	0		50
0	7	3	0		1	4	0	0		4	7	2	0		1	1	5	0		35
0	9	1	0		0	1	1	0		3	30	0	0		1	1	5	0		52
0	6	3	0		2	1	1	0		5	34	4	0		0	1	5	0		62
1	13	4	0		1	2	0	0		8	22	2	0		0	1	5	0		59
1	10	1	0		2	0	2	0		3	30	0	0		3	2	3	0		57
0	12	5	0		2	1	0	0		10	32	2	1		1	3	7	0		76
0	9	2	0		1	2	2	0		7	24	0	0		0	1	7	0		55
5	14	0	0		0	0	1	0		6	34	0	0		2	3	9	0		74
3	14	3	0		1	5	0	0		7	34	1	0		3	1	10	0		82
0	18	4	0		1	3	0	0		8	31	4	0		3	1	6	0		79
1	8	3	0		4	4	4	0		5	30	1	0		3	3	12	0		78
0	16	0	0		3	5	2	0		5	38	7	0		3	2	3	0		84
2	10	4	0		1	0	4	0		6	30	4	0		2	4	3	0		70
2	8	4	1		2	1	4	0		8	31	1	0		5	1	11	0		79
7	11	3	0		0	1	2	0		5	27	1	0		3	2	7	0		69
2	12	0	0		2	2	2	0		3	18	0	0		4	3	7	0		55
0	9	2	0		0	2	1	0		5	14	2	0		4	3	4	0		46
2	4	1	0		1	1	3	0		2	9	0	0		2	3	4	0		32
0	12	4	0		0	1	0	0		1	15	1	0		1	1	2	0		38
0	11	2	0		1	2	1	0		5	22	0	1		2	5	6	0		58
1	5	2	0		1	4	1	0		2	18	0	0		3	2	4	0		43
1	13	2	1		2	1	0	0		5	26	0	0		3	2	7	0		63
1	14	1	0		0	0	2	0		1	14	4	0		5	3	10	0		55
0	17	2	0		1	2	1	0		3	21	0	0		3	1	10	0		61
0	15	2	0		1	1	3	0		6	28	0	0		0	2	12	0		70
1	17	2	0		2	1	1	0		4	21	4	0		1	0	8	0		62
2	19	4	0		0	0	2	0		4	19	1	0		5	1	13	0		70
1	13	2	0		2	1	1	0		4	19	1	0		7					



Traffic Research & Analysis, Inc.
3844 East Indian School Road
Phoenix, AZ 85018
(602) 840-1500

Intersection ID: 1903827
Count Date: 9/27/2019

N SADDLEBAG TRAIL & E CAMELBACK RD



	North		East		South		West		Total
	App	Dep	App	Dep	App	Dep	App	Dep	
AM	0	0	252	666	1	2	667	252	920
MID	0	0	0	0	0	0	0	0	0
PM	0	0	374	891	0	3	894	374	1268
Total	0	0	1464	3504	3	75	3575	1463	5042

Comments

Unless shown otherwise, MID period defined as 10:00 AM - 2:00 PM. Peaks defined based on total intersection volume for all vehicle types. Chart totals do not include crosswalk data.

[illegible]



Traffic Research & Analysis, Inc.
3844 East Indian School Road
Phoenix, AZ 85018
(602) 840-1500

N BUCKBOARD TRAIL & E CAMELBACK RD

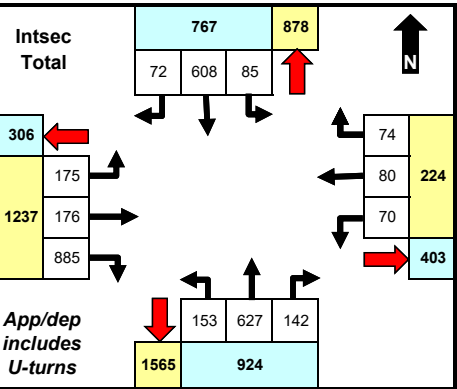
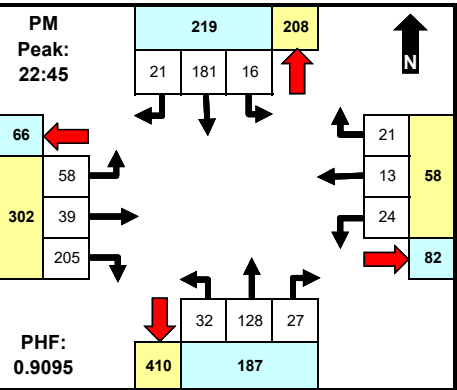
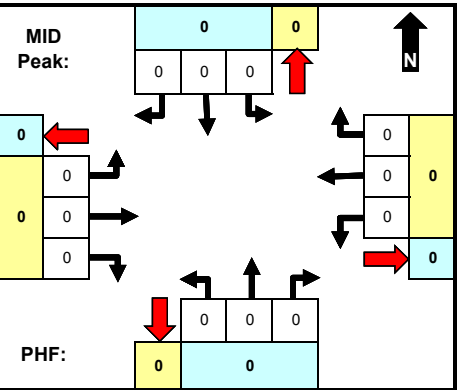
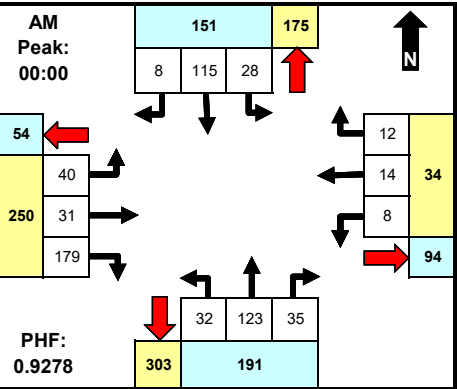
	North		East		South		West		Total
	App	Dep	App	Dep	App	Dep	App	Dep	
AM	0	0	233	654	339	0	450	368	1022
MID	0	0	0	0	0	0	0	0	0
PM	0	0	337	923	413	3	667	491	1417
Total	0	0	1351	3528	1781	5	2484	2083	5616

Unless shown otherwise, MID period defined as 10:00 AM - 2:00 PM. Peaks defined based on total intersection volume for all vehicle types. Chart totals do not include crosswalk data.

[illegible]

Intersection ID: 1903829
Count Date: 9/27/2019

N CIVIC CENTER PLAZA & E STETSON DR



	North		East		South		West		
	App	Dep	App	Dep	App	Dep	App	Dep	Total
AM	151	175	34	94	191	303	250	54	626
MID	0	0	0	0	0	0	0	0	0
PM	219	208	58	82	187	410	302	66	766
Total	767	878	224	403	924	1565	1237	306	3152

Comments

Unless shown otherwise, MID period defined as 10:00 AM - 2:00 PM. Peaks defined based on total intersection volume for all vehicle types. Chart totals do not include crosswalk data.

	From North (SB)					From East (WB)					From South (NB)					From West (EB)					INTSEC		
	N CIVIC CENTER PLAZA					E STETSON DR					N CIVIC CENTER PLAZA					E STETSON DR							
Time	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	LT	Thru	RT	U	Cwlk	TOTAL		
00:00	5	28	2	0	4	4	3	3	0	18	9	31	9	0	16	13	13	53	0	142	353		
00:15	6	36	2	0	0	1	3	5	0	26	6	29	9	0	29	6	2	62	0	117	339		
00:30	4	24	1	0	4	1	7	3	0	7	8	24	8	1	18	8	5	30	0	145	298		
00:45	13	27	3	0	10	2	1	1	0	6	9	39	9	0	16	13	11	34	0	126	320		
01:00	2	23	6	0	4	4	4	5	0	11	6	32	8	0	22	6	7	34	0	151	325		
01:15	4	19	5	0	4	5	1	1	0	18	4	22	4	0	27	9	6	42	0	135	306		
01:30	3	28	3	0	6	1	2	2	0	9	3	38	11	0	16	9	8	44	1	59	243		
01:45	5	25	0	0	15	4	6	4	0	14	6	30	7	0	32	11	8	36	0	76	279		
02:00	5	18	3	0	6	0	8	3	0	28	8	30	6	0	44	3	14	35	0	100	311		
02:15	4	35	1	0	5	1	2	3	0	40	11	42	8	0	55	6	10	43	0	57	323		
02:30	3	23	1	0	4	8	4	6	0	8	7	31	11	0	44	2	7	38	0	20	217		
02:45	1	23	0	0	0	7	0	1	0	2	14	33	6	0	37	5	3	23	0	15	170		
3:00																					0		
3:15																					0		
3:30																					0		
3:45																					0		
4:00																					0		
4:15																					0		
4:30																					0		
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20:45																					0		
21:00																					0		
21:15																					0		
21:30																					0		
21:45																					0		
22:00	0	16	3	0	15	1	6	3	0	9	6	30	3	0	14	3	12	46	0	49	216		
22:15	3	37	6	0	4	2	6	6	0	17	7	26	3	0	15	6	13	49	0	63	263		
22:30	5	31	9	0	11	4	9	5	0	4	15	32	4	1	15	7	11	50	0	60	273		
22:45	2	57	6	0	6	7	2	2	0	28	7	27	8	0	34	14	12	47	0	103	362		
23:00	5	44	5	0	18	9	3	8	0	20	6	36	7	0	21	14	10	49	0	165	420		
23:15	2	36	7	1	7	4	2	7	0	20	12	25	8	0	28	17	12	53	0	126	367		
23:30	7	44	3	0	5	4	6	4	0	21	7	40	4	0	15	13	5	56	0	145	379		
23:45	6	34	6	1	11	1	5	2	0	19	2	30	9	0	21	10	7	61	0	168	393		
Total	85	608	72	2	139	70	80	74	0	325	153	627	142	2	519	175	176	885	1	2022	6157		
AM Peak Hr:																						0:00	
Pk Vol	28	115	8	0	18	8	14	12	0	57	32	123	35	1	79	40	31	179	0	530	1310		
PHF	0.538	0.799	0.667	n/a	0.450	0.500	0.500	0.600	n/a	0.548	0.889	0.788	0.972	0.250	0.681	0.769	0.596	0.722	n/a	0.914	0.928		
MID Peak Hr:																							
Pk Vol														</									

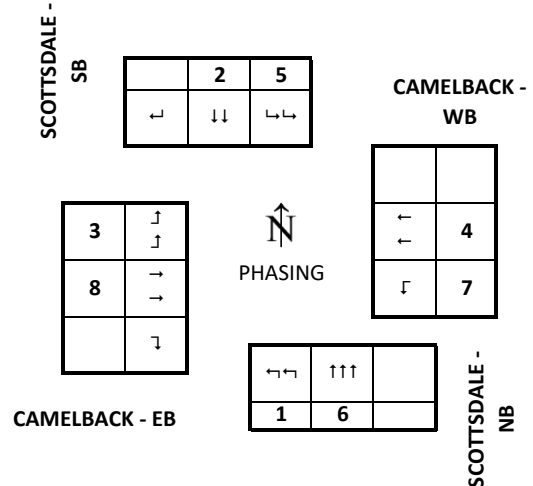


Appendix E – Signal Timing

SCOTTSDALE & CAMELBACK				System #	59
BASIC TIMING PLAN		Section #	I.P. Address	Date Designed	
			MM1-5-1 172.17.10.59	12/20/2016	

Phase	1	2	3	4	5	6	7	8
	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
NOTES	PROT		PROT		PROT		PROT	
MIN GRN	5	10	5	7	5	10	5	7
BK MGRN								
CS MGRN								
DLY GRN								
WALK		7		7		7		7
WALK2								
WLK MAX								
PED CLR/FDW		23		31		24		25
PD CLR2								
PC MAX								
PED CO								
VEH EXT	2	2	2	2	2	2	2	2
VH EXT2								
MAX 1	20	50	20	50	20	50	20	50
MAX 2	35	65	40	65	35	65	40	65
MAX 3								
DYM MAX								
DYM STP								
YELLOW	3	4.4	3.3	4	3.6	3.6	3.3	4
RED CLR	2	1.0	2	1.5	2	1.4	2	1.5
RED MAX								
RED RVT	2	2	2	2	2	2	2	2
ACT B4								
SEC/ACT								
MAX INT								
TIME B4								
CARS WT								
STPTDUC								
TTREDUC								
MIN GAP								
LOCK DET								
VEH RECALL		X				X		
PED RECALL								
MAX RECALL								
SOFT RECALL								
NO REST								
ADD INIT CAL								

NOTES
4" Delayed Green for NB/SB walk.



PHASING SEQUENCES	
TOD: MORNING	
R1	2 1 3 4
R2	5 6 8 7
Use Timing plan:	
TOD: MIDDAY	
R1	2 1 3 4
R2	5 6 8 7
Use Timing plan:	
TOD: EVENING	
R1	2 1 3 4
R2	5 6 8 7
Use Timing plan:	
TOD: WEEKEND	
R1	2 1 3 4
R2	5 6 8 7
Use Timing plan:	
FREE	
R1	2 1 3 4
R2	5 6 8 7
Use Timing plan: 254	

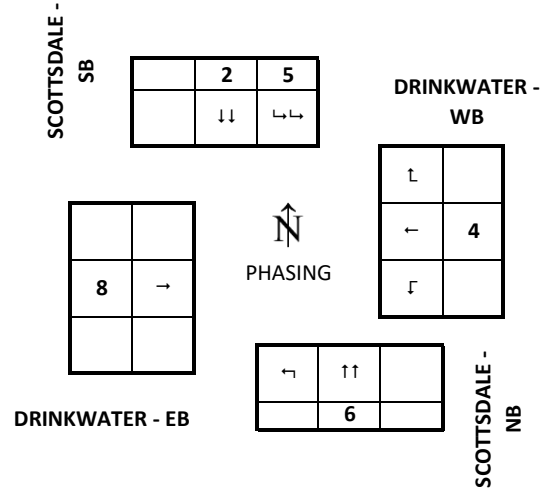
EXPIRES XX/XX/XXXX

SCOTTSDALE & CAMELBACK										System #	59
COORDINATOR					Section #					Date Updated	
					0					12/20/2016	
	PHASE	1	2	3	4	5	6	7	8		
	FDW		23		31		24		25		
	YELLOW	3	4.4	3.3	4	3.6	3.6	3.3	4		
	ALL RED	2	1	2	1.5	2	1.4	2	1.5		
	WALK		23		31		24		25		
PLAN 1 AM PLAN OPERATIVE TIMES	R1	2	↓	1	↶	3	↑	4	↷	COORD PATTERN	OFFSET
	R2	5	↵	6	↑	8	→	7	↴	Balanced	99
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT	18	42	16	44	20	40	14	46	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	13.0	36.6	10.7	38.5	14.4	35.0	8.7	40.5	120	
PLAN 4 MIDDAY PLAN OPERATIVE TIMES	R1	2	↓	1	↶	3	↑	4	↷	COORD PATTERN	OFFSET
	R2	5	↵	6	↑	8	→	7	↴	Balanced	86
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT	22	37	17	44	20	39	14	47	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	###	###	###	###	###	###	8.7	###	120	
PLAN 7 PM PLAN OPERATIVE TIMES	R1	2	↓	1	↶	3	↑	4	↷	COORD PATTERN	OFFSET
	R2	5	↵	6	↑	8	→	7	↴	Balanced	40
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT	23	38	19	40	25	36	16	43	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	###	###	###	###	###	###	###	###	120	
PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES	R1	2	↓	1	↶	3	↑	4	↷	COORD PATTERN	OFFSET
	R2	5	↵	6	↑	8	→	7	↴	Balanced	5
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT	17	33	15	25	15	35	14	26	Target Cycle Length	
	COORD		X				X			90	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	###	###	9.7	###	9.4	###	8.7	###	90	

SCOTTSDALE & DRINKWATER				System # 142
BASIC TIMING PLAN	Section #	I.P. Address	Date Designed	
		MM1-5-1 172.17.11.42	12/20/2016	

TIMING PLAN - MM-2-1	Phase		2		4	5	6		8
	Movement		SBT		WBT	SBL	NBT		EBT
	NOTES					L-P&p			
	MIN GRN		10		7	5	10		7
	BK MGRN								
	CS MGRN								
	DLY GRN								
	WALK		7		7		7		7
	WALK2								
	WLK MAX								
	PED CLR/FDW		6		23		24		21
	PD CLR2								
	PC MAX								
	PED CO								
	VEH EXT				2	2			2
	VH EXT2								
	MAX 1		80		50	30	45		50
	MAX 2		85		55	40	50		55
	MAX 3								
	DYM MAX								
	DYM STP								
	YELLOW		3.6		4	3	3.6		3.3
	RED CLR		1.0		1.2	2	1.5		1.7
	RED MAX								
	RED RVT		2		2	2	2		2
RECALLS - MM-2-8	ACT B4								
	SEC/ACT								
	MAX INT								
	TIME B4								
	CARS WT								
	STPTDUC								
	TTREDUC								
	MIN GAP								
	LOCK DET								
	VEH RECALL		X				X		
	PED RECALL								
	MAX RECALL								
	SOFT RECALL								
	NO REST								
	ADD INIT CAL								

NOTES
OVLP A = Ph4 + Ph5 Not Ph8 Ped Prot Ph3



PHASING SEQUENCES	
TOD: MORNING	
R1	2 4
R2	5 6 8
Use Timing plan:	
TOD: MIDDAY	
R1	2 4
R2	5 6 8
Use Timing plan:	
TOD: EVENING	
R1	2 4
R2	5 6 8
Use Timing plan:	
TOD: WEEKEND	
R1	2 4
R2	5 6 8
Use Timing plan:	
FREE	
R1	2 4
R2	5 6 8
Use Timing plan: 254	

EXPIRES XX/XX/XXXX

SCOTTSDALE & DRINKWATER										System #		142	
COORDINATOR						Section #				Date Updated			
						0				8/21/2018			
	PHASE	1	2	3	4	5	6	7	8				
	FDW		6		23		24		21				
	YELLOW		3.6		4	3	3.6		3.3				
	ALL RED		1		1.2	2	1.5		1.7				
	WALK		6		23		24		21				
PLAN 1 AM PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET		
	R2	5	↪	6	↑	8	→			Balanced	93		
		RING 1				RING 2							
	PHASE		2		4	5	6		8				
	SPLIT		82		38	25	57		38	Target Cycle Length			
	COORD		X				X			120			
	RECALLS		V				V			Actual Cycle Length			
	GREEN		77.4		32.8	20.0	51.9		33.0	120			
PLAN 4 MIDDAY PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET		
	R2	5	↪	6	↑	8	→			Balanced	66		
		RING 1				RING 2							
	PHASE		2		4	5	6		8				
	SPLIT		82		38	20	62		38	Target Cycle Length			
	COORD		X				X			120			
	RECALLS		V				V			Actual Cycle Length			
	GREEN		77.4		32.8	15.0	56.9		33.0	120			
PLAN 7 PM PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET		
	R2	5	↪	6	↑	8	→			Balanced	61		
		RING 1				RING 2							
	PHASE		2		4	5	6		8				
	SPLIT		78		42	20	58		42	Target Cycle Length			
	COORD		X				X			120			
	RECALLS		V				V			Actual Cycle Length			
	GREEN		73.4		36.8	15.0	52.9		37.0	120			
PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET		
	R2	5	↪	6	↑	8	→			Balanced	90		
		RING 1				RING 2							
	PHASE		2		4	5	6		8				
	SPLIT		60		30	20	40		30	Target Cycle Length			
	COORD		X				X			90			
	RECALLS		V				V			Actual Cycle Length			
	GREEN		55.4		24.8	15.0	34.9		25.0	90			

TIMING PLAN - MM-2-1	Phase	1	2		4	5	6		8
	Movement	NBL	SBT		WBT	SBL	NBT		EBT
	NOTES	p&P				p&P			
	MIN GRN	5	10		7	5	10		7
	BK MGRN								
	CS MGRN								
	DLY GRN								
	WALK		10		6		10		6
	WALK2								
	WLK MAX								
	PED CLR/FDW		10		13		10		13
	PD CLR2								
	PC MAX								
	PED CO								
	VEH EXT	1	1		2	1	1		2
	VH EXT2								
	MAX 1	5	30		15	5	30		15
	MAX 2	15	95		45	15	95		45
	MAX 3								
	DYM MAX								
	DYM STP								
	YELLOW	3	3.2		3	3	3.2		3
	RED CLR	1	1.3		2.0	1	1.3		2.0
	RED MAX								
	RED RVT	2	2		2	2	2		2
	ACT B4								
SEC/ACT									
MAX INT									
TIME B4									
CARS WT									
STPTDUC									
TTREDUC									
MIN GAP									
RECALLS - MM-2-8	LOCK DET								
	VEH RECALL								
	PED RECALL		X				X		
	MAX RECALL								
	SOFT RECALL								
	NO REST								
	ADD INIT CAL								

PHASING SEQUENCES				
TOD: MORNING				
R1	2	1	4	
R2	6	5	8	
	B	B	B	
Use Timing plan:				
TOD: MIDDAY				
R1	2	1	4	
R2	6	5	8	
	B	B	B	
Use Timing plan:				
TOD: EVENING				
R1	2	1	4	
R2	6	5	8	
	B	B	B	
Use Timing plan:				
TOD: WEEKEND				
R1	2	1	4	
R2	6	5	8	
	B	B	B	
Use Timing plan:				
FREE				
R1	2	1	4	
R2	6	5	8	
	B	B	B	
Use Timing plan: 254				

9-ZN-2020
9/25/2020

Scottsdale & 5th AVE										System #		54	
COORDINATOR						Section #				Date Updated			
						0				1/18/2017			
	PHASE	1	2	3	4	5	6	7	8				
	FDW		10		13		10		13				
	YELLOW	3	3.2		3	3	3.2		3				
	ALL RED	1	1.3		2	1	1.3		2				
	WALK		10		13		10		13				
PLAN 1 AM PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET		
	R2	6	↑	5	↷	8	→			Balanced	55		
		RING 1				RING 2							
	PHASE	1	2		4	5	6		8				
	SPLIT	9	34		17	9	34		17	Target Cycle Length			
	COORD		X				X			60			
	RECALLS		P				P			Actual Cycle Length			
	GREEN	5.0	29.5		12.0	5.0	29.5		12.0	60			
PLAN 4 MIDDAY PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET		
	R2	6	↑	5	↷	8	→			Balanced	55		
		RING 1				RING 2							
	PHASE	1	2		4	5	6		8				
	SPLIT	9	34		17	9	34		17	Target Cycle Length			
	COORD		X				X			60			
	RECALLS		P				P			Actual Cycle Length			
	GREEN	5.0	###		###	5.0	###		###	60			
PLAN 7 PM PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET		
	R2	6	↑	5	↷	8	→			Balanced	0		
		RING 1				RING 2							
	PHASE	1	2		4	5	6		8				
	SPLIT	9	34		17	9	34		17	Target Cycle Length			
	COORD		X				X			60			
	RECALLS		P				P			Actual Cycle Length			
	GREEN	5.0	###		###	5.0	###		###	60			
PLAN 10 MIDNIGHT PLAN OPERATIVE	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET		
	R2	6	↑	5	↷	8	→			Balanced	10		
		RING 1				RING 2							
	PHASE	1	2		4	5	6		8				
	SPLIT		29		17		29		17	Target Cycle Length			

TIMES	COORD		X				X			46
	RECALLS		P				P			Actual Cycle Length
	GREEN	-4.0	###		###	-4.0	###		###	46

PLAN 254 FREE PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→			Balanced	
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	-4.0	-4.5		-5.0	-4.0	-4.5		-5.0	0	

PLAN 0 AUTO PLAN OPERATIVE TIMES	R1									COORD PATTERN	OFFSET
	R2									Balanced	
		RING 1				RING 2					
	PHASE										
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	-4.0	-4.5		-5.0	-4.0	-4.5		-5.0	0	

PLAN 5 SPECIAL PLAN OPERATIVE TIMES	R1									COORD PATTERN	OFFSET
	R2									Balanced	
		RING 1				RING 2					
	PHASE										
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	-4.0	-4.5		-5.0	-4.0	-4.5		-5.0	0	

PLAN 6 SPECIAL PLAN OPERATIVE TIMES	R1									COORD PATTERN	OFFSET
	R2									Balanced	
		RING 1				RING 2					
	PHASE										
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	-4.0	-4.5		-5.0	-4.0	-4.5		-5.0	0	

EMERGENCY PLANS

EXTREME PLAN - SPLIT PATTERN - NORTH SOUTH THRU	R1	2	↓	1	↩	4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓	1	↩	4	←				
										NB - 1 7	
	RING 1				RING 2				SB - 1 8		
	PHASE	1	2		4					N/S - 1 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
GREEN	-4	-5		-5	-4	-5		-5	0		

EXTREME PLAN - SPLIT PATTERN - NORTH SOUTH LEFT	R1	2	↓	1	↩	4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓	1	↩	4	←				
										NB - 2 7	
	RING 1				RING 2				SB - 2 8		
	PHASE	1	2		4					N/S - 2 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
GREEN	-4	-5		-5	-4	-5		-5	0		

EXTREME PLAN - SPLIT PATTERN - NORTHBOUND THRU & LEFT	R1	2	↓	1	↩	4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓	1	↩	4	←				
										NB - 3 7	
	RING 1				RING 2				SB - 3 8		
	PHASE	1	2		4					N/S - 3 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
GREEN	-4	-5		-5	-4	-5		-5	0		

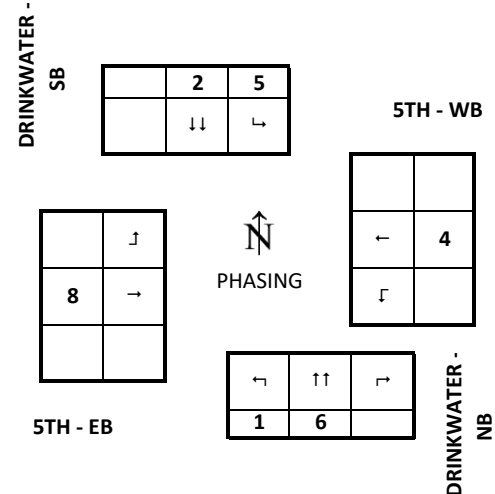
EXTREME PLAN - SPLIT PATTERN - SOUTHBOUND THRU & LEFT	R1	2	↓	1	↩	4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓	1	↩	4	←				
										NB - 4 7	
	RING 1				RING 2				SB - 4 8		
	PHASE	1	2		4					N/S - 4 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
GREEN	-4	-5		-5	-4	-5		-5	0		

EXTREME PLAN - SPLIT PATTERN - EAST WEST THRU	R1	2	↓	1	↖	4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓	1	↖	4	←				
										EB - 5 7	
	RING 1 RING 2									WB - 5 8	
	PHASE									E/W - 5 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	0	0	0	0	0	0	0	0	0	
EXTREME PLAN - SPLIT PATTERN - EAST WEST LEFT	R1	2	↓	1	↖	4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓	1	↖	4	←				
										EB - 6 7	
	RING 1 RING 2									WB - 6 8	
	PHASE									E/W - 6 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	0	0	0	0	0	0	0	0	0	
EXTREME PLAN - SPLIT PATTERN - EASTBOUND THRU & LEFT	R1	2	↓	1	↖	4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓	1	↖	4	←				
										EB - 7 7	
	RING 1 RING 2									WB - 7 8	
	PHASE									E/W - 7 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	0	0	0	0	0	0	0	0	0	
EXTREME PLAN - SPLIT PATTERN - WESTBOUND THRU & LEFT	R1	2	↓	1	↖	4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓	1	↖	4	←				
										EB - 8 7	
	RING 1 RING 2									WB - 8 8	
	PHASE									E/W - 8 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	0	0	0	0	0	0	0	0	0	

DRINKWATER & 5TH/ STETSON				System # 141
BASIC TIMING PLAN	Section #	I.P. Address MM1-5-1	Date Designed	
		172.17.11.41	11/28/2016	

TIMING PLAN - MM-2-1	Phase	1	2		4	5	6		8
	Movement	NBL	SBT		WBT	SBL	NBT		EBT
	NOTES	p&P				p&P			
	MIN GRN	5	10		7	5	10		7
	BK MGRN								
	CS MGRN								
	DLY GRN								
	WALK		7		8		7		8
	WALK2								
	WLK MAX								
	PED CLR/FDW		13		23		13		23
	PD CLR2								
	PC MAX								
	PED CO								
	VEH EXT	2	2		2	2	2		2
	VH EXT2								
	MAX 1	20	80		40	20	80		40
	MAX 2	35	90		60	35	90		60
	MAX 3								
	DYM MAX								
	DYM STP								
	YELLOW	3.3	4.0		3.5	3.3	4		3.5
	RED CLR	1.3	1.2		1.8	1.3	1.2		1.8
	RED MAX								
	RED RVT	2	2		2	2	2		2
RECALLS - MM-2-8	ACT B4								
	SEC/ACT								
	MAX INT								
	TIME B4								
	CARS WT								
	STPTDUC								
	TTREDUC								
	MIN GAP								
	LOCK DET								
	VEH RECALL								
	PED RECALL		X				X		
	MAX RECALL								
	SOFT RECALL								
	NO REST								
	ADD INIT CAL								

NOTES
- no existing vehicle or pedestrian detection for NB/ SB Thru (Drinkwater).



PHASING SEQUENCES	
TOD: MORNING	
R1	2 1 4
R2	6 5 8
Use Timing plan:	
TOD: MIDDAY	
R1	2 1 4
R2	6 5 8
Use Timing plan:	
TOD: EVENING	
R1	2 1 4
R2	6 5 8
Use Timing plan:	
TOD: WEEKEND	
R1	2 1 4
R2	6 5 8
Use Timing plan:	
FREE	
R1	2 1 4
R2	6 5 8
Use Timing plan: 254	

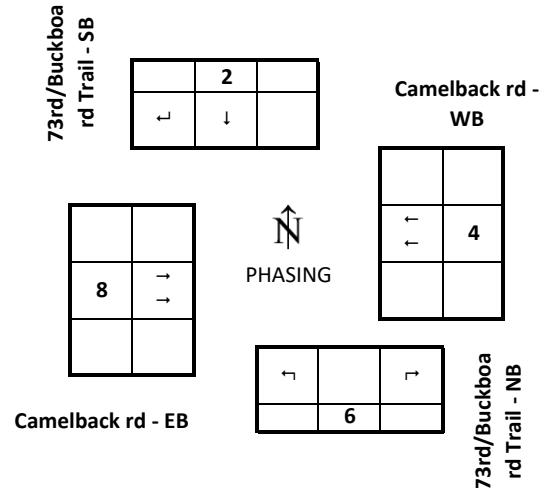
EXPIRES XX/XX/XXXX

DRINKWATER & 5TH/ STETSON										System #	141
COORDINATOR					Section #			Date Updated			
					0			11/28/2016			
	PHASE	1	2	3	4	5	6	7	8		
	FDW		13		23		13		23		
	YELLOW	3.3	4		3.5	3.3	4		3.5		
	ALL RED	1.3	1.2		1.8	1.3	1.2		1.8		
	WALK		13		23		13		23		
PLAN 1 AM PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→			Balanced	50
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT	11	73		36	11	73		36	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		P				P			Actual Cycle Length	
	GREEN	6.4	67.8		30.7	6.4	67.8		30.7	120	
PLAN 4 MIDDAY PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→			Balanced	50
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT	11	72		37	11	72		37	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		P				P			Actual Cycle Length	
	GREEN	6.4	66.9		31.7	6.4	66.9		31.7	120	
PLAN 7 PM PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→			Balanced	50
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT	20	60		40	20	60		40	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		P				P			Actual Cycle Length	
	GREEN	15.4	54.9		34.7	15.4	54.9		34.7	120	
PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→			Balanced	78
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT	10	44		36	10	44		36	Target Cycle Length	
	COORD		X				X			90	
	RECALLS		P				P			Actual Cycle Length	
	GREEN	5.4	38.9		30.7	5.4	38.9		30.7	90	

Camelback rd & 73rd/Buckboard Trail				System #	308
BASIC TIMING PLAN		Section #	I.P. Address	Date Designed	
			MM1-5-1 172.27.13.08	1/0/1900	

	Phase	2	4	6	8
	Movement	SBT	WBT	NBT	EBT
TIMING PLAN - MM-2-1	NOTES				
	MIN GRN	6	10	6	10
	BK MGRN				
	CS MGRN				
	DLY GRN				
	WALK	11	34	11	34
	WALK2				
	WLK MAX				
	PED CLR/FDW	13	11	14	11
	PD CLR2				
	PC MAX				
	PED CO				
	VEH EXT	1	2.5	1	2.5
	VH EXT2				
	MAX 1	40	80	40	80
	MAX 2	50	100	50	100
	MAX 3				
	DYM MAX				
	DYM STP				
	YELLOW	3.2	3.8	3.2	3.8
RECALLS - MM-2-8	RED CLR	2.8	3.2	2.8	3.2
	RED MAX				
	RED RVT	2	2	2	2
	ACT B4				
	SEC/ACT				
	MAX INT				
	TIME B4				
	CARS WT				
	STPTDUC				
	TTREDUC				
	MIN GAP				
	LOCK DET				
	VEH RECALL		X	X	
	PED RECALL				
	MAX RECALL				
	SOFT RECALL				
	NO REST				
	ADD INIT CAL				

NOTES
Intersection is in FREE 24/7



PHASING SEQUENCES			
TOD: MORNING			
R1	2	4	
R2	6	8	
Use Timing plan:			
TOD: MIDDAY			
R1	2	4	
R2	6	8	
Use Timing plan:			
TOD: EVENING			
R1	2	4	
R2	6	8	
Use Timing plan:			
TOD: WEEKEND			
R1	2	4	
R2	6	8	
Use Timing plan:			
FREE			
R1	2	4	
R2	6	8	
Use Timing plan: 254			

EXPIRES XX/XX/XXXX

Camelback rd & 73rd/Buckboard Tra										System #	0
COORDINATOR					Section #			Date Updated			
					0			1/0/1900			
	PHASE	1	2	3	4	5	6	7	8		
	FDW		13		11		14		11		
	YELLOW		3.2		3.8		3.2		3.8		
	ALL RED		2.8		3.2		2.8		3.2		
	WALK		13		11		14		11		
PLAN 1 AM PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT									Target Cycle Length	
	COORD									120	
	RECALLS									Actual Cycle Length	
	GREEN		-6.0		-7.0		-6.0		-7.0	0	
PLAN 2 MIDDAY PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6.0		-7.0		-6.0		-7.0	0	
PLAN 3 PM PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6.0		-7.0		-6.0		-7.0	0	
PLAN 4 MIDNIGHT PLAN OPERATIVE	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT									Target Cycle Length	

TIMES	COORD										
	RECALLS										Actual Cycle Length
	GREEN		-6.0		-7.0		-6.0		-7.0		0

PLAN 254 FREE PLAN OPERATIVE TIMES	R1	2	↓			4	←			COORD PATTERN	OFFSET
	R2	6	↑			8	→			Balanced	
		RING 1				RING 2					
	PHASE		2		4		6		8		
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6.0		-7.0		-6.0		-7.0	0	

PLAN 0 AUTO PLAN OPERATIVE TIMES	R1									COORD PATTERN	OFFSET
	R2									Balanced	
		RING 1				RING 2					
	PHASE										
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6.0		-7.0		-6.0		-7.0	0	

PLAN 5 SPECIAL PLAN OPERATIVE TIMES	R1									COORD PATTERN	OFFSET
	R2									Balanced	
		RING 1				RING 2					
	PHASE										
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6.0		-7.0		-6.0		-7.0	0	

PLAN 6 SPECIAL PLAN OPERATIVE TIMES	R1									COORD PATTERN	OFFSET
	R2									Balanced	
		RING 1				RING 2					
	PHASE										
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6.0		-7.0		-6.0		-7.0	0	

EMERGENCY PLANS

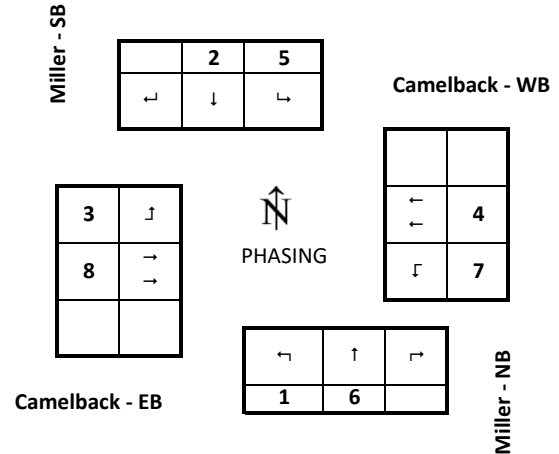
EXTREME PLAN - SPLIT PATTERN - NORTH SOUTH THRU	R1	2	↓			4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓			4	←				
										NB - 1 7	
					RING 1		RING 2			SB - 1 8	
	PHASE		2		4					N/S - 1 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6		-7		-6		-7	0	
EXTREME PLAN - SPLIT PATTERN - NORTH SOUTH LEFT	R1	2	↓			4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓			4	←				
										NB - 2 7	
					RING 1		RING 2			SB - 2 8	
	PHASE		2		4					N/S - 2 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6		-7		-6		-7	0	
EXTREME PLAN - SPLIT PATTERN - NORTHBOUND THRU & LEFT	R1	2	↓			4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓			4	←				
										NB - 3 7	
					RING 1		RING 2			SB - 3 8	
	PHASE		2		4					N/S - 3 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6		-7		-6		-7	0	
EXTREME PLAN - SPLIT PATTERN - SOUTHBOUND THRU & LEFT	R1	2	↓			4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓			4	←				
										NB - 4 7	
					RING 1		RING 2			SB - 4 8	
	PHASE		2		4					N/S - 4 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN		-6		-7		-6		-7	0	

EXTREME PLAN - SPLIT PATTERN - EAST WEST THRU	R1	2	↓			4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓			4	←				
										EB - 5 7	
	RING 1 RING 2									WB - 5 8	
	PHASE									E/W - 5 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	0	0	0	0	0	0	0	0	0	
EXTREME PLAN - SPLIT PATTERN - EAST WEST LEFT	R1	2	↓			4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓			4	←				
										EB - 6 7	
	RING 1 RING 2									WB - 6 8	
	PHASE									E/W - 6 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	0	0	0	0	0	0	0	0	0	
EXTREME PLAN - SPLIT PATTERN - EASTBOUND THRU & LEFT	R1	2	↓			4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓			4	←				
										EB - 7 7	
	RING 1 RING 2									WB - 7 8	
	PHASE									E/W - 7 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	0	0	0	0	0	0	0	0	0	
EXTREME PLAN - SPLIT PATTERN - WESTBOUND THRU & LEFT	R1	2	↓			4	←			COORD PATTERN - PLAN NUMBER	OFFSET
	R2	2	↓			4	←				
										EB - 8 7	
	RING 1 RING 2									WB - 8 8	
	PHASE									E/W - 8 9	
	SPLIT									Target Cycle Length	
	COORD									XXX	
	RECALLS									Actual Cycle Length	
	GREEN	0	0	0	0	0	0	0	0	0	

Miller & Camelback				System #	60
BASIC TIMING PLAN		Section #	I.P. Address	Date Designed	
			MM1-5-1 172.27.10.60	6/4/2019	

TIMING PLAN - MM-2-1	Phase	1	2	3	4	5	6	7	8
	Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
	NOTES	p&P		p&P		p&P		p&P	
	MIN GRN	5	10	5	7	5	10	5	7
	BK MGRN								
	CS MGRN								
	DLY GRN								
	WALK		7		10		10		12
	WALK2		17		10		17		12
	WLK MAX								
	PED CLR/FDW		19		33		19		28
	PD CLR2		19		33		19		28
	PC MAX								
	PED CO								
	VEH EXT	1	1	1	1	1	1	1	1
	VH EXT2								
	MAX 1	20	50	20	50	20	50	15	50
	MAX 2	30	60	30	60	30	60	20	60
	MAX 3								
	DYM MAX								
	DYM STP								
RECALLS - MM-2-8	YELLOW	3.6	4.4	3.3	4	3.6	4.4	3.3	4
	RED CLR	1	1.1	2	1.5	2	1.1	1.9	1.4
	RED MAX								
	RED RVT	2	2	2	2	2	2	2	2
	ACT B4								
	SEC/ACT								
	MAX INT								
	TIME B4								
	CARS WT								
	STPTDUC								
	TTREDUC								
	MIN GAP								
	LOCK DET								
	VEH RECALL		X				X		
	PED RECALL								
	MAX RECALL								
	SOFT RECALL								
	NO REST								
	ADD INIT CAL								

NOTES
Intersection in FREE 24/7



PHASING SEQUENCES			
TOD: MORNING			
R1	2	1	4
R2	6	5	8
	B	B	B
Use Timing plan:			
TOD: MIDDAY			
R1	2	1	4
R2	6	5	8
	B	B	B
Use Timing plan:			
TOD: EVENING			
R1	2	1	4
R2	6	5	8
	B	B	B
Use Timing plan:			
TOD: NIGHT			
R1	2	1	4
R2	6	5	8
	B	B	B
Use Timing plan:			
FREE			
R1	2	1	4
R2	6	5	8
	B	B	B
Use Timing plan: 254			

EXPIRES XX/XX/XXXX

COORDINATOR					Section #				Date Updated		
					0				8/21/2018		
	PHASE	1	2	3	4	5	6	7	8		
	FDW		19		33		19		28		
	YELLOW	3.6	4.4	3.3	4	3.6	4.4	3.3	4		
	ALL RED	1	1.1	2	1.5	2	1.1	1.9	1.4		
	WALK		19		33		19		28		
PLAN 1 AM PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←	3	↑	COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→	7	↴	Balanced	99
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT		100		20		100		20	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		P				P			Actual Cycle Length	
	GREEN	-4.6	94.5	-5.3	14.5	-5.6	94.5	-5.2	14.6	120	
PLAN 4 MIDDAY PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←	3	↑	COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→	7	↴	Balanced	78
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT		90		30		90		30	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		P				P			Actual Cycle Length	
	GREEN	-4.6	###	-5.3	###	-5.6	###	-5.2	###	120	
PLAN 7 PM PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←	3	↑	COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→	7	↴	Balanced	72
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT		90		30		90		30	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		P				P			Actual Cycle Length	
	GREEN	-4.6	###	-5.3	###	-5.6	###	-5.2	###	120	
PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES	R1	2	↓	1	↶	4	←	3	↑	COORD PATTERN	OFFSET
	R2	6	↑	5	↷	8	→	7	↴	Balanced	34
		RING 1				RING 2					
	PHASE	1	2	3	4	5	6	7	8		
	SPLIT		74		16		74		16	Target Cycle Length	
	COORD		X				X			90	
	RECALLS		P				P			Actual Cycle Length	
	GREEN	-4.6	###	-5.3	###	-5.6	###	-5.2	###	90	



Appendix F – Existing Capacity Analysis

1: Scottsdale Road & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	151	330	196	60	574	92	364	101	603	180
Future Volume (vph)	151	330	196	60	574	92	364	101	603	180
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	16.0	46.0	46.0	14.0	44.0	18.0	40.0	20.0	42.0	42.0
Total Split (%)	13.3%	38.3%	38.3%	11.7%	36.7%	15.0%	33.3%	16.7%	35.0%	35.0%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effct Green (s)	9.5	21.9	21.9	20.9	31.3	13.0	49.6	8.2	45.0	45.0
Actuated g/C Ratio	0.08	0.18	0.18	0.17	0.26	0.11	0.41	0.07	0.38	0.38
v/c Ratio	0.61	0.56	0.46	0.21	0.84	0.27	0.26	0.47	0.49	0.28
Control Delay	63.1	49.5	9.1	41.2	49.2	53.7	21.6	59.9	31.6	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	49.5	9.1	41.2	49.2	53.7	21.6	59.9	31.6	7.8
LOS	E	D	A	D	D	D	C	E	C	A
Approach Delay		40.8			48.5		26.6		30.0	
Approach LOS		D			D		C		C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99 (83%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 36.7

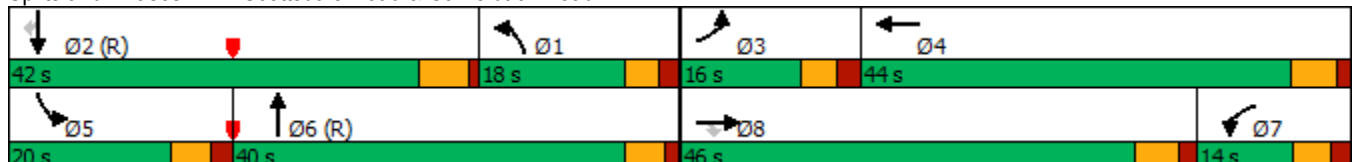
Intersection LOS: D

Intersection Capacity Utilization 62.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	330	196	60	574	131	92	364	130	101	603	180
Future Volume (veh/h)	151	330	196	60	574	131	92	364	130	101	603	180
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	164	359	213	65	624	142	100	396	141	110	655	196
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	575	257	261	709	161	719	1746	594	164	1084	483
Arrive On Green	0.06	0.16	0.16	0.15	0.25	0.25	0.21	0.46	0.46	0.05	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	1781	2876	653	3456	3764	1280	3456	3554	1585
Grp Volume(v), veh/h	164	359	213	65	385	381	100	356	181	110	655	196
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1753	1728	1702	1640	1728	1777	1585
Q Serve(g_s), s	5.6	11.3	15.6	3.9	25.0	25.1	2.8	7.5	8.0	3.8	18.8	9.2
Cycle Q Clear(g_c), s	5.6	11.3	15.6	3.9	25.0	25.1	2.8	7.5	8.0	3.8	18.8	9.2
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	220	575	257	261	438	432	719	1579	761	164	1084	483
V/C Ratio(X)	0.74	0.62	0.83	0.25	0.88	0.88	0.14	0.23	0.24	0.67	0.60	0.41
Avail Cap(c_a), veh/h	308	1199	535	261	570	562	719	1579	761	415	1084	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	46.9	48.7	45.4	43.5	43.5	38.7	19.3	19.4	56.2	35.5	20.1
Incr Delay (d2), s/veh	3.2	0.4	2.7	0.2	10.2	10.6	0.0	0.3	0.7	1.8	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.0	6.3	1.7	12.1	12.0	1.2	3.1	3.2	1.7	8.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	47.3	51.3	45.5	53.7	54.1	38.8	19.6	20.1	58.0	38.0	22.6
LnGrp LOS	E	D	D	D	D	D	D	B	C	E	D	C
Approach Vol, veh/h		736			831			637			961	
Approach Delay, s/veh		51.0			53.2			22.7			37.2	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	42.0	12.9	35.1	11.3	60.7	23.1	24.9				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	13.0	36.6	* 11	38.5	14.4	* 35	8.7	* 41				
Max Q Clear Time (g_c+I1), s	4.8	20.8	7.6	27.1	5.8	10.0	5.9	17.6				
Green Ext Time (p_c), s	0.1	3.1	0.1	2.5	0.1	2.4	0.0	1.8				
Intersection Summary												
HCM 6th Ctrl Delay			41.7									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2: Scottsdale Road & Shoeman Lane

07/29/2020

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	8	576	57	129	729
Future Vol, veh/h	0	8	576	57	129	729
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	-	-	120	-
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	9	626	62	140	792
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	344	0	0	688	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*800	-	-	876	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	1	-	-	1	-
Mov Cap-1 Maneuver	-	*800	-	-	876	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.5	0		1.5		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	800	876	-	
HCM Lane V/C Ratio	-	-	0.011	0.16	-	
HCM Control Delay (s)	-	-	9.5	9.9	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	0	0.6	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	38	15	14	40	304	14	393	208	429
Future Volume (vph)	38	15	14	40	304	14	393	208	429
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	38.0	38.0	38.0	38.0	38.0	57.0	57.0	25.0	82.0
Total Split (%)	31.7%	31.7%	31.7%	31.7%	31.7%	47.5%	47.5%	20.8%	68.3%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		10.6	10.4	10.4	10.4	88.3	88.3	99.4	99.8
Actuated g/C Ratio		0.09	0.09	0.09	0.09	0.74	0.74	0.83	0.83
v/c Ratio		0.54	0.13	0.27	0.75	0.02	0.17	0.15	0.19
Control Delay		56.6	12.5	15.3	32.1	4.1	4.4	0.9	0.6
Queue Delay		0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Total Delay		56.6	12.5	15.3	33.1	4.1	4.4	0.9	0.6
LOS		E	B	B	C	A	A	A	A
Approach Delay		56.6		30.3			4.4		0.7
Approach LOS		E		C			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 93 (78%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 10.9

Intersection LOS: B

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	15	16	14	40	304	14	393	15	208	429	86
Future Volume (veh/h)	38	15	16	14	40	304	14	393	15	208	429	86
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	41	16	17	15	43	330	15	427	16	226	466	93
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	74	64	372	420	356	574	2110	79	1380	2038	404
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	1.00	1.00	1.00	0.09	1.00	1.00
Sat Flow, veh/h	629	328	285	1376	1870	1585	850	3493	131	3456	2955	586
Grp Volume(v), veh/h	74	0	0	15	43	330	15	217	226	226	279	280
Grp Sat Flow(s),veh/h/ln	1242	0	0	1376	1870	1585	850	1777	1847	1728	1777	1765
Q Serve(g_s), s	3.6	0.0	0.0	0.0	2.2	24.5	0.0	0.0	0.0	2.9	0.0	0.0
Cycle Q Clear(g_c), s	5.8	0.0	0.0	1.0	2.2	24.5	0.0	0.0	0.0	2.9	0.0	0.0
Prop In Lane	0.55		0.23	1.00		1.00	1.00		0.07	1.00		0.33
Lane Grp Cap(c), veh/h	326	0	0	372	420	356	574	1074	1116	1380	1225	1217
V/C Ratio(X)	0.23	0.00	0.00	0.04	0.10	0.93	0.03	0.20	0.20	0.16	0.23	0.23
Avail Cap(c_a), veh/h	388	0	0	439	511	433	574	1074	1116	1805	1225	1217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.64	0.64	0.64	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	0.0	0.0	36.5	36.9	45.6	0.0	0.0	0.0	6.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	15.6	0.1	0.4	0.4	0.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	0.4	1.0	11.0	0.0	0.1	0.1	1.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	0.0	36.5	36.9	61.2	0.1	0.4	0.4	6.9	0.4	0.4
LnGrp LOS	D	A	A	D	D	E	A	A	A	A	A	A
Approach Vol, veh/h		74			388			458			785	
Approach Delay, s/veh		38.3			57.5			0.4			2.3	
Approach LOS		D			E			A			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		87.8		32.2	10.2	77.6		32.2				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 77		* 33	20.0	51.9		* 33				
Max Q Clear Time (g_c+I1), s		2.0		26.5	4.9	2.0		7.8				
Green Ext Time (p_c), s		0.6		0.5	0.4	0.5		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				15.9								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

4: Scottsdale Road & 5th Avenue

07/29/2020

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	12	14	14	8	30	435	16	428
Future Volume (vph)	12	14	14	8	30	435	16	428
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)		7.2	7.2	7.2	50.2	51.4	49.4	49.6
Actuated g/C Ratio		0.12	0.12	0.12	0.84	0.86	0.82	0.83
v/c Ratio		0.22	0.07	0.08	0.04	0.16	0.02	0.17
Control Delay		20.2	14.0	9.2	2.1	2.8	0.7	1.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.2	14.0	9.2	2.1	2.8	0.7	1.1
LOS		C	B	A	A	A	A	A
Approach Delay		20.2		11.4		2.8		1.1
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 55 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.22

Intersection Signal Delay: 3.0

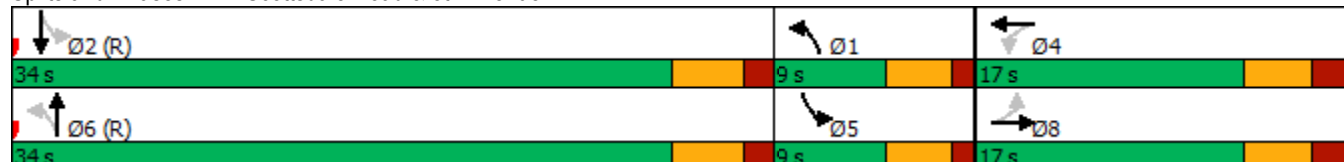
Intersection LOS: A

Intersection Capacity Utilization 37.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	14	15	14	8	8	30	435	18	16	428	25
Future Volume (veh/h)	12	14	15	14	8	8	30	435	18	16	428	25
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	13	15	16	15	9	9	33	473	20	17	465	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	62	51	246	72	72	916	1708	72	846	1678	97
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.20	0.49	0.49	0.40	0.98	0.98
Sat Flow, veh/h	320	732	601	1378	858	858	1781	3474	147	1781	3414	198
Grp Volume(v), veh/h	44	0	0	15	0	18	33	242	251	17	241	251
Grp Sat Flow(s),veh/h/ln	1653	0	0	1378	0	1716	1781	1777	1844	1781	1777	1835
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	4.8	4.8	0.0	0.2	0.2
Cycle Q Clear(g_c), s	1.4	0.0	0.0	0.5	0.0	0.6	0.0	4.8	4.8	0.0	0.2	0.2
Prop In Lane	0.30		0.36	1.00		0.50	1.00		0.08	1.00		0.11
Lane Grp Cap(c), veh/h	217	0	0	246	0	145	916	874	907	846	874	902
V/C Ratio(X)	0.20	0.00	0.00	0.06	0.00	0.12	0.04	0.28	0.28	0.02	0.28	0.28
Avail Cap(c_a), veh/h	403	0	0	405	0	343	916	874	907	846	874	902
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	25.8	0.0	0.0	25.4	0.0	25.4	3.0	9.0	9.0	3.5	0.3	0.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.8	0.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.2	0.0	0.2	0.1	1.7	1.8	0.0	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	0.0	0.0	25.4	0.0	25.6	3.0	9.8	9.7	3.5	1.0	1.0
LnGrp LOS	C	A	A	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		44			33			526			509	
Approach Delay, s/veh		26.0			25.5			9.3			1.1	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.9	34.0		10.1	15.9	34.0		10.1				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.2		2.6	2.0	6.8		3.4				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.0	1.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			6.7									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	449	29	59	783	3	5
Future Vol, veh/h	449	29	59	783	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	488	32	64	851	3	5

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	520	0	1058
Stage 1	-	-	-	-	504
Stage 2	-	-	-	-	554
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	1042	-	220
Stage 1	-	-	-	-	572
Stage 2	-	-	-	-	539
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1042	-	207
Mov Cap-2 Maneuver	-	-	-	-	339
Stage 1	-	-	-	-	572
Stage 2	-	-	-	-	506

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	512	-	-	1042	-
HCM Lane V/C Ratio	0.017	-	-	0.062	-
HCM Control Delay (s)	12.2	-	-	8.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	-

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	134	25	7	51	14
Future Vol, veh/h	5	134	25	7	51	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	146	27	8	55	15
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	35	0	-	0	187	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	156	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1576	-	-	-	802	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	872	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1576	-	-	-	800	1043
Mov Cap-2 Maneuver	-	-	-	-	800	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	872	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		9.7		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1576	-	-	-	842	
HCM Lane V/C Ratio	0.003	-	-	-	0.084	
HCM Control Delay (s)	7.3	0	-	-	9.7	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	55	189	28	310	149	4	38	15	8
Future Volume (vph)	55	189	28	310	149	4	38	15	8
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	36.0	36.0	36.0	36.0	36.0	11.0	73.0	11.0	73.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	9.2%	60.8%	9.2%	60.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	16.0	16.0	16.0	16.0	16.0	95.2	89.6	96.1	91.5
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.79	0.75	0.80	0.76
v/c Ratio	0.71	0.44	0.21	0.71	0.46	0.00	0.03	0.01	0.04
Control Delay	74.9	34.6	48.5	58.1	11.1	5.0	6.8	3.3	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.9	34.6	48.5	58.1	11.1	5.0	6.8	3.3	2.2
LOS	E	C	D	E	B	A	A	A	A
Approach Delay		43.5		43.2			6.7		2.5
Approach LOS		D		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 38.4

Intersection LOS: D

Intersection Capacity Utilization 36.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



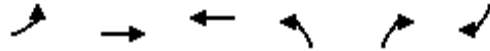
7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	189	4	28	310	149	4	38	2	15	8	40
Future Volume (veh/h)	55	189	4	28	310	149	4	38	2	15	8	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	205	4	30	337	162	4	41	2	16	9	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	625	12	201	623	278	1043	999	49	1055	159	761
Arrive On Green	0.06	0.06	0.06	0.18	0.18	0.18	0.13	0.56	0.56	0.13	0.56	0.56
Sat Flow, veh/h	899	3565	69	1173	3554	1585	1781	1769	86	1781	282	1346
Grp Volume(v), veh/h	60	102	107	30	337	162	4	0	43	16	0	52
Grp Sat Flow(s),veh/h/ln	899	1777	1858	1173	1777	1585	1781	0	1855	1781	0	1628
Q Serve(g_s), s	7.9	6.6	6.6	2.8	10.4	11.3	0.0	0.0	1.2	0.0	0.0	1.7
Cycle Q Clear(g_c), s	18.3	6.6	6.6	9.4	10.4	11.3	0.0	0.0	1.2	0.0	0.0	1.7
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.05	1.00		0.83
Lane Grp Cap(c), veh/h	140	312	326	201	623	278	1043	0	1048	1055	0	920
V/C Ratio(X)	0.43	0.33	0.33	0.15	0.54	0.58	0.00	0.00	0.04	0.02	0.00	0.06
Avail Cap(c_a), veh/h	212	455	475	295	909	406	1043	0	1048	1055	0	920
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.4	49.7	49.7	47.7	45.1	45.5	6.0	0.0	11.6	5.9	0.0	11.7
Incr Delay (d2), s/veh	0.8	0.2	0.2	0.1	0.3	0.7	0.0	0.0	0.1	0.0	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(50%),veh/ln	2.0	3.1	3.3	0.8	4.6	4.5	0.0	0.0	0.5	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	50.0	50.0	47.8	45.4	46.2	6.0	0.0	11.7	5.9	0.0	11.8
LnGrp LOS	E	D	D	D	D	D	A	A	B	A	A	B
Approach Vol, veh/h	269		529				47					
Approach Delay, s/veh	52.5		45.7				11.2					
Approach LOS	D		D				B					
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	20.7	73.0	26.3		20.7	73.0	26.3					
Change Period (Y+Rc), s	* 4.6	5.2	* 5.3		* 4.6	5.2	* 5.3					
Max Green Setting (Gmax), s	* 6.4	67.8	* 31		* 6.4	67.8	* 31					
Max Q Clear Time (g_c+I1), s	2.0	3.7	13.3		2.0	3.2	20.3					
Green Ext Time (p_c), s	0.0	0.2	1.6		0.0	0.2	0.7					
Intersection Summary												
HCM 6th Ctrl Delay	43.3											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBR
Lane Configurations						
Traffic Volume (vph)	11	489	707	37	27	23
Future Volume (vph)	11	489	707	37	27	23
Turn Type	Perm	NA	NA	Perm	Perm	Perm
Protected Phases		8	4			
Permitted Phases	8			6	6	2
Detector Phase	8	8	4	6	6	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0
Total Split (s)	80.0	80.0	80.0	40.0	40.0	40.0
Total Split (%)	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	73.0	73.0	73.0	34.0	34.0	34.0
Actuated g/C Ratio	0.61	0.61	0.61	0.28	0.28	0.28
v/c Ratio	0.03	0.25	0.36	0.08	0.06	0.04
Control Delay	9.8	11.2	12.3	32.2	8.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	11.2	12.3	32.2	8.2	0.1
LOS	A	B	B	C	A	A
Approach Delay		11.2	12.3			
Approach LOS		B	B			

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 12.1

Intersection LOS: B

Intersection Capacity Utilization 42.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	489	0	0	707	3	37	0	27	0	0	23
Future Volume (vph)	11	489	0	0	707	3	37	0	27	0	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0			6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00			1.00
Frt	1.00	1.00			1.00		1.00		0.85			0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00			1.00
Satd. Flow (prot)	1770	3539			3537		1770		1583			1583
Flt Permitted	0.33	1.00			1.00		0.95		1.00			1.00
Satd. Flow (perm)	608	3539			3537		1770		1583			1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	532	0	0	768	3	40	0	29	0	0	25
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	21	0	0	18
Lane Group Flow (vph)	12	532	0	0	771	0	40	0	8	0	0	7
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	73.0	73.0			73.0		34.0		34.0			34.0
Effective Green, g (s)	73.0	73.0			73.0		34.0		34.0			34.0
Actuated g/C Ratio	0.61	0.61			0.61		0.28		0.28			0.28
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0			6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0			1.0
Lane Grp Cap (vph)	369	2152			2151		501		448			448
v/s Ratio Prot		0.15			c0.22							
v/s Ratio Perm	0.02						c0.02		0.01			0.00
v/c Ratio	0.03	0.25			0.36		0.08		0.02			0.02
Uniform Delay, d1	9.4	10.8			11.8		31.5		31.0			31.0
Progression Factor	1.00	1.00			1.00		1.00		1.00			1.00
Incremental Delay, d2	0.2	0.3			0.5		0.3		0.1			0.1
Delay (s)	9.6	11.1			12.2		31.8		31.1			31.0
Level of Service	A	B			B		C		C			C
Approach Delay (s)		11.1			12.2			31.5			31.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			13.1				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.27									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			13.0		
Intersection Capacity Utilization			42.1%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	7	31	3	1	2	12	40	3	4	80	12
Future Vol, veh/h	4	7	31	3	1	2	12	40	3	4	80	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	8	34	3	1	2	13	43	3	4	87	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3	0	0	42	0	0	91	42	25	64	58	2
Stage 1	-	-	-	-	-	-	33	33	-	8	8	-
Stage 2	-	-	-	-	-	-	58	9	-	56	50	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1619	-	-	1567	-	-	893	850	1051	930	833	1082
Stage 1	-	-	-	-	-	-	983	868	-	1013	889	-
Stage 2	-	-	-	-	-	-	954	888	-	956	853	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1619	-	-	1567	-	-	808	846	1051	887	829	1082
Mov Cap-2 Maneuver	-	-	-	-	-	-	808	846	-	887	829	-
Stage 1	-	-	-	-	-	-	980	865	-	1010	887	-
Stage 2	-	-	-	-	-	-	848	886	-	902	850	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	3.7	9.6	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	846	1619	-	-	1567	-	-	856
HCM Lane V/C Ratio	0.071	0.003	-	-	0.002	-	-	0.122
HCM Control Delay (s)	9.6	7.2	0	-	7.3	0	-	9.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	444	27	22	789	7	15	3	22	5	0	10
Future Vol, veh/h	9	444	27	22	789	7	15	3	22	5	0	10
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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	483	29	24	858	8	16	3	24	5	0	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	866	0	0	512	0	0	995	1432	256	1173	1442	433
Stage 1	-	-	-	-	-	-	518	518	-	910	910	-
Stage 2	-	-	-	-	-	-	477	914	-	263	532	-
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	773	-	-	1050	-	-	199	133	743	147	131	571
Stage 1	-	-	-	-	-	-	509	531	-	296	352	-
Stage 2	-	-	-	-	-	-	538	350	-	719	524	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	773	-	-	1050	-	-	190	128	743	136	126	571
Mov Cap-2 Maneuver	-	-	-	-	-	-	190	128	-	136	126	-
Stage 1	-	-	-	-	-	-	502	524	-	292	344	-
Stage 2	-	-	-	-	-	-	516	342	-	683	517	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			18.9			18.9		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	303	773	-	-	1050	-	-	276				
HCM Lane V/C Ratio	0.143	0.013	-	-	0.023	-	-	0.059				
HCM Control Delay (s)	18.9	9.7	-	-	8.5	-	-	18.9				
HCM Lane LOS	C	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.2				

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	6	4	38	34	14
Future Vol, veh/h	3	6	4	38	34	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	7	4	41	37	15
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	45	0	-	0	38	25
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	13	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1563	-	-	-	974	1051
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1010	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1563	-	-	-	972	1051
Mov Cap-2 Maneuver	-	-	-	-	972	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1010	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.4	0		8.8		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1563	-	-	-	-	994
HCM Lane V/C Ratio	0.002	-	-	-	-	0.052
HCM Control Delay (s)	7.3	0	-	-	-	8.8
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0.2

25: 76th Street & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	34	342	100	700	78	152	48	22	233	46
Future Volume (vph)	34	342	100	700	78	152	48	22	233	46
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	20.0	50.0	15.0	50.0	20.0	50.0	50.0	20.0	50.0	50.0
Total Split (%)	14.3%	35.7%	10.7%	35.7%	14.3%	35.7%	35.7%	14.3%	35.7%	35.7%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max
Act Effect Green (s)	22.9	17.8	35.7	29.6	59.0	44.9	44.9	60.6	49.5	49.5
Actuated g/C Ratio	0.21	0.16	0.32	0.27	0.53	0.40	0.40	0.54	0.44	0.44
v/c Ratio	0.25	0.78	0.34	0.85	0.14	0.22	0.07	0.03	0.31	0.07
Control Delay	32.6	54.0	34.6	48.9	13.8	25.2	0.2	13.5	25.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	54.0	34.6	48.9	13.8	25.2	0.2	13.5	25.6	0.2
LOS	C	D	C	D	B	C	A	B	C	A
Approach Delay		52.3		47.2		17.7			20.8	
Approach LOS		D		D		B			C	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 111.6

Natural Cycle: 125

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 39.7

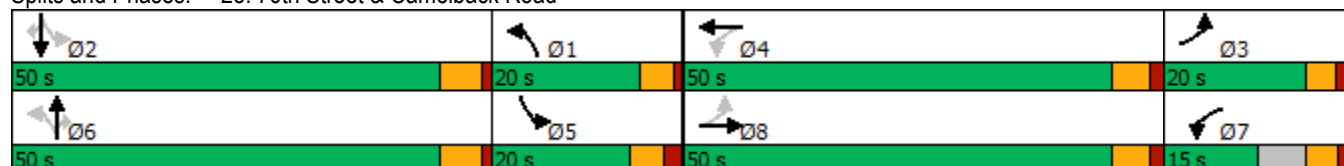
Intersection LOS: D

Intersection Capacity Utilization 58.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road



25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	342	60	100	700	35	78	152	48	22	233	46
Future Volume (veh/h)	34	342	60	100	700	35	78	152	48	22	233	46
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	37	372	65	109	761	38	85	165	52	24	253	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	119	443	77	305	847	42	622	745	632	690	745	632
Arrive On Green	0.03	0.15	0.15	0.13	0.25	0.25	0.13	0.40	0.40	0.13	0.40	0.40
Sat Flow, veh/h	1781	3028	524	1781	3444	172	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	37	217	220	109	392	407	85	165	52	24	253	50
Grp Sat Flow(s), veh/h/ln	1781	1777	1776	1781	1777	1839	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.0	13.3	13.5	1.5	23.9	23.9	0.0	6.5	2.3	0.0	10.5	2.2
Cycle Q Clear(g_c), s	0.0	13.3	13.5	1.5	23.9	23.9	0.0	6.5	2.3	0.0	10.5	2.2
Prop In Lane	1.00		0.30	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	119	260	260	305	437	452	622	745	632	690	745	632
V/C Ratio(X)	0.31	0.83	0.85	0.36	0.90	0.90	0.14	0.22	0.08	0.03	0.34	0.08
Avail Cap(c_a), veh/h	299	710	709	305	708	733	638	745	632	690	745	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	46.4	46.5	42.3	40.8	40.8	19.5	22.2	20.9	16.1	23.4	20.9
Incr Delay (d2), s/veh	0.5	2.7	3.0	0.3	5.8	5.7	0.0	0.7	0.3	0.1	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.0	6.1	2.6	10.9	11.3	1.3	3.0	0.9	0.3	4.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	49.1	49.4	42.6	46.6	46.4	19.5	22.8	21.1	16.2	24.6	21.1
LnGrp LOS	D	D	D	D	D	D	B	C	C	B	C	C
Approach Vol, veh/h		474			908			302			327	
Approach Delay, s/veh		49.5			46.0			21.6			23.4	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	50.0	8.7	33.0	20.0	50.0	19.9	21.7				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 15	* 45	14.7	* 45	* 14	44.5	* 9.8	* 45				
Max Q Clear Time (g_c+I1), s	2.0	12.5	2.0	25.9	2.0	8.5	3.5	15.5				
Green Ext Time (p_c), s	0.0	0.5	0.0	1.6	0.0	0.3	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			39.5									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

1: Scottsdale Road & Camelback Road

07/29/2020

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰↱	↰↱	↰	↰	↰↱	↰↱	↰↱	↰↱	↰↱	↰
Traffic Volume (vph)	222	716	205	89	473	264	830	233	607	206
Future Volume (vph)	222	716	205	89	473	264	830	233	607	206
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	19.0	43.0	43.0	16.0	40.0	23.0	36.0	25.0	38.0	38.0
Total Split (%)	15.8%	35.8%	35.8%	13.3%	33.3%	19.2%	30.0%	20.8%	31.7%	31.7%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effct Green (s)	12.1	32.1	32.1	10.0	30.1	18.0	43.3	13.2	38.7	38.7
Actuated g/C Ratio	0.10	0.27	0.27	0.08	0.25	0.15	0.36	0.11	0.32	0.32
v/c Ratio	0.70	0.82	0.40	0.66	0.80	0.56	0.56	0.67	0.58	0.36
Control Delay	63.3	49.0	10.6	74.0	46.4	56.4	37.9	60.1	37.6	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.3	49.0	10.6	74.0	46.4	56.4	37.9	60.1	37.6	10.7
LOS	E	D	B	E	D	E	D	E	D	B
Approach Delay		44.9			49.7		42.0		37.3	
Approach LOS		D			D		D		D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 40 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 43.0

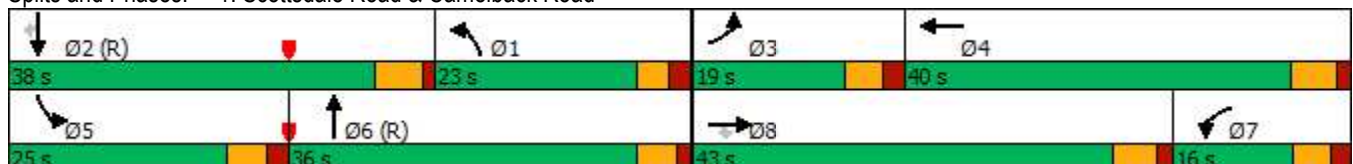
Intersection LOS: D

Intersection Capacity Utilization 68.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	716	205	89	473	176	264	830	108	233	607	206
Future Volume (veh/h)	222	716	205	89	473	176	264	830	108	233	607	206
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	241	778	223	97	514	191	287	902	117	253	660	224
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	894	399	121	596	220	797	1874	242	315	965	431
Arrive On Green	0.09	0.25	0.25	0.07	0.23	0.23	0.46	0.82	0.82	0.09	0.27	0.27
Sat Flow, veh/h	3456	3554	1585	1781	2539	939	3456	4577	591	3456	3554	1585
Grp Volume(v), veh/h	241	778	223	97	359	346	287	670	349	253	660	224
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1701	1728	1702	1764	1728	1777	1585
Q Serve(g_s), s	8.2	25.2	14.7	6.4	23.2	23.5	6.4	7.1	7.1	8.6	19.9	10.9
Cycle Q Clear(g_c), s	8.2	25.2	14.7	6.4	23.2	23.5	6.4	7.1	7.1	8.6	19.9	10.9
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	299	894	399	121	417	399	797	1394	722	315	965	431
V/C Ratio(X)	0.81	0.87	0.56	0.80	0.86	0.87	0.36	0.48	0.48	0.80	0.68	0.52
Avail Cap(c_a), veh/h	395	1111	495	159	511	489	797	1394	722	559	965	431
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	43.0	39.1	55.1	44.0	44.1	26.6	7.1	7.1	53.5	39.1	21.3
Incr Delay (d2), s/veh	6.7	5.5	0.5	14.8	10.4	11.4	0.1	1.2	2.3	1.8	3.9	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	11.6	5.7	3.4	11.3	11.0	2.4	2.1	2.4	3.8	9.2	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	48.5	39.6	70.0	54.4	55.5	26.7	8.2	9.4	55.3	43.0	25.8
LnGrp LOS	E	D	D	E	D	E	C	A	A	E	D	C
Approach Vol, veh/h		1242			802			1306			1137	
Approach Delay, s/veh		49.3			56.8			12.6			42.4	
Approach LOS		D			E			B			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.7	38.0	15.7	33.7	16.5	54.1	13.6	35.7				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	18.0	32.6	* 14	34.5	19.4	* 31	10.7	* 38				
Max Q Clear Time (g_c+I1), s	8.4	21.9	10.2	25.5	10.6	9.1	8.4	27.2				
Green Ext Time (p_c), s	0.4	2.7	0.2	2.0	0.3	4.8	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay			38.2									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2: Scottsdale Road & Shoeman Lane

07/29/2020

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	121	1109	8	7	894
Future Vol, veh/h	0	121	1109	8	7	894
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	-	-	120	-
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	132	1205	9	8	972
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	607	0	0	1214	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*668	-	-	*840	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*668	-	-	*840	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.7	0		0.1		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	668	* 840	-	
HCM Lane V/C Ratio	-	-	0.197	0.009	-	
HCM Control Delay (s)	-	-	11.7	9.3	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.7	0	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	82	28	95	40	466	11	757	242	679
Future Volume (vph)	82	28	95	40	466	11	757	242	679
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	42.0	42.0	42.0	42.0	42.0	58.0	58.0	20.0	78.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%	48.3%	48.3%	16.7%	65.0%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		23.7	23.5	23.5	23.5	73.7	73.7	86.3	86.7
Actuated g/C Ratio		0.20	0.20	0.20	0.20	0.61	0.61	0.72	0.72
v/c Ratio		0.50	0.44	0.12	0.91	0.03	0.39	0.31	0.34
Control Delay		43.3	39.8	27.8	57.6	15.7	15.1	4.4	5.8
Queue Delay		0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
Total Delay		43.3	39.8	27.8	58.4	15.7	15.1	4.4	5.8
LOS		D	D	C	E	B	B	A	A
Approach Delay		43.3		53.5			15.1		5.5
Approach LOS		D		D			B		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 61 (51%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 21.7

Intersection LOS: C

Intersection Capacity Utilization 70.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	28	25	95	40	466	11	757	26	242	679	103
Future Volume (veh/h)	82	28	25	95	40	466	11	757	26	242	679	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	30	27	103	43	507	12	823	28	263	738	112
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	79	61	455	574	486	487	2327	79	1100	2318	352
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	1.00	1.00	1.00	0.09	1.00	1.00
Sat Flow, veh/h	616	259	198	1346	1870	1585	649	3506	119	3456	3093	469
Grp Volume(v), veh/h	146	0	0	103	43	507	12	417	434	263	424	426
Grp Sat Flow(s),veh/h/ln	1073	0	0	1346	1870	1585	649	1777	1849	1728	1777	1786
Q Serve(g_s), s	11.0	0.0	0.0	0.0	2.0	36.8	0.0	0.0	0.0	2.8	0.0	0.0
Cycle Q Clear(g_c), s	12.9	0.0	0.0	8.0	2.0	36.8	0.6	0.0	0.0	2.8	0.0	0.0
Prop In Lane	0.61		0.18	1.00		1.00	1.00		0.06	1.00		0.26
Lane Grp Cap(c), veh/h	377	0	0	455	574	486	487	1179	1227	1100	1331	1338
V/C Ratio(X)	0.39	0.00	0.00	0.23	0.07	1.04	0.02	0.35	0.35	0.24	0.32	0.32
Avail Cap(c_a), veh/h	379	0	0	455	574	486	487	1179	1227	1380	1331	1338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.57	0.57	0.57	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	0.0	31.6	29.5	41.6	0.0	0.0	0.0	4.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	42.6	0.1	0.8	0.8	0.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	2.3	0.9	19.8	0.0	0.3	0.3	0.9	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	0.0	0.0	31.7	29.5	84.2	0.1	0.8	0.8	4.8	0.6	0.6
LnGrp LOS	C	A	A	C	C	F	A	A	A	A	A	A
Approach Vol, veh/h		146			653			863			1113	
Approach Delay, s/veh		33.5			72.3			0.8			1.6	
Approach LOS		C			E			A			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		95.5		42.0	10.2	85.3		42.0				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 73		* 37	15.0	52.9		* 37				
Max Q Clear Time (g_c+I1), s		2.0		38.8	4.8	2.6		14.9				
Green Ext Time (p_c), s		0.9		0.0	0.4	0.9		0.7				
Intersection Summary												
HCM 6th Ctrl Delay				19.7								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

4: Scottsdale Road & 5th Avenue

07/29/2020

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	48	22	56	20	55	718	33	705
Future Volume (vph)	48	22	56	20	55	718	33	705
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		8.7	8.7	8.7	44.1	41.5	43.3	39.7
Actuated g/C Ratio		0.14	0.14	0.14	0.74	0.69	0.72	0.66
v/c Ratio		0.57	0.39	0.16	0.12	0.33	0.07	0.37
Control Delay		19.6	28.4	14.2	4.2	6.5	3.2	7.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		19.6	28.4	14.2	4.2	6.5	3.2	7.7
LOS		B	C	B	A	A	A	A
Approach Delay		19.6		22.5		6.3		7.5
Approach LOS		B		C		A		A

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 8.8

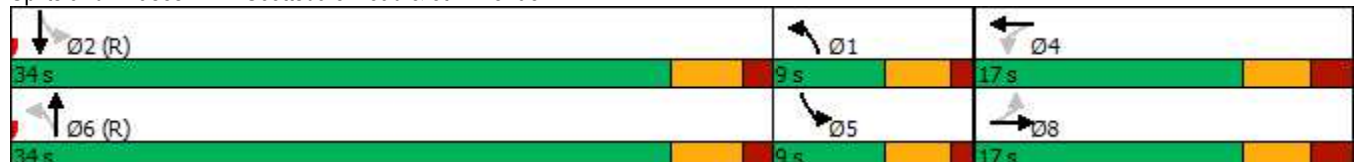
Intersection LOS: A

Intersection Capacity Utilization 53.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	22	85	56	20	19	55	718	15	33	705	79
Future Volume (veh/h)	48	22	85	56	20	19	55	718	15	33	705	79
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	52	24	92	61	22	21	60	780	16	36	766	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	46	119	292	121	115	693	1751	36	618	1583	178
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.15	0.49	0.49	0.29	0.98	0.98
Sat Flow, veh/h	375	337	863	1276	880	840	1781	3561	73	1781	3221	361
Grp Volume(v), veh/h	168	0	0	61	0	43	60	389	407	36	423	429
Grp Sat Flow(s),veh/h/ln	1576	0	0	1276	0	1719	1781	1777	1857	1781	1777	1805
Q Serve(g_s), s	4.4	0.0	0.0	0.0	0.0	1.3	0.0	8.6	8.6	0.0	0.5	0.5
Cycle Q Clear(g_c), s	6.1	0.0	0.0	2.7	0.0	1.3	0.0	8.6	8.6	0.0	0.5	0.5
Prop In Lane	0.31		0.55	1.00		0.49	1.00		0.04	1.00		0.20
Lane Grp Cap(c), veh/h	295	0	0	292	0	236	693	874	913	618	874	888
V/C Ratio(X)	0.57	0.00	0.00	0.21	0.00	0.18	0.09	0.45	0.45	0.06	0.48	0.48
Avail Cap(c_a), veh/h	392	0	0	371	0	344	693	874	913	618	874	888
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	24.9	0.0	0.0	23.5	0.0	22.9	4.5	9.9	9.9	6.6	0.3	0.3
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.1	0.0	1.6	1.6	0.0	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.8	0.0	0.5	0.2	3.2	3.3	0.2	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	0.0	0.0	23.6	0.0	23.0	4.5	11.6	11.5	6.6	2.1	2.1
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		168			104			856			888	
Approach Delay, s/veh		25.5			23.4			11.0			2.2	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	34.0		13.2	12.8	34.0		13.2				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.5		4.7	2.0	10.6		8.1				
Green Ext Time (p_c), s	0.0	2.0		0.1	0.0	1.7		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			9.0									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

5: Brown Avenue & Camelback Road

07/29/2020

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	
Traffic Vol, veh/h	1100	12	18	719	25	44
Future Vol, veh/h	1100	12	18	719	25	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1196	13	20	782	27	48
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	1209	0	1634	605
Stage 1	-	-	-	-	1203	-
Stage 2	-	-	-	-	431	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	573	-	92	441
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	623	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	573	-	89	441
Mov Cap-2 Maneuver	-	-	-	-	191	-
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	601	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.3		21		
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	299	-	-	573	-	
HCM Lane V/C Ratio	0.251	-	-	0.034	-	
HCM Control Delay (s)	21	-	-	11.5	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	1	-	-	0.1	-	

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	38	91	5	28	8
Future Vol, veh/h	22	38	91	5	28	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	41	99	5	30	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	104	0	-	0	191	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	89	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1488	-	-	-	798	953
Stage 1	-	-	-	-	922	-
Stage 2	-	-	-	-	934	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1488	-	-	-	784	953
Mov Cap-2 Maneuver	-	-	-	-	784	-
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	934	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.7	0		9.6		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1488	-	-	-	816	
HCM Lane V/C Ratio	0.016	-	-	-	0.048	
HCM Control Delay (s)	7.5	0	-	-	9.6	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	40	256	45	498	70	20	37	99	68
Future Volume (vph)	40	256	45	498	70	20	37	99	68
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	40.0	40.0	40.0	40.0	40.0	20.0	60.0	20.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	33.3%	16.7%	50.0%	16.7%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	23.5	23.5	23.5	23.5	23.5	82.0	76.4	83.9	80.3
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20	0.68	0.64	0.70	0.67
v/c Ratio	0.58	0.44	0.29	0.78	0.21	0.03	0.07	0.12	0.14
Control Delay	86.0	55.7	44.1	53.9	9.4	5.9	3.6	6.2	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.0	55.7	44.1	53.9	9.4	5.9	3.6	6.2	5.8
LOS	F	E	D	D	A	A	A	A	A
Approach Delay		59.4		48.1			4.1		6.0
Approach LOS		E		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 39.5

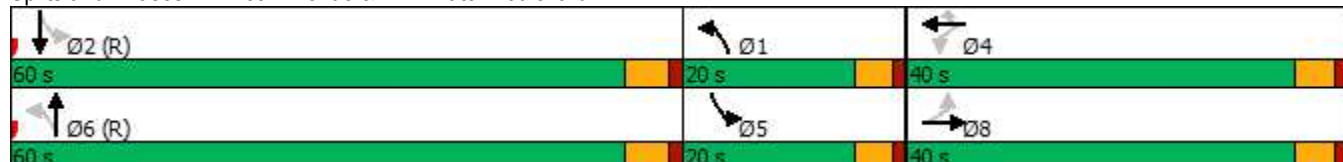
Intersection LOS: D

Intersection Capacity Utilization 49.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	256	26	45	498	70	20	37	35	99	68	86
Future Volume (veh/h)	40	256	26	45	498	70	20	37	35	99	68	86
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	43	278	28	49	541	76	22	40	38	108	74	93
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	706	71	229	769	343	903	403	383	987	344	432
Arrive On Green	0.43	0.43	0.43	0.22	0.22	0.22	0.20	0.46	0.46	0.20	0.46	0.46
Sat Flow, veh/h	806	3263	326	1073	3554	1585	1781	882	838	1781	753	947
Grp Volume(v), veh/h	43	150	156	49	541	76	22	0	78	108	0	167
Grp Sat Flow(s),veh/h/ln	806	1777	1812	1073	1777	1585	1781	0	1720	1781	0	1700
Q Serve(g_s), s	6.1	6.9	7.1	4.8	16.9	4.7	0.0	0.0	3.1	0.0	0.0	7.1
Cycle Q Clear(g_c), s	23.0	6.9	7.1	11.9	16.9	4.7	0.0	0.0	3.1	0.0	0.0	7.1
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.49	1.00		0.56
Lane Grp Cap(c), veh/h	121	385	392	229	769	343	903	0	785	987	0	776
V/C Ratio(X)	0.36	0.39	0.40	0.21	0.70	0.22	0.02	0.00	0.10	0.11	0.00	0.22
Avail Cap(c_a), veh/h	180	514	524	307	1028	458	903	0	785	987	0	776
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	28.6	28.7	44.6	43.5	38.7	9.8	0.0	18.6	8.9	0.0	19.6
Incr Delay (d2), s/veh	0.6	0.2	0.2	0.2	0.7	0.1	0.0	0.0	0.3	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.7	2.8	1.3	7.4	1.9	0.2	0.0	1.3	1.1	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	28.9	28.9	44.8	44.2	38.8	9.9	0.0	18.8	8.9	0.0	20.3
LnGrp LOS	D	C	C	D	D	D	A	A	B	A	A	C
Approach Vol, veh/h	349			666			100			275		
Approach Delay, s/veh	30.5			43.6			16.8			15.8		
Approach LOS	C			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.7	60.0		31.3	28.7	60.0		31.3				
Change Period (Y+Rc), s	* 4.6	5.2		* 5.3	* 4.6	5.2		* 5.3				
Max Green Setting (Gmax), s	* 15	54.8		* 35	* 15	54.8		* 35				
Max Q Clear Time (g_c+I1), s	2.0	9.1		18.9	2.0	5.1		25.0				
Green Ext Time (p_c), s	0.0	0.8		2.4	0.1	0.3		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			32.9									
HCM 6th LOS			C									
Notes												

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	↑	←	↑
Traffic Volume (vph)	27	1156	705	103	189	3	25
Future Volume (vph)	27	1156	705	103	189	3	25
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	80.0	80.0	80.0	40.0	40.0	40.0	40.0
Total Split (%)	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	73.0	73.0	73.0	34.0	34.0	34.0	34.0
Actuated g/C Ratio	0.61	0.61	0.61	0.28	0.28	0.28	0.28
v/c Ratio	0.08	0.58	0.36	0.22	0.41	0.01	0.06
Control Delay	10.4	15.7	12.3	34.4	25.6	31.0	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	15.7	12.3	34.4	25.6	31.0	7.4
LOS	B	B	B	C	C	C	A
Approach Delay		15.5	12.3				
Approach LOS		B	B				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 16.2

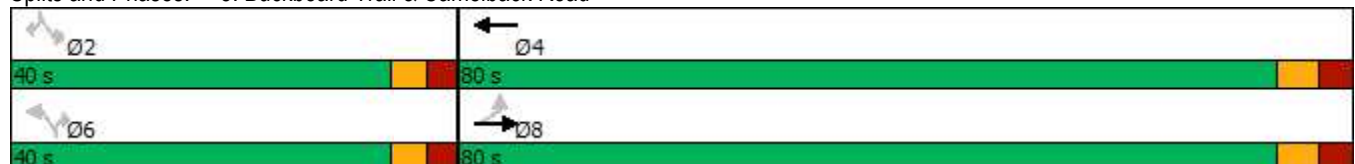
Intersection LOS: B

Intersection Capacity Utilization 61.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1156	0	0	705	8	103	0	189	3	0	25
Future Volume (vph)	27	1156	0	0	705	8	103	0	189	3	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			1.00		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3533		1770		1583	1770		1583
Flt Permitted	0.32	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	605	3539			3533		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	1257	0	0	766	9	112	0	205	3	0	27
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	49	0	0	19
Lane Group Flow (vph)	29	1257	0	0	774	0	112	0	156	3	0	8
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	73.0	73.0			73.0		34.0		34.0	34.0		34.0
Effective Green, g (s)	73.0	73.0			73.0		34.0		34.0	34.0		34.0
Actuated g/C Ratio	0.61	0.61			0.61		0.28		0.28	0.28		0.28
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	368	2152			2149		501		448	501		448
v/s Ratio Prot		c0.36			0.22							
v/s Ratio Perm	0.05						0.06		c0.10	0.00		0.00
v/c Ratio	0.08	0.58			0.36		0.22		0.35	0.01		0.02
Uniform Delay, d1	9.7	14.3			11.8		32.9		34.2	30.9		31.0
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.4	1.2			0.5		1.0		2.1	0.0		0.1
Delay (s)	10.1	15.4			12.3		33.9		36.3	30.9		31.0
Level of Service	B	B			B		C		D	C		C
Approach Delay (s)		15.3			12.3			35.5			31.0	
Approach LOS		B			B			D			C	
Intersection Summary												
HCM 2000 Control Delay		17.2			HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio		0.51										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				13.0			
Intersection Capacity Utilization		61.2%			ICU Level of Service				B			
Analysis Period (min)		15										
c Critical Lane Group												

Intersection												
Int Delay, s/veh	8.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	10	24	9	12	10	24	135	16	3	54	11
Future Vol, veh/h	11	10	24	9	12	10	24	135	16	3	54	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	11	26	10	13	11	26	147	17	3	59	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	24	0	0	37	0	0	122	92	24	169	100	19
Stage 1	-	-	-	-	-	-	48	48	-	39	39	-
Stage 2	-	-	-	-	-	-	74	44	-	130	61	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1591	-	-	1574	-	-	853	798	1052	795	790	1059
Stage 1	-	-	-	-	-	-	965	855	-	976	862	-
Stage 2	-	-	-	-	-	-	935	858	-	874	844	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1591	-	-	1574	-	-	786	787	1052	663	779	1059
Mov Cap-2 Maneuver	-	-	-	-	-	-	786	787	-	663	779	-
Stage 1	-	-	-	-	-	-	957	848	-	968	857	-
Stage 2	-	-	-	-	-	-	856	853	-	705	837	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	2.1	10.9	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	805	1591	-	-	1574	-	-	807
HCM Lane V/C Ratio	0.236	0.008	-	-	0.006	-	-	0.092
HCM Control Delay (s)	10.9	7.3	0	-	7.3	0	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.3

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	12	1060	45	40	567	10	20	2	66	4	0	5
Future Vol, veh/h	12	1060	45	40	567	10	20	2	66	4	0	5
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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1152	49	43	616	11	22	2	72	4	0	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	627	0	0	1201	0	0	1597	1916	601	1311	1935	314
Stage 1	-	-	-	-	-	-	1203	1203	-	708	708	-
Stage 2	-	-	-	-	-	-	394	713	-	603	1227	-
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	951	-	-	577	-	-	71	67	443	116	65	682
Stage 1	-	-	-	-	-	-	196	256	-	392	436	-
Stage 2	-	-	-	-	-	-	602	434	-	453	249	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	951	-	-	577	-	-	66	61	443	88	59	682
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	61	-	88	59	-
Stage 1	-	-	-	-	-	-	193	252	-	387	403	-
Stage 2	-	-	-	-	-	-	553	401	-	371	246	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.8			44.8			27.3		
HCM LOS							E			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	182	951	-	-	577	-	-	171				
HCM Lane V/C Ratio	0.526	0.014	-	-	0.075	-	-	0.057				
HCM Control Delay (s)	44.8	8.8	-	-	11.7	-	-	27.3				
HCM Lane LOS	E	A	-	-	B	-	-	D				
HCM 95th %tile Q(veh)	2.7	0	-	-	0.2	-	-	0.2				

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	15	18	79	48	15
Future Vol, veh/h	8	15	18	79	48	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	16	20	86	52	16
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	106	0	-	0	97	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1485	-	-	-	902	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1485	-	-	-	897	1002
Mov Cap-2 Maneuver	-	-	-	-	897	-
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	988	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.6	0		9.2		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1485	-	-	-	920	
HCM Lane V/C Ratio	0.006	-	-	-	0.074	
HCM Control Delay (s)	7.4	0	-	-	9.2	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

25: 76th Street & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	109	896	138	457	134	289	159	36	300	49
Future Volume (vph)	109	896	138	457	134	289	159	36	300	49
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	20.0	50.0	15.0	50.0	20.0	50.0	50.0	20.0	50.0	50.0
Total Split (%)	14.3%	35.7%	10.7%	35.7%	14.3%	35.7%	35.7%	14.3%	35.7%	35.7%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max
Act Effect Green (s)	59.1	44.6	33.7	24.2	60.8	44.5	44.5	58.8	44.5	44.5
Actuated g/C Ratio	0.44	0.33	0.25	0.18	0.45	0.33	0.33	0.44	0.33	0.33
v/c Ratio	0.25	0.97	0.85	0.85	0.33	0.51	0.27	0.09	0.53	0.09
Control Delay	32.6	65.0	83.2	65.6	25.6	39.9	5.6	20.6	40.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	65.0	83.2	65.6	25.6	39.9	5.6	20.6	40.4	0.3
LOS	C	E	F	E	C	D	A	C	D	A
Approach Delay		61.9		69.4		27.2			33.5	
Approach LOS		E		E		C			C	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 134.4

Natural Cycle: 125

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 52.3

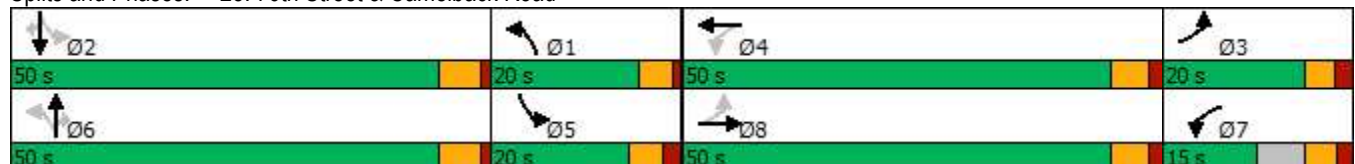
Intersection LOS: D

Intersection Capacity Utilization 77.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road



25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	109	896	143	138	457	40	134	289	159	36	300	49
Future Volume (veh/h)	109	896	143	138	457	40	134	289	159	36	300	49
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	118	974	155	150	497	43	146	314	173	39	326	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	1012	161	174	562	48	438	622	527	425	622	527
Arrive On Green	0.23	0.33	0.33	0.07	0.17	0.17	0.11	0.33	0.33	0.11	0.33	0.33
Sat Flow, veh/h	1781	3071	488	1781	3310	286	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	118	563	566	150	266	274	146	314	173	39	326	53
Grp Sat Flow(s),veh/h/ln	1781	1777	1782	1781	1777	1819	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.5	41.6	41.7	7.1	19.6	19.7	0.0	18.0	10.9	0.0	18.9	3.1
Cycle Q Clear(g_c), s	2.5	41.6	41.7	7.1	19.6	19.7	0.0	18.0	10.9	0.0	18.9	3.1
Prop In Lane	1.00		0.27	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	585	587	174	302	309	438	622	527	425	622	527
V/C Ratio(X)	0.25	0.96	0.96	0.86	0.88	0.89	0.33	0.50	0.33	0.09	0.52	0.10
Avail Cap(c_a), veh/h	464	592	594	184	591	605	451	622	527	425	622	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	44.0	44.1	60.2	54.2	54.3	38.4	35.8	33.5	33.7	36.1	30.8
Incr Delay (d2), s/veh	0.1	27.3	27.6	29.0	3.4	3.4	0.2	2.9	1.7	0.4	3.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	22.4	22.6	6.4	9.0	9.2	3.9	8.7	4.5	1.0	9.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	71.4	71.6	89.2	57.6	57.7	38.6	38.7	35.1	34.1	39.2	31.2
LnGrp LOS	D	E	E	F	E	E	D	D	D	C	D	C
Approach Vol, veh/h	1247			690			633			418		
Approach Delay, s/veh	68.6			64.5			37.7			37.7		
Approach LOS	E			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	50.0	35.6	28.2	20.0	50.0	14.3	49.5				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 15	* 45	14.7	* 45	* 14	44.5	* 9.8	* 45				
Max Q Clear Time (g_c+I1), s	2.0	20.9	4.5	21.7	2.0	20.0	9.1	43.7				
Green Ext Time (p_c), s	0.0	0.6	0.0	1.0	0.0	0.7	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay 56.8

HCM 6th LOS E

Notes

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

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

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	↑	←	↑
Traffic Volume (vph)	6	669	338	156	260	1	5
Future Volume (vph)	6	669	338	156	260	1	5
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.01	0.39	0.20	0.27	0.41	0.00	0.01
Control Delay	13.3	17.2	14.9	28.8	12.1	25.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.3	17.2	14.9	28.8	12.1	25.0	0.0
LOS	B	B	B	C	B	C	A
Approach Delay		17.2	14.9				
Approach LOS		B	B				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 16.9

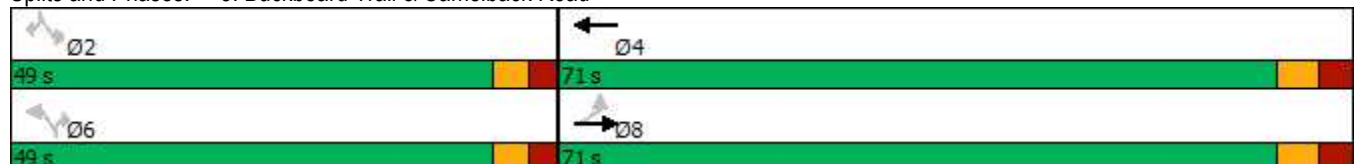
Intersection LOS: B

Intersection Capacity Utilization 52.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	669	0	0	338	2	156	0	260	1	0	5
Future Volume (vph)	6	669	0	0	338	2	156	0	260	1	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			1.00		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3536		1770		1583	1770		1583
Flt Permitted	0.53	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	991	3539			3536		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	727	0	0	367	2	170	0	283	1	0	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	117	0	0	3
Lane Group Flow (vph)	7	727	0	0	369	0	170	0	166	1	0	2
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	528	1887			1885		634		567	634		567
v/s Ratio Prot		c0.21			0.10							
v/s Ratio Perm	0.01						0.10		c0.10	0.00		0.00
v/c Ratio	0.01	0.39			0.20		0.27		0.29	0.00		0.00
Uniform Delay, d1	13.2	16.4			14.6		27.3		27.6	24.7		24.7
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.0	0.6			0.2		1.0		1.3	0.0		0.0
Delay (s)	13.2	17.0			14.8		28.4		28.9	24.7		24.7
Level of Service	B	B			B		C		C	C		C
Approach Delay (s)		17.0			14.8			28.7			24.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay		19.9			HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio		0.35										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				13.0			
Intersection Capacity Utilization		52.1%			ICU Level of Service				A			
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	896	1	2	386	0	0
Future Volume (Veh/h)	896	1	2	386	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	974	1	2	420	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT		TWLT			
Median storage (veh)	2		2			
Upstream signal (ft)	455					
pX, platoon unblocked			0.88	0.88	0.88	
vC, conflicting volume			975	1188	488	
vC1, stage 1 conf vol				974		
vC2, stage 2 conf vol				214		
vCu, unblocked vol			706	948	154	
tC, single (s)			4.1	6.8	6.9	
tC, 2 stage (s)				5.8		
tF (s)			2.2	3.5	3.3	
p0 queue free %			100	100	100	
cM capacity (veh/h)			784	378	763	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	
Volume Total	649	326	2	210	210	
Volume Left	0	0	2	0	0	
Volume Right	0	1	0	0	0	
cSH	1700	1700	784	1700	1700	
Volume to Capacity	0.38	0.19	0.00	0.12	0.12	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	9.6	0.0	0.0	
Lane LOS			A			
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			28.1%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	229	9	8	123	2	4	0	15	1	0	1
Future Vol, veh/h	3	229	9	8	123	2	4	0	15	1	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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	249	10	9	134	2	4	0	16	1	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	136	0	0	259	0	0	345	414	130	284	418	68
Stage 1	-	-	-	-	-	-	260	260	-	153	153	-
Stage 2	-	-	-	-	-	-	85	154	-	131	265	-
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	1446	-	-	1303	-	-	585	527	896	646	524	981
Stage 1	-	-	-	-	-	-	722	692	-	834	770	-
Stage 2	-	-	-	-	-	-	913	769	-	859	688	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1303	-	-	580	522	896	630	519	981
Mov Cap-2 Maneuver	-	-	-	-	-	-	580	522	-	630	519	-
Stage 1	-	-	-	-	-	-	721	691	-	832	765	-
Stage 2	-	-	-	-	-	-	906	764	-	842	687	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.5			9.6			9.7		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	804	1446	-	-	1303	-	-	767				
HCM Lane V/C Ratio	0.026	0.002	-	-	0.007	-	-	0.003				
HCM Control Delay (s)	9.6	7.5	-	-	7.8	-	-	9.7				
HCM Lane LOS	A	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	3	4	17	10	3
Future Vol, veh/h	2	3	4	17	10	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	3	4	18	11	3
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	22	0	-	0	20	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	7	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1593	-	-	-	997	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1016	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1593	-	-	-	996	1067
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	1016	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.9	0		8.6		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1593	-	-	-	1012	
HCM Lane V/C Ratio	0.001	-	-	-	0.014	
HCM Control Delay (s)	7.3	0	-	-	8.6	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	



Appendix G – Trip Generation



Scottsdale Collective
City Center - Existing

Completed: SAB 4/16/2020
Checked: TG 4/17/2020

Trip Generation Calculations

710 General Office																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
General Office	710	68,78	1000 SF GFA	9.74	50%	50%	1.16	86%	14%	1.15	16%	84%	0.05	16%	84%	670	335	335	80	69	11	79	13	66	3	0	3	Average
General Office	710	68,78	1000 SF GFA	2.71	50%	50%	0.37	86%	14%	0.47	16%	84%	N/A	N/A	N/A	186	93	93	25	22	3	32	5	27	N/A	N/A	N/A	Minimum
General Office	710	68,78	1000 SF GFA	27.56	50%	50%	4.23	86%	14%	3.23	16%	84%	N/A	N/A	N/A	1,896	948	948	291	250	41	222	36	186	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
General Office	710	68,78	1000 SF GFA	$\ln(T)=0.97\ln(X)+2.50$	50%	50%	$T=0.94(X)+26.49$	86%	14%	$\ln(T)=0.95\ln(X)+0.36$	16%	84%	0.05% of Weekday Equation	16%	84%	738	369	369	91	78	13	80	13	67	4	1	3	Equation
General Office	Standard Deviation			5.15			0.47			0.42			N/A															
	Number of Studies			66			35			32			N/A															
	Average Size			171			117			114			N/A															
	R ²			0.83			0.47			0.88			N/A															

*ITE Trip Appendix A Land Use 710 Weekday Vehicle Trip Distribution 10:30 PM - 0.5%



Trip Generation Calculations

310 Hotel																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Hotel	310	190	Rooms	8.36	50%	50%	0.47	59%	41%	0.6	51%	49%	0.33	51%	49%	1,588	794	794	89	53	36	114	58	56	64	33	31	Average
Hotel	310	190	Rooms	5.31	50%	50%	0.2	59%	41%	0.26	51%	49%	N/A	N/A	N/A	1,009	505	504	38	22	16	49	25	24	N/A	N/A	N/A	Minimum
Hotel	310	190	Rooms	9.53	50%	50%	0.84	59%	41%	1.06	51%	49%	N/A	N/A	N/A	1,811	906	905	160	94	66	201	103	98	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Hotel	310	190	Rooms	T=11.29(X)-426.97	50%	50%	T=0.50(X)-5.34	59%	41%	T=0.75(X)-26.02	51%	49%	4.0% of Weekday Equation	51%	49%	1,718	859	859	90	53	37	116	59	57	69	35	34	Equation
Hotel		Standard Deviation		1.86				0.14				0.22		N/A														
		Number of Studies		6				25				28		N/A														
		Average Size		146				178				183		N/A														
		R ²		0.92				0.85				0.80		N/A														

*ITE Trip Appendix A Land Use 310 Saturday Vehicle Trip Distribution 10:30 PM - 4.0%

221 Multifamily (Mid-Rise)																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Multifamily (Mid-Rise)	221	136	Dwelling Units	5.44	50%	50%	0.36	26%	74%	0.44	61%	39%	0.12	61%	39%	740	370	370	49	13	36	60	37	23	16	10	6	Average
Multifamily (Mid-Rise)	221	136	Dwelling Units	1.27	50%	50%	0.06	26%	74%	0.15	61%	39%	N/A	N/A	N/A	173	87	86	8	2	6	20	12	8	N/A	N/A	N/A	Minimum
Multifamily (Mid-Rise)	221	136	Dwelling Units	12.50	50%	50%	1.61	26%	74%	1.11	61%	39%	N/A	N/A	N/A	1,700	850	850	219	57	162	151	92	59	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Multifamily (Mid-Rise)	221	136	Dwelling Units	$T=5.45(X)-1.75$	50%	50%	$\ln(T)=0.98\ln(X)-0.98$	26%	74%	$\ln(T)=0.96\ln(X)-0.63$	61%	39%	2.2% of Weeday Equation	61%	39%	739	370	369	46	12	34	60	37	23	16	10	6	Equation
Multifamily (Mid-Rise)				Standard Deviation	2.03		0.19		0.19		N/A																	
				Number of Studies	27		53		60		N/A																	
				Average Size	205		207		208		N/A																	
				R ²	0.77		0.67		0.72		N/A																	

*ITE Trip Appendix A Land Use 221 Weekday Vehicle Trip Distribution 10:30 PM - 2.2%

820 Shopping Center																													
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM				
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out		
Shopping Center	820	46.887	1000 SF GFA	37.75	50%	50%	0.94	62%	38%	3.81	48%	52%	0.26	48%	52%	1,770	885	885	44	27	17	179	86	93	12	6	6	Average	
Shopping Center	820	46.887	1000 SF GFA	7.42	50%	50%	0.18	62%	38%	0.74	48%	52%	N/A	N/A	N/A	348	174	174	8	5	3	35	17	18	N/A	N/A	N/A	Minimum	
Shopping Center	820	46.887	1000 SF GFA	207.98	50%	50%	23.74	62%	38%	18.69	48%	52%	N/A	N/A	N/A	9,752	4,876	4,876	1,113	690	423	876	420	456	N/A	N/A	N/A	Maximum	
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM				
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out		
Shopping Center	820	46.887	1000 SF GFA	$\ln(T)=0.68\ln(X)+5.57$	50%	50%	$T=0.50(X)+151.78$	62%	38%	$\ln(T)=0.74\ln(X)+2.89$	48%	52%	N/A	N/A	N/A	3,592	1,796	1,796	175	109	66	310	149	161	N/A	N/A	N/A	Equation	
Shopping Center				Standard Deviation		16.41				0.87				2.04				N/A											
				Number of Studies		147				84				261				N/A											
				Average Size		453				351				327				N/A											
				R ²		0.76				0.50				0.82				N/A											

*ITE Trip Appendix A Land Use 820 Weekday Vehicle Trip Distribution 10:30 PM - 0.7%

221 Multifamily (Mid-Rise)																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Multifamily (Mid-Rise)	221	237	Dwelling Units	5.44	50%	50%	0.36	26%	74%	0.44	61%	39%	0.12	61%	39%	1,289	645	644	85	22	63	104	63	41	28	17	11	Average
Multifamily (Mid-Rise)	221	237	Dwelling Units	1.27	50%	50%	0.06	26%	74%	0.15	61%	39%	N/A	N/A	N/A	301	151	150	14	4	10	36	22	14	N/A	N/A	N/A	Minimum
Multifamily (Mid-Rise)	221	237	Dwelling Units	12.50	50%	50%	1.61	26%	74%	1.11	61%	39%	N/A	N/A	N/A	2,963	1,482	1,481	382	99	283	263	160	103	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Multifamily (Mid-Rise)	221	237	Dwelling Units	T=5.45(X)-1.75	50%	50%	Ln(T)=0.98Ln(X)-0.98	26%	74%	Ln(T)=0.96Ln(X)-0.63	61%	39%	2.2% of Weeday Equation	61%	39%	1,290	645	645	80	21	59	101	62	39	28	17	11	Equation
Multifamily (Mid-Rise)	Standard Deviation			2.03			0.19			0.19			N/A															
	Number of Studies			27			53			60			N/A															
	Average Size			205			207			208			N/A															
	R²			0.77			0.67			0.72			N/A															

310 Hotel																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Hotel	310	449	Rooms	8.36	50%	50%	0.47	59%	41%	0.6	51%	49%	0.45	51%	49%	3,754	1,877	1,877	211	124	87	269	137	132	203	104	99	Average
Hotel	310	449	Rooms	5.31	50%	50%	0.2	59%	41%	0.26	51%	49%	N/A	N/A	N/A	2,384	1192	1192	90	53	37	117	60	57	N/A	N/A	N/A	Minimum
Hotel	310	449	Rooms	9.53	50%	50%	0.84	59%	41%	1.06	51%	49%	N/A	N/A	N/A	4,279	2,140	2,139	377	222	155	476	243	233	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Hotel	310	449	Rooms	T=11.29(X)-426.97	50%	50%	T=0.50(X)-5.34	59%	41%	T=0.75(X)-26.02	51%	49%	4.0% of Weekday Equation	51%	49%	4,642	2,321	2,321	219	129	90	311	159	152	186	95	91	Equation
Hotel	Standard Deviation			1.86			0.14			0.22			N/A															
	Number of Studies			6			25			28			N/A															
	Average Size			146			178			183			N/A															
	R ²			0.92			0.85			0.80			N/A															

*ITE Trip Appendix A Land Use 310 Saturday Vehicle Trip Distribution 10:30 PM - 4.0%



Trip Generation Calculations

710 General Office																													
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM				
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out		
General Office	710	4.65	1000 SF GFA	9.74	50%	50%	1.16	86%	14%	1.15	16%	84%	0.05	16%	84%	45	23	22	5	4	1	5	1	4	0	0	0	Average	
General Office	710	4.65	1000 SF GFA	2.71	50%	50%	0.37	86%	14%	0.47	16%	84%	N/A	N/A	N/A	13	7	6	2	2	0	2	0	2	N/A	N/A	N/A	Minimum	
General Office	710	4.65	1000 SF GFA	27.56	50%	50%	4.23	86%	14%	3.23	16%	84%	N/A	N/A	N/A	128	64	64	20	17	3	15	2	13	N/A	N/A	N/A	Maximum	
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM				
General Office	710	4.65	1000 SF GFA	Equation			Equation			Equation			Equation			Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out		
				$\ln(T)=0.97\ln(X)+2.50$			$T=0.94(X)+26.49$			$\ln(T)=0.95\ln(X)+0.36$			0.05% of Weekday Equation			54	27	27	31	27	4	6	1	5	0	0	0		
General Office				Standard Deviation		5.15				0.47				0.42				N/A											
				Number of Studies		66				35				32				N/A											
				Average Size		171				117				114				N/A											
				R ²		0.83				0.47				0.88				N/A											
*ITE Trip Appendix A Land Use 710 Weekday Vehicle Trip Distribution 10:30 PM - 0.5%																													
925 Drinking Place																													
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM				
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out		
Drinking Place	925	4.692	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	11.36	66%	34%	15.53	68%	32%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	73	50	23	Average	
Drinking Place	925	4.692	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	3.74	66%	34%	3.74	68%	32%	N/A	N/A	N/A	N/A	N/A	N/A	18	12	6	18	12	6	Minimum	
Drinking Place	925	4.692	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	30.09	66%	34%	30.09	68%	32%	N/A	N/A	N/A	N/A	N/A	N/A	141	93	48	141	96	45	Maximum	
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM				
Drinking Place	925	4.692	1000 SF GFA	Equation			Equation			Equation			Equation			Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out		
				N/A			N/A			N/A			N/A			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Equation	
Drinking Place				Standard Deviation		N/A				N/A				8.42															
				Number of Studies		N/A				N/A				12				3											
				Average Size		N/A				N/A				4				N/A											
				R ²		N/A				N/A				N/A				N/A											
**The Mint doesn't open til 10 PM, assume no traffic during PM peak																													
*Weekday, PM Peak Hour of Generator																													



Trip Generation Calculations

310 Hotel																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Hotel	310	164	Rooms	8.36	50%	50%	0.47	59%	41%	0.6	51%	49%	0.45	51%	49%	1,371	686	685	77	45	32	98	50	48	74	38	36	Average
Hotel	310	164	Rooms	5.31	50%	50%	0.2	59%	41%	0.26	51%	49%	N/A	N/A	N/A	871	436	435	33	19	14	43	22	21	N/A	N/A	N/A	Minimum
Hotel	310	164	Rooms	9.53	50%	50%	0.84	59%	41%	1.06	51%	49%	N/A	N/A	N/A	1,563	782	781	138	81	57	174	89	85	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Hotel	310	164	Rooms	T=11.29(X)-426.97	50%	50%	T=0.50(X)-5.34	59%	41%	T=0.75(X)-26.02	51%	49%	4.0% of Weekday Equation	51%	49%	1,425	713	712	77	45	32	97	49	48	57	29	28	Equation
Hotel		Standard Deviation		1.86			0.14			0.22			N/A															
		Number of Studies		6			25			28			N/A															
		Average Size		146			178			183			N/A															
		R ²		0.92			0.85			0.80			N/A															
*ITE Trip Appendix A Land Use 310 Saturday Vehicle Trip Distribution 10:30 PM - 4.0%																												



Trip Generation Calculations

710 General Office																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
General Office	710	3.86	1000 SF GFA	9.74	50%	50%	1.16	86%	14%	1.15	16%	84%	0.05	16%	84%	38	19	19	4	3	1	4	1	3	0	0	0	Average
General Office	710	3.86	1000 SF GFA	2.71	50%	50%	0.37	86%	14%	0.47	16%	84%	N/A	N/A	N/A	10	5	5	1	1	0	2	0	2	N/A	N/A	N/A	Minimum
General Office	710	3.86	1000 SF GFA	27.56	50%	50%	4.23	86%	14%	3.23	16%	84%	N/A	N/A	N/A	106	53	53	16	14	2	12	2	10	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
General Office	710	3.86	1000 SF GFA	$Ln(T)=0.97Ln(X)+2.50$	50%	50%	$T=0.94(X)+26.49$	86%	14%	$Ln(T)=0.95Ln(X)+0.36$	16%	84%	0.05% of Weekday Equation	16%	84%	45	23	22	30	26	4	5	1	4	0	0	0	Equation
General Office				Standard Deviation		5.15		0.47		0.42		N/A																
				Number of Studies		66		35		32		N/A																
				Average Size		171		117		114		N/A																
				R ²		0.83		0.47		0.88		N/A																
*ITE Trip Appendix A Land Use 710 Weekday Vehicle Trip Distribution 10:30 PM - 0.5%																												
925 Drinking Place																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Drinking Place	925	11.168	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	11.36	66%	34%	15.53	68%	32%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	173	118	55	Average
Drinking Place	925	11.168	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	3.74	66%	34%	3.74	68%	32%	N/A	N/A	N/A	N/A	N/A	N/A	42	28	14	42	29	13	Minimum
Drinking Place	925	11.168	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	30.09	66%	34%	30.09	68%	32%	N/A	N/A	N/A	N/A	N/A	N/A	336	222	114	336	228	108	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Drinking Place	925	11.168	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Equation
Drinking Place				Standard Deviation		N/A		N/A		N/A		8.42																
				Number of Studies		N/A		N/A		12																		
				Average Size		N/A		N/A		4																		
				R ²		N/A		N/A		N/A		N/A																
**The Mint doesn't open til 10 PM, assume no traffic during PM peak																												
*Weekday, PM Peak Hour of Generator																												



Trip Generation Calculations

Multifamily (Mid-Rise)																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Multifamily (Mid-Rise)	221	62	Dwelling Units	5.44	50%	50%	0.36	26%	74%	0.44	61%	39%	0.16	61%	39%	337	169	168	22	6	16	27	16	11	10	6	4	Average
Multifamily (Mid-Rise)	221	62	Dwelling Units	1.27	50%	50%	0.06	26%	74%	0.15	61%	39%	N/A	N/A	N/A	79	40	39	4	1	3	9	5	4	N/A	N/A	N/A	Minimum
Multifamily (Mid-Rise)	221	62	Dwelling Units	12.50	50%	50%	1.61	26%	74%	1.11	61%	39%	N/A	N/A	N/A	775	388	387	100	26	74	69	42	27	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Multifamily (Mid-Rise)	221	62	Dwelling Units	T=5.45(X)-1.75	50%	50%	Ln(T)=0.98Ln(X)-0.98	26%	74%	Ln(T)=0.96Ln(X)-0.63	61%	39%	2.2% of Weekday Equation	61%	39%	336	168	168	21	5	16	28	17	11	7	5	2	Equation
Multifamily (Mid-Rise)				Standard Deviation	2.03		0.19		0.19		N/A																	
				Number of Studies	27		53		60		N/A																	
				Average Size	205		207		208		N/A																	
				R ²	0.77		0.67		0.72		N/A																	
*ITE Trip Appendix A Land Use 221 Weekday Vehicle Trip Distribution 10:30 PM - 2.2%																												
Shopping Center																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Shopping Center	820	27,561	1000 SF GFA	37.75	50%	50%	0.94	62%	38%	3.81	48%	52%	0.26	48%	52%	1,040	520	520	26	16	10	105	50	55	7	3	4	Average
Shopping Center	820	27,561	1000 SF GFA	7.42	50%	50%	0.18	62%	38%	0.74	48%	52%	N/A	N/A	N/A	205	103	102	5	3	2	20	10	10	N/A	N/A	N/A	Minimum
Shopping Center	820	27,561	1000 SF GFA	207.98	50%	50%	23.74	62%	38%	18.69	48%	52%	N/A	N/A	N/A	5,732	2,866	2,866	654	405	249	515	247	268	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Shopping Center	820	27,561	1000 SF GFA	Ln(T)=0.68Ln(X)+5.57	50%	50%	T=0.50(X)+151.78	62%	38%	Ln(T)=0.74Ln(X)+2.89	48%	52%	N/A	N/A	N/A	2,503	1,252	1,251	166	103	63	209	100	109	N/A	N/A	N/A	Equation
Shopping Center				Standard Deviation	16.41		0.87		2.04		N/A																	
				Number of Studies	147		84		261		N/A																	
				Average Size	453		351		327		N/A																	
				R ²	0.76		0.50		0.82		N/A																	
*ITE Trip Appendix A Land Use 820 Weekday Vehicle Trip Distribution 10:30 PM - 0.7%																												
Hotel																												
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Rate	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Hotel	310	116	Rooms	8.36	50%	50%	0.47	59%	41%	0.6	51%	49%	0.45	51%	49%	970	485	485	55	32	23	70	36	34	52	27	25	Average
Hotel	310	116	Rooms	5.31	50%	50%	0.2	59%	41%	0.26	51%	49%	N/A	N/A	N/A	616	308	308	23	14	9	30	15	15	N/A	N/A	N/A	Minimum
Hotel	310	116	Rooms	9.53	50%	50%	0.84	59%	41%	1.06	51%	49%	N/A	N/A	N/A	1,105	553	552	97	57	40	123	63	60	N/A	N/A	N/A	Maximum
Land Use	ITE Code	Qty	Unit	Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			Weekday			AM Peak Hour			PM Peak Hour			Special Peak Hour - 10:30 PM			
				Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Equation	% In	% Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	
Hotel	310	116	Rooms	T=11.29(X)-426.97	50%	50%	T=0.50(X)-5.34	59%	41%	T=0.75(X)-26.02	51%	49%	4.0% of Weekday Equation	51%	49%	883	442	441	53	31	22	61	31	30	35	18	17	Equation
Hotel				Standard Deviation	1.86		0.14		0.22		N/A																	
				Number of Studies	6		25		28		N/A																	
				Average Size	146		178		183		N/A																	
				R ²	0.92		0.85		0.80		N/A																	
*ITE Trip Appendix A Land Use 310 Saturday Vehicle Trip Distribution 10:30 PM - 4.0%																												



Appendix H – MAG Socioeconomic Projections

Socioeconomic Projections

Population and Employment

by Municipal Planning Area, Jurisdiction, and Regional Analysis Zone

June 2019



302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003
(602) 254-6300

Maricopa Association of Governments
Table 1: Total Population by Municipal Planning Area
July 1, 2018 and Projections July 1, 2020 to July 1, 2055

Municipal Planning Area	Total Population					
	2018	2020	2030	2040	2050	2055
Apache Junction	59,000	60,800	70,000	92,000	117,100	132,600
Avondale	84,200	86,700	101,800	111,900	119,000	122,100
Buckeye	89,000	97,700	186,600	305,400	409,900	459,300
Carefree	3,700	3,800	4,100	4,200	4,200	4,300
Cave Creek	5,900	6,000	6,500	7,000	7,200	7,300
Chandler	270,300	279,500	309,100	321,100	329,000	332,400
El Mirage	34,300	35,100	36,500	36,900	37,200	37,200
Florence	79,400	85,500	120,300	160,500	209,900	231,400
Fort McDowell Yavapai Native Nation	1,000	1,100	1,100	1,100	1,100	1,100
Fountain Hills	24,000	24,700	26,200	26,600	26,900	27,000
Gila Bend	2,500	2,700	3,700	3,700	3,900	4,200
Gila River Indian Native Nation	12,000	12,200	12,300	12,300	12,300	12,300
Gilbert	256,500	265,900	293,500	308,800	318,100	321,400
Glendale	272,200	279,100	306,400	323,400	333,200	338,800
Goodyear	87,300	92,100	140,300	192,200	228,600	247,900
Guadalupe	6,300	6,400	6,700	6,800	6,800	6,800
Litchfield Park	13,300	14,000	15,400	15,700	16,100	16,400
Maricopa	59,800	67,000	90,800	106,400	121,600	128,900
Mesa	533,400	552,800	607,500	649,400	680,000	690,300
Paradise Valley	14,000	14,100	14,700	15,100	15,200	15,300
Peoria	188,500	196,600	232,400	273,700	312,600	329,900
Phoenix	1,653,500	1,697,700	1,881,900	2,019,300	2,117,400	2,155,300
Queen Creek	58,700	65,000	90,900	109,000	120,900	128,500
Salt River Pima-Maricopa Native Nation	6,800	6,100	5,700	5,800	5,800	5,800
Scottsdale	245,500	253,800	281,900	299,400	311,400	316,700
Surprise	144,000	150,300	216,700	307,500	383,300	417,200
Tempe	185,300	190,000	217,100	247,000	272,400	282,200
Tolleson	7,000	7,100	8,600	10,300	11,400	11,800
Unincorporated Pinal County	66,800	68,600	79,100	93,700	110,800	122,700
Unincorporated Maricopa County	97,900	101,200	110,500	116,800	137,000	152,600
Wickenburg	8,200	8,500	9,400	9,500	9,800	10,000
Youngtown	6,600	6,800	7,300	7,700	7,800	7,800

Notes: Numbers rounded to the nearest 100. These projections include both the Maricopa County and Pinal County portions for Apache Junction, Queen Creek, and the Gila River Indian Community. Peoria and Wickenburg include only the Maricopa County portion.

Source: Maricopa Association of Governments (MAG) Socioeconomic Projections of Population and Employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ), June 2019

For explanation of variables and complete notation on this series, please refer to the Notes and Caveats in Appendix A.

Maricopa Association of Governments
Table 2: Total Employment by Municipal Planning Area
July 1, 2018 and Projections July 1, 2020 to July 1, 2055

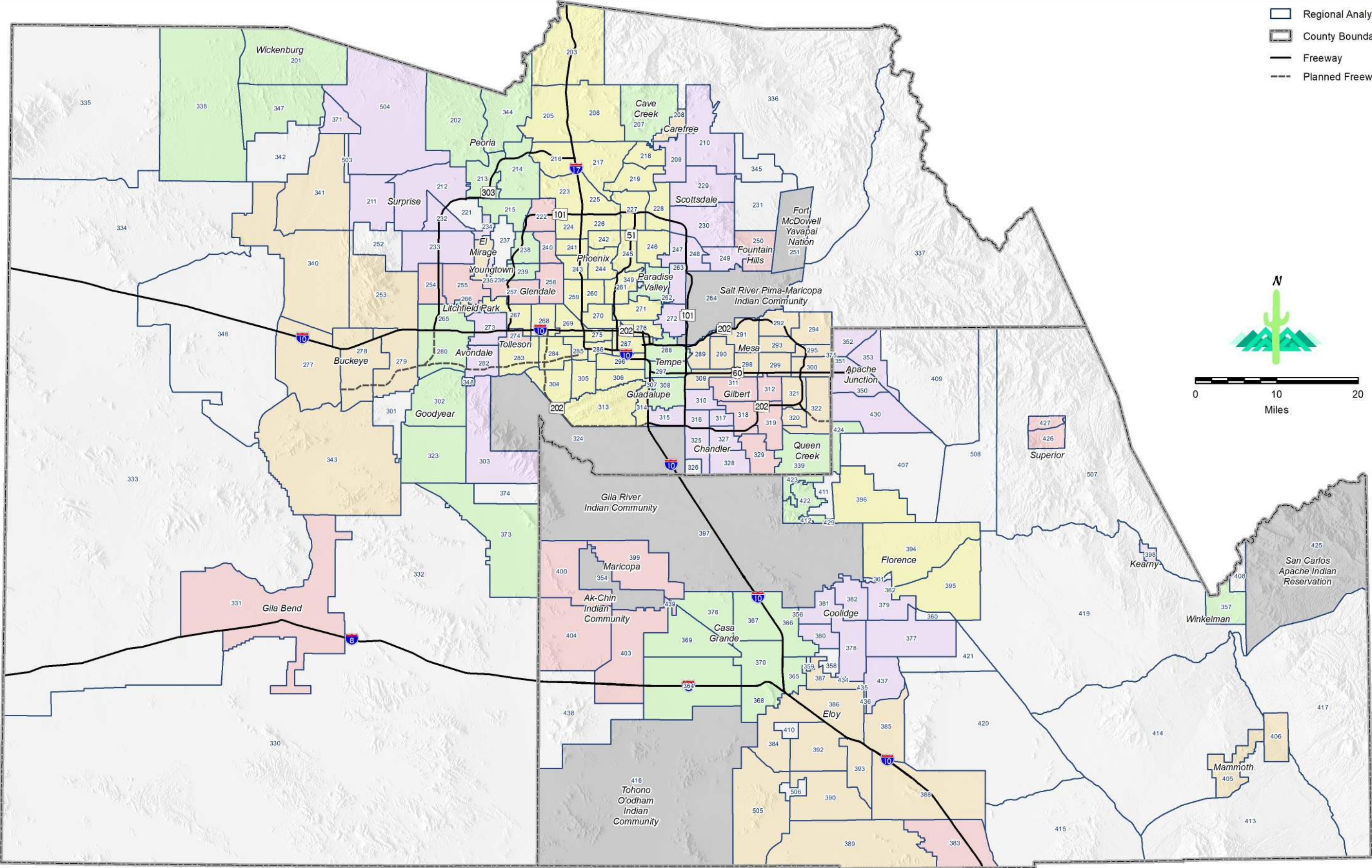
Municipal Planning Area	Total Employment					
	2018	2020	2030	2040	2050	2055
Apache Junction	7,800	8,800	13,100	17,800	26,400	30,500
Avondale	22,400	23,200	30,400	36,200	42,800	45,400
Buckeye	21,600	26,900	42,900	64,500	98,000	128,900
Carefree	1,600	1,600	2,100	2,400	2,500	2,600
Cave Creek	2,200	2,400	2,700	2,900	3,000	3,200
Chandler	145,500	154,700	182,300	202,100	215,200	222,000
El Mirage	5,000	5,100	6,500	7,200	8,000	8,900
Florence	11,000	12,100	17,000	26,400	40,900	51,100
Fort McDowell Yavapai Native Nation	2,200	2,400	2,400	2,500	2,600	2,600
Fountain Hills	7,100	7,700	9,100	9,800	10,200	10,300
Gila Bend	900	900	1,200	1,300	1,500	1,700
Gila River Indian Native Nation	10,500	10,700	11,500	13,100	14,800	15,500
Gilbert	92,800	98,600	120,200	135,900	146,600	152,200
Glendale	103,800	111,400	134,000	153,100	168,900	175,900
Goodyear	35,900	37,200	50,600	69,000	92,600	102,500
Guadalupe	1,300	1,300	1,500	1,600	1,600	1,600
Litchfield Park	3,800	4,400	5,200	5,900	6,400	6,700
Maricopa	6,200	7,100	11,400	18,200	28,200	33,500
Mesa	197,200	205,900	249,000	296,000	333,700	351,000
Paradise Valley	6,300	6,300	6,800	7,100	7,500	7,700
Peoria	58,200	62,400	73,100	84,800	91,900	96,300
Phoenix	897,700	937,600	1,084,000	1,189,200	1,264,900	1,298,900
Queen Creek	15,500	16,400	19,900	24,000	28,900	31,100
Salt River Pima-Maricopa Native Nation	21,200	22,900	28,200	33,900	35,900	36,400
Scottsdale	197,200	207,400	235,500	252,000	261,700	267,000
Surprise	33,600	36,400	59,500	86,400	113,400	130,500
Tempe	190,000	200,500	231,200	257,700	280,000	290,900
Tolleson	17,700	18,300	21,200	23,900	26,000	26,700
Unincorporated Pinal County	3,500	3,900	6,000	8,900	13,500	17,800
Unincorporated Maricopa County	28,600	31,500	35,500	41,100	51,200	58,400
Wickenburg	4,400	4,600	5,200	5,600	6,000	6,200
Youngtown	1,500	1,800	2,200	2,700	2,800	3,100

Notes: Numbers rounded to the nearest 100. These projections include both the Maricopa County and Pinal County portions for Apache Junction, Queen Creek, and the Gila River Indian Community. Peoria and Wickenburg include only the Maricopa County portion.

Source: Maricopa Association of Governments (MAG) Socioeconomic Projections of Population and Employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ), June 2019

For explanation of variables and complete notation on this series, please refer to the Notes and Caveats in Appendix A.

Regional Analysis Zones (RAZ), 2019
Maricopa and Pinal Counties, Arizona



Source: MAG and the MAG member agencies, CAG and the CAG member agencies
Date: May 2019

While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and exp liability for the accuracy thereof.

Maricopa Association of Governments
Table 4: Population by Regional Analysis Zone (RAZ) by MPA
July 1, 2018 and Projections July 1, 2020 to July 1, 2055

RAZ	County	Total Population					
		2018	2020	2030	2040	2050	2055
	Total	1,653,469	1,697,722	1,881,876	2,019,269	2,117,427	2,155,333
Queen Creek MPA							
339	Maricopa County	49,781	53,579	72,670	82,172	87,155	89,586
422	Pinal County	13	13	300	437	564	638
423	Pinal County	1,286	1,410	3,714	6,136	7,457	8,686
424	Pinal County	7,642	10,003	14,200	20,287	25,759	29,586
	Total	58,722	65,005	90,884	109,032	120,935	128,496
Salt River Pima-Maricopa Native Nation MPA							
264	Maricopa County	6,798	6,073	5,708	5,820	5,820	5,820
	Total	6,798	6,073	5,708	5,820	5,820	5,820
Scottsdale MPA							
209	Maricopa County	12,188	12,605	13,961	14,512	14,984	15,255
210	Maricopa County	6,013	6,591	10,463	12,339	13,491	13,961
229	Maricopa County	20,542	21,269	25,221	27,864	29,698	30,229
230	Maricopa County	32,232	33,028	38,882	43,580	46,789	48,510
247	Maricopa County	13,549	13,858	15,420	16,342	16,871	17,019
248	Maricopa County	36,178	37,227	38,468	38,807	39,048	39,143
249	Maricopa County	20,903	21,410	22,543	22,768	22,839	22,848
263	Maricopa County	34,908	35,814	37,002	37,252	37,584	37,773
272	Maricopa County	68,987	71,970	79,910	85,942	90,054	91,927
	Total	245,500	253,772	281,870	299,406	311,358	316,665
Surprise MPA							
211	Maricopa County	863	884	4,471	23,112	36,704	40,737
212	Maricopa County	10,265	11,365	37,615	69,296	85,862	93,806
232	Maricopa County	29,296	30,200	34,506	37,144	37,927	38,313
233	Maricopa County	87,834	91,276	111,822	119,384	123,777	126,523
234	Maricopa County	8,969	9,467	10,460	10,878	11,335	11,488
371	Maricopa County	342	344	434	734	2,584	4,316
504	Maricopa County	6,460	6,718	17,425	46,912	85,127	102,004
	Total	144,029	150,254	216,733	307,460	383,316	417,187
Tempe MPA							
288	Maricopa County	73,442	76,444	100,651	129,202	150,094	157,410
297	Maricopa County	53,146	54,092	56,336	57,432	61,780	64,273
308	Maricopa County	58,756	59,473	60,120	60,348	60,476	60,559
	Total	185,344	190,009	217,107	246,982	272,350	282,242

Notes: Numbers rounded to the nearest 100. These projections include both the Maricopa County and Pinal County portions for Apache Junction, Queen Creek, and the Gila River Indian Community. Peoria and Wickenburg include only the Maricopa County portion.

Source: Maricopa Association of Governments (MAG) Socioeconomic Projections of Population and Employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ), May 2019

For explanation of variables and complete notation on this series, please refer to the Notes and Caveats in Appendix A.

Maricopa Association of Governments
Table 5: Employment by Regional Analysis Zone (RAZ) by MPA
July 1, 2018 and Projections July 1, 2020 to July 1, 2055

RAZ	County	Total Employment					
		2018	2020	2030	2040	2050	2055
Total		897,713	937,622	1,083,980	1,189,209	1,264,941	1,298,903
Queen Creek MPA							
339	Maricopa County	13,933	14,696	16,482	18,825	20,733	21,151
422	Pinal County	9	8	18	22	31	39
423	Pinal County	89	109	351	620	1,068	1,639
424	Pinal County	1,435	1,576	3,073	4,571	7,020	8,309
Total		15,466	16,389	19,924	24,038	28,852	31,138
Salt River Pima-Maricopa Native Nation MPA							
264	Maricopa County	21,160	22,869	28,215	33,871	35,903	36,442
Total		21,160	22,869	28,215	33,871	35,903	36,442
Scottsdale MPA							
209	Maricopa County	4,488	4,659	4,851	5,174	5,161	5,344
210	Maricopa County	2,386	3,018	2,759	3,091	3,139	3,191
229	Maricopa County	9,604	10,005	11,231	11,962	12,193	12,896
230	Maricopa County	23,272	24,919	32,112	36,968	40,834	42,136
247	Maricopa County	44,254	47,089	52,652	54,822	55,679	56,105
248	Maricopa County	29,603	30,901	33,285	34,001	34,234	34,548
249	Maricopa County	7,409	7,692	8,179	8,684	8,906	9,045
263	Maricopa County	26,351	26,961	28,903	30,245	30,919	31,381
272	Maricopa County	49,833	52,185	61,540	67,039	70,676	72,330
Total		197,200	207,429	235,512	251,986	261,741	266,976
Surprise MPA							
211	Maricopa County	60	53	1,560	3,172	4,766	7,017
212	Maricopa County	2,008	2,338	5,821	9,965	13,362	15,709
232	Maricopa County	8,349	9,228	11,297	12,187	12,875	13,116
233	Maricopa County	19,943	21,079	32,661	44,032	52,007	57,402
234	Maricopa County	2,588	2,711	3,354	3,922	4,239	4,386
371	Maricopa County	18	20	327	423	2,381	2,937
504	Maricopa County	677	1,020	4,460	12,695	23,763	29,886
Total		33,643	36,449	59,480	86,396	113,393	130,453
Tempe MPA							
288	Maricopa County	88,927	94,229	111,010	128,894	144,714	152,703
297	Maricopa County	44,730	47,069	53,149	57,125	60,725	62,552
308	Maricopa County	56,380	59,208	67,052	71,701	74,542	75,596
Total		190,037	200,506	231,211	257,720	279,981	290,851

Notes: Numbers rounded to the nearest 100. These projections include both the Maricopa County and Pinal County portions for Apache Junction, Queen Creek, and the Gila River Indian Community. Peoria and Wickenburg include only the Maricopa County portion.

Source: Maricopa Association of Governments (MAG) Socioeconomic Projections of Population and Employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ), May 2019

For explanation of variables and complete notation on this series, please refer to the Notes and Caveats in Appendix A.



Appendix I – Year 2025 No Build Capacity Analysis

1: Scottsdale Road & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	167	433	258	117	680	118	414	158	697	199
Future Volume (vph)	167	433	258	117	680	118	414	158	697	199
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	16.0	42.8	42.8	21.4	48.2	13.0	39.2	16.6	42.8	42.8
Total Split (%)	13.3%	35.7%	35.7%	17.8%	40.2%	10.8%	32.7%	13.8%	35.7%	35.7%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effct Green (s)	9.8	21.4	21.4	25.4	36.9	8.0	42.0	9.9	44.1	44.1
Actuated g/C Ratio	0.08	0.18	0.18	0.21	0.31	0.07	0.35	0.08	0.37	0.37
v/c Ratio	0.65	0.75	0.56	0.34	0.86	0.56	0.36	0.61	0.58	0.31
Control Delay	64.7	54.2	9.8	42.6	46.4	67.9	29.1	62.5	34.0	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	54.2	9.8	42.6	46.4	67.9	29.1	62.5	34.0	9.5
LOS	E	D	A	D	D	E	C	E	C	A
Approach Delay		42.9			45.9		35.7		33.6	
Approach LOS		D			D		D		C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99 (83%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 39.6

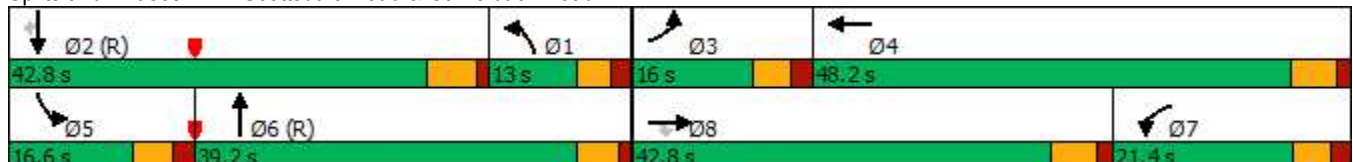
Intersection LOS: D

Intersection Capacity Utilization 70.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	433	258	117	680	169	118	414	167	158	697	199
Future Volume (veh/h)	167	433	258	117	680	169	118	414	167	158	697	199
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	182	471	280	127	739	184	128	450	182	172	758	216
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	731	326	275	825	205	519	1425	553	228	1108	494
Arrive On Green	0.07	0.21	0.21	0.15	0.29	0.29	0.15	0.39	0.39	0.07	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	1781	2819	702	3456	3618	1404	3456	3554	1585
Grp Volume(v), veh/h	182	471	280	127	466	457	128	422	210	172	758	216
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1744	1728	1702	1618	1728	1777	1585
Q Serve(g_s), s	6.2	14.6	20.4	7.8	30.2	30.2	3.9	10.3	10.8	5.9	22.4	10.0
Cycle Q Clear(g_c), s	6.2	14.6	20.4	7.8	30.2	30.2	3.9	10.3	10.8	5.9	22.4	10.0
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	238	731	326	275	520	510	519	1341	637	228	1108	494
V/C Ratio(X)	0.76	0.64	0.86	0.46	0.90	0.90	0.25	0.31	0.33	0.75	0.68	0.44
Avail Cap(c_a), veh/h	308	1105	493	275	632	621	519	1341	637	317	1108	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	43.6	46.0	46.2	40.7	40.7	45.0	25.2	25.3	55.1	36.1	19.5
Incr Delay (d2), s/veh	5.7	0.4	6.3	0.5	12.2	12.4	0.1	0.6	1.4	3.7	3.4	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	6.4	8.5	3.5	14.7	14.4	1.7	4.3	4.4	2.7	10.2	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	44.0	52.2	46.7	52.8	53.1	45.1	25.8	26.7	58.8	39.6	22.3
LnGrp LOS	E	D	D	D	D	D	D	C	C	E	D	C
Approach Vol, veh/h	933			1050			760			1146		
Approach Delay, s/veh	49.7			52.2			29.3			39.2		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.0	42.8	13.6	40.6	13.5	52.3	24.0	30.2				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	8.0	37.4	* 11	42.7	11.0	* 34	16.1	* 37				
Max Q Clear Time (g_c+I1), s	5.9	24.4	8.2	32.2	7.9	12.8	9.8	22.4				
Green Ext Time (p_c), s	0.0	3.4	0.1	3.0	0.1	2.8	0.1	2.2				
Intersection Summary												
HCM 6th Ctrl Delay	43.3											
HCM 6th LOS	D											
Notes												

2: Scottsdale Road & Shoeman Lane

07/29/2020

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	39	656	97	232	838
Future Vol, veh/h	0	39	656	97	232	838
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	-	-	120	-
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	42	713	105	252	911
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	409	0	0	818	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*778	-	-	826	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*778	-	-	826	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.9	0		2.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	778	826	-	
HCM Lane V/C Ratio	-	-	0.054	0.305	-	
HCM Control Delay (s)	-	-	9.9	11.3	-	
HCM Lane LOS	-	-	A	B	-	
HCM 95th %tile Q(veh)	-	-	0.2	1.3	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

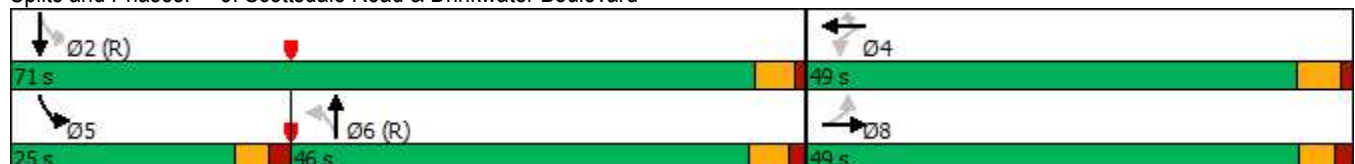
	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	42	17	16	45	336	16	488	230	507
Future Volume (vph)	42	17	16	45	336	16	488	230	507
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	49.0	49.0	49.0	49.0	49.0	46.0	46.0	25.0	71.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	38.3%	38.3%	20.8%	59.2%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		11.2	11.0	11.0	11.0	87.5	87.5	98.8	99.2
Actuated g/C Ratio		0.09	0.09	0.09	0.09	0.73	0.73	0.82	0.83
v/c Ratio		0.57	0.15	0.29	0.77	0.03	0.21	0.19	0.23
Control Delay		56.4	54.1	54.0	41.1	5.2	5.0	1.3	1.0
Queue Delay		0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
Total Delay		56.4	54.1	54.0	41.7	5.2	5.0	1.3	1.0
LOS		E	D	D	D	A	A	A	A
Approach Delay		56.4		43.6			5.0		1.1
Approach LOS		E		D			A		A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 93 (78%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 13.8
 Intersection Capacity Utilization 53.4%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	17	18	16	45	336	16	488	17	230	507	95
Future Volume (veh/h)	42	17	18	16	45	336	16	488	17	230	507	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	18	20	17	49	365	17	530	18	250	551	103
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	78	72	395	458	388	511	2031	69	1253	2002	373
Arrive On Green	0.24	0.24	0.24	0.41	0.41	0.41	1.00	1.00	1.00	0.10	1.00	1.00
Sat Flow, veh/h	618	319	293	1370	1870	1585	779	3507	119	3456	2990	557
Grp Volume(v), veh/h	84	0	0	17	49	365	17	268	280	250	327	327
Grp Sat Flow(s),veh/h/ln	1229	0	0	1370	1870	1585	779	1777	1849	1728	1777	1770
Q Serve(g_s), s	4.3	0.0	0.0	0.0	1.9	26.5	0.0	0.0	0.0	3.4	0.0	0.0
Cycle Q Clear(g_c), s	6.2	0.0	0.0	0.9	1.9	26.5	0.0	0.0	0.0	3.4	0.0	0.0
Prop In Lane	0.55		0.24	1.00		1.00	1.00		0.06	1.00		0.31
Lane Grp Cap(c), veh/h	347	0	0	395	458	388	511	1029	1071	1253	1189	1185
V/C Ratio(X)	0.24	0.00	0.00	0.04	0.11	0.94	0.03	0.26	0.26	0.20	0.27	0.28
Avail Cap(c_a), veh/h	494	0	0	560	683	579	511	1029	1071	1661	1189	1185
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.65	0.65	0.65	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	0.0	27.1	27.4	34.6	0.0	0.0	0.0	7.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	10.9	0.1	0.6	0.6	0.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	0.3	0.9	9.8	0.0	0.2	0.2	1.1	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	0.0	0.0	27.1	27.4	45.6	0.1	0.6	0.6	7.8	0.6	0.6
LnGrp LOS	D	A	A	C	C	D	A	A	A	A	A	A
Approach Vol, veh/h		84			431			565			904	
Approach Delay, s/veh		36.5			42.8			0.6			2.6	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		85.4		34.6	10.8	74.6		34.6				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 66		* 44	20.0	40.9		* 44				
Max Q Clear Time (g_c+I1), s		2.0		28.5	5.4	2.0		8.2				
Green Ext Time (p_c), s		0.7		0.8	0.4	0.6		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				12.2								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

4: Scottsdale Road & 5th Avenue

07/29/2020

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	16	16	9	34	535	18	506
Future Volume (vph)	14	16	16	9	34	535	18	506
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		7.2	7.2	7.2	48.8	48.1	48.0	46.3
Actuated g/C Ratio		0.12	0.12	0.12	0.81	0.80	0.80	0.77
v/c Ratio		0.24	0.08	0.09	0.05	0.21	0.03	0.21
Control Delay		20.5	13.3	8.1	2.3	3.5	0.9	2.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.5	13.3	8.1	2.3	3.5	0.9	2.1
LOS		C	B	A	A	A	A	A
Approach Delay		20.5		10.5		3.4		2.0
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 55 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.24

Intersection Signal Delay: 3.6

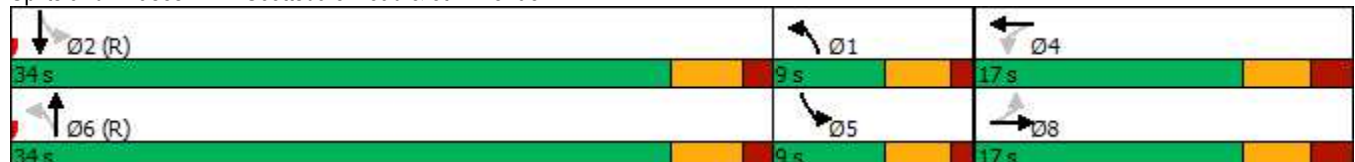
Intersection LOS: A

Intersection Capacity Utilization 40.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	16	17	16	9	9	34	535	20	18	506	28
Future Volume (veh/h)	14	16	17	16	9	9	34	535	20	18	506	28
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	15	17	18	17	10	10	37	582	22	20	550	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	65	53	254	77	77	872	1717	65	784	1685	92
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.19	0.49	0.49	0.39	0.98	0.98
Sat Flow, veh/h	324	733	595	1373	858	858	1781	3492	132	1781	3427	187
Grp Volume(v), veh/h	50	0	0	17	0	20	37	296	308	20	285	295
Grp Sat Flow(s),veh/h/ln	1652	0	0	1373	0	1716	1781	1777	1847	1781	1777	1837
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	6.1	6.1	0.0	0.2	0.2
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.5	0.0	0.6	0.0	6.1	6.1	0.0	0.2	0.2
Prop In Lane	0.30		0.36	1.00		0.50	1.00		0.07	1.00		0.10
Lane Grp Cap(c), veh/h	226	0	0	254	0	153	872	874	908	784	874	903
V/C Ratio(X)	0.22	0.00	0.00	0.07	0.00	0.13	0.04	0.34	0.34	0.03	0.33	0.33
Avail Cap(c_a), veh/h	403	0	0	406	0	343	872	874	908	784	874	903
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	25.6	0.0	0.0	25.1	0.0	25.2	3.2	9.3	9.3	4.0	0.3	0.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.1	0.0	1.1	1.0	0.0	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.2	0.0	0.3	0.1	2.2	2.3	0.1	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	0.0	0.0	25.2	0.0	25.3	3.2	10.4	10.3	4.0	1.2	1.2
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		50			37			641			600	
Approach Delay, s/veh		25.8			25.2			9.9			1.3	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.6	34.0		10.4	15.6	34.0		10.4				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.2		2.6	2.0	8.1		3.6				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	1.3		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			7.1									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	561	105	134	964	26	29
Future Vol, veh/h	561	105	134	964	26	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	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	610	114	146	1048	28	32
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	724	0	1483	362
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	816	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	874	-	116	635
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	395	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	874	-	97	635
Mov Cap-2 Maneuver	-	-	-	-	219	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	329	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.2		18.1	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	335	-	-	874	-	
HCM Lane V/C Ratio	0.178	-	-	0.167	-	
HCM Control Delay (s)	18.1	-	-	9.9	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	0.6	-	-	0.6	-	

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	201	62	30	127	86
Future Vol, veh/h	28	201	62	30	127	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	218	67	33	138	93
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	100	0	-	0	362	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	278	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1493	-	-	-	637	975
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	769	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1493	-	-	-	622	975
Mov Cap-2 Maneuver	-	-	-	-	622	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	769	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		12.2		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1493	-	-	-	728	
HCM Lane V/C Ratio	0.02	-	-	-	0.318	
HCM Control Delay (s)	7.5	0	-	-	12.2	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	61	209	31	343	233	5	42	36	9
Future Volume (vph)	61	209	31	343	233	5	42	36	9
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	36.0	36.0	36.0	36.0	36.0	11.0	73.0	11.0	73.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	9.2%	60.8%	9.2%	60.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	17.8	17.8	17.8	17.8	17.8	91.6	86.0	93.4	89.8
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.76	0.72	0.78	0.75
v/c Ratio	0.76	0.44	0.23	0.71	0.56	0.00	0.04	0.04	0.05
Control Delay	83.3	35.0	47.3	56.1	10.4	5.8	7.8	4.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.3	35.0	47.3	56.1	10.4	5.8	7.8	4.0	2.4
LOS	F	D	D	E	B	A	A	A	A
Approach Delay		45.7		38.1			7.6		3.0
Approach LOS		D		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 35.6

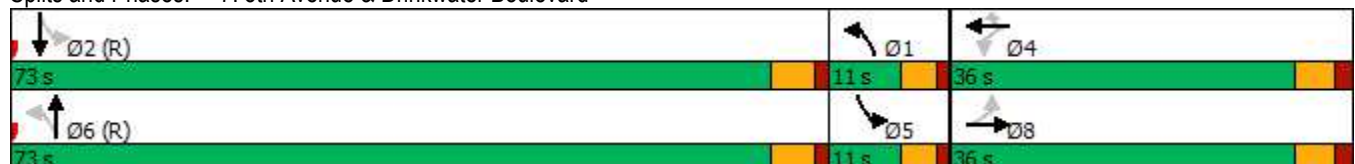
Intersection LOS: D

Intersection Capacity Utilization 41.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	209	5	31	343	233	5	42	3	36	9	45
Future Volume (veh/h)	61	209	5	31	343	233	5	42	3	36	9	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	227	5	34	373	253	5	46	3	39	10	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	702	15	224	702	313	996	981	64	1009	156	764
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.11	0.56	0.56	0.11	0.56	0.56
Sat Flow, veh/h	799	3555	78	1148	3554	1585	1781	1737	113	1781	276	1351
Grp Volume(v), veh/h	66	113	119	34	373	253	5	0	49	39	0	59
Grp Sat Flow(s),veh/h/ln	799	1777	1856	1148	1777	1585	1781	0	1850	1781	0	1627
Q Serve(g_s), s	9.7	6.6	6.6	3.1	11.3	18.3	0.0	0.0	1.4	0.0	0.0	2.0
Cycle Q Clear(g_c), s	21.0	6.6	6.6	9.7	11.3	18.3	0.0	0.0	1.4	0.0	0.0	2.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		0.83
Lane Grp Cap(c), veh/h	143	351	367	224	702	313	996	0	1045	1009	0	919
V/C Ratio(X)	0.46	0.32	0.32	0.15	0.53	0.81	0.01	0.00	0.05	0.04	0.00	0.06
Avail Cap(c_a), veh/h	189	455	475	291	909	406	996	0	1045	1009	0	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.6	41.3	41.3	45.5	43.2	46.0	6.9	0.0	11.7	6.9	0.0	11.8
Incr Delay (d2), s/veh	0.8	0.2	0.2	0.1	0.2	6.9	0.0	0.0	0.1	0.0	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(50%),veh/ln	2.0	2.9	3.1	0.9	4.9	7.8	0.0	0.0	0.6	0.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	41.5	41.5	45.6	43.4	52.9	6.9	0.0	11.7	6.9	0.0	11.9
LnGrp LOS	D	D	D	D	D	D	A	A	B	A	A	B
Approach Vol, veh/h	298			660			54			98		
Approach Delay, s/veh	44.1			47.2			11.3			9.9		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	73.0		29.0	18.0	73.0		29.0				
Change Period (Y+Rc), s	* 4.6	5.2		* 5.3	* 4.6	5.2		* 5.3				
Max Green Setting (Gmax), s	* 6.4	67.8		* 31	* 6.4	67.8		* 31				
Max Q Clear Time (g_c+I1), s	2.0	4.0		20.3	2.0	3.4		23.0				
Green Ext Time (p_c), s	0.0	0.3		1.6	0.0	0.2		0.7				

Intersection Summary

HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

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

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

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	↑	←	↑
Traffic Volume (vph)	70	571	880	41	30	46	94
Future Volume (vph)	70	571	880	41	30	46	94
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.36	0.33	0.53	0.07	0.06	0.08	0.16
Control Delay	22.3	16.5	19.5	25.9	7.6	26.0	5.7
Queue Delay	0.0	0.0	1.9	0.0	0.0	0.0	0.0
Total Delay	22.3	16.5	21.3	25.9	7.6	26.0	5.7
LOS	C	B	C	C	A	C	A
Approach Delay		17.1	21.3				
Approach LOS		B	C				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 19.0

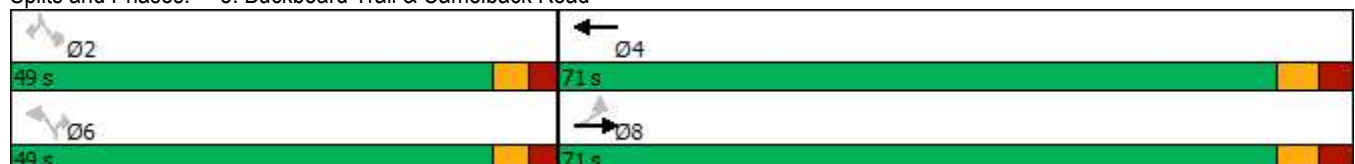
Intersection LOS: B

Intersection Capacity Utilization 55.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	571	0	0	880	42	41	0	30	46	0	94
Future Volume (vph)	70	571	0	0	880	42	41	0	30	46	0	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3515		1770		1583	1770		1583
Flt Permitted	0.21	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	397	3539			3515		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	621	0	0	957	46	45	0	33	50	0	102
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	21	0	0	65
Lane Group Flow (vph)	76	621	0	0	1000	0	45	0	12	50	0	37
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	211	1887			1874		634		567	634		567
v/s Ratio Prot		0.18			c0.28							
v/s Ratio Perm	0.19						0.03		0.01	c0.03		0.02
v/c Ratio	0.36	0.33			0.53		0.07		0.02	0.08		0.07
Uniform Delay, d1	16.2	15.8			18.3		25.3		24.9	25.4		25.3
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	4.7	0.5			1.1		0.2		0.1	0.2		0.2
Delay (s)	20.9	16.3			19.4		25.6		25.0	25.7		25.5
Level of Service	C	B			B		C		C	C		C
Approach Delay (s)		16.8			19.4		25.3				25.6	
Approach LOS		B			B		C				C	
Intersection Summary												
HCM 2000 Control Delay		19.2			HCM 2000 Level of Service		B					
HCM 2000 Volume to Capacity ratio		0.35										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)		13.0					
Intersection Capacity Utilization		55.7%			ICU Level of Service		B					
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBT
Lane Configurations	↑↑	↑↑
Traffic Volume (vph)	647	1036
Future Volume (vph)	647	1036
Turn Type	NA	NA
Protected Phases	4	8
Permitted Phases		
Detector Phase	4	8
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	22.5	22.5
Total Split (s)	22.5	22.5
Total Split (%)	100.0%	100.0%
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	4.5	4.5
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)	18.5	18.5
Actuated g/C Ratio	1.00	1.00
v/c Ratio	0.20	0.32
Control Delay	0.1	0.2
Queue Delay	0.0	0.0
Total Delay	0.1	0.2
LOS	A	A
Approach Delay	0.1	0.2
Approach LOS	A	A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 18.5

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.32

Intersection Signal Delay: 0.2

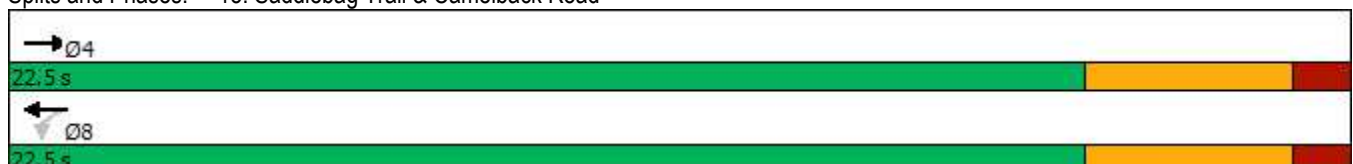
Intersection LOS: A

Intersection Capacity Utilization 32.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	647	0	0	1036	0	0
Future Volume (veh/h)	647	0	0	1036	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	703	0	0	1126		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2502	0	473	2502		
Arrive On Green	0.70	0.00	0.00	0.70		
Sat Flow, veh/h	3741	0	744	3647		
Grp Volume(v), veh/h	703	0	0	1126		
Grp Sat Flow(s),veh/h/ln	1777	0	744	1777		
Q Serve(g_s), s	1.1	0.0	0.0	2.1		
Cycle Q Clear(g_c), s	1.1	0.0	0.0	2.1		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2502	0	473	2502		
V/C Ratio(X)	0.28	0.00	0.00	0.45		
Avail Cap(c_a), veh/h	4206	0	830	4206		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	0.8	0.0	0.0	1.0		
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.0	0.0	1.1		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	703			1126		
Approach Delay, s/veh	0.9			1.1		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				15.2		15.2
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				3.1		4.1
Green Ext Time (p_c), s				4.1		6.6
Intersection Summary						
HCM 6th Ctrl Delay			1.0			
HCM 6th LOS			A			

Intersection

Int Delay, s/veh 7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	8	35	4	2	3	14	45	4	5	89	14
Future Vol, veh/h	5	8	35	4	2	3	14	45	4	5	89	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	9	38	4	2	3	15	49	4	5	97	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	47	0	0	106	51	28	77	69	4
Stage 1	-	-	-	-	-	-	38	38	-	12	12	-
Stage 2	-	-	-	-	-	-	68	13	-	65	57	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1616	-	-	1560	-	-	873	840	1047	912	822	1080
Stage 1	-	-	-	-	-	-	977	863	-	1009	886	-
Stage 2	-	-	-	-	-	-	942	885	-	946	847	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1616	-	-	1560	-	-	779	835	1047	864	817	1080
Mov Cap-2 Maneuver	-	-	-	-	-	-	779	835	-	864	817	-
Stage 1	-	-	-	-	-	-	974	860	-	1006	883	-
Stage 2	-	-	-	-	-	-	824	882	-	886	844	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			3.3			9.7			9.9		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	832	1616	-	-	1560	-	-	846
HCM Lane V/C Ratio	0.082	0.003	-	-	0.003	-	-	0.139
HCM Control Delay (s)	9.7	7.2	0	-	7.3	0	-	9.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.5

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	10	568	30	25	1009	8	17	4	25	6	0	12
Future Vol, veh/h	10	568	30	25	1009	8	17	4	25	6	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	617	33	27	1097	9	18	4	27	7	0	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1106	0	0	650	0	0	1259	1816	325	1489	1828	553
Stage 1	-	-	-	-	-	-	656	656	-	1156	1156	-
Stage 2	-	-	-	-	-	-	603	1160	-	333	672	-
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	627	-	-	932	-	-	127	77	671	86	76	477
Stage 1	-	-	-	-	-	-	421	460	-	209	269	-
Stage 2	-	-	-	-	-	-	453	268	-	654	453	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	627	-	-	932	-	-	119	73	671	76	73	477
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	73	-	76	73	-
Stage 1	-	-	-	-	-	-	413	452	-	205	261	-
Stage 2	-	-	-	-	-	-	428	260	-	611	445	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			29.5			28.4		
HCM LOS							D			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	196	627	-	-	932	-	-	173				
HCM Lane V/C Ratio	0.255	0.017	-	-	0.029	-	-	0.113				
HCM Control Delay (s)	29.5	10.8	-	-	9	-	-	28.4				
HCM Lane LOS	D	B	-	-	A	-	-	D				
HCM 95th %tile Q(veh)	1	0.1	-	-	0.1	-	-	0.4				

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	7	5	42	38	16
Future Vol, veh/h	4	7	5	42	38	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	8	5	46	41	17
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	51	0	-	0	44	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1555	-	-	-	967	1047
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1555	-	-	-	964	1047
Mov Cap-2 Maneuver	-	-	-	-	964	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1007	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.7	0		8.9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1555	-	-	-	987	
HCM Lane V/C Ratio	0.003	-	-	-	0.059	
HCM Control Delay (s)	7.3	0	-	-	8.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

25: 76th Street & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	44	439	111	891	99	168	56	25	258	58
Future Volume (vph)	44	439	111	891	99	168	56	25	258	58
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	20.0	60.0	15.0	55.0	15.0	38.4	38.4	26.6	50.0	50.0
Total Split (%)	14.3%	42.9%	10.7%	39.3%	10.7%	27.4%	27.4%	19.0%	35.7%	35.7%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max
Act Effct Green (s)	28.4	22.7	45.9	37.2	44.7	33.3	33.3	60.1	45.0	45.0
Actuated g/C Ratio	0.24	0.19	0.39	0.32	0.38	0.28	0.28	0.51	0.38	0.38
v/c Ratio	0.33	0.82	0.33	0.90	0.27	0.35	0.11	0.04	0.39	0.09
Control Delay	33.0	54.7	32.3	49.5	22.0	38.3	0.4	18.4	30.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	54.7	32.3	49.5	22.0	38.3	0.4	18.4	30.6	1.4
LOS	C	D	C	D	C	D	A	B	C	A
Approach Delay		53.0		47.7		26.7			24.8	
Approach LOS		D		D		C			C	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 117

Natural Cycle: 125

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 42.5

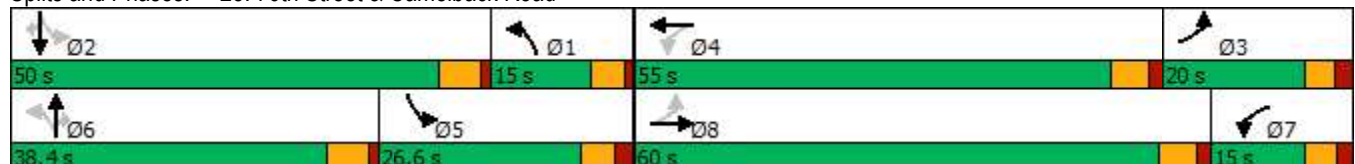
Intersection LOS: D

Intersection Capacity Utilization 66.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road



25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	439	77	111	891	39	99	168	56	25	258	58
Future Volume (veh/h)	44	439	77	111	891	39	99	168	56	25	258	58
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	48	477	84	121	968	42	108	183	61	27	280	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	549	96	353	1057	46	395	537	455	608	726	615
Arrive On Green	0.03	0.18	0.18	0.16	0.30	0.30	0.08	0.29	0.29	0.18	0.39	0.39
Sat Flow, veh/h	1781	3023	529	1781	3470	151	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	48	279	282	121	496	514	108	183	61	27	280	63
Grp Sat Flow(s),veh/h/ln	1781	1777	1775	1781	1777	1843	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.0	17.5	17.7	2.1	30.8	30.8	0.0	8.9	3.3	0.0	12.3	2.9
Cycle Q Clear(g_c), s	0.0	17.5	17.7	2.1	30.8	30.8	0.0	8.9	3.3	0.0	12.3	2.9
Prop In Lane	1.00		0.30	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	323	322	353	541	561	395	537	455	608	726	615
V/C Ratio(X)	0.39	0.87	0.87	0.34	0.92	0.92	0.27	0.34	0.13	0.04	0.39	0.10
Avail Cap(c_a), veh/h	291	846	846	353	767	796	410	537	455	608	726	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	45.6	45.6	40.9	38.4	38.4	34.9	32.3	30.3	22.9	25.2	22.3
Incr Delay (d2), s/veh	0.7	2.8	2.9	0.2	10.0	9.7	0.1	1.7	0.6	0.1	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(50%),veh/ln	1.4	7.9	7.9	2.9	14.6	15.1	2.5	4.2	1.3	0.5	5.7	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.2	48.3	48.6	41.1	48.5	48.2	35.0	34.0	30.9	23.0	26.8	22.7
LnGrp LOS	D	D	D	D	D	D	D	C	C	C	C	C
Approach Vol, veh/h	609				1131				352			
Approach Delay, s/veh	48.9				47.5				33.8			
Approach LOS	D				D				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	50.0	9.2	40.4	26.6	38.4	23.4	26.2				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 10	* 45	14.7	* 50	* 21	32.9	* 9.8	* 55				
Max Q Clear Time (g_c+I1), s	2.0	14.3	2.0	32.8	2.0	10.9	4.1	19.7				
Green Ext Time (p_c), s	0.0	0.5	0.0	2.1	0.0	0.3	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay 42.6

HCM 6th LOS D

Notes

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

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

1: Scottsdale Road & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	 	 			 	 	  	 	 	
Traffic Volume (vph)	246	847	242	161	583	347	958	293	682	228
Future Volume (vph)	246	847	242	161	583	347	958	293	682	228
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	25.0	37.0	37.0	30.0	42.0	18.0	29.0	24.0	35.0	35.0
Total Split (%)	20.8%	30.8%	30.8%	25.0%	35.0%	15.0%	24.2%	20.0%	29.2%	29.2%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effct Green (s)	13.7	31.5	31.5	17.8	35.6	13.0	34.2	15.2	36.5	36.5
Actuated g/C Ratio	0.11	0.26	0.26	0.15	0.30	0.11	0.28	0.13	0.30	0.30
v/c Ratio	0.68	0.99	0.49	0.67	0.85	1.02	0.85	0.73	0.69	0.41
Control Delay	60.0	72.1	16.9	60.0	46.2	105.7	51.2	60.7	41.8	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	72.1	16.9	60.0	46.2	105.7	51.2	60.7	41.8	14.6
LOS	E	E	B	E	D	F	D	E	D	B
Approach Delay		59.9			48.5		64.1		41.3	
Approach LOS		E			D		E		D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 40 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 54.4

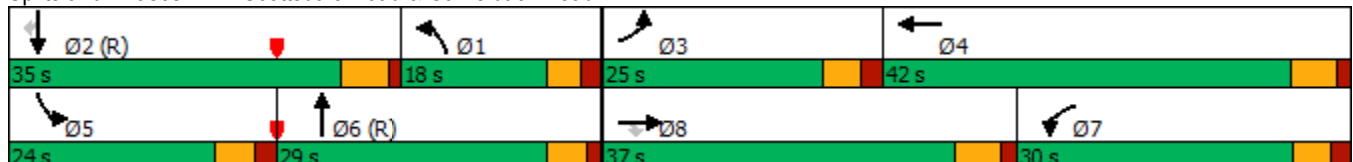
Intersection LOS: D

Intersection Capacity Utilization 80.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	847	242	161	583	233	347	958	159	293	682	228
Future Volume (veh/h)	246	847	242	161	583	233	347	958	159	293	682	228
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	267	921	263	175	634	253	377	1041	173	318	741	248
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	933	416	203	702	280	685	1472	244	379	877	391
Arrive On Green	0.10	0.26	0.26	0.11	0.28	0.28	0.26	0.44	0.44	0.11	0.25	0.25
Sat Flow, veh/h	3456	3554	1585	1781	2480	989	3456	4411	732	3456	3554	1585
Grp Volume(v), veh/h	267	921	263	175	454	433	377	803	411	318	741	248
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1692	1728	1702	1739	1728	1777	1585
Q Serve(g_s), s	9.1	31.0	17.6	11.6	29.5	29.6	11.3	22.9	23.0	10.8	23.8	12.7
Cycle Q Clear(g_c), s	9.1	31.0	17.6	11.6	29.5	29.6	11.3	22.9	23.0	10.8	23.8	12.7
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	329	933	416	203	503	479	685	1136	580	379	877	391
V/C Ratio(X)	0.81	0.99	0.63	0.86	0.90	0.90	0.55	0.71	0.71	0.84	0.85	0.63
Avail Cap(c_a), veh/h	567	933	416	367	540	515	685	1136	580	530	877	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	44.1	39.1	52.2	41.4	41.4	39.6	28.6	28.6	52.4	43.0	23.0
Incr Delay (d2), s/veh	1.9	26.2	2.4	4.1	16.9	17.6	0.6	3.7	7.2	6.1	9.8	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	16.7	7.0	5.4	15.0	14.4	4.6	9.2	10.0	5.0	11.6	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	70.3	41.5	56.3	58.3	59.0	40.1	32.3	35.8	58.4	52.9	30.7
LnGrp LOS	E	E	D	E	E	E	D	C	D	E	D	C
Approach Vol, veh/h		1451			1062			1591			1307	
Approach Delay, s/veh		62.3			58.3			35.1			50.0	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.8	35.0	16.7	39.5	18.8	45.0	19.2	37.0				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	13.0	29.6	* 20	36.5	18.4	* 24	24.7	* 32				
Max Q Clear Time (g_c+I1), s	13.3	25.8	11.1	31.6	12.8	25.0	13.6	33.0				
Green Ext Time (p_c), s	0.0	1.6	0.3	1.8	0.3	0.0	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			50.5									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2: Scottsdale Road & Shoeman Lane

07/29/2020

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	237	1256	21	40	1044
Future Vol, veh/h	0	237	1256	21	40	1044
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	-	-	120	-
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	258	1365	23	43	1135
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	694	0	0	1388	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*624	-	-	*784	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*624	-	-	*784	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.8	0		0.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	624	* 784	-	
HCM Lane V/C Ratio	-	-	0.413	0.055	-	
HCM Control Delay (s)	-	-	14.8	9.9	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	2	0.2	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	91	31	105	45	515	13	879	268	806
Future Volume (vph)	91	31	105	45	515	13	879	268	806
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	49.0	49.0	49.0	49.0	49.0	51.0	51.0	20.0	71.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	42.5%	42.5%	16.7%	59.2%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)		30.1	29.9	29.9	29.9	66.3	66.3	79.9	80.3
Actuated g/C Ratio		0.25	0.25	0.25	0.25	0.55	0.55	0.67	0.67
v/c Ratio		0.45	0.38	0.11	0.91	0.05	0.51	0.43	0.43
Control Delay		36.6	16.4	10.0	40.7	16.5	17.6	7.3	9.2
Queue Delay		0.0	0.0	0.0	0.6	0.0	0.1	0.0	0.0
Total Delay		36.6	16.4	10.0	41.3	16.5	17.7	7.3	9.2
LOS		D	B	A	D	B	B	A	A
Approach Delay		36.6		35.3			17.7		8.7
Approach LOS		D		D			B		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 61 (51%), Referenced to phase 2:SBTL and 6:NBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 19.0

Intersection LOS: B

Intersection Capacity Utilization 78.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	31	28	105	45	515	13	879	29	268	806	114
Future Volume (veh/h)	91	31	28	105	45	515	13	879	29	268	806	114
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	99	34	30	114	49	560	14	955	32	291	876	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	91	70	524	675	572	312	1571	53	768	1730	245
Arrive On Green	0.36	0.36	0.36	0.60	0.60	0.60	0.90	0.90	0.90	0.13	1.00	1.00
Sat Flow, veh/h	604	251	193	1338	1870	1585	563	3508	118	3456	3125	442
Grp Volume(v), veh/h	163	0	0	114	49	560	14	484	503	291	498	502
Grp Sat Flow(s),veh/h/ln	1048	0	0	1338	1870	1585	563	1777	1849	1728	1777	1791
Q Serve(g_s), s	12.0	0.0	0.0	0.0	1.3	41.1	0.3	7.5	7.5	5.3	0.0	0.0
Cycle Q Clear(g_c), s	13.3	0.0	0.0	5.5	1.3	41.1	0.3	7.5	7.5	5.3	0.0	0.0
Prop In Lane	0.61		0.18	1.00		1.00	1.00		0.06	1.00		0.25
Lane Grp Cap(c), veh/h	426	0	0	524	675	572	312	795	828	768	983	991
V/C Ratio(X)	0.38	0.00	0.00	0.22	0.07	0.98	0.04	0.61	0.61	0.38	0.51	0.51
Avail Cap(c_a), veh/h	432	0	0	530	683	579	312	795	828	978	983	991
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.58	0.58	0.58	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	0.0	16.4	15.5	23.4	3.5	3.9	3.9	14.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	23.3	0.2	3.1	3.0	0.1	1.9	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(50%),veh/ln	3.5	0.0	0.0	1.4	0.6	14.7	0.1	2.2	2.3	1.9	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	0.0	16.4	15.5	46.7	3.7	7.0	6.9	14.2	1.9	1.8
LnGrp LOS	C	A	A	B	B	D	A	A	A	B	A	A
Approach Vol, veh/h		163			723			1001			1291	
Approach Delay, s/veh		28.7			39.8			6.9			4.6	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		71.5		48.5	12.7	58.8		48.5				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 66		* 44	15.0	45.9		* 44				
Max Q Clear Time (g_c+I1), s		2.0		43.1	7.3	9.5		15.3				
Green Ext Time (p_c), s		1.1		0.2	0.4	1.1		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				14.6								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

4: Scottsdale Road & 5th Avenue

07/29/2020

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	53	25	62	23	61	836	37	835
Future Volume (vph)	53	25	62	23	61	836	37	835
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		9.0	9.0	9.0	42.4	37.9	41.6	36.1
Actuated g/C Ratio		0.15	0.15	0.15	0.71	0.63	0.69	0.60
v/c Ratio		0.62	0.42	0.17	0.16	0.42	0.09	0.48
Control Delay		22.0	36.6	20.8	5.1	7.6	3.4	9.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		22.0	36.6	20.8	5.1	7.6	3.4	9.1
LOS		C	D	C	A	A	A	A
Approach Delay		22.0		30.0		7.4		8.9
Approach LOS		C		C		A		A

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 10.3

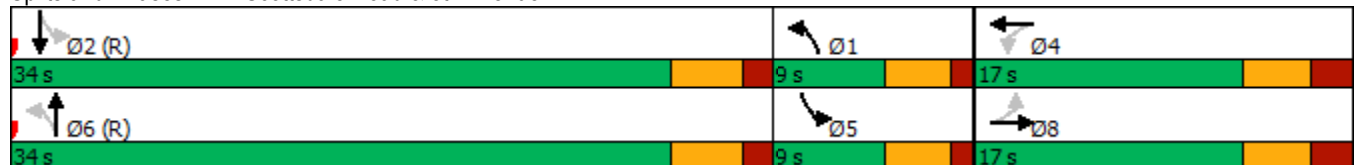
Intersection LOS: B

Intersection Capacity Utilization 58.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	25	94	62	23	21	61	836	17	37	835	88
Future Volume (veh/h)	53	25	94	62	23	21	61	836	17	37	835	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	27	102	67	25	23	66	909	18	40	908	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	50	128	296	134	123	628	1752	35	550	1594	169
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.13	0.49	0.49	0.27	0.98	0.98
Sat Flow, veh/h	378	337	858	1261	897	825	1781	3564	71	1781	3243	343
Grp Volume(v), veh/h	187	0	0	67	0	48	66	453	474	40	498	506
Grp Sat Flow(s),veh/h/ln	1573	0	0	1261	0	1722	1781	1777	1858	1781	1777	1809
Q Serve(g_s), s	5.0	0.0	0.0	0.0	0.0	1.5	0.0	10.4	10.4	0.0	0.6	0.6
Cycle Q Clear(g_c), s	6.8	0.0	0.0	3.2	0.0	1.5	0.0	10.4	10.4	0.0	0.6	0.6
Prop In Lane	0.31		0.55	1.00		0.48	1.00		0.04	1.00		0.19
Lane Grp Cap(c), veh/h	314	0	0	296	0	258	628	874	913	550	874	889
V/C Ratio(X)	0.60	0.00	0.00	0.23	0.00	0.19	0.11	0.52	0.52	0.07	0.57	0.57
Avail Cap(c_a), veh/h	392	0	0	359	0	344	628	874	913	550	874	889
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	24.5	0.0	0.0	23.0	0.0	22.3	5.0	10.4	10.4	8.1	0.3	0.3
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.1	0.0	0.1	0.0	2.2	2.1	0.0	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.8	0.0	0.6	0.3	3.9	4.1	0.2	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	0.0	0.0	23.2	0.0	22.4	5.1	12.6	12.5	8.1	2.7	2.7
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		187			115			993			1044	
Approach Delay, s/veh		25.2			22.9			12.1			2.9	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	34.0		14.0	12.0	34.0		14.0				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.6		5.2	2.0	12.4		8.8				
Green Ext Time (p_c), s	0.0	2.4		0.1	0.0	2.0		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

Intersection						
Int Delay, s/veh	15					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	1319	40	44	882	101	121
Future Vol, veh/h	1319	40	44	882	101	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1434	43	48	959	110	132
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1477	0	2032	739
Stage 1	-	-	-	-	1456	-
Stage 2	-	-	-	-	576	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	452	-	~ 50	360
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	525	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	452	-	~ 45	360
Mov Cap-2 Maneuver	-	-	-	-	135	-
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	469	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		166.8	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	205	-	-	452	-	
HCM Lane V/C Ratio	1.177	-	-	0.106	-	
HCM Control Delay (s)	166.8	-	-	13.9	-	
HCM Lane LOS	F	-	-	B	-	
HCM 95th %tile Q(veh)	12	-	-	0.4	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	97	88	156	78	56	34
Future Vol, veh/h	97	88	156	78	56	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	96	170	85	61	37
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	255	0	-	0	519	213
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	306	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1310	-	-	-	517	827
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	747	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1310	-	-	-	473	827
Mov Cap-2 Maneuver	-	-	-	-	473	-
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	747	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.2	0		12.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1310	-	-	-	564	
HCM Lane V/C Ratio	0.08	-	-	-	0.173	
HCM Control Delay (s)	8	0	-	-	12.7	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	45	283	50	550	102	23	41	175	76
Future Volume (vph)	45	283	50	550	102	23	41	175	76
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	50.0	50.0	50.0	50.0	50.0	24.0	46.0	24.0	46.0
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	20.0%	38.3%	20.0%	38.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	26.1	26.1	26.1	26.1	26.1	79.4	73.7	81.2	77.5
Actuated g/C Ratio	0.22	0.22	0.22	0.22	0.22	0.66	0.61	0.68	0.65
v/c Ratio	0.64	0.44	0.30	0.78	0.26	0.03	0.08	0.21	0.17
Control Delay	83.8	47.7	42.3	51.2	7.8	5.3	5.0	7.9	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.8	47.7	42.3	51.2	7.8	5.3	5.0	7.9	7.7
LOS	F	D	D	D	A	A	A	A	A
Approach Delay		52.2		44.3			5.0		7.8
Approach LOS		D		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 35.1

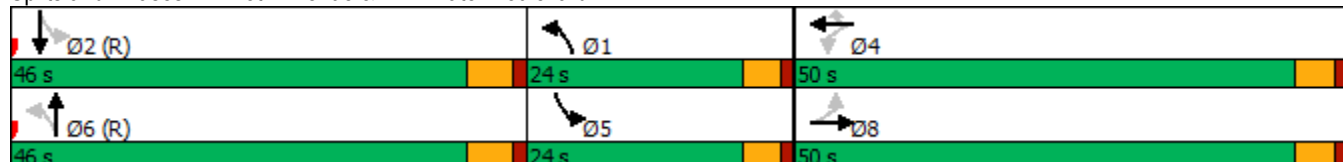
Intersection LOS: D

Intersection Capacity Utilization 53.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	283	29	50	550	102	23	41	39	175	76	95
Future Volume (veh/h)	45	283	29	50	550	102	23	41	39	175	76	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	308	32	54	598	111	25	45	42	190	83	103
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	794	82	251	868	387	886	303	282	976	258	320
Arrive On Green	0.49	0.49	0.49	0.24	0.24	0.24	0.29	0.34	0.34	0.29	0.34	0.34
Sat Flow, veh/h	740	3252	335	1040	3554	1585	1781	890	831	1781	759	942
Grp Volume(v), veh/h	49	167	173	54	598	111	25	0	87	190	0	186
Grp Sat Flow(s),veh/h/ln	740	1777	1810	1040	1777	1585	1781	0	1721	1781	0	1701
Q Serve(g_s), s	7.5	7.1	7.2	5.4	18.3	6.8	0.0	0.0	4.2	0.0	0.0	9.7
Cycle Q Clear(g_c), s	25.8	7.1	7.2	12.6	18.3	6.8	0.0	0.0	4.2	0.0	0.0	9.7
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.48	1.00		0.55
Lane Grp Cap(c), veh/h	128	434	442	251	868	387	886	0	585	976	0	578
V/C Ratio(X)	0.38	0.39	0.39	0.21	0.69	0.29	0.03	0.00	0.15	0.19	0.00	0.32
Avail Cap(c_a), veh/h	222	662	674	385	1324	590	886	0	585	976	0	578
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	25.0	25.0	42.1	41.2	36.8	12.5	0.0	27.5	11.5	0.0	29.3
Incr Delay (d2), s/veh	0.6	0.2	0.2	0.2	0.4	0.1	0.0	0.0	0.5	0.0	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.7	2.8	1.4	8.0	2.7	0.3	0.0	1.9	2.4	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	25.2	25.2	42.3	41.6	37.0	12.5	0.0	28.1	11.6	0.0	30.8
LnGrp LOS	D	C	C	D	D	D	B	A	C	B	A	C
Approach Vol, veh/h		389			763			112			376	
Approach Delay, s/veh		27.0			40.9			24.6			21.1	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.4	46.0		34.6	39.4	46.0		34.6				
Change Period (Y+Rc), s	* 4.6	5.2		* 5.3	* 4.6	5.2		* 5.3				
Max Green Setting (Gmax), s	* 19	40.8		* 45	* 19	40.8		* 45				
Max Q Clear Time (g_c+I1), s	2.0	11.7		20.3	2.0	6.2		27.8				
Green Ext Time (p_c), s	0.0	0.8		3.0	0.2	0.3		1.5				
Intersection Summary												
HCM 6th Ctrl Delay			32.0									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	↰	↗↗	↗↗	↰	↗	↰	↗
Traffic Volume (vph)	119	1364	818	114	209	53	101
Future Volume (vph)	119	1364	818	114	209	53	101
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.57	0.79	0.52	0.20	0.38	0.09	0.17
Control Delay	31.1	26.3	19.0	27.6	26.1	26.2	5.5
Queue Delay	0.0	0.7	1.6	0.0	0.0	0.0	0.0
Total Delay	31.1	27.0	20.6	27.6	26.1	26.2	5.5
LOS	C	C	C	C	C	C	A
Approach Delay		27.3	20.6				
Approach LOS		C	C				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 24.4

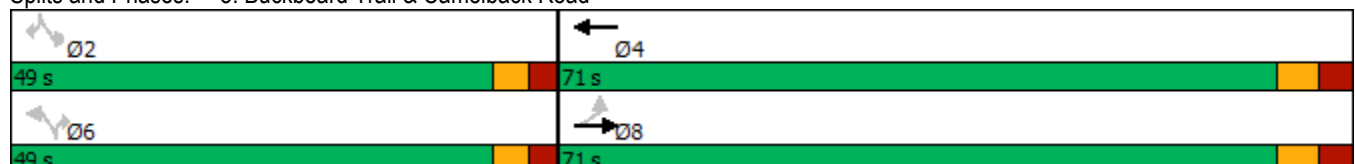
Intersection LOS: C

Intersection Capacity Utilization 68.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (vph)	119	1364	0	0	818	69	114	0	209	53	0	101
Future Volume (vph)	119	1364	0	0	818	69	114	0	209	53	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3498		1770		1583	1770		1583
Flt Permitted	0.23	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	424	3539			3498		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	129	1483	0	0	889	75	124	0	227	58	0	110
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	23	0	0	71
Lane Group Flow (vph)	129	1483	0	0	959	0	124	0	204	58	0	39
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	226	1887			1865		634		567	634		567
v/s Ratio Prot		c0.42			0.27							
v/s Ratio Perm	0.30						0.07		c0.13	0.03		0.02
v/c Ratio	0.57	0.79			0.51		0.20		0.36	0.09		0.07
Uniform Delay, d1	18.8	22.5			18.0		26.6		28.4	25.5		25.3
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	10.1	3.4			1.0		0.7		1.8	0.3		0.2
Delay (s)	28.9	25.9			19.0		27.3		30.1	25.8		25.6
Level of Service	C	C			B		C		C	C		C
Approach Delay (s)		26.1			19.0			29.1			25.7	
Approach LOS		C			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			24.2			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			13.0			
Intersection Capacity Utilization			68.1%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBT
Lane Configurations	↑↑	↑↑
Traffic Volume (vph)	1625	753
Future Volume (vph)	1625	753
Turn Type	NA	NA
Protected Phases	4	8
Permitted Phases		
Detector Phase	4	8
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	22.5	22.5
Total Split (s)	22.5	22.5
Total Split (%)	100.0%	100.0%
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	4.5	4.5
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)	22.1	22.1
Actuated g/C Ratio	1.00	1.00
v/c Ratio	0.50	0.23
Control Delay	0.5	0.2
Queue Delay	0.0	0.0
Total Delay	0.5	0.2
LOS	A	A
Approach Delay	0.5	0.2
Approach LOS	A	A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 22.1

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 0.4

Intersection LOS: A

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑		
Traffic Volume (veh/h)	1625	0	0	753	0	0
Future Volume (veh/h)	1625	0	0	753	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	1766	0	0	818		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2743	0	365	2743		
Arrive On Green	0.77	0.00	0.00	0.77		
Sat Flow, veh/h	3741	0	271	3647		
Grp Volume(v), veh/h	1766	0	0	818		
Grp Sat Flow(s),veh/h/ln	1777	0	271	1777		
Q Serve(g_s), s	4.4	0.0	0.0	1.3		
Cycle Q Clear(g_c), s	4.4	0.0	0.0	1.3		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2743	0	365	2743		
V/C Ratio(X)	0.64	0.00	0.00	0.30		
Avail Cap(c_a), veh/h	3241	0	403	3241		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	1.0	0.0	0.0	0.7		
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.4	0.0	0.0	0.7		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	1766			818		
Approach Delay, s/veh	1.4			0.7		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				19.7		19.7
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				6.4		3.3
Green Ext Time (p_c), s				8.8		4.8
Intersection Summary						
HCM 6th Ctrl Delay			1.2			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	12	27	10	14	12	27	150	18	4	60	13
Future Vol, veh/h	13	12	27	10	14	12	27	150	18	4	60	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	13	29	11	15	13	29	163	20	4	65	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	28	0	0	42	0	0	139	106	28	191	114	22
Stage 1	-	-	-	-	-	-	56	56	-	44	44	-
Stage 2	-	-	-	-	-	-	83	50	-	147	70	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1585	-	-	1567	-	-	831	784	1047	769	776	1055
Stage 1	-	-	-	-	-	-	956	848	-	970	858	-
Stage 2	-	-	-	-	-	-	925	853	-	856	837	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1585	-	-	1567	-	-	757	771	1047	624	764	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	757	771	-	624	764	-
Stage 1	-	-	-	-	-	-	947	840	-	961	852	-
Stage 2	-	-	-	-	-	-	837	847	-	671	829	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	2	11.2	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	788	1585	-	-	1567	-	-	792
HCM Lane V/C Ratio	0.269	0.009	-	-	0.007	-	-	0.106
HCM Control Delay (s)	11.2	7.3	0	-	7.3	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	9.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	1307	50	45	726	12	23	3	73	5	0	6
Future Vol, veh/h	14	1307	50	45	726	12	23	3	73	5	0	6
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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	1421	54	49	789	13	25	3	79	5	0	7
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	802	0	0	1475	0	0	1971	2378	738	1636	2399	401
Stage 1	-	-	-	-	-	-	1478	1478	-	894	894	-
Stage 2	-	-	-	-	-	-	493	900	-	742	1505	-
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	817	-	-	453	-	-	37	34	360	67	33	599
Stage 1	-	-	-	-	-	-	132	188	-	302	358	-
Stage 2	-	-	-	-	-	-	526	355	-	374	182	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	817	-	-	453	-	-	33	30	360	43	29	599
Mov Cap-2 Maneuver	-	-	-	-	-	-	33	30	-	43	29	-
Stage 1	-	-	-	-	-	-	130	185	-	297	319	-
Stage 2	-	-	-	-	-	-	464	317	-	281	179	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.8			195.7			52.9		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	99	817	-	-	453	-	-	87				
HCM Lane V/C Ratio	1.087	0.019	-	-	0.108	-	-	0.137				
HCM Control Delay (s)	195.7	9.5	-	-	13.9	-	-	52.9				
HCM Lane LOS	F	A	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	6.9	0.1	-	-	0.4	-	-	0.5				

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	17	20	88	53	17
Future Vol, veh/h	9	17	20	88	53	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	18	22	96	58	18
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	118	0	-	0	108	70
Stage 1	-	-	-	-	70	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1470	-	-	-	889	993
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1470	-	-	-	883	993
Mov Cap-2 Maneuver	-	-	-	-	883	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	984	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.6	0		9.3		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1470	-	-	-	907	
HCM Lane V/C Ratio	0.007	-	-	-	0.084	
HCM Control Delay (s)	7.5	0	-	-	9.3	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

25: 76th Street & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	131	1098	153	590	157	320	180	40	332	60
Future Volume (vph)	131	1098	153	590	157	320	180	40	332	60
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	19.3	48.7	19.3	48.7	19.0	33.0	33.0	19.0	33.0	33.0
Total Split (%)	16.1%	40.6%	16.1%	40.6%	15.8%	27.5%	27.5%	15.8%	27.5%	27.5%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max
Act Effect Green (s)	59.8	43.3	38.6	27.2	45.8	29.0	29.0	40.8	27.5	27.5
Actuated g/C Ratio	0.50	0.37	0.33	0.23	0.39	0.24	0.24	0.34	0.23	0.23
v/c Ratio	0.29	1.08	0.72	0.86	0.50	0.76	0.37	0.14	0.84	0.14
Control Delay	27.9	87.4	55.2	54.2	40.9	54.4	7.2	27.1	61.8	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.9	87.4	55.2	54.2	40.9	54.4	7.2	27.1	61.8	0.6
LOS	C	F	E	D	D	D	A	C	E	A
Approach Delay		81.9		54.4		38.2			50.1	
Approach LOS		F		D		D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 118.6

Natural Cycle: 145

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.08

Intersection Signal Delay: 62.3

Intersection LOS: E

Intersection Capacity Utilization 87.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road

			
Ø2	Ø1	Ø4	Ø3
33 s	19 s	48.7 s	19.3 s
			
Ø6	Ø5	Ø8	Ø7
33 s	19 s	48.7 s	19.3 s

25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1098	176	153	590	45	157	320	180	40	332	60
Future Volume (veh/h)	131	1098	176	153	590	45	157	320	180	40	332	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	1193	191	166	641	49	171	348	196	43	361	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	492	1162	185	194	721	55	328	449	381	329	449	381
Arrive On Green	0.24	0.38	0.38	0.07	0.22	0.22	0.12	0.24	0.24	0.12	0.24	0.24
Sat Flow, veh/h	1781	3070	489	1781	3346	255	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	142	688	696	166	340	350	171	348	196	43	361	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1782	1781	1777	1824	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.6	43.3	43.3	6.4	21.3	21.3	2.3	19.9	12.3	0.0	20.8	3.7
Cycle Q Clear(g_c), s	2.6	43.3	43.3	6.4	21.3	21.3	2.3	19.9	12.3	0.0	20.8	3.7
Prop In Lane	1.00		0.27	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	492	672	674	194	383	393	328	449	381	329	449	381
V/C Ratio(X)	0.29	1.02	1.03	0.86	0.89	0.89	0.52	0.77	0.51	0.13	0.80	0.17
Avail Cap(c_a), veh/h	492	672	674	282	671	689	343	449	381	329	449	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	35.6	35.6	50.9	43.6	43.6	43.7	40.6	37.7	40.1	40.9	34.4
Incr Delay (d2), s/veh	0.1	40.7	43.1	11.3	3.3	3.3	0.5	12.3	4.9	0.8	14.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	25.6	26.2	5.0	9.5	9.8	4.4	10.5	5.2	1.1	11.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	76.3	78.7	62.1	46.8	46.9	44.2	52.8	42.6	40.9	55.0	35.4
LnGrp LOS	C	F	F	E	D	D	D	D	D	D	E	D
Approach Vol, veh/h		1526			856			715			469	
Approach Delay, s/veh		73.4			49.8			47.9			51.0	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	33.0	32.3	30.1	19.0	33.0	13.7	48.7				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 14	* 28	14.0	* 43	* 13	27.5	* 14	* 43				
Max Q Clear Time (g_c+I1), s	4.3	22.8	4.6	23.3	2.0	21.9	8.4	45.3				
Green Ext Time (p_c), s	0.0	0.4	0.0	1.3	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 59.7

HCM 6th LOS E

Notes

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

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

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	37	743	377	173	288	19	31
Future Volume (vph)	37	743	377	173	288	19	31
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.08	0.43	0.23	0.30	0.47	0.03	0.06
Control Delay	14.3	17.8	15.0	29.3	17.6	25.3	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	17.8	15.0	29.3	17.6	25.3	7.9
LOS	B	B	B	C	B	C	A
Approach Delay		17.7	15.0				
Approach LOS		B	B				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 18.1

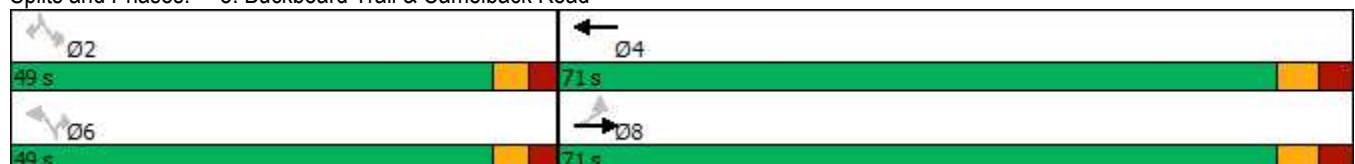
Intersection LOS: B

Intersection Capacity Utilization 55.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (vph)	37	743	0	0	377	23	173	0	288	19	0	31
Future Volume (vph)	37	743	0	0	377	23	173	0	288	19	0	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3509		1770		1583	1770		1583
Flt Permitted	0.49	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	913	3539			3509		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	808	0	0	410	25	188	0	313	21	0	34
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	96	0	0	22
Lane Group Flow (vph)	40	808	0	0	431	0	188	0	217	21	0	12
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	486	1887			1871		634		567	634		567
v/s Ratio Prot		c0.23			0.12							
v/s Ratio Perm	0.04						0.11		c0.14	0.01		0.01
v/c Ratio	0.08	0.43			0.23		0.30		0.38	0.03		0.02
Uniform Delay, d1	13.7	16.9			14.9		27.6		28.6	25.0		24.9
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.3	0.7			0.3		1.2		2.0	0.1		0.1
Delay (s)	14.0	17.6			15.2		28.8		30.6	25.1		25.0
Level of Service	B	B			B		C		C	C		C
Approach Delay (s)		17.5			15.2			29.9			25.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay		20.6			HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio		0.41										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				13.0			
Intersection Capacity Utilization		55.9%			ICU Level of Service				B			
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBL	WBT
Lane Configurations	↑↑	↑	↑↑
Traffic Volume (vph)	1011	3	450
Future Volume (vph)	1011	3	450
Turn Type	NA	Perm	NA
Protected Phases	4		8
Permitted Phases		8	
Detector Phase	4	8	8
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	100.0%	100.0%	100.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	None
Act Effect Green (s)	18.2	18.2	18.2
Actuated g/C Ratio	1.00	1.00	1.00
v/c Ratio	0.31	0.01	0.14
Control Delay	0.2	0.0	0.1
Queue Delay	0.0	0.0	0.0
Total Delay	0.2	0.0	0.1
LOS	A	A	A
Approach Delay	0.2		0.1
Approach LOS	A		A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 18.2

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.31

Intersection Signal Delay: 0.2

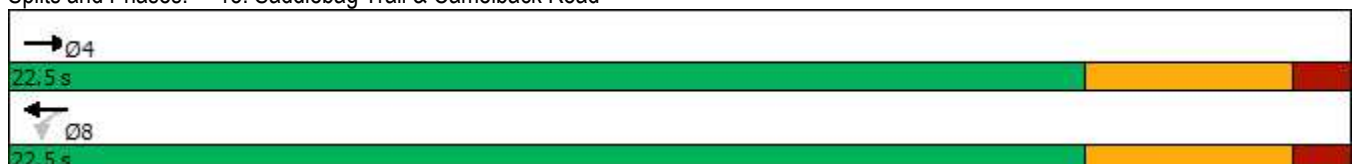
Intersection LOS: A

Intersection Capacity Utilization 31.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	1011	2	3	450	0	0
Future Volume (veh/h)	1011	2	3	450	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	1099	2	3	489		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2504	5	782	2445		
Arrive On Green	0.69	0.69	0.69	0.69		
Sat Flow, veh/h	3733	7	512	3647		
Grp Volume(v), veh/h	537	564	3	489		
Grp Sat Flow(s),veh/h/ln	1777	1869	512	1777		
Q Serve(g_s), s	1.9	1.9	0.0	0.7		
Cycle Q Clear(g_c), s	1.9	1.9	2.0	0.7		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	1223	1286	782	2445		
V/C Ratio(X)	0.44	0.44	0.00	0.20		
Avail Cap(c_a), veh/h	2217	2332	1069	4433		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	1.0	1.0	1.4	0.8		
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.3	1.2	1.5	0.9		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	1101			492		
Approach Delay, s/veh	1.2			0.9		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				14.4		14.4
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				3.9		4.0
Green Ext Time (p_c), s				6.0		2.7
Intersection Summary						
HCM 6th Ctrl Delay			1.1			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	274	10	9	159	3	5	0	17	2	0	2
Future Vol, veh/h	4	274	10	9	159	3	5	0	17	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	298	11	10	173	3	5	0	18	2	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	176	0	0	309	0	0	419	508	155	352	512	88
Stage 1	-	-	-	-	-	-	312	312	-	195	195	-
Stage 2	-	-	-	-	-	-	107	196	-	157	317	-
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	1398	-	-	1248	-	-	518	466	863	578	464	953
Stage 1	-	-	-	-	-	-	673	656	-	788	738	-
Stage 2	-	-	-	-	-	-	887	737	-	829	653	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1398	-	-	1248	-	-	512	461	863	561	459	953
Mov Cap-2 Maneuver	-	-	-	-	-	-	512	461	-	561	459	-
Stage 1	-	-	-	-	-	-	671	654	-	786	732	-
Stage 2	-	-	-	-	-	-	878	731	-	809	651	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			10			10.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	747	1398	-	-	1248	-	-	706				
HCM Lane V/C Ratio	0.032	0.003	-	-	0.008	-	-	0.006				
HCM Control Delay (s)	10	7.6	-	-	7.9	-	-	10.1				
HCM Lane LOS	B	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	4	5	19	12	4
Future Vol, veh/h	3	4	5	19	12	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	4	5	21	13	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	26	0	-	0	26	16
Stage 1	-	-	-	-	16	-
Stage 2	-	-	-	-	10	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1588	-	-	-	989	1063
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1588	-	-	-	987	1063
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	1013	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.1	0		8.6		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1588	-	-	-	1005	
HCM Lane V/C Ratio	0.002	-	-	-	0.017	
HCM Control Delay (s)	7.3	0	-	-	8.6	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	



Appendix J – Year 2025 Build Capacity Analysis

1: Scottsdale Road & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	167	447	258	142	687	144	433	158	713	199
Future Volume (vph)	167	447	258	142	687	144	433	158	713	199
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	16.0	49.0	49.0	14.0	47.0	15.0	37.0	20.0	42.0	42.0
Total Split (%)	13.3%	40.8%	40.8%	11.7%	39.2%	12.5%	30.8%	16.7%	35.0%	35.0%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effct Green (s)	9.8	22.2	22.2	24.5	36.9	10.0	41.5	10.4	42.1	42.1
Actuated g/C Ratio	0.08	0.18	0.18	0.20	0.31	0.08	0.35	0.09	0.35	0.35
v/c Ratio	0.65	0.74	0.56	0.43	0.87	0.55	0.38	0.58	0.62	0.33
Control Delay	64.7	53.0	11.5	45.6	47.4	62.8	28.9	60.3	36.2	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	53.0	11.5	45.6	47.4	62.8	28.9	60.3	36.2	9.9
LOS	E	D	B	D	D	E	C	E	D	A
Approach Delay		43.0			47.2		35.5		34.9	
Approach LOS		D			D		D		C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99 (83%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 40.3

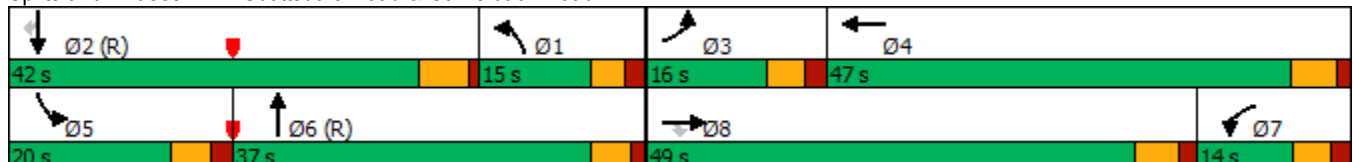
Intersection LOS: D

Intersection Capacity Utilization 70.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	447	258	142	687	175	144	433	167	158	713	199
Future Volume (veh/h)	167	447	258	142	687	175	144	433	167	158	713	199
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	182	486	280	154	747	190	157	471	182	172	775	216
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	738	329	276	828	211	533	1433	533	230	1084	483
Arrive On Green	0.07	0.21	0.21	0.15	0.30	0.30	0.15	0.39	0.39	0.07	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	1781	2805	713	3456	3665	1364	3456	3554	1585
Grp Volume(v), veh/h	182	486	280	154	473	464	157	436	217	172	775	216
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1742	1728	1702	1625	1728	1777	1585
Q Serve(g_s), s	6.2	15.1	20.4	9.6	30.7	30.7	4.8	10.7	11.3	5.9	23.3	10.2
Cycle Q Clear(g_c), s	6.2	15.1	20.4	9.6	30.7	30.7	4.8	10.7	11.3	5.9	23.3	10.2
Prop In Lane	1.00		1.00	1.00		0.41	1.00		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	238	738	329	276	525	514	533	1330	635	230	1084	483
V/C Ratio(X)	0.76	0.66	0.85	0.56	0.90	0.90	0.29	0.33	0.34	0.75	0.72	0.45
Avail Cap(c_a), veh/h	308	1288	575	276	614	602	533	1330	635	415	1084	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	43.6	45.8	46.9	40.6	40.6	45.0	25.5	25.7	55.0	37.1	20.0
Incr Delay (d2), s/veh	5.7	0.4	2.4	1.5	13.8	14.1	0.1	0.7	1.5	1.8	4.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	6.6	8.1	4.3	15.2	14.9	2.1	4.5	4.6	2.6	10.7	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	44.0	48.2	48.4	54.4	54.7	45.1	26.2	27.2	56.8	41.1	23.0
LnGrp LOS	E	D	D	D	D	D	D	C	C	E	D	C
Approach Vol, veh/h		948			1091			810			1163	
Approach Delay, s/veh		48.4			53.7			30.1			40.1	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.5	42.0	13.6	40.9	13.6	51.9	24.1	30.4				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	10.0	36.6	* 11	41.5	14.4	* 32	8.7	* 44				
Max Q Clear Time (g_c+I1), s	6.8	25.3	8.2	32.7	7.9	13.3	11.6	22.4				
Green Ext Time (p_c), s	0.1	3.3	0.1	2.7	0.2	2.8	0.0	2.5				
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.												

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	84	656	114	248	863
Future Vol, veh/h	0	84	656	114	248	863
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	-	-	120	-
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	91	713	124	270	938
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	419	0	0	837	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*778	-	-	806	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	1	-	-	1	-
Mov Cap-1 Maneuver	-	*778	-	-	806	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.2	0		2.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	778	806	-	
HCM Lane V/C Ratio	-	-	0.117	0.334	-	
HCM Control Delay (s)	-	-	10.2	11.7	-	
HCM Lane LOS	-	-	B	B	-	
HCM 95th %tile Q(veh)	-	-	0.4	1.5	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	42	17	16	45	344	16	497	238	524
Future Volume (vph)	42	17	16	45	344	16	497	238	524
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	46.0	46.0	46.0	46.0	46.0	49.0	49.0	25.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	40.8%	40.8%	20.8%	61.7%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		11.3	11.1	11.1	11.1	87.3	87.3	98.7	99.1
Actuated g/C Ratio		0.09	0.09	0.09	0.09	0.73	0.73	0.82	0.83
v/c Ratio		0.57	0.15	0.29	0.77	0.03	0.22	0.19	0.24
Control Delay		56.7	37.5	38.4	36.5	5.1	4.9	0.8	0.6
Queue Delay		0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
Total Delay		56.7	37.5	38.4	37.3	5.1	4.9	0.8	0.6
LOS		E	D	D	D	A	A	A	A
Approach Delay		56.7		37.5			4.9		0.7
Approach LOS		E		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 93 (78%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 12.2

Intersection LOS: B

Intersection Capacity Utilization 54.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	17	18	16	45	344	16	497	17	238	524	95
Future Volume (veh/h)	42	17	18	16	45	344	16	497	17	238	524	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	18	20	17	49	374	17	540	18	259	570	103
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	79	73	403	467	396	498	2009	67	1239	1998	360
Arrive On Green	0.25	0.25	0.25	0.42	0.42	0.42	1.00	1.00	1.00	0.10	1.00	1.00
Sat Flow, veh/h	616	316	291	1370	1870	1585	765	3509	117	3456	3008	542
Grp Volume(v), veh/h	84	0	0	17	49	374	17	273	285	259	336	337
Grp Sat Flow(s),veh/h/ln	1223	0	0	1370	1870	1585	765	1777	1849	1728	1777	1773
Q Serve(g_s), s	4.3	0.0	0.0	0.0	1.9	27.2	0.0	0.0	0.0	3.6	0.0	0.0
Cycle Q Clear(g_c), s	6.2	0.0	0.0	0.9	1.9	27.2	0.0	0.0	0.0	3.6	0.0	0.0
Prop In Lane	0.55		0.24	1.00		1.00	1.00		0.06	1.00		0.31
Lane Grp Cap(c), veh/h	352	0	0	403	467	396	498	1017	1058	1239	1180	1178
V/C Ratio(X)	0.24	0.00	0.00	0.04	0.10	0.94	0.03	0.27	0.27	0.21	0.28	0.29
Avail Cap(c_a), veh/h	462	0	0	526	636	539	498	1017	1058	1641	1180	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.64	0.64	0.64	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	0.0	26.5	26.8	34.1	0.0	0.0	0.0	8.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	13.8	0.1	0.6	0.6	0.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	0.3	0.9	10.3	0.0	0.2	0.2	1.2	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.0	0.0	0.0	26.5	26.8	48.0	0.1	0.6	0.6	8.1	0.6	0.6
LnGrp LOS	D	A	A	C	C	D	A	A	A	A	A	A
Approach Vol, veh/h		84			440			575			932	
Approach Delay, s/veh		36.0			44.8			0.6			2.7	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		84.8		35.2	11.0	73.8		35.2				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 69		* 41	20.0	43.9		* 41				
Max Q Clear Time (g_c+I1), s		2.0		29.2	5.6	2.0		8.2				
Green Ext Time (p_c), s		0.7		0.8	0.4	0.6		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				12.6								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

4: Scottsdale Road & 5th Avenue

07/29/2020

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	16	16	9	34	544	18	523
Future Volume (vph)	14	16	16	9	34	544	18	523
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		7.2	7.2	7.2	48.8	48.1	48.0	46.3
Actuated g/C Ratio		0.12	0.12	0.12	0.81	0.80	0.80	0.77
v/c Ratio		0.24	0.08	0.09	0.05	0.22	0.03	0.22
Control Delay		20.5	13.3	8.0	2.3	3.5	1.1	2.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.5	13.3	8.0	2.3	3.5	1.1	2.1
LOS		C	B	A	A	A	A	A
Approach Delay		20.5		10.4		3.4		2.1
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 55 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.24

Intersection Signal Delay: 3.7

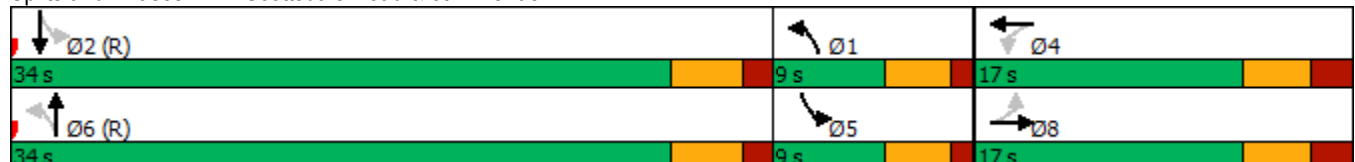
Intersection LOS: A

Intersection Capacity Utilization 40.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	16	17	16	9	9	34	544	20	18	523	28
Future Volume (veh/h)	14	16	17	16	9	9	34	544	20	18	523	28
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	15	17	18	17	10	10	37	591	22	20	568	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	65	53	254	77	77	866	1718	64	780	1688	89
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.19	0.49	0.49	0.39	0.98	0.98
Sat Flow, veh/h	324	733	595	1373	858	858	1781	3494	130	1781	3433	181
Grp Volume(v), veh/h	50	0	0	17	0	20	37	300	313	20	294	304
Grp Sat Flow(s),veh/h/ln	1652	0	0	1373	0	1716	1781	1777	1847	1781	1777	1838
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	6.2	6.2	0.0	0.2	0.2
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.5	0.0	0.6	0.0	6.2	6.2	0.0	0.2	0.2
Prop In Lane	0.30		0.36	1.00		0.50	1.00		0.07	1.00		0.10
Lane Grp Cap(c), veh/h	226	0	0	254	0	153	866	874	908	780	874	904
V/C Ratio(X)	0.22	0.00	0.00	0.07	0.00	0.13	0.04	0.34	0.34	0.03	0.34	0.34
Avail Cap(c_a), veh/h	403	0	0	406	0	343	866	874	908	780	874	904
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	25.6	0.0	0.0	25.1	0.0	25.2	3.2	9.3	9.3	4.1	0.3	0.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.1	0.0	1.1	1.0	0.0	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.2	0.0	0.3	0.1	2.3	2.4	0.1	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	0.0	0.0	25.2	0.0	25.3	3.2	10.4	10.4	4.1	1.3	1.2
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		50			37			650			618	
Approach Delay, s/veh		25.8			25.2			10.0			1.4	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.6	34.0		10.4	15.6	34.0		10.4				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.2		2.6	2.0	8.2		3.6				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	1.3		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				7.0								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	564	116	148	982	46	42
Future Vol, veh/h	564	116	148	982	46	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	613	126	161	1067	50	46

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	739	0	1532
Stage 1	-	-	-	-	676
Stage 2	-	-	-	-	856
Critical Hdwy	-	-	4.14	-	6.84
Critical Hdwy Stg 1	-	-	-	-	5.84
Critical Hdwy Stg 2	-	-	-	-	5.84
Follow-up Hdwy	-	-	2.22	-	3.52
Pot Cap-1 Maneuver	-	-	863	-	107
Stage 1	-	-	-	-	467
Stage 2	-	-	-	-	377
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	863	-	87
Mov Cap-2 Maneuver	-	-	-	-	207
Stage 1	-	-	-	-	467
Stage 2	-	-	-	-	307

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	22.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	304	-	-	863	-
HCM Lane V/C Ratio	0.315	-	-	0.186	-
HCM Control Delay (s)	22.2	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.3	-	-	0.7	-

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	205	62	30	127	86
Future Vol, veh/h	28	205	62	30	127	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	223	67	33	138	93
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	100	0	-	0	367	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	283	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1493	-	-	-	633	975
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	765	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1493	-	-	-	618	975
Mov Cap-2 Maneuver	-	-	-	-	618	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	765	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		12.3		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1493	-	-	-	725	
HCM Lane V/C Ratio	0.02	-	-	-	0.319	
HCM Control Delay (s)	7.5	0	-	-	12.3	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	61	217	31	351	234	5	42	36	9
Future Volume (vph)	61	217	31	351	234	5	42	36	9
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	36.0	36.0	36.0	36.0	36.0	11.0	73.0	11.0	73.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	9.2%	60.8%	9.2%	60.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	18.1	18.1	18.1	18.1	18.1	91.3	85.7	93.1	89.5
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.76	0.71	0.78	0.75
v/c Ratio	0.77	0.45	0.23	0.72	0.56	0.00	0.04	0.04	0.05
Control Delay	84.7	34.8	47.1	56.0	10.2	5.6	8.1	4.1	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.7	34.8	47.1	56.0	10.2	5.6	8.1	4.1	2.4
LOS	F	C	D	E	B	A	A	A	A
Approach Delay		45.5		38.2			7.9		3.1
Approach LOS		D		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 35.7

Intersection LOS: D

Intersection Capacity Utilization 41.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	217	5	31	351	234	5	42	3	36	9	45
Future Volume (veh/h)	61	217	5	31	351	234	5	42	3	36	9	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	236	5	34	382	254	5	46	3	39	10	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	713	15	224	712	318	991	981	64	1004	156	764
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.11	0.56	0.56	0.11	0.56	0.56
Sat Flow, veh/h	792	3558	75	1139	3554	1585	1781	1737	113	1781	276	1351
Grp Volume(v), veh/h	66	118	123	34	382	254	5	0	49	39	0	59
Grp Sat Flow(s),veh/h/ln	792	1777	1857	1139	1777	1585	1781	0	1850	1781	0	1627
Q Serve(g_s), s	9.8	6.8	6.8	3.2	11.6	18.3	0.0	0.0	1.4	0.0	0.0	2.0
Cycle Q Clear(g_c), s	21.3	6.8	6.8	10.0	11.6	18.3	0.0	0.0	1.4	0.0	0.0	2.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		0.83
Lane Grp Cap(c), veh/h	142	356	372	224	712	318	991	0	1045	1004	0	919
V/C Ratio(X)	0.46	0.33	0.33	0.15	0.54	0.80	0.01	0.00	0.05	0.04	0.00	0.06
Avail Cap(c_a), veh/h	186	455	475	287	909	406	991	0	1045	1004	0	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.5	41.1	41.1	45.4	43.0	45.7	7.1	0.0	11.7	7.1	0.0	11.8
Incr Delay (d2), s/veh	0.8	0.2	0.2	0.1	0.2	6.6	0.0	0.0	0.1	0.0	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(50%),veh/ln	2.0	3.0	3.2	0.9	5.1	7.8	0.0	0.0	0.6	0.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	41.3	41.3	45.5	43.2	52.3	7.1	0.0	11.7	7.1	0.0	11.9
LnGrp LOS	D	D	D	D	D	D	A	A	B	A	A	B
Approach Vol, veh/h	307			670			54			98		
Approach Delay, s/veh	43.9			46.8			11.3			10.0		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.6	73.0		29.4	17.6	73.0		29.4				
Change Period (Y+Rc), s	* 4.6	5.2		* 5.3	* 4.6	5.2		* 5.3				
Max Green Setting (Gmax), s	* 6.4	67.8		* 31	* 6.4	67.8		* 31				
Max Q Clear Time (g_c+I1), s	2.0	4.0		20.3	2.0	3.4		23.3				
Green Ext Time (p_c), s	0.0	0.3		1.7	0.0	0.2		0.7				

Intersection Summary

HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D

Notes

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

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

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	70	587	894	59	34	46	94
Future Volume (vph)	70	587	894	59	34	46	94
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.37	0.34	0.54	0.10	0.06	0.08	0.16
Control Delay	22.8	16.6	19.6	26.3	8.1	26.0	6.4
Queue Delay	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Total Delay	22.8	16.6	21.6	26.3	8.1	26.0	6.4
LOS	C	B	C	C	A	C	A
Approach Delay		17.2	21.6				
Approach LOS		B	C				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 19.3

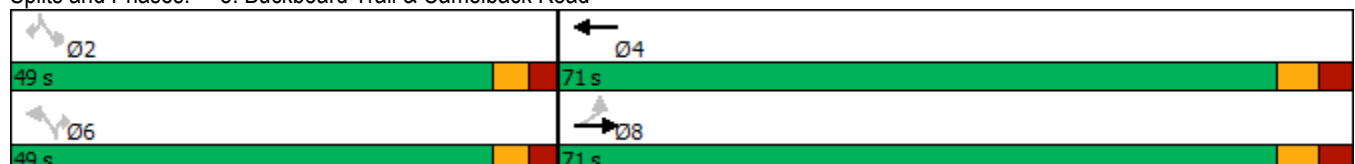
Intersection LOS: B

Intersection Capacity Utilization 56.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	587	0	0	894	42	59	0	34	46	0	94
Future Volume (vph)	70	587	0	0	894	42	59	0	34	46	0	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3515		1770		1583	1770		1583
Flt Permitted	0.21	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	387	3539			3515		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	638	0	0	972	46	64	0	37	50	0	102
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	24	0	0	62
Lane Group Flow (vph)	76	638	0	0	1015	0	64	0	13	50	0	40
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	206	1887			1874		634		567	634		567
v/s Ratio Prot		0.18			c0.29							
v/s Ratio Perm	0.20						c0.04		0.01	0.03		0.03
v/c Ratio	0.37	0.34			0.54		0.10		0.02	0.08		0.07
Uniform Delay, d1	16.3	15.9			18.4		25.6		24.9	25.4		25.3
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	5.0	0.5			1.1		0.3		0.1	0.2		0.2
Delay (s)	21.3	16.4			19.5		25.9		25.0	25.7		25.6
Level of Service	C	B			B		C		C	C		C
Approach Delay (s)		16.9			19.5		25.6				25.6	
Approach LOS		B			B		C				C	
Intersection Summary												
HCM 2000 Control Delay		19.4			HCM 2000 Level of Service		B					
HCM 2000 Volume to Capacity ratio		0.36										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)		13.0					
Intersection Capacity Utilization		56.0%			ICU Level of Service		B					
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBL	WBT
Lane Configurations	↑↑	↑	↑↑
Traffic Volume (vph)	664	2	1050
Future Volume (vph)	664	2	1050
Turn Type	NA	Perm	NA
Protected Phases	4		8
Permitted Phases		8	
Detector Phase	4	8	8
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	100.0%	100.0%	100.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	None
Act Effect Green (s)	18.8	18.8	18.8
Actuated g/C Ratio	1.00	1.00	1.00
v/c Ratio	0.21	0.00	0.32
Control Delay	0.1	0.0	0.2
Queue Delay	0.0	0.0	0.0
Total Delay	0.1	0.0	0.2
LOS	A	A	A
Approach Delay	0.1		0.2
Approach LOS	A		A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 18.8

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.32

Intersection Signal Delay: 0.2

Intersection LOS: A

Intersection Capacity Utilization 32.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	664	3	2	1050	0	0
Future Volume (veh/h)	664	3	2	1050	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	722	3	2	1141		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2565	11	931	2511		
Arrive On Green	0.71	0.71	0.71	0.71		
Sat Flow, veh/h	3723	15	729	3647		
Grp Volume(v), veh/h	353	372	2	1141		
Grp Sat Flow(s),veh/h/ln	1777	1868	729	1777		
Q Serve(g_s), s	1.1	1.1	0.0	2.1		
Cycle Q Clear(g_c), s	1.1	1.1	1.1	2.1		
Prop In Lane		0.01	1.00			
Lane Grp Cap(c), veh/h	1256	1320	931	2511		
V/C Ratio(X)	0.28	0.28	0.00	0.45		
Avail Cap(c_a), veh/h	2085	2191	1271	4169		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.8	0.8	1.0	1.0		
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.9	1.0	1.1		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	725			1143		
Approach Delay, s/veh	0.9			1.1		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				15.3		15.3
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				3.1		4.1
Green Ext Time (p_c), s				3.8		6.7
Intersection Summary						
HCM 6th Ctrl Delay			1.0			
HCM 6th LOS			A			

Intersection

Int Delay, s/veh 7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	8	35	4	2	3	14	45	4	5	89	14
Future Vol, veh/h	5	8	35	4	2	3	14	45	4	5	89	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	9	38	4	2	3	15	49	4	5	97	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	47	0	0	106	51	28	77	69	4
Stage 1	-	-	-	-	-	-	38	38	-	12	12	-
Stage 2	-	-	-	-	-	-	68	13	-	65	57	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1616	-	-	1560	-	-	873	840	1047	912	822	1080
Stage 1	-	-	-	-	-	-	977	863	-	1009	886	-
Stage 2	-	-	-	-	-	-	942	885	-	946	847	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1616	-	-	1560	-	-	779	835	1047	864	817	1080
Mov Cap-2 Maneuver	-	-	-	-	-	-	779	835	-	864	817	-
Stage 1	-	-	-	-	-	-	974	860	-	1006	883	-
Stage 2	-	-	-	-	-	-	824	882	-	886	844	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			3.3			9.7			9.9		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	832	1616	-	-	1560	-	-	846
HCM Lane V/C Ratio	0.082	0.003	-	-	0.003	-	-	0.139
HCM Control Delay (s)	9.7	7.2	0	-	7.3	0	-	9.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.5

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	10	585	30	25	1025	8	17	4	25	6	0	12
Future Vol, veh/h	10	585	30	25	1025	8	17	4	25	6	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	636	33	27	1114	9	18	4	27	7	0	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1123	0	0	669	0	0	1286	1852	335	1515	1864	562
Stage 1	-	-	-	-	-	-	675	675	-	1173	1173	-
Stage 2	-	-	-	-	-	-	611	1177	-	342	691	-
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	618	-	-	917	-	-	122	73	661	82	72	470
Stage 1	-	-	-	-	-	-	410	451	-	204	264	-
Stage 2	-	-	-	-	-	-	448	263	-	646	444	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	618	-	-	917	-	-	114	70	661	72	69	470
Mov Cap-2 Maneuver	-	-	-	-	-	-	114	70	-	72	69	-
Stage 1	-	-	-	-	-	-	403	443	-	200	256	-
Stage 2	-	-	-	-	-	-	423	255	-	602	436	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			30.9			29.7		
HCM LOS							D			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	188	618	-	-	917	-	-	165				
HCM Lane V/C Ratio	0.266	0.018	-	-	0.03	-	-	0.119				
HCM Control Delay (s)	30.9	10.9	-	-	9	-	-	29.7				
HCM Lane LOS	D	B	-	-	A	-	-	D				
HCM 95th %tile Q(veh)	1	0.1	-	-	0.1	-	-	0.4				

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	7	5	42	38	16
Future Vol, veh/h	4	7	5	42	38	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	8	5	46	41	17
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	51	0	-	0	44	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1555	-	-	-	967	1047
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1555	-	-	-	964	1047
Mov Cap-2 Maneuver	-	-	-	-	964	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1007	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.7	0		8.9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1555	-	-	-	987	
HCM Lane V/C Ratio	0.003	-	-	-	0.059	
HCM Control Delay (s)	7.3	0	-	-	8.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

25: 76th Street & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	44	456	111	907	99	168	56	25	258	58
Future Volume (vph)	44	456	111	907	99	168	56	25	258	58
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	20.0	60.0	15.0	55.0	15.0	38.4	38.4	26.6	50.0	50.0
Total Split (%)	14.3%	42.9%	10.7%	39.3%	10.7%	27.4%	27.4%	19.0%	35.7%	35.7%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max
Act Effect Green (s)	29.3	23.6	46.6	37.9	44.7	33.3	33.3	60.1	45.0	45.0
Actuated g/C Ratio	0.25	0.20	0.40	0.32	0.38	0.28	0.28	0.51	0.38	0.38
v/c Ratio	0.33	0.82	0.33	0.91	0.27	0.35	0.11	0.04	0.39	0.09
Control Delay	33.2	54.6	32.7	50.0	22.3	38.6	0.4	18.7	30.9	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	54.6	32.7	50.0	22.3	38.6	0.4	18.7	30.9	1.4
LOS	C	D	C	D	C	D	A	B	C	A
Approach Delay		52.9		48.2		27.0			25.0	
Approach LOS		D		D		C			C	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 117.6

Natural Cycle: 125

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 43.0

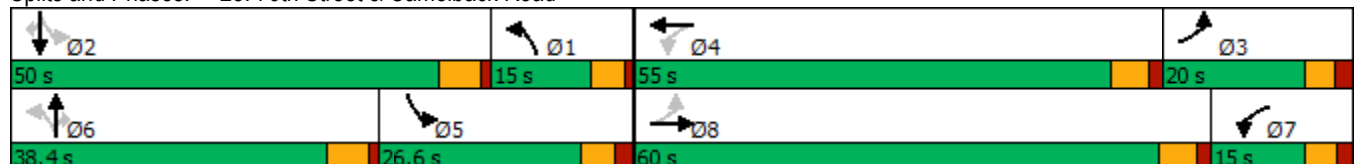
Intersection LOS: D

Intersection Capacity Utilization 67.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road



25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	456	77	111	907	39	99	168	56	25	258	58
Future Volume (veh/h)	44	456	77	111	907	39	99	168	56	25	258	58
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	48	496	84	121	986	42	108	183	61	27	280	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	568	96	351	1074	46	391	533	452	602	721	611
Arrive On Green	0.03	0.19	0.19	0.16	0.31	0.31	0.08	0.29	0.29	0.18	0.39	0.39
Sat Flow, veh/h	1781	3042	513	1781	3473	148	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	48	289	291	121	504	524	108	183	61	27	280	63
Grp Sat Flow(s), veh/h/ln	1781	1777	1778	1781	1777	1844	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.0	18.2	18.4	2.2	31.6	31.6	0.0	9.0	3.3	0.0	12.5	2.9
Cycle Q Clear(g_c), s	0.0	18.2	18.4	2.2	31.6	31.6	0.0	9.0	3.3	0.0	12.5	2.9
Prop In Lane	1.00		0.29	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	332	332	351	550	570	391	533	452	602	721	611
V/C Ratio(X)	0.39	0.87	0.88	0.34	0.92	0.92	0.28	0.34	0.14	0.04	0.39	0.10
Avail Cap(c_a), veh/h	289	840	841	351	762	791	406	533	452	602	721	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	45.6	45.7	41.2	38.5	38.5	35.4	32.7	30.7	23.3	25.6	22.7
Incr Delay (d2), s/veh	0.7	2.8	3.0	0.2	10.7	10.4	0.1	1.8	0.6	0.1	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(50%),veh/ln	1.4	8.2	8.3	3.0	15.1	15.6	2.5	4.3	1.3	0.5	5.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	48.4	48.6	41.4	49.2	48.9	35.6	34.5	31.3	23.5	27.2	23.0
LnGrp LOS	D	D	D	D	D	D	D	C	C	C	C	C
Approach Vol, veh/h		628			1149			352			370	
Approach Delay, s/veh		49.0			48.2			34.3			26.2	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	50.0	9.2	41.2	26.6	38.4	23.5	26.9				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 10	* 45	14.7	* 50	* 21	32.9	* 9.8	* 55				
Max Q Clear Time (g_c+I1), s	2.0	14.5	2.0	33.6	2.0	11.0	4.2	20.4				
Green Ext Time (p_c), s	0.0	0.5	0.0	2.1	0.0	0.3	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay 43.2

HCM 6th LOS D

Notes

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

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

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	332	146	0	0	45
Future Vol, veh/h	30	332	146	0	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	361	159	0	0	49
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	159	0	-	0	586	159
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	427	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1420	-	-	-	473	886
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	658	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1420	-	-	-	459	886
Mov Cap-2 Maneuver	-	-	-	-	459	-
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	658	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		9.3		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1420	-	-	-	-	886
HCM Lane V/C Ratio	0.023	-	-	-	-	0.055
HCM Control Delay (s)	7.6	0	-	-	-	9.3
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.2

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↘ ↘ ↘	↗ ↘ ↘ ↘			↗ ↘
Traffic Vol, veh/h	0	8	699	10	0	1072
Future Vol, veh/h	0	8	699	10	0	1072
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	760	11	0	1165

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	386	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	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	1	-
Mov Cap-1 Maneuver	-	*756	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	756
HCM Lane V/C Ratio	-	-	0.012
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

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	0	0	71	245	18
Future Vol, veh/h	22	0	0	71	245	18
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	0	0	77	266	20
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	353	276	286	0	-	0
Stage 1	276	-	-	-	-	-
Stage 2	77	-	-	-	-	-
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	645	763	1276	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	645	763	1276	-	-	-
Mov Cap-2 Maneuver	645	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.8	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1276	-	645	-	-	
HCM Lane V/C Ratio	-	-	0.037	-	-	
HCM Control Delay (s)	0	-	10.8	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	0	0	60	238	7
Future Vol, veh/h	11	0	0	60	238	7
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	0	0	65	259	8

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	328	263	267
Stage 1	263	-	-
Stage 2	65	-	-
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	666	776	1297
Stage 1	781	-	-
Stage 2	958	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	666	776	1297
Mov Cap-2 Maneuver	666	-	-
Stage 1	781	-	-
Stage 2	958	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1297	-	666	-	-
HCM Lane V/C Ratio	-	-	0.018	-	-
HCM Control Delay (s)	0	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

33: Buckboard Trail & Driveway G

07/29/2020

Intersection

Int Delay, s/veh 1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	115	10	0	0
Future Vol, veh/h	0	22	115	10	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	16979
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	24	125	11	0	0

Major/Minor	Minor1	Major1		
Conflicting Flow All	-	68	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	981	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	981	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	8.8	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBRWBLn1
Capacity (veh/h)	-	- 981
HCM Lane V/C Ratio	-	- 0.024
HCM Control Delay (s)	-	- 8.8
HCM Lane LOS	-	- A
HCM 95th %tile Q(veh)	-	- 0.1

1: Scottsdale Road & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	246	911	242	200	590	377	997	293	740	228
Future Volume (vph)	246	911	242	200	590	377	997	293	740	228
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	16.5	39.0	39.0	23.0	45.5	21.0	40.0	18.0	37.0	37.0
Total Split (%)	13.8%	32.5%	32.5%	19.2%	37.9%	17.5%	33.3%	15.0%	30.8%	30.8%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effct Green (s)	11.0	33.5	33.5	16.8	39.3	16.0	35.9	12.4	32.5	32.5
Actuated g/C Ratio	0.09	0.28	0.28	0.14	0.33	0.13	0.30	0.10	0.27	0.27
v/c Ratio	0.85	1.00	0.47	0.88	0.79	0.90	0.83	0.90	0.84	0.45
Control Delay	77.6	72.8	15.9	83.6	40.0	77.2	48.6	80.8	50.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.6	72.8	15.9	83.6	40.0	77.2	48.6	80.8	50.7	15.5
LOS	E	E	B	F	D	E	D	F	D	B
Approach Delay		63.8			48.5		55.6		51.3	
Approach LOS		E			D		E		D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 40 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 55.4

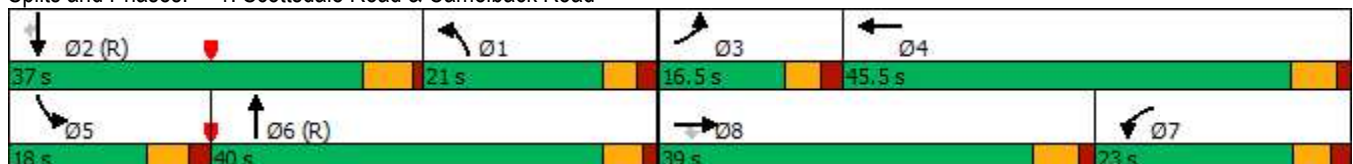
Intersection LOS: E

Intersection Capacity Utilization 85.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	911	242	200	590	242	377	997	159	293	740	228
Future Volume (veh/h)	246	911	242	200	590	242	377	997	159	293	740	228
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	267	990	263	217	641	263	410	1084	173	318	804	248
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	992	442	244	798	327	492	1335	213	357	936	417
Arrive On Green	0.09	0.28	0.28	0.14	0.32	0.32	0.28	0.60	0.60	0.10	0.26	0.26
Sat Flow, veh/h	3456	3554	1585	1781	2458	1008	3456	4439	708	3456	3554	1585
Grp Volume(v), veh/h	267	990	263	217	463	441	410	831	426	318	804	248
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1689	1728	1702	1743	1728	1777	1585
Q Serve(g_s), s	9.1	33.4	17.2	14.4	28.6	28.6	13.3	22.8	22.9	10.9	25.8	12.3
Cycle Q Clear(g_c), s	9.1	33.4	17.2	14.4	28.6	28.6	13.3	22.8	22.9	10.9	25.8	12.3
Prop In Lane	1.00		1.00	1.00		0.60	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	320	992	442	244	577	549	492	1024	524	357	936	417
V/C Ratio(X)	0.83	1.00	0.59	0.89	0.80	0.80	0.83	0.81	0.81	0.89	0.86	0.59
Avail Cap(c_a), veh/h	323	992	442	263	592	563	492	1024	524	357	936	417
HCM Platoon Ratio	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	43.2	37.4	50.9	37.0	37.0	41.6	21.3	21.3	53.1	42.1	21.9
Incr Delay (d2), s/veh	15.9	28.0	1.5	26.6	7.0	7.4	11.0	7.0	12.9	22.5	10.1	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	18.2	6.8	8.1	13.3	12.7	5.6	7.1	8.1	5.8	12.6	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	71.2	38.9	77.6	44.0	44.4	52.6	28.3	34.2	75.6	52.2	28.0
LnGrp LOS	E	E	D	E	D	D	D	C	C	E	D	C
Approach Vol, veh/h	1520			1121			1667			1370		
Approach Delay, s/veh	65.3			50.7			35.7			53.3		
Approach LOS	E			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.1	37.0	16.4	44.5	18.0	41.1	21.9	39.0				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	16.0	31.6	* 11	40.0	12.4	* 35	17.7	* 34				
Max Q Clear Time (g_c+I1), s	15.3	27.8	11.1	30.6	12.9	24.9	16.4	35.4				
Green Ext Time (p_c), s	0.1	1.7	0.0	2.8	0.0	4.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	50.8											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2: Scottsdale Road & Shoeman Lane

07/29/2020

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	306	1256	94	98	1093
Future Vol, veh/h	0	306	1256	94	98	1093
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	-	-	120	-
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	333	1365	102	107	1188
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	734	0	0	1467	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*624	-	-	751	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*624	-	-	751	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	17.2	0		0.9		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	624	751	-	
HCM Lane V/C Ratio	-	-	0.533	0.142	-	
HCM Control Delay (s)	-	-	17.2	10.6	-	
HCM Lane LOS	-	-	C	B	-	
HCM 95th %tile Q(veh)	-	-	3.2	0.5	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	91	31	105	45	543	13	924	283	840
Future Volume (vph)	91	31	105	45	543	13	924	283	840
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	54.0	54.0	54.0	54.0	54.0	46.0	46.0	20.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	45.0%	38.3%	38.3%	16.7%	55.0%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		32.9	32.7	32.7	32.7	62.4	62.4	77.1	77.5
Actuated g/C Ratio		0.27	0.27	0.27	0.27	0.52	0.52	0.64	0.65
v/c Ratio		0.41	0.35	0.10	0.90	0.05	0.57	0.49	0.46
Control Delay		33.4	27.0	17.9	53.6	17.7	19.2	9.4	7.9
Queue Delay		0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
Total Delay		33.4	27.0	17.9	53.8	17.7	19.2	9.4	7.9
LOS		C	C	B	D	B	B	A	A
Approach Delay		33.4		47.4			19.2		8.3
Approach LOS		C		D			B		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 61 (51%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 21.9

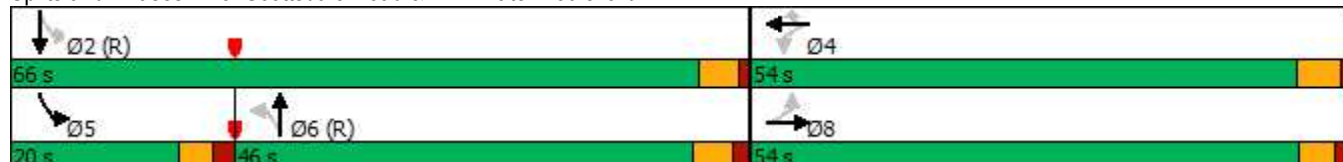
Intersection LOS: C

Intersection Capacity Utilization 81.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	31	28	105	45	543	13	924	29	283	840	114
Future Volume (veh/h)	91	31	28	105	45	543	13	924	29	283	840	114
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	99	34	30	114	49	590	14	1004	32	308	913	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	93	72	557	722	612	287	1465	47	683	1660	225
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.83	0.83	0.83	0.14	1.00	1.00
Sat Flow, veh/h	583	242	186	1338	1870	1585	544	3515	112	3456	3143	427
Grp Volume(v), veh/h	163	0	0	114	49	590	14	508	528	308	516	521
Grp Sat Flow(s),veh/h/ln	1011	0	0	1338	1870	1585	544	1777	1850	1728	1777	1794
Q Serve(g_s), s	11.9	0.0	0.0	0.0	2.0	43.7	0.5	13.3	13.3	6.0	0.0	0.0
Cycle Q Clear(g_c), s	13.9	0.0	0.0	8.0	2.0	43.7	0.5	13.3	13.3	6.0	0.0	0.0
Prop In Lane	0.61		0.18	1.00		1.00	1.00		0.06	1.00		0.24
Lane Grp Cap(c), veh/h	439	0	0	557	722	612	287	740	771	683	938	947
V/C Ratio(X)	0.37	0.00	0.00	0.20	0.07	0.96	0.05	0.69	0.69	0.45	0.55	0.55
Avail Cap(c_a), veh/h	461	0	0	584	761	645	287	740	771	875	938	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.57	0.57	0.57	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	0.0	0.0	25.0	23.2	36.0	5.9	6.9	6.9	16.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	17.9	0.3	4.6	4.4	0.2	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	2.3	0.9	19.3	0.1	3.6	3.7	2.1	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	0.0	0.0	25.1	23.2	53.9	6.2	11.6	11.4	16.5	2.3	2.3
LnGrp LOS	C	A	A	C	C	D	A	B	B	B	A	A
Approach Vol, veh/h		163			753			1050			1345	
Approach Delay, s/veh		26.9			47.6			11.4			5.6	
Approach LOS		C			D			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		68.5		51.5	13.3	55.1		51.5				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 61		* 49	15.0	40.9		* 49				
Max Q Clear Time (g_c+I1), s		2.0		45.7	8.0	15.3		15.9				
Green Ext Time (p_c), s		1.2		0.7	0.4	1.2		1.0				

Intersection Summary

HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Notes

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

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

4: Scottsdale Road & 5th Avenue

07/29/2020

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	53	25	62	23	61	881	37	869
Future Volume (vph)	53	25	62	23	61	881	37	869
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		9.0	9.0	9.0	42.4	37.9	41.6	36.1
Actuated g/C Ratio		0.15	0.15	0.15	0.71	0.63	0.69	0.60
v/c Ratio		0.62	0.42	0.17	0.16	0.44	0.09	0.49
Control Delay		22.0	32.4	17.2	5.2	7.8	3.1	9.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		22.0	32.4	17.2	5.2	7.8	3.1	9.5
LOS		C	C	B	A	A	A	A
Approach Delay		22.0		26.1		7.6		9.3
Approach LOS		C		C		A		A

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 10.3

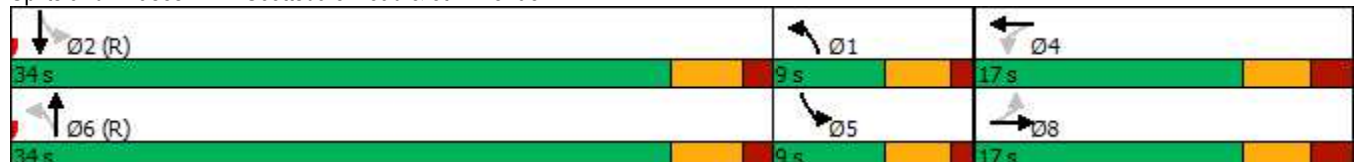
Intersection LOS: B

Intersection Capacity Utilization 58.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	25	94	62	23	21	61	881	17	37	869	88
Future Volume (veh/h)	53	25	94	62	23	21	61	881	17	37	869	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	27	102	67	25	23	66	958	18	40	945	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	50	128	296	134	123	618	1754	33	534	1601	163
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.13	0.49	0.49	0.27	0.98	0.98
Sat Flow, veh/h	378	337	858	1261	897	825	1781	3568	67	1781	3257	331
Grp Volume(v), veh/h	187	0	0	67	0	48	66	477	499	40	516	525
Grp Sat Flow(s),veh/h/ln	1573	0	0	1261	0	1722	1781	1777	1858	1781	1777	1811
Q Serve(g_s), s	5.0	0.0	0.0	0.0	0.0	1.5	0.0	11.2	11.2	0.0	0.7	0.7
Cycle Q Clear(g_c), s	6.8	0.0	0.0	3.2	0.0	1.5	0.0	11.2	11.2	0.0	0.7	0.7
Prop In Lane	0.31		0.55	1.00		0.48	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	314	0	0	296	0	258	618	874	914	534	874	890
V/C Ratio(X)	0.60	0.00	0.00	0.23	0.00	0.19	0.11	0.55	0.55	0.07	0.59	0.59
Avail Cap(c_a), veh/h	392	0	0	359	0	344	618	874	914	534	874	890
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	24.5	0.0	0.0	23.0	0.0	22.3	5.1	10.6	10.6	8.5	0.3	0.3
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.1	0.0	0.1	0.0	2.4	2.3	0.0	2.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.8	0.0	0.6	0.3	4.2	4.4	0.2	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	0.0	0.0	23.2	0.0	22.4	5.1	13.0	12.9	8.5	2.9	2.8
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		187			115			1042			1081	
Approach Delay, s/veh		25.2			22.9			12.5			3.0	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	34.0		14.0	12.0	34.0		14.0				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.7		5.2	2.0	13.2		8.8				
Green Ext Time (p_c), s	0.0	2.5		0.1	0.0	2.2		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			9.8									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

Intersection						
Int Delay, s/veh	44.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	1330	93	73	908	140	155
Future Vol, veh/h	1330	93	73	908	140	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1446	101	79	987	152	168
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1547	0	2149	774
Stage 1	-	-	-	-	1497	-
Stage 2	-	-	-	-	652	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	425	-	~ 41	341
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	480	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	425	-	~ 33	341
Mov Cap-2 Maneuver	-	-	-	-	~ 122	-
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	391	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.1		\$ 399.7	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	184	-	-	425	-	
HCM Lane V/C Ratio	1.743	-	-	0.187	-	
HCM Control Delay (s)	\$ 399.7	-	-	15.4	-	
HCM Lane LOS	F	-	-	C	-	
HCM 95th %tile Q(veh)	22.4	-	-	0.7	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	97	105	156	78	56	34
Future Vol, veh/h	97	105	156	78	56	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	114	170	85	61	37
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	255	0	-	0	537	213
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1310	-	-	-	505	827
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1310	-	-	-	462	827
Mov Cap-2 Maneuver	-	-	-	-	462	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	733	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.8	0		12.9		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1310	-	-	-	554	
HCM Lane V/C Ratio	0.08	-	-	-	0.177	
HCM Control Delay (s)	8	0	-	-	12.9	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	45	298	50	578	108	23	41	175	76
Future Volume (vph)	45	298	50	578	108	23	41	175	76
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	45.0	45.0	45.0	45.0	45.0	23.0	52.0	23.0	52.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%	19.2%	43.3%	19.2%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	27.1	27.1	27.1	27.1	27.1	78.4	72.7	80.3	76.6
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23	0.65	0.61	0.67	0.64
v/c Ratio	0.66	0.45	0.30	0.79	0.26	0.03	0.08	0.21	0.17
Control Delay	88.1	47.3	41.4	50.9	7.5	6.9	5.5	8.3	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.1	47.3	41.4	50.9	7.5	6.9	5.5	8.3	7.7
LOS	F	D	D	D	A	A	A	A	A
Approach Delay		52.2		43.9			5.8		8.0
Approach LOS		D		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 35.4

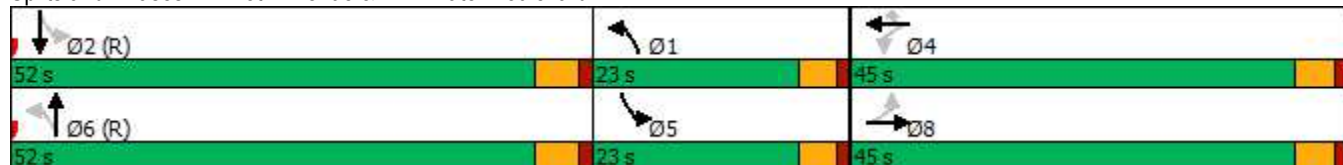
Intersection LOS: D

Intersection Capacity Utilization 54.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	298	29	50	578	108	23	41	39	175	76	95
Future Volume (veh/h)	45	298	29	50	578	108	23	41	39	175	76	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	324	32	54	628	117	25	45	42	190	83	103
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	831	81	236	903	403	847	347	324	938	296	367
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.23	0.39	0.39	0.23	0.39	0.39
Sat Flow, veh/h	715	3269	321	1025	3554	1585	1781	890	831	1781	759	942
Grp Volume(v), veh/h	49	175	181	54	628	117	25	0	87	190	0	186
Grp Sat Flow(s),veh/h/ln	715	1777	1813	1025	1777	1585	1781	0	1721	1781	0	1701
Q Serve(g_s), s	8.0	9.8	9.9	5.5	19.2	7.1	0.0	0.0	3.9	0.0	0.0	9.0
Cycle Q Clear(g_c), s	27.2	9.8	9.9	15.5	19.2	7.1	0.0	0.0	3.9	0.0	0.0	9.0
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.48	1.00		0.55
Lane Grp Cap(c), veh/h	127	451	461	236	903	403	847	0	671	938	0	663
V/C Ratio(X)	0.39	0.39	0.39	0.23	0.70	0.29	0.03	0.00	0.13	0.20	0.00	0.28
Avail Cap(c_a), veh/h	182	588	600	314	1176	524	847	0	671	938	0	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	37.0	37.1	43.5	40.6	36.0	12.7	0.0	23.5	11.9	0.0	25.1
Incr Delay (d2), s/veh	0.6	0.2	0.2	0.2	0.6	0.1	0.0	0.0	0.4	0.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.3	4.5	1.4	8.4	2.8	0.3	0.0	1.7	2.5	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	37.2	37.3	43.7	41.2	36.2	12.7	0.0	23.9	12.0	0.0	26.1
LnGrp LOS	D	D	D	D	D	D	B	A	C	B	A	C
Approach Vol, veh/h	405			799			112			376		
Approach Delay, s/veh	39.2			40.6			21.4			19.0		
Approach LOS	D			D			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.2	52.0		35.8	32.2	52.0		35.8				
Change Period (Y+Rc), s	* 4.6	5.2		* 5.3	* 4.6	5.2		* 5.3				
Max Green Setting (Gmax), s	* 18	46.8		* 40	* 18	46.8		* 40				
Max Q Clear Time (g_c+I1), s	2.0	11.0		21.2	2.0	5.9		29.2				
Green Ext Time (p_c), s	0.0	0.8		3.0	0.2	0.3		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			34.2									
HCM 6th LOS			C									
Notes												

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

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	↑↑	←	↑↑
Traffic Volume (vph)	119	1409	847	140	217	53	101
Future Volume (vph)	119	1409	847	140	217	53	101
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.60	0.81	0.53	0.24	0.40	0.09	0.17
Control Delay	33.8	27.4	19.3	28.3	26.6	26.2	5.5
Queue Delay	0.0	1.0	1.8	0.0	0.0	0.0	0.0
Total Delay	33.8	28.4	21.1	28.3	26.6	26.2	5.5
LOS	C	C	C	C	C	C	A
Approach Delay		28.8	21.1				
Approach LOS		C	C				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 25.4

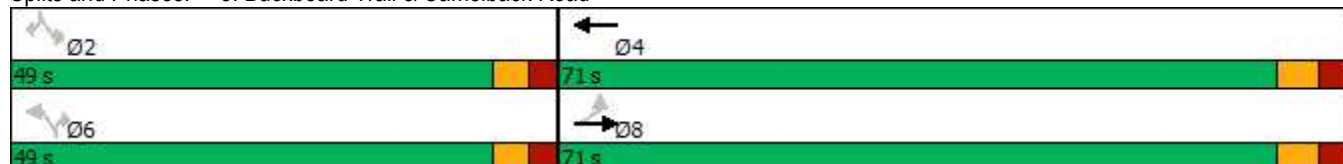
Intersection LOS: C

Intersection Capacity Utilization 69.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	1409	0	0	847	69	140	0	217	53	0	101
Future Volume (vph)	119	1409	0	0	847	69	140	0	217	53	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3499		1770		1583	1770		1583
Flt Permitted	0.22	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	402	3539			3499		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	129	1532	0	0	921	75	152	0	236	58	0	110
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	23	0	0	71
Lane Group Flow (vph)	129	1532	0	0	991	0	152	0	213	58	0	39
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	214	1887			1866		634		567	634		567
v/s Ratio Prot		c0.43			0.28							
v/s Ratio Perm	0.32						0.09		c0.13	0.03		0.02
v/c Ratio	0.60	0.81			0.53		0.24		0.38	0.09		0.07
Uniform Delay, d1	19.3	23.0			18.2		27.0		28.5	25.5		25.3
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	12.0	3.9			1.1		0.9		1.9	0.3		0.2
Delay (s)	31.2	27.0			19.3		27.9		30.4	25.8		25.6
Level of Service	C	C			B		C		C	C		C
Approach Delay (s)		27.3			19.3			29.5			25.7	
Approach LOS		C			B			C			C	

Intersection Summary

HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBL	WBT
Lane Configurations	↑↑	↑	↑↑
Traffic Volume (vph)	1667	6	782
Future Volume (vph)	1667	6	782
Turn Type	NA	Perm	NA
Protected Phases	4		8
Permitted Phases		8	
Detector Phase	4	8	8
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	100.0%	100.0%	100.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	None
Act Effect Green (s)	22.3	22.3	22.3
Actuated g/C Ratio	1.00	1.00	1.00
v/c Ratio	0.52	0.02	0.24
Control Delay	0.5	0.2	0.2
Queue Delay	0.0	0.0	0.0
Total Delay	0.5	0.2	0.2
LOS	A	A	A
Approach Delay	0.5		0.2
Approach LOS	A		A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 22.3

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 0.4

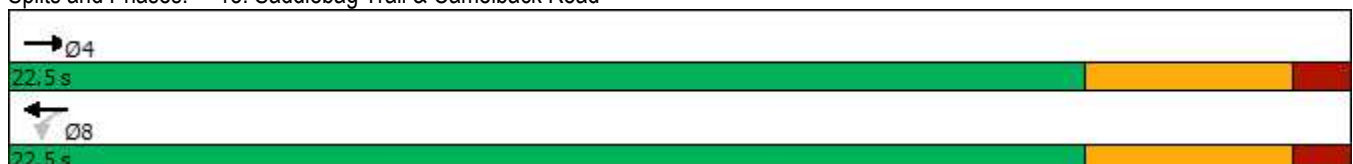
Intersection LOS: A

Intersection Capacity Utilization 50.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	1667	11	6	782	0	0
Future Volume (veh/h)	1667	11	6	782	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	1812	12	7	850		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2796	19	503	2746		
Arrive On Green	0.77	0.77	0.77	0.77		
Sat Flow, veh/h	3712	24	256	3647		
Grp Volume(v), veh/h	889	935	7	850		
Grp Sat Flow(s),veh/h/ln	1777	1866	256	1777		
Q Serve(g_s), s	4.5	4.5	0.3	1.4		
Cycle Q Clear(g_c), s	4.5	4.5	4.8	1.4		
Prop In Lane		0.01	1.00			
Lane Grp Cap(c), veh/h	1373	1442	503	2746		
V/C Ratio(X)	0.65	0.65	0.01	0.31		
Avail Cap(c_a), veh/h	1615	1697	538	3231		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	1.0	1.0	2.1	0.7		
Incr Delay (d2), s/veh	0.7	0.7	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.7	1.7	2.1	0.7		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	1824			857		
Approach Delay, s/veh	1.7			0.7		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				19.8		19.8
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				6.5		6.8
Green Ext Time (p_c), s				8.8		4.4
Intersection Summary						
HCM 6th Ctrl Delay			1.4			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	12	27	10	14	12	27	150	18	4	60	13
Future Vol, veh/h	13	12	27	10	14	12	27	150	18	4	60	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	13	29	11	15	13	29	163	20	4	65	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	28	0	0	42	0	0	139	106	28	191	114	22
Stage 1	-	-	-	-	-	-	56	56	-	44	44	-
Stage 2	-	-	-	-	-	-	83	50	-	147	70	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1585	-	-	1567	-	-	831	784	1047	769	776	1055
Stage 1	-	-	-	-	-	-	956	848	-	970	858	-
Stage 2	-	-	-	-	-	-	925	853	-	856	837	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1585	-	-	1567	-	-	757	771	1047	624	764	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	757	771	-	624	764	-
Stage 1	-	-	-	-	-	-	947	840	-	961	852	-
Stage 2	-	-	-	-	-	-	837	847	-	671	829	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	2	11.2	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	788	1585	-	-	1567	-	-	792
HCM Lane V/C Ratio	0.269	0.009	-	-	0.007	-	-	0.106
HCM Control Delay (s)	11.2	7.3	0	-	7.3	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	11.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	1349	50	45	761	12	23	3	73	5	0	6
Future Vol, veh/h	14	1349	50	45	761	12	23	3	73	5	0	6
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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	1466	54	49	827	13	25	3	79	5	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	840	0	0	1520	0	0	2035	2461	760	1697	2482	420
Stage 1	-	-	-	-	-	-	1523	1523	-	932	932	-
Stage 2	-	-	-	-	-	-	512	938	-	765	1550	-
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	791	-	-	435	-	-	33	30	349	60	29	582
Stage 1	-	-	-	-	-	-	124	179	-	287	343	-
Stage 2	-	-	-	-	-	-	513	341	-	362	173	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	791	-	-	435	-	-	29	26	349	38	25	582
Mov Cap-2 Maneuver	-	-	-	-	-	-	29	26	-	38	25	-
Stage 1	-	-	-	-	-	-	122	176	-	282	304	-
Stage 2	-	-	-	-	-	-	450	302	-	269	170	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.8			248.1			59.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	89	791	-	-	435	-	-	78
HCM Lane V/C Ratio	1.209	0.019	-	-	0.112	-	-	0.153
HCM Control Delay (s)	248.1	9.6	-	-	14.3	-	-	59.3
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	7.6	0.1	-	-	0.4	-	-	0.5

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	17	20	88	53	17
Future Vol, veh/h	9	17	20	88	53	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	18	22	96	58	18
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	118	0	-	0	108	70
Stage 1	-	-	-	-	70	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1470	-	-	-	889	993
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1470	-	-	-	883	993
Mov Cap-2 Maneuver	-	-	-	-	883	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	984	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.6	0		9.3		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1470	-	-	-	907	
HCM Lane V/C Ratio	0.007	-	-	-	0.084	
HCM Control Delay (s)	7.5	0	-	-	9.3	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

25: 76th Street & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	131	1140	153	625	157	320	180	40	332	60
Future Volume (vph)	131	1140	153	625	157	320	180	40	332	60
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	19.0	49.0	19.0	49.0	19.0	33.0	33.0	19.0	33.0	33.0
Total Split (%)	15.8%	40.8%	15.8%	40.8%	15.8%	27.5%	27.5%	15.8%	27.5%	27.5%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effect Green (s)	59.7	43.7	37.8	26.9	39.8	32.6	32.6	34.5	27.6	27.6
Actuated g/C Ratio	0.54	0.39	0.34	0.24	0.36	0.29	0.29	0.31	0.25	0.25
v/c Ratio	0.27	1.04	0.70	0.85	0.61	0.64	0.33	0.18	0.78	0.13
Control Delay	25.6	69.4	49.3	50.4	44.1	43.0	6.6	27.9	53.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	69.4	49.3	50.4	44.1	43.0	6.6	27.9	53.4	0.6
LOS	C	E	D	D	D	D	A	C	D	A
Approach Delay		65.5		50.2		33.3			43.7	
Approach LOS		E		D		C			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 111.2

Natural Cycle: 145

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 52.6

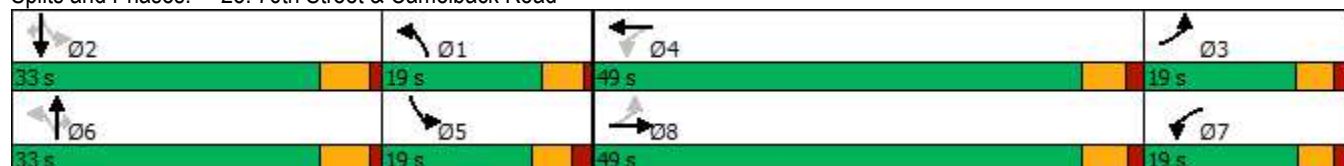
Intersection LOS: D

Intersection Capacity Utilization 89.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road



25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1140	176	153	625	45	157	320	180	40	332	60
Future Volume (veh/h)	131	1140	176	153	625	45	157	320	180	40	332	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	1239	191	166	679	49	171	348	196	43	361	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	534	1277	196	196	767	55	233	488	413	232	488	413
Arrive On Green	0.26	0.41	0.41	0.07	0.23	0.23	0.05	0.26	0.26	0.05	0.26	0.26
Sat Flow, veh/h	1781	3089	473	1781	3361	242	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	142	710	720	166	359	369	171	348	196	43	361	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1785	1781	1777	1827	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.8	41.2	41.9	5.6	20.6	20.6	0.9	17.8	11.0	0.0	18.7	3.3
Cycle Q Clear(g_c), s	1.8	41.2	41.9	5.6	20.6	20.6	0.9	17.8	11.0	0.0	18.7	3.3
Prop In Lane	1.00		0.27	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	534	734	738	196	405	417	233	488	413	232	488	413
V/C Ratio(X)	0.27	0.97	0.98	0.85	0.88	0.89	0.73	0.71	0.47	0.19	0.74	0.16
Avail Cap(c_a), veh/h	534	734	738	301	733	753	392	488	413	374	488	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	30.2	30.4	46.9	39.4	39.4	45.8	35.4	32.9	41.1	35.7	30.1
Incr Delay (d2), s/veh	0.1	24.9	27.1	7.8	2.6	2.6	1.7	8.6	3.9	0.1	9.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	21.7	22.5	4.4	9.1	9.3	4.3	9.1	4.6	1.0	9.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	55.2	57.5	54.7	42.0	41.9	47.5	44.0	36.8	41.3	45.4	30.9
LnGrp LOS	C	E	E	D	D	D	D	D	D	D	D	C
Approach Vol, veh/h		1572			894			715			469	
Approach Delay, s/veh		53.9			44.3			42.9			43.0	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	33.0	32.3	29.6	10.6	33.0	12.9	49.0				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 14	* 28	13.7	* 44	* 13	27.5	* 14	* 44				
Max Q Clear Time (g_c+I1), s	2.9	20.7	3.8	22.6	2.0	19.8	7.6	43.9				
Green Ext Time (p_c), s	0.1	0.5	0.0	1.4	0.0	0.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			48.0									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

27: Shoeman Lane & Driveway A

07/29/2020

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	113	81	191	0	0	69
Future Vol, veh/h	113	81	191	0	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	88	208	0	0	75
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	208	0	-	0	542	208
Stage 1	-	-	-	-	208	-
Stage 2	-	-	-	-	334	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1363	-	-	-	501	832
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	725	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1363	-	-	-	453	832
Mov Cap-2 Maneuver	-	-	-	-	453	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	725	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.6	0		9.8		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1363	-	-	-	-	832
HCM Lane V/C Ratio	0.09	-	-	-	-	0.09
HCM Control Delay (s)	7.9	0	-	-	-	9.8
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	-	0.3

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↘ ↘ ↘	↗ ↘ ↘ ↘			↗ ↘
Traffic Vol, veh/h	0	25	1464	22	0	1085
Future Vol, veh/h	0	25	1464	22	0	1085
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	1591	24	0	1179
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	808	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	*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	WB	NB		SB		
HCM Control Delay, s	11.5	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	- 580		-		
HCM Lane V/C Ratio	-	- 0.047		-		
HCM Control Delay (s)	-	- 11.5		-		
HCM Lane LOS	-	- B		-		
HCM 95th %tile Q(veh)	-	- 0.1		-		
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection

Int Delay, s/veh 1.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 50 0 0 197 109 56

Future Vol, veh/h 50 0 0 197 109 56

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 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 54 0 0 214 118 61

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 363 149 179 0 - 0

Stage 1 149 - - - - -

Stage 2 214 - - - - -

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 636 898 1397 - - -

Stage 1 879 - - - - -

Stage 2 822 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 636 898 1397 - - -

Mov Cap-2 Maneuver 636 - - - - -

Stage 1 879 - - - - -

Stage 2 822 - - - - -

Approach EB NB SB

HCM Control Delay, s 11.2 0 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1397 - 636 - -

HCM Lane V/C Ratio - - 0.085 - -

HCM Control Delay (s) 0 - 11.2 - -

HCM Lane LOS A - B - -

HCM 95th %tile Q(veh) 0 - 0.3 - -

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	0	0	174	83	26
Future Vol, veh/h	23	0	0	174	83	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	25	0	0	189	90	28

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	293	104	118
Stage 1	104	-	-
Stage 2	189	-	-
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	698	951	1470
Stage 1	920	-	-
Stage 2	843	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	698	951	1470
Mov Cap-2 Maneuver	698	-	-
Stage 1	920	-	-
Stage 2	843	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1470	-	698	-	-
HCM Lane V/C Ratio	-	-	0.036	-	-
HCM Control Delay (s)	0	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

33: Buckboard Trail & Driveway G

07/29/2020

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	34	323	40	0	0
Future Vol, veh/h	0	34	323	40	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	16979
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	37	351	43	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	-	197	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	811	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	811	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	9.7		0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT		NBRWBLn1			
Capacity (veh/h)	-		811			
HCM Lane V/C Ratio	-		0.046			
HCM Control Delay (s)	-		9.7			
HCM Lane LOS	-		A			
HCM 95th %tile Q(veh)	-		0.1			

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	37	755	390	173	288	19	31
Future Volume (vph)	37	755	390	173	288	19	31
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.08	0.44	0.24	0.30	0.47	0.03	0.06
Control Delay	14.4	17.9	15.1	29.3	18.1	25.3	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	17.9	15.1	29.3	18.1	25.3	7.9
LOS	B	B	B	C	B	C	A
Approach Delay		17.8	15.1				
Approach LOS		B	B				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 18.2

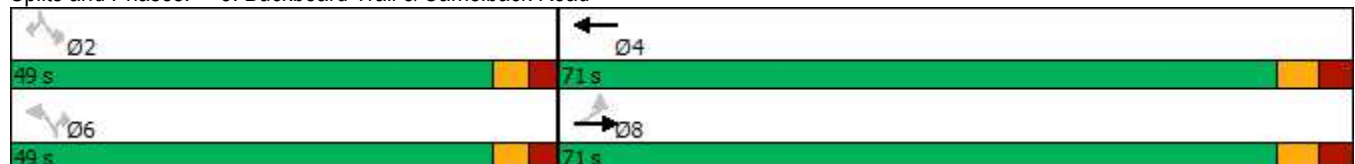
Intersection LOS: B

Intersection Capacity Utilization 56.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (vph)	37	755	0	0	390	23	173	0	288	19	0	31
Future Volume (vph)	37	755	0	0	390	23	173	0	288	19	0	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3510		1770		1583	1770		1583
Flt Permitted	0.48	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	896	3539			3510		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	821	0	0	424	25	188	0	313	21	0	34
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	92	0	0	22
Lane Group Flow (vph)	40	821	0	0	445	0	188	0	221	21	0	12
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	477	1887			1872		634		567	634		567
v/s Ratio Prot		c0.23			0.13							
v/s Ratio Perm	0.04						0.11		c0.14	0.01		0.01
v/c Ratio	0.08	0.44			0.24		0.30		0.39	0.03		0.02
Uniform Delay, d1	13.7	17.0			15.0		27.6		28.7	25.0		24.9
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.3	0.7			0.3		1.2		2.0	0.1		0.1
Delay (s)	14.0	17.7			15.3		28.8		30.7	25.1		25.0
Level of Service	B	B			B		C		C	C		C
Approach Delay (s)		17.6			15.3			30.0			25.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			20.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.42									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			13.0		
Intersection Capacity Utilization			56.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020

	→	←
Lane Group	EBT	WBT
Lane Configurations	↑↑	↑↑
Traffic Volume (vph)	1030	463
Future Volume (vph)	1030	463
Turn Type	NA	NA
Protected Phases	4	8
Permitted Phases		
Detector Phase	4	8
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	22.5	22.5
Total Split (s)	22.5	22.5
Total Split (%)	100.0%	100.0%
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	4.5	4.5
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)	18.5	18.5
Actuated g/C Ratio	1.00	1.00
v/c Ratio	0.32	0.14
Control Delay	0.2	0.1
Queue Delay	0.0	0.0
Total Delay	0.2	0.1
LOS	A	A
Approach Delay	0.2	0.1
Approach LOS	A	A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 18.5

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.32

Intersection Signal Delay: 0.2

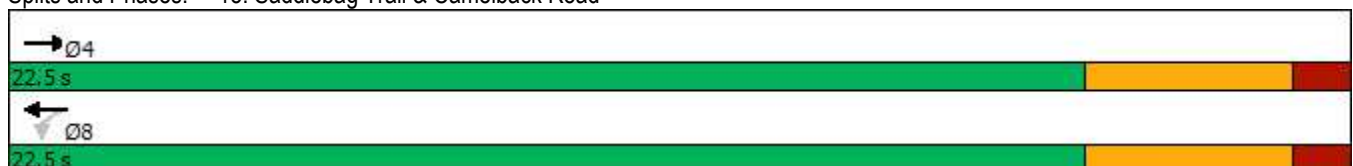
Intersection LOS: A

Intersection Capacity Utilization 32.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	1030	0	0	463	0	0
Future Volume (veh/h)	1030	0	0	463	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	1120	0	0	503		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2498	0	475	2498		
Arrive On Green	0.70	0.00	0.00	0.70		
Sat Flow, veh/h	3741	0	503	3647		
Grp Volume(v), veh/h	1120	0	0	503		
Grp Sat Flow(s),veh/h/ln	1777	0	503	1777		
Q Serve(g_s), s	2.1	0.0	0.0	0.7		
Cycle Q Clear(g_c), s	2.1	0.0	0.0	0.7		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2498	0	475	2498		
V/C Ratio(X)	0.45	0.00	0.00	0.20		
Avail Cap(c_a), veh/h	4221	0	719	4221		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	1.0	0.0	0.0	0.8		
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.1	0.0	0.0	0.8		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	1120			503		
Approach Delay, s/veh	1.1			0.8		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				15.2		15.2
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				4.1		2.7
Green Ext Time (p_c), s				6.6		2.8
Intersection Summary						
HCM 6th Ctrl Delay			1.0			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	293	10	9	168	3	5	0	17	2	0	2
Future Vol, veh/h	4	293	10	9	168	3	5	0	17	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	318	11	10	183	3	5	0	18	2	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	186	0	0	329	0	0	444	538	165	372	542	93
Stage 1	-	-	-	-	-	-	332	332	-	205	205	-
Stage 2	-	-	-	-	-	-	112	206	-	167	337	-
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	1386	-	-	1227	-	-	497	448	850	560	446	946
Stage 1	-	-	-	-	-	-	655	643	-	778	731	-
Stage 2	-	-	-	-	-	-	881	730	-	818	640	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1386	-	-	1227	-	-	492	443	850	543	441	946
Mov Cap-2 Maneuver	-	-	-	-	-	-	492	443	-	543	441	-
Stage 1	-	-	-	-	-	-	653	641	-	776	725	-
Stage 2	-	-	-	-	-	-	872	724	-	798	638	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			10.1			10.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	729	1386	-	-	1227	-	-	690				
HCM Lane V/C Ratio	0.033	0.003	-	-	0.008	-	-	0.006				
HCM Control Delay (s)	10.1	7.6	-	-	8	-	-	10.3				
HCM Lane LOS	B	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	4	5	19	12	4
Future Vol, veh/h	3	4	5	19	12	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	4	5	21	13	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	26	0	-	0	26	16
Stage 1	-	-	-	-	16	-
Stage 2	-	-	-	-	10	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1588	-	-	-	989	1063
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1588	-	-	-	987	1063
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	1013	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.1	0		8.6		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1588	-	-	-	1005	
HCM Lane V/C Ratio	0.002	-	-	-	0.017	
HCM Control Delay (s)	7.3	0	-	-	8.6	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	



Appendix K – Year 2030 No Build Capacity Analysis

1: Scottsdale Road & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	 	 			 	 	  	 	 	
Traffic Volume (vph)	185	474	280	125	759	129	456	171	767	220
Future Volume (vph)	185	474	280	125	759	129	456	171	767	220
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	15.0	50.0	50.0	14.0	49.0	14.0	36.0	20.0	42.0	42.0
Total Split (%)	12.5%	41.7%	41.7%	11.7%	40.8%	11.7%	30.0%	16.7%	35.0%	35.0%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effct Green (s)	9.4	23.4	23.4	25.8	39.9	9.0	38.5	10.9	40.6	40.6
Actuated g/C Ratio	0.08	0.20	0.20	0.22	0.33	0.08	0.32	0.09	0.34	0.34
v/c Ratio	0.75	0.75	0.61	0.36	0.89	0.54	0.43	0.60	0.70	0.37
Control Delay	71.9	52.2	16.0	43.4	46.9	62.9	30.6	60.4	39.0	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.9	52.2	16.0	43.4	46.9	62.9	30.6	60.4	39.0	12.2
LOS	E	D	B	D	D	E	C	E	D	B
Approach Delay		45.3			46.5		36.1		37.1	
Approach LOS		D			D		D		D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99 (83%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 41.4

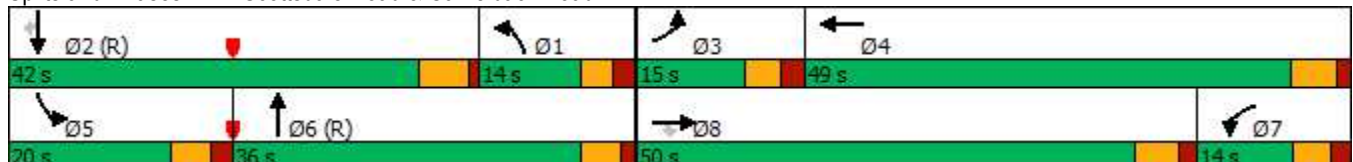
Intersection LOS: D

Intersection Capacity Utilization 75.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	474	280	125	759	187	129	456	183	171	767	220
Future Volume (veh/h)	185	474	280	125	759	187	129	456	183	171	767	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	201	515	304	136	825	203	140	496	199	186	834	239
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	794	354	302	906	223	428	1290	500	245	1084	483
Arrive On Green	0.07	0.22	0.22	0.17	0.32	0.32	0.04	0.12	0.12	0.07	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	1781	2827	695	3456	3620	1402	3456	3554	1585
Grp Volume(v), veh/h	201	515	304	136	519	509	140	465	230	186	834	239
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1745	1728	1702	1618	1728	1777	1585
Q Serve(g_s), s	6.9	15.8	22.1	8.2	33.6	33.6	4.7	15.2	15.8	6.3	25.6	11.3
Cycle Q Clear(g_c), s	6.9	15.8	22.1	8.2	33.6	33.6	4.7	15.2	15.8	6.3	25.6	11.3
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	256	794	354	302	570	559	428	1213	577	245	1084	483
V/C Ratio(X)	0.79	0.65	0.86	0.45	0.91	0.91	0.33	0.38	0.40	0.76	0.77	0.49
Avail Cap(c_a), veh/h	279	1318	588	302	644	633	428	1213	577	415	1084	483
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	42.3	44.8	44.8	39.1	39.1	52.7	40.8	41.0	54.8	37.9	20.0
Incr Delay (d2), s/veh	11.2	0.3	3.3	0.4	15.0	15.3	0.2	0.9	2.1	1.8	5.3	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.9	8.9	3.7	16.7	16.4	2.1	7.1	7.2	2.8	11.8	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	42.7	48.1	45.2	54.1	54.4	52.9	41.7	43.1	56.6	43.1	23.6
LnGrp LOS	E	D	D	D	D	D	D	D	D	E	D	C
Approach Vol, veh/h		1020			1164			835			1259	
Approach Delay, s/veh		48.8			53.2			43.9			41.4	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.9	42.0	14.2	44.0	14.1	47.8	25.8	32.3				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	9.0	36.6	* 9.7	43.5	14.4	* 31	8.7	* 45				
Max Q Clear Time (g_c+I1), s	6.7	27.6	8.9	35.6	8.3	17.8	10.2	24.1				
Green Ext Time (p_c), s	0.0	3.2	0.0	2.8	0.2	2.7	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			46.9									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	40	724	104	247	923
Future Vol, veh/h	0	40	724	104	247	923
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	-	-	120	-
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	43	787	113	268	1003
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	450	0	0	900	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*756	-	-	825	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*756	-	-	825	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.1	0		2.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	756	825	-	
HCM Lane V/C Ratio	-	-	0.058	0.325	-	
HCM Control Delay (s)	-	-	10.1	11.5	-	
HCM Lane LOS	-	-	B	B	-	
HCM 95th %tile Q(veh)	-	-	0.2	1.4	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	47	19	18	49	371	18	535	254	557
Future Volume (vph)	47	19	18	49	371	18	535	254	557
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	44.0	44.0	44.0	44.0	44.0	48.0	48.0	28.0	76.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	40.0%	40.0%	23.3%	63.3%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effect Green (s)		12.0	11.8	11.8	11.8	86.4	86.4	98.0	98.4
Actuated g/C Ratio		0.10	0.10	0.10	0.10	0.72	0.72	0.82	0.82
v/c Ratio		0.60	0.17	0.29	0.78	0.04	0.24	0.22	0.25
Control Delay		58.7	26.5	29.4	31.7	5.4	5.2	0.9	0.7
Queue Delay		0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Total Delay		58.7	26.5	29.4	32.9	5.4	5.2	0.9	0.7
LOS		E	C	C	C	A	A	A	A
Approach Delay		58.7		32.3			5.2		0.7
Approach LOS		E		C			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 93 (78%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 11.4

Intersection LOS: B

Intersection Capacity Utilization 56.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



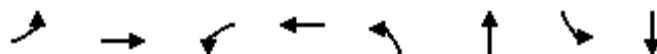
3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	19	20	18	49	371	18	535	19	254	557	105
Future Volume (veh/h)	47	19	20	18	49	371	18	535	19	254	557	105
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	51	21	22	20	53	403	20	582	21	276	605	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	85	75	421	500	424	464	1927	69	1181	1931	363
Arrive On Green	0.27	0.27	0.27	0.45	0.45	0.45	1.00	1.00	1.00	0.11	1.00	1.00
Sat Flow, veh/h	601	320	281	1364	1870	1585	733	3498	126	3456	2985	561
Grp Volume(v), veh/h	94	0	0	20	53	403	20	295	308	276	360	359
Grp Sat Flow(s),veh/h/ln	1202	0	0	1364	1870	1585	733	1777	1848	1728	1777	1769
Q Serve(g_s), s	5.0	0.0	0.0	0.0	2.0	29.4	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	0.0	1.0	2.0	29.4	0.0	0.0	0.0	4.1	0.0	0.0
Prop In Lane	0.54		0.23	1.00		1.00	1.00		0.07	1.00		0.32
Lane Grp Cap(c), veh/h	367	0	0	421	500	424	464	979	1018	1181	1150	1145
V/C Ratio(X)	0.26	0.00	0.00	0.05	0.11	0.95	0.04	0.30	0.30	0.23	0.31	0.31
Avail Cap(c_a), veh/h	436	0	0	497	605	512	464	979	1018	1655	1150	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.63	0.63	0.63	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	0.0	0.0	24.6	24.9	32.5	0.0	0.0	0.0	8.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	17.6	0.2	0.8	0.7	0.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.3	0.9	11.4	0.0	0.2	0.2	1.4	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	0.0	24.7	24.9	50.1	0.2	0.8	0.7	8.9	0.7	0.7
LnGrp LOS	C	A	A	C	C	D	A	A	A	A	A	A
Approach Vol, veh/h		94			476			623			995	
Approach Delay, s/veh		34.7			46.2			0.7			3.0	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		82.7		37.3	11.5	71.2		37.3				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 71		* 39	23.0	42.9		* 39				
Max Q Clear Time (g_c+I1), s		2.0		31.4	6.1	2.0		9.0				
Green Ext Time (p_c), s		0.8		0.7	0.5	0.7		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				13.1								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

4: Scottsdale Road & 5th Avenue

07/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	15	18	18	10	37	586	20	556
Future Volume (vph)	15	18	18	10	37	586	20	556
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		7.3	7.3	7.3	48.7	48.0	47.9	46.2
Actuated g/C Ratio		0.12	0.12	0.12	0.81	0.80	0.80	0.77
v/c Ratio		0.27	0.10	0.10	0.06	0.23	0.03	0.24
Control Delay		20.5	15.2	9.8	2.4	3.6	1.1	2.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.5	15.2	9.8	2.4	3.6	1.1	2.1
LOS		C	B	A	A	A	A	A
Approach Delay		20.5		12.4		3.6		2.1
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 55 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.27

Intersection Signal Delay: 3.8

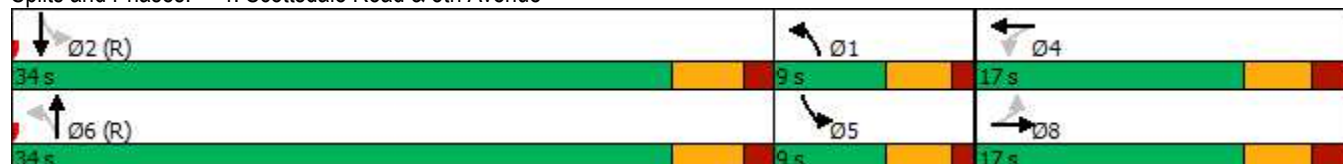
Intersection LOS: A

Intersection Capacity Utilization 41.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	18	19	18	10	10	37	586	22	20	556	31
Future Volume (veh/h)	15	18	19	18	10	10	37	586	22	20	556	31
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	16	20	21	20	11	11	40	637	24	22	604	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	70	58	261	81	81	842	1717	65	749	1682	95
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.19	0.49	0.49	0.38	0.98	0.98
Sat Flow, veh/h	301	746	610	1366	858	858	1781	3492	131	1781	3420	192
Grp Volume(v), veh/h	57	0	0	20	0	22	40	324	337	22	313	325
Grp Sat Flow(s),veh/h/ln	1657	0	0	1366	0	1716	1781	1777	1847	1781	1777	1836
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.7	0.0	6.8	6.8	0.0	0.3	0.3
Cycle Q Clear(g_c), s	1.8	0.0	0.0	0.6	0.0	0.7	0.0	6.8	6.8	0.0	0.3	0.3
Prop In Lane	0.28		0.37	1.00		0.50	1.00		0.07	1.00		0.10
Lane Grp Cap(c), veh/h	233	0	0	261	0	162	842	874	908	749	874	903
V/C Ratio(X)	0.24	0.00	0.00	0.08	0.00	0.14	0.05	0.37	0.37	0.03	0.36	0.36
Avail Cap(c_a), veh/h	403	0	0	406	0	343	842	874	908	749	874	903
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	25.4	0.0	0.0	24.9	0.0	24.9	3.3	9.5	9.5	4.4	0.3	0.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.1	0.0	1.2	1.2	0.0	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.3	0.0	0.3	0.1	2.5	2.6	0.1	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	0.0	24.9	0.0	25.1	3.3	10.7	10.6	4.4	1.4	1.3
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		57			42			701			660	
Approach Delay, s/veh		25.6			25.0			10.2			1.5	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	34.0		10.7	15.3	34.0		10.7				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.3		2.7	2.0	8.8		3.8				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	1.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			7.3									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

5: Brown Avenue & Camelback Road

07/29/2020

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	
Traffic Vol, veh/h	618	108	140	1071	26	30
Future Vol, veh/h	618	108	140	1071	26	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	672	117	152	1164	28	33
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	789	0	1617	395
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	886	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	827	-	94	604
Stage 1	-	-	-	-	437	-
Stage 2	-	-	-	-	363	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	827	-	77	604
Mov Cap-2 Maneuver	-	-	-	-	195	-
Stage 1	-	-	-	-	437	-
Stage 2	-	-	-	-	296	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.2		19.7	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	306	-	-	827	-	
HCM Lane V/C Ratio	0.199	-	-	0.184	-	
HCM Control Delay (s)	19.7	-	-	10.3	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	0.7	-	-	0.7	-	

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	217	65	31	133	88
Future Vol, veh/h	29	217	65	31	133	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	236	71	34	145	96
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	105	0	-	0	388	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	300	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1486	-	-	-	616	970
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	752	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1486	-	-	-	601	970
Mov Cap-2 Maneuver	-	-	-	-	601	-
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	752	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		12.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1486	-	-	-	708	
HCM Lane V/C Ratio	0.021	-	-	-	0.339	
HCM Control Delay (s)	7.5	0	-	-	12.7	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	68	231	35	378	250	5	47	38	10
Future Volume (vph)	68	231	35	378	250	5	47	38	10
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	34.0	34.0	34.0	34.0	34.0	17.0	69.0	17.0	69.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	14.2%	57.5%	14.2%	57.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	19.4	19.4	19.4	19.4	19.4	88.0	82.4	90.8	88.2
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.73	0.69	0.76	0.74
v/c Ratio	0.86	0.45	0.25	0.72	0.56	0.01	0.04	0.04	0.05
Control Delay	98.2	32.1	46.1	54.7	9.5	7.8	9.3	4.8	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.2	32.1	46.1	54.7	9.5	7.8	9.3	4.8	2.7
LOS	F	C	D	D	A	A	A	A	A
Approach Delay		46.9		37.2			9.2		3.5
Approach LOS		D		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 35.6

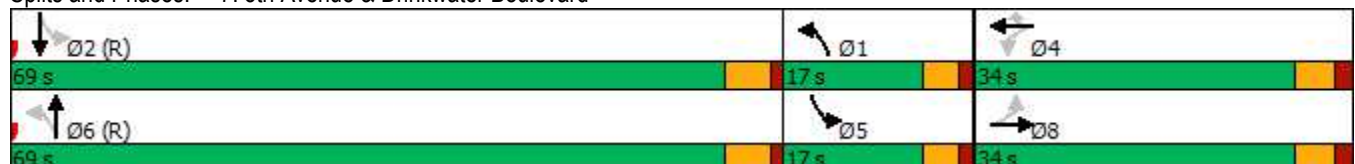
Intersection LOS: D

Intersection Capacity Utilization 42.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	231	5	35	378	250	5	47	3	38	10	49
Future Volume (veh/h)	68	231	5	35	378	250	5	47	3	38	10	49
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	74	251	5	38	411	272	5	51	3	41	11	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	777	15	238	775	345	967	930	55	981	149	717
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.12	0.53	0.53	0.12	0.53	0.53
Sat Flow, veh/h	758	3564	71	1124	3554	1585	1781	1749	103	1781	280	1348
Grp Volume(v), veh/h	74	125	131	38	411	272	5	0	54	41	0	64
Grp Sat Flow(s),veh/h/ln	758	1777	1858	1124	1777	1585	1781	0	1852	1781	0	1628
Q Serve(g_s), s	11.5	7.1	7.1	3.5	12.3	19.4	0.0	0.0	1.7	0.0	0.0	2.3
Cycle Q Clear(g_c), s	23.8	7.1	7.1	10.7	12.3	19.4	0.0	0.0	1.7	0.0	0.0	2.3
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		0.83
Lane Grp Cap(c), veh/h	148	387	405	238	775	345	967	0	985	981	0	865
V/C Ratio(X)	0.50	0.32	0.32	0.16	0.53	0.79	0.01	0.00	0.05	0.04	0.00	0.07
Avail Cap(c_a), veh/h	164	425	444	262	850	379	967	0	985	981	0	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.0	39.5	39.5	44.0	41.5	44.3	7.9	0.0	13.6	7.9	0.0	13.7
Incr Delay (d2), s/veh	0.9	0.2	0.2	0.1	0.2	8.5	0.0	0.0	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.2	3.3	1.0	5.4	8.5	0.0	0.0	0.7	0.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	39.6	39.6	44.1	41.7	52.8	7.9	0.0	13.7	7.9	0.0	13.9
LnGrp LOS	D	D	D	D	D	D	A	A	B	A	A	B
Approach Vol, veh/h		330			721			59			105	
Approach Delay, s/veh		42.6			46.0			13.2			11.5	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.5	69.0		31.5	19.5	69.0		31.5				
Change Period (Y+Rc), s	* 4.6	5.2		* 5.3	* 4.6	5.2		* 5.3				
Max Green Setting (Gmax), s	* 12	63.8		* 29	* 12	63.8		* 29				
Max Q Clear Time (g_c+I1), s	2.0	4.3		21.4	2.0	3.7		25.8				
Green Ext Time (p_c), s	0.0	0.3		1.5	0.0	0.2		0.4				

Intersection Summary

HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D

Notes

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

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

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	71	633	978	46	33	46	97
Future Volume (vph)	71	633	978	46	33	46	97
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.44	0.36	0.59	0.08	0.06	0.08	0.17
Control Delay	26.9	16.9	20.6	26.0	8.2	26.0	9.8
Queue Delay	0.0	0.0	3.2	0.0	0.0	0.0	0.0
Total Delay	26.9	16.9	23.8	26.0	8.2	26.0	9.8
LOS	C	B	C	C	A	C	A
Approach Delay		17.9	23.8				
Approach LOS		B	C				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 20.8

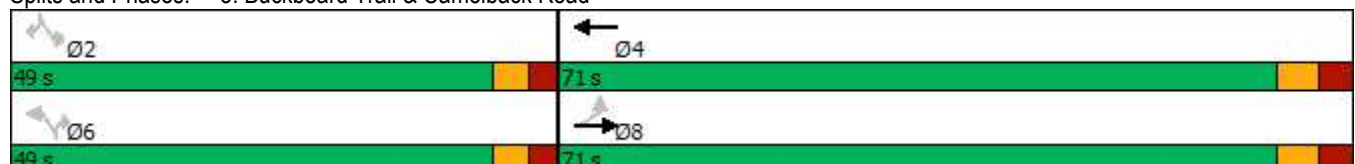
Intersection LOS: C

Intersection Capacity Utilization 58.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	633	0	0	978	42	46	0	33	46	0	97
Future Volume (vph)	71	633	0	0	978	42	46	0	33	46	0	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3517		1770		1583	1770		1583
Flt Permitted	0.18	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	330	3539			3517		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	688	0	0	1063	46	50	0	36	50	0	105
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	23	0	0	49
Lane Group Flow (vph)	77	688	0	0	1107	0	50	0	13	50	0	56
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	176	1887			1875		634		567	634		567
v/s Ratio Prot		0.19			c0.31							
v/s Ratio Perm	0.23						0.03		0.01	0.03		c0.04
v/c Ratio	0.44	0.36			0.59		0.08		0.02	0.08		0.10
Uniform Delay, d1	17.0	16.2			19.1		25.4		24.9	25.4		25.6
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	7.7	0.5			1.4		0.2		0.1	0.2		0.3
Delay (s)	24.8	16.8			20.4		25.7		25.0	25.7		25.9
Level of Service	C	B			C		C		C	C		C
Approach Delay (s)		17.6			20.4		25.4					25.9
Approach LOS		B			C		C					C
Intersection Summary												
HCM 2000 Control Delay		20.0			HCM 2000 Level of Service		C					
HCM 2000 Volume to Capacity ratio		0.39										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)		13.0					
Intersection Capacity Utilization		58.4%			ICU Level of Service		B					
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020

	→	←
Lane Group	EBT	WBT
Lane Configurations	↑↑	↑↑
Traffic Volume (vph)	712	1147
Future Volume (vph)	712	1147
Turn Type	NA	NA
Protected Phases	4	8
Permitted Phases		
Detector Phase	4	8
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	22.5	22.5
Total Split (s)	22.5	22.5
Total Split (%)	100.0%	100.0%
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	4.5	4.5
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)	19.4	19.4
Actuated g/C Ratio	1.00	1.00
v/c Ratio	0.22	0.35
Control Delay	0.1	0.3
Queue Delay	0.0	0.0
Total Delay	0.1	0.3
LOS	A	A
Approach Delay	0.1	0.3
Approach LOS	A	A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 19.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 0.2

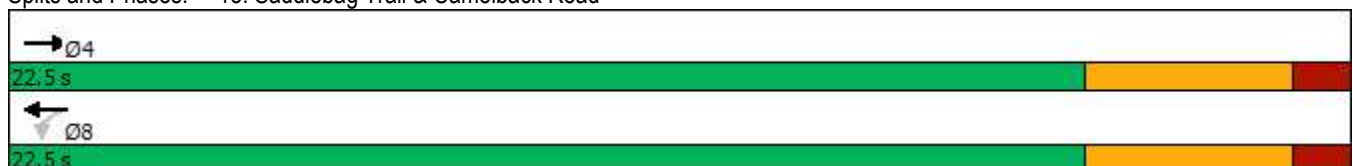
Intersection LOS: A

Intersection Capacity Utilization 35.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	712	0	0	1147	0	0
Future Volume (veh/h)	712	0	0	1147	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	774	0	0	1247		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2565	0	445	2565		
Arrive On Green	0.72	0.00	0.00	0.72		
Sat Flow, veh/h	3741	0	696	3647		
Grp Volume(v), veh/h	774	0	0	1247		
Grp Sat Flow(s),veh/h/ln	1777	0	696	1777		
Q Serve(g_s), s	1.3	0.0	0.0	2.4		
Cycle Q Clear(g_c), s	1.3	0.0	0.0	2.4		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2565	0	445	2565		
V/C Ratio(X)	0.30	0.00	0.00	0.49		
Avail Cap(c_a), veh/h	3953	0	717	3953		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	0.8	0.0	0.0	1.0		
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.0	0.0	1.1		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	774			1247		
Approach Delay, s/veh	0.9			1.1		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				16.2		16.2
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+l1), s				3.3		4.4
Green Ext Time (p_c), s				4.5		7.3
Intersection Summary						
HCM 6th Ctrl Delay			1.0			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	9	38	4	2	3	15	49	4	5	98	15
Future Vol, veh/h	5	9	38	4	2	3	15	49	4	5	98	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	10	41	4	2	3	16	53	4	5	107	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	51	0	0	114	54	31	81	73	4
Stage 1	-	-	-	-	-	-	41	41	-	12	12	-
Stage 2	-	-	-	-	-	-	73	13	-	69	61	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1616	-	-	1555	-	-	863	837	1043	907	817	1080
Stage 1	-	-	-	-	-	-	974	861	-	1009	886	-
Stage 2	-	-	-	-	-	-	937	885	-	941	844	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1616	-	-	1555	-	-	761	832	1043	855	812	1080
Mov Cap-2 Maneuver	-	-	-	-	-	-	761	832	-	855	812	-
Stage 1	-	-	-	-	-	-	971	858	-	1006	883	-
Stage 2	-	-	-	-	-	-	809	882	-	876	841	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	3.3	9.8	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	825	1616	-	-	1555	-	-	840
HCM Lane V/C Ratio	0.09	0.003	-	-	0.003	-	-	0.153
HCM Control Delay (s)	9.8	7.2	0	-	7.3	0	-	10.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	624	33	27	1116	9	19	4	27	7	0	13
Future Vol, veh/h	11	624	33	27	1116	9	19	4	27	7	0	13
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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	678	36	29	1213	10	21	4	29	8	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1223	0	0	714	0	0	1385	2001	357	1641	2014	612
Stage 1	-	-	-	-	-	-	720	720	-	1276	1276	-
Stage 2	-	-	-	-	-	-	665	1281	-	365	738	-
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	566	-	-	882	-	-	103	59	639	66	58	436
Stage 1	-	-	-	-	-	-	385	430	-	176	236	-
Stage 2	-	-	-	-	-	-	416	235	-	627	422	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	566	-	-	882	-	-	96	56	639	57	55	436
Mov Cap-2 Maneuver	-	-	-	-	-	-	96	56	-	57	55	-
Stage 1	-	-	-	-	-	-	377	421	-	172	228	-
Stage 2	-	-	-	-	-	-	389	227	-	579	413	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			38.7			37.9		
HCM LOS							E			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	160	566	-	-	882	-	-	131
HCM Lane V/C Ratio	0.34	0.021	-	-	0.033	-	-	0.166
HCM Control Delay (s)	38.7	11.5	-	-	9.2	-	-	37.9
HCM Lane LOS	E	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0.1	-	-	0.6

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	8	5	47	42	18
Future Vol, veh/h	4	8	5	47	42	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	9	5	51	46	20
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	56	0	-	0	48	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	17	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1549	-	-	-	962	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1006	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1549	-	-	-	959	1043
Mov Cap-2 Maneuver	-	-	-	-	959	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1006	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.4	0		8.9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1549	-	-	-	983	
HCM Lane V/C Ratio	0.003	-	-	-	0.066	
HCM Control Delay (s)	7.3	0	-	-	8.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	48	483	122	989	108	186	65	27	285	64
Future Volume (vph)	48	483	122	989	108	186	65	27	285	64
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	26.0	64.0	15.0	53.0	19.0	38.4	38.4	22.6	42.0	42.0
Total Split (%)	18.6%	45.7%	10.7%	37.9%	13.6%	27.4%	27.4%	16.1%	30.0%	30.0%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max
Act Effct Green (s)	31.1	25.0	51.2	42.0	48.7	33.2	33.2	53.9	36.8	36.8
Actuated g/C Ratio	0.26	0.21	0.43	0.36	0.41	0.28	0.28	0.46	0.31	0.31
v/c Ratio	0.34	0.83	0.32	0.90	0.28	0.39	0.13	0.05	0.53	0.12
Control Delay	32.0	53.8	31.1	46.4	24.9	39.1	0.5	20.6	39.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	53.8	31.1	46.4	24.9	39.1	0.5	20.6	39.7	0.4
LOS	C	D	C	D	C	D	A	C	D	A
Approach Delay		52.1		44.8		27.8			31.6	
Approach LOS		D		D		C			C	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 118

Natural Cycle: 125

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 42.2

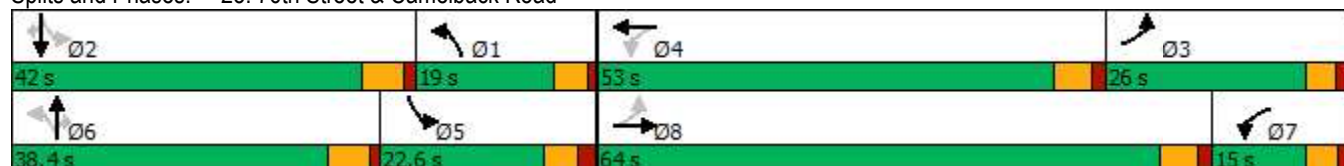
Intersection LOS: D

Intersection Capacity Utilization 71.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road



25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	483	84	122	989	43	108	186	65	27	285	64
Future Volume (veh/h)	48	483	84	122	989	43	108	186	65	27	285	64
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	52	525	91	133	1075	47	117	202	71	29	310	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	598	103	382	1162	51	426	539	457	551	599	507
Arrive On Green	0.04	0.20	0.20	0.17	0.34	0.34	0.12	0.29	0.29	0.15	0.32	0.32
Sat Flow, veh/h	1781	3030	523	1781	3468	152	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	52	307	309	133	551	571	117	202	71	29	310	70
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1781	1777	1843	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.0	19.1	19.3	2.6	34.1	34.1	0.0	9.8	3.8	0.0	15.4	3.6
Cycle Q Clear(g_c), s	0.0	19.1	19.3	2.6	34.1	34.1	0.0	9.8	3.8	0.0	15.4	3.6
Prop In Lane	1.00		0.29	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	351	351	382	595	618	426	539	457	551	599	507
V/C Ratio(X)	0.41	0.88	0.88	0.35	0.92	0.93	0.27	0.37	0.16	0.05	0.52	0.14
Avail Cap(c_a), veh/h	386	913	913	382	740	768	442	539	457	551	599	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	44.4	44.5	39.2	36.5	36.5	34.3	32.4	30.2	24.7	31.6	27.6
Incr Delay (d2), s/veh	0.8	2.7	2.9	0.2	13.9	13.6	0.1	2.0	0.7	0.2	3.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.5	8.6	3.2	16.6	17.2	2.7	4.7	1.5	0.5	7.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	47.2	47.4	39.4	50.5	50.1	34.5	34.4	31.0	24.9	34.8	28.2
LnGrp LOS	D	D	D	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h	668			1255			390			409		
Approach Delay, s/veh	47.8			49.1			33.8			33.0		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	42.0	9.3	43.7	22.6	38.4	25.1	27.9				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 14	* 37	20.7	* 48	* 17	32.9	* 9.8	* 59				
Max Q Clear Time (g_c+l1), s	2.0	17.4	2.0	36.1	2.0	11.8	4.6	21.3				
Green Ext Time (p_c), s	0.0	0.6	0.0	2.2	0.0	0.4	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay	44.2											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

1: Scottsdale Road & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	271	935	265	172	648	377	1053	322	751	252
Future Volume (vph)	271	935	265	172	648	377	1053	322	751	252
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	25.0	40.0	40.0	27.0	42.0	18.0	29.0	24.0	35.0	35.0
Total Split (%)	20.8%	33.3%	33.3%	22.5%	35.0%	15.0%	24.2%	20.0%	29.2%	29.2%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effect Green (s)	14.6	34.5	34.5	17.9	37.8	13.0	30.2	16.0	33.4	33.4
Actuated g/C Ratio	0.12	0.29	0.29	0.15	0.32	0.11	0.25	0.13	0.28	0.28
v/c Ratio	0.71	1.00	0.50	0.71	0.89	1.11	1.05	0.77	0.83	0.49
Control Delay	59.9	71.0	17.6	62.7	48.2	127.1	83.0	61.6	49.9	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	71.0	17.6	62.7	48.2	127.1	83.0	61.6	49.9	17.9
LOS	E	E	B	E	D	F	F	E	D	B
Approach Delay		59.3			50.5		93.3		46.7	
Approach LOS		E			D		F		D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 40 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 64.5

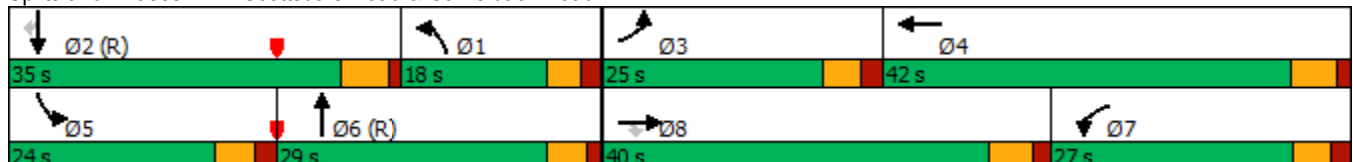
Intersection LOS: E

Intersection Capacity Utilization 86.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	935	265	172	648	256	377	1053	173	322	751	252
Future Volume (veh/h)	271	935	265	172	648	256	377	1053	173	322	751	252
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	295	1016	288	187	704	278	410	1145	188	350	816	274
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	1022	456	215	763	301	576	1295	213	410	877	391
Arrive On Green	0.10	0.29	0.29	0.12	0.31	0.31	0.17	0.29	0.29	0.12	0.25	0.25
Sat Flow, veh/h	3456	3554	1585	1781	2488	982	3456	4419	725	3456	3554	1585
Grp Volume(v), veh/h	295	1016	288	187	503	479	410	882	451	350	816	274
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1694	1728	1702	1740	1728	1777	1585
Q Serve(g_s), s	10.0	34.2	19.0	12.4	32.8	32.8	13.5	29.7	29.7	11.9	26.9	14.1
Cycle Q Clear(g_c), s	10.0	34.2	19.0	12.4	32.8	32.8	13.5	29.7	29.7	11.9	26.9	14.1
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	357	1022	456	215	545	519	576	998	510	410	877	391
V/C Ratio(X)	0.83	0.99	0.63	0.87	0.92	0.92	0.71	0.88	0.88	0.85	0.93	0.70
Avail Cap(c_a), veh/h	567	1022	456	322	545	519	576	998	510	530	877	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	42.7	37.2	51.8	40.2	40.2	47.3	40.5	40.5	51.9	44.2	22.8
Incr Delay (d2), s/veh	2.7	26.7	2.2	10.7	21.1	21.8	3.5	11.3	19.6	8.5	17.6	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	18.5	7.5	6.1	17.2	16.5	6.1	13.9	15.4	5.6	13.9	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	69.4	39.4	62.6	61.3	62.0	50.8	51.8	60.1	60.4	61.8	32.9
LnGrp LOS	E	E	D	E	E	E	D	D	E	E	E	C
Approach Vol, veh/h	1599				1169				1743			
Approach Delay, s/veh	61.4				61.8				53.7			
Approach LOS	E				E				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	35.0	17.7	42.3	19.8	40.2	20.0	40.0				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	13.0	29.6	* 20	36.5	18.4	* 24	21.7	* 35				
Max Q Clear Time (g_c+I1), s	15.5	28.9	12.0	34.8	13.9	31.7	14.4	36.2				
Green Ext Time (p_c), s	0.0	0.4	0.4	0.8	0.3	0.0	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	57.9											
HCM 6th LOS	E											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2: Scottsdale Road & Shoeman Lane

07/29/2020

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	251	1385	22	41	1147
Future Vol, veh/h	0	251	1385	22	41	1147
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	-	-	120	-
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	273	1505	24	45	1247
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	765	0	0	1529	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*602	-	-	*757	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*602	-	-	*757	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.8	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	602	* 757	-	
HCM Lane V/C Ratio	-	-	0.453	0.059	-	
HCM Control Delay (s)	-	-	15.8	10.1	-	
HCM Lane LOS	-	-	C	B	-	
HCM 95th %tile Q(veh)	-	-	2.4	0.2	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	100	35	116	49	569	14	968	295	885
Future Volume (vph)	100	35	116	49	569	14	968	295	885
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	64.0	64.0	64.0	64.0	64.0	37.0	37.0	19.0	56.0
Total Split (%)	53.3%	53.3%	53.3%	53.3%	53.3%	30.8%	30.8%	15.8%	46.7%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		34.7	34.5	34.5	34.5	60.5	60.5	75.3	75.7
Actuated g/C Ratio		0.29	0.29	0.29	0.29	0.50	0.50	0.63	0.63
v/c Ratio		0.43	0.37	0.10	0.89	0.06	0.61	0.55	0.50
Control Delay		32.1	25.6	16.2	48.1	19.4	21.1	12.7	9.3
Queue Delay		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay		32.1	25.6	16.2	48.1	19.4	21.1	12.7	9.3
LOS		C	C	B	D	B	C	B	A
Approach Delay		32.1		42.5			21.1		10.1
Approach LOS		C		D			C		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 61 (51%), Referenced to phase 2:SBTL and 6:NBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 22.0

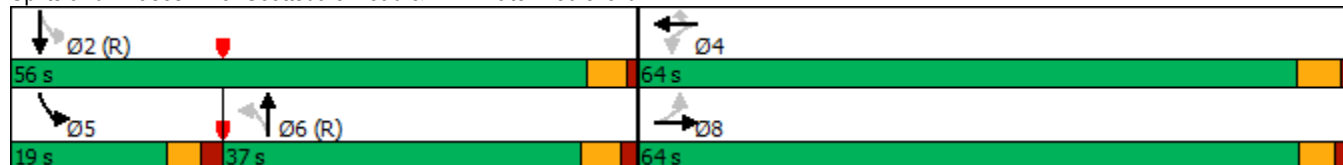
Intersection LOS: C

Intersection Capacity Utilization 85.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	35	31	116	49	569	14	968	32	295	885	126
Future Volume (veh/h)	100	35	31	116	49	569	14	968	32	295	885	126
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	109	38	34	126	53	618	15	1052	35	321	962	137
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	279	97	76	570	748	634	265	1401	47	623	1605	228
Arrive On Green	0.40	0.40	0.40	0.67	0.67	0.67	0.80	0.80	0.80	0.15	1.00	1.00
Sat Flow, veh/h	576	241	189	1328	1870	1585	513	3509	117	3456	3123	445
Grp Volume(v), veh/h	181	0	0	126	53	618	15	533	554	321	547	552
Grp Sat Flow(s),veh/h/ln	1007	0	0	1328	1870	1585	513	1777	1849	1728	1777	1790
Q Serve(g_s), s	13.5	0.0	0.0	0.0	1.2	44.5	0.8	18.1	18.1	6.4	0.0	0.0
Cycle Q Clear(g_c), s	14.9	0.0	0.0	5.3	1.2	44.5	0.8	18.1	18.1	6.4	0.0	0.0
Prop In Lane	0.60		0.19	1.00		1.00	1.00		0.06	1.00		0.25
Lane Grp Cap(c), veh/h	451	0	0	570	748	634	265	709	738	623	913	920
V/C Ratio(X)	0.40	0.00	0.00	0.22	0.07	0.97	0.06	0.75	0.75	0.52	0.60	0.60
Avail Cap(c_a), veh/h	541	0	0	689	916	777	265	709	738	773	913	920
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.57	0.57	0.57	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	0.0	0.0	12.8	12.1	19.3	7.3	9.1	9.1	18.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	16.0	0.4	6.3	6.1	0.2	2.9	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.0	1.3	0.5	13.2	0.1	4.6	4.8	2.3	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	0.0	0.0	12.9	12.1	35.4	7.7	15.4	15.2	18.4	2.9	2.9
LnGrp LOS	C	A	A	B	B	D	A	B	B	B	A	A
Approach Vol, veh/h		181			797			1102			1420	
Approach Delay, s/veh		25.9			30.3			15.2			6.4	
Approach LOS		C			C			B			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		66.8		53.2	13.8	53.0		53.2				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 51		* 59	14.0	31.9		* 59				
Max Q Clear Time (g_c+I1), s		2.0		46.5	8.4	20.1		16.9				
Green Ext Time (p_c), s		1.3		1.5	0.3	1.2		1.2				
Intersection Summary												
HCM 6th Ctrl Delay				15.6								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

4: Scottsdale Road & 5th Avenue

07/29/2020

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	59	27	69	25	68	921	41	917
Future Volume (vph)	59	27	69	25	68	921	41	917
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		9.3	9.3	9.3	41.3	35.8	41.3	35.8
Actuated g/C Ratio		0.16	0.16	0.16	0.69	0.60	0.69	0.60
v/c Ratio		0.66	0.48	0.18	0.20	0.49	0.11	0.53
Control Delay		24.1	42.3	22.0	6.1	9.2	4.9	12.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		24.1	42.3	22.0	6.1	9.2	4.9	12.6
LOS		C	D	C	A	A	A	B
Approach Delay		24.1		33.9		9.0		12.3
Approach LOS		C		C		A		B

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 12.9

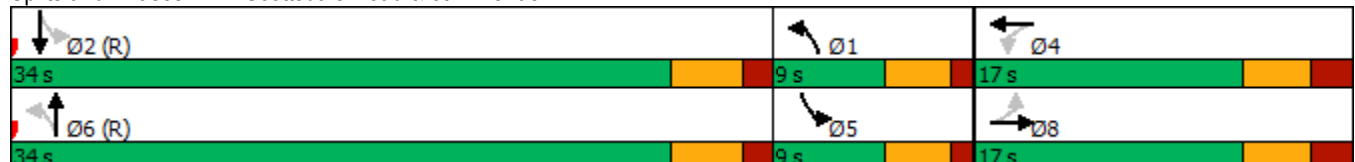
Intersection LOS: B

Intersection Capacity Utilization 61.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	27	104	69	25	24	68	921	19	41	917	97
Future Volume (veh/h)	59	27	104	69	25	24	68	921	19	41	917	97
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	64	29	113	75	27	26	74	1001	21	45	997	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	53	139	300	142	136	581	1750	37	498	1595	168
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.49	0.49	0.24	0.98	0.98
Sat Flow, veh/h	381	328	861	1246	876	843	1781	3559	75	1781	3244	342
Grp Volume(v), veh/h	206	0	0	75	0	53	74	500	522	45	546	556
Grp Sat Flow(s),veh/h/ln	1569	0	0	1246	0	1719	1781	1777	1857	1781	1777	1809
Q Serve(g_s), s	5.6	0.0	0.0	0.0	0.0	1.6	0.0	11.9	11.9	0.0	0.8	0.8
Cycle Q Clear(g_c), s	7.5	0.0	0.0	3.8	0.0	1.6	0.0	11.9	11.9	0.0	0.8	0.8
Prop In Lane	0.31		0.55	1.00		0.49	1.00		0.04	1.00		0.19
Lane Grp Cap(c), veh/h	332	0	0	300	0	278	581	874	913	498	874	889
V/C Ratio(X)	0.62	0.00	0.00	0.25	0.00	0.19	0.13	0.57	0.57	0.09	0.62	0.63
Avail Cap(c_a), veh/h	391	0	0	347	0	344	581	874	913	498	874	889
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	24.2	0.0	0.0	22.7	0.0	21.8	5.6	10.8	10.8	9.5	0.3	0.3
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.2	0.0	0.1	0.0	2.7	2.6	0.0	2.9	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	0.9	0.0	0.6	0.3	4.5	4.7	0.3	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	0.0	0.0	22.8	0.0	21.9	5.6	13.5	13.4	9.6	3.2	3.1
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		206			128			1096			1147	
Approach Delay, s/veh		25.3			22.4			12.9			3.4	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	34.0		14.7	11.3	34.0		14.7				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.8		5.8	2.0	13.9		9.5				
Green Ext Time (p_c), s	0.0	2.7		0.1	0.0	2.3		0.2				
Intersection Summary												
HCM 6th Ctrl Delay				10.2								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Intersection						
Int Delay, s/veh	23.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	1455	41	46	980	104	126
Future Vol, veh/h	1455	41	46	980	104	126
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1582	45	50	1065	113	137
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1627	0	2238	814
Stage 1	-	-	-	-	1605	-
Stage 2	-	-	-	-	633	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	396	-	~ 36	321
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	396	-	~ 31	321
Mov Cap-2 Maneuver	-	-	-	-	~ 112	-
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	429	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		275.7	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	174	-	-	396	-	
HCM Lane V/C Ratio	1.437	-	-	0.126	-	
HCM Control Delay (s)	275.7	-	-	15.4	-	
HCM Lane LOS	F	-	-	C	-	
HCM 95th %tile Q(veh)	15.5	-	-	0.4	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	99	93	166	79	60	35
Future Vol, veh/h	99	93	166	79	60	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	101	180	86	65	38
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	266	0	-	0	540	223
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	317	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1298	-	-	-	503	817
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1298	-	-	-	459	817
Mov Cap-2 Maneuver	-	-	-	-	459	-
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	738	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.1	0		13.1		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1298	-	-	-	547	
HCM Lane V/C Ratio	0.083	-	-	-	0.189	
HCM Control Delay (s)	8	0	-	-	13.1	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	49	313	55	608	110	25	46	186	83
Future Volume (vph)	49	313	55	608	110	25	46	186	83
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	53.0	53.0	53.0	53.0	53.0	25.0	42.0	25.0	42.0
Total Split (%)	44.2%	44.2%	44.2%	44.2%	44.2%	20.8%	35.0%	20.8%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)	28.6	28.6	28.6	28.6	28.6	76.9	71.2	78.7	75.0
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24	0.64	0.59	0.66	0.62
v/c Ratio	0.72	0.45	0.32	0.78	0.26	0.04	0.09	0.23	0.19
Control Delay	89.8	43.3	40.8	49.4	7.0	6.6	7.3	9.1	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.8	43.3	40.8	49.4	7.0	6.6	7.3	9.1	9.0
LOS	F	D	D	D	A	A	A	A	A
Approach Delay		49.1		42.8			7.1		9.1
Approach LOS		D		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 34.2

Intersection LOS: C

Intersection Capacity Utilization 56.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard

									
Ø2 (R)		Ø1		Ø4		Ø5		Ø8	
42 s		25 s		53 s		25 s		53 s	
									
Ø6 (R)		Ø5		Ø8					
42 s		25 s		53 s					

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	313	32	55	608	110	25	46	43	186	83	105
Future Volume (veh/h)	49	313	32	55	608	110	25	46	43	186	83	105
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	53	340	35	60	661	120	27	50	47	202	90	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	881	90	254	962	429	838	272	256	933	230	291
Arrive On Green	0.36	0.36	0.36	0.27	0.27	0.27	0.30	0.31	0.31	0.30	0.31	0.31
Sat Flow, veh/h	692	3254	333	1008	3554	1585	1781	887	834	1781	750	950
Grp Volume(v), veh/h	53	185	190	60	661	120	27	0	97	202	0	204
Grp Sat Flow(s),veh/h/ln	692	1777	1810	1008	1777	1585	1781	0	1720	1781	0	1699
Q Serve(g_s), s	8.8	9.3	9.4	6.1	20.0	7.2	0.0	0.0	5.0	0.0	0.0	11.3
Cycle Q Clear(g_c), s	28.8	9.3	9.4	15.5	20.0	7.2	0.0	0.0	5.0	0.0	0.0	11.3
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.48	1.00		0.56
Lane Grp Cap(c), veh/h	132	481	490	254	962	429	838	0	528	933	0	521
V/C Ratio(X)	0.40	0.38	0.39	0.24	0.69	0.28	0.03	0.00	0.18	0.22	0.00	0.39
Avail Cap(c_a), veh/h	220	706	720	382	1413	630	838	0	528	933	0	521
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.8	31.0	31.0	41.6	39.2	34.5	14.8	0.0	30.6	13.6	0.0	32.8
Incr Delay (d2), s/veh	0.6	0.2	0.2	0.2	0.3	0.1	0.0	0.0	0.8	0.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.9	4.0	1.5	8.6	2.8	0.4	0.0	2.2	2.9	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	31.1	31.2	41.8	39.5	34.6	14.8	0.0	31.3	13.7	0.0	35.0
LnGrp LOS	D	C	C	D	D	C	B	A	C	B	A	C
Approach Vol, veh/h		428			841			124			406	
Approach Delay, s/veh		33.1			39.0			27.7			24.4	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.2	42.0		37.8	40.2	42.0		37.8				
Change Period (Y+Rc), s	* 4.6	5.2		* 5.3	* 4.6	5.2		* 5.3				
Max Green Setting (Gmax), s	* 20	36.8		* 48	* 20	36.8		* 48				
Max Q Clear Time (g_c+I1), s	2.0	13.3		22.0	2.0	7.0		30.8				
Green Ext Time (p_c), s	0.0	0.8		3.4	0.3	0.4		1.7				
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.

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	↑	←	↑
Traffic Volume (vph)	122	1507	914	126	231	53	104
Future Volume (vph)	122	1507	914	126	231	53	104
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.71	0.87	0.57	0.22	0.43	0.09	0.18
Control Delay	44.6	30.6	20.1	28.0	27.4	26.2	8.4
Queue Delay	0.0	2.1	2.6	0.0	0.0	0.0	0.0
Total Delay	44.6	32.7	22.7	28.0	27.4	26.2	8.4
LOS	D	C	C	C	C	C	A
Approach Delay		33.6	22.7				
Approach LOS		C	C				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 28.5

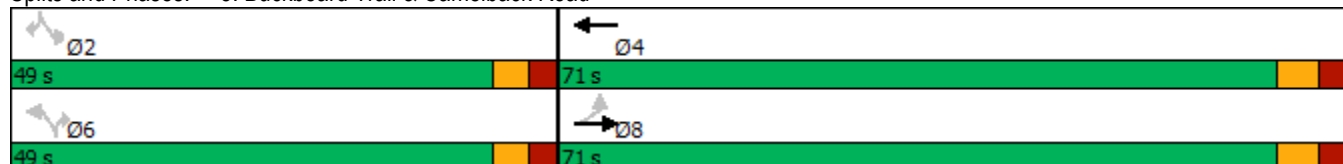
Intersection LOS: C

Intersection Capacity Utilization 73.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	1507	0	0	914	70	126	0	231	53	0	104
Future Volume (vph)	122	1507	0	0	914	70	126	0	231	53	0	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3501		1770		1583	1770		1583
Flt Permitted	0.19	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	355	3539			3501		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	133	1638	0	0	993	76	137	0	251	58	0	113
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	23	0	0	59
Lane Group Flow (vph)	133	1638	0	0	1064	0	137	0	228	58	0	54
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	189	1887			1867		634		567	634		567
v/s Ratio Prot		c0.46			0.30							
v/s Ratio Perm	0.38						0.08		c0.14	0.03		0.03
v/c Ratio	0.70	0.87			0.57		0.22		0.40	0.09		0.10
Uniform Delay, d1	20.9	24.3			18.8		26.8		28.9	25.5		25.6
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	19.7	5.7			1.3		0.8		2.1	0.3		0.3
Delay (s)	40.6	30.1			20.0		27.6		31.0	25.8		25.9
Level of Service	D	C			C		C		C	C		C
Approach Delay (s)		30.8			20.0			29.8			25.9	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM 2000 Control Delay		27.1			HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio		0.68										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				13.0			
Intersection Capacity Utilization		73.5%			ICU Level of Service				D			
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBT
Lane Configurations	↑↑	↑↑
Traffic Volume (vph)	1790	836
Future Volume (vph)	1790	836
Turn Type	NA	NA
Protected Phases	4	8
Permitted Phases		
Detector Phase	4	8
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	22.5	22.5
Total Split (s)	22.5	22.5
Total Split (%)	100.0%	100.0%
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	4.5	4.5
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)	22.5	22.5
Actuated g/C Ratio	1.00	1.00
v/c Ratio	0.55	0.26
Control Delay	0.6	0.2
Queue Delay	0.0	0.0
Total Delay	0.6	0.2
LOS	A	A
Approach Delay	0.6	0.2
Approach LOS	A	A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 22.5

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 0.5

Intersection LOS: A

Intersection Capacity Utilization 53.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	1790	0	0	836	0	0
Future Volume (veh/h)	1790	0	0	836	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	1946	0	0	909		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2779	0	349	2779		
Arrive On Green	0.78	0.00	0.00	0.78		
Sat Flow, veh/h	3741	0	227	3647		
Grp Volume(v), veh/h	1946	0	0	909		
Grp Sat Flow(s),veh/h/ln	1777	0	227	1777		
Q Serve(g_s), s	5.4	0.0	0.0	1.5		
Cycle Q Clear(g_c), s	5.4	0.0	0.0	1.5		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2779	0	349	2779		
V/C Ratio(X)	0.70	0.00	0.00	0.33		
Avail Cap(c_a), veh/h	3099	0	369	3099		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	1.1	0.0	0.0	0.7		
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.7	0.0	0.0	0.7		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	1946			909		
Approach Delay, s/veh	1.7			0.7		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				20.6		20.6
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				7.4		3.5
Green Ext Time (p_c), s				8.7		5.4
Intersection Summary						
HCM 6th Ctrl Delay			1.4			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	13	30	11	15	13	30	165	20	4	66	14
Future Vol, veh/h	14	13	30	11	15	13	30	165	20	4	66	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	14	33	12	16	14	33	179	22	4	72	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	30	0	0	47	0	0	152	115	31	208	124	23
Stage 1	-	-	-	-	-	-	61	61	-	47	47	-
Stage 2	-	-	-	-	-	-	91	54	-	161	77	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1583	-	-	1560	-	-	815	775	1043	749	766	1054
Stage 1	-	-	-	-	-	-	950	844	-	967	856	-
Stage 2	-	-	-	-	-	-	916	850	-	841	831	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1583	-	-	1560	-	-	734	761	1043	592	752	1054
Mov Cap-2 Maneuver	-	-	-	-	-	-	734	761	-	592	752	-
Stage 1	-	-	-	-	-	-	941	836	-	957	849	-
Stage 2	-	-	-	-	-	-	820	843	-	640	823	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	2.1	11.6	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	777	1583	-	-	1560	-	-	779
HCM Lane V/C Ratio	0.301	0.01	-	-	0.008	-	-	0.117
HCM Control Delay (s)	11.6	7.3	0	-	7.3	0	-	10.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	19.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	1439	55	49	806	13	25	3	81	5	0	7
Future Vol, veh/h	15	1439	55	49	806	13	25	3	81	5	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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	1564	60	53	876	14	27	3	88	5	0	8
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	890	0	0	1624	0	0	2170	2622	812	1805	2645	445
Stage 1	-	-	-	-	-	-	1626	1626	-	989	989	-
Stage 2	-	-	-	-	-	-	544	996	-	816	1656	-
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	757	-	-	397	-	-	~ 26	24	322	50	23	561
Stage 1	-	-	-	-	-	-	106	159	-	265	323	-
Stage 2	-	-	-	-	-	-	491	320	-	337	154	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	757	-	-	397	-	-	~ 23	20	322	28	20	561
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 23	20	-	28	20	-
Stage 1	-	-	-	-	-	-	104	156	-	259	280	-
Stage 2	-	-	-	-	-	-	420	277	-	235	151	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.9			\$ 430.4			76.5		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	73	757	-	-	397	-	-	63				
HCM Lane V/C Ratio	1.623	0.022	-	-	0.134	-	-	0.207				
HCM Control Delay (s)	\$ 430.4	9.9	-	-	15.5	-	-	76.5				
HCM Lane LOS	F	A	-	-	C	-	-	F				
HCM 95th %tile Q(veh)	10.1	0.1	-	-	0.5	-	-	0.7				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	19	22	97	59	19
Future Vol, veh/h	10	19	22	97	59	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	21	24	105	64	21
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	129	0	-	0	120	77
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1457	-	-	-	876	984
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1457	-	-	-	869	984
Mov Cap-2 Maneuver	-	-	-	-	869	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	979	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.6	0		9.4		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1457	-	-	-	894	
HCM Lane V/C Ratio	0.007	-	-	-	0.095	
HCM Control Delay (s)	7.5	0	-	-	9.4	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	143	1211	169	658	173	353	200	44	366	65
Future Volume (vph)	143	1211	169	658	173	353	200	44	366	65
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	19.3	48.7	19.3	48.7	19.0	33.0	33.0	19.0	33.0	33.0
Total Split (%)	16.1%	40.6%	16.1%	40.6%	15.8%	27.5%	27.5%	15.8%	27.5%	27.5%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max
Act Effect Green (s)	60.3	43.3	42.1	30.0	45.8	29.0	29.0	40.8	27.5	27.5
Actuated g/C Ratio	0.51	0.36	0.35	0.25	0.38	0.24	0.24	0.34	0.23	0.23
v/c Ratio	0.34	1.20	0.78	0.86	0.61	0.85	0.40	0.18	0.93	0.15
Control Delay	31.8	132.9	61.2	52.8	49.4	61.7	7.2	30.7	74.2	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	132.9	61.2	52.8	49.4	61.7	7.2	30.7	74.2	1.5
LOS	C	F	E	D	D	E	A	C	E	A
Approach Delay		123.6		54.4		43.8			60.2	
Approach LOS		F		D		D			E	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 119.2

Natural Cycle: 145

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.20

Intersection Signal Delay: 82.6

Intersection LOS: F

Intersection Capacity Utilization 95.1%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road

Ø2	Ø1	Ø4	Ø3
33 s	19 s	48.7 s	19.3 s
Ø6	Ø5	Ø8	Ø7
33 s	19 s	48.7 s	19.3 s

25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1211	193	169	658	49	173	353	200	44	366	65
Future Volume (veh/h)	143	1211	193	169	658	49	173	353	200	44	366	65
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	155	1316	210	184	715	53	188	384	217	48	398	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	1150	182	212	795	59	298	445	377	302	445	377
Arrive On Green	0.22	0.37	0.37	0.08	0.24	0.24	0.12	0.24	0.24	0.12	0.24	0.24
Sat Flow, veh/h	1781	3074	486	1781	3354	248	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	155	756	770	184	379	389	188	384	217	48	398	71
Grp Sat Flow(s),veh/h/ln	1781	1777	1783	1781	1777	1826	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.5	43.3	43.3	7.7	23.9	23.9	5.4	22.8	14.0	0.0	23.8	4.1
Cycle Q Clear(g_c), s	3.5	43.3	43.3	7.7	23.9	23.9	5.4	22.8	14.0	0.0	23.8	4.1
Prop In Lane	1.00		0.27	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	665	667	212	421	433	298	445	377	302	445	377
V/C Ratio(X)	0.33	1.14	1.15	0.87	0.90	0.90	0.63	0.86	0.58	0.16	0.90	0.19
Avail Cap(c_a), veh/h	464	665	667	279	663	682	313	445	377	302	445	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	36.2	36.2	50.8	42.8	42.8	46.0	42.3	39.0	43.6	42.7	35.2
Incr Delay (d2), s/veh	0.2	79.1	85.8	16.4	6.9	6.9	2.7	19.5	6.3	1.1	23.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	32.7	34.0	6.1	11.1	11.4	5.2	12.8	6.0	1.3	13.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	115.3	122.0	67.2	49.7	49.7	48.7	61.8	45.2	44.7	65.9	36.3
LnGrp LOS	D	F	F	E	D	D	D	E	D	D	E	D
Approach Vol, veh/h		1681			952			789			517	
Approach Delay, s/veh		111.0			53.1			54.1			59.9	
Approach LOS		F			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	33.0	30.8	32.9	19.0	33.0	15.0	48.7				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 14	* 28	14.0	* 43	* 13	27.5	* 14	* 43				
Max Q Clear Time (g_c+I1), s	7.4	25.8	5.5	25.9	2.0	24.8	9.7	45.3				
Green Ext Time (p_c), s	0.0	0.2	0.0	1.5	0.0	0.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			78.9									
HCM 6th LOS			E									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	↰	↗↗	↗↗	↰	↗	↰	↗
Traffic Volume (vph)	38	822	419	191	317	19	32
Future Volume (vph)	38	822	419	191	317	19	32
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.09	0.47	0.26	0.33	0.54	0.03	0.06
Control Delay	14.5	18.5	15.3	29.8	23.0	25.3	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	18.5	15.3	29.8	23.0	25.3	8.1
LOS	B	B	B	C	C	C	A
Approach Delay		18.3	15.3				
Approach LOS		B	B				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 19.5

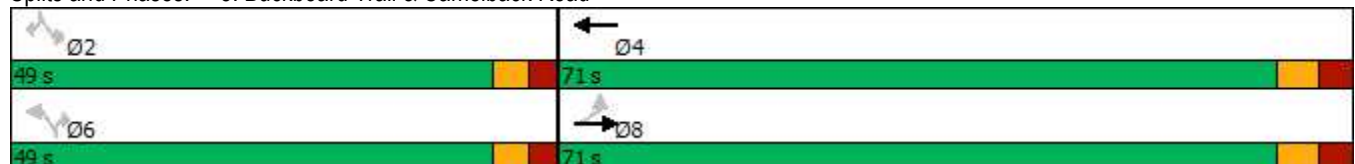
Intersection LOS: B

Intersection Capacity Utilization 59.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	822	0	0	419	23	191	0	317	19	0	32
Future Volume (vph)	38	822	0	0	419	23	191	0	317	19	0	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3512		1770		1583	1770		1583
Flt Permitted	0.46	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	860	3539			3512		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	893	0	0	455	25	208	0	345	21	0	35
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	76	0	0	22
Lane Group Flow (vph)	41	893	0	0	477	0	208	0	269	21	0	13
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	458	1887			1873		634		567	634		567
v/s Ratio Prot		c0.25			0.14							
v/s Ratio Perm	0.05						0.12		c0.17	0.01		0.01
v/c Ratio	0.09	0.47			0.25		0.33		0.47	0.03		0.02
Uniform Delay, d1	13.7	17.5			15.1		28.0		29.8	25.0		24.9
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.4	0.9			0.3		1.4		2.8	0.1		0.1
Delay (s)	14.1	18.3			15.4		29.4		32.6	25.1		25.0
Level of Service	B	B			B		C		C	C		C
Approach Delay (s)		18.1			15.4			31.4			25.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay		21.3			HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio		0.47										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				13.0			
Intersection Capacity Utilization		59.9%			ICU Level of Service				B			
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBL	WBT
Lane Configurations	↑↑	↑	↑↑
Traffic Volume (vph)	1116	3	497
Future Volume (vph)	1116	3	497
Turn Type	NA	Perm	NA
Protected Phases	4		8
Permitted Phases		8	
Detector Phase	4	8	8
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	100.0%	100.0%	100.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	None
Act Effct Green (s)	19.3	19.3	19.3
Actuated g/C Ratio	1.00	1.00	1.00
v/c Ratio	0.34	0.01	0.15
Control Delay	0.3	0.0	0.1
Queue Delay	0.0	0.0	0.0
Total Delay	0.3	0.0	0.1
LOS	A	A	A
Approach Delay	0.3		0.1
Approach LOS	A		A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 19.3

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.34

Intersection Signal Delay: 0.2

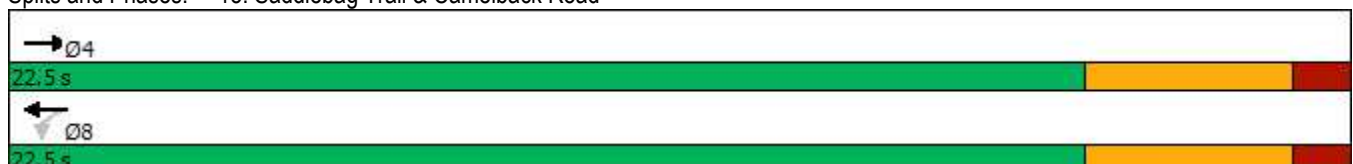
Intersection LOS: A

Intersection Capacity Utilization 34.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑		
Traffic Volume (veh/h)	1116	2	3	497	0	0
Future Volume (veh/h)	1116	2	3	497	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	1213	2	3	540		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2574	4	726	2513		
Arrive On Green	0.71	0.71	0.71	0.71		
Sat Flow, veh/h	3734	6	460	3647		
Grp Volume(v), veh/h	592	623	3	540		
Grp Sat Flow(s), veh/h/ln	1777	1869	460	1777		
Q Serve(g_s), s	2.2	2.2	0.0	0.8		
Cycle Q Clear(g_c), s	2.2	2.2	2.3	0.8		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	1257	1322	726	2513		
V/C Ratio(X)	0.47	0.47	0.00	0.21		
Avail Cap(c_a), veh/h	2081	2189	940	4162		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	1.0	1.0	1.5	0.8		
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.3	1.2	1.5	0.8		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	1215			543		
Approach Delay, s/veh	1.3			0.8		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				15.4		15.4
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				4.2		4.3
Green Ext Time (p_c), s				6.6		3.0
Intersection Summary						
HCM 6th Ctrl Delay			1.1			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	303	11	10	176	3	5	0	19	2	0	2
Future Vol, veh/h	4	303	11	10	176	3	5	0	19	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	329	12	11	191	3	5	0	21	2	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	194	0	0	341	0	0	461	559	171	388	564	97
Stage 1	-	-	-	-	-	-	343	343	-	215	215	-
Stage 2	-	-	-	-	-	-	118	216	-	173	349	-
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	1377	-	-	1215	-	-	484	436	843	545	433	940
Stage 1	-	-	-	-	-	-	646	636	-	767	724	-
Stage 2	-	-	-	-	-	-	874	723	-	812	632	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1377	-	-	1215	-	-	479	431	843	527	428	940
Mov Cap-2 Maneuver	-	-	-	-	-	-	479	431	-	527	428	-
Stage 1	-	-	-	-	-	-	644	634	-	765	717	-
Stage 2	-	-	-	-	-	-	864	716	-	790	630	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			10.1			10.4		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	728	1377	-	-	1215	-	-	675
HCM Lane V/C Ratio	0.036	0.003	-	-	0.009	-	-	0.006
HCM Control Delay (s)	10.1	7.6	-	-	8	-	-	10.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	4	5	21	13	4
Future Vol, veh/h	3	4	5	21	13	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	4	5	23	14	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	28	0	-	0	27	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	10	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1585	-	-	-	988	1062
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	986	1062
Mov Cap-2 Maneuver	-	-	-	-	986	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1013	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.1	0		8.7		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1585	-	-	-	1003	
HCM Lane V/C Ratio	0.002	-	-	-	0.018	
HCM Control Delay (s)	7.3	0	-	-	8.7	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	



Appendix L – Year 2030 Build Capacity Analysis

1: Scottsdale Road & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	 	 			 	 	  	 	 	
Traffic Volume (vph)	185	491	280	150	773	155	481	174	783	220
Future Volume (vph)	185	491	280	150	773	155	481	174	783	220
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	7.0	5.0	7.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	15.0	51.0	51.0	14.0	50.0	15.0	35.0	20.0	40.0	40.0
Total Split (%)	12.5%	42.5%	42.5%	11.7%	41.7%	12.5%	29.2%	16.7%	33.3%	33.3%
Yellow Time (s)	3.3	4.0	4.0	3.3	4.0	3.0	3.6	3.6	4.4	4.4
All-Red Time (s)	2.0	1.5	1.5	2.0	1.5	2.0	1.4	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.5	5.5	5.3	5.5	5.0	5.0	5.6	5.4	5.4
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	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	None	C-Max	C-Max
Act Effct Green (s)	9.4	24.1	24.1	26.1	40.8	10.0	37.5	11.0	38.6	38.6
Actuated g/C Ratio	0.08	0.20	0.20	0.22	0.34	0.08	0.31	0.09	0.32	0.32
v/c Ratio	0.75	0.75	0.59	0.42	0.89	0.59	0.46	0.60	0.75	0.38
Control Delay	71.9	51.8	13.3	44.8	46.1	61.6	30.9	60.4	42.1	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.9	51.8	13.3	44.8	46.1	61.6	30.9	60.4	42.1	12.8
LOS	E	D	B	D	D	E	C	E	D	B
Approach Delay		44.4			45.9		36.7		39.3	
Approach LOS		D			D		D		D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 99 (83%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 41.8

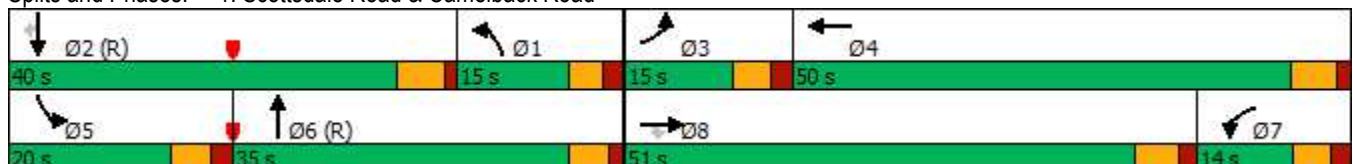
Intersection LOS: D

Intersection Capacity Utilization 76.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	491	280	150	773	193	155	481	183	174	783	220
Future Volume (veh/h)	185	491	280	150	773	193	155	481	183	174	783	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	201	534	304	163	840	210	168	523	199	189	851	239
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	796	355	313	922	231	461	1281	472	248	1025	457
Arrive On Green	0.07	0.22	0.22	0.18	0.33	0.33	0.18	0.46	0.46	0.07	0.29	0.29
Sat Flow, veh/h	3456	3554	1585	1781	2817	704	3456	3675	1355	3456	3554	1585
Grp Volume(v), veh/h	201	534	304	163	530	520	168	483	239	189	851	239
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1744	1728	1702	1626	1728	1777	1585
Q Serve(g_s), s	6.9	16.5	22.1	10.0	34.3	34.3	5.1	11.3	11.7	6.4	26.9	11.7
Cycle Q Clear(g_c), s	6.9	16.5	22.1	10.0	34.3	34.3	5.1	11.3	11.7	6.4	26.9	11.7
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	256	796	355	313	582	571	461	1186	567	248	1025	457
V/C Ratio(X)	0.79	0.67	0.86	0.52	0.91	0.91	0.36	0.41	0.42	0.76	0.83	0.52
Avail Cap(c_a), veh/h	279	1347	601	313	659	647	461	1186	567	415	1025	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	42.5	44.7	44.9	38.7	38.7	44.9	24.0	24.1	54.7	40.0	21.3
Incr Delay (d2), s/veh	11.2	0.4	2.6	0.7	14.7	15.0	0.2	1.0	2.3	1.9	7.8	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	7.2	8.8	4.4	17.0	16.7	2.2	4.4	4.6	2.9	12.8	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	42.9	47.3	45.6	53.4	53.7	45.0	25.0	26.4	56.6	47.8	25.5
LnGrp LOS	E	D	D	D	D	D	D	C	C	E	D	C
Approach Vol, veh/h	1039			1213			890			1279		
Approach Delay, s/veh	48.6			52.5			29.2			44.9		
Approach LOS	D			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	40.0	14.2	44.8	14.2	46.8	26.6	32.4				
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	10.0	34.6	* 9.7	44.5	14.4	* 30	8.7	* 46				
Max Q Clear Time (g_c+I1), s	7.1	28.9	8.9	36.3	8.4	13.7	12.0	24.1				
Green Ext Time (p_c), s	0.1	2.4	0.0	3.0	0.2	3.0	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay	44.7											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

2: Scottsdale Road & Shoeman Lane

07/29/2020

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	91	724	121	263	948
Future Vol, veh/h	0	91	724	121	263	948
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	-	-	120	-
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	99	787	132	286	1030
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	460	0	0	919	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*756	-	-	806	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*756	-	-	806	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.5	0		2.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	756	806	-	
HCM Lane V/C Ratio	-	-	0.131	0.355	-	
HCM Control Delay (s)	-	-	10.5	11.9	-	
HCM Lane LOS	-	-	B	B	-	
HCM 95th %tile Q(veh)	-	-	0.4	1.6	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	47	19	18	49	379	18	544	262	574
Future Volume (vph)	47	19	18	49	379	18	544	262	574
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	44.0	44.0	44.0	44.0	44.0	54.0	54.0	22.0	76.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	45.0%	45.0%	18.3%	63.3%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		12.2	12.0	12.0	12.0	86.1	86.1	97.8	98.2
Actuated g/C Ratio		0.10	0.10	0.10	0.10	0.72	0.72	0.82	0.82
v/c Ratio		0.59	0.16	0.28	0.79	0.04	0.24	0.23	0.26
Control Delay		57.5	12.9	13.9	33.2	4.9	5.3	1.3	1.0
Queue Delay		0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay		57.5	12.9	13.9	34.4	4.9	5.3	1.3	1.0
LOS		E	B	B	C	A	A	A	A
Approach Delay		57.5		31.3			5.3		1.1
Approach LOS		E		C			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 93 (78%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 11.2

Intersection LOS: B

Intersection Capacity Utilization 57.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	19	20	18	49	379	18	544	19	262	574	105
Future Volume (veh/h)	47	19	20	18	49	379	18	544	19	262	574	105
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	51	21	22	20	53	412	20	591	21	285	624	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	87	76	428	510	432	452	1905	68	1167	1926	351
Arrive On Green	0.27	0.27	0.27	0.46	0.46	0.46	1.00	1.00	1.00	0.11	1.00	1.00
Sat Flow, veh/h	599	317	280	1364	1870	1585	720	3501	124	3456	3001	547
Grp Volume(v), veh/h	94	0	0	20	53	412	20	300	312	285	369	369
Grp Sat Flow(s),veh/h/ln	1196	0	0	1364	1870	1585	720	1777	1848	1728	1777	1772
Q Serve(g_s), s	5.0	0.0	0.0	0.0	1.9	30.0	0.0	0.0	0.0	4.3	0.0	0.0
Cycle Q Clear(g_c), s	6.9	0.0	0.0	1.0	1.9	30.0	0.0	0.0	0.0	4.3	0.0	0.0
Prop In Lane	0.54		0.23	1.00		1.00	1.00		0.07	1.00		0.31
Lane Grp Cap(c), veh/h	372	0	0	428	510	432	452	967	1006	1167	1140	1137
V/C Ratio(X)	0.25	0.00	0.00	0.05	0.10	0.95	0.04	0.31	0.31	0.24	0.32	0.32
Avail Cap(c_a), veh/h	434	0	0	498	605	512	452	967	1006	1464	1140	1137
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.63	0.63	0.63	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	0.0	0.0	24.1	24.3	32.0	0.0	0.0	0.0	9.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	18.4	0.2	0.8	0.8	0.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.3	0.9	11.6	0.0	0.2	0.2	1.4	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	0.0	24.1	24.3	50.3	0.2	0.8	0.8	9.1	0.8	0.8
LnGrp LOS	C	A	A	C	C	D	A	A	A	A	A	A
Approach Vol, veh/h		94			485			632			1023	
Approach Delay, s/veh		34.2			46.4			0.8			3.1	
Approach LOS		C			D			A			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		82.1		37.9	11.7	70.4		37.9				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 71		* 39	17.0	48.9		* 39				
Max Q Clear Time (g_c+I1), s		2.0		32.0	6.3	2.0		8.9				
Green Ext Time (p_c), s		0.8		0.7	0.4	0.7		0.4				

Intersection Summary

HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B

Notes

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

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

4: Scottsdale Road & 5th Avenue

07/29/2020

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	15	18	21	10	37	595	20	573
Future Volume (vph)	15	18	21	10	37	595	20	573
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		7.3	7.3	7.3	48.7	48.0	47.9	46.2
Actuated g/C Ratio		0.12	0.12	0.12	0.81	0.80	0.80	0.77
v/c Ratio		0.27	0.11	0.10	0.06	0.24	0.03	0.24
Control Delay		20.5	16.2	10.1	2.4	3.7	0.9	2.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.5	16.2	10.1	2.4	3.7	0.9	2.0
LOS		C	B	B	A	A	A	A
Approach Delay		20.5		13.2		3.6		1.9
Approach LOS		C		B		A		A

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 55 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.27

Intersection Signal Delay: 3.8

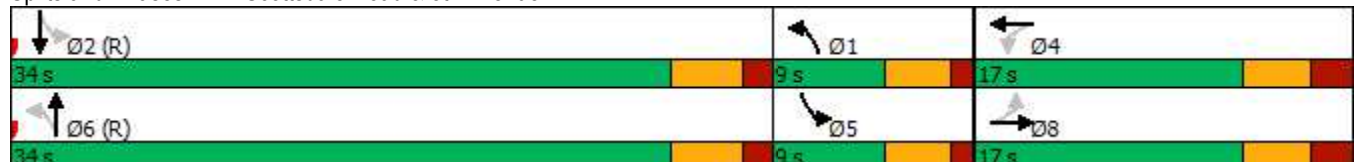
Intersection LOS: A

Intersection Capacity Utilization 42.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	18	19	21	10	10	37	595	24	20	573	31
Future Volume (veh/h)	15	18	19	21	10	10	37	595	24	20	573	31
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	16	20	21	23	11	11	40	647	26	22	623	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	71	58	263	82	82	833	1712	69	742	1685	92
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.19	0.49	0.49	0.38	0.98	0.98
Sat Flow, veh/h	299	748	611	1366	858	858	1781	3482	140	1781	3427	187
Grp Volume(v), veh/h	57	0	0	23	0	22	40	330	343	22	323	334
Grp Sat Flow(s),veh/h/ln	1657	0	0	1366	0	1716	1781	1777	1845	1781	1777	1837
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.7	0.0	7.0	7.0	0.0	0.3	0.3
Cycle Q Clear(g_c), s	1.8	0.0	0.0	0.7	0.0	0.7	0.0	7.0	7.0	0.0	0.3	0.3
Prop In Lane	0.28		0.37	1.00		0.50	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	235	0	0	263	0	164	833	874	907	742	874	903
V/C Ratio(X)	0.24	0.00	0.00	0.09	0.00	0.13	0.05	0.38	0.38	0.03	0.37	0.37
Avail Cap(c_a), veh/h	403	0	0	406	0	343	833	874	907	742	874	903
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	25.4	0.0	0.0	24.9	0.0	24.9	3.3	9.5	9.5	4.5	0.3	0.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.1	0.0	1.2	1.2	0.0	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.3	0.0	0.3	0.1	2.6	2.6	0.1	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	0.0	24.9	0.0	25.0	3.4	10.8	10.7	4.5	1.4	1.4
LnGrp LOS	C	A	A	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		57			45			713			679	
Approach Delay, s/veh		25.6			25.0			10.3			1.5	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	34.0		10.7	15.3	34.0		10.7				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.3		2.7	2.0	9.0		3.8				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	1.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				7.3								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	627	119	154	1096	46	43
Future Vol, veh/h	627	119	154	1096	46	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	682	129	167	1191	50	47

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	811
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	811
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	811
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	25.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	273	-	-	811	-
HCM Lane V/C Ratio	0.354	-	-	0.206	-
HCM Control Delay (s)	25.3	-	-	10.6	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	1.5	-	-	0.8	-

6: Shoeman Lane & Brown Avenue

07/29/2020

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	221	71	31	133	88
Future Vol, veh/h	29	221	71	31	133	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	240	77	34	145	96
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	111	0	-	0	398	94
Stage 1	-	-	-	-	94	-
Stage 2	-	-	-	-	304	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1479	-	-	-	607	963
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	748	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1479	-	-	-	592	963
Mov Cap-2 Maneuver	-	-	-	-	592	-
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	748	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		12.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1479	-	-	-	699	
HCM Lane V/C Ratio	0.021	-	-	-	0.344	
HCM Control Delay (s)	7.5	0	-	-	12.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	68	239	35	386	253	5	49	41	13
Future Volume (vph)	68	239	35	386	253	5	49	41	13
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	34.0	34.0	34.0	34.0	34.0	17.0	69.0	17.0	69.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%	14.2%	57.5%	14.2%	57.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	19.7	19.7	19.7	19.7	19.7	87.7	82.1	90.5	87.9
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.73	0.68	0.75	0.73
v/c Ratio	0.86	0.46	0.25	0.72	0.56	0.01	0.04	0.04	0.06
Control Delay	98.0	31.0	45.9	54.5	9.4	8.4	10.0	4.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.0	31.0	45.9	54.5	9.4	8.4	10.0	4.9	2.8
LOS	F	C	D	D	A	A	A	A	A
Approach Delay		45.7		37.1			9.8		3.6
Approach LOS		D		D			A		A

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 35.1

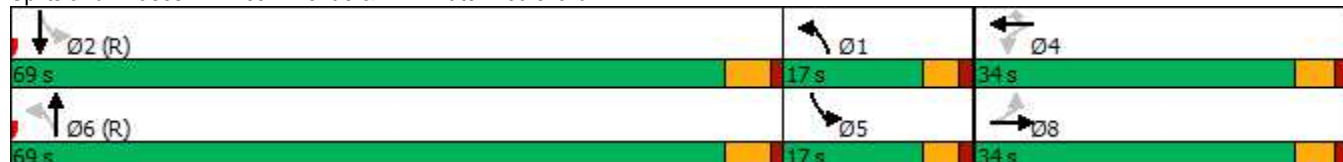
Intersection LOS: D

Intersection Capacity Utilization 43.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	239	5	35	386	253	5	49	3	41	13	49
Future Volume (veh/h)	68	239	5	35	386	253	5	49	3	41	13	49
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	74	260	5	38	420	275	5	53	3	45	14	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	788	15	238	785	350	959	932	53	973	182	689
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.12	0.53	0.53	0.12	0.53	0.53
Sat Flow, veh/h	750	3566	68	1114	3554	1585	1781	1753	99	1781	342	1295
Grp Volume(v), veh/h	74	129	136	38	420	275	5	0	56	45	0	67
Grp Sat Flow(s),veh/h/ln	750	1777	1858	1114	1777	1585	1781	0	1852	1781	0	1637
Q Serve(g_s), s	11.6	7.3	7.4	3.6	12.5	19.6	0.0	0.0	1.8	0.0	0.0	2.4
Cycle Q Clear(g_c), s	24.1	7.3	7.4	10.9	12.5	19.6	0.0	0.0	1.8	0.0	0.0	2.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.05	1.00		0.79
Lane Grp Cap(c), veh/h	147	393	411	238	785	350	959	0	985	973	0	870
V/C Ratio(X)	0.50	0.33	0.33	0.16	0.53	0.79	0.01	0.00	0.06	0.05	0.00	0.08
Avail Cap(c_a), veh/h	161	425	444	258	850	379	959	0	985	973	0	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.0	39.3	39.3	43.9	41.3	44.1	8.1	0.0	13.6	8.1	0.0	13.7
Incr Delay (d2), s/veh	0.9	0.2	0.2	0.1	0.2	8.5	0.0	0.0	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.3	3.4	1.0	5.5	8.6	0.0	0.0	0.8	0.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	39.4	39.5	44.0	41.5	52.6	8.1	0.0	13.7	8.1	0.0	13.9
LnGrp LOS	D	D	D	D	D	D	A	A	B	A	A	B
Approach Vol, veh/h	339		733				61		112			
Approach Delay, s/veh	42.4		45.8				13.2		11.6			
Approach LOS	D		D				B		B			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	19.2	69.0	31.8		19.2	69.0	31.8					
Change Period (Y+Rc), s	* 4.6	5.2	* 5.3		* 4.6	5.2	* 5.3					
Max Green Setting (Gmax), s	* 12	63.8	* 29		* 12	63.8	* 29					
Max Q Clear Time (g_c+I1), s	2.0	4.4	21.6		2.0	3.8	26.1					
Green Ext Time (p_c), s	0.0	0.3	1.5		0.0	0.2	0.4					
Intersection Summary												
HCM 6th Ctrl Delay	40.2											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	71	655	992	71	37	46	97
Future Volume (vph)	71	655	992	71	37	46	97
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.45	0.38	0.60	0.12	0.07	0.08	0.17
Control Delay	28.0	17.1	20.8	26.6	7.9	26.0	10.3
Queue Delay	0.0	0.0	3.6	0.0	0.0	0.0	0.0
Total Delay	28.0	17.1	24.3	26.6	7.9	26.0	10.3
LOS	C	B	C	C	A	C	B
Approach Delay		18.2	24.3				
Approach LOS		B	C				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 21.2

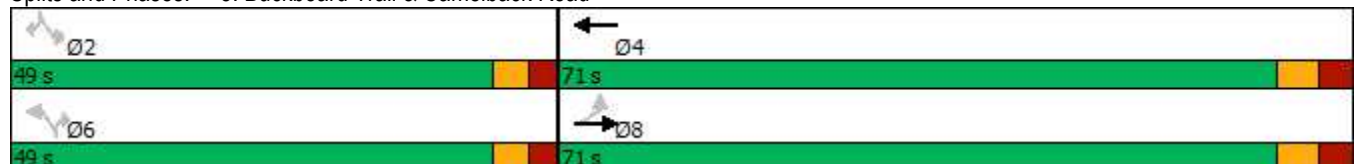
Intersection LOS: C

Intersection Capacity Utilization 58.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (vph)	71	655	0	0	992	42	71	0	37	46	0	97
Future Volume (vph)	71	655	0	0	992	42	71	0	37	46	0	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3517		1770		1583	1770		1583
Flt Permitted	0.17	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	321	3539			3517		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	712	0	0	1078	46	77	0	40	50	0	105
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	26	0	0	47
Lane Group Flow (vph)	77	712	0	0	1122	0	77	0	14	50	0	58
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	171	1887			1875		634		567	634		567
v/s Ratio Prot		0.20			c0.32							
v/s Ratio Perm	0.24						c0.04		0.01	0.03		0.04
v/c Ratio	0.45	0.38			0.60		0.12		0.03	0.08		0.10
Uniform Delay, d1	17.2	16.4			19.2		25.8		24.9	25.4		25.6
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	8.3	0.6			1.4		0.4		0.1	0.2		0.4
Delay (s)	25.5	16.9			20.6		26.2		25.0	25.7		26.0
Level of Service	C	B			C		C		C	C		C
Approach Delay (s)		17.8			20.6			25.8			25.9	
Approach LOS		B			C			C			C	
Intersection Summary												
HCM 2000 Control Delay		20.2			HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio		0.41										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				13.0			
Intersection Capacity Utilization		58.8%			ICU Level of Service				B			
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBL	WBT
Lane Configurations	↑↑	↑	↑↑
Traffic Volume (vph)	729	2	1161
Future Volume (vph)	729	2	1161
Turn Type	NA	Perm	NA
Protected Phases	4		8
Permitted Phases		8	
Detector Phase	4	8	8
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	100.0%	100.0%	100.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	None
Act Effct Green (s)	19.5	19.5	19.5
Actuated g/C Ratio	1.00	1.00	1.00
v/c Ratio	0.23	0.00	0.36
Control Delay	0.1	0.0	0.3
Queue Delay	0.0	0.0	0.0
Total Delay	0.1	0.0	0.3
LOS	A	A	A
Approach Delay	0.1		0.3
Approach LOS	A		A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 19.5

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 0.2

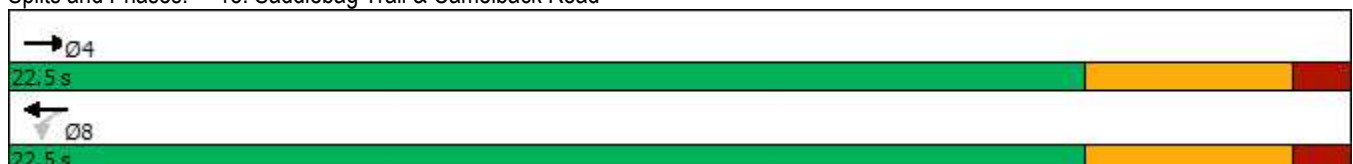
Intersection LOS: A

Intersection Capacity Utilization 35.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	729	9	2	1161	0	0
Future Volume (veh/h)	729	9	2	1161	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	792	10	2	1262		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2602	33	880	2573		
Arrive On Green	0.72	0.72	0.72	0.72		
Sat Flow, veh/h	3687	45	678	3647		
Grp Volume(v), veh/h	392	410	2	1262		
Grp Sat Flow(s),veh/h/ln	1777	1862	678	1777		
Q Serve(g_s), s	1.3	1.3	0.0	2.5		
Cycle Q Clear(g_c), s	1.3	1.3	1.3	2.5		
Prop In Lane		0.02	1.00			
Lane Grp Cap(c), veh/h	1287	1348	880	2573		
V/C Ratio(X)	0.30	0.30	0.00	0.49		
Avail Cap(c_a), veh/h	1961	2055	1137	3922		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	0.8	0.8	1.0	1.0		
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.9	1.0	1.1		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	802			1264		
Approach Delay, s/veh	0.9			1.1		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				16.3		16.3
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				3.3		4.5
Green Ext Time (p_c), s				4.3		7.3
Intersection Summary						
HCM 6th Ctrl Delay			1.0			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	9	38	4	2	3	15	49	4	5	98	21
Future Vol, veh/h	9	9	38	4	2	3	15	49	4	5	98	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	10	41	4	2	3	16	53	4	5	107	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	5	0	0	51	0	0	128	64	31	91	83	4
Stage 1	-	-	-	-	-	-	51	51	-	12	12	-
Stage 2	-	-	-	-	-	-	77	13	-	79	71	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1616	-	-	1555	-	-	845	827	1043	893	807	1080
Stage 1	-	-	-	-	-	-	962	852	-	1009	886	-
Stage 2	-	-	-	-	-	-	932	885	-	930	836	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1616	-	-	1555	-	-	738	820	1043	839	800	1080
Mov Cap-2 Maneuver	-	-	-	-	-	-	738	820	-	839	800	-
Stage 1	-	-	-	-	-	-	956	847	-	1003	883	-
Stage 2	-	-	-	-	-	-	800	882	-	863	831	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			3.3			9.9			10.1		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	810	1616	-	-	1555	-	-	838				
HCM Lane V/C Ratio	0.091	0.006	-	-	0.003	-	-	0.161				
HCM Control Delay (s)	9.9	7.2	0	-	7.3	0	-	10.1				
HCM Lane LOS	A	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.6				

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	11	645	33	27	1135	9	19	4	27	7	0	13
Future Vol, veh/h	11	645	33	27	1135	9	19	4	27	7	0	13
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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	701	36	29	1234	10	21	4	29	8	0	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1244	0	0	737	0	0	1418	2045	369	1674	2058	622
Stage 1	-	-	-	-	-	-	743	743	-	1297	1297	-
Stage 2	-	-	-	-	-	-	675	1302	-	377	761	-
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	555	-	-	865	-	-	97	55	628	62	54	430
Stage 1	-	-	-	-	-	-	373	420	-	171	230	-
Stage 2	-	-	-	-	-	-	410	229	-	616	412	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	555	-	-	865	-	-	90	52	628	53	51	430
Mov Cap-2 Maneuver	-	-	-	-	-	-	90	52	-	53	51	-
Stage 1	-	-	-	-	-	-	365	411	-	167	222	-
Stage 2	-	-	-	-	-	-	383	221	-	568	403	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			41.7			40.4		
HCM LOS							E			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	151	555	-	-	865	-	-	123				
HCM Lane V/C Ratio	0.36	0.022	-	-	0.034	-	-	0.177				
HCM Control Delay (s)	41.7	11.6	-	-	9.3	-	-	40.4				
HCM Lane LOS	E	B	-	-	A	-	-	E				
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0.1	-	-	0.6				

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	8	5	47	42	18
Future Vol, veh/h	4	8	5	47	42	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	9	5	51	46	20
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	56	0	-	0	48	31
Stage 1	-	-	-	-	31	-
Stage 2	-	-	-	-	17	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1549	-	-	-	962	1043
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1006	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1549	-	-	-	959	1043
Mov Cap-2 Maneuver	-	-	-	-	959	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	1006	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.4	0		8.9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1549	-	-	-	983	
HCM Lane V/C Ratio	0.003	-	-	-	0.066	
HCM Control Delay (s)	7.3	0	-	-	8.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

25: 76th Street & Camelback Road

07/29/2020

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	48	504	122	1008	108	186	65	27	285	64
Future Volume (vph)	48	504	122	1008	108	186	65	27	285	64
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	26.0	64.0	15.0	53.0	19.0	38.4	38.4	22.6	42.0	42.0
Total Split (%)	18.6%	45.7%	10.7%	37.9%	13.6%	27.4%	27.4%	16.1%	30.0%	30.0%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	Max	Max	Max
Act Effect Green (s)	32.0	25.9	52.5	43.3	48.6	33.2	33.2	53.8	36.8	36.8
Actuated g/C Ratio	0.27	0.22	0.44	0.36	0.41	0.28	0.28	0.45	0.31	0.31
v/c Ratio	0.34	0.84	0.33	0.89	0.28	0.39	0.13	0.05	0.54	0.12
Control Delay	32.5	54.2	31.8	46.0	25.3	39.6	0.5	20.8	40.3	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	54.2	31.8	46.0	25.3	39.6	0.5	20.8	40.3	0.4
LOS	C	D	C	D	C	D	A	C	D	A
Approach Delay		52.6		44.5		28.2			32.1	
Approach LOS		D		D		C			C	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 119.2

Natural Cycle: 125

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 42.4

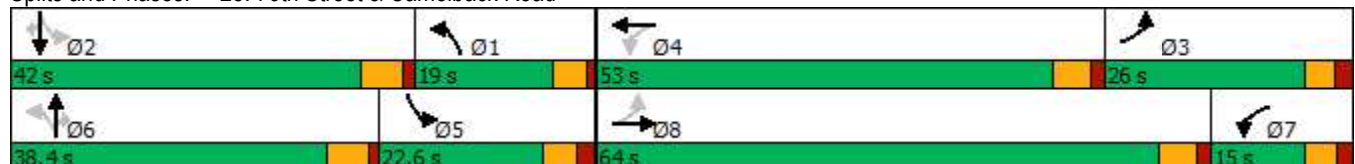
Intersection LOS: D

Intersection Capacity Utilization 71.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road



25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	504	84	122	1008	43	108	186	65	27	285	64
Future Volume (veh/h)	48	504	84	122	1008	43	108	186	65	27	285	64
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	52	548	91	133	1096	47	117	202	71	29	310	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	621	103	379	1182	51	421	535	453	546	594	503
Arrive On Green	0.04	0.20	0.20	0.17	0.34	0.34	0.12	0.29	0.29	0.15	0.32	0.32
Sat Flow, veh/h	1781	3051	505	1781	3472	149	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	52	318	321	133	561	582	117	202	71	29	310	70
Grp Sat Flow(s),veh/h/ln	1781	1777	1779	1781	1777	1844	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.0	20.0	20.1	2.7	35.0	35.0	0.0	9.9	3.8	0.0	15.6	3.6
Cycle Q Clear(g_c), s	0.0	20.0	20.1	2.7	35.0	35.0	0.0	9.9	3.8	0.0	15.6	3.6
Prop In Lane	1.00		0.28	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	362	362	379	605	628	421	535	453	546	594	503
V/C Ratio(X)	0.41	0.88	0.88	0.35	0.93	0.93	0.28	0.38	0.16	0.05	0.52	0.14
Avail Cap(c_a), veh/h	383	905	907	379	734	761	437	535	453	546	594	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	44.4	44.5	39.7	36.6	36.6	35.0	32.9	30.7	25.2	32.1	28.0
Incr Delay (d2), s/veh	0.8	2.8	2.9	0.2	14.8	14.4	0.1	2.0	0.7	0.2	3.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.9	9.0	3.2	17.2	17.8	2.7	4.8	1.6	0.6	7.5	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	47.2	47.4	39.9	51.3	51.0	35.1	34.9	31.4	25.4	35.4	28.6
LnGrp LOS	D	D	D	D	D	D	D	C	C	C	D	C
Approach Vol, veh/h		691			1276			390			409	
Approach Delay, s/veh		47.8			50.0			34.3			33.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	42.0	9.4	44.6	22.6	38.4	25.2	28.8				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 14	* 37	20.7	* 48	* 17	32.9	* 9.8	* 59				
Max Q Clear Time (g_c+I1), s	2.0	17.6	2.0	37.0	2.0	11.9	4.7	22.1				
Green Ext Time (p_c), s	0.0	0.6	0.0	2.1	0.0	0.4	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			44.8									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	353	157	0	0	45
Future Vol, veh/h	30	353	157	0	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	384	171	0	0	49
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	171	0	-	0	621	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	450	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1406	-	-	-	451	873
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1406	-	-	-	437	873
Mov Cap-2 Maneuver	-	-	-	-	437	-
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	642	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		9.4		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1406	-	-	-	873	
HCM Lane V/C Ratio	0.023	-	-	-	0.056	
HCM Control Delay (s)	7.6	0	-	-	9.4	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↘ ↘ ↘	↗ ↘ ↘ ↘			↗ ↘
Traffic Vol, veh/h	0	8	768	10	0	1172
Future Vol, veh/h	0	8	768	10	0	1172
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	835	11	0	1274
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	423	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	WB	NB		SB		
HCM Control Delay, s	10	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	-	734	-		
HCM Lane V/C Ratio	-	-	0.012	-		
HCM Control Delay (s)	-	-	10	-		
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

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	0	0	73	255	18
Future Vol, veh/h	22	0	0	73	255	18
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	0	0	79	277	20
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	366	287	297	0	-	0
Stage 1	287	-	-	-	-	-
Stage 2	79	-	-	-	-	-
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	634	752	1264	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	634	752	1264	-	-	-
Mov Cap-2 Maneuver	634	-	-	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.9	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1264	-	634	-	-	
HCM Lane V/C Ratio	-	-	0.038	-	-	
HCM Control Delay (s)	0	-	10.9	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	0	0	62	248	7
Future Vol, veh/h	11	0	0	62	248	7
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	0	0	67	270	8

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	341	274	278	0	-	0
Stage 1	274	-	-	-	-	-
Stage 2	67	-	-	-	-	-
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	655	765	1285	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	655	765	1285	-	-	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	956	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1285	-	655	-	-
HCM Lane V/C Ratio	-	-	0.018	-	-
HCM Control Delay (s)	0	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	4.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	0	0	0	6	5
Future Vol, veh/h	13	0	0	0	6	5
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	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	0	0	0	7	5
Major/Minor	Minor1		Major2			
Conflicting Flow All	17	-			0	0
Stage 1	0	-			-	-
Stage 2	17	-			-	-
Critical Hdwy	6.84	-			4.14	-
Critical Hdwy Stg 1	-	-			-	-
Critical Hdwy Stg 2	5.84	-			-	-
Follow-up Hdwy	3.52	-			2.22	-
Pot Cap-1 Maneuver	998	0			-	-
Stage 1	-	0			-	-
Stage 2	1003	0			-	-
Platoon blocked, %						-
Mov Cap-1 Maneuver	998	-			-	-
Mov Cap-2 Maneuver	998	-			-	-
Stage 1	-	-			-	-
Stage 2	1003	-			-	-
Approach	WB		SB			
HCM Control Delay, s	8.7					
HCM LOS	A					
Minor Lane/Major Mvmt	WBLn1	SBL	SBT			
Capacity (veh/h)	998	-	-			
HCM Lane V/C Ratio	0.014	-	-			
HCM Control Delay (s)	8.7	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			

32: Civic Center Plaza & Driveway F

07/29/2020

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	6	4	0	0	3
Future Vol, veh/h	4	6	4	0	0	3
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	7	4	0	0	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	10	2	3	0	-	0
Stage 1	2	-	-	-	-	-
Stage 2	8	-	-	-	-	-
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	1010	1082	1619	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	1015	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1008	1082	1619	-	-	-
Mov Cap-2 Maneuver	1008	-	-	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	1015	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	7.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1619	-	1051	-	-	
HCM Lane V/C Ratio	0.003	-	0.01	-	-	
HCM Control Delay (s)	7.2	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

1: Scottsdale Road & Camelback Road

07/29/2020

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↰↱	↰↱	↰	↰	↰↱	↰↱	↰↱	↰↱	↰↱	↰
Traffic Volume (vph)	271	1017	265	221	669	407	1111	339	809	252
Future Volume (vph)	271	1017	265	221	669	407	1111	339	809	252
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA	Perm
Protected Phases	3	8		7	4	1	6	5	2	
Permitted Phases			8							2
Detector Phase	3	8	8	7	4	1	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.3	39.5	39.5	10.3	43.5	10.0	36.0	10.6	35.4	35.4
Total Split (s)	19.0	34.0	34.0	27.0	42.0	23.0	35.0	24.0	36.0	36.0
Total Split (%)	15.8%	28.3%	28.3%	22.5%	35.0%	19.2%	29.2%	20.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	13.8	29.5	29.5	21.4	37.1	18.6	33.8	17.3	32.5	32.5
Actuated g/C Ratio	0.12	0.25	0.25	0.18	0.31	0.16	0.28	0.14	0.27	0.27
v/c Ratio	0.75	1.27	0.58	0.76	0.94	0.83	0.98	0.74	0.92	0.50
Control Delay	64.0	168.7	24.2	63.1	54.4	66.2	65.1	58.8	57.9	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	168.7	24.2	63.1	54.4	66.2	65.1	58.8	57.9	18.9
LOS	E	F	C	E	D	E	E	E	E	B
Approach Delay		125.7			56.1		65.3		51.1	
Approach LOS		F			E		E		D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 9.5 (8%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.27

Intersection Signal Delay: 76.2

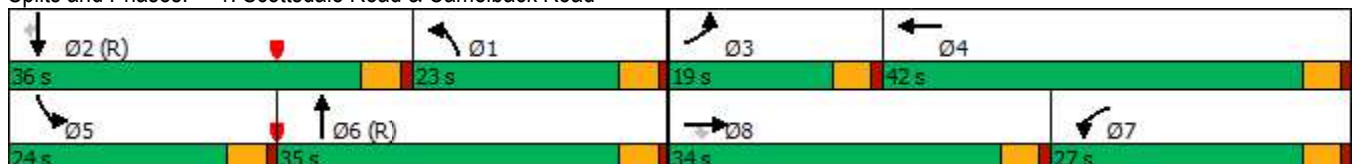
Intersection LOS: E

Intersection Capacity Utilization 90.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Scottsdale Road & Camelback Road



1: Scottsdale Road & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	1017	265	221	669	265	407	1111	173	339	809	252
Future Volume (veh/h)	271	1017	265	221	669	265	407	1111	173	339	809	252
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	295	1105	288	240	727	288	442	1208	188	368	879	274
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	874	390	295	767	304	612	1393	217	435	929	415
Arrive On Green	0.10	0.25	0.25	0.17	0.31	0.31	0.06	0.10	0.10	0.13	0.26	0.26
Sat Flow, veh/h	3456	3554	1585	1781	2485	985	3456	4456	693	3456	3554	1585
Grp Volume(v), veh/h	295	1105	288	240	520	495	442	923	473	368	879	274
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1693	1728	1702	1746	1728	1777	1585
Q Serve(g_s), s	10.1	29.5	20.1	15.6	34.3	34.3	15.1	32.0	32.0	12.5	29.1	14.1
Cycle Q Clear(g_c), s	10.1	29.5	20.1	15.6	34.3	34.3	15.1	32.0	32.0	12.5	29.1	14.1
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	354	874	390	295	549	523	612	1064	546	435	929	415
V/C Ratio(X)	0.83	1.26	0.74	0.81	0.95	0.95	0.72	0.87	0.87	0.85	0.95	0.66
Avail Cap(c_a), veh/h	418	874	390	334	555	529	612	1064	546	562	933	416
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	45.3	41.7	48.3	40.5	40.5	53.6	51.4	51.4	51.3	43.5	22.8
Incr Delay (d2), s/veh	11.8	128.3	7.3	12.9	25.5	26.4	4.2	9.5	16.8	9.2	19.0	8.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	28.3	8.5	7.9	18.5	17.8	7.4	16.1	17.6	6.0	15.1	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	173.6	49.0	61.2	66.0	66.9	57.8	60.9	68.1	60.5	62.5	30.9
LnGrp LOS	E	F	D	E	E	E	E	E	E	E	E	C
Approach Vol, veh/h	1688				1255				1838			
Approach Delay, s/veh	133.3				65.5				62.0			
Approach LOS	F				E				E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.8	35.9	16.8	41.6	19.6	42.0	24.4	34.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	31.5	14.5	37.5	19.5	30.5	22.5	29.5				
Max Q Clear Time (g_c+I1), s	17.1	31.1	12.1	36.3	14.5	34.0	17.6	31.5				
Green Ext Time (p_c), s	0.3	0.3	0.3	0.8	0.6	0.0	0.3	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	80.4											
HCM 6th LOS	F											
Notes												

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↘ ↘	↗ ↘ ↘		↗ ↘	↗ ↘
Traffic Vol, veh/h	0	339	1385	95	99	1196
Future Vol, veh/h	0	339	1385	95	99	1196
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	-	-	120	-
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	368	1505	103	108	1300
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	804	0	0	1608	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	5.34	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	*602	-	-	686	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	-	*602	-	-	686	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	20	0		0.9		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	602	686	-	
HCM Lane V/C Ratio	-	-	0.612	0.157	-	
HCM Control Delay (s)	-	-	20	11.2	-	
HCM Lane LOS	-	-	C	B	-	
HCM 95th %tile Q(veh)	-	-	4.1	0.6	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	100	35	116	49	597	14	1013	310	919
Future Volume (vph)	100	35	116	49	597	14	1013	310	919
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	pm+pt	NA
Protected Phases		8		4			6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	6	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	5.0	10.0
Minimum Split (s)	33.0	33.0	35.2	35.2	35.2	36.1	36.1	10.0	22.5
Total Split (s)	71.0	71.0	71.0	71.0	71.0	30.0	30.0	19.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	59.2%	59.2%	25.0%	25.0%	15.8%	40.8%
Yellow Time (s)	3.3	3.3	4.0	4.0	4.0	3.6	3.6	3.0	3.6
All-Red Time (s)	1.7	1.7	1.2	1.2	1.2	1.5	1.5	2.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.2	5.2	5.2	5.1	5.1	5.0	4.6
Lead/Lag						Lag	Lag	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		34.2	34.0	34.0	34.0	60.9	60.9	75.8	76.2
Actuated g/C Ratio		0.28	0.28	0.28	0.28	0.51	0.51	0.63	0.64
v/c Ratio		0.43	0.38	0.10	0.89	0.07	0.63	0.60	0.51
Control Delay		32.0	28.1	18.2	47.0	25.1	24.4	15.4	17.1
Queue Delay		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay		32.0	28.1	18.2	47.1	25.1	24.4	15.4	17.1
LOS		C	C	B	D	C	C	B	B
Approach Delay		32.0		42.4			24.4		16.8
Approach LOS		C		D			C		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 61 (51%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 25.8

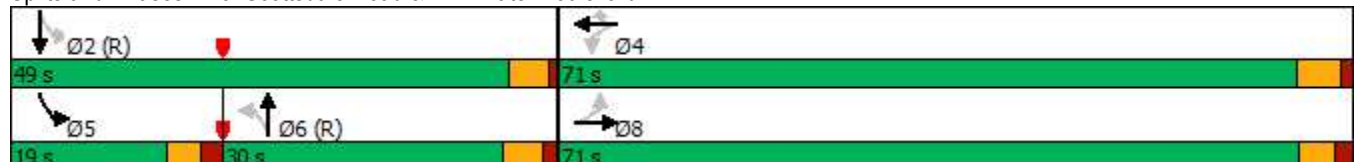
Intersection LOS: C

Intersection Capacity Utilization 88.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Scottsdale Road & Drinkwater Boulevard



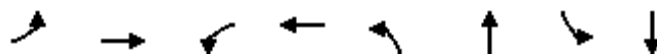
3: Scottsdale Road & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	35	31	116	49	597	14	1013	32	310	919	126
Future Volume (veh/h)	100	35	31	116	49	597	14	1013	32	310	919	126
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	109	38	34	126	53	649	15	1101	35	337	999	137
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	99	78	595	784	665	246	1318	42	549	1554	213
Arrive On Green	0.42	0.42	0.42	0.70	0.70	0.70	0.75	0.75	0.75	0.16	0.99	0.99
Sat Flow, veh/h	564	235	185	1328	1870	1585	495	3515	112	3456	3139	430
Grp Volume(v), veh/h	181	0	0	126	53	649	15	556	580	337	565	571
Grp Sat Flow(s),veh/h/ln	984	0	0	1328	1870	1585	495	1777	1850	1728	1777	1793
Q Serve(g_s), s	13.4	0.0	0.0	0.0	1.1	46.6	1.0	25.1	25.2	7.1	1.1	1.1
Cycle Q Clear(g_c), s	14.7	0.0	0.0	4.8	1.1	46.6	1.0	25.1	25.2	7.1	1.1	1.1
Prop In Lane	0.60		0.19	1.00		1.00	1.00		0.06	1.00		0.24
Lane Grp Cap(c), veh/h	461	0	0	595	784	665	246	666	694	549	879	887
V/C Ratio(X)	0.39	0.00	0.00	0.21	0.07	0.98	0.06	0.84	0.84	0.61	0.64	0.64
Avail Cap(c_a), veh/h	587	0	0	767	1026	869	246	666	694	682	879	887
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.58	0.58	0.58	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	0.0	11.2	10.6	17.4	9.5	12.5	12.5	21.3	0.3	0.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	14.6	0.4	10.2	9.9	0.4	3.6	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	0.0	1.2	0.5	12.5	0.1	6.5	6.7	2.5	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	0.0	0.0	11.2	10.6	32.1	9.9	22.7	22.4	21.7	3.9	3.9
LnGrp LOS	C	A	A	B	B	C	A	C	C	C	A	A
Approach Vol, veh/h		181			828			1151			1473	
Approach Delay, s/veh		24.4			27.5			22.4			8.0	
Approach LOS		C			C			C			A	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		64.5		55.5	14.4	50.1		55.5				
Change Period (Y+Rc), s		* 5.1		* 5.2	5.0	5.1		* 5.2				
Max Green Setting (Gmax), s		* 44		* 66	14.0	24.9		* 66				
Max Q Clear Time (g_c+I1), s		3.1		48.6	9.1	27.2		16.7				
Green Ext Time (p_c), s		1.3		1.7	0.3	0.0		1.3				
Intersection Summary												
HCM 6th Ctrl Delay				17.8								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

4: Scottsdale Road & 5th Avenue

07/29/2020



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	59	27	80	25	68	966	41	951
Future Volume (vph)	59	27	80	25	68	966	41	951
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	24.0	24.0	24.5	24.5	9.5	25.5	9.5	25.5
Total Split (s)	17.0	17.0	17.0	17.0	9.0	34.0	9.0	34.0
Total Split (%)	28.3%	28.3%	28.3%	28.3%	15.0%	56.7%	15.0%	56.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	1.3	1.0	1.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0	5.0	5.0	4.0	4.5	4.0	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effect Green (s)		9.4	9.4	9.4	41.2	35.7	41.2	35.7
Actuated g/C Ratio		0.16	0.16	0.16	0.69	0.60	0.69	0.60
v/c Ratio		0.66	0.55	0.18	0.21	0.52	0.12	0.55
Control Delay		24.0	38.2	15.7	6.4	9.6	5.9	15.3
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		24.0	38.2	15.7	6.4	9.6	5.9	15.3
LOS		C	D	B	A	A	A	B
Approach Delay		24.0		29.7		9.4		14.9
Approach LOS		C		C		A		B

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 14.0

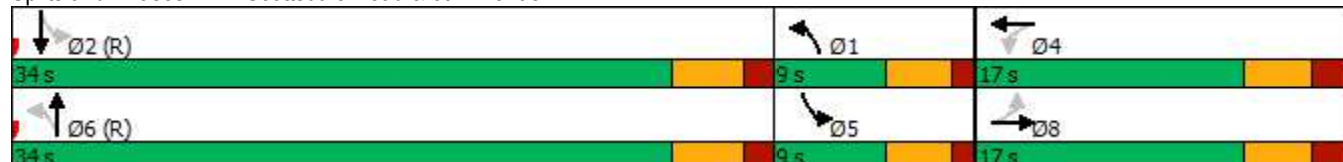
Intersection LOS: B

Intersection Capacity Utilization 62.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: Scottsdale Road & 5th Avenue



4: Scottsdale Road & 5th Avenue

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	27	104	80	25	24	68	966	32	41	951	97
Future Volume (veh/h)	59	27	104	80	25	24	68	966	32	41	951	97
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	64	29	113	87	27	26	74	1050	35	45	1034	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	53	139	300	142	136	572	1725	58	479	1601	163
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.49	0.49	0.24	0.98	0.98
Sat Flow, veh/h	381	328	861	1246	876	843	1781	3509	117	1781	3257	331
Grp Volume(v), veh/h	206	0	0	87	0	53	74	532	553	45	564	575
Grp Sat Flow(s),veh/h/ln	1569	0	0	1246	0	1719	1781	1777	1849	1781	1777	1811
Q Serve(g_s), s	5.6	0.0	0.0	0.0	0.0	1.6	0.0	13.0	13.0	0.0	0.9	0.9
Cycle Q Clear(g_c), s	7.5	0.0	0.0	4.4	0.0	1.6	0.0	13.0	13.0	0.0	0.9	0.9
Prop In Lane	0.31		0.55	1.00		0.49	1.00		0.06	1.00		0.18
Lane Grp Cap(c), veh/h	333	0	0	300	0	278	572	874	909	479	874	890
V/C Ratio(X)	0.62	0.00	0.00	0.29	0.00	0.19	0.13	0.61	0.61	0.09	0.65	0.65
Avail Cap(c_a), veh/h	391	0	0	347	0	344	572	874	909	479	874	890
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	24.2	0.0	0.0	22.9	0.0	21.7	5.7	11.1	11.1	10.2	0.3	0.3
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.2	0.0	0.1	0.0	3.1	3.0	0.0	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	1.1	0.0	0.6	0.3	5.0	5.2	0.3	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	0.0	0.0	23.1	0.0	21.9	5.7	14.2	14.1	10.2	3.4	3.4
LnGrp LOS	C	A	A	C	A	C	A	B	B	B	A	A
Approach Vol, veh/h		206			140			1159			1184	
Approach Delay, s/veh		25.3			22.7			13.6			3.7	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	34.0		14.7	11.3	34.0		14.7				
Change Period (Y+Rc), s	4.0	4.5		5.0	4.0	4.5		5.0				
Max Green Setting (Gmax), s	5.0	29.5		12.0	5.0	29.5		12.0				
Max Q Clear Time (g_c+I1), s	2.0	2.9		6.4	2.0	15.0		9.5				
Green Ext Time (p_c), s	0.0	2.8		0.1	0.0	2.4		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									
Notes												
User approved pedestrian interval to be less than phase max green.												

5: Brown Avenue & Camelback Road

07/29/2020

Intersection						
Int Delay, s/veh	62					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	1501	94	75	1020	143	160
Future Vol, veh/h	1501	94	75	1020	143	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1632	102	82	1109	155	174
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	1734	0	2402	867
Stage 1	-	-	-	-	1683	-
Stage 2	-	-	-	-	719	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	359	-	~ 28	296
Stage 1	-	-	-	-	~ 136	-
Stage 2	-	-	-	-	444	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	359	-	~ 22	296
Mov Cap-2 Maneuver	-	-	-	-	~ 97	-
Stage 1	-	-	-	-	~ 136	-
Stage 2	-	-	-	-	343	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	1.2		\$ 608		
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	150	-	-	359	-	
HCM Lane V/C Ratio	2.196	-	-	0.227	-	
HCM Control Delay (s)	\$ 608	-	-	17.9	-	
HCM Lane LOS	F	-	-	C	-	
HCM 95th %tile Q(veh)	27	-	-	0.9	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	99	110	185	79	60	35
Future Vol, veh/h	99	110	185	79	60	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	120	201	86	65	38
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	287	0	-	0	580	244
Stage 1	-	-	-	-	244	-
Stage 2	-	-	-	-	336	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1275	-	-	-	477	795
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	724	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1275	-	-	-	434	795
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	724	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.8	0		13.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1275	-	-	-	521	
HCM Lane V/C Ratio	0.084	-	-	-	0.198	
HCM Control Delay (s)	8.1	0	-	-	13.6	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7	

7: 5th Avenue & Drinkwater Boulevard

07/29/2020

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	49	328	55	636	126	25	59	194	94
Future Volume (vph)	49	328	55	636	126	25	59	194	94
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		8		4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	8	8	4	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	5.0	10.0
Minimum Split (s)	36.3	36.3	36.3	36.3	36.3	9.6	25.2	9.6	25.2
Total Split (s)	58.0	58.0	58.0	58.0	58.0	27.0	35.0	27.0	35.0
Total Split (%)	48.3%	48.3%	48.3%	48.3%	48.3%	22.5%	29.2%	22.5%	29.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.3	4.0	3.3	4.0
All-Red Time (s)	1.8	1.8	1.8	1.8	1.8	1.3	1.2	1.3	1.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	4.6	5.2	4.6	5.2
Lead/Lag						Lag	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	30.1	30.1	30.1	30.1	30.1	75.4	69.6	77.2	73.5
Actuated g/C Ratio	0.25	0.25	0.25	0.25	0.25	0.63	0.58	0.64	0.61
v/c Ratio	0.70	0.44	0.31	0.78	0.27	0.04	0.11	0.25	0.20
Control Delay	92.8	50.0	39.3	47.9	6.5	8.0	11.9	10.0	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.8	50.0	39.3	47.9	6.5	8.0	11.9	10.0	10.3
LOS	F	D	D	D	A	A	B	A	B
Approach Delay		55.1		41.0			11.1		10.2
Approach LOS		E		D			B		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 35.2

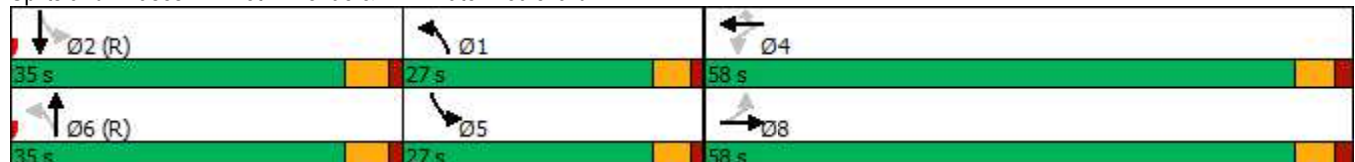
Intersection LOS: D

Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 7: 5th Avenue & Drinkwater Boulevard



7: 5th Avenue & Drinkwater Boulevard

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	328	32	55	636	126	25	59	43	194	94	105
Future Volume (veh/h)	49	328	32	55	636	126	25	59	43	194	94	105
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	53	357	35	60	691	137	27	64	47	211	102	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	926	90	253	1005	448	833	249	183	923	200	224
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.34	0.25	0.25	0.34	0.25	0.25
Sat Flow, veh/h	662	3271	319	992	3554	1585	1781	1002	736	1781	807	901
Grp Volume(v), veh/h	53	193	199	60	691	137	27	0	111	211	0	216
Grp Sat Flow(s),veh/h/ln	662	1777	1813	992	1777	1585	1781	0	1738	1781	0	1708
Q Serve(g_s), s	9.3	10.5	10.6	6.2	20.8	8.1	0.0	0.0	6.2	0.0	0.0	13.1
Cycle Q Clear(g_c), s	30.1	10.5	10.6	16.8	20.8	8.1	0.0	0.0	6.2	0.0	0.0	13.1
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.42	1.00		0.53
Lane Grp Cap(c), veh/h	133	503	513	253	1005	448	833	0	432	923	0	424
V/C Ratio(X)	0.40	0.38	0.39	0.24	0.69	0.31	0.03	0.00	0.26	0.23	0.00	0.51
Avail Cap(c_a), veh/h	236	780	796	408	1561	696	833	0	432	923	0	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.7	34.6	34.7	41.4	38.3	33.8	16.5	0.0	36.2	15.2	0.0	38.8
Incr Delay (d2), s/veh	0.6	0.1	0.1	0.2	0.3	0.1	0.0	0.0	1.4	0.0	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.6	4.8	1.5	9.0	3.2	0.4	0.0	2.8	3.2	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	34.8	34.8	41.6	38.6	33.9	16.5	0.0	37.7	15.2	0.0	43.1
LnGrp LOS	D	C	C	D	D	C	B	A	D	B	A	D
Approach Vol, veh/h	445			888			138			427		
Approach Delay, s/veh	36.9			38.1			33.5			29.4		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	45.7	35.0		39.3	45.7	35.0		39.3				
Change Period (Y+Rc), s	* 4.6	5.2		* 5.3	* 4.6	5.2		* 5.3				
Max Green Setting (Gmax), s	* 22	29.8		* 53	* 22	29.8		* 53				
Max Q Clear Time (g_c+I1), s	2.0	15.1		22.8	2.0	8.2		32.1				
Green Ext Time (p_c), s	0.0	0.7		3.6	0.3	0.4		1.9				

Intersection Summary

HCM 6th Ctrl Delay 35.5

HCM 6th LOS D

Notes

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

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

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	↑	←	↑
Traffic Volume (vph)	122	1587	943	166	239	53	104
Future Volume (vph)	122	1587	943	166	239	53	104
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.75	0.91	0.59	0.28	0.44	0.09	0.18
Control Delay	50.1	34.4	20.4	29.1	27.8	26.2	9.4
Queue Delay	0.0	5.4	3.1	0.0	0.0	0.0	0.0
Total Delay	50.1	39.8	23.5	29.1	27.8	26.2	9.4
LOS	D	D	C	C	C	C	A
Approach Delay		40.6	23.5				
Approach LOS		D	C				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 32.6

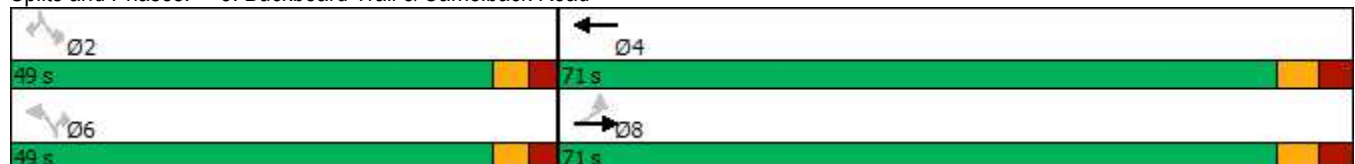
Intersection LOS: C

Intersection Capacity Utilization 76.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	1587	0	0	943	70	166	0	239	53	0	104
Future Volume (vph)	122	1587	0	0	943	70	166	0	239	53	0	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3503		1770		1583	1770		1583
Flt Permitted	0.18	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	335	3539			3503		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	133	1725	0	0	1025	76	180	0	260	58	0	113
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	23	0	0	55
Lane Group Flow (vph)	133	1725	0	0	1096	0	180	0	237	58	0	58
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	178	1887			1868		634		567	634		567
v/s Ratio Prot		c0.49			0.31							
v/s Ratio Perm	0.40						0.10		c0.15	0.03		0.04
v/c Ratio	0.75	0.91			0.59		0.28		0.42	0.09		0.10
Uniform Delay, d1	21.7	25.5			19.0		27.5		29.1	25.5		25.7
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	24.6	8.4			1.4		1.1		2.3	0.3		0.4
Delay (s)	46.3	33.8			20.4		28.6		31.3	25.8		26.0
Level of Service	D	C			C		C		C	C		C
Approach Delay (s)		34.7			20.4			30.2			26.0	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM 2000 Control Delay		29.3			HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio		0.71										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				13.0			
Intersection Capacity Utilization		76.2%			ICU Level of Service				D			
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBL	WBT
Lane Configurations	↑↑	↑	↑↑
Traffic Volume (vph)	1832	6	865
Future Volume (vph)	1832	6	865
Turn Type	NA	Perm	NA
Protected Phases	4		8
Permitted Phases		8	
Detector Phase	4	8	8
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	100.0%	100.0%	100.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	None
Act Effect Green (s)	22.5	22.5	22.5
Actuated g/C Ratio	1.00	1.00	1.00
v/c Ratio	0.58	0.02	0.27
Control Delay	0.7	0.2	0.2
Queue Delay	0.0	0.0	0.0
Total Delay	0.7	0.2	0.2
LOS	A	A	A
Approach Delay	0.7		0.2
Approach LOS	A		A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 22.5

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 0.5

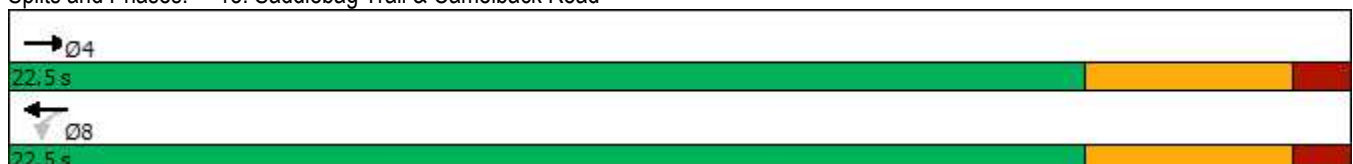
Intersection LOS: A

Intersection Capacity Utilization 55.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	1832	46	6	865	0	0
Future Volume (veh/h)	1832	46	6	865	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	1991	50	7	940		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2782	70	449	2790		
Arrive On Green	0.79	0.79	0.79	0.79		
Sat Flow, veh/h	3636	89	207	3647		
Grp Volume(v), veh/h	994	1047	7	940		
Grp Sat Flow(s),veh/h/ln	1777	1854	207	1777		
Q Serve(g_s), s	5.7	5.8	0.4	1.6		
Cycle Q Clear(g_c), s	5.7	5.8	6.2	1.6		
Prop In Lane		0.05	1.00			
Lane Grp Cap(c), veh/h	1395	1456	449	2790		
V/C Ratio(X)	0.71	0.72	0.02	0.34		
Avail Cap(c_a), veh/h	1527	1594	464	3054		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	1.1	1.1	2.6	0.7		
Incr Delay (d2), s/veh	1.4	1.4	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.5	2.6	2.7	0.7		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	2041			947		
Approach Delay, s/veh	2.5			0.7		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				20.9		20.9
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				7.8		8.2
Green Ext Time (p_c), s				8.6		4.5
Intersection Summary						
HCM 6th Ctrl Delay			2.0			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	13	30	11	15	13	30	165	20	4	66	33
Future Vol, veh/h	37	13	30	11	15	13	30	165	20	4	66	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	14	33	12	16	14	33	179	22	4	72	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	30	0	0	47	0	0	212	165	31	258	174	23
Stage 1	-	-	-	-	-	-	111	111	-	47	47	-
Stage 2	-	-	-	-	-	-	101	54	-	211	127	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1583	-	-	1560	-	-	745	728	1043	695	719	1054
Stage 1	-	-	-	-	-	-	894	804	-	967	856	-
Stage 2	-	-	-	-	-	-	905	850	-	791	791	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1583	-	-	1560	-	-	646	703	1043	533	695	1054
Mov Cap-2 Maneuver	-	-	-	-	-	-	646	703	-	533	695	-
Stage 1	-	-	-	-	-	-	871	783	-	942	849	-
Stage 2	-	-	-	-	-	-	794	843	-	582	770	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.4			2.1			12.4			10.5		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	716	1583	-	-	1560	-	-	770
HCM Lane V/C Ratio	0.326	0.025	-	-	0.008	-	-	0.145
HCM Control Delay (s)	12.4	7.3	0	-	7.3	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	24.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	1497	55	49	851	13	25	3	81	5	0	7
Future Vol, veh/h	15	1497	55	49	851	13	25	3	81	5	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	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	1627	60	53	925	14	27	3	88	5	0	8
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	939	0	0	1687	0	0	2258	2734	844	1885	2757	470
Stage 1	-	-	-	-	-	-	1689	1689	-	1038	1038	-
Stage 2	-	-	-	-	-	-	569	1045	-	847	1719	-
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	726	-	-	375	-	-	~ 22	20	307	43	19	540
Stage 1	-	-	-	-	-	-	97	148	-	247	306	-
Stage 2	-	-	-	-	-	-	474	304	-	323	143	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	726	-	-	375	-	-	~ 19	17	307	23	16	540
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 19	17	-	23	16	-
Stage 1	-	-	-	-	-	-	95	145	-	242	263	-
Stage 2	-	-	-	-	-	-	401	261	-	220	140	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.9			\$ 571.2			96		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	62	726	-	-	375	-	-	52				
HCM Lane V/C Ratio	1.911	0.022	-	-	0.142	-	-	0.251				
HCM Control Delay (s)	\$ 571.2	10.1	-	-	16.2	-	-	96				
HCM Lane LOS	F	B	-	-	C	-	-	F				
HCM 95th %tile Q(veh)	11.1	0.1	-	-	0.5	-	-	0.9				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	19	22	97	59	19
Future Vol, veh/h	10	19	22	97	59	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	21	24	105	64	21
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	129	0	-	0	120	77
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1457	-	-	-	876	984
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1457	-	-	-	869	984
Mov Cap-2 Maneuver	-	-	-	-	869	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	979	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.6	0		9.4		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1457	-	-	-	894	
HCM Lane V/C Ratio	0.007	-	-	-	0.095	
HCM Control Delay (s)	7.5	0	-	-	9.4	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	143	1269	169	703	173	353	200	44	366	65
Future Volume (vph)	143	1269	169	703	173	353	200	44	366	65
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8	7	4	1	6		5	2	
Permitted Phases	8		4		6		6	2		2
Detector Phase	3	8	7	4	1	6	6	5	2	2
Switch Phase										
Minimum Initial (s)	5.0	7.0	5.0	7.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.3	45.4	10.2	48.5	9.6	34.5	34.5	31.5	31.5	31.5
Total Split (s)	19.3	48.7	19.3	48.7	19.0	33.0	33.0	19.0	33.0	33.0
Total Split (%)	16.1%	40.6%	16.1%	40.6%	15.8%	27.5%	27.5%	15.8%	27.5%	27.5%
Yellow Time (s)	3.3	4.0	3.3	4.0	3.6	4.4	4.4	3.6	4.4	4.4
All-Red Time (s)	2.0	1.4	1.9	1.5	1.0	1.1	1.1	2.0	1.1	1.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.4	5.2	5.5	4.6	5.5	5.5	5.6	5.5	5.5
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effect Green (s)	59.8	43.4	41.9	30.3	40.0	29.7	29.7	37.2	27.6	27.6
Actuated g/C Ratio	0.53	0.38	0.37	0.27	0.35	0.26	0.26	0.33	0.24	0.24
v/c Ratio	0.34	1.19	0.76	0.87	0.74	0.79	0.38	0.20	0.88	0.15
Control Delay	30.9	125.8	56.6	49.9	58.0	54.2	7.0	30.2	64.3	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	125.8	56.6	49.9	58.0	54.2	7.0	30.2	64.3	1.5
LOS	C	F	E	D	E	D	A	C	E	A
Approach Delay		117.4		51.1		42.1			52.5	
Approach LOS		F		D		D			D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 113.6

Natural Cycle: 145

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.19

Intersection Signal Delay: 78.1

Intersection LOS: E

Intersection Capacity Utilization 96.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 25: 76th Street & Camelback Road

Ø2	Ø1	Ø4	Ø3
33 s	19 s	48.7 s	19.3 s
Ø6	Ø5	Ø8	Ø7
33 s	19 s	48.7 s	19.3 s

25: 76th Street & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	1269	193	169	703	49	173	353	200	44	366	65
Future Volume (veh/h)	143	1269	193	169	703	49	173	353	200	44	366	65
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	155	1379	210	184	764	53	188	384	217	48	398	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	489	1247	188	214	852	59	218	478	405	220	478	405
Arrive On Green	0.23	0.40	0.40	0.08	0.25	0.25	0.06	0.26	0.26	0.06	0.26	0.26
Sat Flow, veh/h	1781	3097	467	1781	3371	234	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	155	785	804	184	403	414	188	384	217	48	398	71
Grp Sat Flow(s),veh/h/ln	1781	1777	1786	1781	1777	1828	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.8	43.3	43.3	6.9	23.5	23.6	4.1	20.7	12.7	0.0	21.6	3.8
Cycle Q Clear(g_c), s	2.8	43.3	43.3	6.9	23.5	23.6	4.1	20.7	12.7	0.0	21.6	3.8
Prop In Lane	1.00		0.26	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	489	715	719	214	449	462	218	478	405	220	478	405
V/C Ratio(X)	0.32	1.10	1.12	0.86	0.90	0.90	0.86	0.80	0.54	0.22	0.83	0.18
Avail Cap(c_a), veh/h	489	715	719	300	714	734	356	478	405	341	478	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	32.1	32.1	47.2	38.8	38.8	47.7	37.5	34.5	44.2	37.8	31.2
Incr Delay (d2), s/veh	0.1	63.5	70.7	12.5	6.1	6.0	6.2	13.3	5.0	0.2	15.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	30.3	31.9	5.5	10.8	11.1	5.2	11.0	5.4	1.2	11.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	95.6	102.8	59.6	44.9	44.8	53.9	50.8	39.5	44.4	53.3	32.1
LnGrp LOS	C	F	F	E	D	D	D	D	D	D	D	C
Approach Vol, veh/h		1744			1001			789			517	
Approach Delay, s/veh		93.3			47.6			48.4			49.6	
Approach LOS		F			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	33.0	30.2	32.7	11.7	33.0	14.2	48.7				
Change Period (Y+Rc), s	* 5.6	* 5.5	5.3	* 5.5	* 5.6	5.5	* 5.3	* 5.4				
Max Green Setting (Gmax), s	* 14	* 28	14.0	* 43	* 13	27.5	* 14	* 43				
Max Q Clear Time (g_c+I1), s	6.1	23.6	4.8	25.6	2.0	22.7	8.9	45.3				
Green Ext Time (p_c), s	0.1	0.4	0.0	1.6	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 67.7

HCM 6th LOS E

Notes

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

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

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	113	83	221	0	0	69
Future Vol, veh/h	113	83	221	0	0	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	90	240	0	0	75
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	240	0	-	0	576	240
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	336	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1327	-	-	-	479	799
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	724	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1327	-	-	-	432	799
Mov Cap-2 Maneuver	-	-	-	-	432	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	724	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.6	0		10		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1327	-	-	-	-	799
HCM Lane V/C Ratio	0.093	-	-	-	-	0.094
HCM Control Delay (s)	8	0	-	-	-	10
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	-	0.3

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		   				 
Traffic Vol, veh/h	0	25	1603	22	0	1188
Future Vol, veh/h	0	25	1603	22	0	1188
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	1742	24	0	1291
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	883	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	*536	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*536	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	-		536	-	
HCM Lane V/C Ratio	-	-		0.051	-	
HCM Control Delay (s)	-	-		12.1	-	
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

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	0	0	200	112	56
Future Vol, veh/h	50	0	0	200	112	56
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	0	0	217	122	61
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	370	153	183	0	-	0
Stage 1	153	-	-	-	-	-
Stage 2	217	-	-	-	-	-
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	630	893	1392	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	630	893	1392	-	-	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.3	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1392	-	630	-	-	
HCM Lane V/C Ratio	-	-	0.086	-	-	
HCM Control Delay (s)	0	-	11.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	0	0	177	86	26
Future Vol, veh/h	23	0	0	177	86	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	25	0	0	192	93	28
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	299	107	121	0	-	0
Stage 1	107	-	-	-	-	-
Stage 2	192	-	-	-	-	-
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	692	947	1467	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	692	947	1467	-	-	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.4	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1467	-	692	-	-	
HCM Lane V/C Ratio	-	-	0.036	-	-	
HCM Control Delay (s)	0	-	10.4	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	0	0	0	35	17
Future Vol, veh/h	33	0	0	0	35	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	-	16974	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	0	0	0	38	18

Major/Minor	Minor1	Major2	
Conflicting Flow All	85	-	0
Stage 1	0	-	-
Stage 2	85	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	907	0	-
Stage 1	-	0	-
Stage 2	929	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	907	-	-
Mov Cap-2 Maneuver	907	-	-
Stage 1	-	-	-
Stage 2	929	-	-

Approach	WB	SB
HCM Control Delay, s	9.1	
HCM LOS	A	

Minor Lane/Major Mvmt	WBLn1	SBL	SBT
Capacity (veh/h)	907	-	-
HCM Lane V/C Ratio	0.04	-	-
HCM Control Delay (s)	9.1	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-

32: Civic Center Plaza & Driveway F

07/29/2020

Intersection						
Int Delay, s/veh	6.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	19	23	0	0	10
Future Vol, veh/h	16	19	23	0	0	10
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	21	25	0	0	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	56	6	11	0	-	0
Stage 1	6	-	-	-	-	-
Stage 2	50	-	-	-	-	-
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	952	1077	1608	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	937	1077	1608	-	-	-
Mov Cap-2 Maneuver	937	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.7	7.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1608	-	1008	-	-	
HCM Lane V/C Ratio	0.016	-	0.038	-	-	
HCM Control Delay (s)	7.3	0	8.7	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

8: Buckboard Trail & Camelback Road

07/29/2020



Lane Group	EBL	EBT	WBT	NBL	NBR	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	↑↑	←	↑↑
Traffic Volume (vph)	38	782	432	183	317	19	32
Future Volume (vph)	38	782	432	183	317	19	32
Turn Type	Perm	NA	NA	Perm	Perm	Perm	Perm
Protected Phases		8	4				
Permitted Phases	8			6	6	2	2
Detector Phase	8	8	4	6	6	2	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	52.0	52.0	52.0	31.0	31.0	30.0	30.0
Total Split (s)	71.0	71.0	71.0	49.0	49.0	49.0	49.0
Total Split (%)	59.2%	59.2%	59.2%	40.8%	40.8%	40.8%	40.8%
Yellow Time (s)	3.8	3.8	3.8	3.2	3.2	3.2	3.2
All-Red Time (s)	3.2	3.2	3.2	2.8	2.8	2.8	2.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode	Max	Max	Max	Max	Max	Max	Max
Act Effect Green (s)	64.0	64.0	64.0	43.0	43.0	43.0	43.0
Actuated g/C Ratio	0.53	0.53	0.53	0.36	0.36	0.36	0.36
v/c Ratio	0.09	0.45	0.26	0.31	0.53	0.03	0.06
Control Delay	14.5	18.2	15.4	29.6	21.5	25.3	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	18.2	15.4	29.6	21.5	25.3	8.1
LOS	B	B	B	C	C	C	A
Approach Delay		18.0	15.4				
Approach LOS		B	B				

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 19.0

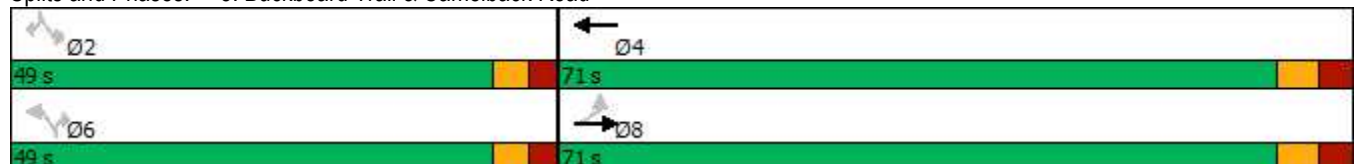
Intersection LOS: B

Intersection Capacity Utilization 58.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 8: Buckboard Trail & Camelback Road



8: Buckboard Trail & Camelback Road

07/29/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	782	0	0	432	23	183	0	317	19	0	32
Future Volume (vph)	38	782	0	0	432	23	183	0	317	19	0	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Lane Util. Factor	1.00	0.95			0.95		1.00		1.00	1.00		1.00
Frt	1.00	1.00			0.99		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3512		1770		1583	1770		1583
Flt Permitted	0.45	1.00			1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	843	3539			3512		1770		1583	1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	850	0	0	470	25	199	0	345	21	0	35
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	85	0	0	22
Lane Group Flow (vph)	41	850	0	0	492	0	199	0	260	21	0	13
Turn Type	Perm	NA			NA		Perm		Perm	Perm		Perm
Protected Phases		8			4							
Permitted Phases	8						6		6	2		2
Actuated Green, G (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Effective Green, g (s)	64.0	64.0			64.0		43.0		43.0	43.0		43.0
Actuated g/C Ratio	0.53	0.53			0.53		0.36		0.36	0.36		0.36
Clearance Time (s)	7.0	7.0			7.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	2.5	2.5			2.5		1.0		1.0	1.0		1.0
Lane Grp Cap (vph)	449	1887			1873		634		567	634		567
v/s Ratio Prot		c0.24			0.14							
v/s Ratio Perm	0.05						0.11		c0.16	0.01		0.01
v/c Ratio	0.09	0.45			0.26		0.31		0.46	0.03		0.02
Uniform Delay, d1	13.7	17.2			15.2		27.8		29.6	25.0		24.9
Progression Factor	1.00	1.00			1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.4	0.8			0.3		1.3		2.7	0.1		0.1
Delay (s)	14.1	18.0			15.5		29.1		32.2	25.1		25.0
Level of Service	B	B			B		C		C	C		C
Approach Delay (s)		17.8			15.5			31.1			25.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay		21.1			HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio		0.45										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				13.0			
Intersection Capacity Utilization		58.7%			ICU Level of Service				B			
Analysis Period (min)		15										
c Critical Lane Group												

15: Saddlebag Trail & Camelback Road

07/29/2020



Lane Group	EBT	WBT
Lane Configurations	↑↑	↑↑
Traffic Volume (vph)	1135	510
Future Volume (vph)	1135	510
Turn Type	NA	NA
Protected Phases	4	8
Permitted Phases		
Detector Phase	4	8
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	22.5	22.5
Total Split (s)	22.5	22.5
Total Split (%)	100.0%	100.0%
Yellow Time (s)	3.5	3.5
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	4.5	4.5
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)	19.4	19.4
Actuated g/C Ratio	1.00	1.00
v/c Ratio	0.35	0.16
Control Delay	0.3	0.1
Queue Delay	0.0	0.0
Total Delay	0.3	0.1
LOS	A	A
Approach Delay	0.3	0.1
Approach LOS	A	A

Intersection Summary

Cycle Length: 22.5

Actuated Cycle Length: 19.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 0.2

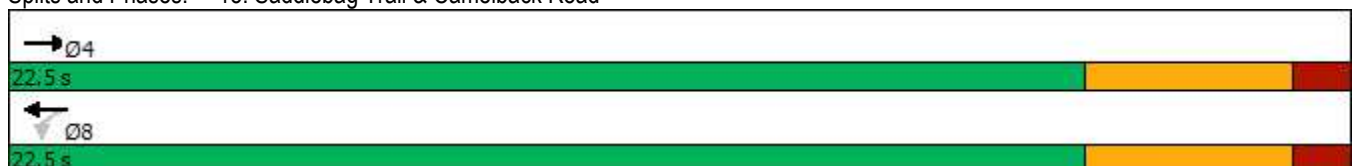
Intersection LOS: A

Intersection Capacity Utilization 35.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 15: Saddlebag Trail & Camelback Road



15: Saddlebag Trail & Camelback Road

07/29/2020

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑		
Traffic Volume (veh/h)	1135	0	0	510	0	0
Future Volume (veh/h)	1135	0	0	510	0	0
Initial Q (Qb), veh	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870		
Adj Flow Rate, veh/h	1234	0	0	554		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2		
Cap, veh/h	2559	0	448	2559		
Arrive On Green	0.72	0.00	0.00	0.72		
Sat Flow, veh/h	3741	0	451	3647		
Grp Volume(v), veh/h	1234	0	0	554		
Grp Sat Flow(s),veh/h/ln	1777	0	451	1777		
Q Serve(g_s), s	2.4	0.0	0.0	0.8		
Cycle Q Clear(g_c), s	2.4	0.0	0.0	0.8		
Prop In Lane		0.00	1.00			
Lane Grp Cap(c), veh/h	2559	0	448	2559		
V/C Ratio(X)	0.48	0.00	0.00	0.22		
Avail Cap(c_a), veh/h	3979	0	628	3979		
HCM Platoon Ratio	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	1.00		
Uniform Delay (d), s/veh	1.0	0.0	0.0	0.7		
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.1	0.0	0.0	0.8		
LnGrp LOS	A	A	A	A		
Approach Vol, veh/h	1234			554		
Approach Delay, s/veh	1.1			0.8		
Approach LOS	A			A		
Timer - Assigned Phs				4		8
Phs Duration (G+Y+Rc), s				16.1		16.1
Change Period (Y+Rc), s				4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0
Max Q Clear Time (g_c+I1), s				4.4		2.8
Green Ext Time (p_c), s				7.2		3.2
Intersection Summary						
HCM 6th Ctrl Delay			1.0			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	313	11	10	170	3	5	0	19	2	0	2
Future Vol, veh/h	4	313	11	10	170	3	5	0	19	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	340	12	11	185	3	5	0	21	2	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	188	0	0	352	0	0	469	564	176	387	569	94
Stage 1	-	-	-	-	-	-	354	354	-	209	209	-
Stage 2	-	-	-	-	-	-	115	210	-	178	360	-
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	1384	-	-	1203	-	-	477	433	837	546	430	944
Stage 1	-	-	-	-	-	-	636	629	-	774	728	-
Stage 2	-	-	-	-	-	-	877	727	-	806	625	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1384	-	-	1203	-	-	472	428	837	527	425	944
Mov Cap-2 Maneuver	-	-	-	-	-	-	472	428	-	527	425	-
Stage 1	-	-	-	-	-	-	634	627	-	772	721	-
Stage 2	-	-	-	-	-	-	867	720	-	784	623	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			10.2			10.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	721	1384	-	-	1203	-	-	676				
HCM Lane V/C Ratio	0.036	0.003	-	-	0.009	-	-	0.006				
HCM Control Delay (s)	10.2	7.6	-	-	8	-	-	10.4				
HCM Lane LOS	B	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0				

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	4	5	21	13	4
Future Vol, veh/h	3	4	5	21	13	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	4	5	23	14	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	28	0	-	0	27	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	10	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1585	-	-	-	988	1062
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	986	1062
Mov Cap-2 Maneuver	-	-	-	-	986	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1013	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.1	0		8.7		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1585	-	-	-	1003	
HCM Lane V/C Ratio	0.002	-	-	-	0.018	
HCM Control Delay (s)	7.3	0	-	-	8.7	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	