# TRAFFIC IMPACT ANALYSIS FOR THE PROPOSED MORONGO OUTDOOR ENTERTAINMENT PROJECT ON MORONGO BAND OF MISSION INDIANS SOVEREIGN NATION

**Prepared for:**

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# EXECUTIVE SUMMARY

Garson Entertainment Group proposes to develop the Morongo Outdoor Entertainment (the "Project") event grounds, on an approximately 310-acre land parcel within the Morongo Band of Mission Indians Sovereign Nation Land (Morongo Reservation). The parcel is located within the undeveloped portion of the Morongo Reservation north of the Interstate 10 (I-10) Freeway, and at the base of the mountains of the San Gorgonio Wilderness area. The Project will house a variety of venues, including a 15,000- to 18,000-seat amphitheater. Camping and RV parking areas are also to be provided, with the camping facilities only available during festival events.

Two major event types are defined and analyzed: Music Festival and Evening Concert. The trip generation for each component of the two event types assumed that 80% of the attendees would travel by freeway from the west, and the remainder will travel from the east, travel by surface streets from the surrounding area, or stay at or utilize the Morongo Casino Resort and Spa.

Twelve intersections were included in the analysis. The project traffic generated would deteriorate the LOS at eight of the twelve study intersections to LOS F. Mitigation measures were investigated to address these impacts, and the following traffic control improvements are recommended to address these impacts.

**Permanent Physical Improvements**

- Widen Seminole Drive between the Morongo Casino East Driveway and Main Street to provide a two-lane facility plus a median lane that will adequately facilitate reversible lane delineations for before and after any event.
- Widen Seminole Drive between the easterly edge of the Cabazon Outlets property and Apache Trail to provide a two-lane facility plus a median lane that

will adequately facilitate reversible lane delineations for before and after any event.

**Event-Day Temporary Traffic Control**

At three hours prior to the start of the event to the mid-point of the event, and until approximately two hours after the event on each day, the following deployments are recommended:

- For events with attendees of 10,000 or more, Traffic Control Officers (TCO's) are recommended at eight STOP-controlled intersections to increase capacity, which would operate similarly to a signalized intersection.
- Temporary signage and delineators in conjunction with direction by the TCO's will be used during the event Arrival and Departure Periods.
- Using advanced signage along the I-10 Freeway mainline, the event inbound traffic will be prohibited from using the Malki Road interchange, as Seminole Drive from Apache Trail to the Thunder Road traffic circle intersection will be closed during event day.
- Increase Freeway ramp capacity from one to two lanes during the arrival period at the Apache Trail and Main Street interchanges by deploying temporary delineators on the I-10 Freeway Eastbound Off-Ramp to Main Street, along with advance changeable message signs.
- Increase Seminole Drive inbound capacity from one lane to two lanes by using the proposed added median lane as the second inbound lane and on the segments leading to the project site.
- Similarly, during post-event departure time, the proposed median lane on Seminole Drive will be reversed in direction so that two outbound lanes are

provided leading to both the Main Street and Malki Road interchanges. Correspondingly, temporary delineators will be implemented to increase the outbound capacity on the I-10 Freeway Westbound On-Ramps at both interchanges from one lane to two lanes.

- During the Departure Period, the segments of Agave Road from Thunder Road to Apache Trail and Apache Trail from Agave Road to Seminole Drive will be temporarily converted to one-way operations and at least three outbound lanes be provided on Thunder Road north of Agave Road, using temporary traffic delineators, signage, and TCO's.
- No left turns would be allowed from any of the approaches at the intersection of Agave Road and Thunder Road during the period surrounding the event start time.

The above proposed permanent roadway improvements and event-day temporary traffic control measures will mitigate the significantly impacted intersections surrounding the venue so that those intersections operate within their nominal capacity under both the Future With Project and Future With Project With Cumulative scenarios.

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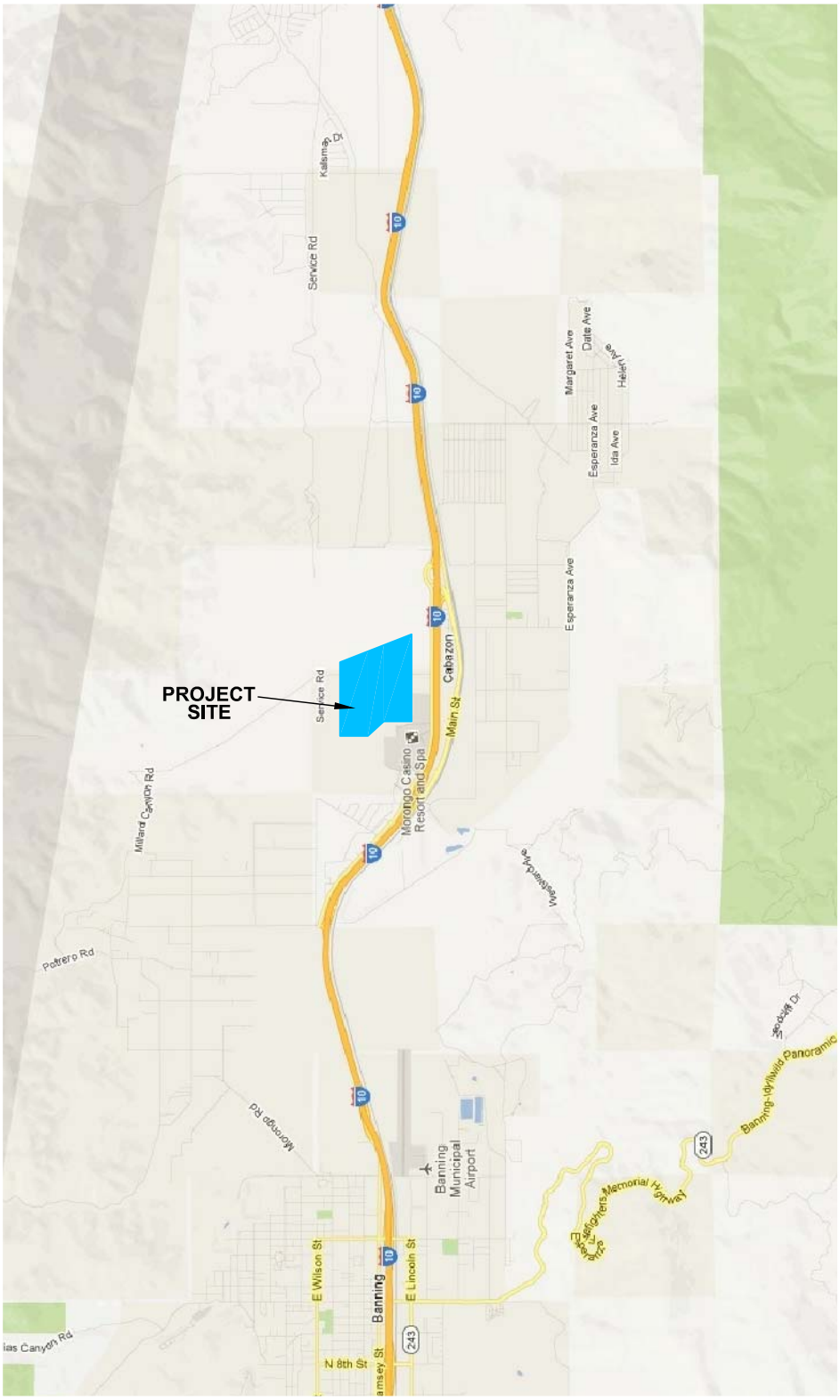
# INTRODUCTION

Crain & Associates has prepared this analysis to assess the potential traffic impacts associated with the proposed Morongo Outdoor Entertainment event grounds (the "Project"), located on the Morongo Band of Mission Indians Sovereign Nation Land (Morongo Reservation). The Project site is located on a presently undeveloped portion of the Morongo Reservation north of the Interstate 10 (I-10) Freeway, and at the base of the mountains of the San Gorgonio Wilderness area. The site is bounded by Seminole Drive and the Canyon Lanes at Morongo bowling alley to the south, the Morongo Casino Resort & Spa and open space to the west, and open space to the north and east. Project parking would be provided on-site via surface parking in the form of general, VIP, charter bus, and staff parking areas. The location of the Project site is shown on Figure 1, Project Site Vicinity Map.

The Morongo Reservation is surrounded by the County of Riverside. This analysis was prepared in accordance with the assumptions, methodologies, and procedures outlined in the County of Riverside Transportation Department *Traffic Impact Analysis Preparation Guide* (April 2008). The analysis is also consistent with the guidelines in the County of Riverside Congestion Management Program (CMP). This report presents the results of a detailed analysis of existing (2012) and future (2013) traffic conditions during the Friday-through-Monday peak hours of event traffic at the following 12 study intersections. I-10 Freeway is anticipated to be the major access route for the Project site via these selected study intersections.




NORTH

FIGURE 1

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FN: MORONGO OUTDOOR ENTERTAINMENT\SITE-VICN

PROJECT SITE VICINITY

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1. Seminole Drive and Malki Road (north leg)
2. Seminole Drive and Malki Road (south leg)
3. I-10 Freeway Eastbound Ramps and Malki Road
4. Seminole Drive and Millard Pass
5. Seminole Drive/Thunder Road/Apache Trail/I-10 Freeway Westbound Ramps Roundabout
6. Main Street/Apache Trail/I-10 Freeway Eastbound Ramps Roundabout
7. Seminole Drive and the Morongo Casino West Driveway
8. Seminole Drive and the Morongo Casino East Driveway
9. Main Street and Broadway
10. Main Street and the I-10 Freeway Eastbound Ramps
11. Main Street and the I-10 Freeway Westbound Ramps
12. Seminole Drive and Main Street

The locations of these study intersections are shown on Figure 2, Study Intersection Location Map. The following traffic conditions have been analyzed:

- Existing (2012) traffic volumes
- Future (2013) (With Ambient Growth) With Project traffic volumes
- Future (2013) (With Ambient Growth) With Project With Cumulative Development traffic volumes

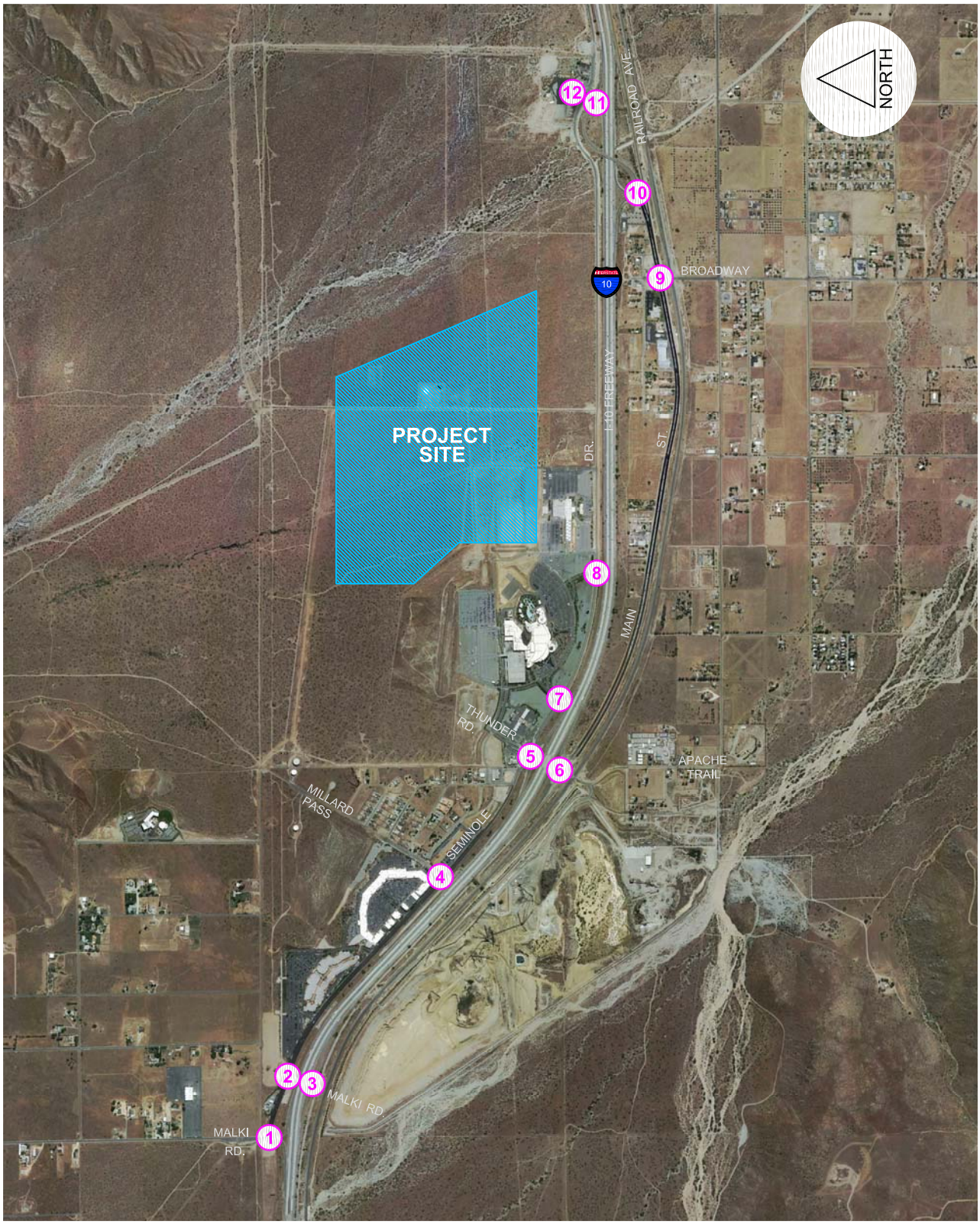


FIGURE 2

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FN: MORONGO OUTDOOR ENTERTAINMENT\STUDY-INT

STUDY INTERSECTION LOCATION MAP

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## PROJECT DESCRIPTION

The proposed Morongo Outdoor Entertainment Project (the “Project”) is a music and events venue to be located on an approximately 310 acre parcel of land located on the Morongo Reservation, north of the Riverside County Community of Cabazon. The Project site is located on a presently undeveloped portion of the Morongo Reservation north of the I-10 Freeway and at the base of the mountains of the San Gorgonio Wilderness area. The site is bounded by Seminole Drive and the Canyon Lanes at Morongo bowling alley to the south, the Morongo Casino Resort & Spa and open space to the west, and open space to the north and east.

The Project proposes a variety of different venues including a main, open air amphitheater seating 15,000 to 18,000 persons, a sprung structure (tent) of 80,000 square feet with a capacity of 10,000 persons, a Beach Club with a capacity of 2,500 persons, and an “Electric Forest” venue featuring a heavily landscaped area interspersed with small performance areas for approximately 500 patrons. All of these venues could be operating simultaneously for festivals but many of the events anticipated would only use the main amphitheater, the Beach Club or the tent venue.

The Beach Club could be used as an adjunct to either venue and can also operate as a stand-alone facility and open daily. An event concourse area of approximately 8.5 acres will interconnect all of the musical venues and offer retail sales, food, activity areas and related offerings. In addition, there are open, grassed festival/flex areas of approximately 21 acres that could be used to support festivals, exhibits and other event activities. The core area housing the music/events venues and related activity areas comprises the 68 acres of the 310 acre site being leased for the Project. The remaining 242 acres is being made available by the Tribe for parking and camping as well as access and infrastructure development.

Project parking would be provided on the site via surface parking in the form of general, VIP, charter bus, and staff parking areas. The site would include approximately 11,000 car parking spaces, plus parking for 200 buses. Camping and RV parking areas are also to be provided with approximately 3,200 spaces. The camping is only available during festival events and is not open for public use otherwise. For events without camping, those areas will be available to provide approximately 6,000 additional parking spaces.

The main access roads would be paved along with the VIP parking areas. The main parking areas would be finished with compacted decomposed granite or similar materials to allow percolation of rain water while controlling dust. The conceptual project site plan is shown on Figure 3.

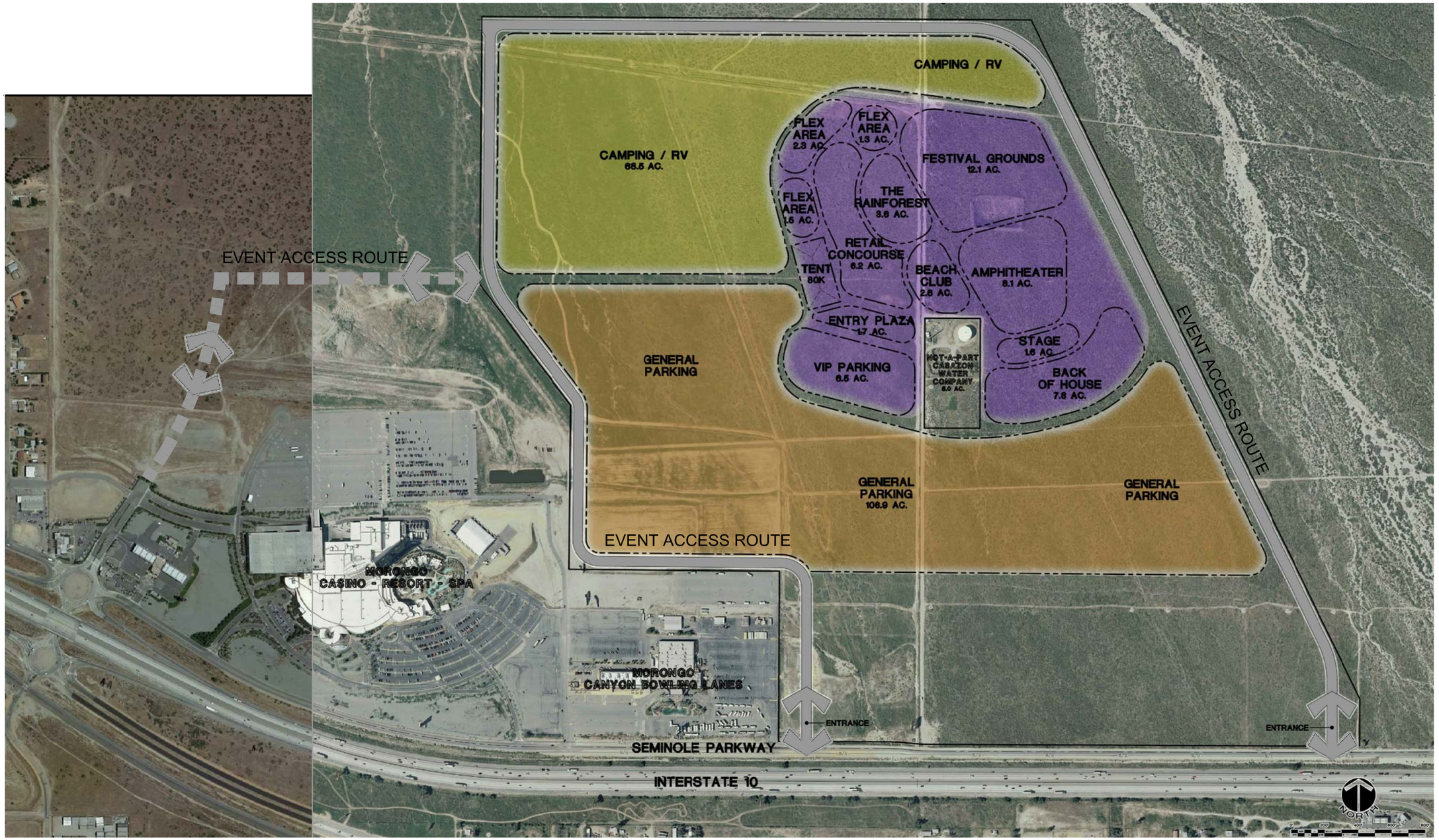


FIGURE 3

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FN: MORONGO OUTDOOR ENTERTAINMENT\SITEPLAN

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CONCEPTUAL PROJECT SITE PLAN

## EXISTING CONDITIONS

The Project site is located north of the I-10 Freeway, at the base of the mountains of the San Gorgonio Wilderness area. The site is bounded by Seminole Drive and the Canyon Lanes at Morongo bowling alley to the south, the Morongo Casino Resort & Spa and open space to the west, and open space to the north and east.

The Project site and surrounding uses are well-served by Major and Secondary Roads, including Malki Road, Thunder Road/Apache Trail, Main Street, Seminole Drive and Main Street. In addition, surface street interchanges provide access to and from the I-10 Freeway at Malki Road, Thunder Road/Apache Trail and Main Street. To address the Project impacts on these transportation facilities, existing traffic conditions were analyzed at twelve intersections in the study area.

### Existing (2012) Traffic Volumes

Traffic volumes for existing conditions were obtained from manual traffic counts conducted at the twelve study intersections in October 2012. In accordance with the Project proposed peak activity periods, five peak event traffic periods were identified and counted at the twelve study intersections. Those peak periods are as shown in the following table:

**Table 1: Traffic Count Time Periods**

| Start | | End | | Traffic Flow | |
|---|---|---|---|---|---|
| **Day** | **Time** | **Day** | **Time** | **Event Type** | **Direction** |
| Friday | 3:00 PM | Friday | 9:00 PM | Concert | Inbound |
| Friday | 11:00 PM | Saturday | 2:00 AM | Concert | Outbound |
| Saturday | 10:00 AM | Saturday | 3:00 PM | Weekend Festival | Inbound All |
| Sunday | 11:00 PM | Monday | 2:00 AM | Weekend Festival | Outbound Non-Campers |
| Monday | 6:00 AM | Monday | 9:00 AM | Weekend Festival | Outbound Campers in Street Peak. |

Peak-hour volumes were determined individually for each intersection based on the highest-volume four consecutive 15-minute periods for all vehicular movements. The existing (2012) Friday PM, Friday Midnight/Saturday Early Morning, Saturday Midday, Sunday Midnight/Monday Early Morning, and Monday AM peak-hour volumes at the study intersections are illustrated on Figures 4(a), 4(b), 4(c), 4(d) and 4(e), respectively. The intersection count data sheets are provided in Appendix A.

Information pertaining to intersection characteristics, such as geometrics and traffic signal operations were obtained from field verifications. The existing lane configurations and traffic control conditions for the study intersections are illustrated in Appendix B.

**Analysis of Existing (2012) Traffic Conditions**

The twelve (12) study intersections listed below were analyzed for existing traffic conditions. Two of these intersections are signalized – Seminole Drive and Malki Road (south leg), and Main Street and Broadway. Eleven of the intersections selected for the analysis of potential Project traffic impacts were due to their critical connections in the area between the I-10 freeway access interchanges and the Project site. The twelfth intersection, Main Street and Broadway, is a critical intersection for the connection of the Project site to the Community of Cabazon. The existing peak-hour traffic volumes for these intersections were discussed previously and presented on Figures 4(a) through 4(e). These volumes, along with information pertaining to intersection geometrics and traffic signal operations, were analyzed using established traffic engineering techniques.

1. Seminole Drive and Malki Road (north leg)
2. Seminole Drive and Malki Road (south leg) (Signalized)
3. I-10 Freeway Eastbound Ramps and Malki Road
4. Seminole Drive and Millard Pass

5. Seminole Drive/Thunder Road/Apache Trail/I-10 Freeway Westbound Ramps Roundabout
6. Main Street/Apache Trail/I-10 Freeway Eastbound Ramps Roundabout
7. Seminole Drive and the Morongo Casino West Driveway
8. Seminole Drive and the Morongo Casino East Driveway
9. Main Street and Broadway (Signalized)
10. Main Street and the I-10 Freeway Eastbound Ramps
11. Main Street and the I-10 Freeway Westbound Ramps
12. Seminole Drive and Main Street

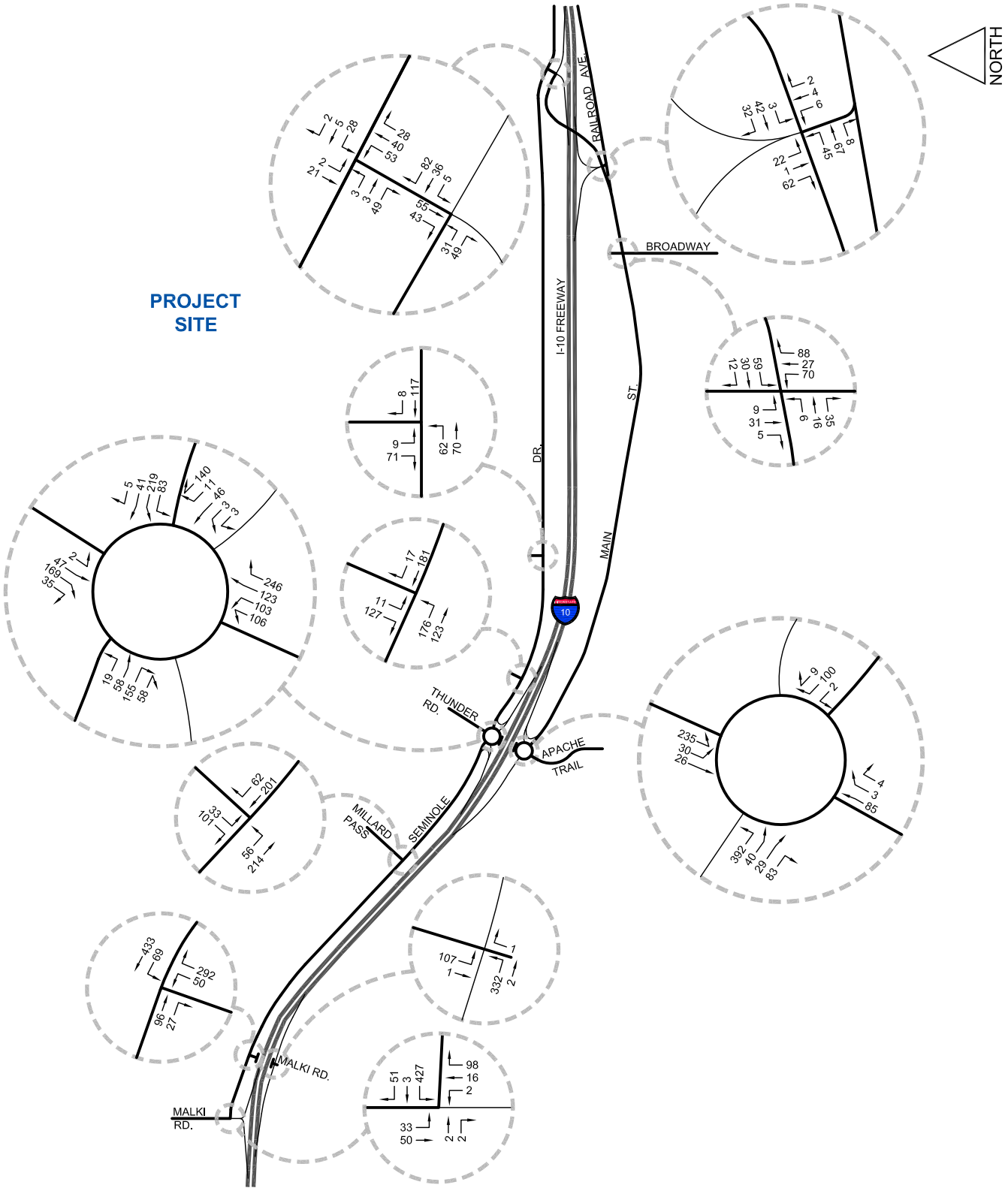


FIGURE 4(a)

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Morongo Outdoor Entertainment\FRIDAY PM 2012

EXISTING (2012) TRAFFIC VOLUMES
FRIDAY PM PEAK HOUR

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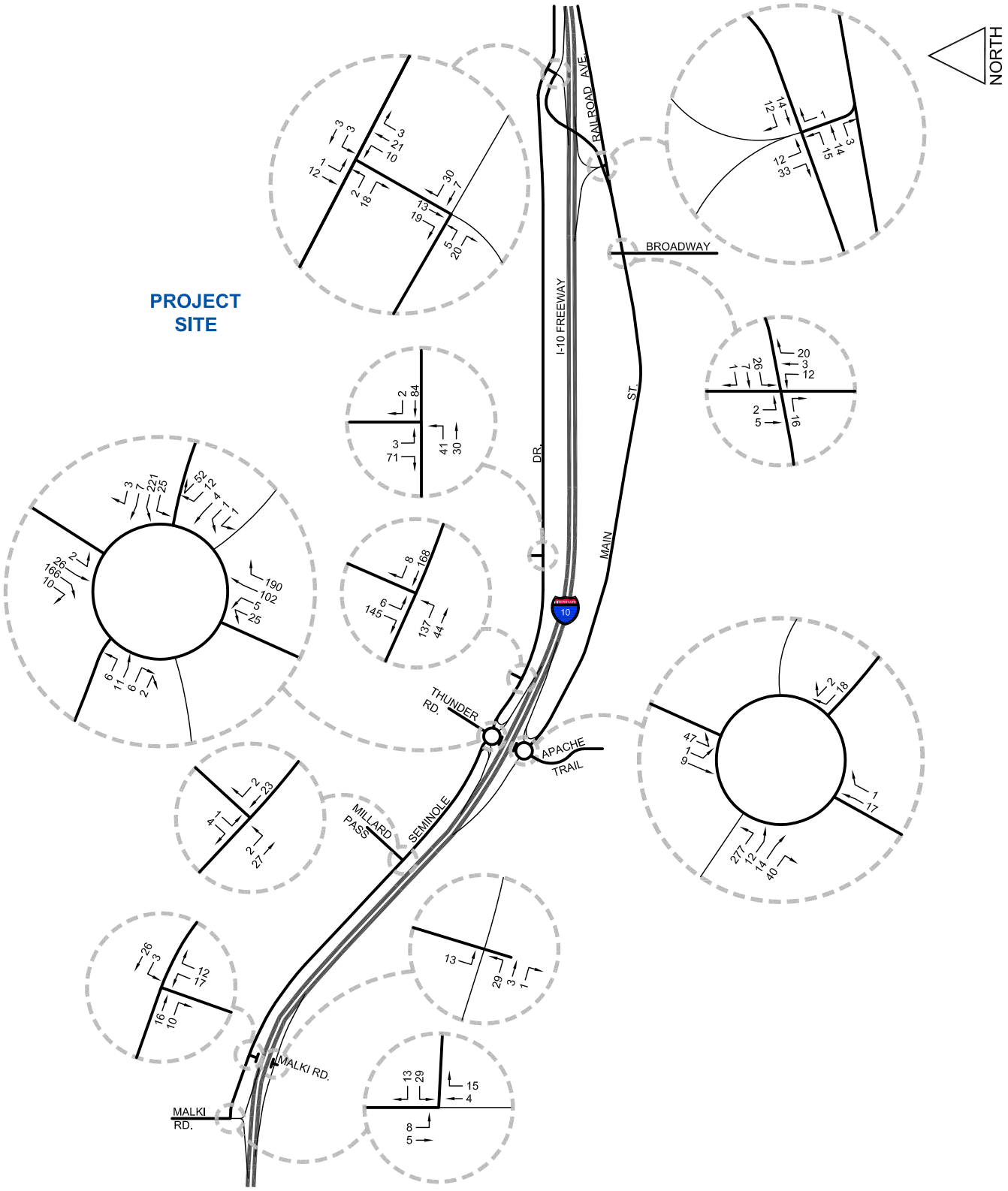


FIGURE 4(b)

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Morongo Outdoor Entertainment\FRIDAY MIDNIGHT 2012

EXISTING (2012) TRAFFIC VOLUMES
FRIDAY MIDNIGHT PEAK HOUR

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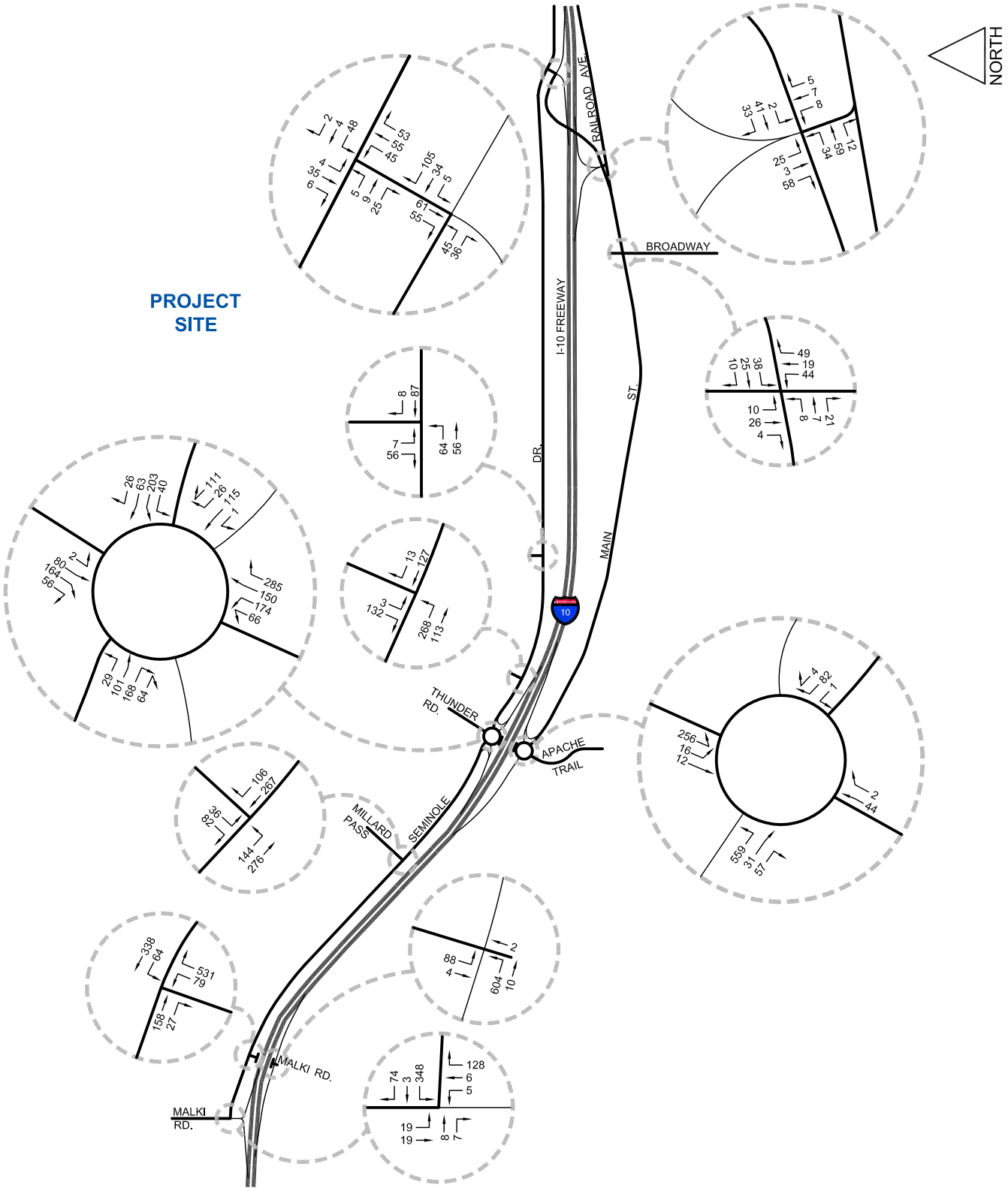


FIGURE 4(c)

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Morongo Outdoor Entertainment\SATURDAY MIDDAY 2012

EXISTING (2012) TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

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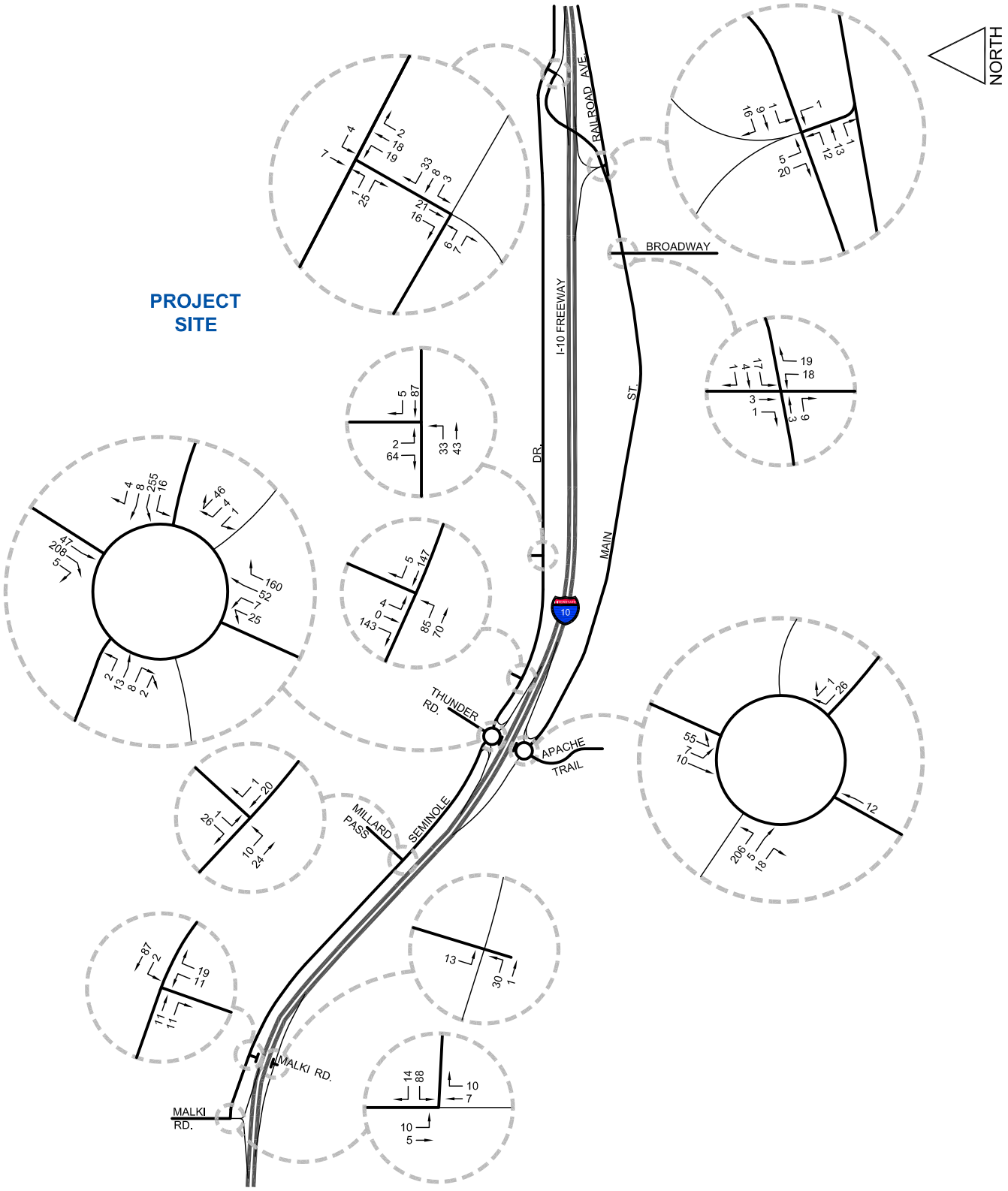


FIGURE 4(d)

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Morongo Outdoor Entertainment\SUNDAY MIDNIGHT 2012

EXISTING (2012) TRAFFIC VOLUMES
SUNDAY MIDNIGHT PEAK HOUR

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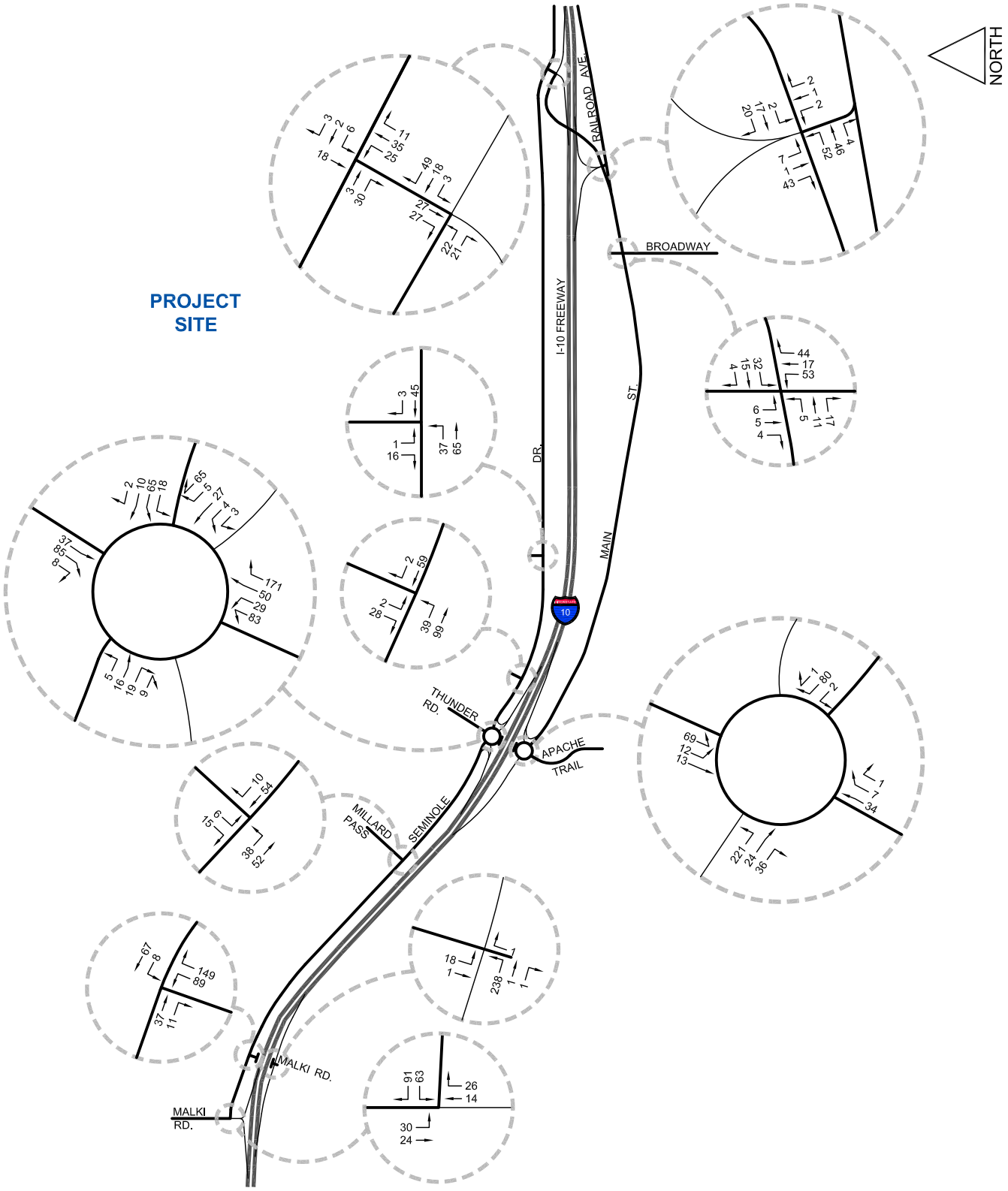


FIGURE 4(e)

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Morongo Outdoor Entertainment\MONDAY AM 2012

EXISTING (2012) TRAFFIC VOLUMES
MONDAY AM PEAK HOUR

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The Riverside County Transportation Department *Traffic Impact Analysis Preparation Guide* specifies the use of Transportation Research Board – Highway Capacity Manual (HCM), 2000 Update, or most recent release. The future year operational analysis was conducted using the operational analysis methodology of the HCM procedures, the 2000 Highway Capacity Manual[1] (HCM), which takes into account signal operations, producing existing volume-to-capacity (V/C) ratios and vehicular delays at these locations. Specifically, this method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on delay.

Level-of-service (LOS) designations are based on the criterion of average control delay per vehicle. Control delay is a measure of driver discomfort, frustration, and fuel consumption, and includes initial deceleration delay approaching the intersection, queue move-up time, stopped delay and final acceleration delay. Tables 2 and 3 summarize the relationship between LOS and control delay for signalized and unsignalized intersections (Two-way STOP, All-way STOP and Roundabout), respectively.

**Table 2: Level-of-Service Criteria for Signalized Intersections**

| LOS | Description of Operating Characteristics | Control Delay per Vehicle (Seconds) |
|---|---|---|
| A | Very low control delay, most vehicles do not stop at all | ≤ 10.0 |
| B | Relatively low control delay. However, more vehicles stop than LOS A. | >10.0 ≤ 20.0 |
| C | Higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping. | >20.0 ≤ 35.0 |
| D | Control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable. | >35.0 ≤ 55.0 |
| E | High control delay values. Individual cycle failures are frequent occurrences. | >55.0 ≤ 80.0 |
| F | High control delay values that often occur with over-saturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels | > 80.0 |

Source: *Highway Capacity Manual* (Transportation Research Board, Washington, D.C.; 2000), page 16-2.

[1] Transportation Research Board, Washington, D.C.; 2000.

**Table 3: Level-of-Service Criteria for Unsignalized Intersections**

| | Control Delay per Vehicle (Seconds) | | |
|---|---|---|---|
| **LOS** | **Two-Way Stop** | **All-Way Stop** | **Roundabout** |
| A | < 10.0 | < 10.0 | < 10.0 |
| B | >10.0 < 15.0 | >10.0 < 15.0 | >10.0 < 15.0 |
| C | >15.0 < 25.0 | >15.0 < 25.0 | >15.0 < 25.0 |
| D | >25.0 < 35.0 | >25.0 < 35.0 | >25.0 < 35.0 |
| E | >35.0 < 50.0 | >35.0 < 50.0 | >35.0 < 50.0 |

Source: *Highway Capacity Manual* (Transportation Research Board, Washington, D.C.; 2000.

To be consistent, the Synchro intersection signal split optimization and network offset optimization values were applied to the signalized intersections of each scenario. The resulting operations for the existing peak-hour conditions for the study intersections are shown in Table 4. The Synchro analysis worksheets for existing conditions are provided in Appendix C. As shown in Table 4, under the existing (2012) conditions, 11 of the 12 study intersections are currently operating at LOS D or better levels. However, the intersection of I-10 Eastbound On/Off-Ramps and Malki Road (south leg) is operating at LOS E during the Saturday Midday peak hour.

**Table 4: Level of Service (LOS) Summary**
**Existing (2012) Traffic Conditions**

| | | Existing (2012) | | |
|---|---|---|---|---|
| | | Delay | V/C | LOS[1] |
| 1. Seminole Drive & Malki Road (North)/I-10 WB On/Off Ramps | Friday PM Peak | 12.6 sec | | B |
| | Friday Midnight Peak | 7.2 sec | | A |
| | Saturday Midday Peak | 10.1 sec | | B |
| | Sunday Midnight Peak | 7.5 sec | | A |
| | Monday AM Peak | 7.5 sec | | A |
| 2. Seminole Drive & Malki Road (South) | Friday PM Peak | 8.9 sec | | A |
| | Friday Midnight Peak | 15.4 sec | | B |
| | Saturday Midday Peak | 17.1 sec | | B |
| | Sunday Midnight Peak | 17.3 sec | | B |
| | Monday AM Peak | 19.2 sec | | B |
| 3. I-10 EB On/Off Ramps & Malki Road (South) | Friday PM Peak | 16.2 sec | | C |
| | Friday Midnight Peak | 8.9 sec | | A |
| | Saturday Midday Peak | 40.7 sec | | E |
| | Sunday Midnight Peak | 8.8 sec | | A |
| | Monday AM Peak | 10.2 sec | | B |
| 4. Seminole Drive & Millard Pass | Friday PM Peak | 8.2 sec | | A |
| | Friday Midnight Peak | 6.9 sec | | A |
| | Saturday Midday Peak | 9.2 sec | | A |
| | Sunday Midnight Peak | 6.9 sec | | A |
| | Monday AM Peak | 7.1 sec | | A |

**Table 4 (continued): Level of Service (LOS) Summary**
**Existing (2012) Traffic Conditions**

| | | Existing (2012) | | |
|---|---|---|---|---|
| | | Delay | V/C | LOS[1] |
| 5. Seminole Drive & Thunder Road/I-10 WB On/Off Ramps | Friday PM Peak | | 0.65 | B |
| | Friday Midnight Peak | | 0.32 | A |
| | Saturday Midday Peak | | 0.86 | D |
| | Sunday Midnight Peak | | 0.33 | A |
| | Monday AM Peak | | 0.35 | A |
| 6. Main Street & Apache Trail/I-10 EB On/Off Ramps | Friday PM Peak | | 0.57 | A |
| | Friday Midnight Peak | | 0.30 | A |
| | Saturday Midday Peak | | 0.72 | A |
| | Sunday Midnight Peak | | 0.21 | A |
| | Monday AM Peak | | 0.25 | A |
| 7. Seminole Drive & Morongo Driveway West | Friday PM Peak | 10.3 sec | | B |
| | Friday Midnight Peak | 10.2 sec | | B |
| | Saturday Midday Peak | 9.8 sec | | A |
| | Sunday Midnight Peak | 9.9 sec | | A |
| | Monday AM Peak | 8.8 sec | | A |
| 8. Seminole Drive & Morongo Driveway East | Friday PM Peak | 9.4 sec | | A |
| | Friday Midnight Peak | 9.1 sec | | A |
| | Saturday Midday Peak | 9.2 sec | | A |
| | Sunday Midnight Peak | 9.1 sec | | A |
| | Monday AM Peak | 8.6 sec | | A |
| 9. Main Street & Broadway | Friday PM Peak | 20.7 sec | | C |
| | Friday Midnight Peak | 21.7 sec | | C |
| | Saturday Midday Peak | 22.3 sec | | C |
| | Sunday Midnight Peak | 21.7 sec | | C |
| | Monday AM Peak | 19.4 sec | | B |
| 10. Main Street & I-10 EB On/Off Ramps/Railroad Avenue | Friday PM Peak | 10.7 sec | | B |
| | Friday Midnight Peak | 8.7 sec | | A |
| | Saturday Midday Peak | 10.3 sec | | B |
| | Sunday Midnight Peak | 9.1 sec | | A |
| | Monday AM Peak | 9.7 sec | | A |
| 11. Main Street & I-10 WB On/Off Ramps | Friday PM Peak | 6.9 sec | | A |
| | Friday Midnight Peak | 6.5 sec | | A |
| | Saturday Midday Peak | 7.1 sec | | A |
| | Sunday Midnight Peak | 6.7 sec | | A |
| | Monday AM Peak | 6.9 sec | | A |
| 12. Seminole Drive & Main Street | Friday PM Peak | 10.8 sec | | B |
| | Friday Midnight Peak | 9.3 sec | | A |
| | Saturday Midday Peak | 11.1 sec | | B |
| | Sunday Midnight Peak | 9.2 sec | | A |
| | Monday AM Peak | 9.4 sec | | A |

[1] To be conservative, LOS values based on intersection worst Approach LOS.
[2] Intersection volumes exceed HCM allowed range.

All delay and volume-to-capacity calculations were performed using the Synchro Version 8 software. It should be noted that, due to the limitation of Synchro software, roundabouts are analyzed as 4-legged intersections by combining traffic volumes for

certain approaches. To be conservative, Sidra Version 5.1, a more specialized software focusing on roundabout analysis, was used for two roundabout intersections – Seminole Drive & Thunder Road/I-10 Westbound On/Off-Ramps and Main Street & Apache Trail/I-10 Eastbound On/Off-Ramps. The results are included in Table 5, and the Sidra worksheets are included in Appendix D. Both analyses concluded that these two roundabouts are operating at LOS D or better during the analyzed time periods under the existing (2012) conditions.

**Table 5: Roundabout Level of Service (LOS) Summary**
**Existing (2012) Traffic Conditions**

| | | Existing (2012) | | |
|---|---|---|---|---|
| | | Delay | V/C | LOS[1] |
| 5. Seminole Drive & Thunder Road/I-10 WB On/Off Ramps | Friday PM Peak | 11.2 sec | | B |
| | Friday Midnight Peak | 6.7 sec | | A |
| | Saturday Midday Peak | 11.7 sec | | B |
| | Sunday Midnight Peak | 6.9 sec | | A |
| | Monday AM Peak | 5.0 sec | | A |
| 6. Main Street & Apache Trail/I-10 EB On/Off Ramps | Friday PM Peak | 9.3 sec | | A |
| | Friday Midnight Peak | 5.9 sec | | A |
| | Saturday Midday Peak | 15.6 sec | | B |
| | Sunday Midnight Peak | 5.5 sec | | A |
| | Monday AM Peak | 5.5 sec | | A |

[1] To be conservative, LOS values based on intersection worst Approach LOS.

## PROJECT TRAFFIC

The following section describes the methodology and procedures used to determine the trip generation, distribution and assignment of traffic resulting from the proposed Project. Project vehicular access and parking are described at the end of this section.

### Project Trip Generation

In order to develop the traffic characteristics of the proposed Project, two major event types are defined and analyzed below.

#### 1. Music Festival

Attendee Trip Assumption Overviews

- Assume 40,000 attendees per day for a weekend (Saturday and Sunday) festival.
- Assume camping by only 25% of the attendees and no employees or vendors (for conservative analysis).
- Each of the two days, the Festival Grounds opens at 10:00AM, events start at 12:00 noon, and the last event ends at midnight.
- Assume following mode split: 100% auto trips
- Assume on-site parking is adequate for the event; and shuttles are not provided.
- Assume typical arrival/departure time percentages for event attendees based on engineering judgment with input from the development team (email of 9/19/12 is attached in Appendix F). Research of documents could not be located to confirm the arrival and departure patterns.

Attendee Trip Generation Estimate

- Assume all arrives by auto (worst case) and 2.5 person/auto as occupancy ratio.
  Auto trips per Day – Non-campers, 30,000 ÷ 2.5 = 12,000 vehicles I/B
  = 12,000 vehicles O/B
  Auto trips per Day – Campers 10,000 ÷ 2.5 = 4,000 vehicles peak direction.

28,000 vehicles per day (16,000 vehicles peak direction, 12,000 vehicles off-peak direction).

- For peak hours of the event, it was assumed: 16% arrival from 11:00 AM to 12:00 PM on Saturday – 2,560 vehicles.
- 32% departure for Midnight to 1:00 AM on Monday – 5,120 vehicles.

Employee overview

- No direct information could be found regarding number of employees that is expected to be used for this type of event. However, ULI shared parking was reviewed, and it provides employee and attendee parking ratios for pro baseball stadiums. Assuming auto occupancy factors of 1.15 employee and 2.5 attendee, a ratio of 1 employee/75 attendees was calculated. Security and parking personnel are included in the employment factor.
- It was assumed that there would be two employee shifts per day beginning before gates are open and continuing through time last group of attendees leave. Additional shifts for set-up and take-down of stages would occur on non-event days but would not affect the event day generation.

  9:00 AM – 5:00 PM (8 hours): Maximum attendees = 30,000
  Employees = 30,000 ÷ 75 = 400

  5:00 PM – 1:00 AM (8 hours): Maximum attendees = 40,000
  Employees = 40,000 ÷ 75 = 533
- Note that additional shifts may be added and the last shift may end later for festivals with events continuing midnight, but the peak arrival and departure times will not overlap with the peak Attendee times.

Employee Trip Generation

- An average vehicle ridership ratio of 1.15 employee/vehicle was assumed.

9:00 AM – 5:00 PM (8 hours): Employee Vehicle Trips = 400 ÷ 1.15 = 348

- Assumes 348 employee trips I/B between 8:00 AM – 9:00 AM
- Assumes 348 employee trips O/B between 5:00PM – 5:30 PM

5:00 PM – 1:00 AM (8 hours): Employee Vehicle Trips = 533 ÷ 1.15 = 463

- Assumes 463 employee trips I/B between 4:30 PM – 5:00 PM
- Assumes 463 employee trips O/B between 1:00AM – 1:30 AM
- Employee trip peak generation is much lower than the attendee peak trip generation, and employee shift changes would be outside attendee traffic peaks. Further, if shifts are added, no shift change is anticipated to occur at

the start or end time of the event, and therefore the peak attendee trip generation would not be added by employee trips. However, both attendee and employee arrivals and departures will be allowed for throughout the festival and on-site employee parking will be provided.

**2. Evening Concert**

Attendee Overview

- 20,000 attendees total assumed.
- For conservative analysis, no camping was assumed.
- On the concert day (assumed as a worst case to be Friday evening) the Festival Grounds opens at 5:00 PM, the event start at 8:00 PM, and the main act ends at midnight. (Note that the analysis is conservative in that later ending will reduce the background traffic level during the peak departure time).
- The following mode split was assumed: 100% auto (Any use of buses will reduce trips below the analysis levels).
- On-site parking was assumed to be adequate for the event; and no trip reduction for the use of shuttles was assumed.
- The arrival patterns were determined based patterns similar to other large-scale event venues.

Employee Overview

- The same ULI shared parking ratios are used for the Evening Concert event as those for the Music Festival discussed above..
- An employee shift beginning 1 hour before gates open and continuing through time last group of attendees leave was assumed.

  4:00 PM – 1:00 AM (9 hours): Maximum attendees = 20,000
  Employees = 20,000 ÷ 75 = 267
- Additional shifts for set-up and take-down of stages would occur on non-event days but not add to the event day traffic generation.

Attendee Trip Generation Estimate

- A 2.5 person/auto as occupancy ratio was assumed.

  20,000 x 100% = 20,000 auto passengers
- Auto trips, Daily: 20,000 ÷ 2.5 = 8,000 vehicles I/B
  = 8,000 vehicles O/B
  16,000 vehicles on the event day

- For peak hours assume 55% arrival from 7:00 PM to 8:00 PM – 4,400 vehicles
  75% departure for 12:00 AM to 1:00 AM – 6,000 vehicles

Employee Trip Generation

- An average vehicle ridership ratio of 1.15 employees/vehicle was assumed.
  4:00 PM – 1:00 AM (9 hours):
  Employee Vehicle Trips = 267 ÷ 1.15 = 232 vehicles
- Assumes 232 employee trips I/B between 3:30PM - 4:00 AM.
- Assumes 232 employee trips O/B between 1:00PM – 1:30 AM.
- Therefore, employment trips would be outside Attendee traffic peaks and do not need to be considered, although employee parking is to be provided.

## Project Trip Distribution

As a conservative worst case, it was assumed that 80% of the attendees would travel by freeway from the area to the west, and the remainder will travel on the I-10 from the east (e.g. utilize the Palm Springs Airport), travel by surface streets from the surrounding area, or stay at or otherwise utilize the Morongo Casino Resort and Spa prior to and/or following the event. The employee trips would be much more connected to local uses. Further, since the employee trips would occur outside of the peak traffic times of the event, diversion to less heavily traveled routes in order to avoid congestion would not be expected. Table 6 is a summary of the Attendee trip distribution.

**Table 6: Project Trip Distribution**

| | Percentage | | Peak Hour Arrivals | | Peak Hour Departures | |
|---|---|---|---|---|---|---|
| | Arr. | Dep. | Concert | Festival | Concert | Festival |
| Day of the Week | | | Friday | Saturday | Friday | Saturday |
| Time of the Day | | | 7-8 PM | 11 AM-Noon | 12-1 AM | 12-1 AM |
| I-10 to the west - Interchange | | | | | | |
| Malki Road* | 0% | 25% | 0 | 0 | 1,500 | 1,600 |
| Thunder Road | 40% | 30% | 1,920 | 960 | 1,800 | 1,920 |
| Main Street | 40% | 25% | 1,920 | 960 | 1,500 | 1,600 |
| Subtotal | 80% | 80% | 3,840 | 1,920 | 4,800 | 5,120 |
| I-10 to the east - Interchange | | | | | | |
| Main Street | 7% | 7% | 336 | 168 | 420 | 448 |
| Thunder Road | 5% | 5% | 240 | 120 | 300 | 320 |
| Malki Road* | 0% | 0% | 0 | 0 | 0 | 0 |
| Subtotal | 12% | 12% | 576 | 288 | 720 | 768 |
| Surface Streets | | | | | | |
| Apache Trail to the south | 3% | 3% | 144 | 72 | 180 | 192 |
| Main Street to the west | 2% | 2% | 96 | 48 | 120 | 128 |
| Seminole Drive to the east | 0% | 0% | 0 | 0 | 0 | 0 |
| Other Local Streets | 0% | 0% | 0 | 0 | 0 | 0 |
| Subtotal | 5% | 5% | 240 | 120 | 300 | 320 |
| Morongo Casino | 3% | 3% | 144 | 72 | 180 | 192 |
| **Total** | 100% | 100% | 4,800 | 2,400 | 6,000 | 6,400 |

* Access to the Morongo Festival Grounds from the Malki Road interchange is not to be provided.

## Project Trip Assignment

The general distribution percentages shown in Table 6 were then utilized to assign the Project trips to specific routes and intersections that will be used for Project access. As part of the proposed Project, the one block segment of Seminole Drive from Thunder Road to Apache Trail will be closed during the peak event hours prior to the event start time until after the event end time, to facilitate the use of the Maliki Road Interchange by

other users, such as the Desert Hills Premium Outlets mall and the Morongo Spa and Casino patrons and employees. As a result, all Project traffic is distributed so as to not use this segment of Seminole Drive. The estimated Project trip assignment percentages at the study intersections were presented on Figure 5. Applying these inbound and outbound percentages to the Project trip generation, the traffic volumes for the proposed Project were determined for the study intersections. These Project-only peak hour traffic volumes are depicted on Figures 5(a), 5(b), 5(c), 5(d) and 5(e) for Friday PM peak event traffic hour, Friday midnight to Saturday early morning peak event traffic hour, Saturday Midday peak event traffic hour, Sunday midnight to Monday early morning peak event traffic hour and Monday AM peak hour, respectively.

**Project Parking and Access**

Project parking would be provided on the site via surface parking in the form of general, VIP, charter bus, and staff parking areas. The site would include approximately 11,000 car parking spaces, plus parking for 200 buses. In addition, camping and RV parking areas are also to be provided with approximately 3,200 camping sites, each with a parking space included as part of the campsite rental. The camping facilities shall only be available during events and is not open for public use otherwise. For events without camping, those areas will be available to provide approximately 6,000 additional parking spaces.

The main access roads would be paved along with the VIP parking areas. The main parking areas would be finished with compacted decomposed granite or similar materials to allow percolation of rain water while controlling dust. Figure 3 in the Project Description section includes the Project access as part of the depicted Project site plan.

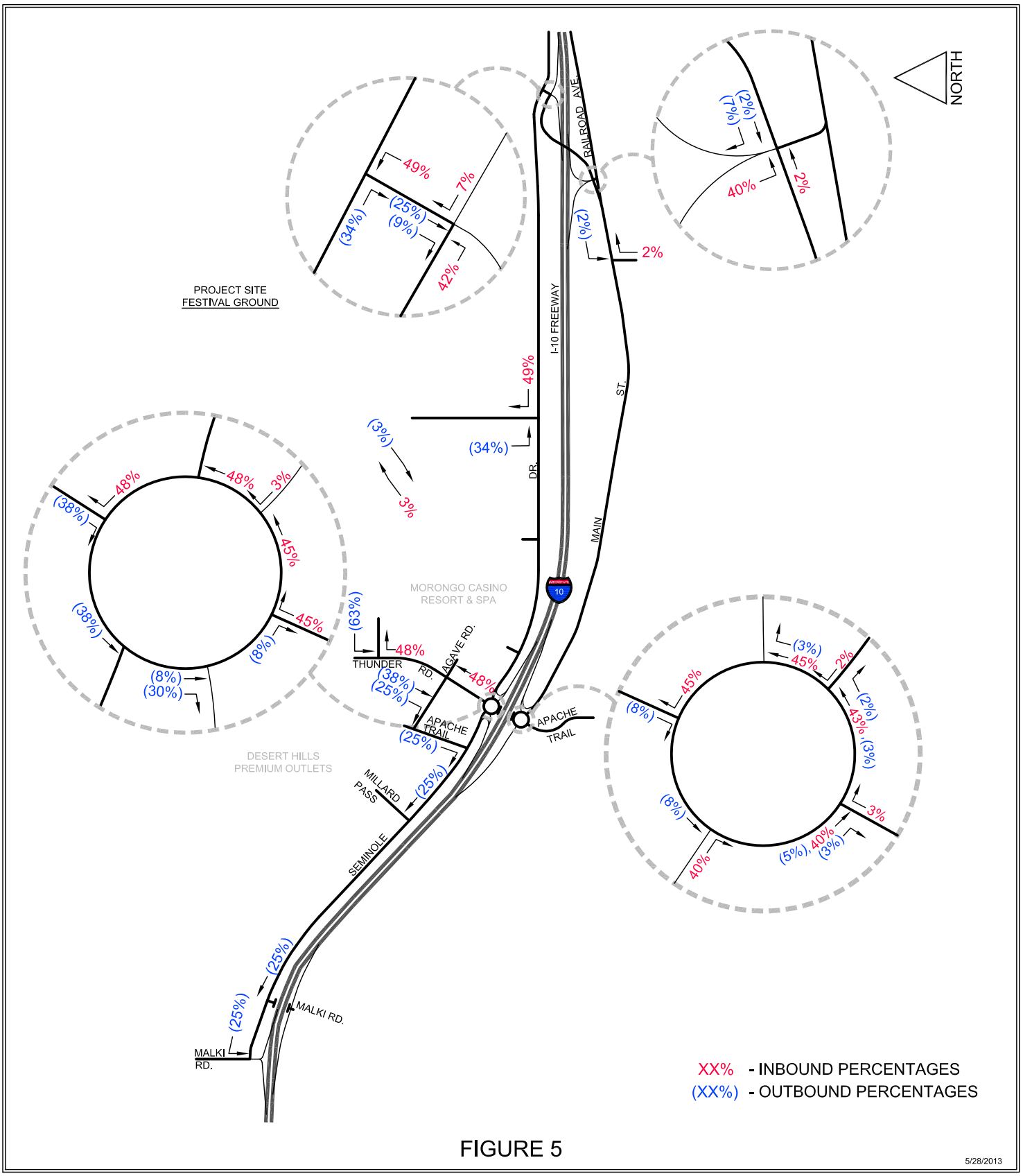


FIGURE 5

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PROJECT TRIP DISTRIBUTION

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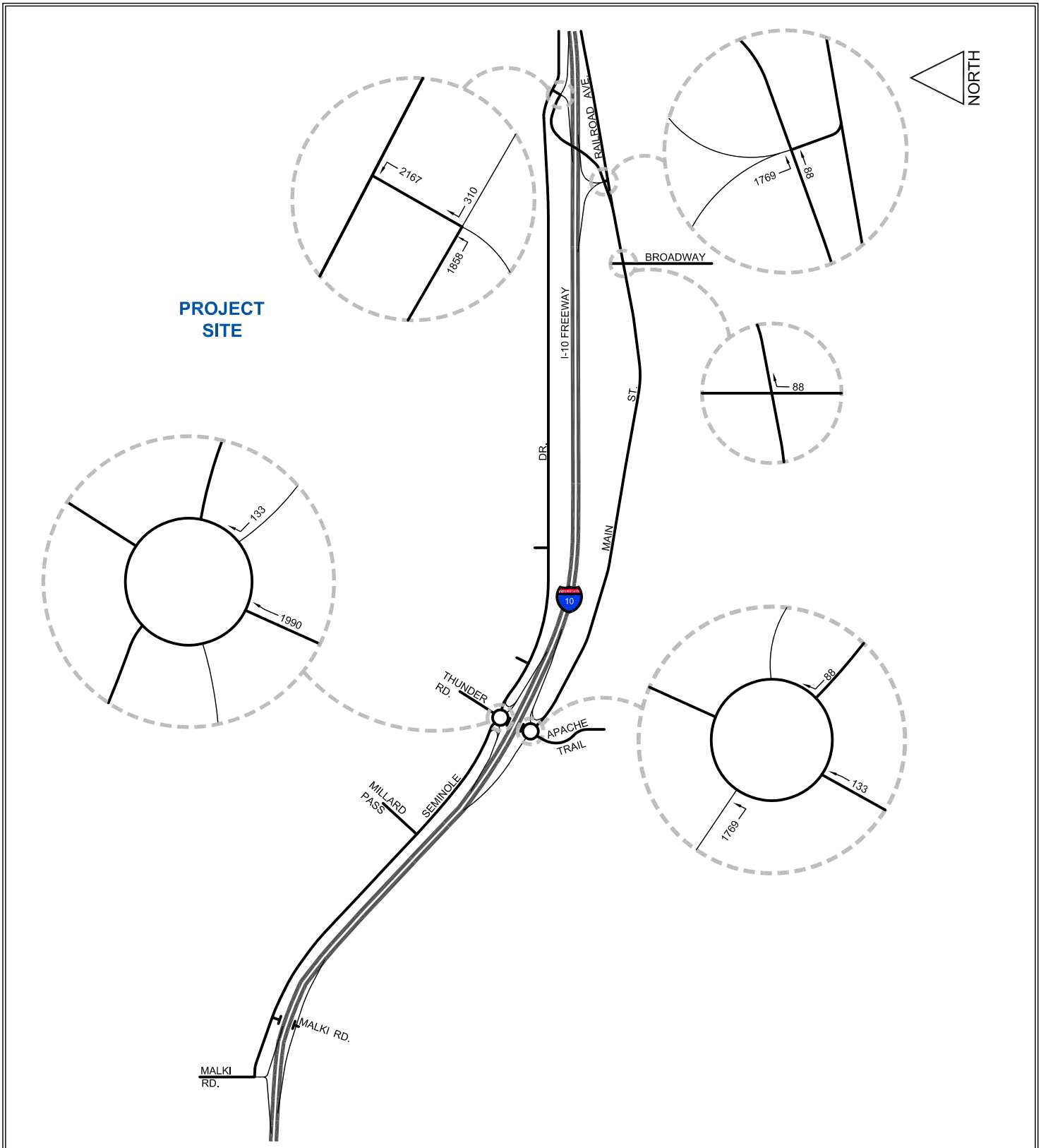


FIGURE 6(a)

5/28/2013

Morongo Outdoor Entertainment\PRJ FRIDAY PM

PROJECT ONLY TRAFFIC VOLUMES
ONE DAY EVENT FRIDAY PM PEAK HOUR

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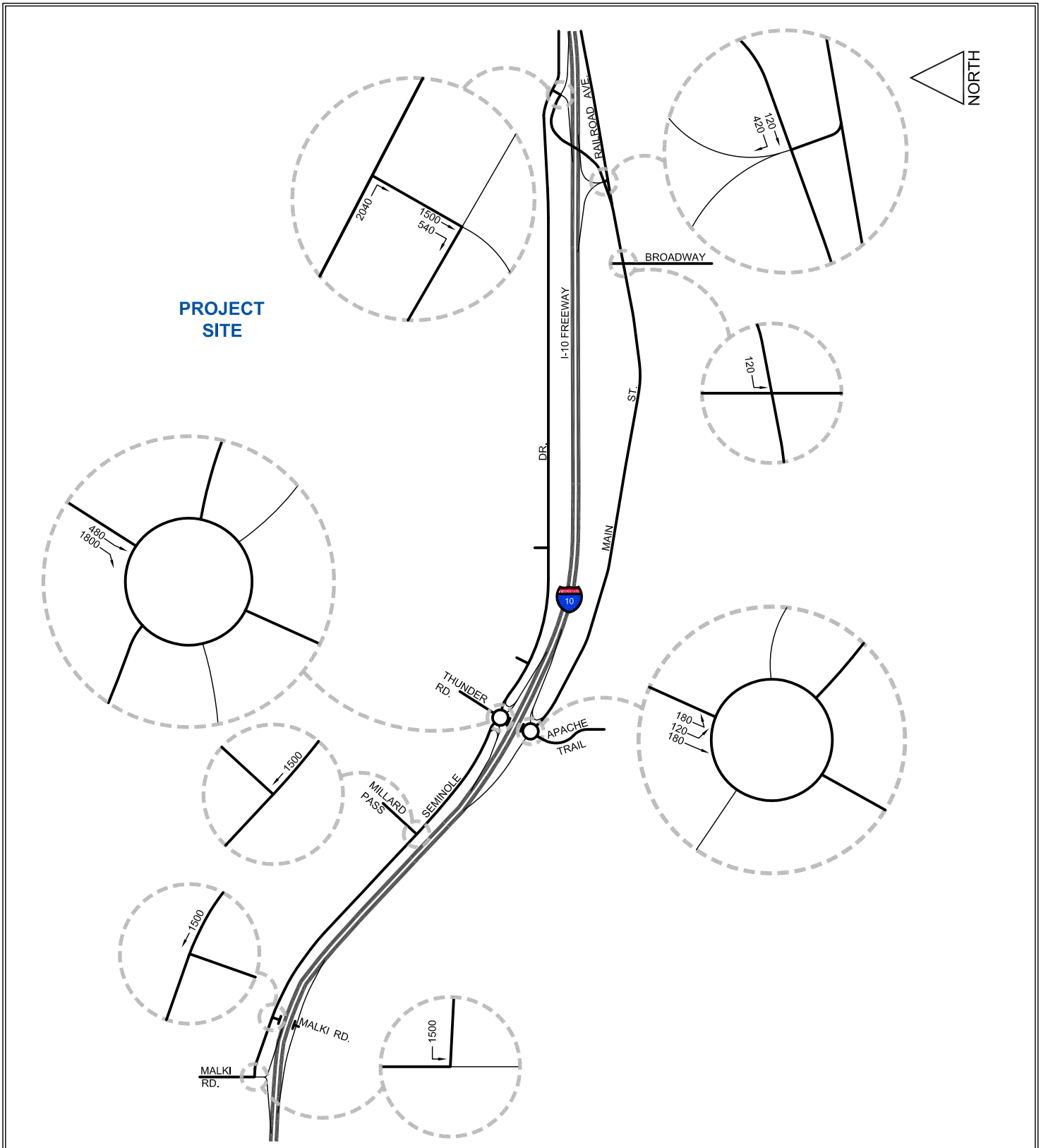


FIGURE 6(b)

5/28/2013

Morongo Outdoor Entertainment\PRJ FRIDAY MIDNIGHT

PROJECT ONLY TRAFFIC VOLUMES

ONE DAY EVENT FRIDAY NIGHT-SATURDAY EARLY MORNING PEAK HOUR

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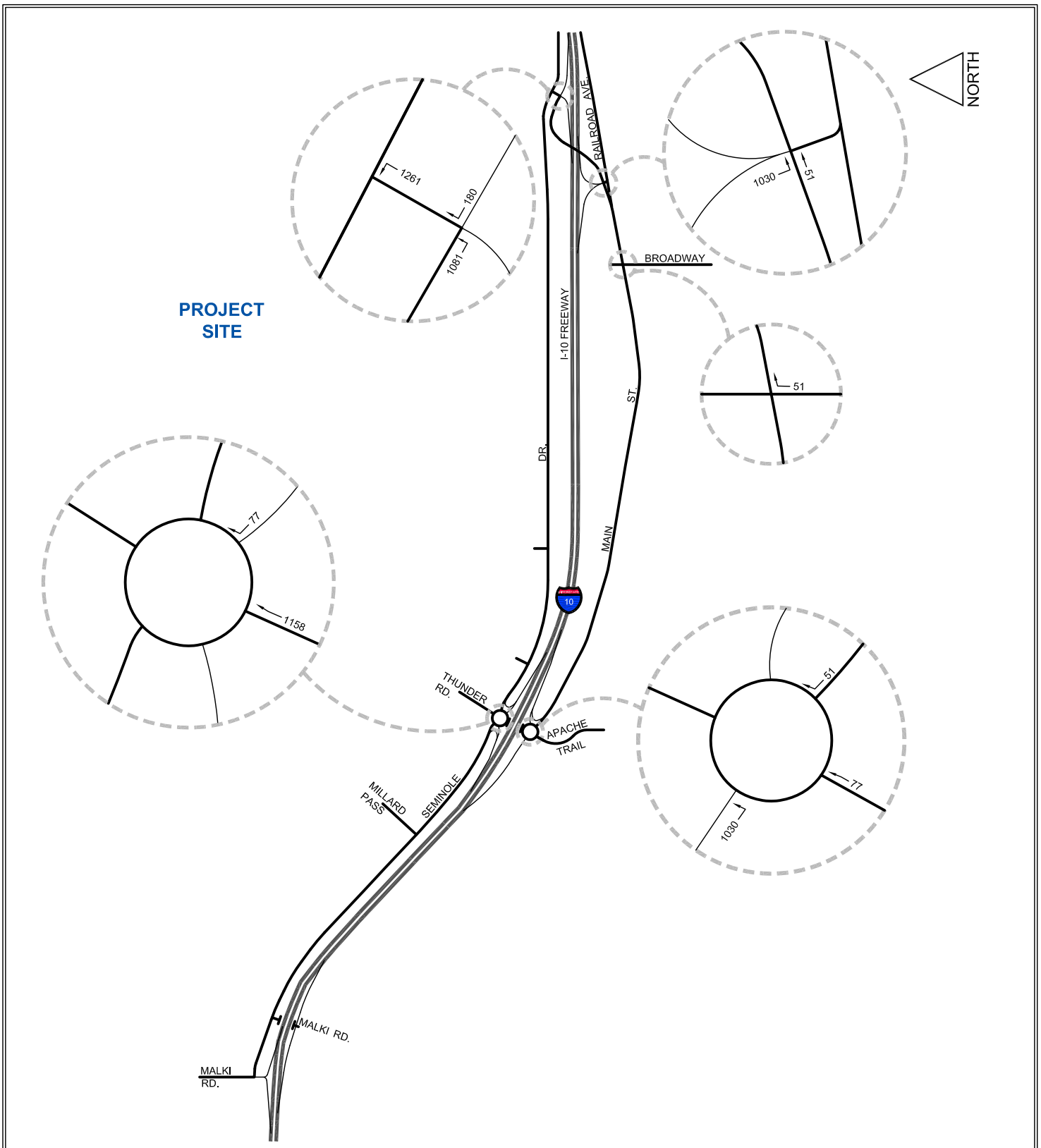


FIGURE 6(c)

5/28/2013

Morongo Outdoor Entertainment\PRJ SATURDAY MIDDAY

PROJECT ONLY TRAFFIC VOLUMES
FESTIVAL SATURDAY MIDDAY PEAK HOUR

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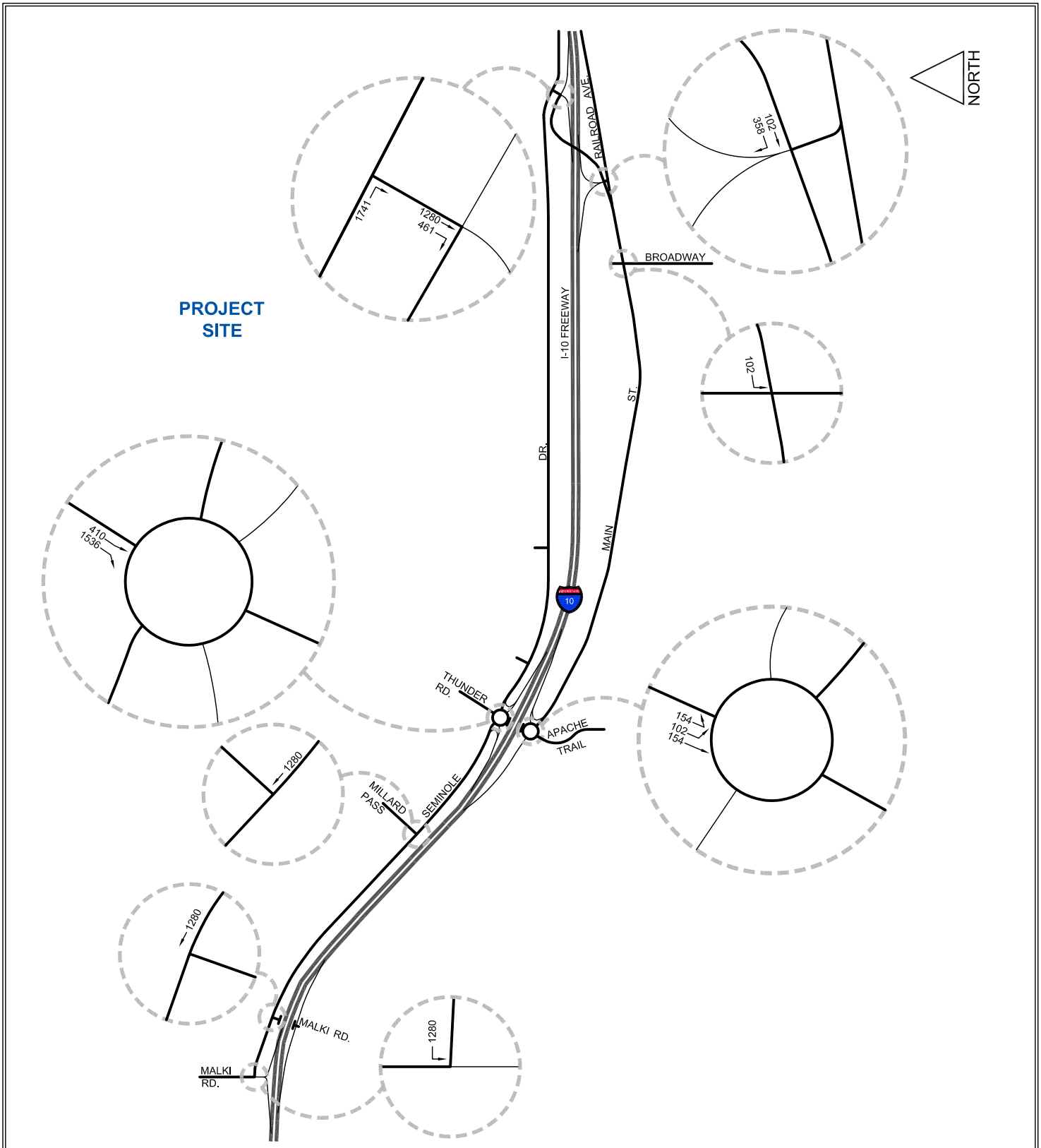


FIGURE 6(d)

5/28/2013

Morongo Outdoor Entertainment\PRJ SUNDAY MIDNIGHT

PROJECT ONLY TRAFFIC VOLUMES
FESTIVAL SUNDAY NIGHT-MONDAY EARLY MORNING PEAK HOUR

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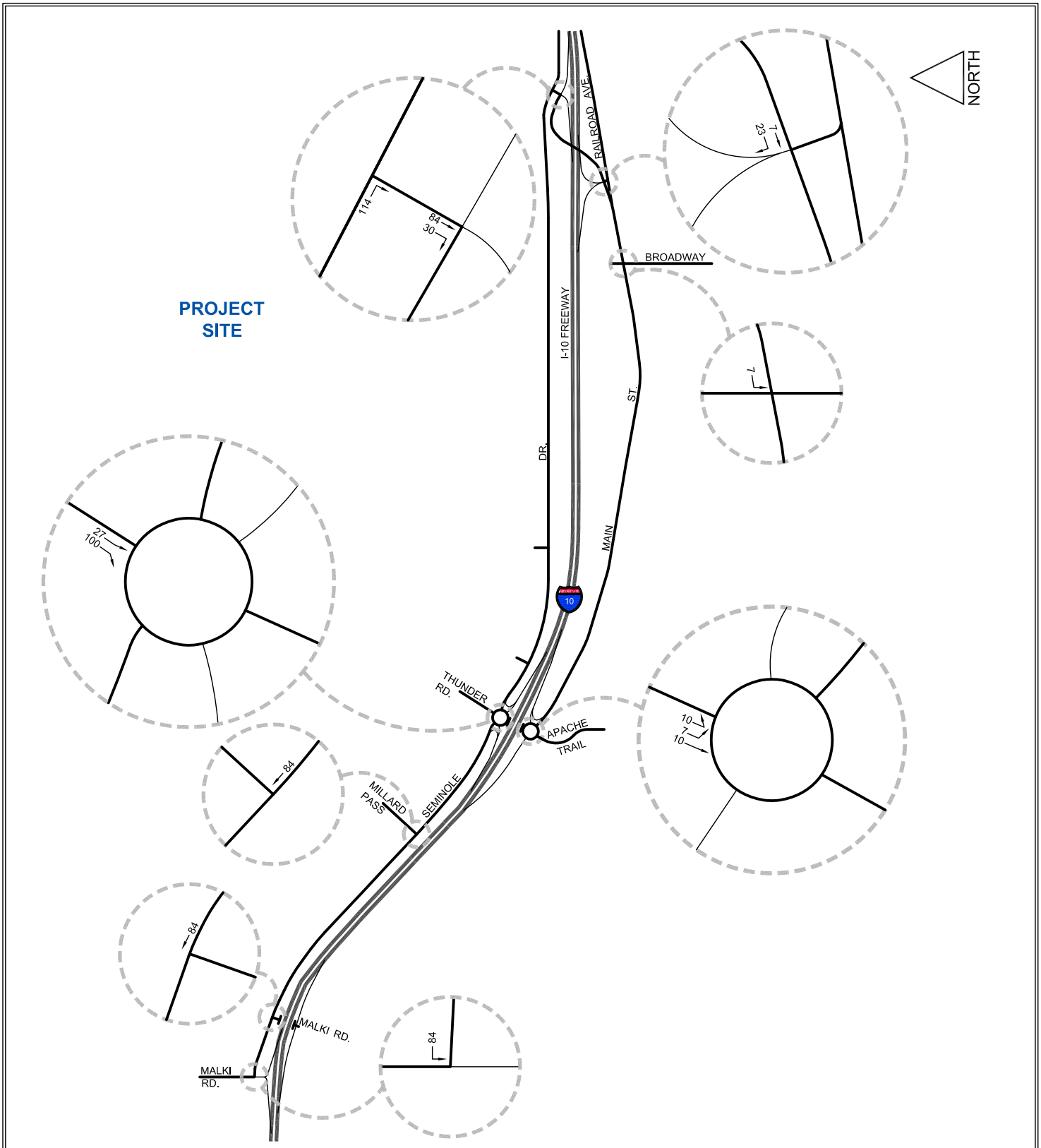


FIGURE 6(e)

5/28/2013

Morongo Outdoor Entertainment\PRJ MONDAY AM

PROJECT ONLY TRAFFIC VOLUMES
FESTIVAL MONDAY AM PEAK HOUR

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## FUTURE TRAFFIC CONDITIONS

In order to evaluate future traffic conditions in the Project area, an analysis of Existing (2012) traffic volumes was first conducted, as described previously. For the analysis of future conditions, an ambient traffic growth factor of 2.0 percent per year was applied to these existing volumes at the twelve study intersections to develop future year (2013) baseline traffic volumes. The proposed project is currently scheduled for completion in 2013; therefore, 2013 was selected as the future buildout study year.

### Significant Impact Criteria

Riverside County traffic impact criteria is not directly applicable to the Project. However, the County's criteria are both informational for developing the critierion for events at the site and the intersections leading to it, and consistency to the extent feasible is recommended. The County of Riverside Transportation Department has defined the deficiencies and significant impacts in accordance with the following requirements. The General Plan states the following:

> "…Peak hour intersection operations of Level of Service C or better are generally acceptable along all County maintained roads and conventional state highways. As an exception, Level of Service D may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Arterial Highways, Urban Arterial Highways, Express ways, conventional state highways or freeway ramp intersections. LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities."

As the above shows, the Riverside County criteria allow a variety of conditions depending upon the specific circumstances being addressed. The capacity leading to

and from the Project site will only be relied upon for short periods of time during and surrounding events, and the Project events will be periodic in nature. Thus, the County criteria that is applicable to conditions occurring during the normal weekday commute conditions should not be directly applied as they are not representative of the typical conditions with those considerations, the capacity of the roadway (i.e. LOS "E") was defined as the maximum permissible level for the peak arrival and departure times.

**Future (2013) With Project Conditions**

As described in the Project Traffic section, Seminole Drive between Thunder Road and Apache Trail will be closed during the peak event traffic hours. The base existing (2012) traffic volumes were redistributed to a this segment. The total future volumes, including the traffic expected to be generated by the Project, formed the Future (2013) With Project condition. Future With Project peak hour traffic volumes are depicted on Figures 7(a), 7(b), 7(c), 7(d) and 7(e) for Friday PM peak event traffic hour, Friday midnight to Saturday early morning peak event traffic hour, Saturday Midday peak event traffic hour, Sunday midnight to Monday early morning peak event traffic hour and Monday AM peak hour, respectively.

The results of the analysis of Future With Project traffic conditions at the study intersections are summarized in Table 7. As shown in Table 7, the addition of ambience growth and the Project-related traffic to existing traffic conditions would deteriorate the LOS at eight study intersections to LOS F.

## Table 7: Level of Service (LOS) Summary
## Future (2013) With Project Traffic Conditions

| | | With Ambience With Project Without Mitigation | | | |
|---|---|---|---|---|---|
| | | Delay | V/C | LOS[1] | |
| 1. Seminole Drive & Malki Road (North)/I-10 WB On/Off Ramps | Friday PM Peak | 15.1 sec | | C | |
| | Friday Midnight Peak | 434.7 sec | | F | * |
| | Saturday Midday Peak | 11.5 sec | | B | |
| | Sunday Midnight Peak | 348.0 sec | | F | * |
| | Monday AM Peak | 7.8 sec | | A | |
| 2. Seminole Drive & Malki Road (South) | Friday PM Peak | 17.8 sec | | B | |
| | Friday Midnight Peak | 36.4 sec | | D | |
| | Saturday Midday Peak | 19.3 sec | | B | |
| | Sunday Midnight Peak | 26.6 sec | | C | |
| | Monday AM Peak | 17.8 sec | | B | |
| 3. I-10 EB On/Off Ramps & Malki Road (South) | Friday PM Peak | 107.5 sec | | F | * |
| | Friday Midnight Peak | 8.9 sec | | A | |
| | Saturday Midday Peak | 466.8 sec | | F | * |
| | Sunday Midnight Peak | 8.9 sec | | A | |
| | Monday AM Peak | 10.9 sec | | B | |
| 5. Seminole Drive & Thunder Road/I-10 WB On/Off Ramps | Friday PM Peak | | 3.24 | F | * |
| | Friday Midnight Peak | | 3.01 | F | * |
| | Saturday Midday Peak | | 1.79 | F | * |
| | Sunday Midnight Peak | | 2.74 | F | * |
| | Monday AM Peak | | 0.32 | A | |
| 6. Main Street & Apache Trail/I-10 EB On/Off Ramps | Friday PM Peak | | 2.33 | F | * |
| | Friday Midnight Peak | | 0.50 | A | |
| | Saturday Midday Peak | | 1.64 | F | * |
| | Sunday Midnight Peak | | 0.44 | A | |
| | Monday AM Peak | | 0.26 | A | |
| 7. Seminole Drive & Morongo Driveway West | Friday PM Peak | 10.0 sec | | B | |
| | Friday Midnight Peak | 10.2 sec | | B | |
| | Saturday Midday Peak | 9.4 sec | | A | |
| | Sunday Midnight Peak | 9.9 sec | | A | |
| | Monday AM Peak | 8.7 sec | | A | |
| 8. Seminole Drive & Morongo Driveway East | Friday PM Peak | 9.2 sec | | A | |
| | Friday Midnight Peak | 9.1 sec | | A | |
| | Saturday Midday Peak | 8.8 sec | | A | |
| | Sunday Midnight Peak | 9.0 sec | | A | |
| | Monday AM Peak | 8.6 sec | | A | |
| 9. Main Street & Broadway | Friday PM Peak | 18.2 sec | | B | |
| | Friday Midnight Peak | 21.6 sec | | C | |
| | Saturday Midday Peak | 19.2 sec | | B | |
| | Sunday Midnight Peak | 29.2 sec | | C | |
| | Monday AM Peak | 19.3 sec | | B | |
| 10. Main Street & I-10 EB On/Off Ramps/Railroad Avenue | Friday PM Peak | [2] sec | | F | * |
| | Friday Midnight Peak | 11.2 sec | | B | |
| | Saturday Midday Peak | 427.7 sec | | F | * |
| | Sunday Midnight Peak | 10.4 sec | | B | |
| | Monday AM Peak | 9.8 sec | | A | |

**Table 7 (continued): Level of Service (LOS) Summary**
**Future (2013) With Project Traffic Conditions**

| | | With Ambience With Project Without Mitigation | | | |
|---|---|---|---|---|---|
| | | Delay | | V/C | LOS[1] | |
| 11. Main Street & I-10 WB On/Off Ramps | Friday PM Peak | 750.0 | sec | | F | * |
| | Friday Midnight Peak | 376.0 | sec | | F | * |
| | Saturday Midday Peak | 279.1 | sec | | F | * |
| | Sunday Midnight Peak | 282.9 | sec | | F | * |
| | Monday AM Peak | 7.0 | sec | | A | |
| 12. Seminole Drive & Main Street | Friday PM Peak | [2] | sec | | F | * |
| | Friday Midnight Peak | [2] | sec | | F | * |
| | Saturday Midday Peak | [2] | sec | | F | * |
| | Sunday Midnight Peak | [2] | sec | | F | * |
| | Monday AM Peak | 10.2 | sec | | B | |

[1] To be conservative, LOS values based on intersection worst Approach LOS.
[2] Intersection volumes exceed HCM allowed range.

In addition, Sidra Version 5.1 software was used for the two roundabouts for the Future (2013) With Project analysis. As shown in Table 8, Sidra analysis results have shown similar conclusions that these two roundabouts would be significantly impacted by the Project traffic under the Future (2013) With Project conditions.

**Table 8: Roundabout Level of Service (LOS) Summary**
**Future (2013) With Project Traffic Conditions**

| | | With Ambience With Project Without Mitigation | | | |
|---|---|---|---|---|---|
| | | Delay | | V/C | LOS[1] | |
| 5. Seminole Drive & Thunder Road/I-10 WB On/Off Ramps | Friday PM Peak | 515.8 | sec | | F | * |
| | Friday Midnight Peak | 547.7 | sec | | F | * |
| | Saturday Midday Peak | 166.1 | sec | | F | * |
| | Sunday Midnight Peak | 464.5 | sec | | F | * |
| | Monday AM Peak | 5.6 | sec | | A | |
| 6. Main Street & Apache Trail/I-10 EB On/Off Ramps | Friday PM Peak | 597.6 | sec | | F | * |
| | Friday Midnight Peak | 10.2 | sec | | B | |
| | Saturday Midday Peak | 319.1 | sec | | F | * |
| | Sunday Midnight Peak | 8.2 | sec | | A | |
| | Monday AM Peak | 5.6 | sec | | A | |

[1] To be conservative, LOS values based on intersection worst Approach LOS.

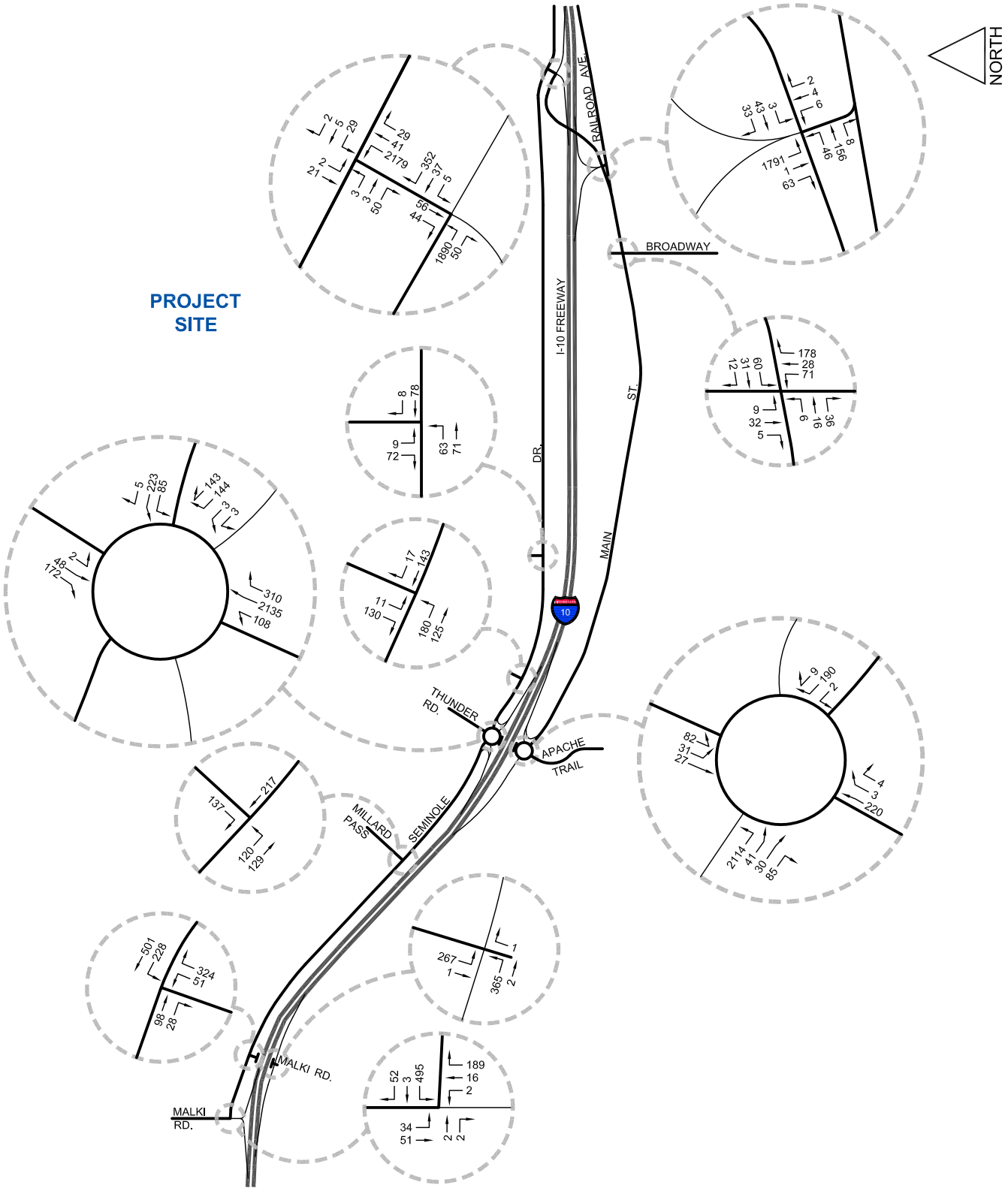


FIGURE 7(a)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 WO Cum Friday PM

(2013) TRAFFIC VOLUMES
WITH PROJECT WITHOUT CUMULATIVE
ONE DAY EVENT FRIDAY PM PEAK HOUR

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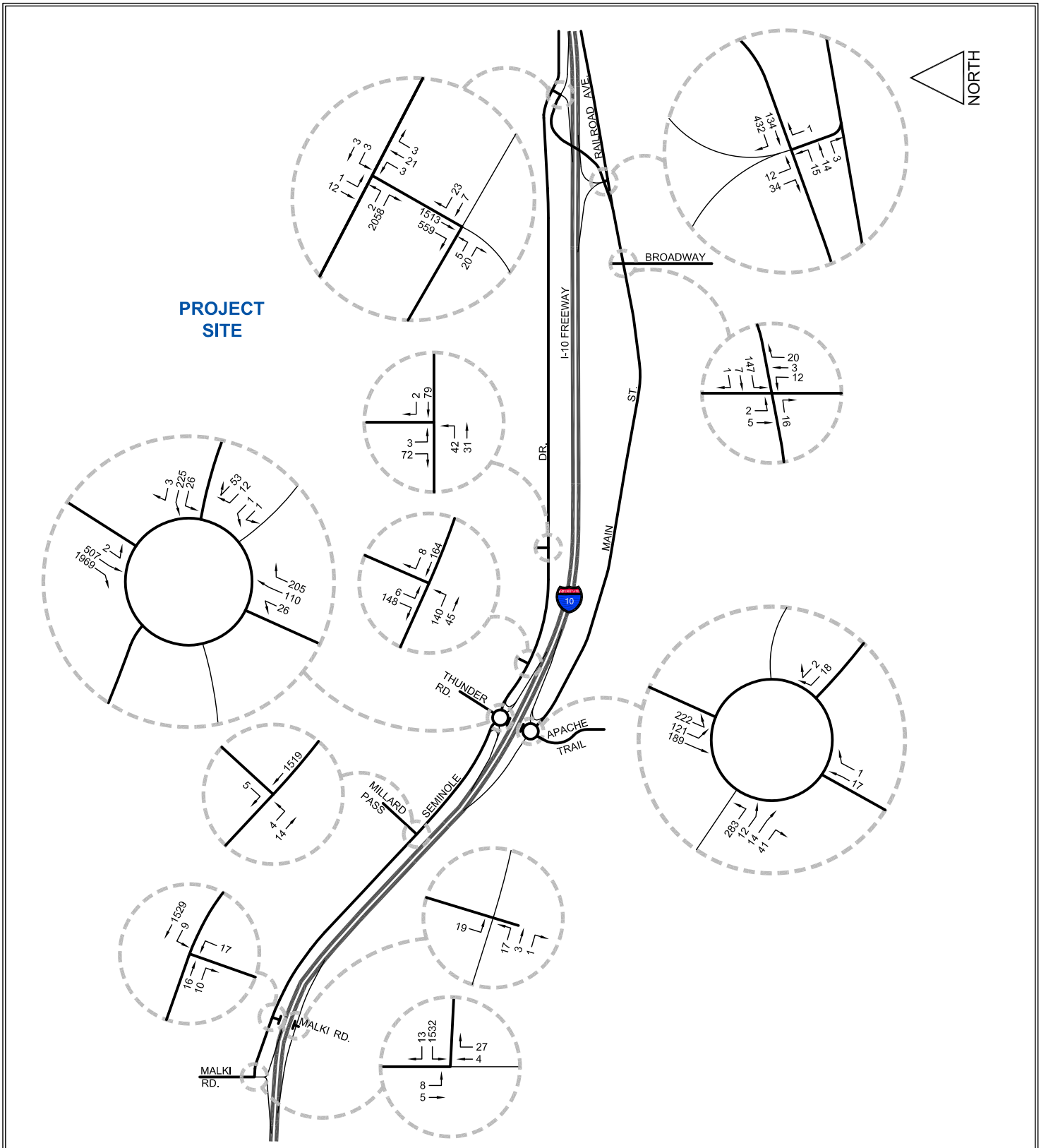


FIGURE 7(b)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 Friday Midnight

(2013) TRAFFIC VOLUMES
WITH PROJECT WITHOUT CUMULATIVE
ONE DAY EVENT FRIDAY NIGHT-SATURDAY EARLY MORNING PEAK HOUR

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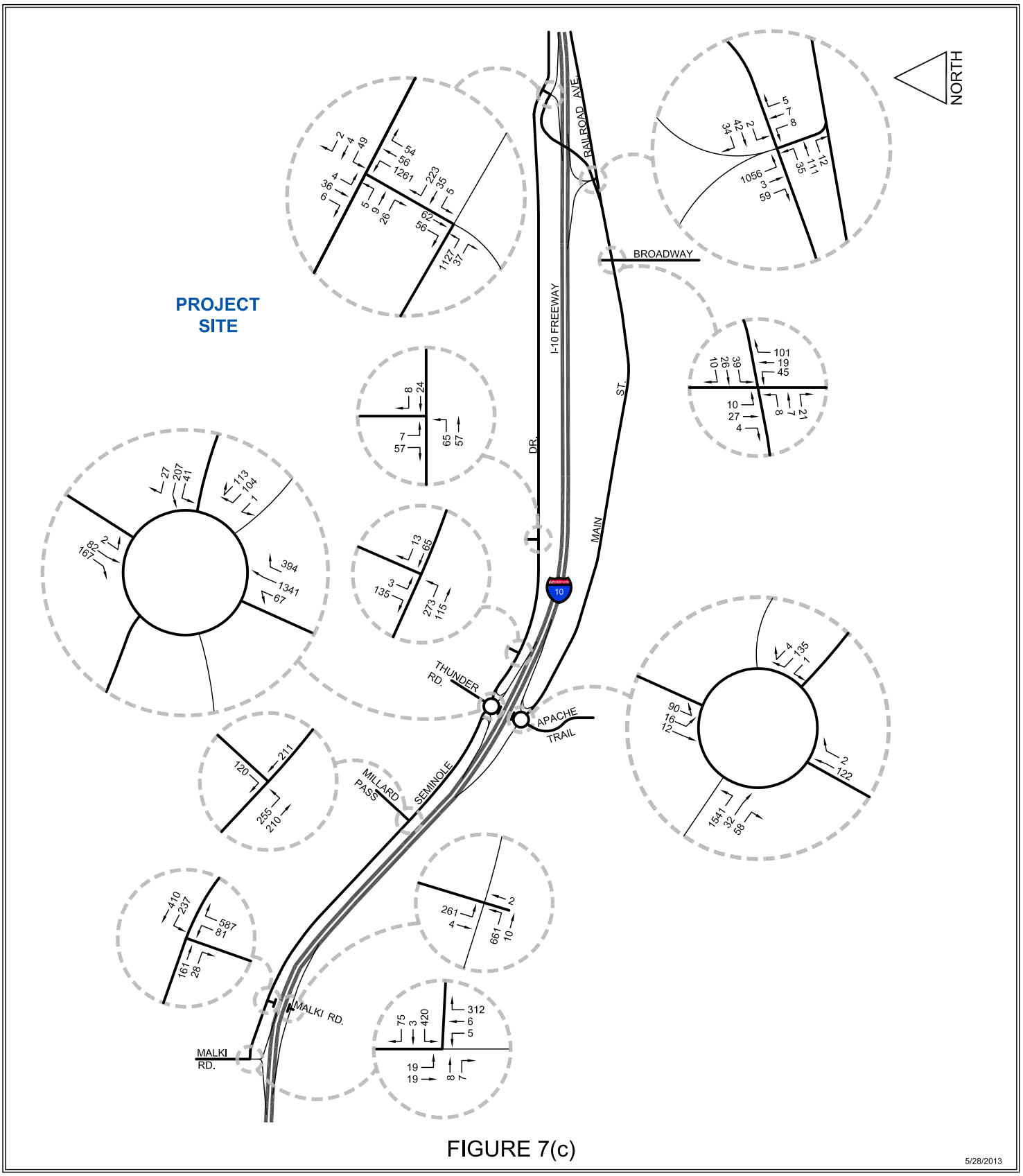


FIGURE 7(c)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 WO CUM SATURDAY MIDDAY

(2013) TRAFFIC VOLUMES
WITH PROJECT WITHOUT CUMULATIVE
FESTIVAL SATURDAY MIDDAY PEAK HOUR

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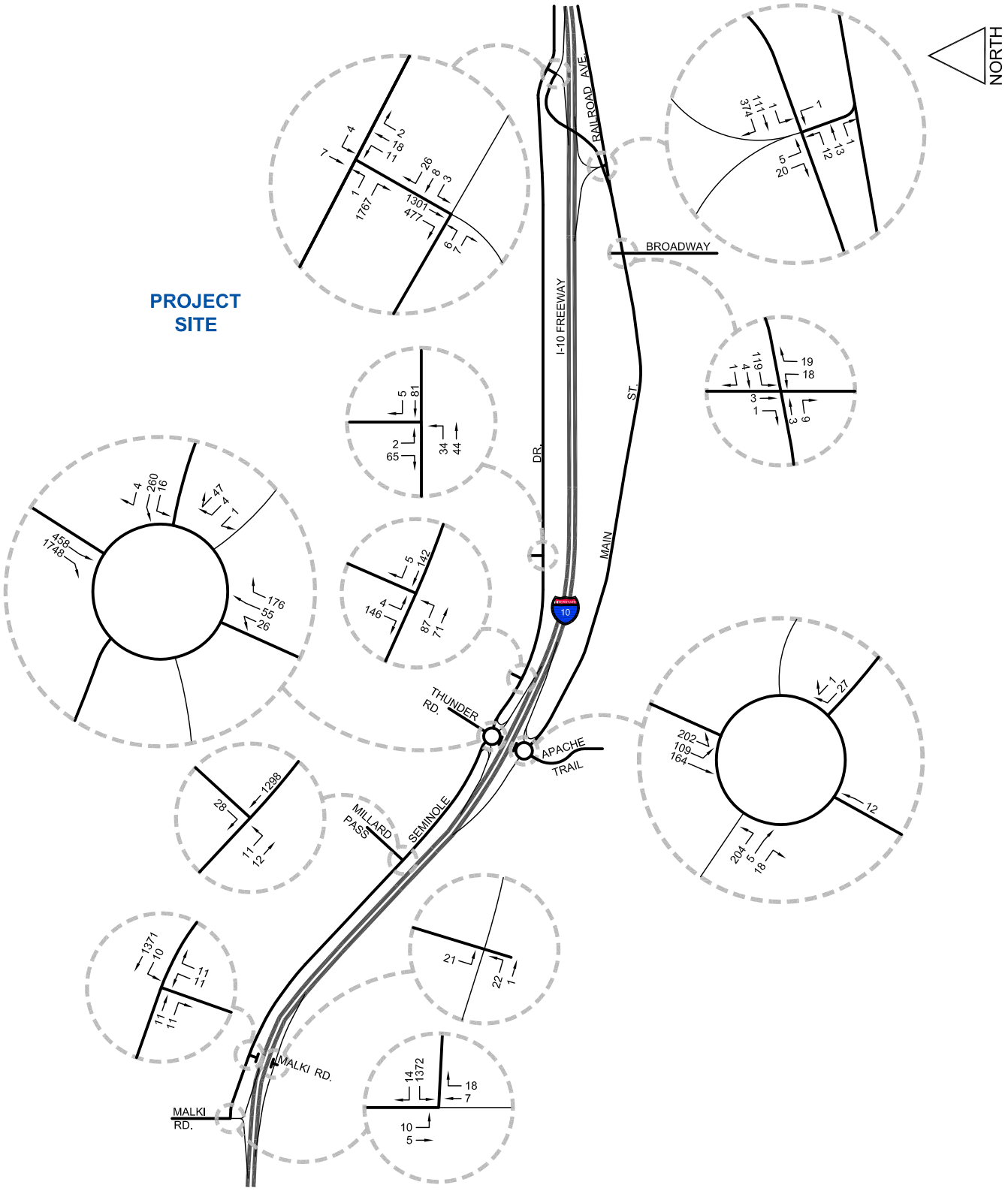


FIGURE 7(d)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 Sunday Midnight

(2013) TRAFFIC VOLUMES
WITH PROJECT WITHOUT CUMULATIVE
FESTIVAL SUNDAY NIGHT-MONDAY EARLY MORNING PEAK HOUR

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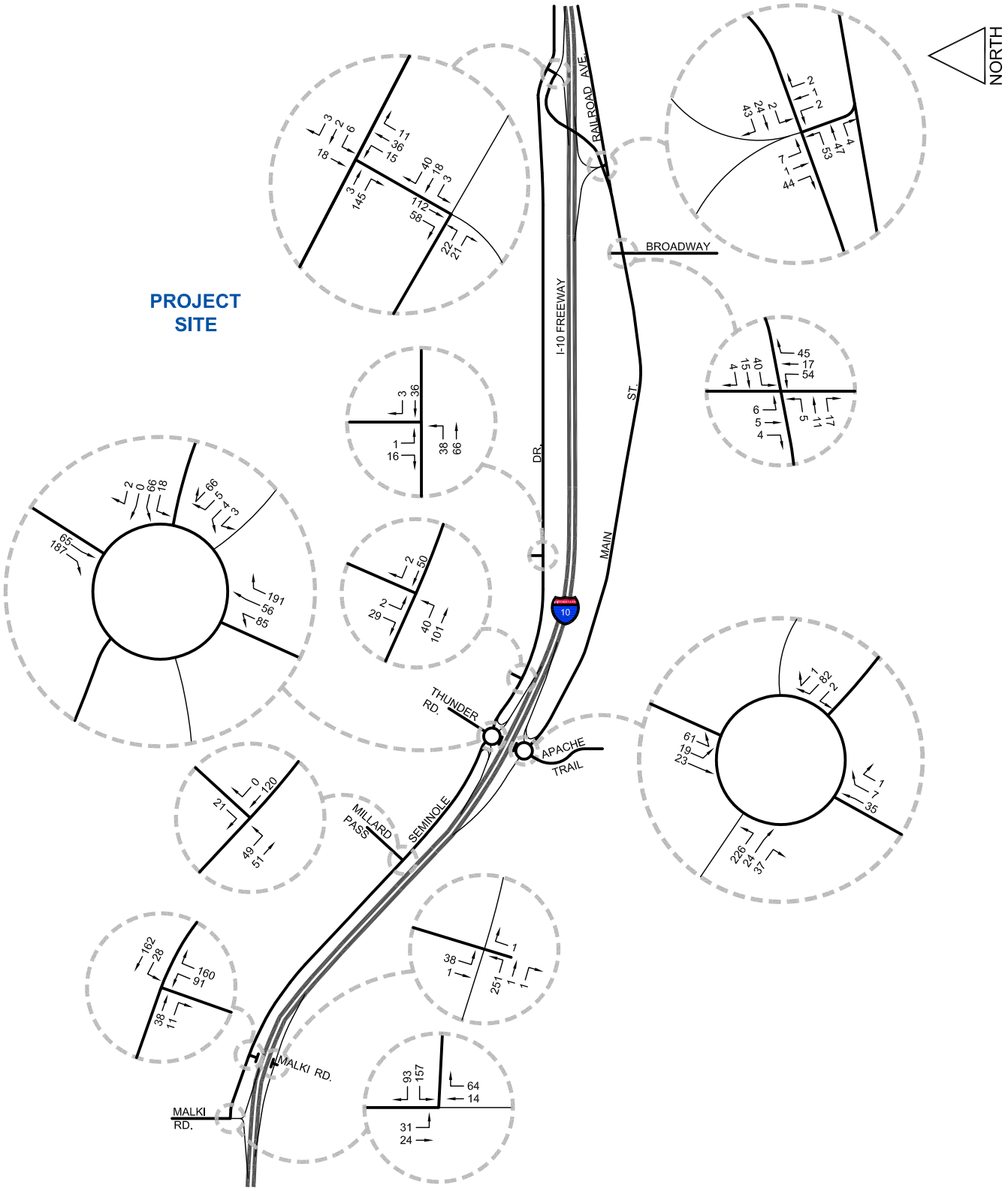


FIGURE 7(e)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 WO CUM MONDAY AM

(2013) TRAFFIC VOLUMES
WITH PROJECT WITHOUT CUMULATIVE
FESTIVAL MONDAY AM PEAK HOUR

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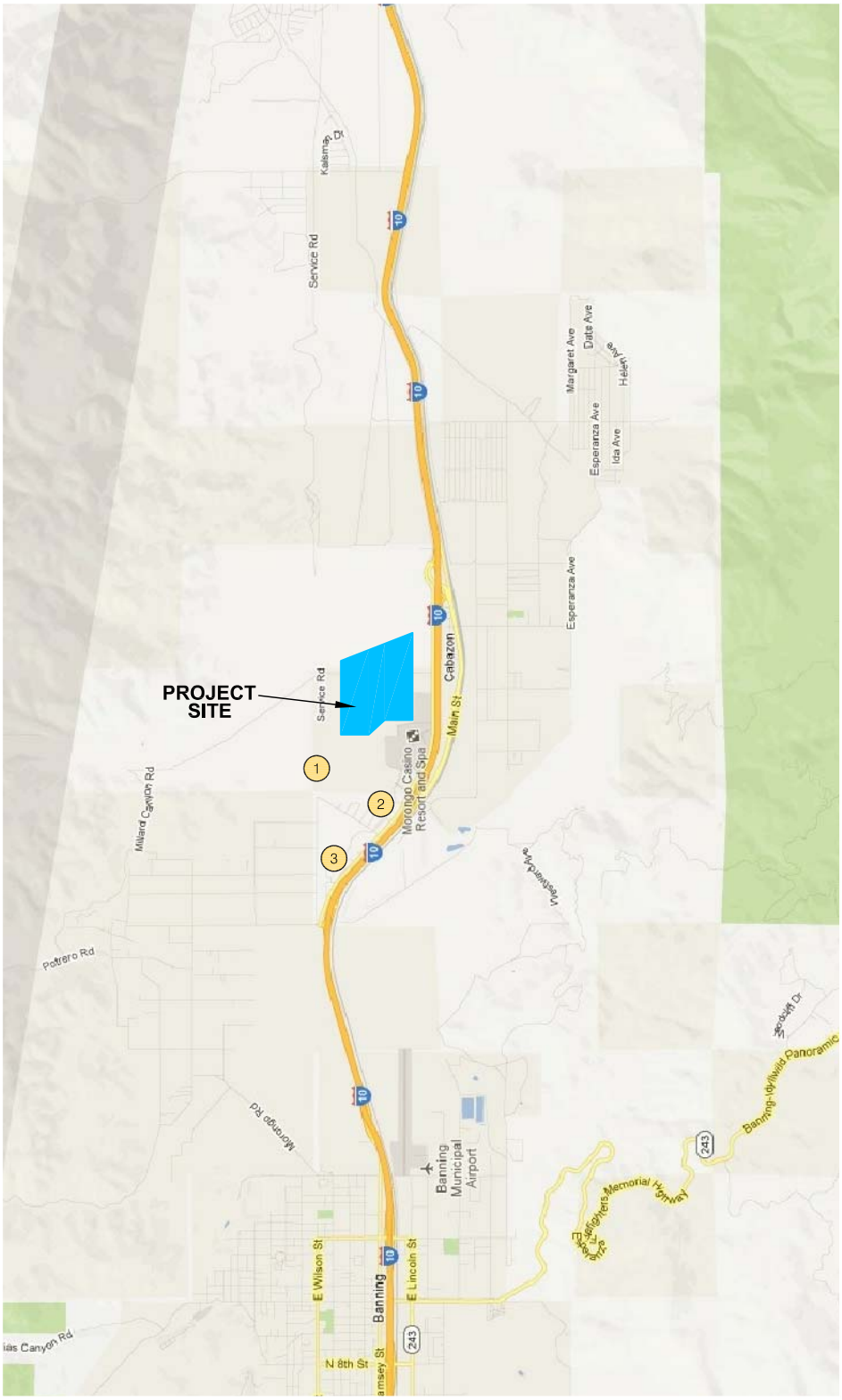
## Future (2013) With Project With Cumulative Conditions

There are a number of other projects either under construction or planned for development in the surrounding area that may contribute future traffic to the study locations. For this reason, the analysis of future traffic conditions was expanded to include potential traffic volume increases expected to be generated by those other projects.

The inclusion of the annual growth factor generally accounts for area-wide traffic increases. To ensure a conservative estimate of cumulative traffic conditions, the traffic generated by “cumulative projects” in the study area was also added to the future baseline traffic volumes. Finally, the traffic expected to be generated by the cumulative projects was analyzed as an incremental addition to the Future (2013) With Project condition, resulting in the Future (2013) With Project With Cumulative condition.

There are 3 potential cumulative projects in the study area, and their locations are shown on Figure 8. The related project locations, descriptions, and trip generation estimates are listed in Table 9. The number of trips expected to be generated by the cumulative projects and their distributions were obtained from information provided by public agencies, traffic studies and environmental reports, to the extent available. Summing the individual cumulative project traffic volume assignments, the total related project traffic volumes at the study intersections were calculated and are shown on Figures 9(a), 9(b) and 9(c) for Friday PM peak event traffic hour, Saturday Midday peak event traffic hour and Monday AM peak hour, respectively. Due to the characteristic of these cumulative projects, it is assumed that these cumulative projects would generate minimal amount of traffic during Friday midnight to Saturday early morning peak event traffic hour and Sunday midnight to Monday early morning peak event traffic hour.

Cumulative projects volumes, as determined earlier, were then added to the Future (2013) With Project traffic volumes to develop the Future (2013) With Project With Cumulative volumes. The Future (2013) With Project With Cumulative peak-hour traffic volumes are shown on Figures 10(a), 10(b), 10(c), 10(d) and 10(e) for Friday PM peak event traffic hour, Friday midnight to Saturday early morning peak event traffic hour, Saturday Midday peak event traffic hour, Sunday midnight to Monday early morning peak event traffic hour and Monday AM peak hour, respectively.




NORTH

FIGURE 8

12/6/2012

FN: MORONGO OUTDOOR ENTERTAINMENT\RELPRJ

CUMULATIVE PRJECT LOCATION MAP

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## Table 9: Cumulative Project Descriptions and Trip Generations [1]

| | | | | WEEKDAY | | | | | | | SATURDAY | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AM PEAK HOUR | | | EVENING PEAK HOUR | | | | MIDDAY PEAK HOUR | | |
| Project | Land Use | SIZE | | DAILY | IN | OUT | TOTAL | IN | OUT | TOTAL | DAILY | IN | OUT | TOTAL |
| PAR 00791 | Single-Family Detached Residential | 93 | du | **890** | **18** | **52** | **70** | **60** | **34** | **94** | **937** | **46** | **41** | **87** |
| PAR 01290 | Factory Outlet Center | 78,000 | sf | 2,074 | 38 | 14 | 52 | 84 | 94 | 178 | 3,196 | 151 | 145 | 296 |
| | Internal Capture (10%) | | | (207) | 0 | 0 | 0 | (8) | (9) | (17) | (320) | (15) | (15) | (30) |
| | | | | **1,867** | **38** | **14** | **52** | **76** | **85** | **161** | **2,876** | **136** | **130** | **266** |
| | Desert Hill Premium Outlet Center | 158,754 | sf | 4,221 | 78 | 29 | 107 | 171 | 192 | 363 | 6,504 | 307 | 296 | 603 |
| | Internal Capture (10%) | | | 422 | 0 | 0 | 0 | (17) | (19) | (36) | (650) | (31) | (30) | (61) |
| | | | | **4,643** | **78** | **29** | **107** | **154** | **173** | **327** | **5,854** | **276** | **266** | **542** |

[1] Due to the characteristics of cumulative projects, no cumulative project traffic are assumed for Friday midnight to Monday early morning peak event traffic hour and Sunday midnight to Monday early morning peak event traffic hour.

Notes: sf = Square Feet; du = Dwelling Units.

Sources: Desert Hills Premium Outlet Expansion Traffic Impact Analysis (Revised), August 7, 2012.

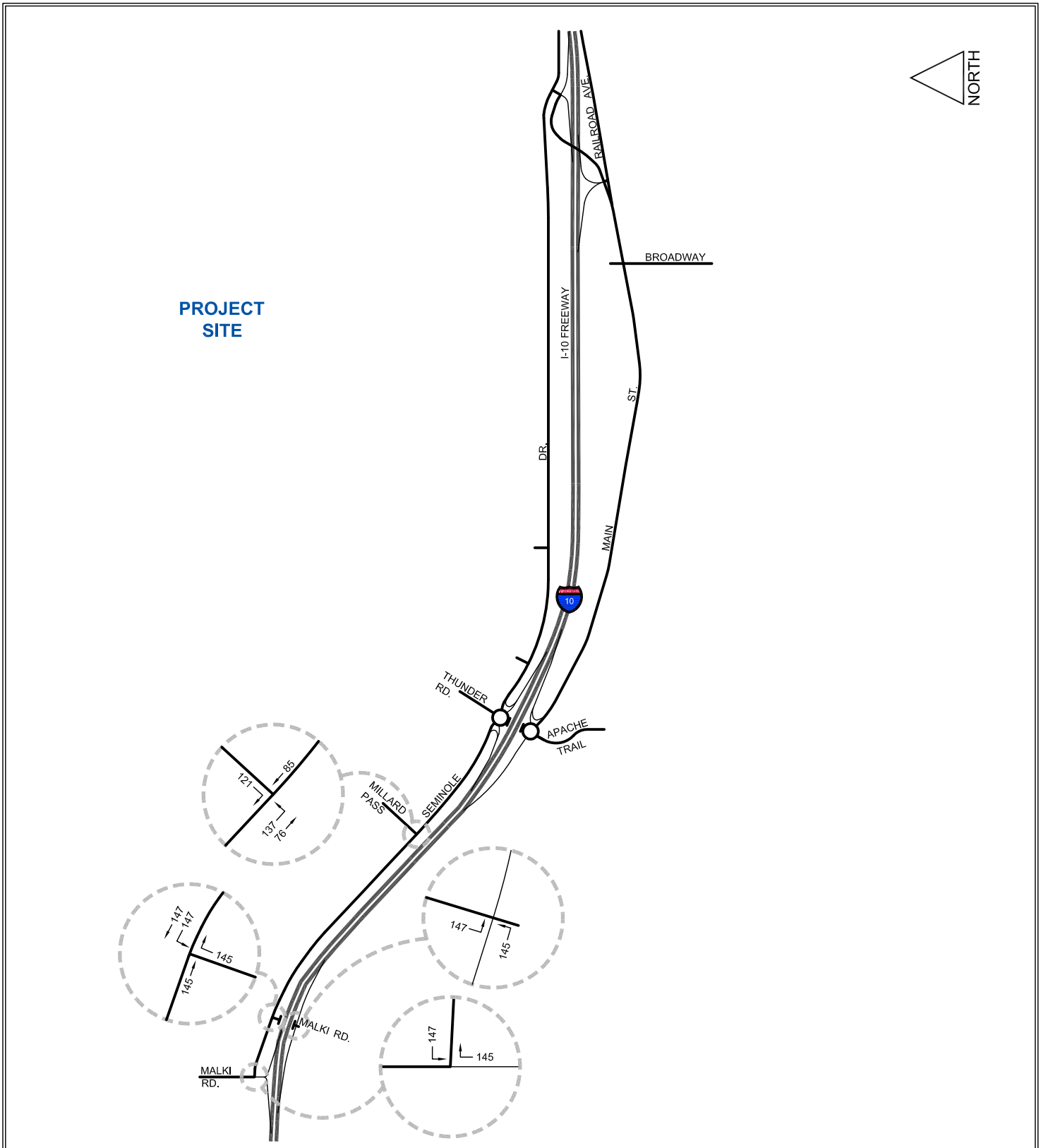


FIGURE 9(a)

5/28/2013

Morongo Outdoor Entertainment\RELPRJ FRIDAY PM

CUMULATIVE PROJECTS VOLUMES
FRIDAY PM PEAK HOUR

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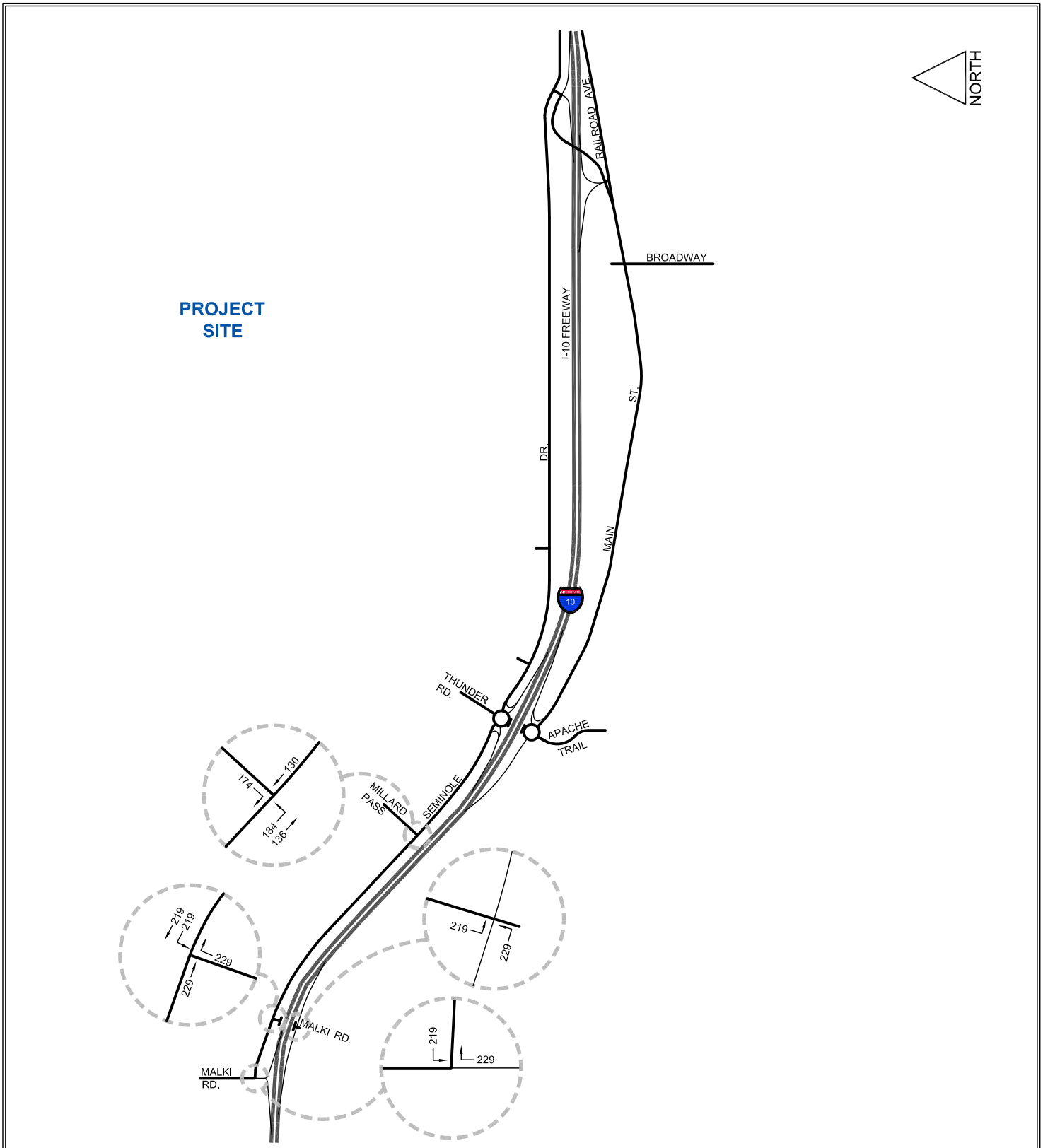


FIGURE 9(b)

5/28/2013

Morongo Outdoor Entertainment\RELPRJ SATURDAY MIDDAY

CUMULATIVE PROJECTS VOLUMES
SATURDAY MIDDAY PEAK HOUR

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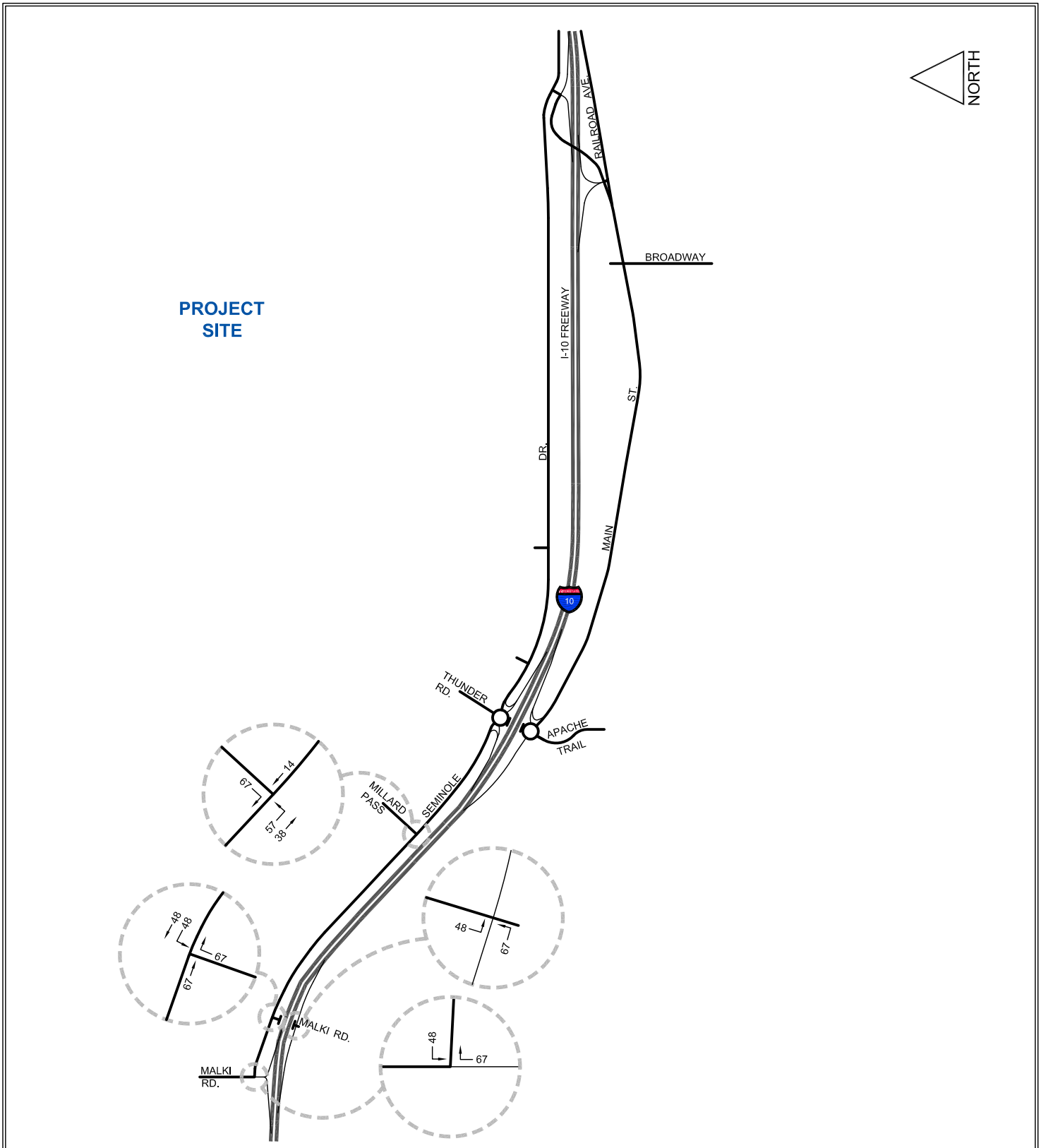


FIGURE 9(c)

5/28/2013

Morongo Outdoor Entertainment\RELPRJ MONDAY AM

CUMULATIVE PROJECTS VOLUMES
MONDAY AM PEAK HOUR

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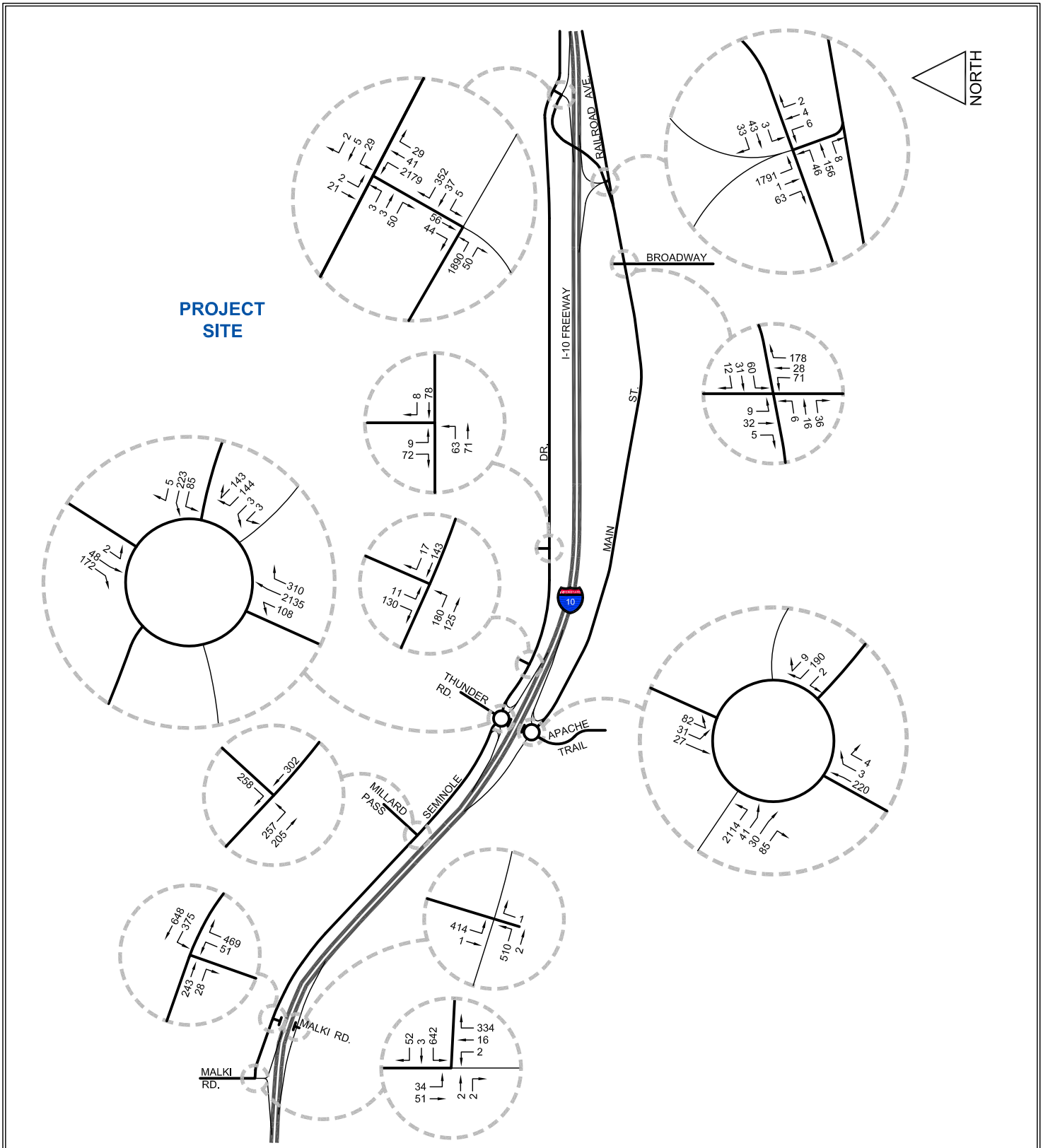


FIGURE 10(a)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 Friday PM

(2013) TRAFFIC VOLUMES
WITH PROJECT WITH CUMULATIVE
ONE DAY EVENT FRIDAY PM PEAK HOUR

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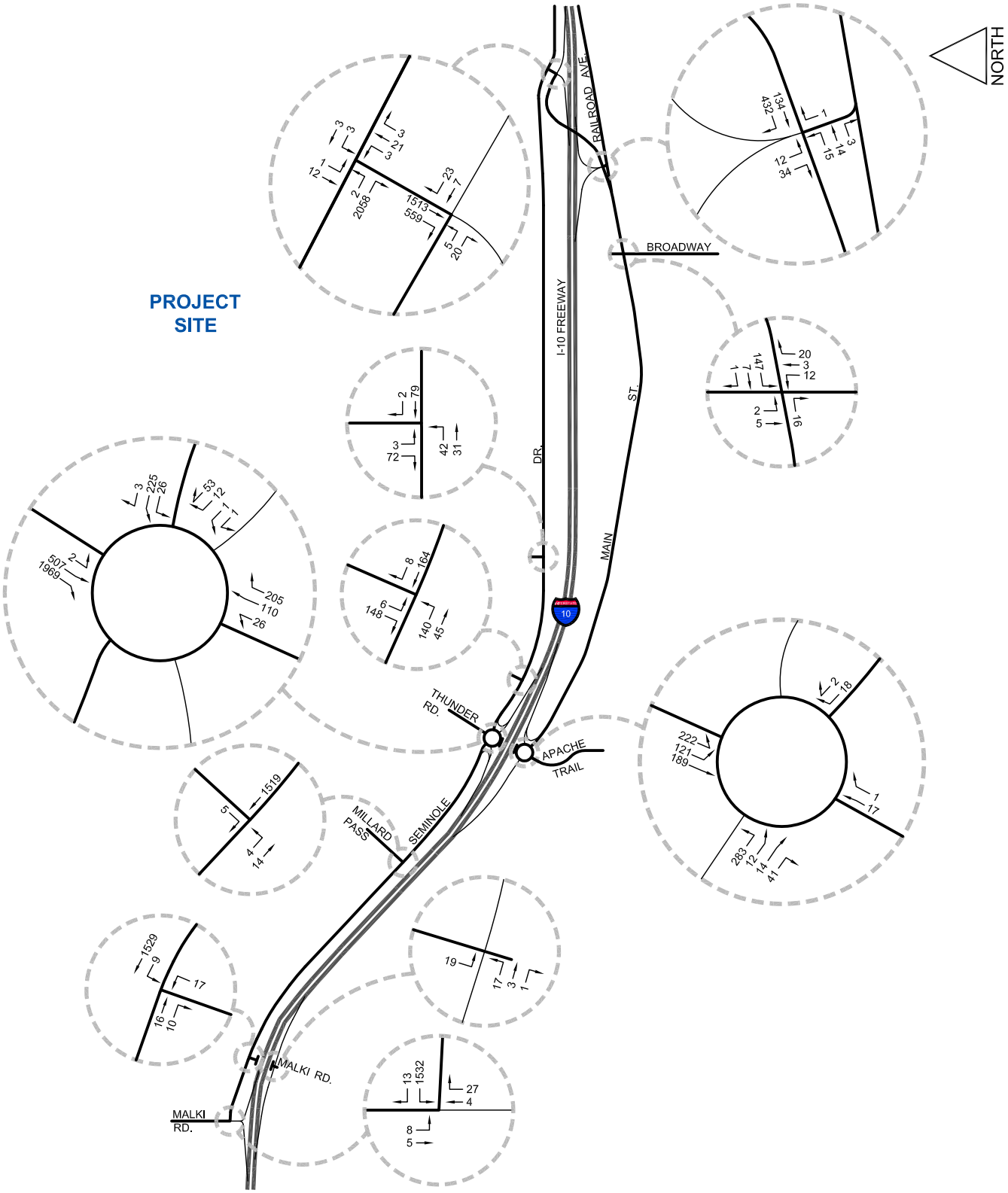


FIGURE 10(b)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 Friday Midnight

(2013) TRAFFIC VOLUMES
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ONE DAY EVENT FRIDAY NIGHT-SATURDAY EARLY MORNING PEAK HOUR

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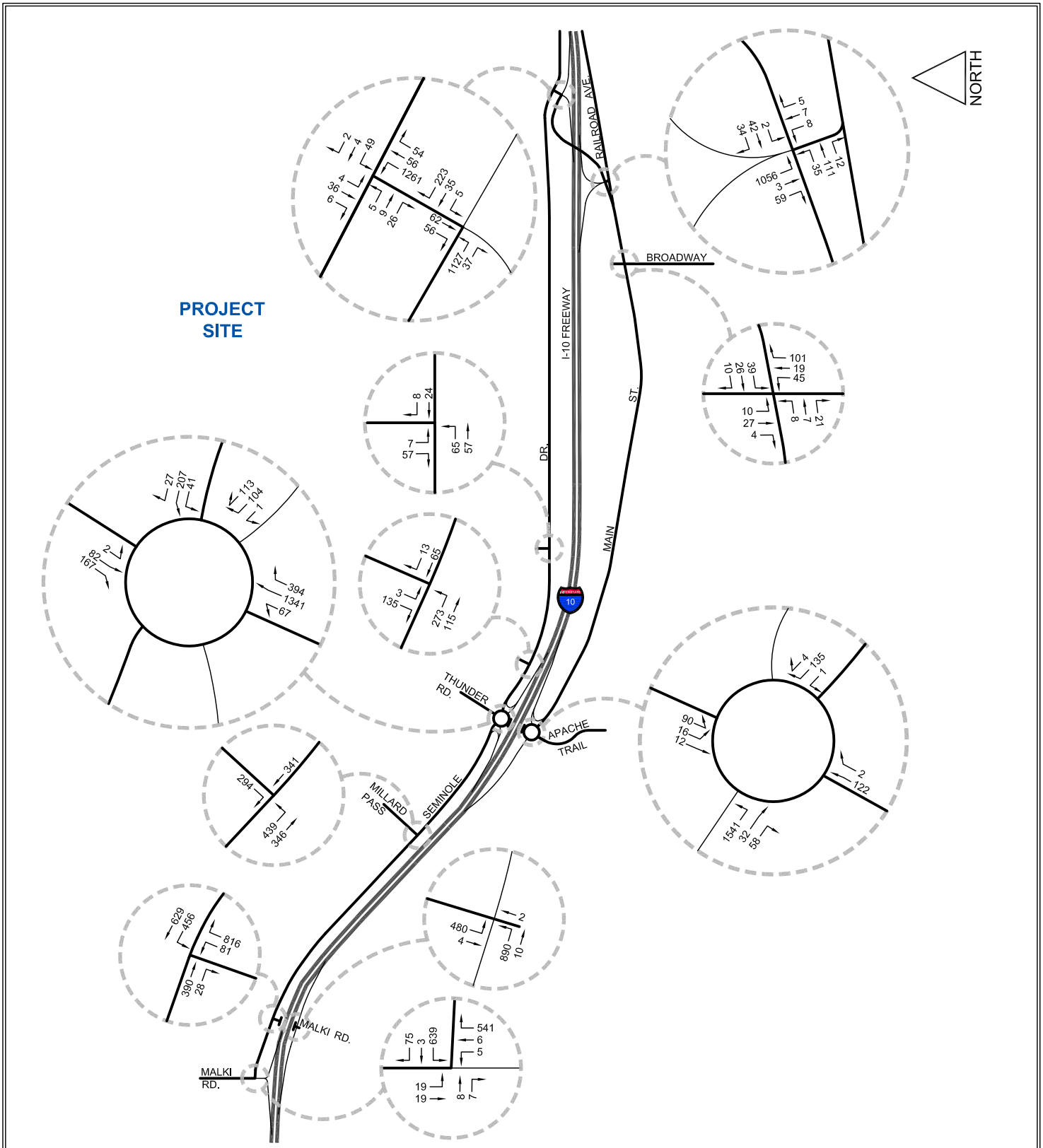


FIGURE 10(c)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 Saturday Midday

(2013) TRAFFIC VOLUMES
WITH PROJECT WITH CUMULATIVE
FESTIVAL SATURDAY MIDDAY PEAK HOUR

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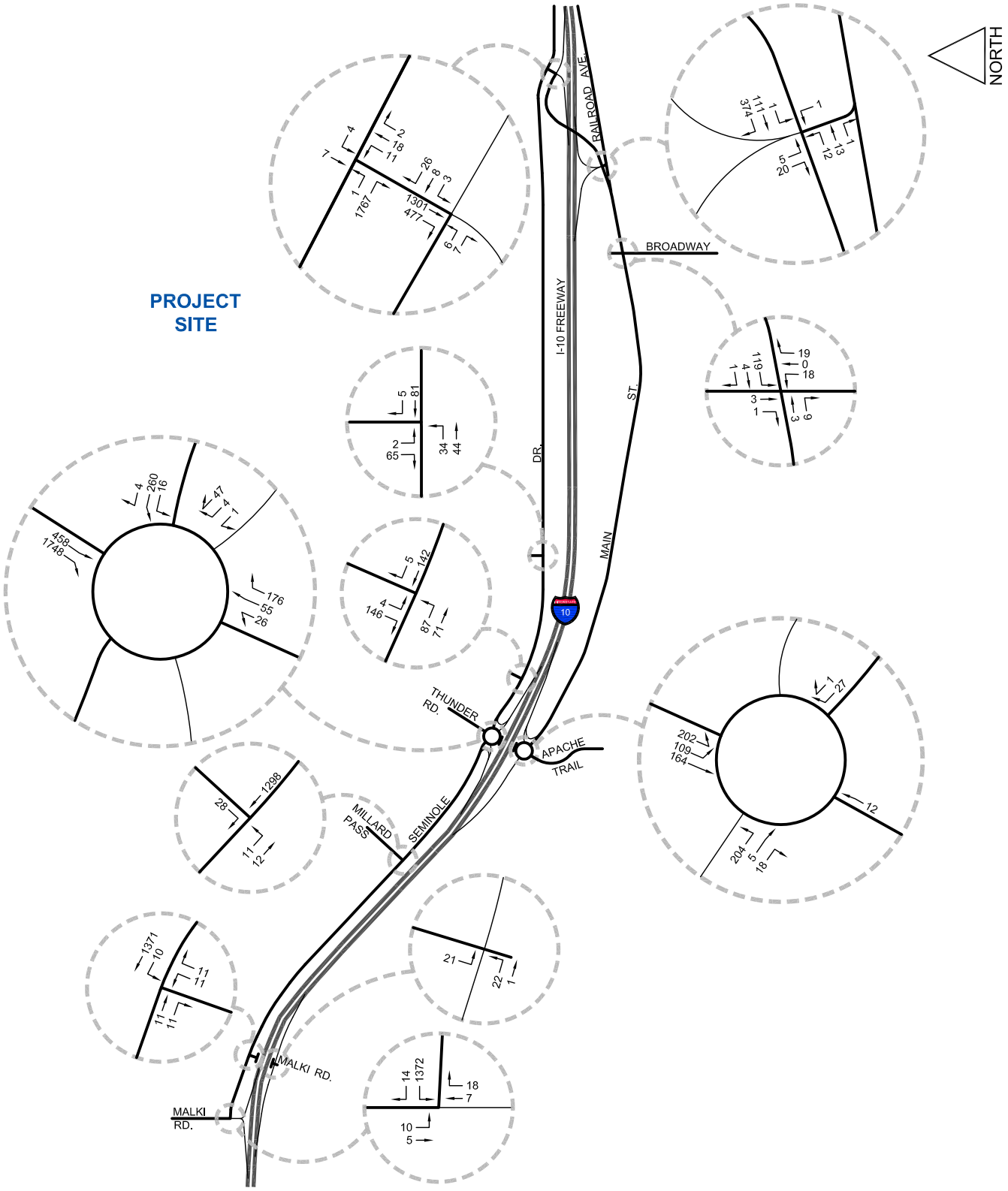


FIGURE 10(d)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 Sunday Midnight

(2013) TRAFFIC VOLUMES
WITH PROJECT WITH CUMULATIVE
FESTIVAL SUNDAY NIGHT-MONDAY EARLY MORNING PEAK HOUR

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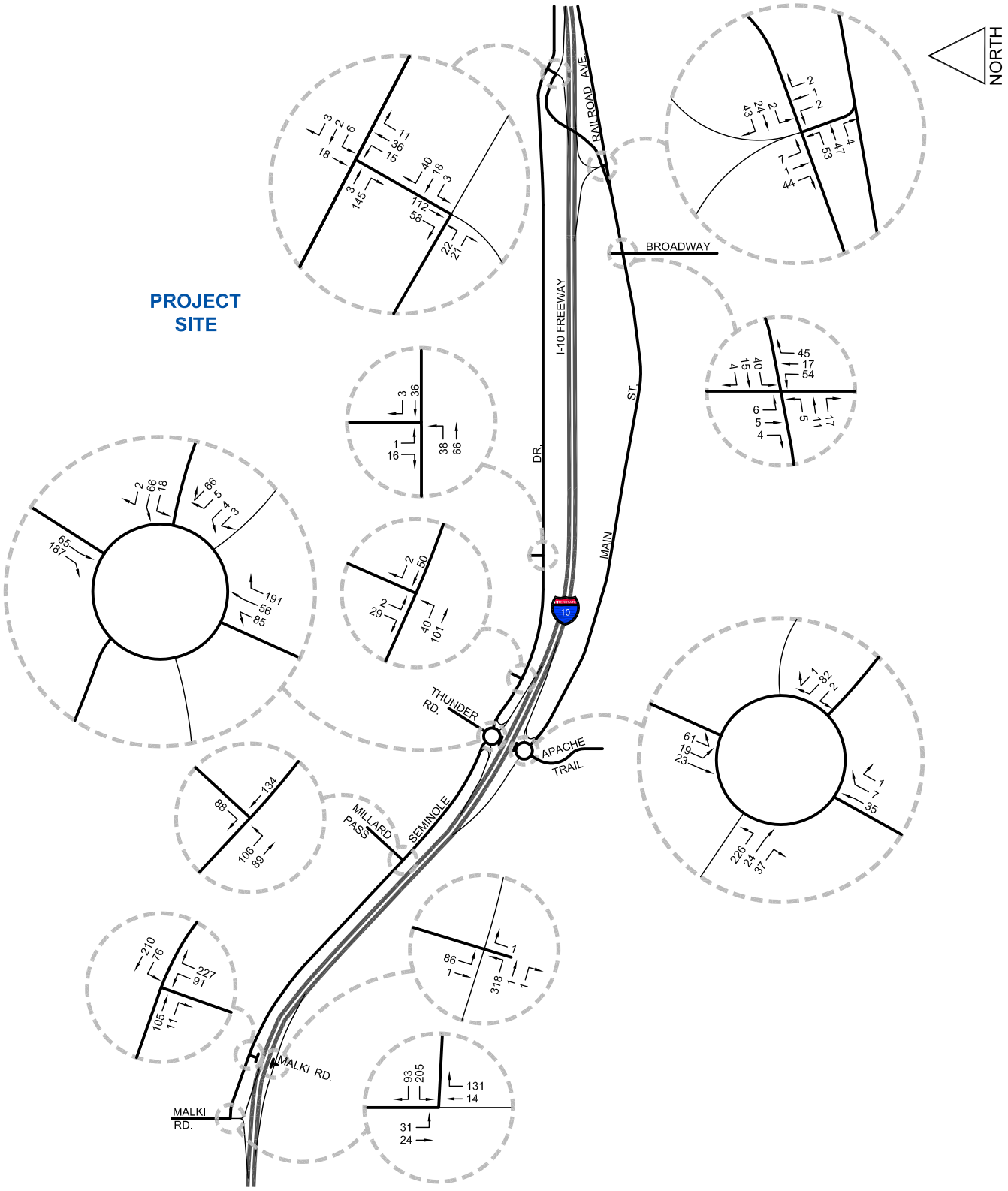


FIGURE 10(e)

5/28/2013

Morongo Outdoor Entertainment\WP 2013 Monday AM

(2013) TRAFFIC VOLUMES
WITH PROJECT WITH CUMULATIVE
FESTIVAL MONDAY AM PEAK HOUR

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The results of the analysis of Future With Project With Cumulative traffic conditions at the study intersections are summarized in Table 10. As shown in Table 10, the addition of Project and cumulative projects traffic to existing traffic conditions would deteriorate the LOS at eight study intersections to LOS F.

**Table 10: Level of Service (LOS) Summary**
**Future (2013) With Project With Cumulative Traffic Conditions**

| | | With Ambience With Project Without Mitigation | | | |
|---|---|---|---|---|---|
| | | Delay | V/C | LOS[1] | |
| 1. Seminole Drive & Malki Road (North)/I-10 WB On/Off Ramps | Friday PM Peak | 27.8 sec | | D | |
| | Friday Midnight Peak | 434.7 sec | | F | * |
| | Saturday Midday Peak | 23.1 sec | | C | |
| | Sunday Midnight Peak | 348.0 sec | | F | * |
| | Monday AM Peak | 8.1 sec | | A | |
| 2. Seminole Drive & Malki Road (South) | Friday PM Peak | 19.8 sec | | B | |
| | Friday Midnight Peak | 36.3 sec | | D | |
| | Saturday Midday Peak | 31.4 sec | | C | |
| | Sunday Midnight Peak | 24.3 sec | | C | |
| | Monday AM Peak | 16.2 sec | | B | |
| 3. I-10 EB On/Off Ramps & Malki Road (South) | Friday PM Peak | 831.7 sec | | F | * |
| | Friday Midnight Peak | 8.9 sec | | A | |
| | Saturday Midday Peak | [2] sec | | F | * |
| | Sunday Midnight Peak | 8.9 sec | | A | |
| | Monday AM Peak | 14.1 sec | | B | |
| 4. Seminole Drive & Millard Pass | Friday PM Peak | 12.3 sec | | B | |
| | Friday Midnight Peak | 107.5 sec | | F | * |
| | Saturday Midday Peak | 32.1 sec | | D | |
| | Sunday Midnight Peak | 55.7 sec | | F | * |
| | Monday AM Peak | 8.0 sec | | A | |
| 5. Seminole Drive & Thunder Road/I-10 WB On/Off Ramps | Friday PM Peak | | 3.24 | F | * |
| | Friday Midnight Peak | | 3.01 | F | * |
| | Saturday Midday Peak | | 1.79 | F | * |
| | Sunday Midnight Peak | | 2.74 | F | * |
| | Monday AM Peak | | 0.32 | A | |
| 6. Main Street & Apache Trail/I-10 EB On/Off Ramps | Friday PM Peak | | 2.33 | F | * |
| | Friday Midnight Peak | | 0.50 | A | |
| | Saturday Midday Peak | | 1.64 | F | * |
| | Sunday Midnight Peak | | 0.44 | A | |
| | Monday AM Peak | | 0.26 | A | |
| 7. Seminole Drive & Morongo Driveway West | Friday PM Peak | 10.0 sec | | B | |
| | Friday Midnight Peak | 10.2 sec | | B | |
| | Saturday Midday Peak | 9.4 sec | | A | |
| | Sunday Midnight Peak | 9.9 sec | | A | |
| | Monday AM Peak | 8.7 sec | | A | |

**Table 10 (continued): Level of Service (LOS) Summary**
**Future (2013) With Project With Cumulative Traffic Conditions**

| | | With Ambience With Project Without Mitigation | | | |
|---|---|---|---|---|---|
| | | Delay | | V/C | LOS[1] |
| 8. Seminole Drive & Morongo Driveway East | Friday PM Peak | 9.2 | sec | | A |
| | Friday Midnight Peak | 9.1 | sec | | A |
| | Saturday Midday Peak | 8.8 | sec | | A |
| | Sunday Midnight Peak | 9.0 | sec | | A |
| | Monday AM Peak | 8.6 | sec | | A |
| 9. Main Street & Broadway | Friday PM Peak | 18.2 | sec | | B |
| | Friday Midnight Peak | 21.6 | sec | | C |
| | Saturday Midday Peak | 19.2 | sec | | B |
| | Sunday Midnight Peak | 29.2 | sec | | C |
| | Monday AM Peak | 19.3 | sec | | B |
| 10. Main Street & I-10 EB On/Off Ramps/Railroad Avenue | Friday PM Peak | [2] | sec | | F * |
| | Friday Midnight Peak | 11.2 | sec | | B |
| | Saturday Midday Peak | 427.7 | sec | | F * |
| | Sunday Midnight Peak | 10.4 | sec | | B |
| | Monday AM Peak | 9.8 | sec | | A |
| 11. Main Street & I-10 WB On/Off Ramps | Friday PM Peak | 750.0 | sec | | F * |
| | Friday Midnight Peak | 376.0 | sec | | F * |
| | Saturday Midday Peak | 279.1 | sec | | F * |
| | Sunday Midnight Peak | 282.9 | sec | | F * |
| | Monday AM Peak | 7.0 | sec | | A |
| 12. Seminole Drive & Main Street | Friday PM Peak | [2] | sec | | F * |
| | Friday Midnight Peak | [2] | sec | | F * |
| | Saturday Midday Peak | [2] | sec | | F * |
| | Sunday Midnight Peak | [2] | sec | | F * |
| | Monday AM Peak | 10.2 | sec | | B |

[1] To be conservative, LOS values based on intersection worst Approach LOS.
[2] Intersection volumes exceed HCM allowed range.

In addition, Sidra Version 5.1 software was used for the two roundabouts for the Future (2013) With Project With Cumulative analysis. As shown in Table 11, Sidra analysis results have shown similar conclusions that these two roundabouts would be significantly impacted by the Project and cumulative projects traffic under the Future (2013) With Project With Cumulative conditions.

**Table 11: Roundabout Level of Service (LOS) Summary**
**Future (2013) With Project With Cumulative Traffic Conditions**

| | | With Ambience With Project With Cumulative Without Mitigation | | | |
|---|---|---|---|---|---|
| | | Delay | V/C | LOS[1] | |
| 5. Seminole Drive & Thunder Road/I-10 WB On/Off Ramps | Friday PM Peak | 515.8 sec | | F | * |
| | Friday Midnight Peak | 547.7 sec | | F | * |
| | Saturday Midday Peak | 166.1 sec | | F | * |
| | Sunday Midnight Peak | 464.5 sec | | F | * |
| | Monday AM Peak | 5.6 sec | | A | |
| 6. Main Street & Apache Trail/I-10 EB On/Off Ramps | Friday PM Peak | 597.6 sec | | F | * |
| | Friday Midnight Peak | 10.2 sec | | B | |
| | Saturday Midday Peak | 319.1 sec | | F | * |
| | Sunday Midnight Peak | 8.2 sec | | A | |
| | Monday AM Peak | 5.6 sec | | A | |

[1] To be conservative, LOS values based on intersection worst Approach LOS.

## MITIGATION MEASURES

As indicated in the Future Traffic Conditions section, the proposed Project is expected to result in eight study intersections not operating within their capacity under the future (2013) traffic conditions. Mitigation measures were investigated to address these impacts, and the following traffic control improvements are recommended to address these impacts.

### Physical Improvements

This measure is to be installed on a permanent basis:

- Widen Seminole Drive between the Morongo Casino East Driveway and Main Street to a total continuous width of a minimum of 36 feet (including drivable shoulders), from a two-lane facility to a two-lane facility plus a median lane, in order to adequately facilitate a reversible lane delineation for before and after any event.

- Widen Seminole Drive between the easterly edge of the Cabazon Outlets property and Apache Trail to a total continuous width of a minimum of 36 feet (including drivable shoulders), from a two-lane facility to a two-lane facility plus a median lane in order to adequately facilitate a reversible lane delineation for before and after any event.

Cross sections of the Seminole Drive widening and Event arrival and departure lane configurations are shown as concepts in Figure E-1.

### Event Traffic Control

These measures are to be installed on a temporary basis for each event with a capacity of 10,000 or more attendees.

## Traffic Control Officers

To increase capacity at STOP-controlled intersections, traffic control officers (TCO's) are recommended to be deployed at the eight study intersections that would operate above their capacity. By utilizing TCO's, capacity at these intersections would operate similar to a signalized intersection, and therefore was analyzed as such as event-day traffic mitigation. The TCO's would be utilized from three hours prior to the event beginning to the mid-point of the event for the Arrival Period, and until two hours following its conclusion for the Departure Period.

The following are intersections where Traffic Control Officers would be utilized:

1. Seminole Drive & Malki Road (North)/I-10 WB On/Off Ramps
   (Departure Period only)

3. I-10 EB On/Off Ramps & Malki Road (south leg)
   (A signal at this location would limit the need for TCO to the Departure Period only)

4. Seminole Drive & Millard Pass
   (The Departure Period only.)

5. Seminole Drive & Thunder Road/I-10 WB On/Off Ramps
   (Both Arrival and Departure Periods)

6. Main Street & Apache Trail/I-10 EB On/Off Ramps
   (Both Arrival and Departure Periods)

10. Main Street & I-10 EB On/Off Ramps/Railroad Avenue
    (Both Arrival and Departure Periods)

11. Main Street & I-10 WB On/Off Ramps
    (Both Arrival and Departure Periods)

12. Seminole Drive & Main Street
    (Both Arrival and Departure Periods)

The lane configurations and locations of the traffic control officers is shown in Figure E-2 and E-3 for the arrival and departure periods.

**Temporary Traffic Delineators and Signage for Event Arrival and Departure Periods**

Temporary signage, cones and direction by the traffic control officers will be used during the event Arrival and Departure Periods.

As noted above, the event inbound traffic will be prohibited from using the Malki Road interchange through the temporarily closed portion of Seminole Drive (from Apache Trail to the Thunder Road traffic circle intersection). Temporary advance messages along appropriate distances in the form of trailer-mounted changeable message and any additional static temporary signs will be provided on the day of each event to direct incoming traffic to the proper interchanges, and the signs will display the message during the Arrival Period when the blockage is implemented. To supply adequate capacity during the arrival period from the Apache Trail and Main Street interchanges, temporary delineations will be implemented to increase the inbound configuration on the I-10 Freeway Eastbound Off-Ramp at Main Street (Figure E-4 and E-5), in conjunction with the conversion of Seminole Drive and Main Street leading to the Project site from one lane to two lanes (Figure E-1), using the proposed added median lane as the second inbound lane. The Arrival Period is at a minimum three hours prior to the start of the event to the mid-point of the event on each day.

During the event departure period, the improved road configuration on Seminole Drive (widened from two to three lanes) will facilitate a reversed lane delineation so that two outbound lanes are provided leading to both the Main Street and Malki Road on-ramp interchanges. Correspondingly, temporary delineators will be implemented to increase the outbound configuration on the

I-10 Freeway Westbound On-Ramps at both interchanges from one lane to two lanes (Figure E-4 and E-5). In addition, during the Departure Period, the segments of Agave Road from Thunder Road to Apache Trail and Apache Trail from Agave Road to Seminole Drive will be temporarily modified to one-way operation and at least three outbound lanes be provided on Thunder Road north of Agave Road. The Departure Period is defined as lasting on each day from the mid-point of the event to two hours following its conclusion. Figure E-6 illustrates the lane configurations to be used at this location during the departure periods.

**Turn Restrictions**

In addition to the temporary closure of Seminole Drive from the Thunder Road traffic circle intersection to Apache Trail peak event arrival times, event-day turn restrictions are recommended to be instituted at the intersection of Agave Road and Thunder Road. No left turns would be allowed from any of the approaches during the period surrounding the event start time. The TCO's would enforce the temporarily signed turn restrictions. Figure E-6 also indicates the location where the turn restrictions are to be installed.

In order to widen the segments of Seminole Drive specified above, appropriate permits will need to be obtained from the Morongo Reservation authorities and Riverside County. In addition, Encroachment Permits will be needed from the Morongo Reservation authorities, Riverside County and Caltrans for the deployment of event-day traffic controls on surface streets, freeway ramps, and the freeway mainline.

The mitigation measures discussed above and shown in Appendix E were analyzed to determine their effectiveness in achieving the minimum acceptable traffic conditions. As shown in Table 12, the above proposed mitigation measures will mitigate the

significantly impacted intersections surrounding the venue so that those intersections operate within their nominal capacity under both the Future With Project and Future With Project With Cumulative scenarios.

## Table 12: Level of Service (LOS) Summary
## Future (2013) Traffic Conditions

| | | With Ambience With Project Without Cumulative | | | | | | With Ambience With Project With Cumulative | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Without Mitigation | | | | With Mitigation | | Without Mitigation | | | | With Mitigation | |
| | | Delay | V/C | LOS[1] | | Delay | LOS[1] | Delay | V/C | LOS[1] | | Delay | LOS[1] |
| 1. Seminole Drive & | Friday PM Peak | 15.1 sec | | C | | 25.0 sec | C | 27.8 sec | | D | | 35.9 sec | D |
| Malki Road (North)/I-10 WB On/Off Ramps | Friday Midnight Peak | 434.7 sec | | F | * | 45.8 sec | D | 434.7 sec | | F | * | 21.1 sec | C |
| | Saturday Midday Peak | 11.5 sec | | B | | 20.9 sec | C | 23.1 sec | | C | | 31.4 sec | C |
| | Sunday Midnight Peak | 348.0 sec | | F | * | 21.2 sec | C | 348.0 sec | | F | * | 36.8 sec | D |
| | Monday AM Peak | 7.8 sec | | A | | 11.7 sec | B | 8.1 sec | | A | | 9.2 sec | A |
| 3. I-10 EB On/Off Ramps & | Friday PM Peak | 107.5 sec | | F | * | 49.3 sec | D | 831.7 sec | | F | * | 45.4 sec | D |
| Malki Road (South) | Friday Midnight Peak | 8.9 sec | | A | | 36.3 sec | D | 8.9 sec | | A | | 34.5 sec | C |
| | Saturday Midday Peak | 466.8 sec | | F | * | 31.2 sec | C | [2] sec | | F | * | 48.4 sec | D |
| | Sunday Midnight Peak | 8.9 sec | | A | | 34.9 sec | C | 8.9 sec | | A | | 34.0 sec | C |
| | Monday AM Peak | 10.9 sec | | B | | 18.2 sec | B | 14.1 sec | | B | | 17.9 sec | B |
| 4. Seminole Drive & | Friday PM Peak | 8.8 sec | | A | | 14.2 sec | B | 12.3 sec | | B | | 12.2 sec | B |
| Millard Pass | Friday Midnight Peak | 107.5 sec | | F | * | 29.0 sec | C | 107.5 sec | | F | * | 29.2 sec | C |
| | Saturday Midday Peak | 10.6 sec | | B | | 15.1 sec | B | 32.1 sec | | D | | 11.4 sec | B |
| | Sunday Midnight Peak | 55.7 sec | | F | * | 32.9 sec | C | 55.7 sec | | F | * | 24.7 sec | C |
| | Monday AM Peak | 7.6 sec | | A | | 19.4 sec | B | 8.0 sec | | A | | 16.2 sec | B |
| 5. Seminole Drive & | Friday PM Peak | | 3.24 | F | * | 74.0 sec | E | | 3.24 | F | * | 68.7 sec | E |
| Morongo Trail/I-10 WB On/Off Ramps | Friday Midnight Peak | | 3.01 | F | * | 52.9 sec | D | | 3.01 | F | * | 48.4 sec | D |
| | Saturday Midday Peak | | 1.79 | F | * | 54.5 sec | D | | 1.79 | F | * | 48.2 sec | D |
| | Sunday Midnight Peak | | 2.74 | F | * | 26.6 sec | C | | 2.74 | F | * | 48.4 sec | D |
| | Monday AM Peak | | 0.32 | A | | 19.3 sec | B | | 0.32 | A | | 16.4 sec | B |
| 6. Main Street & | Friday PM Peak | | 2.33 | F | * | 74.4 sec | E | | 2.33 | F | * | 71.4 sec | E |
| Apache Trail/I-10 EB On/Off Ramps | Friday Midnight Peak | | 0.50 | A | | 26.6 sec | C | | 0.50 | A | | 19.2 sec | B |
| | Saturday Midday Peak | | 1.64 | F | * | 44.3 sec | D | | 1.64 | F | * | 39.1 sec | D |
| | Sunday Midnight Peak | | 0.44 | A | | 19.1 sec | B | | 0.44 | A | | 14.0 sec | B |
| | Monday AM Peak | | 0.26 | A | | 9.1 sec | A | | 0.26 | A | | 17.5 sec | B |
| 10. Main Street & | Friday PM Peak | [2] sec | | F | * | 46.3 sec | D | [2] sec | | F | * | 46.3 sec | D |
| I-10 EB On/Off Ramps/Railroad Avenue | Friday Midnight Peak | 11.2 sec | | B | | 12.4 sec | B | 11.2 sec | | B | | 9.8 sec | A |
| | Saturday Midday Peak | 427.7 sec | | F | * | 63.5 sec | E | 427.7 sec | | F | * | 55.3 sec | E |
| | Sunday Midnight Peak | 10.4 sec | | B | | 9.9 sec | A | 10.4 sec | | B | | 9.9 sec | A |
| | Monday AM Peak | 9.8 sec | | A | | 15.2 sec | B | 9.8 sec | | A | | 15.2 sec | B |
| 11. Main Street & | Friday PM Peak | 750.0 sec | | F | * | 75.9 sec | E | 750.0 sec | | F | * | 18.6 sec | B |
| I-10 WB On/Off Ramps | Friday Midnight Peak | 376.0 sec | | F | * | 43.5 sec | D | 376.0 sec | | F | * | 32.5 sec | C |
| | Saturday Midday Peak | 279.1 sec | | F | * | 16.7 sec | B | 279.1 sec | | F | * | 15.0 sec | B |
| | Sunday Midnight Peak | 282.9 sec | | F | * | 31.5 sec | C | 282.9 sec | | F | * | 51.5 sec | D |
| | Monday AM Peak | 7.0 sec | | A | | 45.3 sec | D | 7.0 sec | | A | | 45.3 sec | D |
| 12. Seminole Drive & | Friday PM Peak | [2] sec | | F | * | 59.2 sec | E | [2] sec | | F | * | 59.2 sec | E |
| Main Street | Friday Midnight Peak | [2] sec | | F | * | 40.9 sec | D | [2] sec | | F | * | 35.6 sec | D |
| | Saturday Midday Peak | [2] sec | | F | * | 57.3 sec | E | [2] sec | | F | * | 70.8 sec | E |
| | Sunday Midnight Peak | [2] sec | | F | * | 17.9 sec | B | [2] sec | | F | * | 55.2 sec | E |
| | Monday AM Peak | 10.2 sec | | B | | 44.5 sec | D | 10.2 sec | | B | | 44.5 sec | D |

[1] To be conservative, LOS values based on intersection worst Approach LOS.
[2] Intersection volumes exceed HCM allowed range.

# APPENDIX A

# TRAFFIC COUNT DATA SHEETS

# FRIDAY PM AND NIGHT TO SATURDAY EARLY MORNING COUNTS

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Malki Rd/I-10 WB Ramps and Seminole Dr , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_001

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 345 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Malki Rd/I-10 WB Ramps)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 50 | 33 | 67 | PM |
| LATE | 0 | 5 | 8 | 17 | LATE |

**Eastbound Approach** (Seminole Dr)

| | AM | PM | LATE |
|---|---|---|---|
| | 0 | 5 | 0 |
| 0 | 0 | 0 | 0 |
| 1 | 0 | 2 | 0 |
| 0 | 0 | 2 | 0 |
| Lanes | AM | PM | LATE |

**Westbound Approach**

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 51 | 13 | 1 |
| 0 | 3 | 0 | .5 |
| 0 | 427 | 29 | .5 |
| 0 | 133 | 23 | |
| AM | PM | LATE | |

**CONTROL**

3-Way Stop (NB/SB/WB)

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 479 | 2 | 16 | 98 | PM |
| LATE | 34 | 0 | 4 | 15 | LATE |
| | | 0 | 1 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

**North Leg**

| | | |
|---|---|---|
| 0 | 0 | AM |
| 83 | 67 | PM |
| 13 | 17 | LATE |

**West Leg**

| AM | PM | LATE |
|---|---|---|
| 0 | 5 | 0 |
| 0 | 4 | 0 |

**East Leg**

| AM | PM | LATE |
|---|---|---|
| 0 | 481 | 42 |
| 0 | 133 | 23 |

**South Leg**

| | | |
|---|---|---|
| 0 | 0 | AM |
| 479 | 116 | PM |
| 34 | 19 | LATE |

## Total Volume Per Leg

**North Leg**

| | |
|---|---|
| 0 | AM |
| 150 | PM |
| 30 | LATE |

**West Leg**

| AM | PM | LATE |
|---|---|---|
| 0 | 9 | 0 |

**East Leg**

| AM | PM | LATE |
|---|---|---|
| 0 | 614 | 65 |

**South Leg**

| | |
|---|---|
| 0 | AM |
| 595 | PM |
| 53 | LATE |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Johnson Lane and Seminole Dr , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_002

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 345 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Johnson Lane)

| | Lanes 0 | 0 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 0 | 0 | 1 | PM |
| LATE | 0 | 0 | 0 | 0 | LATE |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | PM | LATE |
|---|---|---|---|
| | 0 | 482 | 43 |
| 0 | 0 | 0 | 0 |
| 2 | 0 | 96 | 16 |
| 0 | 0 | 27 | 10 |

**Westbound Approach**

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 1 | 0 | 0 |
| 0 | 432 | 26 | 2 |
| 0 | 69 | 3 | 1 |
| 0 | 388 | 28 | |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 96 | 50 | 0 | 292 | PM |
| LATE | 13 | 17 | 0 | 12 | LATE |
| | | 1 | 0 | 1 | Lanes |

**CONTROL**

Signalized

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

### Total Ins & Outs

| North Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 0 | 1 | PM |
| 0 | 0 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 482 | 43 | 0 | 502 | 29 |
| 0 | 123 | 26 | 0 | 388 | 28 |
| | | | AM | PM | LATE |

| South Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 96 | 342 | PM |
| 13 | 29 | LATE |

### Total Volume Per Leg

| North Leg | | |
|---|---|---|
| 0 | | AM |
| 1 | | PM |
| 0 | | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 605 | 69 | 0 | 890 | 57 |
| | | | AM | PM | LATE |

| South Leg | |
|---|---|
| 0 | AM |
| 438 | PM |
| 42 | LATE |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Johnson Lane and I-10 EB Ramps , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_003

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 315 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Johnson Lane)

| | Lanes 0 | 1 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 1 | 107 | 332 | PM |
| LATE | 0 | 0 | 13 | 29 | LATE |

**Eastbound Approach** (I-10 EB Ramps)

| Lanes | AM | PM | LATE |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 332 | 29 |
| 1 | 0 | 2 | 3 |
| 0 | 0 | 0 | 1 |

**Westbound Approach**

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 110 | 16 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 1 | 0 | 0 | 1 | PM |
| LATE | 1 | 0 | 0 | 0 | LATE |
| | | 0 | 1 | 0 | Lanes |

**CONTROL**

1-Way Stop (EB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 108 | 332 | PM |
| | 13 | 29 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 334 | 33 | 0 | 110 | 16 |
| | | | AM | PM | LATE |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| PM | 1 | 1 |
| LATE | 1 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 440 |
| | 42 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 334 | 33 | 0 | 110 | 16 |
| | | | AM | PM | LATE |

| | South Leg |
|---|---|
| AM | 0 |
| PM | 2 |
| LATE | 1 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Millard Pass and Seminole Dr , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_004

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 300 PM |
| LATE Peak Hour | 1130 PM |

### Peak Hour Summary

### Southbound Approach

Millard Pass

| Lanes | 1 | 0 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 101 | 0 | 33 | 118 | PM |
| LATE | 4 | 0 | 1 | 4 | LATE |

### Eastbound Approach

Seminole Dr

| Lanes | AM | PM | LATE |
|---|---|---|---|
| | 0 | 302 | 27 |
| 1 | 0 | 56 | 2 |
| 2 | 0 | 214 | 27 |
| 0 | 0 | 0 | 0 |

### Westbound Approach

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 62 | 2 | 1 |
| 0 | 201 | 23 | 2 |
| 0 | 0 | 0 | 0 |
| 0 | 247 | 28 | |

### CONTROL

All-Way Stop

### Northbound Approach

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 0 | 0 | 0 | PM |
| LATE | 0 | 0 | 0 | 0 | LATE |
| | | 0 | 0 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 134 | 118 | PM |
| | 5 | 4 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 302 | 27 | 0 | 263 | 25 |
| 0 | 270 | 29 | 0 | 247 | 28 |
| | | | AM | PM | LATE |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| PM | 0 | 0 |
| LATE | 0 | 0 |

## Total Volume Per Leg

| | North Leg | |
|---|---|---|
| | 0 | AM |
| | 252 | PM |
| | 9 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 572 | 56 | 0 | 510 | 53 |
| | | | AM | PM | LATE |

| | South Leg |
|---|---|
| AM | 0 |
| PM | 0 |
| LATE | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and Seminole Dr , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_005

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 300 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

### Southbound Approach

Apache Trail/Morongo Dr

| Lanes | 0 | 2 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 35 | 47 | 2 | 147 | PM |
| LATE | 10 | 26 | 2 | 111 | LATE |

### Eastbound Approach

Seminole Dr

| | AM | PM | LATE |
|---|---|---|---|
| | 0 | 179 | 22 |
| 0 | 0 | 19 | 6 |
| 1 | 0 | 58 | 11 |
| 1 | 0 | 155 | 6 |
| Lanes | AM | PM | LATE |

### Westbound Approach

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 5 | 3 | .5 |
| 0 | 41 | 7 | 1.5 |
| 0 | 83 | 25 | 0 |
| 0 | 306 | 203 | |
| AM | PM | LATE | |

### CONTROL

All-Way Yield

### Northbound Approach

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 285 | 103 | 123 | 246 | PM |
| LATE | 57 | 5 | 102 | 190 | LATE |
| | | 0 | 1.5 | .5 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 84 | 147 | PM |
| | 38 | 111 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 179 | 22 | 0 | 129 | 35 |
| 0 | 232 | 23 | 0 | 306 | 203 |
| | | | AM | PM | LATE |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| PM | 285 | 472 |
| LATE | 57 | 297 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 231 |
| | 149 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 411 | 45 | 0 | 435 | 238 |
| | | | AM | PM | LATE |

| | South Leg |
|---|---|
| AM | 0 |
| PM | 757 |
| LATE | 354 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and I-10 WB OnRamp/Seminole Dr/I-10 WB OffRamp , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_105

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 400 PM |
| LATE Peak Hour | 1200 AM |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| | Left | Thru | Right | | |
|---|---|---|---|---|---|
| Lanes | 0 | 0 | 0 | | |
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 169 | 0 | 0 | 3 | PM |
| LATE | 166 | 0 | 0 | 1 | LATE |

**Eastbound Approach** (I-10 WB OnRamp/Seminole Dr/I-10 WB OffRamp)

| | AM | PM | LATE |
|---|---|---|---|
| | 0 | 494 | 412 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 58 | 2 |

**Westbound Approach**

| | AM | PM | LATE | Lanes |
|---|---|---|---|---|
| | 0 | 3 | 1 | 2.5 |
| | 0 | 219 | 221 | .5 |
| | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | |

**Northbound Approach**

| | Left | Thru | Right | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 58 | 106 | 0 | 0 | PM |
| LATE | 2 | 25 | 0 | 0 | LATE |
| Lanes | | 0 | 0 | 0 | Lanes |

**CONTROL**: Yield

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 169 | 3 | PM |
| | 166 | 1 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 494 | 412 | 0 | 222 | 222 |
| 0 | 58 | 2 | 0 | 0 | 0 |
| | | | AM | PM | LATE |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| PM | 58 | 106 |
| LATE | 2 | 25 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 172 |
| | 167 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 552 | 414 | 0 | 222 | 222 |
| | | | AM | PM | LATE |

| | South Leg |
|---|---|
| AM | 0 |
| PM | 164 |
| LATE | 27 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and I-10 WB OffRamp/Seminole Dr/I-10 WB OnRamp , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_205

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 345 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| | Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|---|
| AM | | 0 | 0 | 0 | 0 | AM |
| PM | | 0 | 0 | 0 | 11 | PM |
| LATE | | 0 | 0 | 0 | 12 | LATE |

**Eastbound Approach** (I-10 WB OffRamp/Seminole Dr/I-10 WB OnRamp)

| | AM | PM | LATE |
|---|---|---|---|
| | 0 | 46 | 4 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 140 | 52 |
| 0 | 0 | 0 | 0 |
| Lanes | AM | PM | LATE |

**Westbound Approach**

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 11 | 12 | 0 |
| 0 | 46 | 4 | 0 |
| 0 | 3 | 1 | 0 |
| 0 | 140 | 52 | |
| AM | PM | LATE | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 3 | 0 | 0 | 0 | PM |
| LATE | 1 | 0 | 0 | 0 | LATE |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

No Control

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

### Total Ins & Outs

| North Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 0 | 11 | PM |
| 0 | 12 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 46 | 4 | 0 | 60 | 17 |
| 0 | 140 | 52 | 0 | 140 | 52 |
| | | | AM | PM | LATE |

| South Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 3 | 0 | PM |
| 1 | 0 | LATE |

### Total Volume Per Leg

| North Leg | | |
|---|---|---|
| 0 | | AM |
| 11 | | PM |
| 12 | | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 186 | 56 | 0 | 200 | 69 |
| | | | AM | PM | LATE |

| South Leg | |
|---|---|
| 0 | AM |
| 3 | PM |
| 1 | LATE |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail and Main St/I-10 EB OffRamp , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_006

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 300 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Apache Trail)

| | Lanes 0 | 2 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 26 | 30 | 577 | PM |
| LATE | 0 | 9 | 1 | 312 | LATE |

**Eastbound Approach** (Main St/I-10 EB OffRamp)

| Lanes | AM | PM | LATE |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 392 | 277 |
| 2 | 0 | 29 | 14 |
| 1 | 0 | 83 | 40 |

**Westbound Approach**

| Lanes | AM | PM | LATE |
|---|---|---|---|
| 1 | 0 | 100 | 18 |
| 2 | 0 | 0 | 0 |
| 0 | 0 | 2 | 0 |
| | 0 | 63 | 15 |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 111 | 0 | 85 | 4 | PM |
| LATE | 49 | 0 | 17 | 0 | LATE |
| | | 0 | 1.5 | .5 | Lanes |

**CONTROL**: All-Way Yield

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 56 | 577 | PM |
| | 10 | 312 | LATE |

| West Leg AM | PM | LATE | | East Leg AM | PM | LATE |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 0 | 102 | 18 |
| 0 | 504 | 331 | | 0 | 63 | 15 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| PM | 111 | 89 |
| LATE | 49 | 17 |

## Total Volume Per Leg

| | North Leg | |
|---|---|---|
| | 0 | AM |
| | 633 | PM |
| | 322 | LATE |

| West Leg AM | PM | LATE | | East Leg AM | PM | LATE |
|---|---|---|---|---|---|---|
| 0 | 504 | 331 | | 0 | 165 | 33 |

| | South Leg |
|---|---|
| AM | 0 |
| PM | 200 |
| LATE | 66 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail and I-10 EB OnRamp/Main St/I-10 EB OffRamp , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_106

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 300 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Apache Trail)

| | Lanes | | | | | |
|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | | | |
| AM | 0 | 0 | 0 | 0 | | AM |
| PM | 0 | 0 | 235 | 9 | | PM |
| LATE | 0 | 0 | 47 | 2 | | LATE |

**Eastbound Approach** (I-10 EB OnRamp/Main St/I-10 EB OffRamp)

| | AM | PM | LATE |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 40 | 12 |
| 0 | 0 | 0 | 0 |
| Lanes | AM | PM | LATE |

**Westbound Approach**

| | AM | PM | LATE | Lanes |
|---|---|---|---|---|
| | 0 | 9 | 2 | 0 |
| | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 |
| | 0 | 278 | 60 | |
| | AM | PM | LATE | |

**CONTROL**: No Control

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 0 | 0 | 3 | PM |
| LATE | 0 | 0 | 0 | 1 | LATE |
| | | 0 | 0 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| North Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 235 | 9 | PM |
| 47 | 2 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 0 | 0 | 0 | 9 | 2 |
| 0 | 40 | 12 | 0 | 278 | 60 |
| | | | AM | PM | LATE |

| South Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 0 | 3 | PM |
| 0 | 1 | LATE |

## Total Volume Per Leg

| North Leg | | |
|---|---|---|
| 0 | | AM |
| 244 | | PM |
| 49 | | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 40 | 12 | 0 | 287 | 62 |
| | | | AM | PM | LATE |

| South Leg | |
|---|---|
| 0 | AM |
| 3 | PM |
| 1 | LATE |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Casino Main Dwy and Seminole Dr , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_007

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 300 PM |
| LATE Peak Hour | 1200 AM |

### Peak Hour Summary

### Southbound Approach (Casino Main Dwy)

| | Lanes 1 | 0 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 127 | 0 | 11 | 193 | PM |
| LATE | 145 | 0 | 6 | 145 | LATE |

### Eastbound Approach (Seminole Dr)

| | AM | PM | LATE |
|---|---|---|---|
| | 0 | 308 | 313 |
| 1 | 0 | 176 | 137 |
| 1 | 0 | 123 | 44 |
| 0 | 0 | 0 | 0 |
| Lanes | AM | PM | LATE |

### Westbound Approach

| | AM | PM | LATE | Lanes |
|---|---|---|---|---|
| | 0 | 17 | 8 | 1 |
| | 0 | 181 | 168 | 1 |
| | 0 | 0 | 0 | 0 |
| | 0 | 134 | 50 | |
| | AM | PM | LATE | |

### Northbound Approach

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 0 | 0 | 0 | PM |
| LATE | 0 | 0 | 0 | 0 | LATE |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

1-Way Stop (SB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| North Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 138 | 193 | PM |
| 151 | 145 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 308 | 313 | 0 | 198 | 176 |
| 0 | 299 | 181 | 0 | 134 | 50 |
| | | | AM | PM | LATE |

| South Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 0 | 0 | PM |
| 0 | 0 | LATE |

## Total Volume Per Leg

| North Leg | | |
|---|---|---|
| 0 | | AM |
| 331 | | PM |
| 296 | | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 607 | 494 | 0 | 332 | 226 |
| | | | AM | PM | LATE |

| South Leg | |
|---|---|
| 0 | AM |
| 0 | PM |
| 0 | LATE |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Casino Secondary Dwy and Seminole Dr , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_008

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 300 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Casino Secondary Dwy)

| Lanes | 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 71 | 0 | 9 | 70 | PM |
| LATE | 71 | 0 | 3 | 43 | LATE |

**Eastbound Approach** (Seminole Dr)

| | AM | PM | LATE |
|---|---|---|---|
| | 0 | 188 | 155 |
| 1 | 0 | 62 | 41 |
| 1 | 0 | 70 | 30 |
| 0 | 0 | 0 | 0 |
| Lanes | AM | PM | LATE |

**Westbound Approach**

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 8 | 2 | 1 |
| 0 | 117 | 84 | 1 |
| 0 | 0 | 0 | 0 |
| 0 | 79 | 33 | |
| AM | PM | LATE | |

**CONTROL**

1-Way Stop (SB)

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 0 | 0 | 0 | PM |
| LATE | 0 | 0 | 0 | 0 | LATE |
| | | 0 | 0 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 80 | 70 | PM |
| | 74 | 43 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 188 | 155 | 0 | 125 | 86 |
| 0 | 132 | 71 | 0 | 79 | 33 |
| | | | AM | PM | LATE |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| PM | 0 | 0 |
| LATE | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 150 |
| | 117 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 320 | 226 | 0 | 204 | 119 |
| | | | AM | PM | LATE |

| | South Leg |
|---|---|
| AM | 0 |
| PM | 0 |
| LATE | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Broadway and Main St , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_009

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 300 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

### Southbound Approach

Broadway

| Lanes | 1 | .5 | .5 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 5 | 31 | 9 | 45 | PM |
| LATE | 0 | 5 | 2 | 4 | LATE |

### Eastbound Approach

Main St

| Lanes | AM | PM | LATE |
|---|---|---|---|
| | 0 | 105 | 19 |
| 1 | 0 | 6 | 0 |
| 2 | 0 | 16 | 0 |
| 0 | 0 | 35 | 16 |

### Westbound Approach

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 12 | 1 | 0 |
| 0 | 30 | 7 | 2 |
| 0 | 59 | 26 | 1 |
| 0 | 113 | 22 | |

### CONTROL

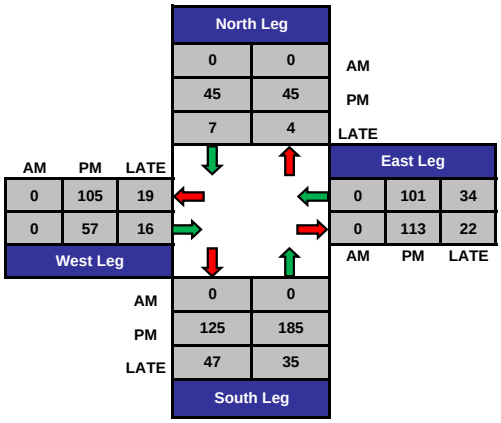
Signalized

### Northbound Approach

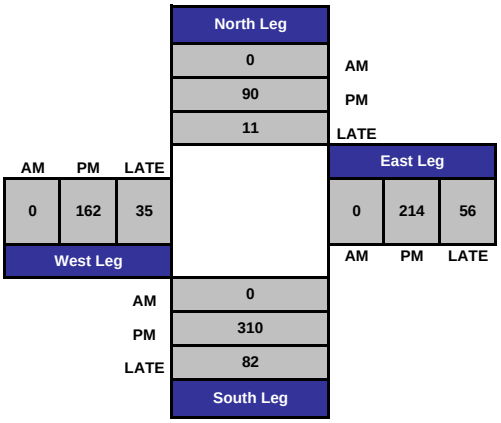
| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 125 | 70 | 27 | 88 | PM |
| LATE | 47 | 12 | 3 | 20 | LATE |
| | | .5 | .5 | 1 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *I-10 EB Ramps and Main St/Railroad Ave , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_010

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 300 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (I-10 EB Ramps)

| Lanes | 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 62 | 1 | 22 | 81 | PM |
| LATE | 33 | 0 | 12 | 27 | LATE |

**Eastbound Approach** (Main St/Railroad Ave)

| Lanes | AM | PM | LATE |
|---|---|---|---|
| | 0 | 110 | 47 |
| 1 | 0 | 45 | 15 |
| 1 | 0 | 67 | 14 |
| 1 | 0 | 8 | 3 |

**Westbound Approach**

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 32 | 12 | 0 |
| 0 | 42 | 14 | 2 |
| 0 | 3 | 0 | 0 |
| 0 | 91 | 27 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 12 | 6 | 4 | 2 | PM |
| LATE | 3 | 0 | 0 | 1 | LATE |
| | | 0 | 1 | 0 | Lanes |

**CONTROL**

2-Way Stop (NB/SB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | AM | PM | LATE |
|---|---|---|---|
| North Leg | 0 | 0 | |
| | 85 | 81 | |
| | 45 | 27 | |
| West Leg | 0 | 110 | 47 |
| | 0 | 120 | 32 |
| East Leg | 0 | 77 | 26 |
| | 0 | 91 | 27 |
| South Leg | 0 | 0 | |
| | 12 | 12 | |
| | 3 | 1 | |

## Total Volume Per Leg

| | AM | PM | LATE |
|---|---|---|---|
| North Leg | 0 | | |
| | 166 | | |
| | 72 | | |
| West Leg | 0 | 230 | 79 |
| East Leg | 0 | 168 | 53 |
| South Leg | 0 | | |
| | 24 | | |
| | 4 | | |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Main St and I-10 WB Ramps , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_011

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 315 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Main St)

| | Lanes 1 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 43 | 54 | 1 | 109 | PM |
| LATE | 19 | 13 | 0 | 35 | LATE |

**Eastbound Approach** (I-10 WB Ramps)

| Lanes | AM | PM | LATE |
|---|---|---|---|
| | 0 | 79 | 26 |
| 1 | 0 | 26 | 5 |
| 0 | 0 | 5 | 0 |
| 1 | 0 | 49 | 20 |

**Westbound Approach**

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 82 | 30 | .5 |
| 0 | 36 | 7 | .5 |
| 0 | 5 | 0 | 0 |
| 0 | 7 | 0 | |

**CONTROL**: All-Way Stop

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 108 | 0 | 1 | 1 | PM |
| LATE | 33 | 0 | 0 | 0 | LATE |
| | | 0 | 0 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 98 | 109 | PM |
| | 32 | 35 | LATE |

| West Leg AM | PM | LATE | East Leg AM | PM | LATE |
|---|---|---|---|---|---|
| 0 | 79 | 26 | 0 | 123 | 37 |
| 0 | 80 | 25 | 0 | 7 | 0 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| PM | 108 | 2 |
| LATE | 33 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| PM | 207 |
| LATE | 67 |

| West Leg AM | PM | LATE | East Leg AM | PM | LATE |
|---|---|---|---|---|---|
| 0 | 159 | 51 | 0 | 130 | 37 |

| | South Leg |
|---|---|
| AM | 0 |
| PM | 110 |
| LATE | 33 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Main St and Seminole Dr , City of Cabazon*

Date: 10/19/2012

Day: Friday

Project #: CA12_6141_012

| | |
|---|---|
| AM Peak Hour | |
| PM Peak Hour | 545 PM |
| LATE Peak Hour | 1100 PM |

### Peak Hour Summary

**Southbound Approach** (Main St)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 0 | 21 | 2 | 45 | PM |
| LATE | 0 | 12 | 1 | 23 | LATE |

**Eastbound Approach** (Seminole Dr)

| | AM | PM | LATE |
|---|---|---|---|
| | 0 | 58 | 13 |
| 0 | 0 | 3 | 2 |
| 1 | 0 | 3 | 0 |
| 0 | 0 | 49 | 18 |
| Lanes | AM | PM | LATE |

**Westbound Approach**

| AM | PM | LATE | Lanes |
|---|---|---|---|
| 0 | 2 | 0 | 0 |
| 0 | 5 | 3 | 1 |
| 0 | 28 | 3 | 0 |
| 0 | 33 | 4 | |
| AM | PM | LATE | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| PM | 98 | 53 | 40 | 28 | PM |
| LATE | 33 | 10 | 21 | 3 | LATE |
| | | 0 | 1 | 0 | Lanes |

**CONTROL**

2-Way Stop (EB/WB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| PM | 3:00 PM | 9:00 PM |
| LATE | 11:00 PM | 2:00 AM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 23 | 45 | PM |
| | 13 | 23 | LATE |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 58 | 13 | 0 | 35 | 6 |
| 0 | 55 | 20 | 0 | 33 | 4 |
| | | | AM | PM | LATE |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| PM | 98 | 121 |
| LATE | 33 | 34 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 68 |
| | 36 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | PM | LATE | | | |
| 0 | 113 | 33 | 0 | 68 | 10 |
| | | | AM | PM | LATE |

| | South Leg |
|---|---|
| AM | 0 |
| PM | 219 |
| LATE | 67 |

# SATURDAY MIDDAY COUNTS

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Malki Rd/I-10 WB Ramps and Seminole Dr , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_001

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 100 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Malki Rd/I-10 WB Ramps)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 19 | 19 | 80 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 8 | 0 |
| 0 | 0 | 0 | 0 |
| 1 | 0 | 8 | 0 |
| 0 | 0 | 7 | 0 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 74 | 0 | 1 |
| 0 | 3 | 0 | .5 |
| 0 | 348 | 0 | .5 |
| 0 | 155 | 0 | |
| AM | NOON | PM | |

**CONTROL**

3-Way Stop (NB/SB/WB)

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 374 | 5 | 6 | 128 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 38 | 80 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 8 | 0 | | 0 | 425 | 0 |
| 0 | 15 | 0 | | 0 | 155 | 0 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 374 | 139 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg | |
|---|---|---|
| | 0 | AM |
| | 118 | NOON |
| | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 23 | 0 | | 0 | 580 | 0 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 513 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Johnson Lane and Seminole Dr , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_002

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 1230 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Johnson Lane)

| | Lanes 0 | 0 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 417 | 0 |
| 0 | 0 | 0 | 0 |
| 2 | 0 | 158 | 0 |
| 0 | 0 | 27 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 338 | 0 | 2 |
| 0 | 64 | 0 | 1 |
| 0 | 689 | 0 | |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 91 | 79 | 0 | 531 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 1 | 0 | 1 | Lanes |

**CONTROL**

Signalized

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg | | |
|---|---|---|---|---|---|---|
| 0 | 417 | 0 | | 0 | 402 | 0 |
| 0 | 185 | 0 | | 0 | 689 | 0 |
| | | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 91 | 610 |
| PM | 0 | 0 |

### Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 0 |
| | 0 |

| West Leg AM | NOON | PM | | East Leg | | |
|---|---|---|---|---|---|---|
| 0 | 602 | 0 | | 0 | 1091 | 0 |
| | | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 701 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Johnson Lane and I-10 EB Ramps , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_003

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 1230 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Johnson Lane)

| Lanes | 0 | 1 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 4 | 88 | 606 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (I-10 EB Ramps)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 604 | 0 |
| 1 | 0 | 10 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| | 0 | 98 | 0 |

**Northbound Approach**

| Lanes | 0 | 1 | 0 | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 4 | 0 | 2 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**CONTROL**

1-Way Stop (EB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 92 | 606 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| | 0 | 614 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| | 0 | 98 | 0 |

| South Leg | | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 4 | 2 |
| PM | 0 | 0 |

## Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 698 | NOON |
| 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 614 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 98 | 0 |

| South Leg | |
|---|---|
| AM | 0 |
| NOON | 6 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Millard Pass and Seminole Dr , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_004

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 1245 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Millard Pass)

| | Lanes 1 | 0 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 82 | 0 | 36 | 250 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 349 | 0 |
| 1 | 0 | 144 | 0 |
| 2 | 0 | 276 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 1 | 0 | 106 | 0 |
| 2 | 0 | 267 | 0 |
| 0 | 0 | 0 | 0 |
| | 0 | 312 | 0 |

**Northbound Approach**

| | | | | | Lanes |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | |

**CONTROL**

All-Way Stop

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 118 | 250 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 349 | 0 |
| | 0 | 420 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 373 | 0 |
| | 0 | 312 | 0 |

| South Leg | | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 368 | NOON |
| 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 769 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 685 | 0 |

| South Leg | |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and Seminole Dr , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_005

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 200 PM |
| PM Peak Hour | |

### Peak Hour Summary

### Southbound Approach

Apache Trail/Morongo Dr

| Lanes | 0 | 2 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 56 | 80 | 2 | 205 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

### Eastbound Approach

Seminole Dr

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 293 | 0 |
| 0 | 0 | 29 | 0 |
| 1 | 0 | 101 | 0 |
| 1 | 0 | 168 | 0 |
| Lanes | AM | NOON | PM |

### Westbound Approach

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 26 | 0 | .5 |
| | 0 | 63 | 0 | 1.5 |
| | 0 | 40 | 0 | 0 |
| | 0 | 388 | 0 | |
| | AM | NOON | PM | |

**CONTROL**

All-Way Yield

### Northbound Approach

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 288 | 174 | 150 | 285 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1.5 | .5 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 138 | 205 | NOON |
| | 0 | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 293 | 0 | 0 | 129 | 0 |
| 0 | 298 | 0 | 0 | 388 | 0 |
| | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 288 | 609 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 343 |
| | 0 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 591 | 0 | 0 | 517 | 0 |
| | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 897 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and I-10 WB OnRamp/Seminole Dr/I-10 WB OffRamp , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_105

### Peak Hour Summary

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 200 PM |
| PM Peak Hour | |

### Southbound Approach

Apache Trail/Morongo Dr

| | | | | | |
|---|---|---|---|---|---|
| Lanes | 0 | 0 | 0 | | |
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 164 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

### Eastbound Approach

I-10 WB OnRamp/Seminole Dr/I-10 WB OffRamp

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 433 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 64 | 0 |

### Westbound Approach

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 0 | 2.5 |
| 0 | 203 | 0 | .5 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | |

### CONTROL

Yield

### Northbound Approach

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 64 | 66 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 164 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 433 | 0 |
| | 0 | 64 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 203 | 0 |
| | 0 | 0 | 0 |

| South Leg | | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 64 | 66 |
| PM | 0 | 0 |

## Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 164 | NOON |
| 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 497 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 203 | 0 |

| South Leg | |
|---|---|
| AM | 0 |
| NOON | 130 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and I-10 WB OffRamp/Seminole Dr/I-10 WB OnRamp , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_205

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 1100 AM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| | Lanes | | | | | |
|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | | | |
| AM | 0 | 0 | 0 | 0 | | AM |
| NOON | 0 | 0 | 0 | 26 | | NOON |
| PM | 0 | 0 | 0 | 0 | | PM |

**Eastbound Approach** (I-10 WB OffRamp/Seminole Dr/I-10 WB OnRamp)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 115 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 111 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 26 | 0 | 0 |
| | 0 | 115 | 0 | 0 |
| | 0 | 1 | 0 | 0 |
| | 0 | 111 | 0 | |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 1 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

No Control

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 26 | NOON |
| | 0 | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 115 | 0 | 0 | 142 | 0 |
| 0 | 111 | 0 | 0 | 111 | 0 |
| | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 1 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 26 |
| | 0 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 226 | 0 | 0 | 253 | 0 |
| | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 1 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail and Main St/I-10 EB OffRamp , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_006

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 145 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Apache Trail)

| | Lanes 0 | 2 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 12 | 16 | 685 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Main St/I-10 EB OffRamp)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 559 | 0 |
| 2 | 0 | 31 | 0 |
| 1 | 0 | 57 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 82 | 0 | 1 |
| 0 | 0 | 0 | 2 |
| 0 | 1 | 0 | 0 |
| 0 | 47 | 0 | |

**Northbound Approach**

| | 0 | 1.5 | .5 | Lanes |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 70 | 0 | 44 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**CONTROL**: All-Way Yield

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 28 | 685 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 0 | 83 | 0 |
| 0 | 647 | 0 | | 0 | 47 | 0 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 70 | 44 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg | |
|---|---|---|
| | 0 | AM |
| | 713 | NOON |
| | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 647 | 0 | | 0 | 130 | 0 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 114 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

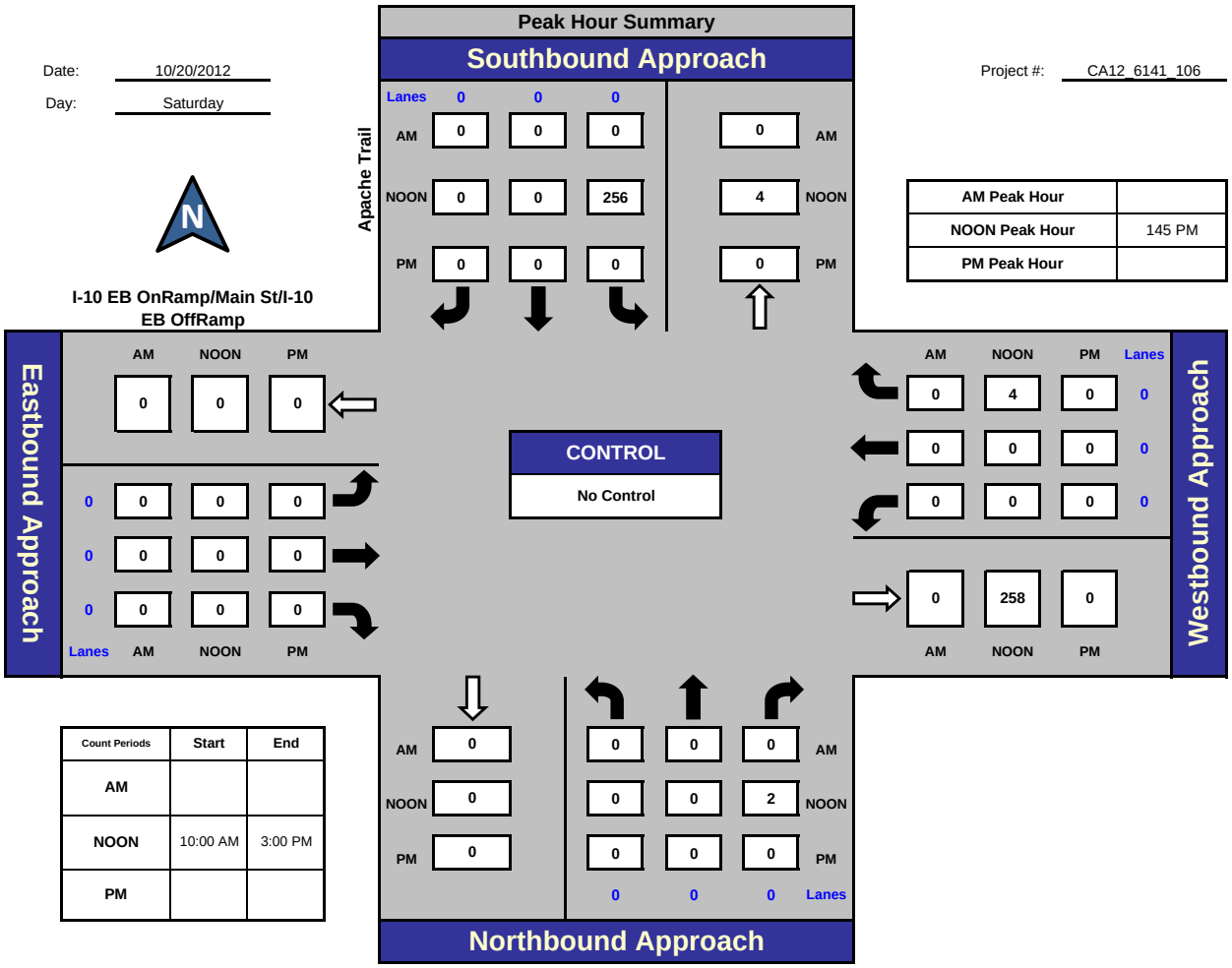
## *Apache Trail and I-10 EB OnRamp/Main St/I-10 EB OffRamp , City of Cabazon*

Date: 10/20/2012

Day: Saturday

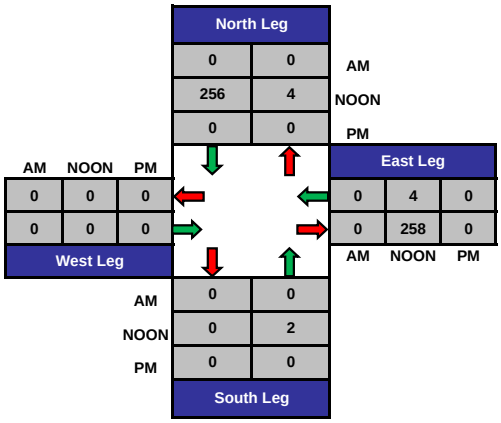
Project #: CA12_6141_106

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 145 PM |
| PM Peak Hour | |

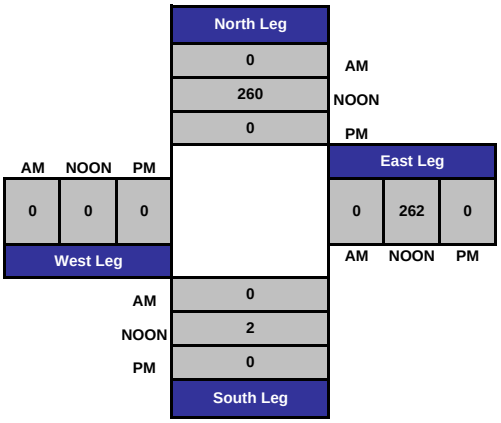



| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Casino Main Dwy and Seminole Dr , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_007

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 200 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Casino Main Dwy)

| | Left | Thru | Right | | |
|---|---|---|---|---|---|
| Lanes | 1 | 0 | 1 | | |
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 132 | 0 | 3 | 281 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 259 | 0 |
| 1 | 0 | 268 | 0 |
| 1 | 0 | 113 | 0 |
| 0 | 0 | 0 | 0 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 13 | 0 | 1 |
| | 0 | 127 | 0 | 1 |
| | 0 | 0 | 0 | 0 |
| | 0 | 116 | 0 | |
| | AM | NOON | PM | |

**Northbound Approach**

| | Left | Thru | Right | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

1-Way Stop (SB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 135 | 281 | NOON |
| | 0 | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 259 | 0 | 0 | 140 | 0 |
| 0 | 381 | 0 | 0 | 116 | 0 |
| | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 416 |
| | 0 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 640 | 0 | 0 | 256 | 0 |
| | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Casino Secondary Dwy and Seminole Dr , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_008

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 145 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Casino Secondary Dwy)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 56 | 0 | 7 | 72 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 143 | 0 |
| 1 | 0 | 64 | 0 |
| 1 | 0 | 56 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 8 | 0 | 1 |
| | 0 | 87 | 0 | 1 |
| | 0 | 0 | 0 | 0 |
| | 0 | 63 | 0 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

1-Way Stop (SB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 63 | 72 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 143 | 0 |
| | 0 | 120 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 95 | 0 |
| | 0 | 63 | 0 |

| South Leg | | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 135 | NOON |
| 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 263 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 158 | 0 |

| South Leg | |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Broadway and Main St , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_009

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 130 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Broadway)

| Lanes | 1 | .5 | .5 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 4 | 26 | 10 | 37 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Main St)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 73 | 0 |
| 1 | 0 | 8 | 0 |
| 2 | 0 | 7 | 0 |
| 0 | 0 | 21 | 0 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 0 | 0 | 10 | 0 |
| 2 | 0 | 25 | 0 |
| 1 | 0 | 38 | 0 |
| | 0 | 66 | 0 |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 85 | 44 | 19 | 49 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | .5 | .5 | 1 | Lanes |

**CONTROL**

Signalized

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 40 | 37 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 73 | 0 |
| | 0 | 36 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 73 | 0 |
| | 0 | 66 | 0 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 85 | 112 |
| PM | 0 | 0 |

## Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 77 | NOON |
| 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 109 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 139 | 0 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 197 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *I-10 EB Ramps and Main St/Railroad Ave , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_010

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 200 PM |
| PM Peak Hour | |

### Peak Hour Summary

### Southbound Approach

I-10 EB Ramps

| Lanes | 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 58 | 3 | 25 | 74 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

### Eastbound Approach

Main St/Railroad Ave

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 107 | 0 |
| 1 | 0 | 34 | 0 |
| 1 | 0 | 59 | 0 |
| 1 | 0 | 12 | 0 |

### Westbound Approach

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 0 | 0 | 33 | 0 |
| 2 | 0 | 41 | 0 |
| 0 | 0 | 2 | 0 |
| | 0 | 89 | 0 |

### CONTROL

2-Way Stop (NB/SB)

### Northbound Approach

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 17 | 8 | 7 | 5 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| North Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 86 | 74 | NOON |
| 0 | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 107 | 0 | 0 | 76 | 0 |
| 0 | 105 | 0 | 0 | 89 | 0 |
| | | | AM | NOON | PM |

| South Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 17 | 20 | NOON |
| 0 | 0 | PM |

## Total Volume Per Leg

| North Leg | | |
|---|---|---|
| 0 | | AM |
| 160 | | NOON |
| 0 | | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 212 | 0 | 0 | 165 | 0 |
| | | | AM | NOON | PM |

| South Leg | |
|---|---|
| 0 | AM |
| 37 | NOON |
| 0 | PM |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Main St and I-10 WB Ramps , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_011

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 1215 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Main St)

| | Lanes 1 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 55 | 61 | 0 | 150 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (I-10 WB Ramps)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 89 | 0 |
| 1 | 0 | 45 | 0 |
| 0 | 0 | 0 | 0 |
| 1 | 0 | 36 | 0 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| .5 | 0 | 105 | 0 |
| .5 | 0 | 34 | 0 |
| 0 | 0 | 5 | 0 |
| | 0 | 0 | 0 |

**Northbound Approach**

| | | | | | Lanes |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 102 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | |

**CONTROL**

All-Way Stop

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 116 | 150 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 89 | 0 | | 0 | 144 | 0 |
| 0 | 81 | 0 | | 0 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 102 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| NOON | 266 |
| PM | 0 |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 170 | 0 | | 0 | 144 | 0 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 102 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Main St and Seminole Dr , City of Cabazon*

Date: 10/20/2012

Day: Saturday

Project #: CA12_6141_012

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | 1200 PM |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Main St)

| Lanes | 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 6 | 35 | 4 | 62 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 55 | 0 |
| 0 | 0 | 5 | 0 |
| 1 | 0 | 9 | 0 |
| 0 | 0 | 25 | 0 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 2 | 0 | 0 |
| 0 | 4 | 0 | 1 |
| 0 | 48 | 0 | 0 |
| 0 | 66 | 0 | |
| AM | NOON | PM | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 108 | 45 | 55 | 53 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

**CONTROL**

2-Way Stop (EB/WB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | 10:00 AM | 3:00 PM |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 45 | 62 | NOON |
| | 0 | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 55 | 0 | 0 | 54 | 0 |
| 0 | 39 | 0 | 0 | 66 | 0 |
| | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 108 | 153 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 107 |
| | 0 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 94 | 0 | 0 | 120 | 0 |
| | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 261 |
| PM | 0 |

# SUNDAY NIGHT TO MONDAY EARLY MORNING COUNTS

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Malki Rd/I-10 WB Ramps and Seminole Dr , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_001

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1000 PM |

### Peak Hour Summary

**Southbound Approach** (Malki Rd/I-10 WB Ramps)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 5 | 10 | 21 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 1 | 0 | 0 | 14 |
| .5 | 0 | 0 | 0 |
| .5 | 0 | 0 | 88 |
| | 0 | 0 | 20 |

**Northbound Approach**

| | | | | Lanes |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 |
| NOON | 0 | 0 | 0 | 0 |
| PM | 93 | 0 | 7 | 10 |

**CONTROL**

3-Way Stop (NB/SB/WB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 15 | 21 | PM |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 102 |
| 0 | 0 | 0 | 0 | 0 | 20 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 93 | 17 |

## Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 0 | NOON |
| 36 | PM |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 122 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 110 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Johnson Lane and Seminole Dr , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_002

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1000 PM |

### Peak Hour Summary

**Southbound Approach** (Johnson Lane)

| | Left | Thru | Right | |
|---|---|---|---|---|
| Lanes | 0 | 0 | 0 | |
| AM | 0 | 0 | 0 | 0 AM |
| NOON | 0 | 0 | 0 | 0 NOON |
| PM | 0 | 0 | 0 | 0 PM |

**Eastbound Approach** (Seminole Dr)

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 98 |
| 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 11 |
| 0 | 0 | 0 | 11 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |
| | 0 | 0 | 87 | 2 |
| | 0 | 0 | 2 | 1 |
| | 0 | 0 | 30 | |
| | AM | NOON | PM | |

**Northbound Approach**

| | Left | Thru | Right | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 AM |
| NOON | 0 | 0 | 0 | 0 NOON |
| PM | 13 | 11 | 0 | 19 PM |
| | | 1 | 0 | 1 Lanes |

**CONTROL**

Signalized

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 98 |
| | 0 | 0 | 22 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 89 |
| | 0 | 0 | 30 |

| South Leg | | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 13 | 30 |

### Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 0 | NOON |
| 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 120 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 119 |

| South Leg | |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 43 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Johnson Lane and I-10 EB Ramps , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_003

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1000 PM |

### Peak Hour Summary

**Southbound Approach** (Johnson Lane)

| | Lanes 0 | 1 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 13 | 30 | PM |

**Eastbound Approach** (I-10 EB Ramps)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 0 | 30 |
| 1 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 14 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

**CONTROL**

1-Way Stop (EB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 13 | 30 | PM |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 31 | 0 | 0 | 14 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 43 |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 31 | 0 | 0 | 14 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Millard Pass and Seminole Dr , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_004

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1000 PM |

### Peak Hour Summary

**Southbound Approach** (Millard Pass)

| | Lanes 1 | 0 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 26 | 0 | 1 | 11 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 46 |
| 1 | 0 | 0 | 10 |
| 2 | 0 | 0 | 24 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 1 | 0 | 0 | 1 |
| 2 | 0 | 0 | 20 |
| 0 | 0 | 0 | 0 |
| | 0 | 0 | 25 |

**Northbound Approach**

| | | | | | Lanes |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

All-Way Stop

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 27 | 11 | PM |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 46 | 0 | 0 | 21 |
| 0 | 0 | 34 | 0 | 0 | 25 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 38 |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 80 | 0 | 0 | 46 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and Seminole Dr , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_005

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1000 PM |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| | Lanes 0 | 2 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 5 | 47 | 0 | 58 | PM |

**Eastbound Approach** (Seminole Dr)

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 20 |
| 0 | 0 | 0 | 2 |
| 1 | 0 | 0 | 13 |
| 1 | 0 | 0 | 8 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 4 | .5 |
| 0 | 0 | 8 | 1.5 |
| 0 | 0 | 16 | 0 |
| 0 | 0 | 173 | |
| AM | NOON | PM | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 71 | 7 | 52 | 160 | PM |
| | | 0 | 1.5 | .5 | Lanes |

**CONTROL**

All-Way Yield

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 52 | 58 | PM |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 20 | 0 | 0 | 28 |
| 0 | 0 | 23 | 0 | 0 | 173 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 71 | 219 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 110 |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 43 | 0 | 0 | 201 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 290 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and I-10 WB OnRamp/Seminole Dr/I-10 WB OffRamp , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_105

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1015 PM |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| | Left | Thru | Right | | |
|---|---|---|---|---|---|
| Lanes | 0 | 0 | 0 | | |
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 208 | 0 | 0 | 0 | PM |

**Eastbound Approach** (I-10 WB OnRamp/Seminole Dr/I-10 WB OffRamp)

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 488 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 2 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 0 | 0 | 2.5 |
| | 0 | 0 | 255 | .5 |
| | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | |
| | AM | NOON | PM | |

**Northbound Approach**

| | Left | Thru | Right | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 2 | 25 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**: Yield

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 208 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 488 |
| | 0 | 0 | 2 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 255 |
| | 0 | 0 | 0 |

| South Leg | | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 2 | 25 |

### Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 0 | NOON |
| 208 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 490 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 255 |

| South Leg | |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 27 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and I-10 WB OffRamp/Seminole Dr/I-10 WB OnRamp , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_205

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1015 PM |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 4 | PM |

**Eastbound Approach** (I-10 WB OffRamp/Seminole Dr/I-10 WB OnRamp)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 46 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 4 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 |
| 0 | 0 | 46 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 1 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

No Control

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 0 | 4 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| | 0 | 0 | 46 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 5 |
| | 0 | 0 | 46 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 1 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 4 |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 46 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 51 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 1 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail and Main St/I-10 EB OffRamp , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_006

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1000 PM |

### Peak Hour Summary

**Southbound Approach** (Apache Trail)

| | Lanes 0 | 2 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 10 | 7 | 244 | PM |

**Eastbound Approach** (Main St/I-10 EB OffRamp)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 0 | 206 |
| 2 | 0 | 0 | 5 |
| 1 | 0 | 0 | 18 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 1 | 0 | 0 | 26 |
| 2 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| | 0 | 0 | 12 |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 28 | 0 | 12 | 0 | PM |
| | | 0 | 1.5 | .5 | Lanes |

**CONTROL**

All-Way Yield

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 17 | 244 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 0 | 0 | 26 |
| 0 | 0 | 229 | | 0 | 0 | 12 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 28 | 12 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 261 |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 229 | | 0 | 0 | 38 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 40 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

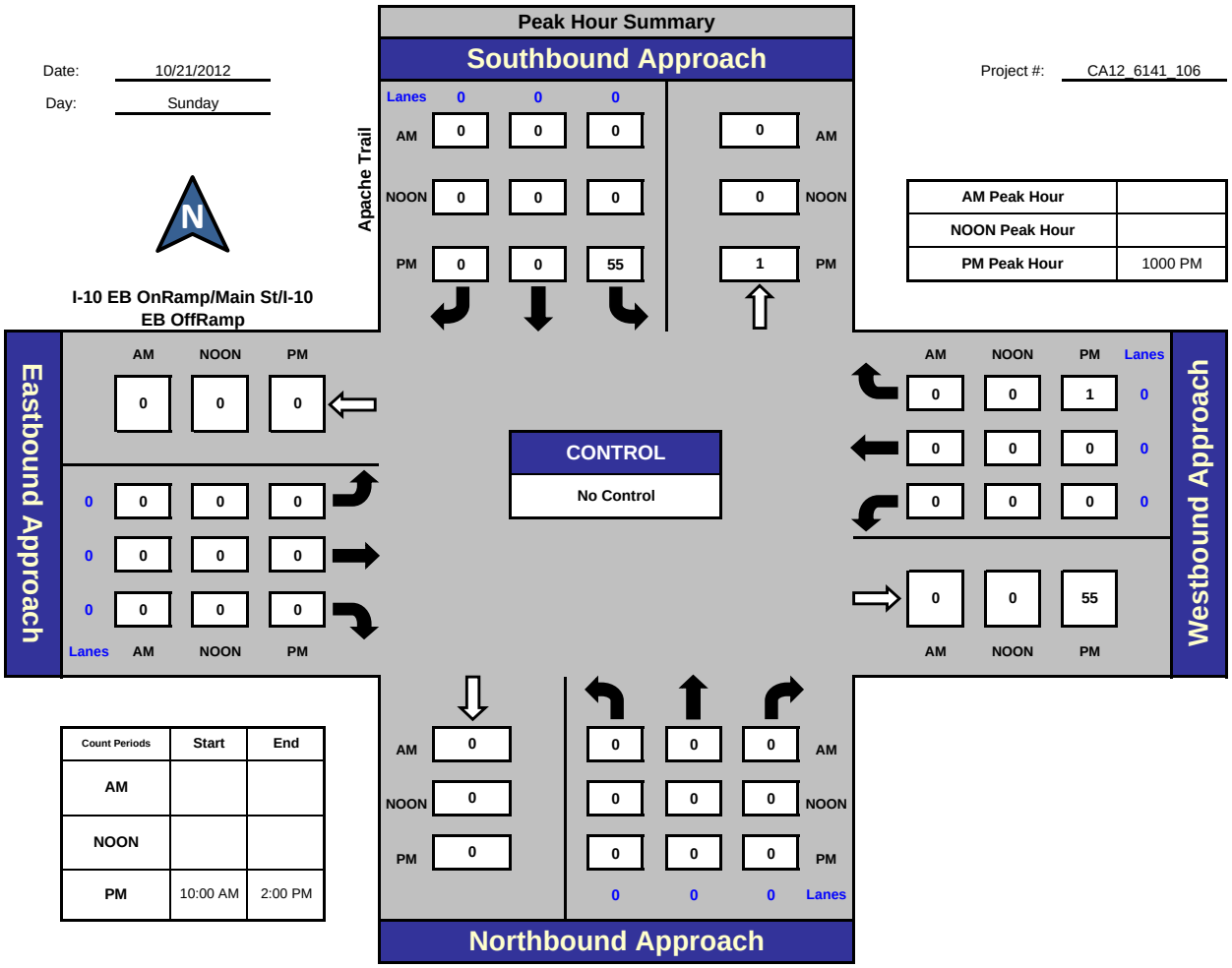
## *Apache Trail and I-10 EB OnRamp/Main St/I-10 EB OffRamp , City of Cabazon*

Date: 10/21/2012

Day: Sunday

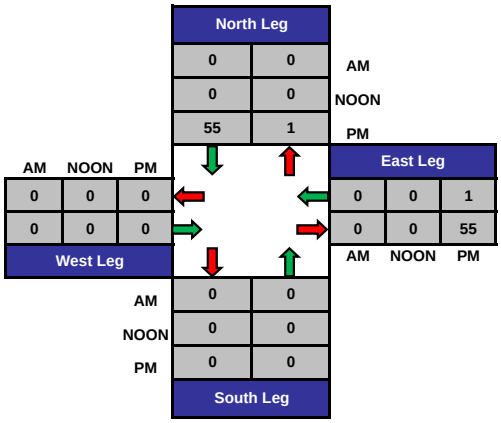
Project #: CA12_6141_106

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1000 PM |

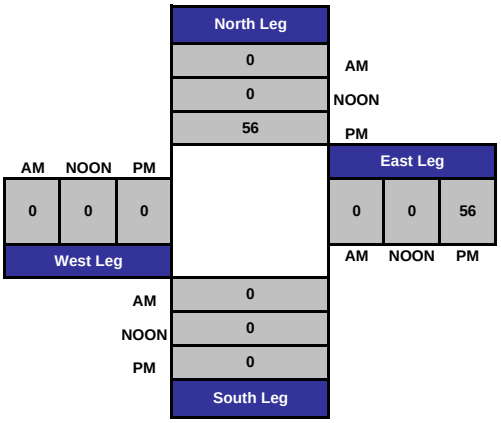



| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Casino Main Dwy and Seminole Dr , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_007

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1015 PM |

### Peak Hour Summary

**Southbound Approach** (Casino Main Dwy)

| | Lanes 1 | 0 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 143 | 0 | 4 | 90 | PM |

**Eastbound Approach** (Seminole Dr)

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 290 |
| 1 | 0 | 0 | 85 |
| 1 | 0 | 0 | 70 |
| 0 | 0 | 0 | 0 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 0 | 5 | 1 |
| | 0 | 0 | 147 | 1 |
| | 0 | 0 | 0 | 0 |
| | 0 | 0 | 74 | |
| | AM | NOON | PM | |

**CONTROL**

1-Way Stop (SB)

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 147 | 90 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 0 | 290 | 0 | 0 | 152 |
| 0 | 0 | 155 | 0 | 0 | 74 |
| | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 0 |
| | 0 |
| | 237 |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 0 | 0 | 445 | 0 | 0 | 226 |
| | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Casino Secondary Dwy and Seminole Dr , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_008

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1015 PM |

### Peak Hour Summary

**Southbound Approach** (Casino Secondary Dwy)

| Lanes | 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 64 | 0 | 2 | 38 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 151 |
| 1 | 0 | 0 | 33 |
| 1 | 0 | 0 | 43 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 5 | 1 |
| 0 | 0 | 87 | 1 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 45 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

1-Way Stop (SB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 66 | 38 | PM |

| West Leg AM | West Leg NOON | West Leg PM | | East Leg AM | East Leg NOON | East Leg PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 151 | | 0 | 0 | 92 |
| 0 | 0 | 76 | | 0 | 0 | 45 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 104 |

| West Leg AM | West Leg NOON | West Leg PM | | East Leg AM | East Leg NOON | East Leg PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 227 | | 0 | 0 | 137 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Broadway and Main St , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_009

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1000 PM |

### Peak Hour Summary

### Southbound Approach

Broadway

| Lanes | 1 | .5 | .5 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 1 | 3 | 0 | 1 | PM |

### Eastbound Approach

Main St

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 23 |
| 1 | 0 | 0 | 0 |
| 2 | 0 | 0 | 3 |
| 0 | 0 | 0 | 9 |

### Westbound Approach

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 0 | 1 | 0 |
| | 0 | 0 | 4 | 2 |
| | 0 | 0 | 17 | 1 |
| | 0 | 0 | 22 | |

### CONTROL

Signalized

### Northbound Approach

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 29 | 18 | 0 | 19 | PM |
| | | .5 | .5 | 1 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 4 | 1 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 23 |
| | 0 | 0 | 12 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 22 |
| | 0 | 0 | 22 |

| South Leg | | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 29 | 37 |

## Total Volume Per Leg

| North Leg | |
|---|---|
| 0 | AM |
| 0 | NOON |
| 5 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 35 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 44 |

| South Leg | |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 66 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *I-10 EB Ramps and Main St/Railroad Ave , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_010

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1100 PM |

### Peak Hour Summary

### Southbound Approach (I-10 EB Ramps)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 20 | 0 | 5 | 28 | PM |

### Eastbound Approach (Main St/Railroad Ave)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 30 |
| 1 | 0 | 0 | 12 |
| 1 | 0 | 0 | 13 |
| 1 | 0 | 0 | 1 |

### Westbound Approach

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 16 | 0 |
| 0 | 0 | 9 | 2 |
| 0 | 0 | 1 | 0 |
| 0 | 0 | 18 | |

### CONTROL

2-Way Stop (NB/SB)

### Northbound Approach

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 2 | 1 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| North Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 0 | 0 | NOON |
| 25 | 28 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | AM | NOON | PM |
| 0 | 0 | 30 | 0 | 0 | 26 |
| 0 | 0 | 26 | 0 | 0 | 18 |

| South Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 0 | 0 | NOON |
| 2 | 1 | PM |

## Total Volume Per Leg

| North Leg |
|---|
| 0 AM |
| 0 NOON |
| 53 PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | AM | NOON | PM |
| 0 | 0 | 56 | 0 | 0 | 44 |

| South Leg |
|---|
| 0 AM |
| 0 NOON |
| 3 PM |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Main St and I-10 WB Ramps , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_011

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1015 PM |

### Peak Hour Summary

**Southbound Approach** (Main St)

| | Lanes 1 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 16 | 21 | 0 | 39 | PM |

**Eastbound Approach** (I-10 WB Ramps)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 24 |
| 0 | 0 | 0 | 6 |
| 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 7 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 33 | .5 |
| 0 | 0 | 8 | .5 |
| 0 | 0 | 3 | 0 |
| 0 | 0 | 0 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 31 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

All-Way Stop

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 37 | 39 | PM |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 24 | 0 | 0 | 44 |
| 0 | 0 | 13 | 0 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 31 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 76 |

| West Leg AM | NOON | PM | East Leg AM | NOON | PM |
|---|---|---|---|---|---|
| 0 | 0 | 37 | 0 | 0 | 44 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 31 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Main St and Seminole Dr , City of Cabazon*

Date: 10/21/2012

Day: Sunday

Project #: CA12_6141_012

| | |
|---|---|
| AM Peak Hour | |
| NOON Peak Hour | |
| PM Peak Hour | 1015 PM |

### Peak Hour Summary

**Southbound Approach** (Main St)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 7 | 0 | 19 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 19 |
| 0 | 0 | 0 | 1 |
| 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 25 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 |
| 0 | 0 | 4 | 0 |
| 0 | 0 | 2 | |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 36 | 19 | 18 | 2 | PM |
| | | 0 | 1 | 0 | Lanes |

**CONTROL**

2-Way Stop (EB/WB)

| Count Periods | Start | End |
|---|---|---|
| AM | | |
| NOON | | |
| PM | 10:00 AM | 2:00 PM |

## Total Ins & Outs

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 0 | 0 | 7 |
| | 0 | 0 | 19 |
| West Leg | 0 | 0 | 19 |
| | 0 | 0 | 26 |
| East Leg | 0 | 0 | 4 |
| | 0 | 0 | 2 |
| South Leg | 0 | 0 | 36 |
| | 0 | 0 | 39 |

## Total Volume Per Leg

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 0 | 0 | 26 |
| West Leg | 0 | 0 | 45 |
| East Leg | 0 | 0 | 6 |
| South Leg | 0 | 0 | 75 |

# MONDAY AM PEAK HOUR COUNTS

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Malki Rd/I-10 WB Ramps and Seminole Dr , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_001

| | |
|---|---|
| AM Peak Hour | 745 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Malki Rd/I-10 WB Ramps)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 24 | 30 | 105 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 91 | 0 | 0 | 1 |
| | 0 | 0 | 0 | .5 |
| | 63 | 0 | 0 | .5 |
| | 56 | 0 | 0 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 87 | 0 | 14 | 26 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

**CONTROL**

3-Way Stop (NB/SB/WB)

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 54 | 105 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 154 | 0 | 0 |
| 0 | 0 | 0 | | 56 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 87 | 40 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 159 |
| NOON | 0 |
| PM | 0 |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 210 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 127 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Johnson Lane and Seminole Dr , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_002

| | |
|---|---|
| AM Peak Hour | 730 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Johnson Lane)

| | Left | Thru | Right | |
|---|---|---|---|---|
| Lanes | 0 | 0 | 0 | |
| AM | 0 | 0 | 0 | 0 AM |
| NOON | 0 | 0 | 0 | 0 NOON |
| PM | 0 | 0 | 0 | 0 PM |

**Eastbound Approach** (Seminole Dr)

| | AM | NOON | PM |
|---|---|---|---|
| | 156 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 2 | 37 | 0 | 0 |
| 0 | 11 | 0 | 0 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |
| | 67 | 0 | 0 | 2 |
| | 8 | 0 | 0 | 1 |
| | 186 | 0 | 0 | |
| | AM | NOON | PM | |

**Northbound Approach**

| | Left | Thru | Right | |
|---|---|---|---|---|
| AM | 19 | 89 | 0 | 149 AM |
| NOON | 0 | 0 | 0 | 0 NOON |
| PM | 0 | 0 | 0 | 0 PM |
| Lanes | | 1 | 0 | 1 Lanes |

**CONTROL**

Signalized

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 0 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 156 | 0 | 0 |
| | 48 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 75 | 0 | 0 |
| | 186 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 19 | 238 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| North Leg |
|---|
| 0 AM |
| 0 NOON |
| 0 PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 204 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 261 | 0 | 0 |

| South Leg |
|---|
| AM 257 |
| NOON 0 |
| PM 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Johnson Lane and I-10 EB Ramps , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_003

| | |
|---|---|
| AM Peak Hour | 730 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Johnson Lane)

| Lanes | 0 | 1 | 1 | | |
|---|---|---|---|---|---|
| AM | 0 | 1 | 18 | 238 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (I-10 EB Ramps)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 238 | 0 | 0 |
| 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | |

**CONTROL**: 1-Way Stop (EB)

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 2 | 0 | 0 | 1 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 19 | 238 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 0 | 0 | 0 |
| 240 | 0 | 0 | | 20 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 2 | 1 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 257 |
| NOON | 0 |
| PM | 0 |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 240 | 0 | 0 | | 20 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 3 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Millard Pass and Seminole Dr , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_004

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Millard Pass)

| Lanes | 1 | 0 | 1 | | |
|---|---|---|---|---|---|
| AM | 15 | 0 | 6 | 48 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| | AM | NOON | PM |
|---|---|---|---|
| | 69 | 0 | 0 |
| 1 | 38 | 0 | 0 |
| 2 | 52 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 10 | 0 | 0 | 1 |
| 54 | 0 | 0 | 2 |
| 0 | 0 | 0 | 0 |
| 58 | 0 | 0 | |
| AM | NOON | PM | |

**CONTROL**: All-Way Stop

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 21 | 48 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 69 | 0 | 0 | | 64 | 0 | 0 |
| 90 | 0 | 0 | | 58 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 69 |
| NOON | 0 |
| PM | 0 |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 159 | 0 | 0 | | 122 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and Seminole Dr , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_005

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| | Lanes 0 | 2 | 0 | | |
|---|---|---|---|---|---|
| AM | 8 | 37 | 0 | 57 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 47 | 0 | 0 |
| 0 | 5 | 0 | 0 |
| 1 | 16 | 0 | 0 |
| 1 | 19 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 2 | 0 | 0 | .5 |
| 10 | 0 | 0 | 1.5 |
| 18 | 0 | 0 | 0 |
| 187 | 0 | 0 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 74 | 29 | 50 | 171 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1.5 | .5 | Lanes |

**CONTROL**

All-Way Yield

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 45 | 57 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 47 | 0 | 0 | | 30 | 0 | 0 |
| 40 | 0 | 0 | | 187 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 74 | 250 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 102 |
| NOON | 0 |
| PM | 0 |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 87 | 0 | 0 | | 217 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 324 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and I-10 WB OnRamp/Seminole Dr/I-10 WB OffRamp , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_105

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|
| AM | 85 | 0 | 0 | 4 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (I-10 WB OnRamp/Seminole Dr/I-10 WB OffRamp)

| | AM | NOON | PM |
|---|---|---|---|
| | 233 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 9 | 0 | 0 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 4 | 0 | 0 | 2.5 |
| 65 | 0 | 0 | .5 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | |
| AM | NOON | PM | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 9 | 83 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**: Yield

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 85 | 4 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 233 | 0 | 0 |
| | 9 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 69 | 0 | 0 |
| | 0 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 9 | 83 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 89 |
| NOON | 0 |
| PM | 0 |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 242 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 69 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 92 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail/Morongo Dr and I-10 WB OffRamp/Seminole Dr/I-10 WB OnRamp , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_205

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Apache Trail/Morongo Dr)

| | Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 5 | AM | |
| NOON | 0 | 0 | 0 | 0 | NOON | |
| PM | 0 | 0 | 0 | 0 | PM | |

**Eastbound Approach** (I-10 WB OffRamp/Seminole Dr/I-10 WB OnRamp)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 27 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 65 | 0 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 5 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 |
| 65 | 0 | 0 | |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 3 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

No Control

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 0 | 5 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 27 | 0 | 0 | 35 | 0 | 0 |
| 65 | 0 | 0 | 65 | 0 | 0 |
| | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 3 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| | North Leg | |
|---|---|---|
| | 5 | AM |
| | 0 | NOON |
| | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 92 | 0 | 0 | 100 | 0 | 0 |
| | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 3 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail and Main St/I-10 EB OffRamp , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_006

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Apache Trail)

| | Lanes 0 | 2 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 13 | 12 | 335 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Main St/I-10 EB OffRamp)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 221 | 0 | 0 |
| 2 | 24 | 0 | 0 |
| 1 | 36 | 0 | 0 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 1 | 80 | 0 | 0 |
| 2 | 0 | 0 | 0 |
| 0 | 2 | 0 | 0 |
| | 37 | 0 | 0 |

**CONTROL**: All-Way Yield

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 51 | 0 | 34 | 1 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1.5 | .5 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 25 | 335 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | | 82 | 0 | 0 |
| 281 | 0 | 0 | | 37 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 51 | 35 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 360 |
| NOON | 0 |
| PM | 0 |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 281 | 0 | 0 | | 119 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 86 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Apache Trail and I-10 EB OnRamp/Main St/I-10 EB OffRamp , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_106

| | |
|---|---|
| AM Peak Hour | 700 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

Peak Hour Summary

**Southbound Approach** (Apache Trail)

| | Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|---|
| AM | | 0 | 0 | 69 | 1 | AM |
| NOON | | 0 | 0 | 0 | 0 | NOON |
| PM | | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (I-10 EB OnRamp/Main St/I-10 EB OffRamp)

| | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 1 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 |
| | 76 | 0 | 0 | |
| | AM | NOON | PM | |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 7 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

No Control

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 69 | 1 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |
| | 0 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 1 | 0 | 0 |
| | 76 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 0 | 7 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 70 |
| NOON | 0 |
| PM | 0 |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 0 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 77 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 7 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Casino Main Dwy and Seminole Dr , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_007

| | |
|---|---|
| AM Peak Hour | 700 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Casino Main Dwy)

| | Lanes 1 | 0 | 1 | | |
|---|---|---|---|---|---|
| AM | 28 | 0 | 2 | 41 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 87 | 0 | 0 |
| 1 | 39 | 0 | 0 |
| 1 | 99 | 0 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 2 | 0 | 0 | 1 |
| 59 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 |
| 101 | 0 | 0 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

1-Way Stop (SB)

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 30 | 41 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 87 | 0 | 0 | 61 | 0 | 0 |
| 138 | 0 | 0 | 101 | 0 | 0 |
| | | | AM | NOON | PM |

| | South Leg | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| | North Leg |
|---|---|
| | 71 AM |
| | 0 NOON |
| | 0 PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 225 | 0 | 0 | 162 | 0 | 0 |
| | | | AM | NOON | PM |

| | South Leg |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Casino Secondary Dwy and Seminole Dr , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_008

| | |
|---|---|
| AM Peak Hour | 700 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Casino Secondary Dwy)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 16 | 0 | 1 | 40 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 61 | 0 | 0 |
| 1 | 37 | 0 | 0 |
| 1 | 65 | 0 | 0 |
| 0 | 0 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 3 | 0 | 0 | 1 |
| 45 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 |
| 66 | 0 | 0 | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

**CONTROL**

1-Way Stop (SB)

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 17 | 40 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 61 | 0 | 0 |
| | 102 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 48 | 0 | 0 |
| | 66 | 0 | 0 |

| South Leg | | |
|---|---|---|
| AM | 0 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| North Leg | |
|---|---|
| 57 | AM |
| 0 | NOON |
| 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 163 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 114 | 0 | 0 |

| South Leg | |
|---|---|
| AM | 0 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Broadway and Main St , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_009

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

### Southbound Approach

Broadway

| Lanes | 1 | .5 | .5 | | |
|---|---|---|---|---|---|
| AM | 4 | 5 | 6 | 26 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

### Eastbound Approach

Main St

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 72 | 0 | 0 |
| 1 | 5 | 0 | 0 |
| 2 | 11 | 0 | 0 |
| 0 | 17 | 0 | 0 |

### Westbound Approach

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 4 | 0 | 0 | 0 |
| | 15 | 0 | 0 | 2 |
| | 32 | 0 | 0 | 1 |
| | 61 | 0 | 0 | |

### CONTROL

Signalized

### Northbound Approach

| | | | | | |
|---|---|---|---|---|---|
| AM | 54 | 53 | 17 | 44 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | .5 | .5 | 1 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 15 | 26 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 72 | 0 | 0 |
| | 33 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 51 | 0 | 0 |
| | 61 | 0 | 0 |

| South Leg | | |
|---|---|---|
| AM | 54 | 114 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| North Leg | |
|---|---|
| 41 | AM |
| 0 | NOON |
| 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 105 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 112 | 0 | 0 |

| South Leg | |
|---|---|
| AM | 168 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *I-10 EB Ramps and Main St/Railroad Ave , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_010

| | |
|---|---|
| AM Peak Hour | 645 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (I-10 EB Ramps)

| | Lanes 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 43 | 1 | 7 | 73 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Main St/Railroad Ave)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 62 | 0 | 0 |
| 1 | 52 | 0 | 0 |
| 1 | 46 | 0 | 0 |
| 1 | 4 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 20 | 0 | 0 | 0 |
| 17 | 0 | 0 | 2 |
| 2 | 0 | 0 | 0 |
| 55 | 0 | 0 | |

**CONTROL**

2-Way Stop (NB/SB)

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 7 | 2 | 1 | 2 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 51 | 73 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 62 | 0 | 0 | | 39 | 0 | 0 |
| 102 | 0 | 0 | | 55 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 7 | 5 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 124 |
| NOON | 0 |
| PM | 0 |

| West Leg AM | NOON | PM | | East Leg AM | NOON | PM |
|---|---|---|---|---|---|---|
| 164 | 0 | 0 | | 94 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 12 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Main St and I-10 WB Ramps , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_011

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Main St)

| | Lanes 1 | Lanes 1 | Lanes 0 | | |
|---|---|---|---|---|---|
| AM | 27 | 27 | 0 | 71 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (I-10 WB Ramps)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 45 | 0 | 0 |
| 0 | 22 | 0 | 0 |
| 1 | 0 | 0 | 0 |
| 0 | 21 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 49 | 0 | 0 | .5 |
| 18 | 0 | 0 | .5 |
| 3 | 0 | 0 | 0 |
| 0 | 0 | 0 | |

**CONTROL**: All-Way Stop

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 51 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 0 | 0 | Lanes |

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 54 | 71 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 45 | 0 | 0 |
| | 43 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 70 | 0 | 0 |
| | 0 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 51 | 0 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

### Total Volume Per Leg

| | North Leg |
|---|---|
| AM | 125 |
| NOON | 0 |
| PM | 0 |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 88 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 70 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 51 |
| NOON | 0 |
| PM | 0 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Main St and Seminole Dr , City of Cabazon*

Date: 10/22/2012

Day: Monday

Project #: CA12_6141_012

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | |

### Peak Hour Summary

**Southbound Approach** (Main St)

| Lanes | 0 | 1 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 18 | 0 | 38 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach** (Seminole Dr)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 27 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 1 | 3 | 0 | 0 |
| 0 | 30 | 0 | 0 |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 3 | 0 | 0 | 0 |
| 2 | 0 | 0 | 1 |
| 6 | 0 | 0 | 0 |
| 14 | 0 | 0 | |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 54 | 25 | 35 | 11 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |
| | | 0 | 1 | 0 | Lanes |

**CONTROL**

2-Way Stop (EB/WB)

| Count Periods | Start | End |
|---|---|---|
| AM | 6:00 AM | 9:00 AM |
| NOON | | |
| PM | | |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| | 18 | 38 | AM |
| | 0 | 0 | NOON |
| | 0 | 0 | PM |

| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 27 | 0 | 0 |
| | 33 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 11 | 0 | 0 |
| | 14 | 0 | 0 |

| | South Leg | |
|---|---|---|
| AM | 54 | 71 |
| NOON | 0 | 0 |
| PM | 0 | 0 |

## Total Volume Per Leg

| North Leg | | |
|---|---|---|
| 56 | | AM |
| 0 | | NOON |
| 0 | | PM |

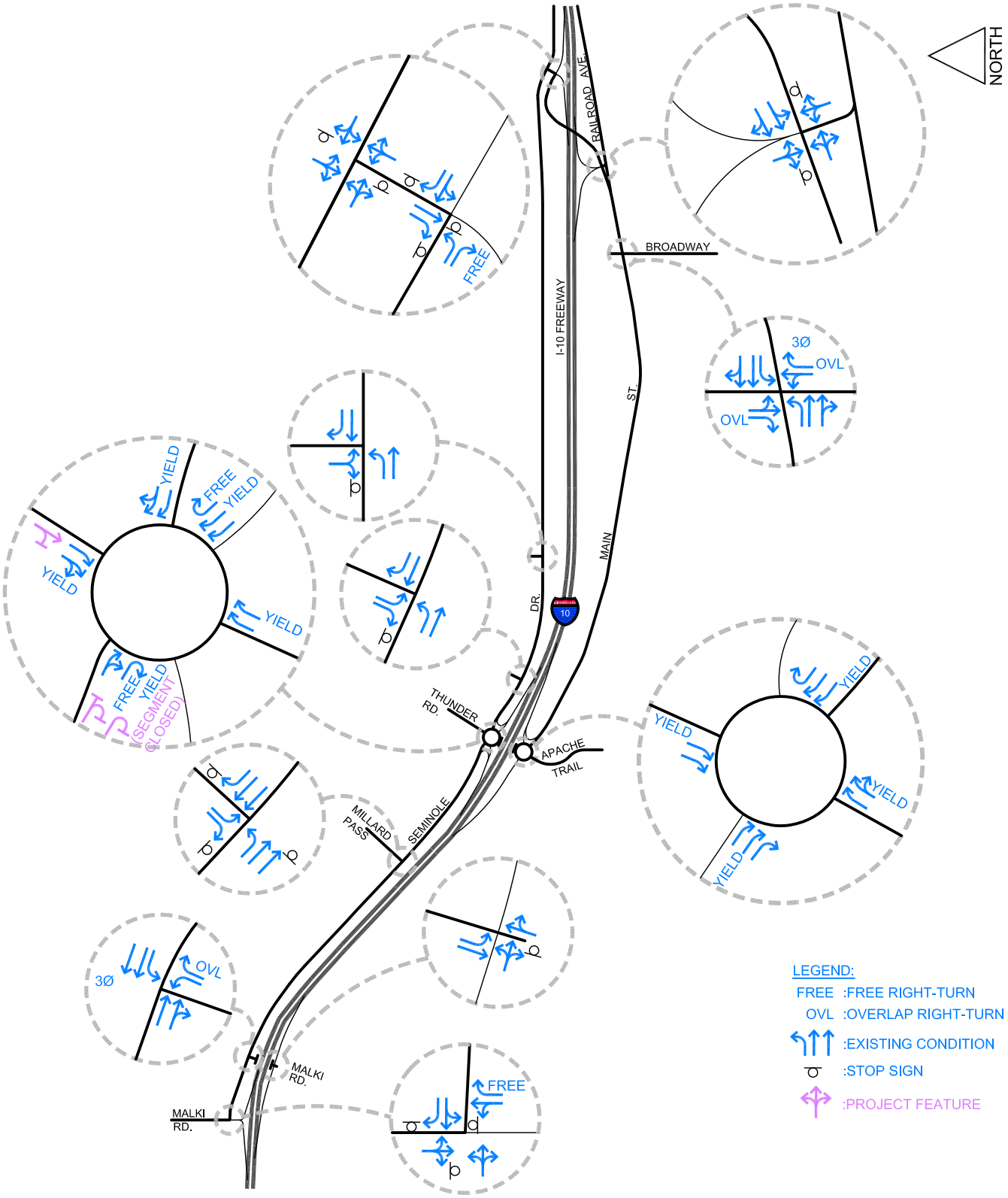
| West Leg | AM | NOON | PM |
|---|---|---|---|
| | 60 | 0 | 0 |

| East Leg | AM | NOON | PM |
|---|---|---|---|
| | 25 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 125 |
| NOON | 0 |
| PM | 0 |

# APPENDIX B

# STUDY INTERSECTION GEOMETRICS AND TRAFFIC CONTROL OPERATIONS




APPENDIX B

5/28/2013

FN: MORONGO OUTDOOR ENTERTAINMENT\LANE CONFIG

LANE CONFIGURATON

CRAIN & ASSOCIATES
Transportation Planning
Traffic Engineering
300 Corporate Pointe, Suite 470
Culver City, California 90230
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www.crainandassociates.com

# APPENDIX C

# LOS CALCULATION WORKSHEETS

# EXISTING (2012)

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 2 | 2 | 427 | 3 | 51 | 2 | 16 | 98 | 33 | 50 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 2 | 2 | 464 | 3 | 55 | 2 | 17 | 107 | 36 | 54 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 4 | 467 | 55 | 20 | 107 | 90 |
| Volume Left (vph) | 0 | 464 | 0 | 2 | 0 | 36 |
| Volume Right (vph) | 2 | 0 | 55 | 0 | 107 | 0 |
| Hadj (s) | -0.27 | 0.23 | -0.57 | 0.06 | -0.57 | 0.11 |
| Departure Headway (s) | 4.4 | 4.4 | 3.2 | 5.2 | 3.2 | 5.2 |
| Degree Utilization, x | 0.01 | 0.58 | 0.05 | 0.03 | 0.09 | 0.13 |
| Capacity (veh/h) | 764 | 792 | 1121 | 623 | 1121 | 641 |
| Control Delay (s) | 7.5 | 13.3 | 6.4 | 8.4 | 6.5 | 8.9 |
| Approach Delay (s) | 7.5 | 12.6 | | 6.8 | | 8.9 |
| Approach LOS | A | B | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 11.1 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 48.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 96 | 27 | 69 | 433 | 50 | 292 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.97 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3538 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3538 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 104 | 29 | 75 | 471 | 54 | 317 |
| RTOR Reduction (vph) | 23 | 0 | 0 | 0 | 0 | 160 |
| Lane Group Flow (vph) | 110 | 0 | 75 | 471 | 54 | 157 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 5.9 | | 4.8 | 14.7 | 4.9 | 13.7 |
| Effective Green, g (s) | 5.9 | | 4.8 | 14.7 | 4.9 | 13.7 |
| Actuated g/C Ratio | 0.21 | | 0.17 | 0.53 | 0.18 | 0.50 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 756 | | 307 | 1884 | 314 | 785 |
| v/s Ratio Prot | 0.03 | | 0.04 | c0.13 | 0.03 | c0.10 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.15 | | 0.24 | 0.25 | 0.17 | 0.20 |
| Uniform Delay, d1 | 8.8 | | 9.8 | 3.5 | 9.6 | 3.9 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.4 | 0.1 | 0.3 | 0.1 |
| Delay (s) | 8.9 | | 10.3 | 3.5 | 9.9 | 4.0 |
| Level of Service | A | | B | A | A | A |
| Approach Delay (s) | 8.9 | | | 4.5 | 4.9 | |
| Approach LOS | A | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 5.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.32 | | |
| Actuated Cycle Length (s) | 27.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 28.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 332 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 107 | 1 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 361 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 116 | 1 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 234 | 235 | 1 | 235 | 234 | 1 | 1 | | | 1 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 234 | 235 | 1 | 235 | 234 | 1 | 1 | | | 1 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 47 | 100 | 100 | 100 | 100 | 100 | 100 | | | 93 | | |
| cM capacity (veh/h) | 681 | 618 | 1083 | 678 | 618 | 1084 | 1622 | | | 1622 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 363 | 1 | 116 | 1 |
| Volume Left | 361 | 0 | 116 | 0 |
| Volume Right | 0 | 1 | 0 | 0 |
| cSH | 680 | 1700 | 1622 | 1700 |
| Volume to Capacity | 0.53 | 0.00 | 0.07 | 0.00 |
| Queue Length 95th (ft) | 79 | 0 | 6 | 0 |
| Control Delay (s) | 16.2 | 0.0 | 7.4 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 16.2 | 0.0 | 7.3 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 14.0 | | |
| Intersection Capacity Utilization | 37.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 101 | 62 | 56 | 107 | 33 | 101 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 110 | 67 | 61 | 116 | 36 | 110 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 110 | 67 | 61 | 116 | 36 | 110 |
| Volume Left (vph) | 110 | 0 | 61 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 116 | 0 | 110 |
| Hadj (s) | 0.53 | 0.03 | 0.53 | -0.67 | 0.03 | -0.67 |
| Departure Headway (s) | 5.6 | 5.1 | 5.8 | 4.6 | 5.2 | 4.5 |
| Degree Utilization, x | 0.17 | 0.10 | 0.10 | 0.15 | 0.05 | 0.14 |
| Capacity (veh/h) | 618 | 675 | 586 | 737 | 663 | 768 |
| Control Delay (s) | 8.6 | 7.5 | 8.2 | 7.2 | 7.3 | 7.0 |
| Approach Delay (s) | 8.2 | | 7.6 | | 7.0 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.6 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 22.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | | Yes |
| Volume (veh/h) | 302 | 41 | 5 | 261 | 134 | 246 | 2 | 216 | 35 | 19 | 58 | 155 |
| 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 |
| Hourly flow rate (vph) | 328 | 45 | 5 | 284 | 146 | 267 | 2 | 235 | 38 | 21 | 63 | 168 |
| Approach Volume (veh/h) | 378 | | | | 697 | | | 275 | | | 84 | |
| Crossing Volume (veh/h) | 450 | | | | 86 | | | 657 | | | 565 | |
| High Capacity (veh/h) | 971 | | | | 1295 | | | 823 | | | 886 | |
| High v/c (veh/h) | 0.39 | | | | 0.54 | | | 0.33 | | | 0.09 | |
| Low Capacity (veh/h) | 788 | | | | 1080 | | | 657 | | | 712 | |
| Low v/c (veh/h) | 0.48 | | | | 0.65 | | | 0.42 | | | 0.12 | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Maximum v/c High | 0.54 | | | |
| Maximum v/c Low | 0.65 | | | |
| Intersection Capacity Utilization | 63.5% | ICU Level of Service | B | |

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | | Yes |
| Volume (veh/h) | 432 | 29 | 83 | 2 | 0 | 100 | 235 | 30 | 26 | 88 | 4 |
| 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 |
| Hourly flow rate (vph) | 470 | 32 | 90 | 2 | 0 | 109 | 255 | 33 | 28 | 96 | 4 |
| Approach Volume (veh/h) | 501 | | | | | 111 | | 316 | | 96 | |
| Crossing Volume (veh/h) | 318 | | | | | 821 | | 2 | | 789 | |
| High Capacity (veh/h) | 1078 | | | | | 721 | | 1382 | | 739 | |
| High v/c (veh/h) | 0.46 | | | | | 0.15 | | 0.23 | | 0.13 | |
| Low Capacity (veh/h) | 884 | | | | | 568 | | 1159 | | 584 | |
| Low v/c (veh/h) | 0.57 | | | | | 0.20 | | 0.27 | | 0.16 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.46 | | |
| Maximum v/c Low | 0.57 | | |
| Intersection Capacity Utilization | 47.1% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 176 | 123 | 11 | 127 | 181 | 17 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 191 | 134 | 12 | 138 | 197 | 18 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 215 | | 713 | 197 | | |
| vC1, stage 1 conf vol | | | 197 | | | |
| vC2, stage 2 conf vol | | | 516 | | | |
| vCu, unblocked vol | 215 | | 713 | 197 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 86 | | 98 | 84 | | |
| cM capacity (veh/h) | 1355 | | 488 | 844 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 191 | 134 | 12 | 138 | 203 | 12 |
| Volume Left | 191 | 0 | 12 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 138 | 6 | 12 |
| cSH | 1355 | 1700 | 488 | 844 | 1700 | 1700 |
| Volume to Capacity | 0.14 | 0.08 | 0.02 | 0.16 | 0.12 | 0.01 |
| Queue Length 95th (ft) | 12 | 0 | 2 | 15 | 0 | 0 |
| Control Delay (s) | 8.1 | 0.0 | 12.6 | 10.1 | 0.0 | 0.0 |
| Lane LOS | A | | B | B | | |
| Approach Delay (s) | 4.8 | | 10.3 | | 0.0 | |
| Approach LOS | | | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.5 | | |
| Intersection Capacity Utilization | 33.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 62 | 70 | 117 | 8 | 9 | 71 |
| 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) | 67 | 76 | 127 | 9 | 10 | 77 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 136 | | | | 338 | 127 |
| vC1, stage 1 conf vol | | | | | 127 | |
| vC2, stage 2 conf vol | | | | | 211 | |
| vCu, unblocked vol | 136 | | | | 338 | 127 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 95 | | | | 99 | 92 |
| cM capacity (veh/h) | 1448 | | | | 740 | 923 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 67 | 76 | 127 | 9 | 87 |
| Volume Left | 67 | 0 | 0 | 0 | 10 |
| Volume Right | 0 | 0 | 0 | 9 | 77 |
| cSH | 1448 | 1700 | 1700 | 1700 | 898 |
| Volume to Capacity | 0.05 | 0.04 | 0.07 | 0.01 | 0.10 |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 8 |
| Control Delay (s) | 7.6 | 0.0 | 0.0 | 0.0 | 9.4 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 3.6 | | 0.0 | | 9.4 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.6 | | |
| Intersection Capacity Utilization | 21.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 6 | 16 | 35 | 59 | 30 | 12 | 70 | 27 | 88 | 9 | 31 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.90 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3172 | | 1652 | 3389 | | | 1798 | 1583 | | 1842 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.76 | 1.00 | | 0.90 | 1.00 |
| Satd. Flow (perm) | 1652 | 3172 | | 1652 | 3389 | | | 1412 | 1583 | | 1670 | 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 | 17 | 38 | 64 | 33 | 13 | 76 | 29 | 96 | 10 | 34 | 5 |
| RTOR Reduction (vph) | 0 | 17 | 0 | 0 | 5 | 0 | 0 | 0 | 78 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 7 | 38 | 0 | 64 | 41 | 0 | 0 | 105 | 18 | 0 | 44 | 1 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 24.5 | | 3.3 | 27.1 | | | 5.4 | 8.7 | | 5.4 | 6.1 |
| Effective Green, g (s) | 0.7 | 24.5 | | 3.3 | 27.1 | | | 5.4 | 8.7 | | 5.4 | 6.1 |
| Actuated g/C Ratio | 0.02 | 0.54 | | 0.07 | 0.60 | | | 0.12 | 0.19 | | 0.12 | 0.13 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1719 | | 120 | 2031 | | | 168 | 444 | | 199 | 353 |
| v/s Ratio Prot | 0.00 | 0.01 | | c0.04 | c0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.07 | 0.01 | | 0.03 | 0.00 |
| v/c Ratio | 0.28 | 0.02 | | 0.53 | 0.02 | | | 0.62 | 0.04 | | 0.22 | 0.00 |
| Uniform Delay, d1 | 22.0 | 4.8 | | 20.2 | 3.7 | | | 18.9 | 14.9 | | 18.0 | 16.9 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 6.0 | 0.0 | | 4.5 | 0.0 | | | 7.1 | 0.0 | | 0.6 | 0.0 |
| Delay (s) | 28.0 | 4.8 | | 24.7 | 3.7 | | | 26.0 | 14.9 | | 18.6 | 16.9 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 7.4 | | | 15.9 | | | 20.7 | | | 18.4 | |
| Approach LOS | | A | | | B | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.15 | | |
| Actuated Cycle Length (s) | 45.2 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 28.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 45 | 67 | 8 | 3 | 42 | 32 | 6 | 4 | 2 | 22 | 1 | 62 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 49 | 73 | 9 | 3 | 46 | 35 | 7 | 4 | 2 | 24 | 1 | 67 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 80 | | | 82 | | | 272 | 262 | 77 | 249 | 249 | 40 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 80 | | | 82 | | | 272 | 262 | 77 | 249 | 249 | 40 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 99 | 99 | 100 | 96 | 100 | 93 |
| cM capacity (veh/h) | 1515 | | | 1514 | | | 598 | 620 | 968 | 661 | 630 | 1022 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 130 | 26 | 58 | 13 | 92 |
| Volume Left | 49 | 3 | 0 | 7 | 24 |
| Volume Right | 9 | 0 | 35 | 2 | 67 |
| cSH | 1515 | 1514 | 1700 | 647 | 890 |
| Volume to Capacity | 0.03 | 0.00 | 0.03 | 0.02 | 0.10 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 2 | 9 |
| Control Delay (s) | 3.0 | 0.9 | 0.0 | 10.7 | 9.5 |
| Lane LOS | A | A | | B | A |
| Approach Delay (s) | 3.0 | 0.3 | | 10.7 | 9.5 |
| Approach LOS | | | | B | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.5 | | |
| Intersection Capacity Utilization | 25.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 5 | 36 | 82 | 0 | 0 | 0 | 0 | 54 | 43 | 31 | 0 | 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 |
| Hourly flow rate (vph) | 5 | 39 | 89 | 0 | 0 | 0 | 0 | 59 | 47 | 34 | 0 | 53 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 74 | 59 | 59 | 47 | 34 | 53 |
| Volume Left (vph) | 5 | 0 | 0 | 0 | 34 | 0 |
| Volume Right (vph) | 30 | 59 | 0 | 47 | 0 | 53 |
| Hadj (s) | -0.19 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 4.0 | 3.2 | 4.8 | 4.1 | 4.4 | 3.2 |
| Degree Utilization, x | 0.08 | 0.05 | 0.08 | 0.05 | 0.04 | 0.05 |
| Capacity (veh/h) | 872 | 1121 | 731 | 854 | 786 | 1121 |
| Control Delay (s) | 7.3 | 6.4 | 7.0 | 6.1 | 7.6 | 6.4 |
| Approach Delay (s) | 6.9 | | 6.6 | | 6.9 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.8 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 20.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 3 | 3 | 49 | 28 | 5 | 2 | 53 | 40 | 28 | 2 | 21 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 3 | 3 | 53 | 30 | 5 | 2 | 58 | 43 | 30 | 2 | 23 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 206 | 216 | 23 | 256 | 201 | 59 | 23 | | | 74 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 206 | 216 | 23 | 256 | 201 | 59 | 23 | | | 74 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 95 | 95 | 99 | 100 | 96 | | | 100 | | |
| cM capacity (veh/h) | 724 | 656 | 1054 | 641 | 669 | 1007 | 1592 | | | 1526 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 60 | 38 | 132 | 25 |
| Volume Left | 3 | 30 | 58 | 2 |
| Volume Right | 53 | 2 | 30 | 0 |
| cSH | 996 | 658 | 1592 | 1526 |
| Volume to Capacity | 0.06 | 0.06 | 0.04 | 0.00 |
| Queue Length 95th (ft) | 5 | 5 | 3 | 0 |
| Control Delay (s) | 8.8 | 10.8 | 3.4 | 0.6 |
| Lane LOS | A | B | A | A |
| Approach Delay (s) | 8.8 | 10.8 | 3.4 | 0.6 |
| Approach LOS | A | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.5 | | |
| Intersection Capacity Utilization | 28.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 29 | 0 | 13 | 0 | 4 | 15 | 8 | 5 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 32 | 0 | 14 | 0 | 4 | 16 | 9 | 5 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 32 | 14 | 4 | 16 | 14 |
| Volume Left (vph) | 0 | 32 | 0 | 0 | 0 | 9 |
| Volume Right (vph) | 0 | 0 | 14 | 0 | 16 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.16 |
| Departure Headway (s) | 4.0 | 4.2 | 3.2 | 4.0 | 3.2 | 4.1 |
| Degree Utilization, x | 0.00 | 0.04 | 0.01 | 0.00 | 0.01 | 0.02 |
| Capacity (veh/h) | 900 | 854 | 1121 | 875 | 1121 | 852 |
| Control Delay (s) | 7.0 | 7.3 | 6.2 | 7.0 | 6.2 | 7.2 |
| Approach Delay (s) | 0.0 | 7.0 | | 6.4 | | 7.2 |
| Approach LOS | A | A | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 17.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 16 | 10 | 3 | 26 | 17 | 12 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.94 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3442 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3442 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 17 | 11 | 3 | 28 | 18 | 13 |
| RTOR Reduction (vph) | 7 | 0 | 0 | 0 | 0 | 12 |
| Lane Group Flow (vph) | 21 | 0 | 3 | 28 | 18 | 1 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 17.0 | | 5.0 | 26.0 | 16.0 | 5.0 |
| Effective Green, g (s) | 17.0 | | 5.0 | 26.0 | 16.0 | 5.0 |
| Actuated g/C Ratio | 0.34 | | 0.10 | 0.52 | 0.32 | 0.10 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Grp Cap (vph) | 1170 | | 177 | 1840 | 566 | 158 |
| v/s Ratio Prot | c0.01 | | 0.00 | c0.01 | c0.01 | 0.00 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.02 | | 0.02 | 0.02 | 0.03 | 0.01 |
| Uniform Delay, d1 | 11.0 | | 20.3 | 5.8 | 11.7 | 20.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.0 | | 0.2 | 0.0 | 0.1 | 0.1 |
| Delay (s) | 11.0 | | 20.5 | 5.8 | 11.8 | 20.4 |
| Level of Service | B | | C | A | B | C |
| Approach Delay (s) | 11.0 | | | 7.2 | 15.4 | |
| Approach LOS | B | | | A | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.02 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 29 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 32 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 28 | 28 | 0 | 31 | 28 | 0 | 0 | | | 0 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 28 | 28 | 0 | 31 | 28 | 0 | 0 | | | 0 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 97 | 100 | 100 | 100 | 100 | 100 | 100 | | | 99 | | |
| cM capacity (veh/h) | 975 | 857 | 1085 | 967 | 857 | 1085 | 1623 | | | 1623 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 36 | 0 | 14 | 0 |
| Volume Left | 32 | 0 | 14 | 0 |
| Volume Right | 1 | 0 | 0 | 0 |
| cSH | 966 | 1700 | 1623 | 1700 |
| Volume to Capacity | 0.04 | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 3 | 0 | 1 | 0 |
| Control Delay (s) | 8.9 | 0.0 | 7.2 | 0.0 |
| Lane LOS | A | | A | |
| Approach Delay (s) | 8.9 | 0.0 | 7.2 | |
| Approach LOS | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8.4 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 12 | 2 | 2 | 14 | 1 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 13 | 2 | 2 | 15 | 1 | 4 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 13 | 2 | 2 | 15 | 1 | 4 |
| Volume Left (vph) | 13 | 0 | 2 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 15 | 0 | 4 |
| Hadj (s) | 0.53 | 0.03 | 0.53 | -0.67 | 0.03 | -0.67 |
| Departure Headway (s) | 5.1 | 4.6 | 5.1 | 3.9 | 4.6 | 3.9 |
| Degree Utilization, x | 0.02 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| Capacity (veh/h) | 696 | 772 | 701 | 919 | 779 | 920 |
| Control Delay (s) | 7.0 | 6.4 | 6.9 | 5.7 | 6.4 | 5.7 |
| Approach Delay (s) | 6.9 | | 5.9 | | 5.8 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.3 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | | Yes |
| Volume (veh/h) | 246 | 7 | 3 | 36 | 114 | 190 | 2 | 192 | 10 | 6 | 11 | 6 |
| 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 |
| Hourly flow rate (vph) | 267 | 8 | 3 | 39 | 124 | 207 | 2 | 209 | 11 | 7 | 12 | 7 |
| Approach Volume (veh/h) | 278 | | | | 370 | | | 222 | | | 18 | |
| Crossing Volume (veh/h) | 170 | | | | 21 | | | 314 | | | 478 | |
| High Capacity (veh/h) | 1213 | | | | 1363 | | | 1082 | | | 950 | |
| High v/c (veh/h) | 0.23 | | | | 0.27 | | | 0.20 | | | 0.02 | |
| Low Capacity (veh/h) | 1005 | | | | 1141 | | | 887 | | | 769 | |
| Low v/c (veh/h) | 0.28 | | | | 0.32 | | | 0.25 | | | 0.02 | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Maximum v/c High | 0.27 | | | |
| Maximum v/c Low | 0.32 | | | |
| Intersection Capacity Utilization | 40.0% | ICU Level of Service | A | |

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | Yes |
| Volume (veh/h) | 289 | 14 | 40 | 0 | 18 | 47 | 1 | 9 | 17 | 1 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 314 | 15 | 43 | 0 | 20 | 51 | 1 | 10 | 18 | 1 |
| Approach Volume (veh/h) | 329 | | | | 20 | | 62 | | 18 | |
| Crossing Volume (veh/h) | 62 | | | | 384 | | 0 | | 382 | |
| High Capacity (veh/h) | 1319 | | | | 1024 | | 1385 | | 1026 | |
| High v/c (veh/h) | 0.25 | | | | 0.02 | | 0.04 | | 0.02 | |
| Low Capacity (veh/h) | 1102 | | | | 835 | | 1161 | | 837 | |
| Low v/c (veh/h) | 0.30 | | | | 0.02 | | 0.05 | | 0.02 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.25 | | |
| Maximum v/c Low | 0.30 | | |
| Intersection Capacity Utilization | 31.7% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 137 | 44 | 6 | 145 | 168 | 8 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 149 | 48 | 7 | 158 | 183 | 9 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 191 | | 528 | 183 | | |
| vC1, stage 1 conf vol | | | 183 | | | |
| vC2, stage 2 conf vol | | | 346 | | | |
| vCu, unblocked vol | 191 | | 528 | 183 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 89 | | 99 | 82 | | |
| cM capacity (veh/h) | 1382 | | 601 | 860 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 149 | 48 | 7 | 158 | 186 | 6 |
| Volume Left | 149 | 0 | 7 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 158 | 3 | 6 |
| cSH | 1382 | 1700 | 601 | 860 | 1700 | 1700 |
| Volume to Capacity | 0.11 | 0.03 | 0.01 | 0.18 | 0.11 | 0.00 |
| Queue Length 95th (ft) | 9 | 0 | 1 | 17 | 0 | 0 |
| Control Delay (s) | 7.9 | 0.0 | 11.1 | 10.1 | 0.0 | 0.0 |
| Lane LOS | A | | B | B | | |
| Approach Delay (s) | 6.0 | | 10.2 | | 0.0 | |
| Approach LOS | | | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.2 | | |
| Intersection Capacity Utilization | 30.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 41 | 30 | 84 | 2 | 3 | 71 |
| 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) | 45 | 33 | 91 | 2 | 3 | 77 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 93 | | | | 213 | 91 |
| vC1, stage 1 conf vol | | | | | 91 | |
| vC2, stage 2 conf vol | | | | | 122 | |
| vCu, unblocked vol | 93 | | | | 213 | 91 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 100 | 92 |
| cM capacity (veh/h) | 1501 | | | | 829 | 966 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 45 | 33 | 91 | 2 | 80 |
| Volume Left | 45 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 2 | 77 |
| cSH | 1501 | 1700 | 1700 | 1700 | 960 |
| Volume to Capacity | 0.03 | 0.02 | 0.05 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 7 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.1 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 4.3 | | 0.0 | | 9.1 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.2 | | |
| Intersection Capacity Utilization | 20.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 16 | 26 | 7 | 1 | 12 | 3 | 20 | 2 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.85 | | 1.00 | 0.98 | | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | | 3008 | | 1652 | 3480 | | | 1790 | 1583 | | 1837 | |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Satd. Flow (perm) | | 3008 | | 1652 | 3480 | | | 1863 | 1583 | | 1863 | |
| 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) | 0 | 0 | 17 | 28 | 8 | 1 | 13 | 3 | 22 | 2 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 11 | 0 | 28 | 9 | 0 | 0 | 16 | 1 | 0 | 7 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 28.3 | | 1.6 | 33.9 | | | 1.2 | 2.8 | | 1.2 | |
| Effective Green, g (s) | | 28.3 | | 1.6 | 33.9 | | | 1.2 | 2.8 | | 1.2 | |
| Actuated g/C Ratio | | 0.66 | | 0.04 | 0.79 | | | 0.03 | 0.06 | | 0.03 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1975 | | 61 | 2737 | | | 51 | 249 | | 51 | |
| v/s Ratio Prot | | c0.00 | | c0.02 | 0.00 | | | | 0.00 | | | |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | 0.00 | |
| v/c Ratio | | 0.01 | | 0.46 | 0.00 | | | 0.31 | 0.01 | | 0.14 | |
| Uniform Delay, d1 | | 2.6 | | 20.3 | 1.0 | | | 20.5 | 18.8 | | 20.4 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | 5.4 | 0.0 | | | 3.5 | 0.0 | | 1.2 | |
| Delay (s) | | 2.6 | | 25.7 | 1.0 | | | 24.1 | 18.9 | | 21.7 | |
| Level of Service | | A | | C | A | | | C | B | | C | |
| Approach Delay (s) | | 2.6 | | | 19.7 | | | 21.0 | | | 21.7 | |
| Approach LOS | | A | | | B | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.4 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.04 | | |
| Actuated Cycle Length (s) | 43.1 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 22.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 15 | 14 | 3 | 0 | 14 | 12 | 0 | 0 | 1 | 12 | 0 | 33 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 16 | 15 | 3 | 0 | 15 | 13 | 0 | 0 | 1 | 13 | 0 | 36 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 28 | | | 18 | | | 93 | 78 | 17 | 72 | 73 | 14 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 28 | | | 18 | | | 93 | 78 | 17 | 72 | 73 | 14 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 99 | 100 | 97 |
| cM capacity (veh/h) | 1583 | | | 1597 | | | 844 | 803 | 1058 | 902 | 808 | 1062 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 35 | 8 | 21 | 1 | 49 |
| Volume Left | 16 | 0 | 0 | 0 | 13 |
| Volume Right | 3 | 0 | 13 | 1 | 36 |
| cSH | 1583 | 1597 | 1700 | 1058 | 1014 |
| Volume to Capacity | 0.01 | 0.00 | 0.01 | 0.00 | 0.05 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 4 |
| Control Delay (s) | 3.5 | 0.0 | 0.0 | 8.4 | 8.7 |
| Lane LOS | A | | | A | A |
| Approach Delay (s) | 3.5 | 0.0 | | 8.4 | 8.7 |
| Approach LOS | | | | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.9 | | |
| Intersection Capacity Utilization | 24.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 7 | 30 | 0 | 0 | 0 | 0 | 13 | 19 | 5 | 0 | 20 |
| 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 |
| Hourly flow rate (vph) | 0 | 8 | 33 | 0 | 0 | 0 | 0 | 14 | 21 | 5 | 0 | 22 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 18 | 22 | 14 | 21 | 5 | 22 |
| Volume Left (vph) | 0 | 0 | 0 | 0 | 5 | 0 |
| Volume Right (vph) | 11 | 22 | 0 | 21 | 0 | 22 |
| Hadj (s) | -0.32 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 3.7 | 3.2 | 4.6 | 3.9 | 4.2 | 3.2 |
| Degree Utilization, x | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 |
| Capacity (veh/h) | 970 | 1121 | 770 | 918 | 839 | 1121 |
| Control Delay (s) | 6.7 | 6.3 | 6.5 | 5.8 | 7.3 | 6.3 |
| Approach Delay (s) | 6.5 | | 6.1 | | 6.5 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.3 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 2 | 0 | 18 | 3 | 3 | 0 | 10 | 21 | 3 | 1 | 12 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 2 | 0 | 20 | 3 | 3 | 0 | 11 | 23 | 3 | 1 | 13 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 63 | 63 | 13 | 81 | 61 | 24 | 13 | | | 26 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 63 | 63 | 13 | 81 | 61 | 24 | 13 | | | 26 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 98 | 100 | 100 | 100 | 99 | | | 100 | | |
| cM capacity (veh/h) | 923 | 822 | 1067 | 885 | 823 | 1052 | 1605 | | | 1588 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 22 | 7 | 37 | 14 |
| Volume Left | 2 | 3 | 11 | 1 |
| Volume Right | 20 | 0 | 3 | 0 |
| cSH | 1051 | 853 | 1605 | 1588 |
| Volume to Capacity | 0.02 | 0.01 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 2 | 1 | 1 | 0 |
| Control Delay (s) | 8.5 | 9.3 | 2.2 | 0.6 |
| Lane LOS | A | A | A | A |
| Approach Delay (s) | 8.5 | 9.3 | 2.2 | 0.6 |
| Approach LOS | A | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.2 | | |
| Intersection Capacity Utilization | 14.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 8 | 7 | 348 | 3 | 74 | 5 | 6 | 128 | 19 | 19 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 9 | 8 | 378 | 3 | 80 | 5 | 7 | 139 | 21 | 21 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 16 | 382 | 80 | 12 | 139 | 41 |
| Volume Left (vph) | 0 | 378 | 0 | 5 | 0 | 21 |
| Volume Right (vph) | 8 | 0 | 80 | 0 | 139 | 0 |
| Hadj (s) | -0.25 | 0.23 | -0.57 | 0.12 | -0.57 | 0.13 |
| Departure Headway (s) | 4.2 | 4.3 | 3.2 | 5.0 | 3.2 | 5.0 |
| Degree Utilization, x | 0.02 | 0.45 | 0.07 | 0.02 | 0.12 | 0.06 |
| Capacity (veh/h) | 828 | 821 | 1121 | 661 | 1121 | 669 |
| Control Delay (s) | 7.3 | 10.8 | 6.4 | 8.1 | 6.7 | 8.3 |
| Approach Delay (s) | 7.3 | 10.1 | | 6.8 | | 8.3 |
| Approach LOS | A | B | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 9.1 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 41.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 158 | 27 | 64 | 338 | 79 | 531 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.98 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3578 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3578 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 172 | 29 | 70 | 367 | 86 | 577 |
| RTOR Reduction (vph) | 25 | 0 | 0 | 0 | 0 | 464 |
| Lane Group Flow (vph) | 176 | 0 | 70 | 367 | 86 | 113 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 6.0 | | 8.4 | 18.4 | 16.4 | 8.4 |
| Effective Green, g (s) | 6.0 | | 8.4 | 18.4 | 16.4 | 8.4 |
| Actuated g/C Ratio | 0.14 | | 0.20 | 0.43 | 0.38 | 0.20 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 501 | | 347 | 1521 | 678 | 310 |
| v/s Ratio Prot | c0.05 | | 0.04 | 0.10 | c0.05 | c0.07 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.35 | | 0.20 | 0.24 | 0.13 | 0.37 |
| Uniform Delay, d1 | 16.6 | | 14.4 | 7.8 | 8.6 | 14.9 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.4 | | 0.3 | 0.1 | 0.4 | 0.7 |
| Delay (s) | 17.1 | | 14.7 | 7.8 | 8.9 | 15.6 |
| Level of Service | B | | B | A | A | B |
| Approach Delay (s) | 17.1 | | | 8.9 | 14.8 | |
| Approach LOS | B | | | A | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.24 | | |
| Actuated Cycle Length (s) | 42.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 44.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 604 | 10 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 88 | 4 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 657 | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 96 | 4 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 198 | 198 | 4 | 203 | 198 | 2 | 4 | | | 2 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 198 | 198 | 4 | 203 | 198 | 2 | 4 | | | 2 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 10 | 98 | 100 | 100 | 100 | 100 | 100 | | | 94 | | |
| cM capacity (veh/h) | 727 | 657 | 1079 | 712 | 657 | 1082 | 1617 | | | 1620 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 667 | 2 | 96 | 4 |
| Volume Left | 657 | 0 | 96 | 0 |
| Volume Right | 0 | 0 | 0 | 0 |
| cSH | 725 | 1700 | 1620 | 1700 |
| Volume to Capacity | 0.92 | 0.00 | 0.06 | 0.00 |
| Queue Length 95th (ft) | 315 | 0 | 5 | 0 |
| Control Delay (s) | 40.7 | 0.0 | 7.4 | 0.0 |
| Lane LOS | E | | A | |
| Approach Delay (s) | 40.7 | 0.0 | 7.0 | |
| Approach LOS | E | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 36.2 | | |
| Intersection Capacity Utilization | 52.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 134 | 106 | 144 | 138 | 36 | 82 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 146 | 115 | 157 | 150 | 39 | 89 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 146 | 115 | 157 | 150 | 39 | 89 |
| Volume Left (vph) | 146 | 0 | 157 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 150 | 0 | 89 |
| Hadj (s) | 0.53 | 0.03 | 0.53 | -0.67 | 0.03 | -0.67 |
| Departure Headway (s) | 6.0 | 5.5 | 6.0 | 4.8 | 5.7 | 5.0 |
| Degree Utilization, x | 0.24 | 0.18 | 0.26 | 0.20 | 0.06 | 0.12 |
| Capacity (veh/h) | 575 | 623 | 568 | 706 | 594 | 679 |
| Control Delay (s) | 9.7 | 8.5 | 9.9 | 7.8 | 7.9 | 7.5 |
| Approach Delay (s) | 9.2 | | 8.9 | | 7.6 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.8 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 28.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | | Yes |
| Volume (veh/h) | 243 | 63 | 26 | 356 | 176 | 285 | 2 | 244 | 56 | 29 | 101 | 168 |
| 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 |
| Hourly flow rate (vph) | 264 | 68 | 28 | 387 | 191 | 310 | 2 | 265 | 61 | 32 | 110 | 183 |
| Approach Volume (veh/h) | 361 | | | | 888 | | | 328 | | | 141 | |
| Crossing Volume (veh/h) | 610 | | | | 143 | | | 720 | | | 532 | |
| High Capacity (veh/h) | 855 | | | | 1238 | | | 782 | | | 910 | |
| High v/c (veh/h) | 0.42 | | | | 0.72 | | | 0.42 | | | 0.16 | |
| Low Capacity (veh/h) | 685 | | | | 1028 | | | 621 | | | 734 | |
| Low v/c (veh/h) | 0.53 | | | | 0.86 | | | 0.53 | | | 0.19 | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Maximum v/c High | 0.72 | | | |
| Maximum v/c Low | 0.86 | | | |
| Intersection Capacity Utilization | 73.5% | ICU Level of Service | D | |

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | Yes |
| Volume (veh/h) | 559 | 31 | 57 | 1 | 82 | 256 | 16 | 12 | 44 | 2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 608 | 34 | 62 | 1 | 89 | 278 | 17 | 13 | 48 | 2 |
| Approach Volume (veh/h) | 641 | | | | 90 | | 309 | | 48 | |
| Crossing Volume (veh/h) | 309 | | | | 934 | | 1 | | 937 | |
| High Capacity (veh/h) | 1087 | | | | 657 | | 1383 | | 656 | |
| High v/c (veh/h) | 0.59 | | | | 0.14 | | 0.22 | | 0.07 | |
| Low Capacity (veh/h) | 891 | | | | 513 | | 1160 | | 511 | |
| Low v/c (veh/h) | 0.72 | | | | 0.18 | | 0.27 | | 0.09 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.59 | | |
| Maximum v/c Low | 0.72 | | |
| Intersection Capacity Utilization | 51.7% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 268 | 113 | 3 | 132 | 127 | 13 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 291 | 123 | 3 | 143 | 138 | 14 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 152 | | 843 | 138 | | |
| vC1, stage 1 conf vol | | | 138 | | | |
| vC2, stage 2 conf vol | | | 705 | | | |
| vCu, unblocked vol | 152 | | 843 | 138 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 80 | | 99 | 84 | | |
| cM capacity (veh/h) | 1429 | | 377 | 910 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 291 | 123 | 3 | 143 | 143 | 9 |
| Volume Left | 291 | 0 | 3 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 143 | 5 | 9 |
| cSH | 1429 | 1700 | 377 | 910 | 1700 | 1700 |
| Volume to Capacity | 0.20 | 0.07 | 0.01 | 0.16 | 0.08 | 0.01 |
| Queue Length 95th (ft) | 19 | 0 | 1 | 14 | 0 | 0 |
| Control Delay (s) | 8.2 | 0.0 | 14.6 | 9.7 | 0.0 | 0.0 |
| Lane LOS | A | | B | A | | |
| Approach Delay (s) | 5.7 | | 9.8 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.4 | | |
| Intersection Capacity Utilization | 35.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 64 | 56 | 87 | 8 | 7 | 56 |
| 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) | 70 | 61 | 95 | 9 | 8 | 61 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 103 | | | | 295 | 95 |
| vC1, stage 1 conf vol | | | | | 95 | |
| vC2, stage 2 conf vol | | | | | 200 | |
| vCu, unblocked vol | 103 | | | | 295 | 95 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 95 | | | | 99 | 94 |
| cM capacity (veh/h) | 1489 | | | | 758 | 962 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 70 | 61 | 95 | 9 | 68 |
| Volume Left | 70 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 9 | 61 |
| cSH | 1489 | 1700 | 1700 | 1700 | 934 |
| Volume to Capacity | 0.05 | 0.04 | 0.06 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.2 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 4.0 | | 0.0 | | 9.2 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.8 | | |
| Intersection Capacity Utilization | 20.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 8 | 7 | 21 | 38 | 25 | 10 | 44 | 19 | 49 | 10 | 26 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.89 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3145 | | 1652 | 3386 | | | 1800 | 1583 | | 1837 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 0.88 | 1.00 |
| Satd. Flow (perm) | 1652 | 3145 | | 1652 | 3386 | | | 1863 | 1583 | | 1640 | 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) | 9 | 8 | 23 | 41 | 27 | 11 | 48 | 21 | 53 | 11 | 28 | 4 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 4 | 0 | 0 | 0 | 47 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 9 | 22 | 0 | 41 | 34 | 0 | 0 | 69 | 6 | 0 | 39 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 26.5 | | 1.7 | 27.5 | | | 3.1 | 4.8 | | 3.1 | 3.8 |
| Effective Green, g (s) | 0.7 | 26.5 | | 1.7 | 27.5 | | | 3.1 | 4.8 | | 3.1 | 3.8 |
| Actuated g/C Ratio | 0.02 | 0.61 | | 0.04 | 0.64 | | | 0.07 | 0.11 | | 0.07 | 0.09 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 26 | 1924 | | 64 | 2150 | | | 133 | 321 | | 117 | 285 |
| v/s Ratio Prot | 0.01 | 0.01 | | c0.02 | c0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.04 | 0.00 | | 0.02 | 0.00 |
| v/c Ratio | 0.35 | 0.01 | | 0.64 | 0.02 | | | 0.52 | 0.02 | | 0.33 | 0.00 |
| Uniform Delay, d1 | 21.1 | 3.3 | | 20.5 | 2.9 | | | 19.4 | 17.2 | | 19.1 | 18.0 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 7.9 | 0.0 | | 19.8 | 0.0 | | | 3.4 | 0.0 | | 1.7 | 0.0 |
| Delay (s) | 28.9 | 3.3 | | 40.3 | 2.9 | | | 22.8 | 17.2 | | 20.8 | 18.0 |
| Level of Service | C | A | | D | A | | | C | B | | C | B |
| Approach Delay (s) | | 9.1 | | | 22.3 | | | 20.3 | | | 20.5 | |
| Approach LOS | | A | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 43.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 25.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 34 | 59 | 12 | 2 | 41 | 33 | 8 | 7 | 5 | 25 | 3 | 58 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 37 | 64 | 13 | 2 | 45 | 36 | 9 | 8 | 5 | 27 | 3 | 63 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 80 | | | 77 | | | 236 | 229 | 71 | 221 | 218 | 40 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 80 | | | 77 | | | 236 | 229 | 71 | 221 | 218 | 40 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 99 | 99 | 99 | 96 | 100 | 94 |
| cM capacity (veh/h) | 1515 | | | 1519 | | | 640 | 652 | 977 | 692 | 662 | 1022 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 114 | 24 | 58 | 22 | 93 |
| Volume Left | 37 | 2 | 0 | 9 | 27 |
| Volume Right | 13 | 0 | 36 | 5 | 63 |
| cSH | 1515 | 1519 | 1700 | 706 | 883 |
| Volume to Capacity | 0.02 | 0.00 | 0.03 | 0.03 | 0.11 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 2 | 9 |
| Control Delay (s) | 2.5 | 0.7 | 0.0 | 10.3 | 9.6 |
| Lane LOS | A | A | | B | A |
| Approach Delay (s) | 2.5 | 0.2 | | 10.3 | 9.6 |
| Approach LOS | | | | B | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.6 | | |
| Intersection Capacity Utilization | 25.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 5 | 34 | 105 | 0 | 0 | 0 | 0 | 61 | 55 | 45 | 0 | 36 |
| 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 |
| Hourly flow rate (vph) | 5 | 37 | 114 | 0 | 0 | 0 | 0 | 66 | 60 | 49 | 0 | 39 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 80 | 76 | 66 | 60 | 49 | 39 |
| Volume Left (vph) | 5 | 0 | 0 | 0 | 49 | 0 |
| Volume Right (vph) | 38 | 76 | 0 | 60 | 0 | 39 |
| Hadj (s) | -0.24 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 4.0 | 3.2 | 4.8 | 4.1 | 4.5 | 3.2 |
| Degree Utilization, x | 0.09 | 0.07 | 0.09 | 0.07 | 0.06 | 0.03 |
| Capacity (veh/h) | 865 | 1121 | 722 | 841 | 774 | 1121 |
| Control Delay (s) | 7.4 | 6.4 | 7.1 | 6.2 | 7.8 | 6.3 |
| Approach Delay (s) | 6.9 | | 6.7 | | 7.1 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 21.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 5 | 9 | 25 | 48 | 4 | 2 | 45 | 55 | 53 | 4 | 35 | 6 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 5 | 10 | 27 | 52 | 4 | 2 | 49 | 60 | 58 | 4 | 38 | 7 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 241 | 265 | 41 | 268 | 240 | 89 | 45 | | | 117 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 241 | 265 | 41 | 268 | 240 | 89 | 45 | | | 117 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 99 | 98 | 97 | 92 | 99 | 100 | 97 | | | 100 | | |
| cM capacity (veh/h) | 690 | 618 | 1030 | 641 | 639 | 970 | 1564 | | | 1471 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 42 | 59 | 166 | 49 |
| Volume Left | 5 | 52 | 49 | 4 |
| Volume Right | 27 | 2 | 58 | 7 |
| cSH | 846 | 649 | 1564 | 1471 |
| Volume to Capacity | 0.05 | 0.09 | 0.03 | 0.00 |
| Queue Length 95th (ft) | 4 | 7 | 2 | 0 |
| Control Delay (s) | 9.5 | 11.1 | 2.3 | 0.7 |
| Lane LOS | A | B | A | A |
| Approach Delay (s) | 9.5 | 11.1 | 2.3 | 0.7 |
| Approach LOS | A | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.7 | | |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 88 | 0 | 14 | 0 | 7 | 10 | 10 | 5 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 96 | 0 | 15 | 0 | 8 | 11 | 11 | 5 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 96 | 15 | 8 | 11 | 16 |
| Volume Left (vph) | 0 | 96 | 0 | 0 | 0 | 11 |
| Volume Right (vph) | 0 | 0 | 15 | 0 | 11 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.17 |
| Departure Headway (s) | 4.0 | 4.2 | 3.2 | 4.2 | 3.2 | 4.3 |
| Degree Utilization, x | 0.00 | 0.11 | 0.01 | 0.01 | 0.01 | 0.02 |
| Capacity (veh/h) | 885 | 851 | 1121 | 833 | 1121 | 810 |
| Control Delay (s) | 7.0 | 7.7 | 6.2 | 7.2 | 6.2 | 7.4 |
| Approach Delay (s) | 0.0 | 7.5 | | 6.6 | | 7.4 |
| Approach LOS | A | A | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.4 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 19.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 11 | 11 | 2 | 87 | 11 | 19 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.93 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 12 | 12 | 2 | 95 | 12 | 21 |
| RTOR Reduction (vph) | 8 | 0 | 0 | 0 | 0 | 19 |
| Lane Group Flow (vph) | 16 | 0 | 2 | 95 | 12 | 2 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 17.0 | | 5.0 | 26.0 | 16.0 | 5.0 |
| Effective Green, g (s) | 17.0 | | 5.0 | 26.0 | 16.0 | 5.0 |
| Actuated g/C Ratio | 0.34 | | 0.10 | 0.52 | 0.32 | 0.10 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Grp Cap (vph) | 1150 | | 177 | 1840 | 566 | 158 |
| v/s Ratio Prot | 0.00 | | 0.00 | c0.03 | c0.01 | 0.00 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.01 | 0.05 | 0.02 | 0.01 |
| Uniform Delay, d1 | 10.9 | | 20.3 | 5.9 | 11.6 | 20.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.0 | | 0.1 | 0.1 | 0.1 | 0.2 |
| Delay (s) | 11.0 | | 20.4 | 6.0 | 11.7 | 20.4 |
| Level of Service | B | | C | A | B | C |
| Approach Delay (s) | 11.0 | | | 6.3 | 17.3 | |
| Approach LOS | B | | | A | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.4 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.04 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 30 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 33 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 28 | 28 | 0 | 29 | 28 | 0 | 0 | | | 0 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 28 | 28 | 0 | 29 | 28 | 0 | 0 | | | 0 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 97 | 100 | 100 | 100 | 100 | 100 | 100 | | | 99 | | |
| cM capacity (veh/h) | 975 | 857 | 1085 | 973 | 857 | 1085 | 1623 | | | 1623 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 34 | 0 | 14 | 0 |
| Volume Left | 33 | 0 | 14 | 0 |
| Volume Right | 0 | 0 | 0 | 0 |
| cSH | 970 | 1700 | 1623 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 3 | 0 | 1 | 0 |
| Control Delay (s) | 8.8 | 0.0 | 7.2 | 0.0 |
| Lane LOS | A | | A | |
| Approach Delay (s) | 8.8 | 0.0 | 7.2 | |
| Approach LOS | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8.4 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 10 | 1 | 10 | 12 | 1 | 26 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 11 | 1 | 11 | 13 | 1 | 28 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 11 | 1 | 11 | 13 | 1 | 28 |
| Volume Left (vph) | 11 | 0 | 11 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 13 | 0 | 28 |
| Hadj (s) | 0.53 | 0.03 | 0.53 | -0.67 | 0.03 | -0.67 |
| Departure Headway (s) | 5.1 | 4.6 | 5.1 | 3.9 | 4.6 | 3.9 |
| Degree Utilization, x | 0.02 | 0.00 | 0.02 | 0.01 | 0.00 | 0.03 |
| Capacity (veh/h) | 691 | 765 | 693 | 896 | 775 | 914 |
| Control Delay (s) | 7.0 | 6.4 | 7.0 | 5.8 | 6.4 | 5.8 |
| Approach Delay (s) | 6.9 | | 6.3 | | 5.8 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.2 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | | Yes |
| Volume (veh/h) | 271 | 8 | 4 | 33 | 56 | 160 | 0 | 255 | 5 | 2 | 13 | 8 |
| 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 |
| Hourly flow rate (vph) | 295 | 9 | 4 | 36 | 61 | 174 | 0 | 277 | 5 | 2 | 14 | 9 |
| Approach Volume (veh/h) | 308 | | | | 271 | | | 283 | | | 16 | |
| Crossing Volume (veh/h) | 99 | | | | 16 | | | 339 | | | 572 | |
| High Capacity (veh/h) | 1282 | | | | 1367 | | | 1061 | | | 881 | |
| High v/c (veh/h) | 0.24 | | | | 0.20 | | | 0.27 | | | 0.02 | |
| Low Capacity (veh/h) | 1068 | | | | 1145 | | | 868 | | | 708 | |
| Low v/c (veh/h) | 0.29 | | | | 0.24 | | | 0.33 | | | 0.02 | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Maximum v/c High | 0.27 | | | |
| Maximum v/c Low | 0.33 | | | |
| Intersection Capacity Utilization | 39.6% | ICU Level of Service | A | |

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | Yes |
| Volume (veh/h) | 206 | 5 | 18 | 0 | 26 | 55 | 7 | 10 | 12 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 224 | 5 | 20 | 0 | 28 | 60 | 8 | 11 | 13 | 0 |
| Approach Volume (veh/h) | 229 | | | | 28 | | 78 | | 13 | |
| Crossing Volume (veh/h) | 78 | | | | 297 | | 0 | | 297 | |
| High Capacity (veh/h) | 1303 | | | | 1097 | | 1385 | | 1097 | |
| High v/c (veh/h) | 0.18 | | | | 0.03 | | 0.06 | | 0.01 | |
| Low Capacity (veh/h) | 1087 | | | | 901 | | 1161 | | 901 | |
| Low v/c (veh/h) | 0.21 | | | | 0.03 | | 0.07 | | 0.01 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.18 | | |
| Maximum v/c Low | 0.21 | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 85 | 70 | 4 | 143 | 147 | 5 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 92 | 76 | 4 | 155 | 160 | 5 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 165 | | 421 | 160 | | |
| vC1, stage 1 conf vol | | | 160 | | | |
| vC2, stage 2 conf vol | | | 261 | | | |
| vCu, unblocked vol | 165 | | 421 | 160 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 93 | | 99 | 82 | | |
| cM capacity (veh/h) | 1413 | | 684 | 885 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 92 | 76 | 4 | 155 | 162 | 4 |
| Volume Left | 92 | 0 | 4 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 155 | 2 | 4 |
| cSH | 1413 | 1700 | 684 | 885 | 1700 | 1700 |
| Volume to Capacity | 0.07 | 0.04 | 0.01 | 0.18 | 0.10 | 0.00 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 16 | 0 | 0 |
| Control Delay (s) | 7.7 | 0.0 | 10.3 | 9.9 | 0.0 | 0.0 |
| Lane LOS | A | | B | A | | |
| Approach Delay (s) | 4.2 | | 9.9 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.7 | | |
| Intersection Capacity Utilization | 26.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 33 | 43 | 87 | 5 | 2 | 64 |
| 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) | 36 | 47 | 95 | 5 | 2 | 70 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 100 | | | | 213 | 95 |
| vC1, stage 1 conf vol | | | | | 95 | |
| vC2, stage 2 conf vol | | | | | 118 | |
| vCu, unblocked vol | 100 | | | | 213 | 95 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 100 | 93 |
| cM capacity (veh/h) | 1493 | | | | 834 | 962 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 36 | 47 | 95 | 5 | 72 |
| Volume Left | 36 | 0 | 0 | 0 | 2 |
| Volume Right | 0 | 0 | 0 | 5 | 70 |
| cSH | 1493 | 1700 | 1700 | 1700 | 958 |
| Volume to Capacity | 0.02 | 0.03 | 0.06 | 0.00 | 0.07 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.1 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 3.2 | | 0.0 | | 9.1 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.6 | | |
| Intersection Capacity Utilization | 19.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 3 | 9 | 17 | 4 | 1 | 18 | 0 | 19 | 0 | 3 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 0.88 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (prot) | | 3131 | | 1652 | 3433 | | | 1770 | 1583 | | 1863 | 1583 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 3131 | | 1652 | 3433 | | | 1863 | 1583 | | 1863 | 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) | 0 | 3 | 10 | 18 | 4 | 1 | 20 | 0 | 21 | 0 | 3 | 1 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 1 |
| Lane Group Flow (vph) | 0 | 8 | 0 | 18 | 5 | 0 | 0 | 20 | 2 | 0 | 3 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 28.5 | | 1.9 | 29.5 | | | 1.3 | 3.2 | | 1.3 | 2.2 |
| Effective Green, g (s) | | 28.5 | | 1.9 | 29.5 | | | 1.3 | 3.2 | | 1.3 | 2.2 |
| Actuated g/C Ratio | | 0.65 | | 0.04 | 0.68 | | | 0.03 | 0.07 | | 0.03 | 0.05 |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 2041 | | 71 | 2317 | | | 55 | 260 | | 55 | 224 |
| v/s Ratio Prot | | c0.00 | | c0.01 | 0.00 | | | | 0.00 | | 0.00 | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | | 0.00 |
| v/c Ratio | | 0.00 | | 0.25 | 0.00 | | | 0.36 | 0.01 | | 0.05 | 0.00 |
| Uniform Delay, d1 | | 2.7 | | 20.2 | 2.3 | | | 20.8 | 18.8 | | 20.6 | 19.7 |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.0 | | 1.9 | 0.0 | | | 4.1 | 0.0 | | 0.4 | 0.0 |
| Delay (s) | | 2.7 | | 22.1 | 2.3 | | | 24.9 | 18.8 | | 21.0 | 19.7 |
| Level of Service | | A | | C | A | | | C | B | | C | B |
| Approach Delay (s) | | 2.7 | | | 17.8 | | | 21.7 | | | 20.7 | |
| Approach LOS | | A | | | B | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.03 | | |
| Actuated Cycle Length (s) | 43.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 21.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 12 | 13 | 1 | 1 | 9 | 16 | 1 | 0 | 0 | 5 | 0 | 20 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 13 | 14 | 1 | 1 | 10 | 17 | 1 | 0 | 0 | 5 | 0 | 22 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 27 | | | 15 | | | 70 | 70 | 15 | 61 | 62 | 14 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 27 | | | 15 | | | 70 | 70 | 15 | 61 | 62 | 14 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 99 | 100 | 98 |
| cM capacity (veh/h) | 1585 | | | 1601 | | | 890 | 812 | 1061 | 920 | 821 | 1063 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 28 | 6 | 22 | 1 | 27 |
| Volume Left | 13 | 1 | 0 | 1 | 5 |
| Volume Right | 1 | 0 | 17 | 0 | 22 |
| cSH | 1585 | 1601 | 1700 | 890 | 1031 |
| Volume to Capacity | 0.01 | 0.00 | 0.01 | 0.00 | 0.03 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 2 |
| Control Delay (s) | 3.4 | 1.3 | 0.0 | 9.1 | 8.6 |
| Lane LOS | A | A | | A | A |
| Approach Delay (s) | 3.4 | 0.3 | | 9.1 | 8.6 |
| Approach LOS | | | | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.1 | | |
| Intersection Capacity Utilization | 18.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 3 | 8 | 33 | 0 | 0 | 0 | 0 | 21 | 16 | 6 | 0 | 7 |
| 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 |
| Hourly flow rate (vph) | 3 | 9 | 36 | 0 | 0 | 0 | 0 | 23 | 17 | 7 | 0 | 8 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 24 | 24 | 23 | 17 | 7 | 8 |
| Volume Left (vph) | 3 | 0 | 0 | 0 | 7 | 0 |
| Volume Right (vph) | 12 | 24 | 0 | 17 | 0 | 8 |
| Hadj (s) | -0.24 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 3.8 | 3.2 | 4.6 | 3.9 | 4.2 | 3.2 |
| Degree Utilization, x | 0.02 | 0.02 | 0.03 | 0.02 | 0.01 | 0.01 |
| Capacity (veh/h) | 935 | 1121 | 767 | 914 | 834 | 1121 |
| Control Delay (s) | 6.9 | 6.3 | 6.5 | 5.8 | 7.3 | 6.2 |
| Approach Delay (s) | 6.6 | | 6.2 | | 6.7 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.4 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 1 | 0 | 25 | 4 | 0 | 0 | 19 | 18 | 2 | 0 | 7 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 1 | 0 | 27 | 4 | 0 | 0 | 21 | 20 | 2 | 0 | 8 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 70 | 71 | 8 | 97 | 70 | 21 | 8 | | | 22 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 70 | 71 | 8 | 97 | 70 | 21 | 8 | | | 22 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 97 | 99 | 100 | 100 | 99 | | | 100 | | |
| cM capacity (veh/h) | 913 | 809 | 1075 | 855 | 810 | 1057 | 1613 | | | 1594 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 28 | 4 | 42 | 8 |
| Volume Left | 1 | 4 | 21 | 0 |
| Volume Right | 27 | 0 | 2 | 0 |
| cSH | 1067 | 855 | 1613 | 1594 |
| Volume to Capacity | 0.03 | 0.01 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 1 | 0 |
| Control Delay (s) | 8.5 | 9.2 | 3.6 | 0.0 |
| Lane LOS | A | A | A | |
| Approach Delay (s) | 8.5 | 9.2 | 3.6 | 0.0 |
| Approach LOS | A | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.2 | | |
| Intersection Capacity Utilization | 18.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 63 | 0 | 91 | 0 | 14 | 26 | 30 | 24 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 68 | 0 | 99 | 0 | 15 | 28 | 33 | 26 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 68 | 99 | 15 | 28 | 59 |
| Volume Left (vph) | 0 | 68 | 0 | 0 | 0 | 33 |
| Volume Right (vph) | 0 | 0 | 99 | 0 | 28 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.15 |
| Departure Headway (s) | 4.1 | 4.3 | 3.2 | 4.2 | 3.2 | 4.2 |
| Degree Utilization, x | 0.00 | 0.08 | 0.09 | 0.02 | 0.03 | 0.07 |
| Capacity (veh/h) | 864 | 820 | 1121 | 839 | 1121 | 829 |
| Control Delay (s) | 7.1 | 7.7 | 6.5 | 7.2 | 6.3 | 7.5 |
| Approach Delay (s) | 0.0 | 7.0 | | 6.6 | | 7.5 |
| Approach LOS | A | A | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.0 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 19.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 37 | 11 | 8 | 67 | 89 | 149 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.97 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3531 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3531 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 40 | 12 | 9 | 73 | 97 | 162 |
| RTOR Reduction (vph) | 11 | 0 | 0 | 0 | 0 | 140 |
| Lane Group Flow (vph) | 41 | 0 | 9 | 73 | 97 | 22 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 2.3 | | 5.5 | 11.8 | 21.6 | 5.5 |
| Effective Green, g (s) | 2.3 | | 5.5 | 11.8 | 21.6 | 5.5 |
| Actuated g/C Ratio | 0.06 | | 0.13 | 0.29 | 0.52 | 0.13 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 196 | | 235 | 1008 | 923 | 210 |
| v/s Ratio Prot | c0.01 | | 0.01 | 0.02 | c0.05 | c0.01 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.21 | | 0.04 | 0.07 | 0.11 | 0.10 |
| Uniform Delay, d1 | 18.7 | | 15.6 | 10.8 | 5.0 | 15.8 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.5 | | 0.1 | 0.0 | 0.2 | 0.2 |
| Delay (s) | 19.2 | | 15.7 | 10.8 | 5.2 | 16.0 |
| Level of Service | B | | B | B | A | B |
| Approach Delay (s) | 19.2 | | | 11.4 | 12.0 | |
| Approach LOS | B | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 41.4 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 19.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 238 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 18 | 1 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 259 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 20 | 1 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 41 | 41 | 1 | 42 | 41 | 1 | 1 | | | 1 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 41 | 41 | 1 | 42 | 41 | 1 | 1 | | | 1 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 73 | 100 | 100 | 100 | 100 | 100 | 100 | | | 99 | | |
| cM capacity (veh/h) | 954 | 840 | 1083 | 950 | 841 | 1084 | 1622 | | | 1622 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 261 | 1 | 20 | 1 |
| Volume Left | 259 | 0 | 20 | 0 |
| Volume Right | 1 | 1 | 0 | 0 |
| cSH | 954 | 1700 | 1622 | 1700 |
| Volume to Capacity | 0.27 | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 28 | 0 | 1 | 0 |
| Control Delay (s) | 10.2 | 0.0 | 7.2 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 10.2 | 0.0 | 6.9 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 9.9 | | |
| Intersection Capacity Utilization | 27.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 27 | 10 | 38 | 26 | 6 | 15 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 29 | 11 | 41 | 28 | 7 | 16 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 29 | 11 | 41 | 28 | 7 | 16 |
| Volume Left (vph) | 29 | 0 | 41 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 28 | 0 | 16 |
| Hadj (s) | 0.53 | 0.03 | 0.53 | -0.67 | 0.03 | -0.67 |
| Departure Headway (s) | 5.2 | 4.7 | 5.2 | 4.0 | 4.7 | 4.0 |
| Degree Utilization, x | 0.04 | 0.01 | 0.06 | 0.03 | 0.01 | 0.02 |
| Capacity (veh/h) | 672 | 741 | 683 | 879 | 745 | 865 |
| Control Delay (s) | 7.3 | 6.6 | 7.3 | 5.9 | 6.6 | 5.9 |
| Approach Delay (s) | 7.1 | | 6.7 | | 6.1 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.7 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | | Yes |
| Volume (veh/h) | 83 | 10 | 2 | 146 | 55 | 171 | 0 | 122 | 8 | 5 | 16 | 19 |
| 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 |
| Hourly flow rate (vph) | 90 | 11 | 2 | 159 | 60 | 186 | 0 | 133 | 9 | 5 | 17 | 21 |
| Approach Volume (veh/h) | 103 | | | | 404 | | | 141 | | | 23 | |
| Crossing Volume (veh/h) | 224 | | | | 23 | | | 260 | | | 223 | |
| High Capacity (veh/h) | 1162 | | | | 1360 | | | 1130 | | | 1163 | |
| High v/c (veh/h) | 0.09 | | | | 0.30 | | | 0.13 | | | 0.02 | |
| Low Capacity (veh/h) | 959 | | | | 1139 | | | 930 | | | 960 | |
| Low v/c (veh/h) | 0.11 | | | | 0.35 | | | 0.15 | | | 0.02 | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Maximum v/c High | 0.30 | | | |
| Maximum v/c Low | 0.35 | | | |
| Intersection Capacity Utilization | 34.9% | ICU Level of Service | A | |

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | | Yes |
| Volume (veh/h) | 221 | 24 | 36 | 2 | 0 | 80 | 69 | 12 | 13 | 41 | 1 |
| 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 |
| Hourly flow rate (vph) | 240 | 26 | 39 | 2 | 0 | 87 | 75 | 13 | 14 | 45 | 1 |
| Approach Volume (veh/h) | 266 | | | | | 89 | | 102 | | 45 | |
| Crossing Volume (veh/h) | 104 | | | | | 360 | | 2 | | 354 | |
| High Capacity (veh/h) | 1276 | | | | | 1044 | | 1382 | | 1048 | |
| High v/c (veh/h) | 0.21 | | | | | 0.09 | | 0.07 | | 0.04 | |
| Low Capacity (veh/h) | 1063 | | | | | 853 | | 1159 | | 857 | |
| Low v/c (veh/h) | 0.25 | | | | | 0.10 | | 0.09 | | 0.05 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.21 | | |
| Maximum v/c Low | 0.25 | | |
| Intersection Capacity Utilization | 31.3% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 39 | 99 | 2 | 28 | 59 | 2 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 42 | 108 | 2 | 30 | 64 | 2 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 66 | | 257 | 64 | | |
| vC1, stage 1 conf vol | | | 64 | | | |
| vC2, stage 2 conf vol | | | 192 | | | |
| vCu, unblocked vol | 66 | | 257 | 64 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 97 | | 100 | 97 | | |
| cM capacity (veh/h) | 1535 | | 786 | 1000 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 42 | 108 | 2 | 30 | 65 | 1 |
| Volume Left | 42 | 0 | 2 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 30 | 1 | 1 |
| cSH | 1535 | 1700 | 786 | 1000 | 1700 | 1700 |
| Volume to Capacity | 0.03 | 0.06 | 0.00 | 0.03 | 0.04 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 2 | 0 | 0 |
| Control Delay (s) | 7.4 | 0.0 | 9.6 | 8.7 | 0.0 | 0.0 |
| Lane LOS | A | | A | A | | |
| Approach Delay (s) | 2.1 | | 8.8 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.4 | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 37 | 65 | 45 | 3 | 1 | 16 |
| 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) | 40 | 71 | 49 | 3 | 1 | 17 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 52 | | | | 200 | 49 |
| vC1, stage 1 conf vol | | | | | 49 | |
| vC2, stage 2 conf vol | | | | | 151 | |
| vCu, unblocked vol | 52 | | | | 200 | 49 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 100 | 98 |
| cM capacity (veh/h) | 1554 | | | | 825 | 1020 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 40 | 71 | 49 | 3 | 18 |
| Volume Left | 40 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 3 | 17 |
| cSH | 1554 | 1700 | 1700 | 1700 | 1006 |
| Volume to Capacity | 0.03 | 0.04 | 0.03 | 0.00 | 0.02 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 1 |
| Control Delay (s) | 7.4 | 0.0 | 0.0 | 0.0 | 8.6 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 2.7 | | 0.0 | | 8.6 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.5 | | |
| Intersection Capacity Utilization | 18.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 11 | 17 | 32 | 15 | 4 | 53 | 17 | 44 | 6 | 5 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.91 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.97 | 1.00 |
| Satd. Flow (prot) | 1652 | 3221 | | 1652 | 3433 | | | 1794 | 1583 | | 1810 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.78 | 1.00 |
| Satd. Flow (perm) | 1652 | 3221 | | 1652 | 3433 | | | 1433 | 1583 | | 1453 | 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) | 5 | 12 | 18 | 35 | 16 | 4 | 58 | 18 | 48 | 7 | 5 | 4 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 40 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 5 | 22 | 0 | 35 | 18 | 0 | 0 | 76 | 8 | 0 | 12 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 26.1 | | 2.3 | 27.7 | | | 4.9 | 7.2 | | 4.9 | 5.6 |
| Effective Green, g (s) | 0.7 | 26.1 | | 2.3 | 27.7 | | | 4.9 | 7.2 | | 4.9 | 5.6 |
| Actuated g/C Ratio | 0.02 | 0.58 | | 0.05 | 0.61 | | | 0.11 | 0.16 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1855 | | 83 | 2099 | | | 155 | 391 | | 157 | 335 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.02 | 0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.00 | | 0.01 | 0.00 |
| v/c Ratio | 0.20 | 0.01 | | 0.42 | 0.01 | | | 0.49 | 0.02 | | 0.08 | 0.00 |
| Uniform Delay, d1 | 22.0 | 4.1 | | 20.9 | 3.4 | | | 19.0 | 16.1 | | 18.2 | 17.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.9 | 0.0 | | 3.4 | 0.0 | | | 2.4 | 0.0 | | 0.2 | 0.0 |
| Delay (s) | 25.9 | 4.1 | | 24.3 | 3.4 | | | 21.5 | 16.1 | | 18.4 | 17.4 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 7.2 | | | 16.7 | | | 19.4 | | | 18.1 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 45.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 25.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 52 | 46 | 4 | 2 | 17 | 20 | 2 | 1 | 2 | 7 | 1 | 43 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 57 | 50 | 4 | 2 | 18 | 22 | 2 | 1 | 2 | 8 | 1 | 47 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 40 | | | 54 | | | 226 | 210 | 52 | 202 | 201 | 20 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 40 | | | 54 | | | 226 | 210 | 52 | 202 | 201 | 20 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 100 | 99 | 100 | 96 |
| cM capacity (veh/h) | 1568 | | | 1549 | | | 658 | 661 | 1004 | 715 | 668 | 1053 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 111 | 11 | 31 | 5 | 55 |
| Volume Left | 57 | 2 | 0 | 2 | 8 |
| Volume Right | 4 | 0 | 22 | 2 | 47 |
| cSH | 1568 | 1549 | 1700 | 764 | 978 |
| Volume to Capacity | 0.04 | 0.00 | 0.02 | 0.01 | 0.06 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 1 | 4 |
| Control Delay (s) | 3.9 | 1.4 | 0.0 | 9.7 | 8.9 |
| Lane LOS | A | A | | A | A |
| Approach Delay (s) | 3.9 | 0.4 | | 9.7 | 8.9 |
| Approach LOS | | | | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.6 | | |
| Intersection Capacity Utilization | 22.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 3 | 18 | 49 | 0 | 0 | 0 | 0 | 27 | 27 | 22 | 0 | 21 |
| 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 |
| Hourly flow rate (vph) | 3 | 20 | 53 | 0 | 0 | 0 | 0 | 29 | 29 | 24 | 0 | 23 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 41 | 36 | 29 | 29 | 24 | 23 |
| Volume Left (vph) | 3 | 0 | 0 | 0 | 24 | 0 |
| Volume Right (vph) | 18 | 36 | 0 | 29 | 0 | 23 |
| Hadj (s) | -0.21 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 3.8 | 3.2 | 4.7 | 4.0 | 4.3 | 3.2 |
| Degree Utilization, x | 0.04 | 0.03 | 0.04 | 0.03 | 0.03 | 0.02 |
| Capacity (veh/h) | 911 | 1121 | 751 | 881 | 819 | 1121 |
| Control Delay (s) | 7.0 | 6.3 | 6.7 | 5.9 | 7.4 | 6.3 |
| Approach Delay (s) | 6.7 | | 6.3 | | 6.9 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.6 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 3 | 30 | 6 | 2 | 3 | 25 | 35 | 11 | 0 | 18 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 0 | 3 | 33 | 7 | 2 | 3 | 27 | 38 | 12 | 0 | 20 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 122 | 124 | 20 | 152 | 118 | 44 | 20 | | | 50 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 122 | 124 | 20 | 152 | 118 | 44 | 20 | | | 50 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 97 | 99 | 100 | 100 | 98 | | | 100 | | |
| cM capacity (veh/h) | 837 | 753 | 1058 | 777 | 759 | 1026 | 1597 | | | 1557 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 36 | 12 | 77 | 20 |
| Volume Left | 0 | 7 | 27 | 0 |
| Volume Right | 33 | 3 | 12 | 0 |
| cSH | 1021 | 828 | 1597 | 1557 |
| Volume to Capacity | 0.04 | 0.01 | 0.02 | 0.00 |
| Queue Length 95th (ft) | 3 | 1 | 1 | 0 |
| Control Delay (s) | 8.7 | 9.4 | 2.7 | 0.0 |
| Lane LOS | A | A | A | |
| Approach Delay (s) | 8.7 | 9.4 | 2.7 | 0.0 |
| Approach LOS | A | A | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.3 | | |
| Intersection Capacity Utilization | 23.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# FUTURE (2013) WITH PROJECT

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 2 | 2 | 495 | 3 | 52 | 2 | 16 | 189 | 34 | 51 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 2 | 2 | 538 | 3 | 57 | 2 | 17 | 205 | 37 | 55 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 4 | 541 | 57 | 20 | 205 | 92 |
| Volume Left (vph) | 0 | 538 | 0 | 2 | 0 | 37 |
| Volume Right (vph) | 2 | 0 | 57 | 0 | 205 | 0 |
| Hadj (s) | -0.27 | 0.23 | -0.57 | 0.06 | -0.57 | 0.11 |
| Departure Headway (s) | 4.6 | 4.5 | 3.2 | 5.4 | 3.2 | 5.3 |
| Degree Utilization, x | 0.01 | 0.67 | 0.05 | 0.03 | 0.18 | 0.14 |
| Capacity (veh/h) | 745 | 792 | 1121 | 595 | 1121 | 613 |
| Control Delay (s) | 7.6 | 16.0 | 6.4 | 8.6 | 6.9 | 9.2 |
| Approach Delay (s) | 7.6 | 15.1 | | 7.1 | | 9.2 |
| Approach LOS | A | C | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 12.5 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 52.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 98 | 28 | 228 | 501 | 51 | 324 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.97 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3537 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3537 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 107 | 30 | 248 | 545 | 55 | 352 |
| RTOR Reduction (vph) | 26 | 0 | 0 | 0 | 0 | 270 |
| Lane Group Flow (vph) | 111 | 0 | 248 | 545 | 55 | 82 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 5.4 | | 10.2 | 19.6 | 16.4 | 10.2 |
| Effective Green, g (s) | 5.4 | | 10.2 | 19.6 | 16.4 | 10.2 |
| Actuated g/C Ratio | 0.12 | | 0.23 | 0.45 | 0.37 | 0.23 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 434 | | 410 | 1576 | 659 | 366 |
| v/s Ratio Prot | 0.03 | | c0.14 | c0.15 | c0.03 | 0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.26 | | 0.60 | 0.35 | 0.08 | 0.22 |
| Uniform Delay, d1 | 17.5 | | 15.1 | 8.0 | 8.9 | 13.7 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.3 | | 2.5 | 0.1 | 0.2 | 0.3 |
| Delay (s) | 17.8 | | 17.6 | 8.1 | 9.2 | 14.0 |
| Level of Service | B | | B | A | A | B |
| Approach Delay (s) | 17.8 | | | 11.1 | 13.3 | |
| Approach LOS | B | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.32 | | |
| Actuated Cycle Length (s) | 44.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 30.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 365 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 267 | 1 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 397 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 290 | 1 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 582 | 583 | 1 | 583 | 582 | 1 | 1 | | | 1 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 582 | 583 | 1 | 583 | 582 | 1 | 1 | | | 1 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 99 | 100 | 100 | 100 | 100 | 100 | | | 82 | | |
| cM capacity (veh/h) | 366 | 348 | 1083 | 364 | 349 | 1084 | 1622 | | | 1622 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 399 | 1 | 290 | 1 |
| Volume Left | 397 | 0 | 290 | 0 |
| Volume Right | 0 | 1 | 0 | 0 |
| cSH | 366 | 1700 | 1622 | 1700 |
| Volume to Capacity | 1.09 | 0.00 | 0.18 | 0.00 |
| Queue Length 95th (ft) | 362 | 0 | 16 | 0 |
| Control Delay (s) | 107.5 | 0.0 | 7.7 | 0.0 |
| Lane LOS | F | | A | |
| Approach Delay (s) | 107.5 | 0.0 | 7.7 | |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 65.3 | | |
| Intersection Capacity Utilization | 48.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 109 | 0 | 120 | 65 | 0 | 137 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 118 | 0 | 130 | 71 | 0 | 149 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 118 | 0 | 130 | 71 | 0 | 149 |
| Volume Left (vph) | 118 | 0 | 130 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 71 | 0 | 149 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 5.7 | 5.2 | 5.7 | 4.5 | 5.2 | 4.5 |
| Degree Utilization, x | 0.19 | 0.00 | 0.21 | 0.09 | 0.00 | 0.19 |
| Capacity (veh/h) | 605 | 674 | 596 | 750 | 675 | 761 |
| Control Delay (s) | 8.8 | 7.0 | 9.0 | 6.8 | 7.0 | 7.3 |
| Approach Delay (s) | 8.8 | | 8.2 | | 7.3 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.1 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 19.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 308 | 0 | 5 | 114 | 2279 | 310 | 2 | 220 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 335 | 0 | 5 | 124 | 2477 | 337 | 2 | 239 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 340 | | | | 2938 | | | 241 | | 0 | |
| Crossing Volume (veh/h) | 2601# | | | | 2 | | | 459 | | 576 | |
| High Capacity (veh/h) | 159 | | | | 1382 | | | 965 | | 878 | |
| High v/c (veh/h) | 2.14 | | | | 2.13 | | | 0.25 | | 0.00 | |
| Low Capacity (veh/h) | 105 | | | | 1159 | | | 782 | | 706 | |
| Low v/c (veh/h) | 3.24 | | | | 2.53 | | | 0.31 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 2.14 | | |
| Maximum v/c Low | 3.24 | | |
| Intersection Capacity Utilization | 101.3% | ICU Level of Service | G |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | | Yes |
| Volume (veh/h) | 2155 | 30 | 85 | 2 | 0 | 190 | 82 | 31 | 27 | 223 | 4 |
| 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 |
| Hourly flow rate (vph) | 2342 | 33 | 92 | 2 | 0 | 207 | 89 | 34 | 29 | 242 | 4 |
| Approach Volume (veh/h) | 2375 | | | | | 209 | | 152 | | 242 | |
| Crossing Volume (veh/h) | 154 | | | | | 2674# | | 2 | | 2498# | |
| High Capacity (veh/h) | 1227 | | | | | 149 | | 1382 | | 174 | |
| High v/c (veh/h) | 1.94 | | | | | 1.40 | | 0.11 | | 1.39 | |
| Low Capacity (veh/h) | 1018 | | | | | 98 | | 1159 | | 116 | |
| Low v/c (veh/h) | 2.33 | | | | | 2.14 | | 0.13 | | 2.09 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 1.94 | | |
| Maximum v/c Low | 2.33 | | |
| Intersection Capacity Utilization | 93.0% | ICU Level of Service | F |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 180 | 125 | 11 | 130 | 143 | 17 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 196 | 136 | 12 | 141 | 155 | 18 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 174 | | 683 | 155 | | |
| vC1, stage 1 conf vol | | | 155 | | | |
| vC2, stage 2 conf vol | | | 527 | | | |
| vCu, unblocked vol | 174 | | 683 | 155 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 86 | | 98 | 84 | | |
| cM capacity (veh/h) | 1403 | | 488 | 890 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 196 | 136 | 12 | 141 | 162 | 12 |
| Volume Left | 196 | 0 | 12 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 141 | 6 | 12 |
| cSH | 1403 | 1700 | 488 | 890 | 1700 | 1700 |
| Volume to Capacity | 0.14 | 0.08 | 0.02 | 0.16 | 0.10 | 0.01 |
| Queue Length 95th (ft) | 12 | 0 | 2 | 14 | 0 | 0 |
| Control Delay (s) | 8.0 | 0.0 | 12.6 | 9.8 | 0.0 | 0.0 |
| Lane LOS | A | | B | A | | |
| Approach Delay (s) | 4.7 | | 10.0 | | 0.0 | |
| Approach LOS | | | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.7 | | |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 63 | 71 | 78 | 8 | 9 | 72 |
| 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) | 68 | 77 | 85 | 9 | 10 | 78 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 93 | | | | 299 | 85 |
| vC1, stage 1 conf vol | | | | | 85 | |
| vC2, stage 2 conf vol | | | | | 214 | |
| vCu, unblocked vol | 93 | | | | 299 | 85 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 95 | | | | 99 | 92 |
| cM capacity (veh/h) | 1501 | | | | 751 | 974 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 68 | 77 | 85 | 9 | 88 |
| Volume Left | 68 | 0 | 0 | 0 | 10 |
| Volume Right | 0 | 0 | 0 | 9 | 78 |
| cSH | 1501 | 1700 | 1700 | 1700 | 943 |
| Volume to Capacity | 0.05 | 0.05 | 0.05 | 0.01 | 0.09 |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 8 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.2 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 3.5 | | 0.0 | | 9.2 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.1 | | |
| Intersection Capacity Utilization | 21.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 6 | 16 | 36 | 60 | 31 | 12 | 71 | 28 | 178 | 9 | 32 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.90 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3169 | | 1652 | 3392 | | | 1798 | 1583 | | 1842 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.76 | 1.00 | | 0.90 | 1.00 |
| Satd. Flow (perm) | 1652 | 3169 | | 1652 | 3392 | | | 1412 | 1583 | | 1673 | 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 | 17 | 39 | 65 | 34 | 13 | 77 | 30 | 193 | 10 | 35 | 5 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 5 | 0 | 0 | 0 | 149 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 7 | 37 | 0 | 65 | 42 | 0 | 0 | 107 | 44 | 0 | 45 | 1 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 22.6 | | 4.8 | 26.7 | | | 5.4 | 10.2 | | 5.4 | 6.1 |
| Effective Green, g (s) | 0.7 | 22.6 | | 4.8 | 26.7 | | | 5.4 | 10.2 | | 5.4 | 6.1 |
| Actuated g/C Ratio | 0.02 | 0.50 | | 0.11 | 0.60 | | | 0.12 | 0.23 | | 0.12 | 0.14 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1598 | | 177 | 2021 | | | 170 | 501 | | 201 | 356 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.04 | 0.01 | | | | 0.01 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.08 | 0.02 | | 0.03 | 0.00 |
| v/c Ratio | 0.28 | 0.02 | | 0.37 | 0.02 | | | 0.63 | 0.09 | | 0.22 | 0.00 |
| Uniform Delay, d1 | 21.8 | 5.6 | | 18.6 | 3.7 | | | 18.7 | 13.6 | | 17.8 | 16.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 6.0 | 0.0 | | 1.3 | 0.0 | | | 7.1 | 0.1 | | 0.6 | 0.0 |
| Delay (s) | 27.8 | 5.6 | | 19.9 | 3.7 | | | 25.9 | 13.7 | | 18.4 | 16.7 |
| Level of Service | C | A | | B | A | | | C | B | | B | B |
| Approach Delay (s) | | 8.1 | | | 13.1 | | | 18.0 | | | 18.2 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.17 | | |
| Actuated Cycle Length (s) | 44.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 28.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 46 | 156 | 8 | 3 | 43 | 33 | 6 | 4 | 2 | 1791 | 1 | 63 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 50 | 170 | 9 | 3 | 47 | 36 | 7 | 4 | 2 | 1947 | 1 | 68 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 83 | | | 178 | | | 373 | 363 | 174 | 349 | 349 | 41 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 83 | | | 178 | | | 373 | 363 | 174 | 349 | 349 | 41 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 99 | 99 | 100 | 0 | 100 | 93 |
| cM capacity (veh/h) | 1513 | | | 1395 | | | 507 | 543 | 839 | 560 | 553 | 1021 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 228 | 27 | 59 | 13 | 2016 |
| Volume Left | 50 | 3 | 0 | 7 | 1947 |
| Volume Right | 9 | 0 | 36 | 2 | 68 |
| cSH | 1513 | 1395 | 1700 | 556 | 569 |
| Volume to Capacity | 0.03 | 0.00 | 0.03 | 0.02 | 3.54 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 2 | Err |
| Control Delay (s) | 1.8 | 0.9 | 0.0 | 11.6 | Err |
| Lane LOS | A | A | | B | F |
| Approach Delay (s) | 1.8 | 0.3 | | 11.6 | Err |
| Approach LOS | | | | B | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8603.3 | | |
| Intersection Capacity Utilization | 134.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 5 | 37 | 352 | 0 | 0 | 0 | 0 | 56 | 44 | 1890 | 0 | 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 |
| Hourly flow rate (vph) | 5 | 40 | 383 | 0 | 0 | 0 | 0 | 61 | 48 | 2054 | 0 | 54 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 173 | 255 | 61 | 48 | 2054 | 54 |
| Volume Left (vph) | 5 | 0 | 0 | 0 | 2054 | 0 |
| Volume Right (vph) | 128 | 255 | 0 | 48 | 0 | 54 |
| Hadj (s) | -0.40 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 4.7 | 3.2 | 6.7 | 6.0 | 4.7 | 3.2 |
| Degree Utilization, x | 0.23 | 0.23 | 0.11 | 0.08 | 2.68 | 0.05 |
| Capacity (veh/h) | 748 | 1122 | 524 | 584 | 777 | 1121 |
| Control Delay (s) | 9.1 | 7.1 | 9.3 | 8.3 | 769.7 | 6.4 |
| Approach Delay (s) | 7.9 | | 8.9 | | 750.0 | |
| Approach LOS | A | | A | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 599.5 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 127.9% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 3 | 3 | 50 | 29 | 5 | 2 | 2179 | 41 | 29 | 2 | 21 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 3 | 3 | 54 | 32 | 5 | 2 | 2368 | 45 | 32 | 2 | 23 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 4829 | 4840 | 23 | 4880 | 4824 | 60 | 23 | | | 76 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 4829 | 4840 | 23 | 4880 | 4824 | 60 | 23 | | | 76 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 0 | 95 | 0 | 0 | 100 | 0 | | | 100 | | |
| cM capacity (veh/h) | 0 | 0 | 1054 | 0 | 0 | 1005 | 1592 | | | 1523 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 61 | 39 | 2445 | 25 |
| Volume Left | 3 | 32 | 2368 | 2 |
| Volume Right | 54 | 2 | 32 | 0 |
| cSH | 0 | 0 | 1592 | 1523 |
| Volume to Capacity | Err | Err | 1.49 | 0.00 |
| Queue Length 95th (ft) | Err | Err | 2636 | 0 |
| Control Delay (s) | Err | Err | 233.3 | 0.7 |
| Lane LOS | F | F | F | A |
| Approach Delay (s) | Err | Err | 233.3 | 0.7 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 146.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 1532 | 0 | 13 | 0 | 4 | 27 | 8 | 5 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 1665 | 0 | 14 | 0 | 4 | 29 | 9 | 5 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 1665 | 14 | 4 | 29 | 14 |
| Volume Left (vph) | 0 | 1665 | 0 | 0 | 0 | 9 |
| Volume Right (vph) | 0 | 0 | 14 | 0 | 29 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.16 |
| Departure Headway (s) | 4.8 | 4.2 | 3.2 | 5.8 | 3.2 | 5.9 |
| Degree Utilization, x | 0.00 | 1.94 | 0.01 | 0.01 | 0.03 | 0.02 |
| Capacity (veh/h) | 764 | 865 | 1121 | 607 | 1121 | 597 |
| Control Delay (s) | 7.8 | 438.3 | 6.2 | 8.9 | 6.3 | 9.1 |
| Approach Delay (s) | 0.0 | 434.7 | | 6.6 | | 9.1 |
| Approach LOS | A | F | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 422.8 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 98.9% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 16 | 10 | 9 | 1529 | 17 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | |
| Frt | 0.94 | | 1.00 | 1.00 | 1.00 | |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | |
| Satd. Flow (prot) | 3442 | | 1770 | 3539 | 1770 | |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | |
| Satd. Flow (perm) | 3442 | | 1770 | 3539 | 1770 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 17 | 11 | 10 | 1662 | 18 | 0 |
| RTOR Reduction (vph) | 3 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 25 | 0 | 10 | 1662 | 18 | 0 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 43.9 | | 0.7 | 48.6 | 1.3 | |
| Effective Green, g (s) | 43.9 | | 0.7 | 48.6 | 1.3 | |
| Actuated g/C Ratio | 0.76 | | 0.01 | 0.84 | 0.02 | |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2609 | | 21 | 2970 | 39 | |
| v/s Ratio Prot | 0.01 | | 0.01 | c0.47 | c0.01 | |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.48 | 0.56 | 0.46 | |
| Uniform Delay, d1 | 1.7 | | 28.4 | 1.4 | 28.0 | |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.0 | | 16.0 | 0.8 | 8.4 | |
| Delay (s) | 1.7 | | 44.5 | 2.2 | 36.4 | |
| Level of Service | A | | D | A | D | |
| Approach Delay (s) | 1.7 | | | 2.4 | 36.4 | |
| Approach LOS | A | | | A | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.8 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 57.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 52.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 17 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 18 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 41 | 41 | 0 | 44 | 41 | 0 | 0 | | | 0 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 41 | 41 | 0 | 44 | 41 | 0 | 0 | | | 0 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 98 | 100 | 100 | 100 | 100 | 100 | 100 | | | 99 | | |
| cM capacity (veh/h) | 953 | 840 | 1085 | 945 | 840 | 1085 | 1623 | | | 1623 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 23 | 0 | 21 | 0 |
| Volume Left | 18 | 0 | 21 | 0 |
| Volume Right | 1 | 0 | 0 | 0 |
| cSH | 940 | 1700 | 1623 | 1700 |
| Volume to Capacity | 0.02 | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 1 | 0 |
| Control Delay (s) | 8.9 | 0.0 | 7.2 | 0.0 |
| Lane LOS | A | | A | |
| Approach Delay (s) | 8.9 | 0.0 | 7.2 | |
| Approach LOS | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8.1 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 760 | 0 | 4 | 7 | 0 | 5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 826 | 0 | 4 | 8 | 0 | 5 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 826 | 0 | 4 | 8 | 0 | 5 |
| Volume Left (vph) | 826 | 0 | 4 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 8 | 0 | 5 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 5.1 | 4.5 | 6.9 | 5.7 | 5.0 | 4.4 |
| Degree Utilization, x | 1.16 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 |
| Capacity (veh/h) | 716 | 798 | 509 | 620 | 725 | 809 |
| Control Delay (s) | 107.5 | 6.3 | 8.8 | 7.6 | 6.8 | 6.2 |
| Approach Delay (s) | 107.5 | | 8.0 | | 6.2 | |
| Approach LOS | F | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 105.5 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 52.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 251 | 0 | 3 | 28 | 122 | 205 | 2 | 2476 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 273 | 0 | 3 | 30 | 133 | 223 | 2 | 2691 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 276 | | | | 386 | | | 2693 | | 0 | |
| Crossing Volume (veh/h) | 163 | | | | 2 | | | 303 | | 2966# | |
| High Capacity (veh/h) | 1219 | | | | 1382 | | | 1092 | | 115 | |
| High v/c (veh/h) | 0.23 | | | | 0.28 | | | 2.47 | | 0.00 | |
| Low Capacity (veh/h) | 1011 | | | | 1159 | | | 896 | | 73 | |
| Low v/c (veh/h) | 0.27 | | | | 0.33 | | | 3.01 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 2.47 | | |
| Maximum v/c Low | 3.01 | | |
| Intersection Capacity Utilization | 83.8% | ICU Level of Service | E |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | Yes |
| Volume (veh/h) | 295 | 14 | 41 | 0 | 18 | 222 | 121 | 189 | 18 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 321 | 15 | 45 | 0 | 20 | 241 | 132 | 205 | 20 | 0 |
| Approach Volume (veh/h) | 336 | | | | 20 | | 578 | | 20 | |
| Crossing Volume (veh/h) | 578 | | | | 582 | | 0 | | 709 | |
| High Capacity (veh/h) | 877 | | | | 874 | | 1385 | | 789 | |
| High v/c (veh/h) | 0.38 | | | | 0.02 | | 0.42 | | 0.02 | |
| Low Capacity (veh/h) | 704 | | | | 702 | | 1161 | | 627 | |
| Low v/c (veh/h) | 0.48 | | | | 0.03 | | 0.50 | | 0.03 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.42 | | |
| Maximum v/c Low | 0.50 | | |
| Intersection Capacity Utilization | 41.9% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 140 | 45 | 6 | 148 | 164 | 8 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 152 | 49 | 7 | 161 | 178 | 9 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 187 | | 532 | 178 | | |
| vC1, stage 1 conf vol | | | 178 | | | |
| vC2, stage 2 conf vol | | | 353 | | | |
| vCu, unblocked vol | 187 | | 532 | 178 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 89 | | 99 | 81 | | |
| cM capacity (veh/h) | 1387 | | 596 | 865 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 152 | 49 | 7 | 161 | 181 | 6 |
| Volume Left | 152 | 0 | 7 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 161 | 3 | 6 |
| cSH | 1387 | 1700 | 596 | 865 | 1700 | 1700 |
| Volume to Capacity | 0.11 | 0.03 | 0.01 | 0.19 | 0.11 | 0.00 |
| Queue Length 95th (ft) | 9 | 0 | 1 | 17 | 0 | 0 |
| Control Delay (s) | 7.9 | 0.0 | 11.1 | 10.1 | 0.0 | 0.0 |
| Lane LOS | A | | B | B | | |
| Approach Delay (s) | 6.0 | | 10.2 | | 0.0 | |
| Approach LOS | | | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.2 | | |
| Intersection Capacity Utilization | 30.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 42 | 31 | 79 | 2 | 3 | 72 |
| 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) | 46 | 34 | 86 | 2 | 3 | 78 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 88 | | | | 211 | 86 |
| vC1, stage 1 conf vol | | | | | 86 | |
| vC2, stage 2 conf vol | | | | | 125 | |
| vCu, unblocked vol | 88 | | | | 211 | 86 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 100 | 92 |
| cM capacity (veh/h) | 1508 | | | | 829 | 973 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 46 | 34 | 86 | 2 | 82 |
| Volume Left | 46 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 2 | 78 |
| cSH | 1508 | 1700 | 1700 | 1700 | 966 |
| Volume to Capacity | 0.03 | 0.02 | 0.05 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 7 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.1 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 4.3 | | 0.0 | | 9.1 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.3 | | |
| Intersection Capacity Utilization | 20.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 16 | 147 | 7 | 1 | 12 | 3 | 20 | 2 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.85 | | 1.00 | 0.98 | | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | | 3008 | | 1652 | 3480 | | | 1790 | 1583 | | 1837 | |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Satd. Flow (perm) | | 3008 | | 1652 | 3480 | | | 1863 | 1583 | | 1863 | |
| 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) | 0 | 0 | 17 | 160 | 8 | 1 | 13 | 3 | 22 | 2 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 160 | 9 | 0 | 0 | 16 | 4 | 0 | 7 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 22.1 | | 6.2 | 32.3 | | | 1.3 | 7.5 | | 1.3 | |
| Effective Green, g (s) | | 22.1 | | 6.2 | 32.3 | | | 1.3 | 7.5 | | 1.3 | |
| Actuated g/C Ratio | | 0.53 | | 0.15 | 0.78 | | | 0.03 | 0.18 | | 0.03 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1598 | | 246 | 2702 | | | 58 | 437 | | 58 | |
| v/s Ratio Prot | | c0.00 | | c0.10 | 0.00 | | | | 0.00 | | | |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | 0.00 | |
| v/c Ratio | | 0.01 | | 0.65 | 0.00 | | | 0.28 | 0.01 | | 0.12 | |
| Uniform Delay, d1 | | 4.6 | | 16.7 | 1.0 | | | 19.7 | 14.0 | | 19.6 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | 6.0 | 0.0 | | | 2.6 | 0.0 | | 0.9 | |
| Delay (s) | | 4.6 | | 22.7 | 1.0 | | | 22.3 | 14.0 | | 20.5 | |
| Level of Service | | A | | C | A | | | C | B | | C | |
| Approach Delay (s) | | 4.6 | | | 21.6 | | | 17.5 | | | 20.5 | |
| Approach LOS | | A | | | C | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.15 | | |
| Actuated Cycle Length (s) | 41.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 29.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 15 | 14 | 3 | 0 | 134 | 432 | 0 | 0 | 1 | 12 | 0 | 34 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 16 | 15 | 3 | 0 | 146 | 470 | 0 | 0 | 1 | 13 | 0 | 37 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 615 | | | 18 | | | 159 | 665 | 17 | 431 | 432 | 308 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 615 | | | 18 | | | 159 | 665 | 17 | 431 | 432 | 308 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 100 | 97 | 100 | 95 |
| cM capacity (veh/h) | 960 | | | 1597 | | | 739 | 373 | 1058 | 501 | 507 | 688 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 35 | 73 | 542 | 1 | 50 |
| Volume Left | 16 | 0 | 0 | 0 | 13 |
| Volume Right | 3 | 0 | 470 | 1 | 37 |
| cSH | 960 | 1597 | 1700 | 1058 | 627 |
| Volume to Capacity | 0.02 | 0.00 | 0.32 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 4.2 | 0.0 | 0.0 | 8.4 | 11.2 |
| Lane LOS | A | | | A | B |
| Approach Delay (s) | 4.2 | 0.0 | | 8.4 | 11.2 |
| Approach LOS | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 33.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 7 | 23 | 0 | 0 | 0 | 0 | 1513 | 559 | 5 | 0 | 20 |
| 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 |
| Hourly flow rate (vph) | 0 | 8 | 25 | 0 | 0 | 0 | 0 | 1645 | 608 | 5 | 0 | 22 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 16 | 17 | 1645 | 608 | 5 | 22 |
| Volume Left (vph) | 0 | 0 | 0 | 0 | 5 | 0 |
| Volume Right (vph) | 8 | 17 | 0 | 608 | 0 | 22 |
| Hadj (s) | -0.28 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 5.5 | 3.2 | 4.6 | 3.9 | 6.0 | 3.2 |
| Degree Utilization, x | 0.02 | 0.01 | 2.10 | 0.66 | 0.01 | 0.02 |
| Capacity (veh/h) | 647 | 1121 | 786 | 919 | 590 | 1121 |
| Control Delay (s) | 8.6 | 6.2 | 510.2 | 12.9 | 9.1 | 6.3 |
| Approach Delay (s) | 7.4 | | 376.0 | | 6.8 | |
| Approach LOS | A | | F | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 366.5 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 96.3% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 2 | 0 | 2058 | 3 | 3 | 0 | 3 | 21 | 3 | 1 | 12 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 2 | 0 | 2237 | 3 | 3 | 0 | 3 | 23 | 3 | 1 | 13 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 48 | 48 | 13 | 2283 | 46 | 24 | 13 | | | 26 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 48 | 48 | 13 | 2283 | 46 | 24 | 13 | | | 26 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 0 | 0 | 100 | 100 | 100 | | | 100 | | |
| cM capacity (veh/h) | 948 | 841 | 1067 | 0 | 843 | 1052 | 1605 | | | 1588 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 2239 | 7 | 29 | 14 |
| Volume Left | 2 | 3 | 3 | 1 |
| Volume Right | 2237 | 0 | 3 | 0 |
| cSH | 1067 | 0 | 1605 | 1588 |
| Volume to Capacity | 2.10 | Err | 0.00 | 0.00 |
| Queue Length 95th (ft) | 3801 | Err | 0 | 0 |
| Control Delay (s) | 509.0 | Err | 0.8 | 0.6 |
| Lane LOS | F | F | A | A |
| Approach Delay (s) | 509.0 | Err | 0.8 | 0.6 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 137.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 8 | 7 | 420 | 3 | 75 | 5 | 6 | 312 | 19 | 19 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 9 | 8 | 457 | 3 | 82 | 5 | 7 | 339 | 21 | 21 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 16 | 460 | 82 | 12 | 339 | 41 |
| Volume Left (vph) | 0 | 457 | 0 | 5 | 0 | 21 |
| Volume Right (vph) | 8 | 0 | 82 | 0 | 339 | 0 |
| Hadj (s) | -0.25 | 0.23 | -0.57 | 0.12 | -0.57 | 0.13 |
| Departure Headway (s) | 4.3 | 4.3 | 3.2 | 5.2 | 3.2 | 5.1 |
| Degree Utilization, x | 0.02 | 0.55 | 0.07 | 0.02 | 0.30 | 0.06 |
| Capacity (veh/h) | 809 | 822 | 1121 | 629 | 1113 | 639 |
| Control Delay (s) | 7.4 | 12.4 | 6.4 | 8.3 | 7.6 | 8.5 |
| Approach Delay (s) | 7.4 | 11.5 | | 7.6 | | 8.5 |
| Approach LOS | A | B | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 9.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 45.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 161 | 28 | 237 | 410 | 81 | 587 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.98 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3577 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3577 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 175 | 30 | 258 | 446 | 88 | 638 |
| RTOR Reduction (vph) | 26 | 0 | 0 | 0 | 0 | 469 |
| Lane Group Flow (vph) | 179 | 0 | 258 | 446 | 88 | 169 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 6.2 | | 12.5 | 22.7 | 16.6 | 12.5 |
| Effective Green, g (s) | 6.2 | | 12.5 | 22.7 | 16.6 | 12.5 |
| Actuated g/C Ratio | 0.13 | | 0.26 | 0.48 | 0.35 | 0.26 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 468 | | 467 | 1698 | 621 | 418 |
| v/s Ratio Prot | c0.05 | | c0.15 | 0.13 | c0.05 | 0.11 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.38 | | 0.55 | 0.26 | 0.14 | 0.40 |
| Uniform Delay, d1 | 18.8 | | 15.0 | 7.3 | 10.5 | 14.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.5 | | 1.4 | 0.1 | 0.5 | 0.6 |
| Delay (s) | 19.3 | | 16.4 | 7.4 | 11.0 | 15.0 |
| Level of Service | B | | B | A | B | B |
| Approach Delay (s) | 19.3 | | | 10.7 | 14.5 | |
| Approach LOS | B | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.33 | | |
| Actuated Cycle Length (s) | 47.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 48.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 661 | 10 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 261 | 4 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 718 | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 284 | 4 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 574 | 574 | 4 | 579 | 574 | 2 | 4 | | | 2 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 574 | 574 | 4 | 579 | 574 | 2 | 4 | | | 2 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 97 | 100 | 100 | 100 | 100 | 100 | | | 82 | | |
| cM capacity (veh/h) | 372 | 354 | 1079 | 360 | 354 | 1082 | 1617 | | | 1620 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 729 | 2 | 284 | 4 |
| Volume Left | 718 | 0 | 284 | 0 |
| Volume Right | 0 | 0 | 0 | 0 |
| cSH | 372 | 1700 | 1620 | 1700 |
| Volume to Capacity | 1.96 | 0.00 | 0.18 | 0.00 |
| Queue Length 95th (ft) | 1254 | 0 | 16 | 0 |
| Control Delay (s) | 466.8 | 0.0 | 7.7 | 0.0 |
| Lane LOS | F | | A | |
| Approach Delay (s) | 466.8 | 0.0 | 7.6 | |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 336.1 | | |
| Intersection Capacity Utilization | 64.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 106 | 0 | 255 | 105 | 0 | 120 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 115 | 0 | 277 | 114 | 0 | 130 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 115 | 0 | 277 | 114 | 0 | 130 |
| Volume Left (vph) | 115 | 0 | 277 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 114 | 0 | 130 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 6.2 | 5.7 | 5.7 | 4.5 | 5.7 | 5.0 |
| Degree Utilization, x | 0.20 | 0.00 | 0.44 | 0.14 | 0.00 | 0.18 |
| Capacity (veh/h) | 546 | 600 | 604 | 758 | 599 | 667 |
| Control Delay (s) | 9.6 | 7.5 | 12.0 | 7.1 | 7.5 | 8.0 |
| Approach Delay (s) | 9.6 | | 10.6 | | 8.0 | |
| Approach LOS | A | | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 9.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 26.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 248 | 0 | 27 | 68 | 1445 | 394 | 2 | 249 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 270 | 0 | 29 | 74 | 1571 | 428 | 2 | 271 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 299 | | | | 2073 | | | 273 | | 0 | |
| Crossing Volume (veh/h) | 1645# | | | | 2 | | | 343 | | 542 | |
| High Capacity (veh/h) | 364 | | | | 1382 | | | 1057 | | 902 | |
| High v/c (veh/h) | 0.82 | | | | 1.50 | | | 0.26 | | 0.00 | |
| Low Capacity (veh/h) | 266 | | | | 1159 | | | 865 | | 727 | |
| Low v/c (veh/h) | 1.13 | | | | 1.79 | | | 0.32 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 1.50 | | |
| Maximum v/c Low | 1.79 | | |
| Intersection Capacity Utilization | 79.4% | ICU Level of Service | D |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | | Yes |
| Volume (veh/h) | 1541 | 32 | 58 | 1 | 0 | 135 | 90 | 16 | 12 | 124 | 0 |
| 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 |
| Hourly flow rate (vph) | 1675 | 35 | 63 | 1 | 0 | 147 | 98 | 17 | 13 | 135 | 0 |
| Approach Volume (veh/h) | 1710 | | | | | 148 | | 128 | | 135 | |
| Crossing Volume (veh/h) | 129 | | | | | 1908# | | 1 | | 1825# | |
| High Capacity (veh/h) | 1252 | | | | | 291 | | 1383 | | 312 | |
| High v/c (veh/h) | 1.37 | | | | | 0.51 | | 0.09 | | 0.43 | |
| Low Capacity (veh/h) | 1040 | | | | | 207 | | 1160 | | 224 | |
| Low v/c (veh/h) | 1.64 | | | | | 0.72 | | 0.11 | | 0.60 | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Maximum v/c High | 1.37 | | | |
| Maximum v/c Low | 1.64 | | | |
| Intersection Capacity Utilization | 71.2% | ICU Level of Service | C | |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 273 | 115 | 3 | 135 | 65 | 13 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 297 | 125 | 3 | 147 | 71 | 14 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 85 | | 789 | 71 | | |
| vC1, stage 1 conf vol | | | 71 | | | |
| vC2, stage 2 conf vol | | | 718 | | | |
| vCu, unblocked vol | 85 | | 789 | 71 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 80 | | 99 | 85 | | |
| cM capacity (veh/h) | 1512 | | 377 | 992 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 297 | 125 | 3 | 147 | 75 | 9 |
| Volume Left | 297 | 0 | 3 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 147 | 5 | 9 |
| cSH | 1512 | 1700 | 377 | 992 | 1700 | 1700 |
| Volume to Capacity | 0.20 | 0.07 | 0.01 | 0.15 | 0.04 | 0.01 |
| Queue Length 95th (ft) | 18 | 0 | 1 | 13 | 0 | 0 |
| Control Delay (s) | 8.0 | 0.0 | 14.6 | 9.3 | 0.0 | 0.0 |
| Lane LOS | A | | B | A | | |
| Approach Delay (s) | 5.6 | | 9.4 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.7 | | |
| Intersection Capacity Utilization | 32.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 65 | 57 | 24 | 8 | 7 | 57 |
| 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) | 71 | 62 | 26 | 9 | 8 | 62 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 35 | | | | 229 | 26 |
| vC1, stage 1 conf vol | | | | | 26 | |
| vC2, stage 2 conf vol | | | | | 203 | |
| vCu, unblocked vol | 35 | | | | 229 | 26 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 96 | | | | 99 | 94 |
| cM capacity (veh/h) | 1577 | | | | 771 | 1050 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 71 | 62 | 26 | 9 | 70 |
| Volume Left | 71 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 9 | 62 |
| cSH | 1577 | 1700 | 1700 | 1700 | 1010 |
| Volume to Capacity | 0.04 | 0.04 | 0.02 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 7.4 | 0.0 | 0.0 | 0.0 | 8.8 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 3.9 | | 0.0 | | 8.8 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.8 | | |
| Intersection Capacity Utilization | 20.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 8 | 7 | 21 | 39 | 26 | 10 | 45 | 19 | 101 | 10 | 27 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.89 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3145 | | 1652 | 3389 | | | 1800 | 1583 | | 1837 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.88 | 1.00 |
| Satd. Flow (perm) | 1652 | 3145 | | 1652 | 3389 | | | 1428 | 1583 | | 1645 | 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) | 9 | 8 | 23 | 42 | 28 | 11 | 49 | 21 | 110 | 11 | 29 | 4 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 4 | 0 | 0 | 0 | 89 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 9 | 21 | 0 | 42 | 35 | 0 | 0 | 70 | 21 | 0 | 40 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 24.8 | | 3.9 | 28.0 | | | 4.8 | 8.7 | | 4.8 | 5.5 |
| Effective Green, g (s) | 0.7 | 24.8 | | 3.9 | 28.0 | | | 4.8 | 8.7 | | 4.8 | 5.5 |
| Actuated g/C Ratio | 0.02 | 0.55 | | 0.09 | 0.62 | | | 0.11 | 0.19 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1714 | | 141 | 2085 | | | 150 | 441 | | 173 | 330 |
| v/s Ratio Prot | 0.01 | 0.01 | | c0.03 | c0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.01 | | 0.02 | 0.00 |
| v/c Ratio | 0.36 | 0.01 | | 0.30 | 0.02 | | | 0.47 | 0.05 | | 0.23 | 0.00 |
| Uniform Delay, d1 | 22.2 | 4.7 | | 19.5 | 3.4 | | | 19.1 | 15.0 | | 18.7 | 17.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 8.7 | 0.0 | | 1.2 | 0.0 | | | 2.3 | 0.0 | | 0.7 | 0.0 |
| Delay (s) | 30.8 | 4.8 | | 20.7 | 3.4 | | | 21.4 | 15.1 | | 19.3 | 17.6 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 10.6 | | | 12.4 | | | 17.5 | | | 19.2 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 45.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 25.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 35 | 111 | 12 | 2 | 42 | 34 | 8 | 7 | 5 | 1056 | 3 | 59 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 38 | 121 | 13 | 2 | 46 | 37 | 9 | 8 | 5 | 1148 | 3 | 64 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 83 | | | 134 | | | 296 | 290 | 127 | 281 | 278 | 41 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 83 | | | 134 | | | 296 | 290 | 127 | 281 | 278 | 41 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 98 | 99 | 99 | 0 | 99 | 94 |
| cM capacity (veh/h) | 1513 | | | 1449 | | | 579 | 602 | 899 | 626 | 612 | 1021 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 172 | 25 | 60 | 22 | 1215 |
| Volume Left | 38 | 2 | 0 | 9 | 1148 |
| Volume Right | 13 | 0 | 37 | 5 | 64 |
| cSH | 1513 | 1449 | 1700 | 645 | 639 |
| Volume to Capacity | 0.03 | 0.00 | 0.04 | 0.03 | 1.90 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 3 | 1946 |
| Control Delay (s) | 1.8 | 0.7 | 0.0 | 10.8 | 427.7 |
| Lane LOS | A | A | | B | F |
| Approach Delay (s) | 1.8 | 0.2 | | 10.8 | 427.7 |
| Approach LOS | | | | B | F |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 348.4 | | | |
| Intersection Capacity Utilization | 90.8% | ICU Level of Service | E | |
| Analysis Period (min) | 15 | | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 5 | 35 | 223 | 0 | 0 | 0 | 0 | 62 | 56 | 1127 | 0 | 37 |
| 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 |
| Hourly flow rate (vph) | 5 | 38 | 242 | 0 | 0 | 0 | 0 | 67 | 61 | 1225 | 0 | 40 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 124 | 162 | 67 | 61 | 1225 | 40 |
| Volume Left (vph) | 5 | 0 | 0 | 0 | 1225 | 0 |
| Volume Right (vph) | 81 | 162 | 0 | 61 | 0 | 40 |
| Hadj (s) | -0.35 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 4.8 | 3.2 | 6.6 | 5.9 | 4.7 | 3.2 |
| Degree Utilization, x | 0.17 | 0.14 | 0.12 | 0.10 | 1.60 | 0.04 |
| Capacity (veh/h) | 728 | 1121 | 532 | 594 | 760 | 1121 |
| Control Delay (s) | 8.8 | 6.7 | 9.3 | 8.4 | 288.1 | 6.3 |
| Approach Delay (s) | 7.6 | | 8.9 | | 279.1 | |
| Approach LOS | A | | A | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 212.3 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 82.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 5 | 9 | 26 | 49 | 4 | 2 | 1261 | 56 | 54 | 4 | 36 | 6 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 5 | 10 | 28 | 53 | 4 | 2 | 1371 | 61 | 59 | 4 | 39 | 7 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2887 | 2912 | 42 | 2916 | 2886 | 90 | 46 | | | 120 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2887 | 2912 | 42 | 2916 | 2886 | 90 | 46 | | | 120 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 0 | 97 | 0 | 0 | 100 | 12 | | | 100 | | |
| cM capacity (veh/h) | 0 | 2 | 1028 | 0 | 2 | 968 | 1562 | | | 1468 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 43 | 60 | 1490 | 50 |
| Volume Left | 5 | 53 | 1371 | 4 |
| Volume Right | 28 | 2 | 59 | 7 |
| cSH | 0 | 0 | 1562 | 1468 |
| Volume to Capacity | Err | Err | 0.88 | 0.00 |
| Queue Length 95th (ft) | Err | Err | 342 | 0 |
| Control Delay (s) | Err | Err | 20.5 | 0.7 |
| Lane LOS | F | F | C | A |
| Approach Delay (s) | Err | Err | 20.5 | 0.7 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 99.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 1372 | 0 | 14 | 0 | 7 | 18 | 10 | 5 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 1491 | 0 | 15 | 0 | 8 | 20 | 11 | 5 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 1491 | 15 | 8 | 20 | 16 |
| Volume Left (vph) | 0 | 1491 | 0 | 0 | 0 | 11 |
| Volume Right (vph) | 0 | 0 | 15 | 0 | 20 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.17 |
| Departure Headway (s) | 4.8 | 4.2 | 3.2 | 5.8 | 3.2 | 6.0 |
| Degree Utilization, x | 0.00 | 1.74 | 0.01 | 0.01 | 0.02 | 0.03 |
| Capacity (veh/h) | 760 | 859 | 1121 | 607 | 1121 | 595 |
| Control Delay (s) | 7.8 | 351.5 | 6.2 | 8.9 | 6.3 | 9.1 |
| Approach Delay (s) | 0.0 | 348.0 | | 7.0 | | 9.1 |
| Approach LOS | A | F | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 338.4 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 90.2% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 11 | 11 | 10 | 1371 | 11 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.92 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 12 | 12 | 11 | 1490 | 12 | 12 |
| RTOR Reduction (vph) | 3 | 0 | 0 | 0 | 0 | 12 |
| Lane Group Flow (vph) | 21 | 0 | 11 | 1490 | 12 | 0 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 37.6 | | 0.8 | 42.4 | 1.3 | 0.8 |
| Effective Green, g (s) | 37.6 | | 0.8 | 42.4 | 1.3 | 0.8 |
| Actuated g/C Ratio | 0.73 | | 0.02 | 0.82 | 0.03 | 0.02 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 2460 | | 27 | 2902 | 44 | 24 |
| v/s Ratio Prot | 0.01 | | 0.01 | c0.42 | c0.01 | 0.00 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.41 | 0.51 | 0.27 | 0.01 |
| Uniform Delay, d1 | 1.9 | | 25.2 | 1.4 | 24.7 | 25.1 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.0 | | 9.7 | 0.7 | 3.3 | 0.1 |
| Delay (s) | 1.9 | | 34.9 | 2.1 | 28.1 | 25.2 |
| Level of Service | A | | C | A | C | C |
| Approach Delay (s) | 1.9 | | | 2.3 | 26.6 | |
| Approach LOS | A | | | A | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.7 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 51.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 47.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 46 | 46 | 0 | 46 | 46 | 0 | 0 | | | 0 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 46 | 46 | 0 | 46 | 46 | 0 | 0 | | | 0 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 97 | 100 | 100 | 100 | 100 | 100 | 100 | | | 99 | | |
| cM capacity (veh/h) | 946 | 834 | 1085 | 944 | 834 | 1085 | 1623 | | | 1623 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 25 | 0 | 23 | 0 |
| Volume Left | 24 | 0 | 23 | 0 |
| Volume Right | 0 | 0 | 0 | 0 |
| cSH | 940 | 1700 | 1623 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 1 | 0 |
| Control Delay (s) | 8.9 | 0.0 | 7.2 | 0.0 |
| Lane LOS | A | | A | |
| Approach Delay (s) | 8.9 | 0.0 | 7.2 | |
| Approach LOS | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8.1 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 649 | 0 | 11 | 6 | 0 | 28 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 705 | 0 | 12 | 7 | 0 | 30 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 705 | 0 | 12 | 7 | 0 | 30 |
| Volume Left (vph) | 705 | 0 | 12 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 7 | 0 | 30 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 5.1 | 4.6 | 6.9 | 5.8 | 5.1 | 4.4 |
| Degree Utilization, x | 1.00 | 0.00 | 0.02 | 0.01 | 0.00 | 0.04 |
| Capacity (veh/h) | 705 | 790 | 505 | 614 | 720 | 802 |
| Control Delay (s) | 55.7 | 6.4 | 8.9 | 7.6 | 6.9 | 6.4 |
| Approach Delay (s) | 55.7 | | 8.5 | | 6.4 | |
| Approach LOS | F | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 52.6 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 46.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 276 | 0 | 4 | 27 | 59 | 176 | 0 | 2206 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 300 | 0 | 4 | 29 | 64 | 191 | 0 | 2398 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 304 | | | | 285 | | | 2398 | | 0 | |
| Crossing Volume (veh/h) | 93 | | | | 0 | | | 329 | | 2698# | |
| High Capacity (veh/h) | 1287 | | | | 1385 | | | 1069 | | 146 | |
| High v/c (veh/h) | 0.24 | | | | 0.21 | | | 2.24 | | 0.00 | |
| Low Capacity (veh/h) | 1073 | | | | 1161 | | | 876 | | 95 | |
| Low v/c (veh/h) | 0.28 | | | | 0.25 | | | 2.74 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 2.24 | | |
| Maximum v/c Low | 2.74 | | |
| Intersection Capacity Utilization | 75.6% | ICU Level of Service | D |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | Yes |
| Volume (veh/h) | 204 | 5 | 18 | 0 | 27 | 202 | 109 | 164 | 12 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 222 | 5 | 20 | 0 | 29 | 220 | 118 | 178 | 13 | 0 |
| Approach Volume (veh/h) | 227 | | | | 29 | | 516 | | 13 | |
| Crossing Volume (veh/h) | 516 | | | | 454 | | 0 | | 565 | |
| High Capacity (veh/h) | 921 | | | | 968 | | 1385 | | 886 | |
| High v/c (veh/h) | 0.25 | | | | 0.03 | | 0.37 | | 0.01 | |
| Low Capacity (veh/h) | 744 | | | | 785 | | 1161 | | 712 | |
| Low v/c (veh/h) | 0.31 | | | | 0.04 | | 0.44 | | 0.02 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.37 | | |
| Maximum v/c Low | 0.44 | | |
| Intersection Capacity Utilization | 37.4% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 87 | 71 | 4 | 146 | 142 | 5 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 95 | 77 | 4 | 159 | 154 | 5 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 160 | | 421 | 154 | | |
| vC1, stage 1 conf vol | | | 154 | | | |
| vC2, stage 2 conf vol | | | 266 | | | |
| vCu, unblocked vol | 160 | | 421 | 154 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 93 | | 99 | 82 | | |
| cM capacity (veh/h) | 1419 | | 681 | 892 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 95 | 77 | 4 | 159 | 156 | 4 |
| Volume Left | 95 | 0 | 4 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 159 | 2 | 4 |
| cSH | 1419 | 1700 | 681 | 892 | 1700 | 1700 |
| Volume to Capacity | 0.07 | 0.05 | 0.01 | 0.18 | 0.09 | 0.00 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 16 | 0 | 0 |
| Control Delay (s) | 7.7 | 0.0 | 10.3 | 9.9 | 0.0 | 0.0 |
| Lane LOS | A | | B | A | | |
| Approach Delay (s) | 4.2 | | 9.9 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.7 | | |
| Intersection Capacity Utilization | 26.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 34 | 44 | 81 | 5 | 2 | 65 |
| 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) | 37 | 48 | 88 | 5 | 2 | 71 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 93 | | | | 210 | 88 |
| vC1, stage 1 conf vol | | | | | 88 | |
| vC2, stage 2 conf vol | | | | | 122 | |
| vCu, unblocked vol | 93 | | | | 210 | 88 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 100 | 93 |
| cM capacity (veh/h) | 1501 | | | | 834 | 970 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 37 | 48 | 88 | 5 | 73 |
| Volume Left | 37 | 0 | 0 | 0 | 2 |
| Volume Right | 0 | 0 | 0 | 5 | 71 |
| cSH | 1501 | 1700 | 1700 | 1700 | 966 |
| Volume to Capacity | 0.02 | 0.03 | 0.05 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.0 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 3.3 | | 0.0 | | 9.0 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.7 | | |
| Intersection Capacity Utilization | 19.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 3 | 9 | 119 | 4 | 1 | 18 | 0 | 19 | 0 | 3 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 0.88 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (prot) | | 3131 | | 1652 | 3433 | | | 1770 | 1583 | | 1863 | 1583 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 3131 | | 1652 | 3433 | | | 1863 | 1583 | | 1863 | 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) | 0 | 3 | 10 | 129 | 4 | 1 | 20 | 0 | 21 | 0 | 3 | 1 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 1 |
| Lane Group Flow (vph) | 0 | 8 | 0 | 129 | 5 | 0 | 0 | 20 | 3 | 0 | 3 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 25.7 | | 4.9 | 29.9 | | | 1.3 | 6.2 | | 1.3 | 2.0 |
| Effective Green, g (s) | | 25.7 | | 4.9 | 29.9 | | | 1.3 | 6.2 | | 1.3 | 2.0 |
| Actuated g/C Ratio | | 0.59 | | 0.11 | 0.68 | | | 0.03 | 0.14 | | 0.03 | 0.05 |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1832 | | 184 | 2338 | | | 55 | 367 | | 55 | 216 |
| v/s Ratio Prot | | c0.00 | | c0.08 | 0.00 | | | | 0.00 | | 0.00 | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | | 0.00 |
| v/c Ratio | | 0.00 | | 0.70 | 0.00 | | | 0.36 | 0.01 | | 0.05 | 0.00 |
| Uniform Delay, d1 | | 3.8 | | 18.8 | 2.2 | | | 20.9 | 16.2 | | 20.7 | 20.0 |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.0 | | 11.4 | 0.0 | | | 4.1 | 0.0 | | 0.4 | 0.0 |
| Delay (s) | | 3.8 | | 30.2 | 2.2 | | | 25.0 | 16.2 | | 21.1 | 20.0 |
| Level of Service | | A | | C | A | | | C | B | | C | B |
| Approach Delay (s) | | 3.8 | | | 29.2 | | | 20.5 | | | 20.8 | |
| Approach LOS | | A | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.13 | | |
| Actuated Cycle Length (s) | 43.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 27.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 12 | 13 | 1 | 1 | 111 | 374 | 1 | 0 | 0 | 5 | 0 | 20 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 13 | 14 | 1 | 1 | 121 | 407 | 1 | 0 | 0 | 5 | 0 | 22 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 527 | | | 15 | | | 125 | 570 | 15 | 367 | 367 | 264 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 527 | | | 15 | | | 125 | 570 | 15 | 367 | 367 | 264 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 99 | 100 | 97 |
| cM capacity (veh/h) | 1036 | | | 1601 | | | 803 | 424 | 1061 | 559 | 553 | 735 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 28 | 61 | 467 | 1 | 27 |
| Volume Left | 13 | 1 | 0 | 1 | 5 |
| Volume Right | 1 | 0 | 407 | 0 | 22 |
| cSH | 1036 | 1601 | 1700 | 803 | 691 |
| Volume to Capacity | 0.01 | 0.00 | 0.27 | 0.00 | 0.04 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 3 |
| Control Delay (s) | 4.0 | 0.1 | 0.0 | 9.5 | 10.4 |
| Lane LOS | A | A | | A | B |
| Approach Delay (s) | 4.0 | 0.0 | | 9.5 | 10.4 |
| Approach LOS | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 25.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 3 | 8 | 26 | 0 | 0 | 0 | 0 | 1301 | 477 | 6 | 0 | 7 |
| 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 |
| Hourly flow rate (vph) | 3 | 9 | 28 | 0 | 0 | 0 | 0 | 1414 | 518 | 7 | 0 | 8 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 21 | 19 | 1414 | 518 | 7 | 8 |
| Volume Left (vph) | 3 | 0 | 0 | 0 | 7 | 0 |
| Volume Right (vph) | 9 | 19 | 0 | 518 | 0 | 8 |
| Hadj (s) | -0.20 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 5.6 | 3.2 | 4.6 | 3.9 | 6.0 | 3.2 |
| Degree Utilization, x | 0.03 | 0.02 | 1.81 | 0.56 | 0.01 | 0.01 |
| Capacity (veh/h) | 638 | 1121 | 789 | 913 | 589 | 1121 |
| Control Delay (s) | 8.7 | 6.3 | 382.8 | 10.7 | 9.1 | 6.2 |
| Approach Delay (s) | 7.6 | | 282.9 | | 7.5 | |
| Approach LOS | A | | F | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 275.4 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 85.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 1 | 0 | 1767 | 4 | 0 | 0 | 11 | 18 | 2 | 0 | 7 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 1 | 0 | 1921 | 4 | 0 | 0 | 12 | 20 | 2 | 0 | 8 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 52 | 53 | 8 | 1973 | 52 | 21 | 8 | | | 22 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 52 | 53 | 8 | 1973 | 52 | 21 | 8 | | | 22 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 0 | 0 | 100 | 100 | 99 | | | 100 | | |
| cM capacity (veh/h) | 941 | 832 | 1075 | 0 | 833 | 1057 | 1613 | | | 1594 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 1922 | 4 | 34 | 8 |
| Volume Left | 1 | 4 | 12 | 0 |
| Volume Right | 1921 | 0 | 2 | 0 |
| cSH | 1074 | 0 | 1613 | 1594 |
| Volume to Capacity | 1.79 | Err | 0.01 | 0.00 |
| Queue Length 95th (ft) | 2808 | Err | 1 | 0 |
| Control Delay (s) | 370.6 | Err | 2.6 | 0.0 |
| Lane LOS | F | F | A | |
| Approach Delay (s) | 370.6 | Err | 2.6 | 0.0 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 124.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 157 | 0 | 93 | 0 | 14 | 64 | 31 | 24 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 171 | 0 | 101 | 0 | 15 | 70 | 34 | 26 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 171 | 101 | 15 | 70 | 60 |
| Volume Left (vph) | 0 | 171 | 0 | 0 | 0 | 34 |
| Volume Right (vph) | 0 | 0 | 101 | 0 | 70 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.15 |
| Departure Headway (s) | 4.3 | 4.3 | 3.2 | 4.4 | 3.2 | 4.5 |
| Degree Utilization, x | 0.00 | 0.20 | 0.09 | 0.02 | 0.06 | 0.07 |
| Capacity (veh/h) | 829 | 820 | 1121 | 776 | 1121 | 769 |
| Control Delay (s) | 7.3 | 8.4 | 6.5 | 7.5 | 6.4 | 7.8 |
| Approach Delay (s) | 0.0 | 7.7 | | 6.6 | | 7.8 |
| Approach LOS | A | A | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.5 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 25.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 38 | 11 | 28 | 162 | 91 | 160 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.97 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3533 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3533 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 41 | 12 | 30 | 176 | 99 | 174 |
| RTOR Reduction (vph) | 11 | 0 | 0 | 0 | 0 | 151 |
| Lane Group Flow (vph) | 42 | 0 | 30 | 176 | 99 | 23 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 2.3 | | 5.2 | 11.5 | 19.3 | 5.2 |
| Effective Green, g (s) | 2.3 | | 5.2 | 11.5 | 19.3 | 5.2 |
| Actuated g/C Ratio | 0.06 | | 0.13 | 0.30 | 0.50 | 0.13 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 209 | | 237 | 1048 | 880 | 212 |
| v/s Ratio Prot | 0.01 | | 0.02 | c0.05 | c0.06 | 0.01 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.20 | | 0.13 | 0.17 | 0.11 | 0.11 |
| Uniform Delay, d1 | 17.4 | | 14.8 | 10.1 | 5.2 | 14.8 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.5 | | 0.2 | 0.1 | 0.3 | 0.2 |
| Delay (s) | 17.8 | | 15.0 | 10.2 | 5.4 | 15.0 |
| Level of Service | B | | B | B | A | B |
| Approach Delay (s) | 17.8 | | | 10.9 | 11.5 | |
| Approach LOS | B | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.15 | | |
| Actuated Cycle Length (s) | 38.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 19.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 251 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 38 | 1 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 273 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 41 | 1 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 84 | 85 | 1 | 86 | 84 | 1 | 1 | | | 1 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 84 | 85 | 1 | 86 | 84 | 1 | 1 | | | 1 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 69 | 100 | 100 | 100 | 100 | 100 | 100 | | | 97 | | |
| cM capacity (veh/h) | 885 | 785 | 1083 | 881 | 785 | 1084 | 1622 | | | 1622 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 275 | 1 | 41 | 1 |
| Volume Left | 273 | 0 | 41 | 0 |
| Volume Right | 1 | 1 | 0 | 0 |
| cSH | 885 | 1700 | 1622 | 1700 |
| Volume to Capacity | 0.31 | 0.00 | 0.03 | 0.00 |
| Queue Length 95th (ft) | 33 | 0 | 2 | 0 |
| Control Delay (s) | 10.9 | 0.0 | 7.3 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 10.9 | 0.0 | 7.1 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 10.3 | | |
| Intersection Capacity Utilization | 29.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 60 | 0 | 49 | 26 | 0 | 21 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 65 | 0 | 53 | 28 | 0 | 23 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 65 | 0 | 53 | 28 | 0 | 23 |
| Volume Left (vph) | 65 | 0 | 53 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 28 | 0 | 23 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 5.3 | 4.7 | 5.3 | 4.1 | 4.8 | 4.1 |
| Degree Utilization, x | 0.10 | 0.00 | 0.08 | 0.03 | 0.00 | 0.03 |
| Capacity (veh/h) | 667 | 760 | 670 | 857 | 752 | 849 |
| Control Delay (s) | 7.6 | 6.5 | 7.5 | 6.0 | 6.6 | 6.0 |
| Approach Delay (s) | 7.6 | | 7.0 | | 6.0 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 84 | 0 | 2 | 92 | 61 | 191 | 0 | 252 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 91 | 0 | 2 | 100 | 66 | 208 | 0 | 274 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 93 | | | | 374 | | | 274 | | 0 | |
| Crossing Volume (veh/h) | 166 | | | | 0 | | | 191 | | 365 | |
| High Capacity (veh/h) | 1216 | | | | 1385 | | | 1192 | | 1039 | |
| High v/c (veh/h) | 0.08 | | | | 0.27 | | | 0.23 | | 0.00 | |
| Low Capacity (veh/h) | 1008 | | | | 1161 | | | 986 | | 849 | |
| Low v/c (veh/h) | 0.09 | | | | 0.32 | | | 0.28 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.27 | | |
| Maximum v/c Low | 0.32 | | |
| Intersection Capacity Utilization | 30.8% | ICU Level of Service | A |

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | | Yes |
| Volume (veh/h) | 226 | 24 | 37 | 2 | 0 | 82 | 61 | 19 | 23 | 42 | 1 |
| 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 |
| Hourly flow rate (vph) | 246 | 26 | 40 | 2 | 0 | 89 | 66 | 21 | 25 | 46 | 1 |
| Approach Volume (veh/h) | 272 | | | | | 91 | | 112 | | 46 | |
| Crossing Volume (veh/h) | 114 | | | | | 358 | | 2 | | 359 | |
| High Capacity (veh/h) | 1267 | | | | | 1046 | | 1382 | | 1045 | |
| High v/c (veh/h) | 0.21 | | | | | 0.09 | | 0.08 | | 0.04 | |
| Low Capacity (veh/h) | 1054 | | | | | 854 | | 1159 | | 854 | |
| Low v/c (veh/h) | 0.26 | | | | | 0.11 | | 0.10 | | 0.05 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.21 | | |
| Maximum v/c Low | 0.26 | | |
| Intersection Capacity Utilization | 31.0% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 40 | 101 | 2 | 29 | 50 | 2 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 43 | 110 | 2 | 32 | 54 | 2 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 57 | | 251 | 54 | | |
| vC1, stage 1 conf vol | | | 54 | | | |
| vC2, stage 2 conf vol | | | 197 | | | |
| vCu, unblocked vol | 57 | | 251 | 54 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 97 | | 100 | 97 | | |
| cM capacity (veh/h) | 1548 | | 785 | 1013 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 43 | 110 | 2 | 32 | 55 | 1 |
| Volume Left | 43 | 0 | 2 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 32 | 1 | 1 |
| cSH | 1548 | 1700 | 785 | 1013 | 1700 | 1700 |
| Volume to Capacity | 0.03 | 0.06 | 0.00 | 0.03 | 0.03 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 2 | 0 | 0 |
| Control Delay (s) | 7.4 | 0.0 | 9.6 | 8.7 | 0.0 | 0.0 |
| Lane LOS | A | | A | A | | |
| Approach Delay (s) | 2.1 | | 8.7 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.5 | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 38 | 66 | 36 | 3 | 1 | 16 |
| 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) | 41 | 72 | 39 | 3 | 1 | 17 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 42 | | | | 193 | 39 |
| vC1, stage 1 conf vol | | | | | 39 | |
| vC2, stage 2 conf vol | | | | | 154 | |
| vCu, unblocked vol | 42 | | | | 193 | 39 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 100 | 98 |
| cM capacity (veh/h) | 1567 | | | | 824 | 1032 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 41 | 72 | 39 | 3 | 18 |
| Volume Left | 41 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 3 | 17 |
| cSH | 1567 | 1700 | 1700 | 1700 | 1017 |
| Volume to Capacity | 0.03 | 0.04 | 0.02 | 0.00 | 0.02 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 1 |
| Control Delay (s) | 7.4 | 0.0 | 0.0 | 0.0 | 8.6 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 2.7 | | 0.0 | | 8.6 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.7 | | |
| Intersection Capacity Utilization | 18.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 11 | 17 | 40 | 15 | 4 | 54 | 17 | 45 | 6 | 5 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.91 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.97 | 1.00 |
| Satd. Flow (prot) | 1652 | 3221 | | 1652 | 3433 | | | 1794 | 1583 | | 1810 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.78 | 1.00 |
| Satd. Flow (perm) | 1652 | 3221 | | 1652 | 3433 | | | 1432 | 1583 | | 1452 | 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) | 5 | 12 | 18 | 43 | 16 | 4 | 59 | 18 | 49 | 7 | 5 | 4 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 41 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 5 | 22 | 0 | 43 | 18 | 0 | 0 | 77 | 8 | 0 | 12 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 25.6 | | 2.8 | 27.7 | | | 4.9 | 7.7 | | 4.9 | 5.6 |
| Effective Green, g (s) | 0.7 | 25.6 | | 2.8 | 27.7 | | | 4.9 | 7.7 | | 4.9 | 5.6 |
| Actuated g/C Ratio | 0.02 | 0.57 | | 0.06 | 0.61 | | | 0.11 | 0.17 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1820 | | 102 | 2099 | | | 154 | 408 | | 157 | 335 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.03 | 0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.00 | | 0.01 | 0.00 |
| v/c Ratio | 0.20 | 0.01 | | 0.42 | 0.01 | | | 0.50 | 0.02 | | 0.08 | 0.00 |
| Uniform Delay, d1 | 22.0 | 4.3 | | 20.5 | 3.4 | | | 19.0 | 15.7 | | 18.2 | 17.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.9 | 0.0 | | 2.8 | 0.0 | | | 2.5 | 0.0 | | 0.2 | 0.0 |
| Delay (s) | 25.9 | 4.3 | | 23.3 | 3.4 | | | 21.6 | 15.7 | | 18.4 | 17.4 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 7.4 | | | 17.0 | | | 19.3 | | | 18.1 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 45.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 26.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 53 | 47 | 4 | 2 | 24 | 43 | 2 | 1 | 2 | 7 | 1 | 44 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 58 | 51 | 4 | 2 | 26 | 47 | 2 | 1 | 2 | 8 | 1 | 48 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 73 | | | 55 | | | 234 | 246 | 53 | 225 | 224 | 36 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 73 | | | 55 | | | 234 | 246 | 53 | 225 | 224 | 36 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 100 | 99 | 100 | 95 |
| cM capacity (veh/h) | 1525 | | | 1548 | | | 647 | 630 | 1003 | 688 | 647 | 1028 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 113 | 15 | 60 | 5 | 57 |
| Volume Left | 58 | 2 | 0 | 2 | 8 |
| Volume Right | 4 | 0 | 47 | 2 | 48 |
| cSH | 1525 | 1548 | 1700 | 749 | 954 |
| Volume to Capacity | 0.04 | 0.00 | 0.04 | 0.01 | 0.06 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 1 | 5 |
| Control Delay (s) | 3.9 | 1.1 | 0.0 | 9.8 | 9.0 |
| Lane LOS | A | A | | A | A |
| Approach Delay (s) | 3.9 | 0.2 | | 9.8 | 9.0 |
| Approach LOS | | | | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.1 | | |
| Intersection Capacity Utilization | 22.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 3 | 18 | 40 | 0 | 0 | 0 | 0 | 112 | 58 | 22 | 0 | 21 |
| 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 |
| Hourly flow rate (vph) | 3 | 20 | 43 | 0 | 0 | 0 | 0 | 122 | 63 | 24 | 0 | 23 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 37 | 29 | 122 | 63 | 24 | 23 |
| Volume Left (vph) | 3 | 0 | 0 | 0 | 24 | 0 |
| Volume Right (vph) | 14 | 29 | 0 | 63 | 0 | 23 |
| Hadj (s) | -0.18 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 4.2 | 3.2 | 4.7 | 4.0 | 4.6 | 3.2 |
| Degree Utilization, x | 0.04 | 0.03 | 0.16 | 0.07 | 0.03 | 0.02 |
| Capacity (veh/h) | 824 | 1121 | 753 | 883 | 753 | 1121 |
| Control Delay (s) | 7.3 | 6.3 | 7.4 | 6.1 | 7.7 | 6.3 |
| Approach Delay (s) | 6.9 | | 6.9 | | 7.0 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 22.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 3 | 145 | 6 | 2 | 3 | 15 | 36 | 11 | 0 | 18 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 0 | 3 | 158 | 7 | 2 | 3 | 16 | 39 | 12 | 0 | 20 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 102 | 103 | 20 | 257 | 97 | 45 | 20 | | | 51 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 102 | 103 | 20 | 257 | 97 | 45 | 20 | | | 51 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 85 | 99 | 100 | 100 | 99 | | | 100 | | |
| cM capacity (veh/h) | 868 | 779 | 1058 | 586 | 785 | 1025 | 1597 | | | 1555 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 161 | 12 | 67 | 20 |
| Volume Left | 0 | 7 | 16 | 0 |
| Volume Right | 158 | 3 | 12 | 0 |
| cSH | 1051 | 700 | 1597 | 1555 |
| Volume to Capacity | 0.15 | 0.02 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 13 | 1 | 1 | 0 |
| Control Delay (s) | 9.0 | 10.2 | 1.8 | 0.0 |
| Lane LOS | A | B | A | |
| Approach Delay (s) | 9.0 | 10.2 | 1.8 | 0.0 |
| Approach LOS | A | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.5 | | |
| Intersection Capacity Utilization | 25.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# FUTURE (2013) WITH PROJECT WITH CUMULATIVE

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 2 | 2 | 642 | 3 | 52 | 2 | 16 | 334 | 34 | 51 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 2 | 2 | 698 | 3 | 57 | 2 | 17 | 363 | 37 | 55 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 4 | 701 | 57 | 20 | 363 | 92 |
| Volume Left (vph) | 0 | 698 | 0 | 2 | 0 | 37 |
| Volume Right (vph) | 2 | 0 | 57 | 0 | 363 | 0 |
| Hadj (s) | -0.27 | 0.23 | -0.57 | 0.06 | -0.57 | 0.11 |
| Departure Headway (s) | 4.8 | 4.5 | 3.2 | 5.8 | 3.2 | 5.7 |
| Degree Utilization, x | 0.01 | 0.87 | 0.05 | 0.03 | 0.32 | 0.15 |
| Capacity (veh/h) | 724 | 794 | 1121 | 587 | 1113 | 599 |
| Control Delay (s) | 7.8 | 29.6 | 6.4 | 9.0 | 7.7 | 9.7 |
| Approach Delay (s) | 7.8 | 27.8 | | 7.8 | | 9.7 |
| Approach LOS | A | D | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 20.2 | | |
| Level of Service | C | | |
| Intersection Capacity Utilization | 60.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 243 | 28 | 375 | 648 | 51 | 469 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.98 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3601 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3601 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 264 | 30 | 408 | 704 | 55 | 510 |
| RTOR Reduction (vph) | 16 | 0 | 0 | 0 | 0 | 362 |
| Lane Group Flow (vph) | 278 | 0 | 408 | 704 | 55 | 148 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 9.3 | | 15.3 | 28.6 | 16.1 | 15.3 |
| Effective Green, g (s) | 9.3 | | 15.3 | 28.6 | 16.1 | 15.3 |
| Actuated g/C Ratio | 0.18 | | 0.29 | 0.54 | 0.31 | 0.29 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 635 | | 513 | 1920 | 540 | 459 |
| v/s Ratio Prot | 0.08 | | c0.23 | c0.20 | c0.03 | 0.09 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.44 | | 0.80 | 0.37 | 0.10 | 0.32 |
| Uniform Delay, d1 | 19.4 | | 17.3 | 6.9 | 13.1 | 14.6 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.5 | | 8.3 | 0.1 | 0.4 | 0.4 |
| Delay (s) | 19.8 | | 25.6 | 7.0 | 13.5 | 15.1 |
| Level of Service | B | | C | A | B | B |
| Approach Delay (s) | 19.8 | | | 13.8 | 14.9 | |
| Approach LOS | B | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.44 | | |
| Actuated Cycle Length (s) | 52.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 43.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 510 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 414 | 1 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 554 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 450 | 1 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 902 | 902 | 1 | 903 | 902 | 1 | 1 | | | 1 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 902 | 902 | 1 | 903 | 902 | 1 | 1 | | | 1 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 99 | 100 | 100 | 100 | 100 | 100 | | | 72 | | |
| cM capacity (veh/h) | 203 | 200 | 1083 | 201 | 201 | 1084 | 1622 | | | 1622 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 557 | 1 | 450 | 1 |
| Volume Left | 554 | 0 | 450 | 0 |
| Volume Right | 0 | 1 | 0 | 0 |
| cSH | 203 | 1700 | 1622 | 1700 |
| Volume to Capacity | 2.74 | 0.00 | 0.28 | 0.00 |
| Queue Length 95th (ft) | 1212 | 0 | 29 | 0 |
| Control Delay (s) | 831.7 | 0.0 | 8.1 | 0.0 |
| Lane LOS | F | | A | |
| Approach Delay (s) | 831.7 | 0.0 | 8.1 | |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 462.5 | | |
| Intersection Capacity Utilization | 64.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 151 | 0 | 257 | 103 | 0 | 258 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 164 | 0 | 279 | 112 | 0 | 280 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 164 | 0 | 279 | 112 | 0 | 280 |
| Volume Left (vph) | 164 | 0 | 279 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 112 | 0 | 280 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 6.6 | 6.0 | 6.3 | 5.1 | 5.9 | 5.3 |
| Degree Utilization, x | 0.30 | 0.00 | 0.49 | 0.16 | 0.00 | 0.41 |
| Capacity (veh/h) | 521 | 570 | 546 | 665 | 584 | 653 |
| Control Delay (s) | 11.2 | 7.8 | 14.1 | 7.9 | 7.7 | 10.7 |
| Approach Delay (s) | 11.2 | | 12.3 | | 10.7 | |
| Approach LOS | B | | B | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 11.5 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 308 | 0 | 5 | 114 | 2279 | 310 | 2 | 220 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 335 | 0 | 5 | 124 | 2477 | 337 | 2 | 239 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 340 | | | | 2938 | | | 241 | | 0 | |
| Crossing Volume (veh/h) | 2601# | | | | 2 | | | 459 | | 576 | |
| High Capacity (veh/h) | 159 | | | | 1382 | | | 965 | | 878 | |
| High v/c (veh/h) | 2.14 | | | | 2.13 | | | 0.25 | | 0.00 | |
| Low Capacity (veh/h) | 105 | | | | 1159 | | | 782 | | 706 | |
| Low v/c (veh/h) | 3.24 | | | | 2.53 | | | 0.31 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 2.14 | | |
| Maximum v/c Low | 3.24 | | |
| Intersection Capacity Utilization | 101.3% | ICU Level of Service | G |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | | Yes |
| Volume (veh/h) | 2155 | 30 | 85 | 2 | 0 | 190 | 82 | 31 | 27 | 223 | 4 |
| 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 |
| Hourly flow rate (vph) | 2342 | 33 | 92 | 2 | 0 | 207 | 89 | 34 | 29 | 242 | 4 |
| Approach Volume (veh/h) | 2375 | | | | | 209 | | 152 | | 242 | |
| Crossing Volume (veh/h) | 154 | | | | | 2674# | | 2 | | 2498# | |
| High Capacity (veh/h) | 1227 | | | | | 149 | | 1382 | | 174 | |
| High v/c (veh/h) | 1.94 | | | | | 1.40 | | 0.11 | | 1.39 | |
| Low Capacity (veh/h) | 1018 | | | | | 98 | | 1159 | | 116 | |
| Low v/c (veh/h) | 2.33 | | | | | 2.14 | | 0.13 | | 2.09 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 1.94 | | |
| Maximum v/c Low | 2.33 | | |
| Intersection Capacity Utilization | 93.0% | ICU Level of Service | F |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 180 | 125 | 11 | 130 | 143 | 17 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 196 | 136 | 12 | 141 | 155 | 18 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 174 | | 683 | 155 | | |
| vC1, stage 1 conf vol | | | 155 | | | |
| vC2, stage 2 conf vol | | | 527 | | | |
| vCu, unblocked vol | 174 | | 683 | 155 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 86 | | 98 | 84 | | |
| cM capacity (veh/h) | 1403 | | 488 | 890 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 196 | 136 | 12 | 141 | 162 | 12 |
| Volume Left | 196 | 0 | 12 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 141 | 6 | 12 |
| cSH | 1403 | 1700 | 488 | 890 | 1700 | 1700 |
| Volume to Capacity | 0.14 | 0.08 | 0.02 | 0.16 | 0.10 | 0.01 |
| Queue Length 95th (ft) | 12 | 0 | 2 | 14 | 0 | 0 |
| Control Delay (s) | 8.0 | 0.0 | 12.6 | 9.8 | 0.0 | 0.0 |
| Lane LOS | A | | B | A | | |
| Approach Delay (s) | 4.7 | | 10.0 | | 0.0 | |
| Approach LOS | | | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.7 | | |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 63 | 71 | 78 | 8 | 9 | 72 |
| 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) | 68 | 77 | 85 | 9 | 10 | 78 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 93 | | | | 299 | 85 |
| vC1, stage 1 conf vol | | | | | 85 | |
| vC2, stage 2 conf vol | | | | | 214 | |
| vCu, unblocked vol | 93 | | | | 299 | 85 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 95 | | | | 99 | 92 |
| cM capacity (veh/h) | 1501 | | | | 751 | 974 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 68 | 77 | 85 | 9 | 88 |
| Volume Left | 68 | 0 | 0 | 0 | 10 |
| Volume Right | 0 | 0 | 0 | 9 | 78 |
| cSH | 1501 | 1700 | 1700 | 1700 | 943 |
| Volume to Capacity | 0.05 | 0.05 | 0.05 | 0.01 | 0.09 |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 8 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.2 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 3.5 | | 0.0 | | 9.2 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.1 | | |
| Intersection Capacity Utilization | 21.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 6 | 16 | 36 | 60 | 31 | 12 | 71 | 28 | 178 | 9 | 32 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.90 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3169 | | 1652 | 3392 | | | 1798 | 1583 | | 1842 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.76 | 1.00 | | 0.90 | 1.00 |
| Satd. Flow (perm) | 1652 | 3169 | | 1652 | 3392 | | | 1412 | 1583 | | 1673 | 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 | 17 | 39 | 65 | 34 | 13 | 77 | 30 | 193 | 10 | 35 | 5 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 5 | 0 | 0 | 0 | 149 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 7 | 37 | 0 | 65 | 42 | 0 | 0 | 107 | 44 | 0 | 45 | 1 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 22.6 | | 4.8 | 26.7 | | | 5.4 | 10.2 | | 5.4 | 6.1 |
| Effective Green, g (s) | 0.7 | 22.6 | | 4.8 | 26.7 | | | 5.4 | 10.2 | | 5.4 | 6.1 |
| Actuated g/C Ratio | 0.02 | 0.50 | | 0.11 | 0.60 | | | 0.12 | 0.23 | | 0.12 | 0.14 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1598 | | 177 | 2021 | | | 170 | 501 | | 201 | 356 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.04 | 0.01 | | | | 0.01 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.08 | 0.02 | | 0.03 | 0.00 |
| v/c Ratio | 0.28 | 0.02 | | 0.37 | 0.02 | | | 0.63 | 0.09 | | 0.22 | 0.00 |
| Uniform Delay, d1 | 21.8 | 5.6 | | 18.6 | 3.7 | | | 18.7 | 13.6 | | 17.8 | 16.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 6.0 | 0.0 | | 1.3 | 0.0 | | | 7.1 | 0.1 | | 0.6 | 0.0 |
| Delay (s) | 27.8 | 5.6 | | 19.9 | 3.7 | | | 25.9 | 13.7 | | 18.4 | 16.7 |
| Level of Service | C | A | | B | A | | | C | B | | B | B |
| Approach Delay (s) | | 8.1 | | | 13.1 | | | 18.0 | | | 18.2 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.17 | | |
| Actuated Cycle Length (s) | 44.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 28.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 46 | 156 | 8 | 3 | 43 | 33 | 6 | 4 | 2 | 1791 | 1 | 63 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 50 | 170 | 9 | 3 | 47 | 36 | 7 | 4 | 2 | 1947 | 1 | 68 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 83 | | | 178 | | | 373 | 363 | 174 | 349 | 349 | 41 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 83 | | | 178 | | | 373 | 363 | 174 | 349 | 349 | 41 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 99 | 99 | 100 | 0 | 100 | 93 |
| cM capacity (veh/h) | 1513 | | | 1395 | | | 507 | 543 | 839 | 560 | 553 | 1021 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 228 | 27 | 59 | 13 | 2016 |
| Volume Left | 50 | 3 | 0 | 7 | 1947 |
| Volume Right | 9 | 0 | 36 | 2 | 68 |
| cSH | 1513 | 1395 | 1700 | 556 | 569 |
| Volume to Capacity | 0.03 | 0.00 | 0.03 | 0.02 | 3.54 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 2 | Err |
| Control Delay (s) | 1.8 | 0.9 | 0.0 | 11.6 | Err |
| Lane LOS | A | A | | B | F |
| Approach Delay (s) | 1.8 | 0.3 | | 11.6 | Err |
| Approach LOS | | | | B | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8603.3 | | |
| Intersection Capacity Utilization | 134.3% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 5 | 37 | 352 | 0 | 0 | 0 | 0 | 56 | 44 | 1890 | 0 | 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 |
| Hourly flow rate (vph) | 5 | 40 | 383 | 0 | 0 | 0 | 0 | 61 | 48 | 2054 | 0 | 54 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 173 | 255 | 61 | 48 | 2054 | 54 |
| Volume Left (vph) | 5 | 0 | 0 | 0 | 2054 | 0 |
| Volume Right (vph) | 128 | 255 | 0 | 48 | 0 | 54 |
| Hadj (s) | -0.40 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 4.7 | 3.2 | 6.7 | 6.0 | 4.7 | 3.2 |
| Degree Utilization, x | 0.23 | 0.23 | 0.11 | 0.08 | 2.68 | 0.05 |
| Capacity (veh/h) | 748 | 1122 | 524 | 584 | 777 | 1121 |
| Control Delay (s) | 9.1 | 7.1 | 9.3 | 8.3 | 769.7 | 6.4 |
| Approach Delay (s) | 7.9 | | 8.9 | | 750.0 | |
| Approach LOS | A | | A | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 599.5 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 127.9% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 3 | 3 | 50 | 29 | 5 | 2 | 2179 | 41 | 29 | 2 | 21 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 3 | 3 | 54 | 32 | 5 | 2 | 2368 | 45 | 32 | 2 | 23 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 4829 | 4840 | 23 | 4880 | 4824 | 60 | 23 | | | 76 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 4829 | 4840 | 23 | 4880 | 4824 | 60 | 23 | | | 76 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 0 | 95 | 0 | 0 | 100 | 0 | | | 100 | | |
| cM capacity (veh/h) | 0 | 0 | 1054 | 0 | 0 | 1005 | 1592 | | | 1523 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 61 | 39 | 2445 | 25 |
| Volume Left | 3 | 32 | 2368 | 2 |
| Volume Right | 54 | 2 | 32 | 0 |
| cSH | 0 | 0 | 1592 | 1523 |
| Volume to Capacity | Err | Err | 1.49 | 0.00 |
| Queue Length 95th (ft) | Err | Err | 2636 | 0 |
| Control Delay (s) | Err | Err | 233.3 | 0.7 |
| Lane LOS | F | F | F | A |
| Approach Delay (s) | Err | Err | 233.3 | 0.7 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 146.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 1532 | 0 | 13 | 0 | 4 | 27 | 8 | 5 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 1665 | 0 | 14 | 0 | 4 | 29 | 9 | 5 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 1665 | 14 | 4 | 29 | 14 |
| Volume Left (vph) | 0 | 1665 | 0 | 0 | 0 | 9 |
| Volume Right (vph) | 0 | 0 | 14 | 0 | 29 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.16 |
| Departure Headway (s) | 4.8 | 4.2 | 3.2 | 5.8 | 3.2 | 5.9 |
| Degree Utilization, x | 0.00 | 1.94 | 0.01 | 0.01 | 0.03 | 0.02 |
| Capacity (veh/h) | 764 | 865 | 1121 | 607 | 1121 | 597 |
| Control Delay (s) | 7.8 | 438.3 | 6.2 | 8.9 | 6.3 | 9.1 |
| Approach Delay (s) | 0.0 | 434.7 | | 6.6 | | 9.1 |
| Approach LOS | A | F | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 422.8 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 98.9% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 16 | 10 | 9 | 1529 | 17 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | |
| Frt | 0.94 | | 1.00 | 1.00 | 1.00 | |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | |
| Satd. Flow (prot) | 3442 | | 1770 | 3539 | 1770 | |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | |
| Satd. Flow (perm) | 3442 | | 1770 | 3539 | 1770 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 17 | 11 | 10 | 1662 | 18 | 0 |
| RTOR Reduction (vph) | 3 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 25 | 0 | 10 | 1662 | 18 | 0 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 40.6 | | 3.8 | 48.4 | 1.3 | |
| Effective Green, g (s) | 40.6 | | 3.8 | 48.4 | 1.3 | |
| Actuated g/C Ratio | 0.70 | | 0.07 | 0.84 | 0.02 | |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2421 | | 116 | 2968 | 39 | |
| v/s Ratio Prot | 0.01 | | 0.01 | c0.47 | c0.01 | |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.09 | 0.56 | 0.46 | |
| Uniform Delay, d1 | 2.6 | | 25.3 | 1.4 | 27.9 | |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.0 | | 0.3 | 0.8 | 8.4 | |
| Delay (s) | 2.6 | | 25.6 | 2.2 | 36.3 | |
| Level of Service | A | | C | A | D | |
| Approach Delay (s) | 2.6 | | | 2.3 | 36.3 | |
| Approach LOS | A | | | A | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.7 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 57.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 52.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 17 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 18 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 41 | 41 | 0 | 44 | 41 | 0 | 0 | | | 0 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 41 | 41 | 0 | 44 | 41 | 0 | 0 | | | 0 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 98 | 100 | 100 | 100 | 100 | 100 | 100 | | | 99 | | |
| cM capacity (veh/h) | 953 | 840 | 1085 | 945 | 840 | 1085 | 1623 | | | 1623 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 23 | 0 | 21 | 0 |
| Volume Left | 18 | 0 | 21 | 0 |
| Volume Right | 1 | 0 | 0 | 0 |
| cSH | 940 | 1700 | 1623 | 1700 |
| Volume to Capacity | 0.02 | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 1 | 0 |
| Control Delay (s) | 8.9 | 0.0 | 7.2 | 0.0 |
| Lane LOS | A | | A | |
| Approach Delay (s) | 8.9 | 0.0 | 7.2 | |
| Approach LOS | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8.1 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 760 | 0 | 4 | 7 | 0 | 5 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 826 | 0 | 4 | 8 | 0 | 5 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 826 | 0 | 4 | 8 | 0 | 5 |
| Volume Left (vph) | 826 | 0 | 4 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 8 | 0 | 5 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 5.1 | 4.5 | 6.9 | 5.7 | 5.0 | 4.4 |
| Degree Utilization, x | 1.16 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 |
| Capacity (veh/h) | 716 | 798 | 509 | 620 | 725 | 809 |
| Control Delay (s) | 107.5 | 6.3 | 8.8 | 7.6 | 6.8 | 6.2 |
| Approach Delay (s) | 107.5 | | 8.0 | | 6.2 | |
| Approach LOS | F | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 105.5 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 52.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 251 | 0 | 3 | 28 | 122 | 205 | 2 | 2476 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 273 | 0 | 3 | 30 | 133 | 223 | 2 | 2691 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 276 | | | | 386 | | | 2693 | | 0 | |
| Crossing Volume (veh/h) | 163 | | | | 2 | | | 303 | | 2966# | |
| High Capacity (veh/h) | 1219 | | | | 1382 | | | 1092 | | 115 | |
| High v/c (veh/h) | 0.23 | | | | 0.28 | | | 2.47 | | 0.00 | |
| Low Capacity (veh/h) | 1011 | | | | 1159 | | | 896 | | 73 | |
| Low v/c (veh/h) | 0.27 | | | | 0.33 | | | 3.01 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 2.47 | | |
| Maximum v/c Low | 3.01 | | |
| Intersection Capacity Utilization | 83.8% | ICU Level of Service | E |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | Yes |
| Volume (veh/h) | 295 | 14 | 41 | 0 | 18 | 222 | 121 | 189 | 18 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 321 | 15 | 45 | 0 | 20 | 241 | 132 | 205 | 20 | 0 |
| Approach Volume (veh/h) | 336 | | | | 20 | | 578 | | 20 | |
| Crossing Volume (veh/h) | 578 | | | | 582 | | 0 | | 709 | |
| High Capacity (veh/h) | 877 | | | | 874 | | 1385 | | 789 | |
| High v/c (veh/h) | 0.38 | | | | 0.02 | | 0.42 | | 0.02 | |
| Low Capacity (veh/h) | 704 | | | | 702 | | 1161 | | 627 | |
| Low v/c (veh/h) | 0.48 | | | | 0.03 | | 0.50 | | 0.03 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.42 | | |
| Maximum v/c Low | 0.50 | | |
| Intersection Capacity Utilization | 41.9% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 140 | 45 | 6 | 148 | 164 | 8 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 152 | 49 | 7 | 161 | 178 | 9 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 187 | | 532 | 178 | | |
| vC1, stage 1 conf vol | | | 178 | | | |
| vC2, stage 2 conf vol | | | 353 | | | |
| vCu, unblocked vol | 187 | | 532 | 178 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 89 | | 99 | 81 | | |
| cM capacity (veh/h) | 1387 | | 596 | 865 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 152 | 49 | 7 | 161 | 181 | 6 |
| Volume Left | 152 | 0 | 7 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 161 | 3 | 6 |
| cSH | 1387 | 1700 | 596 | 865 | 1700 | 1700 |
| Volume to Capacity | 0.11 | 0.03 | 0.01 | 0.19 | 0.11 | 0.00 |
| Queue Length 95th (ft) | 9 | 0 | 1 | 17 | 0 | 0 |
| Control Delay (s) | 7.9 | 0.0 | 11.1 | 10.1 | 0.0 | 0.0 |
| Lane LOS | A | | B | B | | |
| Approach Delay (s) | 6.0 | | 10.2 | | 0.0 | |
| Approach LOS | | | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.2 | | |
| Intersection Capacity Utilization | 30.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 42 | 31 | 79 | 2 | 3 | 72 |
| 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) | 46 | 34 | 86 | 2 | 3 | 78 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 88 | | | | 211 | 86 |
| vC1, stage 1 conf vol | | | | | 86 | |
| vC2, stage 2 conf vol | | | | | 125 | |
| vCu, unblocked vol | 88 | | | | 211 | 86 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 100 | 92 |
| cM capacity (veh/h) | 1508 | | | | 829 | 973 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 46 | 34 | 86 | 2 | 82 |
| Volume Left | 46 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 2 | 78 |
| cSH | 1508 | 1700 | 1700 | 1700 | 966 |
| Volume to Capacity | 0.03 | 0.02 | 0.05 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 7 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.1 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 4.3 | | 0.0 | | 9.1 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.3 | | |
| Intersection Capacity Utilization | 20.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 16 | 147 | 7 | 1 | 12 | 3 | 20 | 2 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.85 | | 1.00 | 0.98 | | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | | 3008 | | 1652 | 3480 | | | 1790 | 1583 | | 1837 | |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Satd. Flow (perm) | | 3008 | | 1652 | 3480 | | | 1863 | 1583 | | 1863 | |
| 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) | 0 | 0 | 17 | 160 | 8 | 1 | 13 | 3 | 22 | 2 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 160 | 9 | 0 | 0 | 16 | 4 | 0 | 7 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 22.1 | | 6.2 | 32.3 | | | 1.3 | 7.5 | | 1.3 | |
| Effective Green, g (s) | | 22.1 | | 6.2 | 32.3 | | | 1.3 | 7.5 | | 1.3 | |
| Actuated g/C Ratio | | 0.53 | | 0.15 | 0.78 | | | 0.03 | 0.18 | | 0.03 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1598 | | 246 | 2702 | | | 58 | 437 | | 58 | |
| v/s Ratio Prot | | c0.00 | | c0.10 | 0.00 | | | | 0.00 | | | |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | 0.00 | |
| v/c Ratio | | 0.01 | | 0.65 | 0.00 | | | 0.28 | 0.01 | | 0.12 | |
| Uniform Delay, d1 | | 4.6 | | 16.7 | 1.0 | | | 19.7 | 14.0 | | 19.6 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | 6.0 | 0.0 | | | 2.6 | 0.0 | | 0.9 | |
| Delay (s) | | 4.6 | | 22.7 | 1.0 | | | 22.3 | 14.0 | | 20.5 | |
| Level of Service | | A | | C | A | | | C | B | | C | |
| Approach Delay (s) | | 4.6 | | | 21.6 | | | 17.5 | | | 20.5 | |
| Approach LOS | | A | | | C | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.15 | | |
| Actuated Cycle Length (s) | 41.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 29.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 15 | 14 | 3 | 0 | 134 | 432 | 0 | 0 | 1 | 12 | 0 | 34 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 16 | 15 | 3 | 0 | 146 | 470 | 0 | 0 | 1 | 13 | 0 | 37 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 615 | | | 18 | | | 159 | 665 | 17 | 431 | 432 | 308 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 615 | | | 18 | | | 159 | 665 | 17 | 431 | 432 | 308 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 100 | 97 | 100 | 95 |
| cM capacity (veh/h) | 960 | | | 1597 | | | 739 | 373 | 1058 | 501 | 507 | 688 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 35 | 73 | 542 | 1 | 50 |
| Volume Left | 16 | 0 | 0 | 0 | 13 |
| Volume Right | 3 | 0 | 470 | 1 | 37 |
| cSH | 960 | 1597 | 1700 | 1058 | 627 |
| Volume to Capacity | 0.02 | 0.00 | 0.32 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 4.2 | 0.0 | 0.0 | 8.4 | 11.2 |
| Lane LOS | A | | | A | B |
| Approach Delay (s) | 4.2 | 0.0 | | 8.4 | 11.2 |
| Approach LOS | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 33.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 7 | 23 | 0 | 0 | 0 | 0 | 1513 | 559 | 5 | 0 | 20 |
| 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 |
| Hourly flow rate (vph) | 0 | 8 | 25 | 0 | 0 | 0 | 0 | 1645 | 608 | 5 | 0 | 22 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 16 | 17 | 1645 | 608 | 5 | 22 |
| Volume Left (vph) | 0 | 0 | 0 | 0 | 5 | 0 |
| Volume Right (vph) | 8 | 17 | 0 | 608 | 0 | 22 |
| Hadj (s) | -0.28 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 5.5 | 3.2 | 4.6 | 3.9 | 6.0 | 3.2 |
| Degree Utilization, x | 0.02 | 0.01 | 2.10 | 0.66 | 0.01 | 0.02 |
| Capacity (veh/h) | 647 | 1121 | 786 | 919 | 590 | 1121 |
| Control Delay (s) | 8.6 | 6.2 | 510.2 | 12.9 | 9.1 | 6.3 |
| Approach Delay (s) | 7.4 | | 376.0 | | 6.8 | |
| Approach LOS | A | | F | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 366.5 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 96.3% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 2 | 0 | 2058 | 3 | 3 | 0 | 3 | 21 | 3 | 1 | 12 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 2 | 0 | 2237 | 3 | 3 | 0 | 3 | 23 | 3 | 1 | 13 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 48 | 48 | 13 | 2283 | 46 | 24 | 13 | | | 26 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 48 | 48 | 13 | 2283 | 46 | 24 | 13 | | | 26 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 0 | 0 | 100 | 100 | 100 | | | 100 | | |
| cM capacity (veh/h) | 948 | 841 | 1067 | 0 | 843 | 1052 | 1605 | | | 1588 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 2239 | 7 | 29 | 14 |
| Volume Left | 2 | 3 | 3 | 1 |
| Volume Right | 2237 | 0 | 3 | 0 |
| cSH | 1067 | 0 | 1605 | 1588 |
| Volume to Capacity | 2.10 | Err | 0.00 | 0.00 |
| Queue Length 95th (ft) | 3801 | Err | 0 | 0 |
| Control Delay (s) | 509.0 | Err | 0.8 | 0.6 |
| Lane LOS | F | F | A | A |
| Approach Delay (s) | 509.0 | Err | 0.8 | 0.6 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 137.5% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 8 | 7 | 639 | 3 | 75 | 5 | 6 | 541 | 19 | 19 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 9 | 8 | 695 | 3 | 82 | 5 | 7 | 588 | 21 | 21 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 16 | 698 | 82 | 12 | 588 | 41 |
| Volume Left (vph) | 0 | 695 | 0 | 5 | 0 | 21 |
| Volume Right (vph) | 8 | 0 | 82 | 0 | 588 | 0 |
| Hadj (s) | -0.25 | 0.23 | -0.57 | 0.12 | -0.57 | 0.13 |
| Departure Headway (s) | 4.5 | 4.3 | 3.2 | 5.7 | 3.2 | 5.7 |
| Degree Utilization, x | 0.02 | 0.84 | 0.07 | 0.02 | 0.52 | 0.07 |
| Capacity (veh/h) | 762 | 698 | 1121 | 589 | 1117 | 596 |
| Control Delay (s) | 7.6 | 25.0 | 6.4 | 8.9 | 9.6 | 9.1 |
| Approach Delay (s) | 7.6 | 23.1 | | 9.6 | | 9.1 |
| Approach LOS | A | C | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 16.9 | | |
| Level of Service | C | | |
| Intersection Capacity Utilization | 57.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 390 | 28 | 456 | 629 | 81 | 816 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.99 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3621 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3621 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 424 | 30 | 496 | 684 | 88 | 887 |
| RTOR Reduction (vph) | 7 | 0 | 0 | 0 | 0 | 362 |
| Lane Group Flow (vph) | 447 | 0 | 496 | 684 | 88 | 525 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 13.3 | | 25.6 | 42.9 | 16.3 | 25.6 |
| Effective Green, g (s) | 13.3 | | 25.6 | 42.9 | 16.3 | 25.6 |
| Actuated g/C Ratio | 0.20 | | 0.38 | 0.64 | 0.24 | 0.38 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 716 | | 674 | 2259 | 429 | 603 |
| v/s Ratio Prot | c0.12 | | 0.28 | 0.19 | c0.05 | c0.33 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.62 | | 0.74 | 0.30 | 0.21 | 0.87 |
| Uniform Delay, d1 | 24.7 | | 17.9 | 5.4 | 20.3 | 19.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.7 | | 4.2 | 0.1 | 1.1 | 13.1 |
| Delay (s) | 26.4 | | 22.1 | 5.5 | 21.4 | 32.3 |
| Level of Service | C | | C | A | C | C |
| Approach Delay (s) | 26.4 | | | 12.5 | 31.4 | |
| Approach LOS | C | | | B | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 67.2 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 68.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 890 | 10 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 480 | 4 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 967 | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 522 | 4 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1050 | 1050 | 4 | 1055 | 1050 | 2 | 4 | | | 2 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1050 | 1050 | 4 | 1055 | 1050 | 2 | 4 | | | 2 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 93 | 100 | 100 | 100 | 100 | 100 | | | 68 | | |
| cM capacity (veh/h) | 154 | 154 | 1079 | 145 | 154 | 1082 | 1617 | | | 1620 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 978 | 2 | 522 | 4 |
| Volume Left | 967 | 0 | 522 | 0 |
| Volume Right | 0 | 0 | 0 | 0 |
| cSH | 154 | 1700 | 1620 | 1700 |
| Volume to Capacity | 6.36 | 0.00 | 0.32 | 0.00 |
| Queue Length 95th (ft) | Err | 0 | 35 | 0 |
| Control Delay (s) | Err | 0.0 | 8.3 | 0.0 |
| Lane LOS | F | | A | |
| Approach Delay (s) | Err | 0.0 | 8.2 | |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6495.7 | | |
| Intersection Capacity Utilization | 89.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 171 | 0 | 439 | 173 | 0 | 294 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 186 | 0 | 477 | 188 | 0 | 320 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 186 | 0 | 477 | 188 | 0 | 320 |
| Volume Left (vph) | 186 | 0 | 477 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 188 | 0 | 320 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 7.6 | 7.1 | 6.7 | 5.5 | 6.9 | 6.2 |
| Degree Utilization, x | 0.39 | 0.00 | 0.89 | 0.29 | 0.00 | 0.55 |
| Capacity (veh/h) | 459 | 501 | 477 | 632 | 516 | 547 |
| Control Delay (s) | 14.2 | 8.9 | 41.0 | 9.5 | 8.7 | 15.3 |
| Approach Delay (s) | 14.2 | | 32.1 | | 15.3 | |
| Approach LOS | B | | D | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 24.7 | | |
| Level of Service | C | | |
| Intersection Capacity Utilization | 40.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 248 | 0 | 27 | 68 | 1445 | 394 | 2 | 249 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 270 | 0 | 29 | 74 | 1571 | 428 | 2 | 271 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 299 | | | | 2073 | | | 273 | | 0 | |
| Crossing Volume (veh/h) | 1645# | | | | 2 | | | 343 | | 542 | |
| High Capacity (veh/h) | 364 | | | | 1382 | | | 1057 | | 902 | |
| High v/c (veh/h) | 0.82 | | | | 1.50 | | | 0.26 | | 0.00 | |
| Low Capacity (veh/h) | 266 | | | | 1159 | | | 865 | | 727 | |
| Low v/c (veh/h) | 1.13 | | | | 1.79 | | | 0.32 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 1.50 | | |
| Maximum v/c Low | 1.79 | | |
| Intersection Capacity Utilization | 79.4% | ICU Level of Service | D |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | | Yes |
| Volume (veh/h) | 1541 | 32 | 58 | 1 | 0 | 135 | 90 | 16 | 12 | 124 | 0 |
| 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 |
| Hourly flow rate (vph) | 1675 | 35 | 63 | 1 | 0 | 147 | 98 | 17 | 13 | 135 | 0 |
| Approach Volume (veh/h) | 1710 | | | | | 148 | | 128 | | 135 | |
| Crossing Volume (veh/h) | 129 | | | | | 1908# | | 1 | | 1825# | |
| High Capacity (veh/h) | 1252 | | | | | 291 | | 1383 | | 312 | |
| High v/c (veh/h) | 1.37 | | | | | 0.51 | | 0.09 | | 0.43 | |
| Low Capacity (veh/h) | 1040 | | | | | 207 | | 1160 | | 224 | |
| Low v/c (veh/h) | 1.64 | | | | | 0.72 | | 0.11 | | 0.60 | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Maximum v/c High | 1.37 | | | |
| Maximum v/c Low | 1.64 | | | |
| Intersection Capacity Utilization | 71.2% | ICU Level of Service | C | |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 273 | 115 | 3 | 135 | 65 | 13 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 297 | 125 | 3 | 147 | 71 | 14 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 85 | | 789 | 71 | | |
| vC1, stage 1 conf vol | | | 71 | | | |
| vC2, stage 2 conf vol | | | 718 | | | |
| vCu, unblocked vol | 85 | | 789 | 71 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 80 | | 99 | 85 | | |
| cM capacity (veh/h) | 1512 | | 377 | 992 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 297 | 125 | 3 | 147 | 75 | 9 |
| Volume Left | 297 | 0 | 3 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 147 | 5 | 9 |
| cSH | 1512 | 1700 | 377 | 992 | 1700 | 1700 |
| Volume to Capacity | 0.20 | 0.07 | 0.01 | 0.15 | 0.04 | 0.01 |
| Queue Length 95th (ft) | 18 | 0 | 1 | 13 | 0 | 0 |
| Control Delay (s) | 8.0 | 0.0 | 14.6 | 9.3 | 0.0 | 0.0 |
| Lane LOS | A | | B | A | | |
| Approach Delay (s) | 5.6 | | 9.4 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 5.7 | | |
| Intersection Capacity Utilization | 32.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 65 | 57 | 24 | 8 | 7 | 57 |
| 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) | 71 | 62 | 26 | 9 | 8 | 62 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 35 | | | | 229 | 26 |
| vC1, stage 1 conf vol | | | | | 26 | |
| vC2, stage 2 conf vol | | | | | 203 | |
| vCu, unblocked vol | 35 | | | | 229 | 26 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 96 | | | | 99 | 94 |
| cM capacity (veh/h) | 1577 | | | | 771 | 1050 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 71 | 62 | 26 | 9 | 70 |
| Volume Left | 71 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 9 | 62 |
| cSH | 1577 | 1700 | 1700 | 1700 | 1010 |
| Volume to Capacity | 0.04 | 0.04 | 0.02 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 7.4 | 0.0 | 0.0 | 0.0 | 8.8 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 3.9 | | 0.0 | | 8.8 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.8 | | |
| Intersection Capacity Utilization | 20.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 8 | 7 | 21 | 39 | 26 | 10 | 45 | 19 | 101 | 10 | 27 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.89 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3145 | | 1652 | 3389 | | | 1800 | 1583 | | 1837 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.88 | 1.00 |
| Satd. Flow (perm) | 1652 | 3145 | | 1652 | 3389 | | | 1428 | 1583 | | 1645 | 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) | 9 | 8 | 23 | 42 | 28 | 11 | 49 | 21 | 110 | 11 | 29 | 4 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 4 | 0 | 0 | 0 | 89 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 9 | 21 | 0 | 42 | 35 | 0 | 0 | 70 | 21 | 0 | 40 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 24.8 | | 3.9 | 28.0 | | | 4.8 | 8.7 | | 4.8 | 5.5 |
| Effective Green, g (s) | 0.7 | 24.8 | | 3.9 | 28.0 | | | 4.8 | 8.7 | | 4.8 | 5.5 |
| Actuated g/C Ratio | 0.02 | 0.55 | | 0.09 | 0.62 | | | 0.11 | 0.19 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1714 | | 141 | 2085 | | | 150 | 441 | | 173 | 330 |
| v/s Ratio Prot | 0.01 | 0.01 | | c0.03 | c0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.01 | | 0.02 | 0.00 |
| v/c Ratio | 0.36 | 0.01 | | 0.30 | 0.02 | | | 0.47 | 0.05 | | 0.23 | 0.00 |
| Uniform Delay, d1 | 22.2 | 4.7 | | 19.5 | 3.4 | | | 19.1 | 15.0 | | 18.7 | 17.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 8.7 | 0.0 | | 1.2 | 0.0 | | | 2.3 | 0.0 | | 0.7 | 0.0 |
| Delay (s) | 30.8 | 4.8 | | 20.7 | 3.4 | | | 21.4 | 15.1 | | 19.3 | 17.6 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 10.6 | | | 12.4 | | | 17.5 | | | 19.2 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 45.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 25.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 35 | 111 | 12 | 2 | 42 | 34 | 8 | 7 | 5 | 1056 | 3 | 59 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 38 | 121 | 13 | 2 | 46 | 37 | 9 | 8 | 5 | 1148 | 3 | 64 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 83 | | | 134 | | | 296 | 290 | 127 | 281 | 278 | 41 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 83 | | | 134 | | | 296 | 290 | 127 | 281 | 278 | 41 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 98 | 99 | 99 | 0 | 99 | 94 |
| cM capacity (veh/h) | 1513 | | | 1449 | | | 579 | 602 | 899 | 626 | 612 | 1021 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 172 | 25 | 60 | 22 | 1215 |
| Volume Left | 38 | 2 | 0 | 9 | 1148 |
| Volume Right | 13 | 0 | 37 | 5 | 64 |
| cSH | 1513 | 1449 | 1700 | 645 | 639 |
| Volume to Capacity | 0.03 | 0.00 | 0.04 | 0.03 | 1.90 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 3 | 1946 |
| Control Delay (s) | 1.8 | 0.7 | 0.0 | 10.8 | 427.7 |
| Lane LOS | A | A | | B | F |
| Approach Delay (s) | 1.8 | 0.2 | | 10.8 | 427.7 |
| Approach LOS | | | | B | F |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 348.4 | | |
| Intersection Capacity Utilization | 90.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 5 | 35 | 223 | 0 | 0 | 0 | 0 | 62 | 56 | 1127 | 0 | 37 |
| 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 |
| Hourly flow rate (vph) | 5 | 38 | 242 | 0 | 0 | 0 | 0 | 67 | 61 | 1225 | 0 | 40 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 124 | 162 | 67 | 61 | 1225 | 40 |
| Volume Left (vph) | 5 | 0 | 0 | 0 | 1225 | 0 |
| Volume Right (vph) | 81 | 162 | 0 | 61 | 0 | 40 |
| Hadj (s) | -0.35 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 4.8 | 3.2 | 6.6 | 5.9 | 4.7 | 3.2 |
| Degree Utilization, x | 0.17 | 0.14 | 0.12 | 0.10 | 1.60 | 0.04 |
| Capacity (veh/h) | 728 | 1121 | 532 | 594 | 760 | 1121 |
| Control Delay (s) | 8.8 | 6.7 | 9.3 | 8.4 | 288.1 | 6.3 |
| Approach Delay (s) | 7.6 | | 8.9 | | 279.1 | |
| Approach LOS | A | | A | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 212.3 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 82.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 5 | 9 | 26 | 49 | 4 | 2 | 1261 | 56 | 54 | 4 | 36 | 6 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 5 | 10 | 28 | 53 | 4 | 2 | 1371 | 61 | 59 | 4 | 39 | 7 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 2887 | 2912 | 42 | 2916 | 2886 | 90 | 46 | | | 120 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 2887 | 2912 | 42 | 2916 | 2886 | 90 | 46 | | | 120 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 0 | 0 | 97 | 0 | 0 | 100 | 12 | | | 100 | | |
| cM capacity (veh/h) | 0 | 2 | 1028 | 0 | 2 | 968 | 1562 | | | 1468 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 43 | 60 | 1490 | 50 |
| Volume Left | 5 | 53 | 1371 | 4 |
| Volume Right | 28 | 2 | 59 | 7 |
| cSH | 0 | 0 | 1562 | 1468 |
| Volume to Capacity | Err | Err | 0.88 | 0.00 |
| Queue Length 95th (ft) | Err | Err | 342 | 0 |
| Control Delay (s) | Err | Err | 20.5 | 0.7 |
| Lane LOS | F | F | C | A |
| Approach Delay (s) | Err | Err | 20.5 | 0.7 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 99.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 1372 | 0 | 14 | 0 | 7 | 18 | 10 | 5 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 1491 | 0 | 15 | 0 | 8 | 20 | 11 | 5 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 1491 | 15 | 8 | 20 | 16 |
| Volume Left (vph) | 0 | 1491 | 0 | 0 | 0 | 11 |
| Volume Right (vph) | 0 | 0 | 15 | 0 | 20 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.17 |
| Departure Headway (s) | 4.8 | 4.2 | 3.2 | 5.8 | 3.2 | 6.0 |
| Degree Utilization, x | 0.00 | 1.74 | 0.01 | 0.01 | 0.02 | 0.03 |
| Capacity (veh/h) | 760 | 859 | 1121 | 607 | 1121 | 595 |
| Control Delay (s) | 7.8 | 351.5 | 6.2 | 8.9 | 6.3 | 9.1 |
| Approach Delay (s) | 0.0 | 348.0 | | 7.0 | | 9.1 |
| Approach LOS | A | F | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 338.4 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 90.2% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 11 | 11 | 10 | 1371 | 11 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.92 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 12 | 12 | 11 | 1490 | 12 | 12 |
| RTOR Reduction (vph) | 4 | 0 | 0 | 0 | 0 | 11 |
| Lane Group Flow (vph) | 20 | 0 | 11 | 1490 | 12 | 1 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 33.7 | | 3.4 | 41.1 | 1.4 | 3.4 |
| Effective Green, g (s) | 33.7 | | 3.4 | 41.1 | 1.4 | 3.4 |
| Actuated g/C Ratio | 0.67 | | 0.07 | 0.81 | 0.03 | 0.07 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 2257 | | 119 | 2880 | 49 | 106 |
| v/s Ratio Prot | 0.01 | | 0.01 | c0.42 | c0.01 | 0.00 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.09 | 0.52 | 0.24 | 0.01 |
| Uniform Delay, d1 | 2.8 | | 22.1 | 1.5 | 24.0 | 22.0 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.0 | | 0.3 | 0.7 | 2.6 | 0.0 |
| Delay (s) | 2.8 | | 22.4 | 2.2 | 26.6 | 22.0 |
| Level of Service | A | | C | A | C | C |
| Approach Delay (s) | 2.8 | | | 2.3 | 24.3 | |
| Approach LOS | A | | | A | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.7 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 50.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 47.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 46 | 46 | 0 | 46 | 46 | 0 | 0 | | | 0 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 46 | 46 | 0 | 46 | 46 | 0 | 0 | | | 0 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 97 | 100 | 100 | 100 | 100 | 100 | 100 | | | 99 | | |
| cM capacity (veh/h) | 946 | 834 | 1085 | 944 | 834 | 1085 | 1623 | | | 1623 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 25 | 0 | 23 | 0 |
| Volume Left | 24 | 0 | 23 | 0 |
| Volume Right | 0 | 0 | 0 | 0 |
| cSH | 940 | 1700 | 1623 | 1700 |
| Volume to Capacity | 0.03 | 0.00 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 1 | 0 |
| Control Delay (s) | 8.9 | 0.0 | 7.2 | 0.0 |
| Lane LOS | A | | A | |
| Approach Delay (s) | 8.9 | 0.0 | 7.2 | |
| Approach LOS | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 8.1 | | |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 649 | 0 | 11 | 6 | 0 | 28 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 705 | 0 | 12 | 7 | 0 | 30 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 705 | 0 | 12 | 7 | 0 | 30 |
| Volume Left (vph) | 705 | 0 | 12 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 7 | 0 | 30 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 5.1 | 4.6 | 6.9 | 5.8 | 5.1 | 4.4 |
| Degree Utilization, x | 1.00 | 0.00 | 0.02 | 0.01 | 0.00 | 0.04 |
| Capacity (veh/h) | 705 | 790 | 505 | 614 | 720 | 802 |
| Control Delay (s) | 55.7 | 6.4 | 8.9 | 7.6 | 6.9 | 6.4 |
| Approach Delay (s) | 55.7 | | 8.5 | | 6.4 | |
| Approach LOS | F | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 52.6 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 46.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 276 | 0 | 4 | 27 | 59 | 176 | 0 | 2206 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 300 | 0 | 4 | 29 | 64 | 191 | 0 | 2398 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 304 | | | | 285 | | | 2398 | | 0 | |
| Crossing Volume (veh/h) | 93 | | | | 0 | | | 329 | | 2698# | |
| High Capacity (veh/h) | 1287 | | | | 1385 | | | 1069 | | 146 | |
| High v/c (veh/h) | 0.24 | | | | 0.21 | | | 2.24 | | 0.00 | |
| Low Capacity (veh/h) | 1073 | | | | 1161 | | | 876 | | 95 | |
| Low v/c (veh/h) | 0.28 | | | | 0.25 | | | 2.74 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 2.24 | | |
| Maximum v/c Low | 2.74 | | |
| Intersection Capacity Utilization | 75.6% | ICU Level of Service | D |

# Crossing flow exceeds 1200, method is not applicable

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | Yes |
| Volume (veh/h) | 204 | 5 | 18 | 0 | 27 | 202 | 109 | 164 | 12 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 222 | 5 | 20 | 0 | 29 | 220 | 118 | 178 | 13 | 0 |
| Approach Volume (veh/h) | 227 | | | | 29 | | 516 | | 13 | |
| Crossing Volume (veh/h) | 516 | | | | 454 | | 0 | | 565 | |
| High Capacity (veh/h) | 921 | | | | 968 | | 1385 | | 886 | |
| High v/c (veh/h) | 0.25 | | | | 0.03 | | 0.37 | | 0.01 | |
| Low Capacity (veh/h) | 744 | | | | 785 | | 1161 | | 712 | |
| Low v/c (veh/h) | 0.31 | | | | 0.04 | | 0.44 | | 0.02 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.37 | | |
| Maximum v/c Low | 0.44 | | |
| Intersection Capacity Utilization | 37.4% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 87 | 71 | 4 | 146 | 142 | 5 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 95 | 77 | 4 | 159 | 154 | 5 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 160 | | 421 | 154 | | |
| vC1, stage 1 conf vol | | | 154 | | | |
| vC2, stage 2 conf vol | | | 266 | | | |
| vCu, unblocked vol | 160 | | 421 | 154 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 93 | | 99 | 82 | | |
| cM capacity (veh/h) | 1419 | | 681 | 892 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 95 | 77 | 4 | 159 | 156 | 4 |
| Volume Left | 95 | 0 | 4 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 159 | 2 | 4 |
| cSH | 1419 | 1700 | 681 | 892 | 1700 | 1700 |
| Volume to Capacity | 0.07 | 0.05 | 0.01 | 0.18 | 0.09 | 0.00 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 16 | 0 | 0 |
| Control Delay (s) | 7.7 | 0.0 | 10.3 | 9.9 | 0.0 | 0.0 |
| Lane LOS | A | | B | A | | |
| Approach Delay (s) | 4.2 | | 9.9 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.7 | | |
| Intersection Capacity Utilization | 26.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 34 | 44 | 81 | 5 | 2 | 65 |
| 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) | 37 | 48 | 88 | 5 | 2 | 71 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 93 | | | | 210 | 88 |
| vC1, stage 1 conf vol | | | | | 88 | |
| vC2, stage 2 conf vol | | | | | 122 | |
| vCu, unblocked vol | 93 | | | | 210 | 88 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 100 | 93 |
| cM capacity (veh/h) | 1501 | | | | 834 | 970 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 37 | 48 | 88 | 5 | 73 |
| Volume Left | 37 | 0 | 0 | 0 | 2 |
| Volume Right | 0 | 0 | 0 | 5 | 71 |
| cSH | 1501 | 1700 | 1700 | 1700 | 966 |
| Volume to Capacity | 0.02 | 0.03 | 0.05 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 7.5 | 0.0 | 0.0 | 0.0 | 9.0 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 3.3 | | 0.0 | | 9.0 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.7 | | |
| Intersection Capacity Utilization | 19.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 3 | 9 | 119 | 4 | 1 | 18 | 0 | 19 | 0 | 3 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 0.88 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (prot) | | 3131 | | 1652 | 3433 | | | 1770 | 1583 | | 1863 | 1583 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 3131 | | 1652 | 3433 | | | 1863 | 1583 | | 1863 | 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) | 0 | 3 | 10 | 129 | 4 | 1 | 20 | 0 | 21 | 0 | 3 | 1 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 1 |
| Lane Group Flow (vph) | 0 | 8 | 0 | 129 | 5 | 0 | 0 | 20 | 3 | 0 | 3 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 25.7 | | 4.9 | 29.9 | | | 1.3 | 6.2 | | 1.3 | 2.0 |
| Effective Green, g (s) | | 25.7 | | 4.9 | 29.9 | | | 1.3 | 6.2 | | 1.3 | 2.0 |
| Actuated g/C Ratio | | 0.59 | | 0.11 | 0.68 | | | 0.03 | 0.14 | | 0.03 | 0.05 |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1832 | | 184 | 2338 | | | 55 | 367 | | 55 | 216 |
| v/s Ratio Prot | | c0.00 | | c0.08 | 0.00 | | | | 0.00 | | 0.00 | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | | 0.00 |
| v/c Ratio | | 0.00 | | 0.70 | 0.00 | | | 0.36 | 0.01 | | 0.05 | 0.00 |
| Uniform Delay, d1 | | 3.8 | | 18.8 | 2.2 | | | 20.9 | 16.2 | | 20.7 | 20.0 |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.0 | | 11.4 | 0.0 | | | 4.1 | 0.0 | | 0.4 | 0.0 |
| Delay (s) | | 3.8 | | 30.2 | 2.2 | | | 25.0 | 16.2 | | 21.1 | 20.0 |
| Level of Service | | A | | C | A | | | C | B | | C | B |
| Approach Delay (s) | | 3.8 | | | 29.2 | | | 20.5 | | | 20.8 | |
| Approach LOS | | A | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.13 | | |
| Actuated Cycle Length (s) | 43.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 27.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 12 | 13 | 1 | 1 | 111 | 374 | 1 | 0 | 0 | 5 | 0 | 20 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 13 | 14 | 1 | 1 | 121 | 407 | 1 | 0 | 0 | 5 | 0 | 22 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 527 | | | 15 | | | 125 | 570 | 15 | 367 | 367 | 264 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 527 | | | 15 | | | 125 | 570 | 15 | 367 | 367 | 264 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 99 | 100 | 97 |
| cM capacity (veh/h) | 1036 | | | 1601 | | | 803 | 424 | 1061 | 559 | 553 | 735 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 28 | 61 | 467 | 1 | 27 |
| Volume Left | 13 | 1 | 0 | 1 | 5 |
| Volume Right | 1 | 0 | 407 | 0 | 22 |
| cSH | 1036 | 1601 | 1700 | 803 | 691 |
| Volume to Capacity | 0.01 | 0.00 | 0.27 | 0.00 | 0.04 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 3 |
| Control Delay (s) | 4.0 | 0.1 | 0.0 | 9.5 | 10.4 |
| Lane LOS | A | A | | A | B |
| Approach Delay (s) | 4.0 | 0.0 | | 9.5 | 10.4 |
| Approach LOS | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 25.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 3 | 8 | 26 | 0 | 0 | 0 | 0 | 1301 | 477 | 6 | 0 | 7 |
| 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 |
| Hourly flow rate (vph) | 3 | 9 | 28 | 0 | 0 | 0 | 0 | 1414 | 518 | 7 | 0 | 8 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 21 | 19 | 1414 | 518 | 7 | 8 |
| Volume Left (vph) | 3 | 0 | 0 | 0 | 7 | 0 |
| Volume Right (vph) | 9 | 19 | 0 | 518 | 0 | 8 |
| Hadj (s) | -0.20 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 5.6 | 3.2 | 4.6 | 3.9 | 6.0 | 3.2 |
| Degree Utilization, x | 0.03 | 0.02 | 1.81 | 0.56 | 0.01 | 0.01 |
| Capacity (veh/h) | 638 | 1121 | 789 | 913 | 589 | 1121 |
| Control Delay (s) | 8.7 | 6.3 | 382.8 | 10.7 | 9.1 | 6.2 |
| Approach Delay (s) | 7.6 | | 282.9 | | 7.5 | |
| Approach LOS | A | | F | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 275.4 | | |
| Level of Service | F | | |
| Intersection Capacity Utilization | 85.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 1 | 0 | 1767 | 4 | 0 | 0 | 11 | 18 | 2 | 0 | 7 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 1 | 0 | 1921 | 4 | 0 | 0 | 12 | 20 | 2 | 0 | 8 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 52 | 53 | 8 | 1973 | 52 | 21 | 8 | | | 22 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 52 | 53 | 8 | 1973 | 52 | 21 | 8 | | | 22 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 0 | 0 | 100 | 100 | 99 | | | 100 | | |
| cM capacity (veh/h) | 941 | 832 | 1075 | 0 | 833 | 1057 | 1613 | | | 1594 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 1922 | 4 | 34 | 8 |
| Volume Left | 1 | 4 | 12 | 0 |
| Volume Right | 1921 | 0 | 2 | 0 |
| cSH | 1074 | 0 | 1613 | 1594 |
| Volume to Capacity | 1.79 | Err | 0.01 | 0.00 |
| Queue Length 95th (ft) | 2808 | Err | 1 | 0 |
| Control Delay (s) | 370.6 | Err | 2.6 | 0.0 |
| Lane LOS | F | F | A | |
| Approach Delay (s) | 370.6 | Err | 2.6 | 0.0 |
| Approach LOS | F | F | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | Err | | |
| Intersection Capacity Utilization | 124.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 0 | 0 | 0 | 205 | 0 | 93 | 0 | 14 | 131 | 31 | 24 | 0 |
| 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 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 223 | 0 | 101 | 0 | 15 | 142 | 34 | 26 | 0 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | NB 2 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 0 | 223 | 101 | 15 | 142 | 60 |
| Volume Left (vph) | 0 | 223 | 0 | 0 | 0 | 34 |
| Volume Right (vph) | 0 | 0 | 101 | 0 | 142 | 0 |
| Hadj (s) | 0.00 | 0.23 | -0.57 | 0.03 | -0.57 | 0.15 |
| Departure Headway (s) | 4.3 | 4.3 | 3.2 | 4.5 | 3.2 | 4.6 |
| Degree Utilization, x | 0.00 | 0.27 | 0.09 | 0.02 | 0.13 | 0.08 |
| Capacity (veh/h) | 816 | 820 | 1121 | 747 | 1121 | 742 |
| Control Delay (s) | 7.3 | 8.9 | 6.5 | 7.6 | 6.7 | 8.0 |
| Approach Delay (s) | 0.0 | 8.1 | | 6.8 | | 8.0 |
| Approach LOS | A | A | | A | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.7 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 27.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 105 | 11 | 76 | 210 | 91 | 227 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.99 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3605 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3605 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 114 | 12 | 83 | 228 | 99 | 247 |
| RTOR Reduction (vph) | 10 | 0 | 0 | 0 | 0 | 211 |
| Lane Group Flow (vph) | 116 | 0 | 83 | 228 | 99 | 36 |
| Turn Type | NA | | Prot | NA | NA | Over |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 5.5 | | 6.0 | 15.5 | 17.6 | 6.0 |
| Effective Green, g (s) | 5.5 | | 6.0 | 15.5 | 17.6 | 6.0 |
| Actuated g/C Ratio | 0.13 | | 0.15 | 0.38 | 0.43 | 0.15 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 482 | | 258 | 1334 | 757 | 231 |
| v/s Ratio Prot | 0.03 | | c0.05 | c0.06 | c0.06 | 0.02 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.24 | | 0.32 | 0.17 | 0.13 | 0.16 |
| Uniform Delay, d1 | 15.9 | | 15.7 | 8.5 | 7.1 | 15.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.3 | | 0.7 | 0.1 | 0.4 | 0.3 |
| Delay (s) | 16.2 | | 16.5 | 8.6 | 7.5 | 15.7 |
| Level of Service | B | | B | A | A | B |
| Approach Delay (s) | 16.2 | | | 10.7 | 13.3 | |
| Approach LOS | B | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.19 | | |
| Actuated Cycle Length (s) | 41.1 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 24.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 318 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 86 | 1 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 346 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 93 | 1 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | 394 | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 189 | 189 | 1 | 190 | 189 | 1 | 1 | | | 1 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 189 | 189 | 1 | 190 | 189 | 1 | 1 | | | 1 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 53 | 100 | 100 | 100 | 100 | 100 | 100 | | | 94 | | |
| cM capacity (veh/h) | 738 | 665 | 1083 | 734 | 665 | 1084 | 1622 | | | 1622 | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 348 | 1 | 93 | 1 |
| Volume Left | 346 | 0 | 93 | 0 |
| Volume Right | 1 | 1 | 0 | 0 |
| cSH | 738 | 1700 | 1622 | 1700 |
| Volume to Capacity | 0.47 | 0.00 | 0.06 | 0.00 |
| Queue Length 95th (ft) | 64 | 0 | 5 | 0 |
| Control Delay (s) | 14.1 | 0.0 | 7.4 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 14.1 | 0.0 | 7.3 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 12.6 | | |
| Intersection Capacity Utilization | 35.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Stop | | Stop | |
| Volume (vph) | 67 | 0 | 106 | 45 | 0 | 88 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 73 | 0 | 115 | 49 | 0 | 96 |

| Direction, Lane # | NB 1 | NB 2 | SE 1 | SE 2 | SW 1 | SW 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 73 | 0 | 115 | 49 | 0 | 96 |
| Volume Left (vph) | 73 | 0 | 115 | 0 | 0 | 0 |
| Volume Right (vph) | 0 | 0 | 0 | 49 | 0 | 96 |
| Hadj (s) | 0.53 | 0.00 | 0.53 | -0.67 | 0.00 | -0.67 |
| Departure Headway (s) | 5.5 | 5.0 | 5.5 | 4.3 | 5.0 | 4.3 |
| Degree Utilization, x | 0.11 | 0.00 | 0.17 | 0.06 | 0.00 | 0.12 |
| Capacity (veh/h) | 625 | 709 | 631 | 807 | 710 | 793 |
| Control Delay (s) | 8.0 | 6.8 | 8.4 | 6.3 | 6.8 | 6.7 |
| Approach Delay (s) | 8.0 | | 7.8 | | 6.7 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.5 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 16.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | | | | | | | | | Yes |
| Volume (veh/h) | 84 | 0 | 2 | 92 | 61 | 191 | 0 | 252 | 0 | 0 | 0 |
| 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 |
| Hourly flow rate (vph) | 91 | 0 | 2 | 100 | 66 | 208 | 0 | 274 | 0 | 0 | 0 |
| Approach Volume (veh/h) | 93 | | | | 374 | | | 274 | | 0 | |
| Crossing Volume (veh/h) | 166 | | | | 0 | | | 191 | | 365 | |
| High Capacity (veh/h) | 1216 | | | | 1385 | | | 1192 | | 1039 | |
| High v/c (veh/h) | 0.08 | | | | 0.27 | | | 0.23 | | 0.00 | |
| Low Capacity (veh/h) | 1008 | | | | 1161 | | | 986 | | 849 | |
| Low v/c (veh/h) | 0.09 | | | | 0.32 | | | 0.28 | | 0.00 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.27 | | |
| Maximum v/c Low | 0.32 | | |
| Intersection Capacity Utilization | 30.8% | ICU Level of Service | A |

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Right Turn Channelized | | | Yes | | | | | | | | Yes |
| Volume (veh/h) | 226 | 24 | 37 | 2 | 0 | 82 | 61 | 19 | 23 | 42 | 1 |
| 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 |
| Hourly flow rate (vph) | 246 | 26 | 40 | 2 | 0 | 89 | 66 | 21 | 25 | 46 | 1 |
| Approach Volume (veh/h) | 272 | | | | | 91 | | 112 | | 46 | |
| Crossing Volume (veh/h) | 114 | | | | | 358 | | 2 | | 359 | |
| High Capacity (veh/h) | 1267 | | | | | 1046 | | 1382 | | 1045 | |
| High v/c (veh/h) | 0.21 | | | | | 0.09 | | 0.08 | | 0.04 | |
| Low Capacity (veh/h) | 1054 | | | | | 854 | | 1159 | | 854 | |
| Low v/c (veh/h) | 0.26 | | | | | 0.11 | | 0.10 | | 0.05 | |

| Intersection Summary | | | |
|---|---|---|---|
| Maximum v/c High | 0.21 | | |
| Maximum v/c Low | 0.26 | | |
| Intersection Capacity Utilization | 31.0% | ICU Level of Service | A |

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 40 | 101 | 2 | 29 | 50 | 2 |
| Sign Control | Free | | Stop | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 43 | 110 | 2 | 32 | 54 | 2 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | TWLTL | | | | TWLTL | |
| Median storage veh) | 2 | | | | 2 | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 57 | | 251 | 54 | | |
| vC1, stage 1 conf vol | | | 54 | | | |
| vC2, stage 2 conf vol | | | 197 | | | |
| vCu, unblocked vol | 57 | | 251 | 54 | | |
| tC, single (s) | 4.1 | | 6.4 | 6.2 | | |
| tC, 2 stage (s) | | | 5.4 | | | |
| tF (s) | 2.2 | | 3.5 | 3.3 | | |
| p0 queue free % | 97 | | 100 | 97 | | |
| cM capacity (veh/h) | 1548 | | 785 | 1013 | | |

| Direction, Lane # | EB 1 | EB 2 | SB 1 | SB 2 | NW 1 | NW 2 |
|---|---|---|---|---|---|---|
| Volume Total | 43 | 110 | 2 | 32 | 55 | 1 |
| Volume Left | 43 | 0 | 2 | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 | 32 | 1 | 1 |
| cSH | 1548 | 1700 | 785 | 1013 | 1700 | 1700 |
| Volume to Capacity | 0.03 | 0.06 | 0.00 | 0.03 | 0.03 | 0.00 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 2 | 0 | 0 |
| Control Delay (s) | 7.4 | 0.0 | 9.6 | 8.7 | 0.0 | 0.0 |
| Lane LOS | A | | A | A | | |
| Approach Delay (s) | 2.1 | | 8.7 | | 0.0 | |
| Approach LOS | | | A | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.5 | | |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 38 | 66 | 36 | 3 | 1 | 16 |
| 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) | 41 | 72 | 39 | 3 | 1 | 17 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | TWLTL | TWLTL | | | |
| Median storage veh) | | 2 | 2 | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 42 | | | | 193 | 39 |
| vC1, stage 1 conf vol | | | | | 39 | |
| vC2, stage 2 conf vol | | | | | 154 | |
| vCu, unblocked vol | 42 | | | | 193 | 39 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | 5.4 | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 100 | 98 |
| cM capacity (veh/h) | 1567 | | | | 824 | 1032 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 41 | 72 | 39 | 3 | 18 |
| Volume Left | 41 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 3 | 17 |
| cSH | 1567 | 1700 | 1700 | 1700 | 1017 |
| Volume to Capacity | 0.03 | 0.04 | 0.02 | 0.00 | 0.02 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 1 |
| Control Delay (s) | 7.4 | 0.0 | 0.0 | 0.0 | 8.6 |
| Lane LOS | A | | | | A |
| Approach Delay (s) | 2.7 | | 0.0 | | 8.6 |
| Approach LOS | | | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.7 | | |
| Intersection Capacity Utilization | 18.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 11 | 17 | 40 | 15 | 4 | 54 | 17 | 45 | 6 | 5 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.91 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.97 | 1.00 |
| Satd. Flow (prot) | 1652 | 3221 | | 1652 | 3433 | | | 1794 | 1583 | | 1810 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.78 | 1.00 |
| Satd. Flow (perm) | 1652 | 3221 | | 1652 | 3433 | | | 1432 | 1583 | | 1452 | 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) | 5 | 12 | 18 | 43 | 16 | 4 | 59 | 18 | 49 | 7 | 5 | 4 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 41 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 5 | 22 | 0 | 43 | 18 | 0 | 0 | 77 | 8 | 0 | 12 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 25.6 | | 2.8 | 27.7 | | | 4.9 | 7.7 | | 4.9 | 5.6 |
| Effective Green, g (s) | 0.7 | 25.6 | | 2.8 | 27.7 | | | 4.9 | 7.7 | | 4.9 | 5.6 |
| Actuated g/C Ratio | 0.02 | 0.57 | | 0.06 | 0.61 | | | 0.11 | 0.17 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1820 | | 102 | 2099 | | | 154 | 408 | | 157 | 335 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.03 | 0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.00 | | 0.01 | 0.00 |
| v/c Ratio | 0.20 | 0.01 | | 0.42 | 0.01 | | | 0.50 | 0.02 | | 0.08 | 0.00 |
| Uniform Delay, d1 | 22.0 | 4.3 | | 20.5 | 3.4 | | | 19.0 | 15.7 | | 18.2 | 17.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.9 | 0.0 | | 2.8 | 0.0 | | | 2.5 | 0.0 | | 0.2 | 0.0 |
| Delay (s) | 25.9 | 4.3 | | 23.3 | 3.4 | | | 21.6 | 15.7 | | 18.4 | 17.4 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 7.4 | | | 17.0 | | | 19.3 | | | 18.1 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 45.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 26.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 53 | 47 | 4 | 2 | 24 | 43 | 2 | 1 | 2 | 7 | 1 | 44 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 58 | 51 | 4 | 2 | 26 | 47 | 2 | 1 | 2 | 8 | 1 | 48 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 1295 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 73 | | | 55 | | | 234 | 246 | 53 | 225 | 224 | 36 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 73 | | | 55 | | | 234 | 246 | 53 | 225 | 224 | 36 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 100 | 99 | 100 | 95 |
| cM capacity (veh/h) | 1525 | | | 1548 | | | 647 | 630 | 1003 | 688 | 647 | 1028 |

| Direction, Lane # | EB 1 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|
| Volume Total | 113 | 15 | 60 | 5 | 57 |
| Volume Left | 58 | 2 | 0 | 2 | 8 |
| Volume Right | 4 | 0 | 47 | 2 | 48 |
| cSH | 1525 | 1548 | 1700 | 749 | 954 |
| Volume to Capacity | 0.04 | 0.00 | 0.04 | 0.01 | 0.06 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 1 | 5 |
| Control Delay (s) | 3.9 | 1.1 | 0.0 | 9.8 | 9.0 |
| Lane LOS | A | A | | A | A |
| Approach Delay (s) | 3.9 | 0.2 | | 9.8 | 9.0 |
| Approach LOS | | | | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 4.1 | | |
| Intersection Capacity Utilization | 22.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | Stop | | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 3 | 18 | 40 | 0 | 0 | 0 | 0 | 112 | 58 | 22 | 0 | 21 |
| 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 |
| Hourly flow rate (vph) | 3 | 20 | 43 | 0 | 0 | 0 | 0 | 122 | 63 | 24 | 0 | 23 |

| Direction, Lane # | WB 1 | WB 2 | SB 1 | SB 2 | SE 1 | SE 2 |
|---|---|---|---|---|---|---|
| Volume Total (vph) | 37 | 29 | 122 | 63 | 24 | 23 |
| Volume Left (vph) | 3 | 0 | 0 | 0 | 24 | 0 |
| Volume Right (vph) | 14 | 29 | 0 | 63 | 0 | 23 |
| Hadj (s) | -0.18 | -0.57 | 0.03 | -0.67 | 0.23 | -0.57 |
| Departure Headway (s) | 4.2 | 3.2 | 4.7 | 4.0 | 4.6 | 3.2 |
| Degree Utilization, x | 0.04 | 0.03 | 0.16 | 0.07 | 0.03 | 0.02 |
| Capacity (veh/h) | 824 | 1121 | 753 | 883 | 753 | 1121 |
| Control Delay (s) | 7.3 | 6.3 | 7.4 | 6.1 | 7.7 | 6.3 |
| Approach Delay (s) | 6.9 | | 6.9 | | 7.0 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 22.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 3 | 145 | 6 | 2 | 3 | 15 | 36 | 11 | 0 | 18 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| 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 |
| Hourly flow rate (vph) | 0 | 3 | 158 | 7 | 2 | 3 | 16 | 39 | 12 | 0 | 20 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 102 | 103 | 20 | 257 | 97 | 45 | 20 | | | 51 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 102 | 103 | 20 | 257 | 97 | 45 | 20 | | | 51 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 100 | 100 | 85 | 99 | 100 | 100 | 99 | | | 100 | | |
| cM capacity (veh/h) | 868 | 779 | 1058 | 586 | 785 | 1025 | 1597 | | | 1555 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 161 | 12 | 67 | 20 |
| Volume Left | 0 | 7 | 16 | 0 |
| Volume Right | 158 | 3 | 12 | 0 |
| cSH | 1051 | 700 | 1597 | 1555 |
| Volume to Capacity | 0.15 | 0.02 | 0.01 | 0.00 |
| Queue Length 95th (ft) | 13 | 1 | 1 | 0 |
| Control Delay (s) | 9.0 | 10.2 | 1.8 | 0.0 |
| Lane LOS | A | B | A | |
| Approach Delay (s) | 9.0 | 10.2 | 1.8 | 0.0 |
| Approach LOS | A | B | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 6.5 | | |
| Intersection Capacity Utilization | 25.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

# FUTURE (2013) WITH PROJECT

# WITH MITIGATION

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 2 | 2 | 495 | 3 | 52 | 2 | 16 | 189 | 34 | 51 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.93 | | | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | | 0.95 | 1.00 | | 0.99 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 1737 | | | 1775 | 1794 | | 1853 | 1636 | | 2069 | |
| Flt Permitted | | 1.00 | | | 0.73 | 1.00 | | 0.99 | 1.00 | | 0.91 | |
| Satd. Flow (perm) | | 1737 | | | 1351 | 1794 | | 1836 | 1636 | | 1919 | |
| 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) | 0 | 2 | 2 | 538 | 3 | 57 | 2 | 17 | 205 | 37 | 55 | 0 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 0 | 28 | 0 | 0 | 130 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 3 | 0 | 0 | 541 | 29 | 0 | 19 | 75 | 0 | 92 | 0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | 30.1 | | | 30.1 | 30.1 | | 21.9 | 21.9 | | 21.9 | |
| Effective Green, g (s) | | 30.1 | | | 30.1 | 30.1 | | 21.9 | 21.9 | | 21.9 | |
| Actuated g/C Ratio | | 0.50 | | | 0.50 | 0.50 | | 0.36 | 0.36 | | 0.36 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 871 | | | 677 | 899 | | 670 | 597 | | 700 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.40 | 0.02 | | 0.01 | 0.05 | | c0.05 | |
| v/c Ratio | | 0.00 | | | 0.80 | 0.03 | | 0.03 | 0.13 | | 0.13 | |
| Uniform Delay, d1 | | 7.5 | | | 12.4 | 7.6 | | 12.2 | 12.7 | | 12.7 | |
| Progression Factor | | 1.00 | | | 1.69 | 0.11 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 6.5 | 0.0 | | 0.1 | 0.4 | | 0.4 | |
| Delay (s) | | 7.5 | | | 27.5 | 0.9 | | 12.3 | 13.1 | | 13.1 | |
| Level of Service | | A | | | C | A | | B | B | | B | |
| Approach Delay (s) | | 7.5 | | | 25.0 | | | 13.0 | | | 13.1 | |
| Approach LOS | | A | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 20.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 52.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 98 | 28 | 228 | 501 | 51 | 324 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.97 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3537 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3537 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 107 | 30 | 248 | 545 | 55 | 352 |
| RTOR Reduction (vph) | 25 | 0 | 0 | 0 | 0 | 62 |
| Lane Group Flow (vph) | 112 | 0 | 248 | 545 | 55 | 290 |
| Turn Type | NA | | Prot | NA | NA | pm+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 3 |
| Permitted Phases | | | | | | 2 |
| Actuated Green, G (s) | 9.2 | | 22.9 | 36.1 | 75.9 | 98.8 |
| Effective Green, g (s) | 9.2 | | 22.9 | 36.1 | 75.9 | 98.8 |
| Actuated g/C Ratio | 0.08 | | 0.19 | 0.30 | 0.63 | 0.82 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 271 | | 337 | 1064 | 1119 | 1356 |
| v/s Ratio Prot | 0.03 | | c0.14 | c0.15 | 0.03 | c0.04 |
| v/s Ratio Perm | | | | | | 0.14 |
| v/c Ratio | 0.41 | | 0.74 | 0.51 | 0.05 | 0.21 |
| Uniform Delay, d1 | 52.8 | | 45.7 | 34.7 | 8.4 | 2.3 |
| Progression Factor | 1.01 | | 1.00 | 1.00 | 0.03 | 0.82 |
| Incremental Delay, d2 | 1.0 | | 8.1 | 0.4 | 0.1 | 0.1 |
| Delay (s) | 54.6 | | 53.8 | 35.1 | 0.3 | 1.9 |
| Level of Service | D | | D | D | A | A |
| Approach Delay (s) | 54.6 | | | 40.9 | 1.7 | |
| Approach LOS | D | | | D | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.36 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 30.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 365 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 267 | 1 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | | | | | | 0.86 | | 1.00 | 1.00 | |
| Flt Protected | | 0.95 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1834 | | | | | | 1826 | | 1770 | 1863 | |
| Flt Permitted | | 0.95 | | | | | | 1.00 | | 0.76 | 1.00 | |
| Satd. Flow (perm) | | 1834 | | | | | | 1826 | | 1410 | 1863 | |
| 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) | 397 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 290 | 1 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 399 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 290 | 1 | 0 |
| Turn Type | Perm | NA | | | | | | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 32.7 | | | | | | 79.3 | | 79.3 | 79.3 | |
| Effective Green, g (s) | | 32.7 | | | | | | 79.3 | | 79.3 | 79.3 | |
| Actuated g/C Ratio | | 0.27 | | | | | | 0.66 | | 0.66 | 0.66 | |
| Clearance Time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 499 | | | | | | 1206 | | 931 | 1231 | |
| v/s Ratio Prot | | | | | | | | 0.00 | | | 0.00 | |
| v/s Ratio Perm | | 0.22 | | | | | | | | c0.21 | | |
| v/c Ratio | | 0.80 | | | | | | 0.00 | | 0.31 | 0.00 | |
| Uniform Delay, d1 | | 40.6 | | | | | | 6.9 | | 8.7 | 6.9 | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | 0.33 | 0.26 | |
| Incremental Delay, d2 | | 8.7 | | | | | | 0.0 | | 0.8 | 0.0 | |
| Delay (s) | | 49.3 | | | | | | 6.9 | | 3.7 | 1.8 | |
| Level of Service | | D | | | | | | A | | A | A | |
| Approach Delay (s) | | 49.3 | | | 0.0 | | | 6.9 | | | 3.7 | |
| Approach LOS | | D | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.1 | 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) | 8.0 |
| Intersection Capacity Utilization | 48.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 217 | 0 | 120 | 129 | 0 | 137 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 236 | 0 | 130 | 140 | 0 | 149 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 48 | 0 | 130 |
| Lane Group Flow (vph) | 236 | 0 | 130 | 92 | 0 | 19 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 23.6 | | 23.6 | 23.6 | | 4.5 |
| Effective Green, g (s) | 23.6 | | 23.6 | 23.6 | | 4.5 |
| Actuated g/C Ratio | 0.65 | | 0.65 | 0.65 | | 0.12 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2244 | | 1157 | 1821 | | 201 |
| v/s Ratio Prot | 0.07 | | c0.07 | | | |
| v/s Ratio Perm | | | | 0.03 | | c0.01 |
| v/c Ratio | 0.11 | | 0.11 | 0.05 | | 0.09 |
| Uniform Delay, d1 | 2.3 | | 2.3 | 2.2 | | 14.0 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.2 | 0.1 | | 0.2 |
| Delay (s) | 2.4 | | 2.5 | 2.3 | | 14.2 |
| Level of Service | A | | A | A | | B |
| Approach Delay (s) | 2.4 | | 2.4 | | 14.2 | |
| Approach LOS | A | | A | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 5.1 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 36.1 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 19.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 308 | 0 | 5 | 114 | 2279 | 310 | 2 | 220 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 1.00 | | | | 0.98 | | | 1.00 | | | |
| Flt Protected | 0.95 | | | | 1.00 | | | 1.00 | | | |
| Satd. Flow (prot) | 3436 | | | | 3471 | | | 3538 | | | |
| Flt Permitted | 0.95 | | | | 0.92 | | | 0.87 | | | |
| Satd. Flow (perm) | 3436 | | | | 3188 | | | 3097 | | | |
| 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 |
| Adj. Flow (vph) | 335 | 0 | 5 | 124 | 2477 | 337 | 2 | 239 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 332 | 0 | 0 | 0 | 2930 | 0 | 0 | 241 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 15.1 | | | | 96.9 | | | 96.9 | | | |
| Effective Green, g (s) | 15.1 | | | | 96.9 | | | 96.9 | | | |
| Actuated g/C Ratio | 0.13 | | | | 0.81 | | | 0.81 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 432 | | | | 2574 | | | 2500 | | | |
| v/s Ratio Prot | c0.10 | | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.92 | | | 0.08 | | | |
| v/c Ratio | 0.77 | | | | 1.14 | | | 0.10 | | | |
| Uniform Delay, d1 | 50.8 | | | | 11.5 | | | 2.4 | | | |
| Progression Factor | 0.96 | | | | 0.72 | | | 1.00 | | | |
| Incremental Delay, d2 | 8.0 | | | | 65.7 | | | 0.1 | | | |
| Delay (s) | 56.8 | | | | 74.0 | | | 2.5 | | | |
| Level of Service | E | | | | E | | | A | | | |
| Approach Delay (s) | 56.8 | | | | 74.0 | | | 2.5 | | 0.0 | |
| Approach LOS | E | | | | E | | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 67.4 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 1.09 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 101.3% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 2155 | 30 | 85 | 2 | 0 | 190 | 82 | 31 | 27 | 223 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 1.00 | | 0.85 | | | 1.00 | | 0.97 | | 1.00 | |
| Flt Protected | 0.95 | | 1.00 | | | 1.00 | | 0.97 | | 0.95 | |
| Satd. Flow (prot) | 3435 | | 1441 | | | 3538 | | 3340 | | 3436 | |
| Flt Permitted | 0.95 | | 1.00 | | | 0.95 | | 0.69 | | 0.95 | |
| Satd. Flow (perm) | 3435 | | 1441 | | | 3377 | | 2380 | | 3436 | |
| 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 |
| Adj. Flow (vph) | 2342 | 33 | 92 | 2 | 0 | 207 | 89 | 34 | 29 | 242 | 4 |
| RTOR Reduction (vph) | 2 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| Lane Group Flow (vph) | 2382 | 0 | 66 | 0 | 0 | 209 | 0 | 152 | 0 | 238 | 0 |
| Turn Type | NA | | Perm | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4! | | | | | 8! | | 2! | | 2! | |
| Permitted Phases | | | 4 | 8 | | | 2 | | | 2! | |
| Actuated Green, G (s) | 96.0 | | 96.0 | | | 96.0 | | 16.0 | | 16.0 | |
| Effective Green, g (s) | 96.0 | | 96.0 | | | 96.0 | | 16.0 | | 16.0 | |
| Actuated g/C Ratio | 0.80 | | 0.80 | | | 0.80 | | 0.13 | | 0.13 | |
| Clearance Time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 2748 | | 1152 | | | 2701 | | 317 | | 458 | |
| v/s Ratio Prot | c0.69 | | | | | | | | | c0.07 | |
| v/s Ratio Perm | | | 0.05 | | | 0.06 | | 0.06 | | | |
| v/c Ratio | 0.87 | | 0.06 | | | 0.08 | | 1.44dl | | 0.52 | |
| Uniform Delay, d1 | 7.8 | | 2.5 | | | 2.6 | | 48.1 | | 48.4 | |
| Progression Factor | 1.00 | | 1.00 | | | 1.00 | | 1.45 | | 1.00 | |
| Incremental Delay, d2 | 4.0 | | 0.1 | | | 0.0 | | 4.6 | | 4.2 | |
| Delay (s) | 11.8 | | 2.6 | | | 2.6 | | 74.4 | | 52.6 | |
| Level of Service | B | | A | | | A | | E | | D | |
| Approach Delay (s) | 11.5 | | | | | 2.6 | | 74.4 | | 52.6 | |
| Approach LOS | B | | | | | A | | E | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 93.0% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 180 | 125 | 11 | 130 | 143 | 17 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1772 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1772 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 196 | 136 | 12 | 141 | 155 | 18 |
| RTOR Reduction (vph) | 0 | 109 | 0 | 47 | 6 | 5 |
| Lane Group Flow (vph) | 196 | 27 | 12 | 94 | 151 | 11 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 12.0 | 12.0 | 40.0 | 40.0 | 40.0 | 40.0 |
| Effective Green, g (s) | 12.0 | 12.0 | 40.0 | 40.0 | 40.0 | 40.0 |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.67 | 0.67 | 0.67 | 0.67 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 354 | 316 | 1180 | 1055 | 1181 | 1002 |
| v/s Ratio Prot | c0.11 | | 0.01 | | c0.09 | |
| v/s Ratio Perm | | 0.02 | | 0.06 | | 0.01 |
| v/c Ratio | 0.55 | 0.09 | 0.01 | 0.09 | 0.13 | 0.01 |
| Uniform Delay, d1 | 21.6 | 19.5 | 3.4 | 3.5 | 3.6 | 3.4 |
| Progression Factor | 0.84 | 1.37 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.2 | 0.0 | 0.0 | 0.2 | 0.2 | 0.0 |
| Delay (s) | 18.3 | 26.8 | 3.4 | 3.7 | 3.9 | 3.4 |
| Level of Service | B | C | A | A | A | A |
| Approach Delay (s) | 21.8 | | 3.7 | | 3.8 | |
| Approach LOS | C | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.23 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 63 | 71 | 78 | 8 | 9 | 72 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.99 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1631 | |
| Flt Permitted | 0.80 | 1.00 | 1.00 | 1.00 | 0.99 | |
| Satd. Flow (perm) | 1490 | 1863 | 1863 | 1583 | 1631 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 68 | 77 | 85 | 9 | 10 | 78 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 8 | 29 | 0 |
| Lane Group Flow (vph) | 68 | 77 | 85 | 1 | 59 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 5.0 | 5.0 | 5.0 | 5.0 | 21.8 | |
| Effective Green, g (s) | 5.0 | 5.0 | 5.0 | 5.0 | 21.8 | |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.14 | 0.14 | 0.63 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 214 | 267 | 267 | 227 | 1021 | |
| v/s Ratio Prot | | 0.04 | 0.05 | | c0.04 | |
| v/s Ratio Perm | c0.05 | | | 0.00 | | |
| v/c Ratio | 0.32 | 0.29 | 0.32 | 0.01 | 0.06 | |
| Uniform Delay, d1 | 13.4 | 13.3 | 13.4 | 12.8 | 2.5 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.9 | 0.6 | 0.7 | 0.0 | 0.1 | |
| Delay (s) | 14.2 | 13.9 | 14.1 | 12.8 | 2.6 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 14.1 | 13.9 | | 2.6 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 34.8 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 21.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 6 | 16 | 36 | 60 | 31 | 12 | 71 | 28 | 178 | 9 | 32 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.90 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3169 | | 1652 | 3392 | | | 1798 | 1583 | | 1842 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.76 | 1.00 | | 0.90 | 1.00 |
| Satd. Flow (perm) | 1652 | 3169 | | 1652 | 3392 | | | 1412 | 1583 | | 1673 | 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 | 17 | 39 | 65 | 34 | 13 | 77 | 30 | 193 | 10 | 35 | 5 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 5 | 0 | 0 | 0 | 149 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 7 | 37 | 0 | 65 | 42 | 0 | 0 | 107 | 44 | 0 | 45 | 1 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 22.6 | | 4.8 | 26.7 | | | 5.4 | 10.2 | | 5.4 | 6.1 |
| Effective Green, g (s) | 0.7 | 22.6 | | 4.8 | 26.7 | | | 5.4 | 10.2 | | 5.4 | 6.1 |
| Actuated g/C Ratio | 0.02 | 0.50 | | 0.11 | 0.60 | | | 0.12 | 0.23 | | 0.12 | 0.14 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1598 | | 177 | 2021 | | | 170 | 501 | | 201 | 356 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.04 | 0.01 | | | | 0.01 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.08 | 0.02 | | 0.03 | 0.00 |
| v/c Ratio | 0.28 | 0.02 | | 0.37 | 0.02 | | | 0.63 | 0.09 | | 0.22 | 0.00 |
| Uniform Delay, d1 | 21.8 | 5.6 | | 18.6 | 3.7 | | | 18.7 | 13.6 | | 17.8 | 16.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 6.0 | 0.0 | | 1.3 | 0.0 | | | 7.1 | 0.1 | | 0.6 | 0.0 |
| Delay (s) | 27.8 | 5.6 | | 19.9 | 3.7 | | | 25.9 | 13.7 | | 18.4 | 16.7 |
| Level of Service | C | A | | B | A | | | C | B | | B | B |
| Approach Delay (s) | | 8.1 | | | 13.1 | | | 18.0 | | | 18.2 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.17 | | |
| Actuated Cycle Length (s) | 44.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 28.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 46 | 156 | 8 | 3 | 43 | 33 | 6 | 4 | 2 | 1791 | 1 | 63 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | 0.95 | 0.95 | |
| Frt | | 0.99 | | | 0.94 | | | 0.98 | | 1.00 | 0.99 | |
| Flt Protected | | 0.99 | | | 1.00 | | | 0.97 | | 0.95 | 0.96 | |
| Satd. Flow (prot) | | 2077 | | | 3422 | | | 2013 | | 1681 | 1897 | |
| Flt Permitted | | 0.91 | | | 0.95 | | | 0.81 | | 0.75 | 0.73 | |
| Satd. Flow (perm) | | 1907 | | | 3246 | | | 1676 | | 1326 | 1452 | |
| 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) | 50 | 170 | 9 | 3 | 47 | 36 | 7 | 4 | 2 | 1947 | 1 | 68 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Lane Group Flow (vph) | 0 | 227 | 0 | 0 | 56 | 0 | 0 | 13 | 0 | 1012 | 1001 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 14.4 | | | 14.4 | | | 68.1 | | 68.1 | 68.1 | |
| Effective Green, g (s) | | 14.4 | | | 14.4 | | | 68.1 | | 68.1 | 68.1 | |
| Actuated g/C Ratio | | 0.16 | | | 0.16 | | | 0.75 | | 0.75 | 0.75 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 303 | | | 516 | | | 1261 | | 997 | 1092 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.12 | | | 0.02 | | | 0.01 | | c0.76 | 0.69 | |
| v/c Ratio | | 0.75 | | | 0.11 | | | 0.01 | | 1.02 | 0.92 | |
| Uniform Delay, d1 | | 36.3 | | | 32.6 | | | 2.8 | | 11.2 | 8.9 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 10.0 | | | 0.1 | | | 0.0 | | 32.3 | 13.4 | |
| Delay (s) | | 46.3 | | | 32.6 | | | 2.8 | | 43.5 | 22.3 | |
| Level of Service | | D | | | C | | | A | | D | C | |
| Approach Delay (s) | | 46.3 | | | 32.6 | | | 2.8 | | | 33.0 | |
| Approach LOS | | D | | | C | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 34.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.97 | | |
| Actuated Cycle Length (s) | 90.5 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 37 | 352 | 0 | 0 | 0 | 0 | 56 | 44 | 1890 | 0 | 50 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 0.95 | 0.95 | |
| Frt | 0.85 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | 0.95 | |
| Satd. Flow (prot) | 1588 | | 1504 | | | | | 1863 | 1583 | 1681 | 1677 | |
| Flt Permitted | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | 0.95 | |
| Satd. Flow (perm) | 1588 | | 1504 | | | | | 1863 | 1583 | 1681 | 1677 | |
| 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) | 5 | 40 | 383 | 0 | 0 | 0 | 0 | 61 | 48 | 2054 | 0 | 54 |
| RTOR Reduction (vph) | 34 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 180 | 0 | 171 | 0 | 0 | 0 | 0 | 61 | 6 | 1048 | 1058 | 0 |
| Turn Type | NA | | Perm | | | | | NA | Perm | Perm | NA | |
| Protected Phases | 8! | | | | | | | 6 | | | 4! | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | |
| Actuated Green, G (s) | 96.0 | | 96.0 | | | | | 16.0 | 16.0 | 96.0 | 96.0 | |
| Effective Green, g (s) | 96.0 | | 96.0 | | | | | 16.0 | 16.0 | 96.0 | 96.0 | |
| Actuated g/C Ratio | 0.80 | | 0.80 | | | | | 0.13 | 0.13 | 0.80 | 0.80 | |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 1270 | | 1203 | | | | | 248 | 211 | 1344 | 1341 | |
| v/s Ratio Prot | 0.11 | | | | | | | c0.03 | | | | |
| v/s Ratio Perm | | | 0.11 | | | | | | 0.00 | 0.62 | 0.63 | |
| v/c Ratio | 0.14 | | 0.14 | | | | | 0.25 | 0.03 | 0.78 | 0.79 | |
| Uniform Delay, d1 | 2.7 | | 2.7 | | | | | 46.6 | 45.2 | 6.4 | 6.5 | |
| Progression Factor | 1.00 | | 1.00 | | | | | 1.27 | 2.07 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.1 | | 0.1 | | | | | 2.3 | 0.3 | 2.9 | 3.2 | |
| Delay (s) | 2.8 | | 2.8 | | | | | 61.7 | 94.0 | 9.3 | 9.7 | |
| Level of Service | A | | A | | | | | E | F | A | A | |
| Approach Delay (s) | 2.8 | | | | 0.0 | | | 75.9 | | | 9.5 | |
| Approach LOS | A | | | | A | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 77.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 3 | 50 | 29 | 5 | 2 | 2179 | 41 | 29 | 2 | 21 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | 0.95 | 0.95 | | | 1.00 | |
| Frt | | 0.88 | | | 0.99 | | 1.00 | 1.00 | | | 1.00 | |
| Flt Protected | | 1.00 | | | 0.96 | | 0.95 | 0.96 | | | 1.00 | |
| Satd. Flow (prot) | | 1850 | | | 2014 | | 1681 | 1908 | | | 1855 | |
| Flt Permitted | | 0.98 | | | 0.64 | | 0.95 | 0.96 | | | 0.91 | |
| Satd. Flow (perm) | | 1825 | | | 1349 | | 1681 | 1908 | | | 1689 | |
| 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) | 3 | 3 | 54 | 32 | 5 | 2 | 2368 | 45 | 32 | 2 | 23 | 0 |
| RTOR Reduction (vph) | 0 | 51 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 0 | 37 | 0 | 1231 | 1213 | 0 | 0 | 25 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Split | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | 2 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | 6 | | |
| Actuated Green, G (s) | | 7.0 | | | 7.0 | | 85.0 | 85.0 | | | 16.0 | |
| Effective Green, g (s) | | 7.0 | | | 7.0 | | 85.0 | 85.0 | | | 16.0 | |
| Actuated g/C Ratio | | 0.06 | | | 0.06 | | 0.71 | 0.71 | | | 0.13 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 106 | | | 78 | | 1190 | 1351 | | | 225 | |
| v/s Ratio Prot | | | | | | | c0.73 | 0.64 | | | | |
| v/s Ratio Perm | | 0.01 | | | c0.03 | | | | | | c0.01 | |
| v/c Ratio | | 0.09 | | | 0.48 | | 1.03 | 0.90 | | | 0.11 | |
| Uniform Delay, d1 | | 53.5 | | | 54.7 | | 17.5 | 14.0 | | | 45.7 | |
| Progression Factor | | 1.00 | | | 1.00 | | 0.64 | 0.60 | | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 4.5 | | 31.5 | 7.3 | | | 1.0 | |
| Delay (s) | | 53.8 | | | 59.2 | | 42.7 | 15.8 | | | 46.7 | |
| Level of Service | | D | | | E | | D | B | | | D | |
| Approach Delay (s) | | 53.8 | | | 59.2 | | | 29.3 | | | 46.7 | |
| Approach LOS | | D | | | E | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.86 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 84.3% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 1532 | 0 | 13 | 0 | 4 | 27 | 8 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | | | 1.00 | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | | | | 1681 | 1681 | 1794 | | 1863 | 1636 | | 2045 | |
| Flt Permitted | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.89 | |
| Satd. Flow (perm) | | | | 1681 | 1681 | 1794 | | 1863 | 1636 | | 1869 | |
| 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) | 0 | 0 | 0 | 1665 | 0 | 14 | 0 | 4 | 29 | 9 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 832 | 833 | 11 | 0 | 4 | 27 | 0 | 14 | 0 |
| Turn Type | Perm | | | Prot | NA | Perm | Perm | NA | pm+ov | Perm | NA | |
| Protected Phases | | 4 | | 3 | 8 | | | 2 | 3 | | 6 | |
| Permitted Phases | 4 | | | | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | | | 96.0 | 96.0 | 96.0 | | 16.0 | 112.0 | | 16.0 | |
| Effective Green, g (s) | | | | 96.0 | 96.0 | 96.0 | | 16.0 | 112.0 | | 16.0 | |
| Actuated g/C Ratio | | | | 0.80 | 0.80 | 0.80 | | 0.13 | 0.93 | | 0.13 | |
| Clearance Time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | | | 1344 | 1344 | 1435 | | 248 | 1636 | | 249 | |
| v/s Ratio Prot | | | | 0.49 | c0.50 | | | 0.00 | 0.01 | | | |
| v/s Ratio Perm | | | | | | 0.01 | | | 0.00 | | c0.01 | |
| v/c Ratio | | | | 0.62 | 0.62 | 0.01 | | 0.02 | 0.02 | | 0.06 | |
| Uniform Delay, d1 | | | | 4.8 | 4.8 | 2.4 | | 45.2 | 0.3 | | 45.4 | |
| Progression Factor | | | | 0.91 | 0.91 | 0.99 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | | | 1.9 | 1.9 | 0.0 | | 0.1 | 0.0 | | 0.4 | |
| Delay (s) | | | | 6.2 | 6.3 | 2.4 | | 45.3 | 0.3 | | 45.8 | |
| Level of Service | | | | A | A | A | | D | A | | D | |
| Approach Delay (s) | | 0.0 | | | 6.2 | | | 5.7 | | | 45.8 | |
| Approach LOS | | A | | | A | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 6.5 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 56.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 16 | 10 | 9 | 1529 | 17 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | |
| Frt | 0.94 | | 1.00 | 1.00 | 1.00 | |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | |
| Satd. Flow (prot) | 3442 | | 1770 | 3539 | 1770 | |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | |
| Satd. Flow (perm) | 3442 | | 1770 | 3539 | 1770 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 17 | 11 | 10 | 1662 | 18 | 0 |
| RTOR Reduction (vph) | 3 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 25 | 0 | 10 | 1662 | 18 | 0 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 45.1 | | 1.4 | 50.5 | 1.5 | |
| Effective Green, g (s) | 45.1 | | 1.4 | 50.5 | 1.5 | |
| Actuated g/C Ratio | 0.75 | | 0.02 | 0.84 | 0.02 | |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2587 | | 41 | 2978 | 44 | |
| v/s Ratio Prot | 0.01 | | 0.01 | c0.47 | c0.01 | |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.24 | 0.56 | 0.41 | |
| Uniform Delay, d1 | 1.9 | | 28.8 | 1.4 | 28.8 | |
| Progression Factor | 1.44 | | 1.16 | 0.21 | 0.14 | |
| Incremental Delay, d2 | 0.0 | | 2.7 | 0.7 | 6.1 | |
| Delay (s) | 2.7 | | 36.0 | 1.0 | 10.1 | |
| Level of Service | A | | D | A | B | |
| Approach Delay (s) | 2.7 | | | 1.2 | 10.1 | |
| Approach LOS | A | | | A | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 1.3 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 52.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 17 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | | | 4.0 | | |
| Lane Util. Factor | | 1.00 | | | | | | | | 1.00 | | |
| Frt | | 0.99 | | | | | | | | 1.00 | | |
| Flt Protected | | 0.96 | | | | | | | | 0.95 | | |
| Satd. Flow (prot) | | 1838 | | | | | | | | 1770 | | |
| Flt Permitted | | 0.96 | | | | | | | | 0.76 | | |
| Satd. Flow (perm) | | 1838 | | | | | | | | 1410 | | |
| 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) | 18 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| Turn Type | Perm | NA | | | | | | | | Perm | | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 1.5 | | | | | | | | 50.5 | | |
| Effective Green, g (s) | | 1.5 | | | | | | | | 50.5 | | |
| Actuated g/C Ratio | | 0.02 | | | | | | | | 0.84 | | |
| Clearance Time (s) | | 4.0 | | | | | | | | 4.0 | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | 3.0 | | |
| Lane Grp Cap (vph) | | 45 | | | | | | | | 1186 | | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.01 | | | | | | | | c0.01 | | |
| v/c Ratio | | 0.47 | | | | | | | | 0.02 | | |
| Uniform Delay, d1 | | 28.9 | | | | | | | | 0.8 | | |
| Progression Factor | | 1.00 | | | | | | | | 0.42 | | |
| Incremental Delay, d2 | | 7.5 | | | | | | | | 0.0 | | |
| Delay (s) | | 36.3 | | | | | | | | 0.4 | | |
| Level of Service | | D | | | | | | | | A | | |
| Approach Delay (s) | | 36.3 | | | 0.0 | | | 0.0 | | | 0.4 | |
| Approach LOS | | D | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.03 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 1519 | 0 | 4 | 14 | 0 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 1651 | 0 | 4 | 15 | 0 | 5 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 2 | 0 | 5 |
| Lane Group Flow (vph) | 1651 | 0 | 4 | 13 | 0 | 0 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 50.9 | | 50.9 | 50.9 | | 1.1 |
| Effective Green, g (s) | 50.9 | | 50.9 | 50.9 | | 1.1 |
| Actuated g/C Ratio | 0.85 | | 0.85 | 0.85 | | 0.02 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2912 | | 1501 | 2364 | | 29 |
| v/s Ratio Prot | c0.48 | | 0.00 | | | |
| v/s Ratio Perm | | | | 0.00 | | c0.00 |
| v/c Ratio | 0.57 | | 0.00 | 0.01 | | 0.00 |
| Uniform Delay, d1 | 1.3 | | 0.7 | 0.7 | | 28.9 |
| Progression Factor | 0.99 | | 0.23 | 0.00 | | 1.00 |
| Incremental Delay, d2 | 0.8 | | 0.0 | 0.0 | | 0.0 |
| Delay (s) | 2.1 | | 0.2 | 0.0 | | 29.0 |
| Level of Service | A | | A | A | | C |
| Approach Delay (s) | 2.1 | | 0.0 | | 29.0 | |
| Approach LOS | A | | A | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 53.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 251 | 0 | 3 | 28 | 122 | 205 | 2 | 2476 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 1.00 | | | | 0.91 | | | 1.00 | | | |
| Flt Protected | 0.95 | | | | 1.00 | | | 1.00 | | | |
| Satd. Flow (prot) | 3438 | | | | 3220 | | | 3539 | | | |
| Flt Permitted | 0.95 | | | | 0.66 | | | 0.95 | | | |
| Satd. Flow (perm) | 3438 | | | | 2127 | | | 3379 | | | |
| 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 |
| Adj. Flow (vph) | 273 | 0 | 3 | 30 | 133 | 223 | 2 | 2691 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 8 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 268 | 0 | 0 | 0 | 345 | 0 | 0 | 2693 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 14.0 | | | | 98.0 | | | 98.0 | | | |
| Effective Green, g (s) | 14.0 | | | | 98.0 | | | 98.0 | | | |
| Actuated g/C Ratio | 0.12 | | | | 0.82 | | | 0.82 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 401 | | | | 1737 | | | 2759 | | | |
| v/s Ratio Prot | c0.08 | | | | | | | | | | |
| v/s Ratio Perm | | | | | 0.16 | | | c0.80 | | | |
| v/c Ratio | 0.67 | | | | 0.20 | | | 0.98 | | | |
| Uniform Delay, d1 | 50.8 | | | | 2.4 | | | 9.9 | | | |
| Progression Factor | 0.96 | | | | 1.00 | | | 1.00 | | | |
| Incremental Delay, d2 | 4.2 | | | | 0.3 | | | 12.4 | | | |
| Delay (s) | 52.9 | | | | 2.7 | | | 22.3 | | | |
| Level of Service | D | | | | A | | | C | | | |
| Approach Delay (s) | 52.9 | | | | 2.7 | | | 22.3 | | 0.0 | |
| Approach LOS | D | | | | A | | | C | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.94 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 83.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | |
| Volume (vph) | 295 | 14 | 41 | 0 | 18 | 222 | 121 | 189 | 18 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 0.99 | | 0.85 | | 1.00 | | 0.95 | | 1.00 | |
| Flt Protected | 0.96 | | 1.00 | | 1.00 | | 0.98 | | 0.95 | |
| Satd. Flow (prot) | 3421 | | 1441 | | 3539 | | 3282 | | 3433 | |
| Flt Permitted | 0.96 | | 1.00 | | 1.00 | | 0.61 | | 0.95 | |
| Satd. Flow (perm) | 3421 | | 1441 | | 3539 | | 2037 | | 3433 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 321 | 15 | 45 | 0 | 20 | 241 | 132 | 205 | 20 | 0 |
| RTOR Reduction (vph) | 60 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 281 | 0 | 9 | 0 | 20 | 0 | 578 | 0 | 20 | 0 |
| Turn Type | NA | | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4! | | | | 8! | | 6 | | 2 | |
| Permitted Phases | | | 4 | | | 6 | | | | |
| Actuated Green, G (s) | 16.0 | | 16.0 | | 16.0 | | 26.0 | | 16.0 | |
| Effective Green, g (s) | 16.0 | | 16.0 | | 16.0 | | 26.0 | | 16.0 | |
| Actuated g/C Ratio | 0.23 | | 0.23 | | 0.23 | | 0.37 | | 0.23 | |
| Clearance Time (s) | 4.0 | | 4.0 | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 781 | | 329 | | 808 | | 756 | | 784 | |
| v/s Ratio Prot | c0.08 | | | | 0.01 | | | | c0.01 | |
| v/s Ratio Perm | | | 0.01 | | | | c0.28 | | | |
| v/c Ratio | 0.36 | | 0.03 | | 0.02 | | 2.27dl | | 0.03 | |
| Uniform Delay, d1 | 22.7 | | 21.0 | | 20.9 | | 19.3 | | 21.0 | |
| Progression Factor | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.3 | | 0.0 | | 0.1 | | 7.2 | | 0.1 | |
| Delay (s) | 23.0 | | 21.0 | | 21.0 | | 26.6 | | 21.0 | |
| Level of Service | C | | C | | C | | C | | C | |
| Approach Delay (s) | 22.8 | | | | 21.0 | | 26.6 | | 21.0 | |
| Approach LOS | C | | | | C | | C | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.45 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 41.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 140 | 45 | 6 | 148 | 164 | 8 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1773 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1773 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 152 | 49 | 7 | 161 | 178 | 9 |
| RTOR Reduction (vph) | 0 | 41 | 0 | 46 | 5 | 2 |
| Lane Group Flow (vph) | 152 | 8 | 7 | 115 | 174 | 6 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 9.2 | 9.2 | 42.8 | 42.8 | 42.8 | 42.8 |
| Effective Green, g (s) | 9.2 | 9.2 | 42.8 | 42.8 | 42.8 | 42.8 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.71 | 0.71 | 0.71 | 0.71 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 271 | 242 | 1262 | 1129 | 1264 | 1072 |
| v/s Ratio Prot | c0.09 | | 0.00 | | c0.10 | |
| v/s Ratio Perm | | 0.00 | | 0.07 | | 0.00 |
| v/c Ratio | 0.56 | 0.03 | 0.01 | 0.10 | 0.14 | 0.01 |
| Uniform Delay, d1 | 23.5 | 21.6 | 2.5 | 2.7 | 2.7 | 2.5 |
| Progression Factor | 0.95 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.6 | 0.1 | 0.0 | 0.2 | 0.2 | 0.0 |
| Delay (s) | 25.0 | 18.7 | 2.5 | 2.8 | 3.0 | 2.5 |
| Level of Service | C | B | A | A | A | A |
| Approach Delay (s) | 23.5 | | 2.8 | | 2.9 | |
| Approach LOS | C | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.21 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 30.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 42 | 31 | 79 | 2 | 3 | 72 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.87 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1618 | |
| Flt Permitted | 0.80 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1490 | 1863 | 1863 | 1583 | 1618 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 46 | 34 | 86 | 2 | 3 | 78 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 2 | 25 | 0 |
| Lane Group Flow (vph) | 46 | 34 | 86 | 0 | 56 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 5.0 | 5.0 | 5.0 | 5.0 | 27.0 | |
| Effective Green, g (s) | 5.0 | 5.0 | 5.0 | 5.0 | 27.0 | |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.12 | 0.12 | 0.68 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 186 | 232 | 232 | 197 | 1092 | |
| v/s Ratio Prot | | 0.02 | c0.05 | | c0.03 | |
| v/s Ratio Perm | 0.03 | | | 0.00 | | |
| v/c Ratio | 0.25 | 0.15 | 0.37 | 0.00 | 0.05 | |
| Uniform Delay, d1 | 15.8 | 15.6 | 16.1 | 15.3 | 2.2 | |
| Progression Factor | 1.00 | 1.00 | 0.99 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.7 | 0.3 | 1.0 | 0.0 | 0.1 | |
| Delay (s) | 16.5 | 15.9 | 16.9 | 15.3 | 2.3 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 16.2 | 16.8 | | 2.3 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 40.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 20.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 16 | 147 | 7 | 1 | 12 | 3 | 20 | 2 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.85 | | 1.00 | 0.98 | | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | | 3008 | | 1652 | 3480 | | | 1790 | 1583 | | 1837 | |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Satd. Flow (perm) | | 3008 | | 1652 | 3480 | | | 1863 | 1583 | | 1863 | |
| 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) | 0 | 0 | 17 | 160 | 8 | 1 | 13 | 3 | 22 | 2 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 160 | 9 | 0 | 0 | 16 | 4 | 0 | 7 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 22.1 | | 6.2 | 32.3 | | | 1.3 | 7.5 | | 1.3 | |
| Effective Green, g (s) | | 22.1 | | 6.2 | 32.3 | | | 1.3 | 7.5 | | 1.3 | |
| Actuated g/C Ratio | | 0.53 | | 0.15 | 0.78 | | | 0.03 | 0.18 | | 0.03 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1598 | | 246 | 2702 | | | 58 | 437 | | 58 | |
| v/s Ratio Prot | | c0.00 | | c0.10 | 0.00 | | | | 0.00 | | | |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | 0.00 | |
| v/c Ratio | | 0.01 | | 0.65 | 0.00 | | | 0.28 | 0.01 | | 0.12 | |
| Uniform Delay, d1 | | 4.6 | | 16.7 | 1.0 | | | 19.7 | 14.0 | | 19.6 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | 6.0 | 0.0 | | | 2.6 | 0.0 | | 0.9 | |
| Delay (s) | | 4.6 | | 22.7 | 1.0 | | | 22.3 | 14.0 | | 20.5 | |
| Level of Service | | A | | C | A | | | C | B | | C | |
| Approach Delay (s) | | 4.6 | | | 21.6 | | | 17.5 | | | 20.5 | |
| Approach LOS | | A | | | C | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.15 | | |
| Actuated Cycle Length (s) | 41.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 29.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 15 | 14 | 3 | 0 | 134 | 432 | 0 | 0 | 1 | 12 | 0 | 34 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.89 | | | 0.86 | | | 0.90 | |
| Flt Protected | | 0.98 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Satd. Flow (prot) | | 2038 | | | 3239 | | | 1826 | | | 1876 | |
| Flt Permitted | | 0.70 | | | 1.00 | | | 1.00 | | | 0.96 | |
| Satd. Flow (perm) | | 1462 | | | 3239 | | | 1826 | | | 1832 | |
| 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) | 16 | 15 | 3 | 0 | 146 | 470 | 0 | 0 | 1 | 13 | 0 | 37 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 361 | 0 | 0 | 0 | 0 | 0 | 16 | 0 |
| Lane Group Flow (vph) | 0 | 32 | 0 | 0 | 255 | 0 | 0 | 1 | 0 | 0 | 34 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 9.3 | | | 9.3 | | | 22.7 | | | 22.7 | |
| Effective Green, g (s) | | 9.3 | | | 9.3 | | | 22.7 | | | 22.7 | |
| Actuated g/C Ratio | | 0.23 | | | 0.23 | | | 0.57 | | | 0.57 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 339 | | | 753 | | | 1036 | | | 1039 | |
| v/s Ratio Prot | | | | | c0.08 | | | 0.00 | | | | |
| v/s Ratio Perm | | 0.02 | | | | | | | | | c0.02 | |
| v/c Ratio | | 0.09 | | | 0.34 | | | 0.00 | | | 0.03 | |
| Uniform Delay, d1 | | 12.0 | | | 12.8 | | | 3.7 | | | 3.8 | |
| Progression Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.3 | | | 0.0 | | | 0.1 | |
| Delay (s) | | 12.2 | | | 12.4 | | | 3.7 | | | 3.9 | |
| Level of Service | | B | | | B | | | A | | | A | |
| Approach Delay (s) | | 12.2 | | | 12.4 | | | 3.7 | | | 3.9 | |
| Approach LOS | | B | | | B | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.12 | | |
| Actuated Cycle Length (s) | 40.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 33.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 7 | 23 | 0 | 0 | 0 | 0 | 1513 | 559 | 5 | 0 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Frt | 0.85 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1583 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| Flt Permitted | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (perm) | 1583 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| 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) | 0 | 8 | 25 | 0 | 0 | 0 | 0 | 1645 | 608 | 5 | 0 | 22 |
| RTOR Reduction (vph) | 14 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 81 | 0 | 0 | 21 |
| Lane Group Flow (vph) | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 1645 | 527 | 5 | 0 | 1 |
| Turn Type | NA | | Perm | | | | | NA | Prot | custom | | custom |
| Protected Phases | 8 | | | | | | | 6 | 6 | | | |
| Permitted Phases | | | 8 | | | | | | | 4 | | 4 |
| Actuated Green, G (s) | 2.7 | | 2.7 | | | | | 69.3 | 69.3 | 2.7 | | 2.7 |
| Effective Green, g (s) | 2.7 | | 2.7 | | | | | 69.3 | 69.3 | 2.7 | | 2.7 |
| Actuated g/C Ratio | 0.03 | | 0.03 | | | | | 0.87 | 0.87 | 0.03 | | 0.03 |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 53 | | 50 | | | | | 1613 | 1371 | 59 | | 60 |
| v/s Ratio Prot | 0.00 | | | | | | | c0.88 | 0.33 | | | |
| v/s Ratio Perm | | | 0.00 | | | | | | | c0.00 | | 0.00 |
| v/c Ratio | 0.07 | | 0.01 | | | | | 1.02 | 0.38 | 0.08 | | 0.01 |
| Uniform Delay, d1 | 37.4 | | 37.4 | | | | | 5.4 | 1.1 | 37.5 | | 37.4 |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.62 | 0.16 | 0.93 | | 1.21 |
| Incremental Delay, d2 | 0.5 | | 0.1 | | | | | 20.8 | 0.4 | 0.6 | | 0.1 |
| Delay (s) | 38.0 | | 37.4 | | | | | 24.1 | 0.6 | 35.3 | | 45.3 |
| Level of Service | D | | D | | | | | C | A | D | | D |
| Approach Delay (s) | 37.7 | | | | 0.0 | | | 17.8 | | | 43.5 | |
| Approach LOS | D | | | | A | | | B | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.98 | | |
| Actuated Cycle Length (s) | 80.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 96.3% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 2 | 0 | 2058 | 3 | 3 | 0 | 3 | 21 | 3 | 1 | 12 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 0.95 | 0.95 | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.85 | 0.85 | | 1.00 | | | 0.99 | | | 1.00 | |
| Flt Protected | | 1.00 | 1.00 | | 0.98 | | | 0.99 | | | 1.00 | |
| Satd. Flow (prot) | | 1705 | 1504 | | 2060 | | | 2071 | | | 1856 | |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | | | 0.99 | | | 0.99 | |
| Satd. Flow (perm) | | 1705 | 1504 | | 2111 | | | 2060 | | | 1852 | |
| 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) | 2 | 0 | 2237 | 3 | 3 | 0 | 3 | 23 | 3 | 1 | 13 | 0 |
| RTOR Reduction (vph) | 0 | 606 | 606 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 515 | 512 | 0 | 6 | 0 | 0 | 27 | 0 | 0 | 14 | 0 |
| Turn Type | Split | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 33.3 | 33.3 | | 1.4 | | | 33.3 | | | 33.3 | |
| Effective Green, g (s) | | 33.3 | 33.3 | | 1.4 | | | 33.3 | | | 33.3 | |
| Actuated g/C Ratio | | 0.42 | 0.42 | | 0.02 | | | 0.42 | | | 0.42 | |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 709 | 626 | | 36 | | | 857 | | | 770 | |
| v/s Ratio Prot | | 0.30 | | | | | | | | | | |
| v/s Ratio Perm | | | c0.34 | | c0.00 | | | c0.01 | | | 0.01 | |
| v/c Ratio | | 0.73 | 0.82 | | 0.17 | | | 0.03 | | | 0.02 | |
| Uniform Delay, d1 | | 19.5 | 20.7 | | 38.7 | | | 13.8 | | | 13.7 | |
| Progression Factor | | 0.96 | 0.94 | | 1.00 | | | 0.36 | | | 1.00 | |
| Incremental Delay, d2 | | 3.7 | 8.2 | | 2.2 | | | 0.1 | | | 0.0 | |
| Delay (s) | | 22.4 | 27.7 | | 40.9 | | | 5.1 | | | 13.8 | |
| Level of Service | | C | C | | D | | | A | | | B | |
| Approach Delay (s) | | 25.0 | | | 40.9 | | | 5.1 | | | 13.8 | |
| Approach LOS | | C | | | D | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 80.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 101.6% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 8 | 7 | 420 | 3 | 75 | 5 | 6 | 312 | 19 | 19 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.94 | | | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | | 0.95 | 1.00 | | 0.98 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 1744 | | | 1775 | 1794 | | 1825 | 1636 | | 2060 | |
| Flt Permitted | | 1.00 | | | 0.72 | 1.00 | | 0.95 | 1.00 | | 0.92 | |
| Satd. Flow (perm) | | 1744 | | | 1333 | 1794 | | 1770 | 1636 | | 1932 | |
| 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) | 0 | 9 | 8 | 457 | 3 | 82 | 5 | 7 | 339 | 21 | 21 | 0 |
| RTOR Reduction (vph) | 0 | 4 | 0 | 0 | 0 | 46 | 0 | 0 | 196 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 13 | 0 | 0 | 460 | 36 | 0 | 12 | 143 | 0 | 42 | 0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | 26.7 | | | 26.7 | 26.7 | | 25.3 | 25.3 | | 25.3 | |
| Effective Green, g (s) | | 26.7 | | | 26.7 | 26.7 | | 25.3 | 25.3 | | 25.3 | |
| Actuated g/C Ratio | | 0.44 | | | 0.44 | 0.44 | | 0.42 | 0.42 | | 0.42 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 776 | | | 593 | 798 | | 746 | 689 | | 814 | |
| v/s Ratio Prot | | 0.01 | | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.35 | 0.02 | | 0.01 | c0.09 | | 0.02 | |
| v/c Ratio | | 0.02 | | | 0.78 | 0.05 | | 0.02 | 0.21 | | 0.05 | |
| Uniform Delay, d1 | | 9.3 | | | 14.1 | 9.4 | | 10.1 | 11.0 | | 10.3 | |
| Progression Factor | | 1.00 | | | 1.27 | 0.22 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 6.2 | 0.0 | | 0.0 | 0.7 | | 0.1 | |
| Delay (s) | | 9.3 | | | 24.2 | 2.1 | | 10.1 | 11.7 | | 10.4 | |
| Level of Service | | A | | | C | A | | B | B | | B | |
| Approach Delay (s) | | 9.3 | | | 20.9 | | | 11.6 | | | 10.4 | |
| Approach LOS | | A | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 45.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 161 | 28 | 237 | 410 | 81 | 587 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.98 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3577 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3577 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 175 | 30 | 258 | 446 | 88 | 638 |
| RTOR Reduction (vph) | 13 | 0 | 0 | 0 | 0 | 42 |
| Lane Group Flow (vph) | 192 | 0 | 258 | 446 | 88 | 596 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 11.7 | | 23.9 | 39.6 | 72.4 | 100.3 |
| Effective Green, g (s) | 11.7 | | 23.9 | 39.6 | 72.4 | 100.3 |
| Actuated g/C Ratio | 0.10 | | 0.20 | 0.33 | 0.60 | 0.84 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 348 | | 352 | 1167 | 1067 | 1323 |
| v/s Ratio Prot | c0.05 | | c0.15 | 0.13 | 0.05 | c0.38 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.55 | | 0.73 | 0.38 | 0.08 | 0.45 |
| Uniform Delay, d1 | 51.7 | | 45.1 | 30.8 | 9.9 | 2.6 |
| Progression Factor | 1.05 | | 1.00 | 1.00 | 0.42 | 0.13 |
| Incremental Delay, d2 | 1.8 | | 7.7 | 0.2 | 0.1 | 0.2 |
| Delay (s) | 55.9 | | 52.7 | 31.0 | 4.3 | 0.5 |
| Level of Service | E | | D | C | A | A |
| Approach Delay (s) | 55.9 | | | 39.0 | 1.0 | |
| Approach LOS | E | | | D | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 48.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 661 | 10 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 261 | 4 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Flt Protected | | 0.95 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1834 | | | | | | 2111 | | 1770 | 1863 | |
| Flt Permitted | | 0.95 | | | | | | 1.00 | | 0.76 | 1.00 | |
| Satd. Flow (perm) | | 1834 | | | | | | 2111 | | 1409 | 1863 | |
| 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) | 718 | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 284 | 4 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 729 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 284 | 4 | 0 |
| Turn Type | Perm | NA | | | | | | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 59.0 | | | | | | 53.0 | | 53.0 | 53.0 | |
| Effective Green, g (s) | | 59.0 | | | | | | 53.0 | | 53.0 | 53.0 | |
| Actuated g/C Ratio | | 0.49 | | | | | | 0.44 | | 0.44 | 0.44 | |
| Clearance Time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 901 | | | | | | 932 | | 622 | 822 | |
| v/s Ratio Prot | | | | | | | | 0.00 | | | 0.00 | |
| v/s Ratio Perm | | 0.40 | | | | | | | | c0.20 | | |
| v/c Ratio | | 0.81 | | | | | | 0.00 | | 0.46 | 0.00 | |
| Uniform Delay, d1 | | 25.7 | | | | | | 18.7 | | 23.4 | 18.7 | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | 0.13 | 0.13 | |
| Incremental Delay, d2 | | 5.4 | | | | | | 0.0 | | 2.2 | 0.0 | |
| Delay (s) | | 31.2 | | | | | | 18.7 | | 5.2 | 2.4 | |
| Level of Service | | C | | | | | | B | | A | A | |
| Approach Delay (s) | | 31.2 | | | 0.0 | | | 18.7 | | | 5.2 | |
| Approach LOS | | C | | | A | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 23.8 | 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) | 8.0 |
| Intersection Capacity Utilization | 64.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 211 | 0 | 255 | 210 | 0 | 120 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 229 | 0 | 277 | 228 | 0 | 130 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 72 | 0 | 118 |
| Lane Group Flow (vph) | 229 | 0 | 277 | 156 | 0 | 12 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 24.5 | | 24.5 | 24.5 | | 3.4 |
| Effective Green, g (s) | 24.5 | | 24.5 | 24.5 | | 3.4 |
| Actuated g/C Ratio | 0.68 | | 0.68 | 0.68 | | 0.09 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2342 | | 1207 | 1901 | | 152 |
| v/s Ratio Prot | 0.07 | | c0.16 | | | |
| v/s Ratio Perm | | | | 0.06 | | c0.01 |
| v/c Ratio | 0.10 | | 0.23 | 0.08 | | 0.08 |
| Uniform Delay, d1 | 1.9 | | 2.1 | 1.9 | | 14.8 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.4 | 0.1 | | 0.2 |
| Delay (s) | 2.0 | | 2.6 | 2.0 | | 15.1 |
| Level of Service | A | | A | A | | B |
| Approach Delay (s) | 2.0 | | 2.3 | | 15.1 | |
| Approach LOS | A | | A | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.21 | | |
| Actuated Cycle Length (s) | 35.9 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 26.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 248 | 0 | 27 | 68 | 1445 | 394 | 2 | 249 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 0.99 | | | | 0.97 | | | 1.00 | | | |
| Flt Protected | 0.96 | | | | 1.00 | | | 1.00 | | | |
| Satd. Flow (prot) | 3407 | | | | 3423 | | | 3538 | | | |
| Flt Permitted | 0.96 | | | | 0.92 | | | 0.94 | | | |
| Satd. Flow (perm) | 3407 | | | | 3169 | | | 3341 | | | |
| 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 |
| Adj. Flow (vph) | 270 | 0 | 29 | 74 | 1571 | 428 | 2 | 271 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 8 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 291 | 0 | 0 | 0 | 2055 | 0 | 0 | 273 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 14.5 | | | | 97.5 | | | 97.5 | | | |
| Effective Green, g (s) | 14.5 | | | | 97.5 | | | 97.5 | | | |
| Actuated g/C Ratio | 0.12 | | | | 0.81 | | | 0.81 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 411 | | | | 2574 | | | 2714 | | | |
| v/s Ratio Prot | c0.09 | | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.65 | | | 0.08 | | | |
| v/c Ratio | 0.71 | | | | 0.80 | | | 0.10 | | | |
| Uniform Delay, d1 | 50.7 | | | | 6.0 | | | 2.3 | | | |
| Progression Factor | 0.97 | | | | 0.89 | | | 1.00 | | | |
| Incremental Delay, d2 | 5.5 | | | | 2.3 | | | 0.1 | | | |
| Delay (s) | 54.5 | | | | 7.6 | | | 2.4 | | | |
| Level of Service | D | | | | A | | | A | | | |
| Approach Delay (s) | 54.5 | | | | 7.6 | | | 2.4 | | 0.0 | |
| Approach LOS | D | | | | A | | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 79.4% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.

c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 1541 | 32 | 58 | 1 | 0 | 135 | 90 | 16 | 12 | 124 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 1.00 | | 0.85 | | | 1.00 | | 0.98 | | 1.00 | |
| Flt Protected | 0.95 | | 1.00 | | | 1.00 | | 0.96 | | 0.95 | |
| Satd. Flow (prot) | 3433 | | 1441 | | | 3538 | | 3357 | | 3433 | |
| Flt Permitted | 0.95 | | 1.00 | | | 0.95 | | 0.72 | | 0.95 | |
| Satd. Flow (perm) | 3433 | | 1441 | | | 3378 | | 2523 | | 3433 | |
| 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 |
| Adj. Flow (vph) | 1675 | 35 | 63 | 1 | 0 | 147 | 98 | 17 | 13 | 135 | 0 |
| RTOR Reduction (vph) | 2 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 1714 | 0 | 44 | 0 | 0 | 148 | 0 | 128 | 0 | 135 | 0 |
| Turn Type | NA | | Perm | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4! | | | | | 8! | | 6! | | 6! | |
| Permitted Phases | | | 4 | 8 | | | 6 | | | | |
| Actuated Green, G (s) | 92.0 | | 92.0 | | | 92.0 | | 20.0 | | 20.0 | |
| Effective Green, g (s) | 92.0 | | 92.0 | | | 92.0 | | 20.0 | | 20.0 | |
| Actuated g/C Ratio | 0.77 | | 0.77 | | | 0.77 | | 0.17 | | 0.17 | |
| Clearance Time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 2631 | | 1104 | | | 2589 | | 420 | | 572 | |
| v/s Ratio Prot | c0.50 | | | | | | | | | 0.04 | |
| v/s Ratio Perm | | | 0.03 | | | 0.04 | | c0.05 | | | |
| v/c Ratio | 0.65 | | 0.04 | | | 0.06 | | 1.58dl | | 0.24 | |
| Uniform Delay, d1 | 6.5 | | 3.4 | | | 3.4 | | 43.9 | | 43.4 | |
| Progression Factor | 1.00 | | 1.00 | | | 1.00 | | 0.79 | | 1.00 | |
| Incremental Delay, d2 | 0.6 | | 0.0 | | | 0.0 | | 1.8 | | 1.0 | |
| Delay (s) | 7.1 | | 3.4 | | | 3.5 | | 36.4 | | 44.3 | |
| Level of Service | A | | A | | | A | | D | | D | |
| Approach Delay (s) | 7.0 | | | | | 3.5 | | 36.4 | | 44.3 | |
| Approach LOS | A | | | | | A | | D | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.59 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 71.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 273 | 115 | 3 | 135 | 65 | 13 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1772 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1772 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 297 | 125 | 3 | 147 | 71 | 14 |
| RTOR Reduction (vph) | 0 | 93 | 0 | 58 | 7 | 5 |
| Lane Group Flow (vph) | 297 | 33 | 3 | 89 | 65 | 8 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 15.6 | 15.6 | 36.4 | 36.4 | 36.4 | 36.4 |
| Effective Green, g (s) | 15.6 | 15.6 | 36.4 | 36.4 | 36.4 | 36.4 |
| Actuated g/C Ratio | 0.26 | 0.26 | 0.61 | 0.61 | 0.61 | 0.61 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 460 | 411 | 1073 | 960 | 1075 | 912 |
| v/s Ratio Prot | c0.17 | | 0.00 | | 0.04 | |
| v/s Ratio Perm | | 0.02 | | c0.06 | | 0.01 |
| v/c Ratio | 0.65 | 0.08 | 0.00 | 0.09 | 0.06 | 0.01 |
| Uniform Delay, d1 | 19.7 | 16.8 | 4.6 | 4.9 | 4.8 | 4.7 |
| Progression Factor | 0.79 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.8 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Delay (s) | 17.4 | 16.0 | 4.7 | 5.1 | 4.9 | 4.7 |
| Level of Service | B | B | A | A | A | A |
| Approach Delay (s) | 17.0 | | 5.1 | | 4.9 | |
| Approach LOS | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.26 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 32.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 65 | 57 | 24 | 8 | 7 | 57 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.99 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1631 | |
| Flt Permitted | 0.80 | 1.00 | 1.00 | 1.00 | 0.99 | |
| Satd. Flow (perm) | 1490 | 1863 | 1863 | 1583 | 1631 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 71 | 62 | 26 | 9 | 8 | 62 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 8 | 23 | 0 |
| Lane Group Flow (vph) | 71 | 62 | 26 | 1 | 47 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 5.0 | 5.0 | 5.0 | 5.0 | 22.8 | |
| Effective Green, g (s) | 5.0 | 5.0 | 5.0 | 5.0 | 22.8 | |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.14 | 0.14 | 0.64 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 208 | 260 | 260 | 221 | 1038 | |
| v/s Ratio Prot | | 0.03 | 0.01 | | c0.03 | |
| v/s Ratio Perm | c0.05 | | | 0.00 | | |
| v/c Ratio | 0.34 | 0.24 | 0.10 | 0.01 | 0.05 | |
| Uniform Delay, d1 | 13.9 | 13.7 | 13.4 | 13.3 | 2.4 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.0 | 0.5 | 0.2 | 0.0 | 0.1 | |
| Delay (s) | 14.9 | 14.2 | 13.6 | 13.3 | 2.5 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 14.6 | 13.5 | | 2.5 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 35.8 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 20.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 8 | 7 | 21 | 39 | 26 | 10 | 45 | 19 | 101 | 10 | 27 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.89 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3145 | | 1652 | 3389 | | | 1800 | 1583 | | 1837 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.88 | 1.00 |
| Satd. Flow (perm) | 1652 | 3145 | | 1652 | 3389 | | | 1428 | 1583 | | 1645 | 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) | 9 | 8 | 23 | 42 | 28 | 11 | 49 | 21 | 110 | 11 | 29 | 4 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 4 | 0 | 0 | 0 | 89 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 9 | 21 | 0 | 42 | 35 | 0 | 0 | 70 | 21 | 0 | 40 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 24.8 | | 3.9 | 28.0 | | | 4.8 | 8.7 | | 4.8 | 5.5 |
| Effective Green, g (s) | 0.7 | 24.8 | | 3.9 | 28.0 | | | 4.8 | 8.7 | | 4.8 | 5.5 |
| Actuated g/C Ratio | 0.02 | 0.55 | | 0.09 | 0.62 | | | 0.11 | 0.19 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1714 | | 141 | 2085 | | | 150 | 441 | | 173 | 330 |
| v/s Ratio Prot | 0.01 | 0.01 | | c0.03 | c0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.01 | | 0.02 | 0.00 |
| v/c Ratio | 0.36 | 0.01 | | 0.30 | 0.02 | | | 0.47 | 0.05 | | 0.23 | 0.00 |
| Uniform Delay, d1 | 22.2 | 4.7 | | 19.5 | 3.4 | | | 19.1 | 15.0 | | 18.7 | 17.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 8.7 | 0.0 | | 1.2 | 0.0 | | | 2.3 | 0.0 | | 0.7 | 0.0 |
| Delay (s) | 30.8 | 4.8 | | 20.7 | 3.4 | | | 21.4 | 15.1 | | 19.3 | 17.6 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 10.6 | | | 12.4 | | | 17.5 | | | 19.2 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 45.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 25.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 35 | 111 | 12 | 2 | 42 | 34 | 8 | 7 | 5 | 1056 | 3 | 59 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.93 | | | 0.97 | | | 0.99 | |
| Flt Protected | | 0.99 | | | 1.00 | | | 0.98 | | | 0.95 | |
| Satd. Flow (prot) | | 2067 | | | 3414 | | | 2005 | | | 2002 | |
| Flt Permitted | | 0.91 | | | 0.95 | | | 0.78 | | | 0.72 | |
| Satd. Flow (perm) | | 1896 | | | 3244 | | | 1593 | | | 1513 | |
| 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) | 38 | 121 | 13 | 2 | 46 | 37 | 9 | 8 | 5 | 1148 | 3 | 64 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 33 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 169 | 0 | 0 | 52 | 0 | 0 | 21 | 0 | 0 | 1214 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 14.4 | | | 14.4 | | | 97.6 | | | 97.6 | |
| Effective Green, g (s) | | 14.4 | | | 14.4 | | | 97.6 | | | 97.6 | |
| Actuated g/C Ratio | | 0.12 | | | 0.12 | | | 0.81 | | | 0.81 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 227 | | | 389 | | | 1295 | | | 1230 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.09 | | | 0.02 | | | 0.01 | | | c0.80 | |
| v/c Ratio | | 0.75 | | | 0.13 | | | 0.02 | | | 0.99 | |
| Uniform Delay, d1 | | 51.0 | | | 47.2 | | | 2.1 | | | 10.6 | |
| Progression Factor | | 1.00 | | | 0.89 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 12.5 | | | 0.2 | | | 0.0 | | | 22.7 | |
| Delay (s) | | 63.5 | | | 42.0 | | | 2.1 | | | 33.2 | |
| Level of Service | | E | | | D | | | A | | | C | |
| Approach Delay (s) | | 63.5 | | | 42.0 | | | 2.1 | | | 33.2 | |
| Approach LOS | | E | | | D | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.96 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 90.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 35 | 223 | 0 | 0 | 0 | 0 | 62 | 56 | 1127 | 0 | 37 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Frt | 0.86 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1590 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| Flt Permitted | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (perm) | 1590 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| 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) | 5 | 38 | 242 | 0 | 0 | 0 | 0 | 67 | 61 | 1225 | 0 | 40 |
| RTOR Reduction (vph) | 28 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 8 |
| Lane Group Flow (vph) | 114 | 0 | 114 | 0 | 0 | 0 | 0 | 67 | 8 | 1225 | 0 | 32 |
| Turn Type | NA | | Perm | | | | | NA | Perm | custom | | custom |
| Protected Phases | 8 | | | | | | | 6 | | | | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | 4 |
| Actuated Green, G (s) | 96.0 | | 96.0 | | | | | 16.0 | 16.0 | 96.0 | | 96.0 |
| Effective Green, g (s) | 96.0 | | 96.0 | | | | | 16.0 | 16.0 | 96.0 | | 96.0 |
| Actuated g/C Ratio | 0.80 | | 0.80 | | | | | 0.13 | 0.13 | 0.80 | | 0.80 |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1272 | | 1203 | | | | | 248 | 211 | 1416 | | 1435 |
| v/s Ratio Prot | 0.07 | | | | | | | c0.04 | | | | |
| v/s Ratio Perm | | | 0.08 | | | | | | 0.01 | c0.69 | | 0.02 |
| v/c Ratio | 0.09 | | 0.10 | | | | | 0.27 | 0.04 | 0.87 | | 0.02 |
| Uniform Delay, d1 | 2.6 | | 2.6 | | | | | 46.8 | 45.3 | 7.8 | | 2.4 |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.56 | 0.06 | 0.55 | | 1.00 |
| Incremental Delay, d2 | 0.0 | | 0.0 | | | | | 2.7 | 0.3 | 2.0 | | 0.0 |
| Delay (s) | 2.6 | | 2.6 | | | | | 28.9 | 3.2 | 6.3 | | 2.4 |
| Level of Service | A | | A | | | | | C | A | A | | A |
| Approach Delay (s) | 2.6 | | | | 0.0 | | | 16.7 | | | 6.1 | |
| Approach LOS | A | | | | A | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 6.4 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 9 | 26 | 49 | 4 | 2 | 1261 | 56 | 54 | 4 | 36 | 6 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | 0.95 | 0.95 | | | 1.00 | |
| Frt | | 0.91 | | | 1.00 | | 1.00 | 0.99 | | | 0.98 | |
| Flt Protected | | 0.99 | | | 0.96 | | 0.95 | 0.96 | | | 1.00 | |
| Satd. Flow (prot) | | 1914 | | | 2011 | | 1681 | 1902 | | | 1820 | |
| Flt Permitted | | 0.97 | | | 0.78 | | 0.72 | 0.73 | | | 0.96 | |
| Satd. Flow (perm) | | 1875 | | | 1645 | | 1282 | 1437 | | | 1762 | |
| 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) | 5 | 10 | 28 | 53 | 4 | 2 | 1371 | 61 | 59 | 4 | 39 | 7 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 17 | 0 | 0 | 58 | 0 | 740 | 749 | 0 | 0 | 49 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 8.4 | | | 8.4 | | 103.6 | 103.6 | | | 103.6 | |
| Effective Green, g (s) | | 8.4 | | | 8.4 | | 103.6 | 103.6 | | | 103.6 | |
| Actuated g/C Ratio | | 0.07 | | | 0.07 | | 0.86 | 0.86 | | | 0.86 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 131 | | | 115 | | 1106 | 1240 | | | 1521 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.01 | | | c0.04 | | c0.58 | 0.52 | | | 0.03 | |
| v/c Ratio | | 0.13 | | | 0.50 | | 0.67 | 0.60 | | | 0.03 | |
| Uniform Delay, d1 | | 52.4 | | | 53.8 | | 2.7 | 2.3 | | | 1.2 | |
| Progression Factor | | 1.00 | | | 1.00 | | 0.06 | 0.07 | | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 3.5 | | 2.2 | 1.5 | | | 0.0 | |
| Delay (s) | | 52.8 | | | 57.3 | | 2.3 | 1.6 | | | 1.2 | |
| Level of Service | | D | | | E | | A | A | | | A | |
| Approach Delay (s) | | 52.8 | | | 57.3 | | | 2.0 | | | 1.2 | |
| Approach LOS | | D | | | E | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 5.3 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 61.1% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 1372 | 0 | 14 | 0 | 7 | 18 | 10 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | | | 1.00 | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | | | | 1681 | 1681 | 1794 | | 1863 | 1636 | | 2041 | |
| Flt Permitted | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.89 | |
| Satd. Flow (perm) | | | | 1681 | 1681 | 1794 | | 1863 | 1636 | | 1877 | |
| 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) | 0 | 0 | 0 | 1491 | 0 | 15 | 0 | 8 | 20 | 11 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 15 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 745 | 746 | 10 | 0 | 8 | 5 | 0 | 16 | 0 |
| Turn Type | Perm | | | Split | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | 8 | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | | | 46.0 | 46.0 | 46.0 | | 16.0 | 16.0 | | 16.0 | |
| Effective Green, g (s) | | | | 46.0 | 46.0 | 46.0 | | 16.0 | 16.0 | | 16.0 | |
| Actuated g/C Ratio | | | | 0.66 | 0.66 | 0.66 | | 0.23 | 0.23 | | 0.23 | |
| Clearance Time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | | | 1104 | 1104 | 1178 | | 425 | 373 | | 429 | |
| v/s Ratio Prot | | | | 0.44 | c0.44 | | | 0.00 | | | | |
| v/s Ratio Perm | | | | | | 0.01 | | | 0.00 | | c0.01 | |
| v/c Ratio | | | | 0.67 | 0.68 | 0.01 | | 0.02 | 0.01 | | 0.04 | |
| Uniform Delay, d1 | | | | 7.4 | 7.4 | 4.1 | | 20.9 | 20.9 | | 21.0 | |
| Progression Factor | | | | 0.62 | 0.62 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | | | 1.5 | 1.5 | 0.0 | | 0.1 | 0.1 | | 0.2 | |
| Delay (s) | | | | 6.1 | 6.1 | 4.1 | | 21.0 | 20.9 | | 21.2 | |
| Level of Service | | | | A | A | A | | C | C | | C | |
| Approach Delay (s) | | 0.0 | | | 6.1 | | | 21.0 | | | 21.2 | |
| Approach LOS | | A | | | A | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 6.5 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 52.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 11 | 11 | 10 | 1371 | 11 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.93 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 12 | 12 | 11 | 1490 | 12 | 12 |
| RTOR Reduction (vph) | 3 | 0 | 0 | 0 | 0 | 10 |
| Lane Group Flow (vph) | 21 | 0 | 11 | 1490 | 12 | 2 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 52.6 | | 2.7 | 59.3 | 2.7 | 9.4 |
| Effective Green, g (s) | 52.6 | | 2.7 | 59.3 | 2.7 | 9.4 |
| Actuated g/C Ratio | 0.75 | | 0.04 | 0.85 | 0.04 | 0.13 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2542 | | 68 | 2998 | 68 | 212 |
| v/s Ratio Prot | 0.01 | | 0.01 | c0.42 | c0.01 | 0.00 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.16 | 0.50 | 0.18 | 0.01 |
| Uniform Delay, d1 | 2.2 | | 32.6 | 1.4 | 32.6 | 26.3 |
| Progression Factor | 0.65 | | 0.95 | 1.14 | 0.06 | 0.21 |
| Incremental Delay, d2 | 0.0 | | 1.0 | 0.5 | 1.2 | 0.0 |
| Delay (s) | 1.4 | | 31.9 | 2.2 | 3.3 | 5.4 |
| Level of Service | A | | C | A | A | A |
| Approach Delay (s) | 1.4 | | | 2.4 | 4.4 | |
| Approach LOS | A | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.4 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 47.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | | | 4.0 | | |
| Lane Util. Factor | | 1.00 | | | | | | | | 1.00 | | |
| Frt | | 1.00 | | | | | | | | 1.00 | | |
| Flt Protected | | 0.95 | | | | | | | | 0.95 | | |
| Satd. Flow (prot) | | 1837 | | | | | | | | 1770 | | |
| Flt Permitted | | 0.95 | | | | | | | | 0.76 | | |
| Satd. Flow (perm) | | 1837 | | | | | | | | 1410 | | |
| 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) | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Turn Type | Perm | NA | | | | | | | | Perm | | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 3.0 | | | | | | | | 59.0 | | |
| Effective Green, g (s) | | 3.0 | | | | | | | | 59.0 | | |
| Actuated g/C Ratio | | 0.04 | | | | | | | | 0.84 | | |
| Clearance Time (s) | | 4.0 | | | | | | | | 4.0 | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | 3.0 | | |
| Lane Grp Cap (vph) | | 78 | | | | | | | | 1188 | | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.01 | | | | | | | | c0.02 | | |
| v/c Ratio | | 0.32 | | | | | | | | 0.02 | | |
| Uniform Delay, d1 | | 32.5 | | | | | | | | 0.9 | | |
| Progression Factor | | 1.00 | | | | | | | | 0.37 | | |
| Incremental Delay, d2 | | 2.4 | | | | | | | | 0.0 | | |
| Delay (s) | | 34.9 | | | | | | | | 0.4 | | |
| Level of Service | | C | | | | | | | | A | | |
| Approach Delay (s) | | 34.9 | | | 0.0 | | | 0.0 | | | 0.4 | |
| Approach LOS | | C | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.03 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 1298 | 0 | 11 | 12 | 0 | 28 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 1411 | 0 | 12 | 13 | 0 | 30 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 2 | 0 | 29 |
| Lane Group Flow (vph) | 1411 | 0 | 12 | 11 | 0 | 1 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 59.7 | | 59.7 | 59.7 | | 2.3 |
| Effective Green, g (s) | 59.7 | | 59.7 | 59.7 | | 2.3 |
| Actuated g/C Ratio | 0.85 | | 0.85 | 0.85 | | 0.03 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2927 | | 1509 | 2376 | | 53 |
| v/s Ratio Prot | c0.41 | | 0.01 | | | |
| v/s Ratio Perm | | | | 0.00 | | c0.00 |
| v/c Ratio | 0.48 | | 0.01 | 0.00 | | 0.02 |
| Uniform Delay, d1 | 1.3 | | 0.8 | 0.8 | | 32.8 |
| Progression Factor | 0.98 | | 1.87 | 2.71 | | 1.00 |
| Incremental Delay, d2 | 0.6 | | 0.0 | 0.0 | | 0.1 |
| Delay (s) | 1.8 | | 1.4 | 2.1 | | 32.9 |
| Level of Service | A | | A | A | | C |
| Approach Delay (s) | 1.8 | | 1.8 | | 32.9 | |
| Approach LOS | A | | A | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.5 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 47.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 276 | 0 | 4 | 27 | 59 | 176 | 0 | 2206 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 1.00 | | | | 0.90 | | | 1.00 | | | |
| Flt Protected | 0.95 | | | | 0.99 | | | 1.00 | | | |
| Satd. Flow (prot) | 3437 | | | | 3166 | | | 3539 | | | |
| Flt Permitted | 0.95 | | | | 0.71 | | | 1.00 | | | |
| Satd. Flow (perm) | 3437 | | | | 2270 | | | 3539 | | | |
| 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 |
| Adj. Flow (vph) | 300 | 0 | 4 | 29 | 64 | 191 | 0 | 2398 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 13 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 291 | 0 | 0 | 0 | 232 | 0 | 0 | 2398 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 11.1 | | | | 50.9 | | | 50.9 | | | |
| Effective Green, g (s) | 11.1 | | | | 50.9 | | | 50.9 | | | |
| Actuated g/C Ratio | 0.16 | | | | 0.73 | | | 0.73 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 545 | | | | 1650 | | | 2573 | | | |
| v/s Ratio Prot | c0.08 | | | | | | | c0.68 | | | |
| v/s Ratio Perm | | | | | 0.10 | | | | | | |
| v/c Ratio | 0.53 | | | | 0.14 | | | 0.93 | | | |
| Uniform Delay, d1 | 27.1 | | | | 2.9 | | | 8.1 | | | |
| Progression Factor | 0.94 | | | | 1.70 | | | 1.00 | | | |
| Incremental Delay, d2 | 1.0 | | | | 0.2 | | | 7.7 | | | |
| Delay (s) | 26.6 | | | | 5.1 | | | 15.8 | | | |
| Level of Service | C | | | | A | | | B | | | |
| Approach Delay (s) | 26.6 | | | | 5.1 | | | 15.8 | | 0.0 | |
| Approach LOS | C | | | | A | | | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.86 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 75.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | |
| Volume (vph) | 204 | 5 | 18 | 0 | 27 | 202 | 109 | 164 | 12 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 1.00 | | 0.85 | | 1.00 | | 0.95 | | 1.00 | |
| Flt Protected | 0.95 | | 1.00 | | 1.00 | | 0.98 | | 0.95 | |
| Satd. Flow (prot) | 3431 | | 1441 | | 3539 | | 3286 | | 3433 | |
| Flt Permitted | 0.95 | | 1.00 | | 1.00 | | 0.59 | | 0.95 | |
| Satd. Flow (perm) | 3431 | | 1441 | | 3539 | | 1978 | | 3433 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 222 | 5 | 20 | 0 | 29 | 220 | 118 | 178 | 13 | 0 |
| RTOR Reduction (vph) | 11 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 218 | 0 | 5 | 0 | 29 | 0 | 516 | 0 | 13 | 0 |
| Turn Type | NA | | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4! | | | | 8! | | 6! | | 6! | |
| Permitted Phases | | | 4 | | | 6 | | | | |
| Actuated Green, G (s) | 20.0 | | 20.0 | | 20.0 | | 42.0 | | 42.0 | |
| Effective Green, g (s) | 20.0 | | 20.0 | | 20.0 | | 42.0 | | 42.0 | |
| Actuated g/C Ratio | 0.29 | | 0.29 | | 0.29 | | 0.60 | | 0.60 | |
| Clearance Time (s) | 4.0 | | 4.0 | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 980 | | 411 | | 1011 | | 1186 | | 2059 | |
| v/s Ratio Prot | c0.06 | | | | 0.01 | | | | 0.00 | |
| v/s Ratio Perm | | | 0.00 | | | | c0.26 | | | |
| v/c Ratio | 0.22 | | 0.01 | | 0.03 | | 2.08dl | | 0.01 | |
| Uniform Delay, d1 | 19.1 | | 17.9 | | 18.0 | | 7.6 | | 5.6 | |
| Progression Factor | 1.00 | | 1.00 | | 1.00 | | 0.54 | | 1.00 | |
| Incremental Delay, d2 | 0.1 | | 0.0 | | 0.1 | | 0.5 | | 0.0 | |
| Delay (s) | 19.2 | | 17.9 | | 18.1 | | 4.7 | | 5.6 | |
| Level of Service | B | | B | | B | | A | | A | |
| Approach Delay (s) | 19.1 | | | | 18.1 | | 4.7 | | 5.6 | |
| Approach LOS | B | | | | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.6 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.37 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 37.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 87 | 71 | 4 | 146 | 142 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1773 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1773 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 95 | 77 | 4 | 159 | 154 | 5 |
| RTOR Reduction (vph) | 0 | 68 | 0 | 36 | 4 | 1 |
| Lane Group Flow (vph) | 95 | 9 | 4 | 123 | 151 | 3 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 8.0 | 8.0 | 54.0 | 54.0 | 54.0 | 54.0 |
| Effective Green, g (s) | 8.0 | 8.0 | 54.0 | 54.0 | 54.0 | 54.0 |
| Actuated g/C Ratio | 0.11 | 0.11 | 0.77 | 0.77 | 0.77 | 0.77 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 202 | 180 | 1365 | 1221 | 1367 | 1160 |
| v/s Ratio Prot | c0.05 | | 0.00 | | c0.09 | |
| v/s Ratio Perm | | 0.01 | | 0.08 | | 0.00 |
| v/c Ratio | 0.47 | 0.05 | 0.00 | 0.10 | 0.11 | 0.00 |
| Uniform Delay, d1 | 29.0 | 27.6 | 1.8 | 2.0 | 2.0 | 1.8 |
| Progression Factor | 0.64 | 0.38 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.7 | 0.1 | 0.0 | 0.2 | 0.2 | 0.0 |
| Delay (s) | 20.2 | 10.5 | 1.8 | 2.1 | 2.2 | 1.8 |
| Level of Service | C | B | A | A | A | A |
| Approach Delay (s) | 15.9 | | 2.1 | | 2.2 | |
| Approach LOS | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 6.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.16 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 26.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 44 | 81 | 5 | 2 | 65 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.87 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1616 | |
| Flt Permitted | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1863 | 1863 | 1863 | 1583 | 1616 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 37 | 48 | 88 | 5 | 2 | 71 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 5 | 23 | 0 |
| Lane Group Flow (vph) | 37 | 48 | 88 | 0 | 50 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 3.3 | 3.3 | 3.3 | 3.3 | 23.5 | |
| Effective Green, g (s) | 3.3 | 3.3 | 3.3 | 3.3 | 23.5 | |
| Actuated g/C Ratio | 0.09 | 0.09 | 0.09 | 0.09 | 0.68 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 176 | 176 | 176 | 150 | 1091 | |
| v/s Ratio Prot | | 0.03 | c0.05 | | c0.03 | |
| v/s Ratio Perm | 0.02 | | | 0.00 | | |
| v/c Ratio | 0.21 | 0.27 | 0.50 | 0.00 | 0.05 | |
| Uniform Delay, d1 | 14.5 | 14.6 | 15.0 | 14.3 | 1.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.6 | 0.8 | 2.2 | 0.0 | 0.1 | |
| Delay (s) | 15.1 | 15.5 | 17.2 | 14.3 | 2.0 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 15.3 | 17.0 | | 2.0 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 34.8 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 19.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 3 | 9 | 119 | 4 | 1 | 18 | 0 | 19 | 0 | 3 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 0.88 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (prot) | | 3131 | | 1652 | 3433 | | | 1770 | 1583 | | 1863 | 1583 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 3131 | | 1652 | 3433 | | | 1863 | 1583 | | 1863 | 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) | 0 | 3 | 10 | 129 | 4 | 1 | 20 | 0 | 21 | 0 | 3 | 1 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 1 |
| Lane Group Flow (vph) | 0 | 8 | 0 | 129 | 5 | 0 | 0 | 20 | 3 | 0 | 3 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 25.7 | | 4.9 | 29.9 | | | 1.3 | 6.2 | | 1.3 | 2.0 |
| Effective Green, g (s) | | 25.7 | | 4.9 | 29.9 | | | 1.3 | 6.2 | | 1.3 | 2.0 |
| Actuated g/C Ratio | | 0.59 | | 0.11 | 0.68 | | | 0.03 | 0.14 | | 0.03 | 0.05 |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1832 | | 184 | 2338 | | | 55 | 367 | | 55 | 216 |
| v/s Ratio Prot | | c0.00 | | c0.08 | 0.00 | | | | 0.00 | | 0.00 | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | | 0.00 |
| v/c Ratio | | 0.00 | | 0.70 | 0.00 | | | 0.36 | 0.01 | | 0.05 | 0.00 |
| Uniform Delay, d1 | | 3.8 | | 18.8 | 2.2 | | | 20.9 | 16.2 | | 20.7 | 20.0 |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.0 | | 11.4 | 0.0 | | | 4.1 | 0.0 | | 0.4 | 0.0 |
| Delay (s) | | 3.8 | | 30.2 | 2.2 | | | 25.0 | 16.2 | | 21.1 | 20.0 |
| Level of Service | | A | | C | A | | | C | B | | C | B |
| Approach Delay (s) | | 3.8 | | | 29.2 | | | 20.5 | | | 20.8 | |
| Approach LOS | | A | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.13 | | |
| Actuated Cycle Length (s) | 43.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 27.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 12 | 13 | 1 | 1 | 111 | 374 | 1 | 0 | 0 | 5 | 0 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | | 1.00 | | | 0.88 | | | 1.00 | | | 0.89 | |
| Flt Protected | | 0.98 | | | 1.00 | | | 0.95 | | | 0.99 | |
| Satd. Flow (prot) | | 2053 | | | 3235 | | | 2006 | | | 1862 | |
| Flt Permitted | | 0.73 | | | 0.95 | | | 0.74 | | | 0.98 | |
| Satd. Flow (perm) | | 1524 | | | 3088 | | | 1561 | | | 1834 | |
| 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) | 13 | 14 | 1 | 1 | 121 | 407 | 1 | 0 | 0 | 5 | 0 | 22 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 304 | 0 | 0 | 0 | 0 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 0 | 27 | 0 | 0 | 225 | 0 | 0 | 1 | 0 | 0 | 13 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 8.2 | | | 8.2 | | | 16.1 | | | 16.1 | |
| Effective Green, g (s) | | 8.2 | | | 8.2 | | | 16.1 | | | 16.1 | |
| Actuated g/C Ratio | | 0.25 | | | 0.25 | | | 0.50 | | | 0.50 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 386 | | | 783 | | | 778 | | | 914 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.02 | | | c0.07 | | | 0.00 | | | c0.01 | |
| v/c Ratio | | 0.07 | | | 0.29 | | | 0.00 | | | 0.01 | |
| Uniform Delay, d1 | | 9.2 | | | 9.7 | | | 4.1 | | | 4.1 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.2 | | | 0.0 | | | 0.0 | |
| Delay (s) | | 9.2 | | | 9.9 | | | 4.1 | | | 4.1 | |
| Level of Service | | A | | | A | | | A | | | A | |
| Approach Delay (s) | | 9.2 | | | 9.9 | | | 4.1 | | | 4.1 | |
| Approach LOS | | A | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.6 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 32.3 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 25.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 8 | 26 | 0 | 0 | 0 | 0 | 1301 | 477 | 6 | 0 | 7 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Frt | 0.87 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | | 0.85 |
| Flt Protected | 0.99 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1613 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| Flt Permitted | 0.99 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (perm) | 1613 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| 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) | 3 | 9 | 28 | 0 | 0 | 0 | 0 | 1414 | 518 | 7 | 0 | 8 |
| RTOR Reduction (vph) | 19 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 87 | 0 | 0 | 8 |
| Lane Group Flow (vph) | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1414 | 431 | 7 | 0 | 0 |
| Turn Type | NA | | Perm | | | | | NA | Perm | custom | | custom |
| Protected Phases | 8 | | | | | | | 6 | | | | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | 4 |
| Actuated Green, G (s) | 3.8 | | 3.8 | | | | | 58.2 | 58.2 | 3.8 | | 3.8 |
| Effective Green, g (s) | 3.8 | | 3.8 | | | | | 58.2 | 58.2 | 3.8 | | 3.8 |
| Actuated g/C Ratio | 0.05 | | 0.05 | | | | | 0.83 | 0.83 | 0.05 | | 0.05 |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 87 | | 81 | | | | | 1548 | 1316 | 96 | | 97 |
| v/s Ratio Prot | 0.00 | | | | | | | c0.76 | | | | |
| v/s Ratio Perm | | | 0.00 | | | | | | 0.27 | c0.00 | | 0.00 |
| v/c Ratio | 0.01 | | 0.01 | | | | | 0.91 | 0.33 | 0.07 | | 0.00 |
| Uniform Delay, d1 | 31.3 | | 31.3 | | | | | 4.1 | 1.4 | 31.4 | | 31.3 |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.91 | 0.19 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.1 | | | | | 7.3 | 0.5 | 0.3 | | 0.0 |
| Delay (s) | 31.4 | | 31.4 | | | | | 11.1 | 0.7 | 31.8 | | 31.3 |
| Level of Service | C | | C | | | | | B | A | C | | C |
| Approach Delay (s) | 31.4 | | | | 0.0 | | | 8.3 | | | 31.5 | |
| Approach LOS | C | | | | A | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 8.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.86 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 85.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 1 | 0 | 1767 | 4 | 0 | 0 | 11 | 18 | 2 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 0.95 | 0.95 | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.85 | 0.85 | | 1.00 | | | 0.99 | | | 1.00 | |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | | | 0.98 | | | 1.00 | |
| Satd. Flow (prot) | | 1705 | 1504 | | 2006 | | | 2058 | | | 1863 | |
| Flt Permitted | | 1.00 | 1.00 | | 0.14 | | | 0.95 | | | 1.00 | |
| Satd. Flow (perm) | | 1705 | 1504 | | 295 | | | 1991 | | | 1863 | |
| 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) | 1 | 0 | 1921 | 4 | 0 | 0 | 12 | 20 | 2 | 0 | 8 | 0 |
| RTOR Reduction (vph) | 0 | 568 | 568 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 394 | 392 | 0 | 4 | 0 | 0 | 33 | 0 | 0 | 8 | 0 |
| Turn Type | Perm | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 28.6 | 28.6 | | 28.6 | | | 33.4 | | | 33.4 | |
| Effective Green, g (s) | | 28.6 | 28.6 | | 28.6 | | | 33.4 | | | 33.4 | |
| Actuated g/C Ratio | | 0.41 | 0.41 | | 0.41 | | | 0.48 | | | 0.48 | |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 696 | 614 | | 120 | | | 949 | | | 888 | |
| v/s Ratio Prot | | | | | | | | | | | 0.00 | |
| v/s Ratio Perm | | 0.23 | c0.26 | | 0.01 | | | c0.02 | | | | |
| v/c Ratio | | 0.57 | 0.64 | | 0.03 | | | 0.03 | | | 0.01 | |
| Uniform Delay, d1 | | 15.9 | 16.6 | | 12.4 | | | 9.7 | | | 9.6 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | | | 0.48 | | | 1.00 | |
| Incremental Delay, d2 | | 1.1 | 2.2 | | 0.1 | | | 0.1 | | | 0.0 | |
| Delay (s) | | 17.0 | 18.8 | | 12.5 | | | 4.7 | | | 9.6 | |
| Level of Service | | B | B | | B | | | A | | | A | |
| Approach Delay (s) | | 17.9 | | | 12.5 | | | 4.7 | | | 9.6 | |
| Approach LOS | | B | | | B | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.31 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 89.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 157 | 0 | 93 | 0 | 14 | 64 | 31 | 24 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | | | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | | | | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | | | | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | | | | | 1770 | 1794 | | 1863 | 1636 | | 2053 | |
| Flt Permitted | | | | | 0.76 | 1.00 | | 1.00 | 1.00 | | 0.90 | |
| Satd. Flow (perm) | | | | | 1410 | 1794 | | 1863 | 1636 | | 1901 | |
| 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) | 0 | 0 | 0 | 171 | 0 | 101 | 0 | 15 | 70 | 34 | 26 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 81 | 0 | 0 | 25 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 171 | 20 | 0 | 15 | 45 | 0 | 60 | 0 |
| Turn Type | Perm | | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | | | | 10.1 | 10.1 | | 31.9 | 31.9 | | 31.9 | |
| Effective Green, g (s) | | | | | 10.1 | 10.1 | | 31.9 | 31.9 | | 31.9 | |
| Actuated g/C Ratio | | | | | 0.20 | 0.20 | | 0.64 | 0.64 | | 0.64 | |
| Clearance Time (s) | | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | | | | 284 | 362 | | 1188 | 1043 | | 1212 | |
| v/s Ratio Prot | | | | | | | | 0.01 | | | | |
| v/s Ratio Perm | | | | | c0.12 | 0.01 | | | 0.03 | | c0.03 | |
| v/c Ratio | | | | | 0.60 | 0.06 | | 0.01 | 0.04 | | 0.05 | |
| Uniform Delay, d1 | | | | | 18.1 | 16.1 | | 3.3 | 3.4 | | 3.4 | |
| Progression Factor | | | | | 0.51 | 0.60 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | | | | 3.6 | 0.1 | | 0.0 | 0.1 | | 0.1 | |
| Delay (s) | | | | | 12.8 | 9.8 | | 3.3 | 3.4 | | 3.5 | |
| Level of Service | | | | | B | A | | A | A | | A | |
| Approach Delay (s) | | 0.0 | | | 11.7 | | | 3.4 | | | 3.5 | |
| Approach LOS | | A | | | B | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 8.8 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.18 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 25.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 38 | 11 | 28 | 162 | 91 | 160 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.97 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3533 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3533 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 41 | 12 | 30 | 176 | 99 | 174 |
| RTOR Reduction (vph) | 11 | 0 | 0 | 0 | 0 | 37 |
| Lane Group Flow (vph) | 42 | 0 | 30 | 176 | 99 | 137 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 2.7 | | 5.9 | 12.6 | 29.4 | 39.3 |
| Effective Green, g (s) | 2.7 | | 5.9 | 12.6 | 29.4 | 39.3 |
| Actuated g/C Ratio | 0.05 | | 0.12 | 0.25 | 0.59 | 0.79 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 190 | | 208 | 891 | 1040 | 1244 |
| v/s Ratio Prot | 0.01 | | 0.02 | c0.05 | 0.06 | c0.09 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.22 | | 0.14 | 0.20 | 0.10 | 0.11 |
| Uniform Delay, d1 | 22.6 | | 19.8 | 14.7 | 4.5 | 1.3 |
| Progression Factor | 0.82 | | 1.00 | 1.00 | 0.00 | 0.00 |
| Incremental Delay, d2 | 0.6 | | 0.3 | 0.1 | 0.2 | 0.0 |
| Delay (s) | 19.1 | | 20.1 | 14.8 | 0.2 | 0.0 |
| Level of Service | B | | C | B | A | A |
| Approach Delay (s) | 19.1 | | | 15.6 | 0.1 | |
| Approach LOS | B | | | B | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 8.0 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.16 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 19.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 251 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 38 | 1 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | | | | | | 0.86 | | 1.00 | 1.00 | |
| Flt Protected | | 0.95 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1833 | | | | | | 1826 | | 1770 | 1863 | |
| Flt Permitted | | 0.95 | | | | | | 1.00 | | 0.76 | 1.00 | |
| Satd. Flow (perm) | | 1833 | | | | | | 1826 | | 1410 | 1863 | |
| 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) | 273 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 41 | 1 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 275 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 41 | 1 | 0 |
| Turn Type | Perm | NA | | | | | | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 12.8 | | | | | | 29.2 | | 29.2 | 29.2 | |
| Effective Green, g (s) | | 12.8 | | | | | | 29.2 | | 29.2 | 29.2 | |
| Actuated g/C Ratio | | 0.26 | | | | | | 0.58 | | 0.58 | 0.58 | |
| Clearance Time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 469 | | | | | | 1066 | | 823 | 1087 | |
| v/s Ratio Prot | | | | | | | | 0.00 | | | 0.00 | |
| v/s Ratio Perm | | 0.15 | | | | | | | | c0.03 | | |
| v/c Ratio | | 0.59 | | | | | | 0.00 | | 0.05 | 0.00 | |
| Uniform Delay, d1 | | 16.3 | | | | | | 4.3 | | 4.5 | 4.3 | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | 1.67 | 2.12 | |
| Incremental Delay, d2 | | 1.9 | | | | | | 0.0 | | 0.1 | 0.0 | |
| Delay (s) | | 18.2 | | | | | | 4.3 | | 7.6 | 9.2 | |
| Level of Service | | B | | | | | | A | | A | A | |
| Approach Delay (s) | | 18.2 | | | 0.0 | | | 4.3 | | | 7.6 | |
| Approach LOS | | B | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.21 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 29.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 120 | 0 | 49 | 51 | 0 | 21 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 130 | 0 | 53 | 55 | 0 | 23 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 12 | 0 | 22 |
| Lane Group Flow (vph) | 130 | 0 | 53 | 43 | 0 | 1 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 31.3 | | 31.3 | 31.3 | | 0.9 |
| Effective Green, g (s) | 31.3 | | 31.3 | 31.3 | | 0.9 |
| Actuated g/C Ratio | 0.78 | | 0.78 | 0.78 | | 0.02 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2672 | | 1378 | 2169 | | 36 |
| v/s Ratio Prot | c0.04 | | 0.03 | | | |
| v/s Ratio Perm | | | | 0.02 | | c0.00 |
| v/c Ratio | 0.05 | | 0.04 | 0.02 | | 0.01 |
| Uniform Delay, d1 | 1.0 | | 1.0 | 1.0 | | 19.2 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.0 | | 0.1 | 0.0 | | 0.2 |
| Delay (s) | 1.1 | | 1.1 | 1.0 | | 19.4 |
| Level of Service | A | | A | A | | B |
| Approach Delay (s) | 1.1 | | 1.0 | | 19.4 | |
| Approach LOS | A | | A | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.7 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.05 | | |
| Actuated Cycle Length (s) | 40.2 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 13.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 84 | 0 | 2 | 92 | 61 | 191 | 0 | 252 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 1.00 | | | | 0.92 | | | 1.00 | | | |
| Flt Protected | 0.95 | | | | 0.99 | | | 1.00 | | | |
| Satd. Flow (prot) | 3434 | | | | 3201 | | | 3539 | | | |
| Flt Permitted | 0.95 | | | | 0.82 | | | 1.00 | | | |
| Satd. Flow (perm) | 3434 | | | | 2658 | | | 3539 | | | |
| 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 |
| Adj. Flow (vph) | 91 | 0 | 2 | 100 | 66 | 208 | 0 | 274 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 20 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 73 | 0 | 0 | 0 | 323 | 0 | 0 | 274 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 4.3 | | | | 37.7 | | | 37.7 | | | |
| Effective Green, g (s) | 4.3 | | | | 37.7 | | | 37.7 | | | |
| Actuated g/C Ratio | 0.09 | | | | 0.75 | | | 0.75 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 295 | | | | 2004 | | | 2668 | | | |
| v/s Ratio Prot | c0.02 | | | | | | | 0.08 | | | |
| v/s Ratio Perm | | | | | c0.12 | | | | | | |
| v/c Ratio | 0.25 | | | | 0.16 | | | 0.10 | | | |
| Uniform Delay, d1 | 21.3 | | | | 1.7 | | | 1.6 | | | |
| Progression Factor | 0.88 | | | | 0.37 | | | 1.00 | | | |
| Incremental Delay, d2 | 0.4 | | | | 0.2 | | | 0.1 | | | |
| Delay (s) | 19.3 | | | | 0.8 | | | 1.7 | | | |
| Level of Service | B | | | | A | | | A | | | |
| Approach Delay (s) | 19.3 | | | | 0.8 | | | 1.7 | | 0.0 | |
| Approach LOS | B | | | | A | | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.5 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.17 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 30.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 226 | 24 | 37 | 2 | 0 | 82 | 61 | 19 | 23 | 42 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 0.98 | | 0.85 | | | 1.00 | | 0.97 | | 1.00 | |
| Flt Protected | 0.96 | | 1.00 | | | 1.00 | | 0.97 | | 0.95 | |
| Satd. Flow (prot) | 3403 | | 1441 | | | 3535 | | 3323 | | 3434 | |
| Flt Permitted | 0.96 | | 1.00 | | | 0.95 | | 0.59 | | 0.95 | |
| Satd. Flow (perm) | 3403 | | 1441 | | | 3370 | | 2030 | | 3434 | |
| 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 |
| Adj. Flow (vph) | 246 | 26 | 40 | 2 | 0 | 89 | 66 | 21 | 25 | 46 | 1 |
| RTOR Reduction (vph) | 13 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 |
| Lane Group Flow (vph) | 263 | 0 | 15 | 0 | 0 | 91 | 0 | 112 | 0 | 34 | 0 |
| Turn Type | NA | | Perm | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4! | | | | | 8! | | 6! | | 6! | |
| Permitted Phases | | | 4 | 8 | | | 6 | | | | |
| Actuated Green, G (s) | 21.0 | | 21.0 | | | 21.0 | | 21.0 | | 21.0 | |
| Effective Green, g (s) | 21.0 | | 21.0 | | | 21.0 | | 21.0 | | 21.0 | |
| Actuated g/C Ratio | 0.42 | | 0.42 | | | 0.42 | | 0.42 | | 0.42 | |
| Clearance Time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 1429 | | 605 | | | 1415 | | 852 | | 1442 | |
| v/s Ratio Prot | c0.08 | | | | | | | | | 0.01 | |
| v/s Ratio Perm | | | 0.01 | | | 0.03 | | c0.06 | | | |
| v/c Ratio | 0.18 | | 0.02 | | | 0.06 | | 0.13 | | 0.02 | |
| Uniform Delay, d1 | 9.1 | | 8.5 | | | 8.6 | | 8.9 | | 8.5 | |
| Progression Factor | 1.00 | | 1.00 | | | 1.00 | | 0.79 | | 1.00 | |
| Incremental Delay, d2 | 0.1 | | 0.0 | | | 0.1 | | 0.3 | | 0.0 | |
| Delay (s) | 9.2 | | 8.5 | | | 8.7 | | 7.4 | | 8.5 | |
| Level of Service | A | | A | | | A | | A | | A | |
| Approach Delay (s) | 9.1 | | | | | 8.7 | | 7.4 | | 8.5 | |
| Approach LOS | A | | | | | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 8.6 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.16 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 31.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 40 | 101 | 2 | 29 | 50 | 2 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1770 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1770 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 43 | 110 | 2 | 32 | 54 | 2 |
| RTOR Reduction (vph) | 0 | 97 | 0 | 9 | 0 | 1 |
| Lane Group Flow (vph) | 43 | 13 | 2 | 23 | 54 | 1 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 5.8 | 5.8 | 36.2 | 36.2 | 36.2 | 36.2 |
| Effective Green, g (s) | 5.8 | 5.8 | 36.2 | 36.2 | 36.2 | 36.2 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.72 | 0.72 | 0.72 | 0.72 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 205 | 183 | 1281 | 1146 | 1281 | 1088 |
| v/s Ratio Prot | c0.02 | | 0.00 | | c0.03 | |
| v/s Ratio Perm | | 0.01 | | 0.01 | | 0.00 |
| v/c Ratio | 0.21 | 0.07 | 0.00 | 0.02 | 0.04 | 0.00 |
| Uniform Delay, d1 | 20.0 | 19.7 | 1.9 | 1.9 | 2.0 | 1.9 |
| Progression Factor | 0.67 | 0.29 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.5 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 |
| Delay (s) | 14.0 | 5.8 | 1.9 | 2.0 | 2.0 | 1.9 |
| Level of Service | B | A | A | A | A | A |
| Approach Delay (s) | 8.1 | | 2.0 | | 2.0 | |
| Approach LOS | A | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 5.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.07 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 38 | 66 | 36 | 3 | 1 | 16 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.87 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1621 | |
| Flt Permitted | 0.87 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1620 | 1863 | 1863 | 1583 | 1621 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 41 | 72 | 39 | 3 | 1 | 17 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 3 | 6 | 0 |
| Lane Group Flow (vph) | 41 | 72 | 39 | 0 | 12 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 4.6 | 4.6 | 4.6 | 4.6 | 23.0 | |
| Effective Green, g (s) | 4.6 | 4.6 | 4.6 | 4.6 | 23.0 | |
| Actuated g/C Ratio | 0.13 | 0.13 | 0.13 | 0.13 | 0.65 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 209 | 240 | 240 | 204 | 1047 | |
| v/s Ratio Prot | | c0.04 | 0.02 | | c0.01 | |
| v/s Ratio Perm | 0.03 | | | 0.00 | | |
| v/c Ratio | 0.20 | 0.30 | 0.16 | 0.00 | 0.01 | |
| Uniform Delay, d1 | 13.8 | 14.0 | 13.8 | 13.5 | 2.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.5 | 0.7 | 0.3 | 0.0 | 0.0 | |
| Delay (s) | 14.3 | 14.7 | 14.1 | 13.5 | 2.3 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 14.6 | 14.1 | | 2.3 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.06 | | |
| Actuated Cycle Length (s) | 35.6 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 18.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 11 | 17 | 40 | 15 | 4 | 54 | 17 | 45 | 6 | 5 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.91 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.97 | 1.00 |
| Satd. Flow (prot) | 1652 | 3221 | | 1652 | 3433 | | | 1794 | 1583 | | 1810 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.78 | 1.00 |
| Satd. Flow (perm) | 1652 | 3221 | | 1652 | 3433 | | | 1432 | 1583 | | 1452 | 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) | 5 | 12 | 18 | 43 | 16 | 4 | 59 | 18 | 49 | 7 | 5 | 4 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 41 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 5 | 22 | 0 | 43 | 18 | 0 | 0 | 77 | 8 | 0 | 12 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 25.6 | | 2.8 | 27.7 | | | 4.9 | 7.7 | | 4.9 | 5.6 |
| Effective Green, g (s) | 0.7 | 25.6 | | 2.8 | 27.7 | | | 4.9 | 7.7 | | 4.9 | 5.6 |
| Actuated g/C Ratio | 0.02 | 0.57 | | 0.06 | 0.61 | | | 0.11 | 0.17 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1820 | | 102 | 2099 | | | 154 | 408 | | 157 | 335 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.03 | 0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.00 | | 0.01 | 0.00 |
| v/c Ratio | 0.20 | 0.01 | | 0.42 | 0.01 | | | 0.50 | 0.02 | | 0.08 | 0.00 |
| Uniform Delay, d1 | 22.0 | 4.3 | | 20.5 | 3.4 | | | 19.0 | 15.7 | | 18.2 | 17.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.9 | 0.0 | | 2.8 | 0.0 | | | 2.5 | 0.0 | | 0.2 | 0.0 |
| Delay (s) | 25.9 | 4.3 | | 23.3 | 3.4 | | | 21.6 | 15.7 | | 18.4 | 17.4 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 7.4 | | | 17.0 | | | 19.3 | | | 18.1 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 45.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 26.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 53 | 47 | 4 | 2 | 24 | 43 | 2 | 1 | 2 | 7 | 1 | 44 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | | 1.00 | | | 0.91 | | | 0.95 | | | 0.89 | |
| Flt Protected | | 0.97 | | | 1.00 | | | 0.98 | | | 0.99 | |
| Satd. Flow (prot) | | 2048 | | | 3309 | | | 1958 | | | 1858 | |
| Flt Permitted | | 0.80 | | | 0.95 | | | 0.96 | | | 0.98 | |
| Satd. Flow (perm) | | 1675 | | | 3132 | | | 1919 | | | 1839 | |
| 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) | 58 | 51 | 4 | 2 | 26 | 47 | 2 | 1 | 2 | 8 | 1 | 48 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 40 | 0 | 0 | 1 | 0 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 0 | 110 | 0 | 0 | 35 | 0 | 0 | 4 | 0 | 0 | 39 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 5.1 | | | 5.1 | | | 22.3 | | | 22.3 | |
| Effective Green, g (s) | | 5.1 | | | 5.1 | | | 22.3 | | | 22.3 | |
| Actuated g/C Ratio | | 0.14 | | | 0.14 | | | 0.63 | | | 0.63 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 241 | | | 451 | | | 1208 | | | 1158 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.07 | | | 0.01 | | | 0.00 | | | c0.02 | |
| v/c Ratio | | 0.45 | | | 0.08 | | | 0.00 | | | 0.03 | |
| Uniform Delay, d1 | | 13.9 | | | 13.1 | | | 2.4 | | | 2.5 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 1.4 | | | 0.1 | | | 0.0 | | | 0.1 | |
| Delay (s) | | 15.2 | | | 13.2 | | | 2.4 | | | 2.5 | |
| Level of Service | | B | | | B | | | A | | | A | |
| Approach Delay (s) | | 15.2 | | | 13.2 | | | 2.4 | | | 2.5 | |
| Approach LOS | | B | | | B | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 35.4 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 22.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 18 | 40 | 0 | 0 | 0 | 0 | 112 | 58 | 22 | 0 | 21 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Frt | 0.86 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1601 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| Flt Permitted | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (perm) | 1601 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| 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) | 3 | 20 | 43 | 0 | 0 | 0 | 0 | 122 | 63 | 24 | 0 | 23 |
| RTOR Reduction (vph) | 31 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 22 |
| Lane Group Flow (vph) | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 122 | 54 | 24 | 0 | 1 |
| Turn Type | NA | | Perm | | | | | NA | Perm | custom | | custom |
| Protected Phases | 8 | | | | | | | 6 | | | | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | 4 |
| Actuated Green, G (s) | 5.8 | | 5.8 | | | | | 86.2 | 86.2 | 5.8 | | 5.8 |
| Effective Green, g (s) | 5.8 | | 5.8 | | | | | 86.2 | 86.2 | 5.8 | | 5.8 |
| Actuated g/C Ratio | 0.06 | | 0.06 | | | | | 0.86 | 0.86 | 0.06 | | 0.06 |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 92 | | 87 | | | | | 1605 | 1364 | 102 | | 104 |
| v/s Ratio Prot | 0.00 | | | | | | | c0.07 | | | | |
| v/s Ratio Perm | | | 0.00 | | | | | | 0.03 | c0.01 | | 0.00 |
| v/c Ratio | 0.02 | | 0.02 | | | | | 0.08 | 0.04 | 0.24 | | 0.01 |
| Uniform Delay, d1 | 44.4 | | 44.4 | | | | | 1.0 | 1.0 | 45.0 | | 44.4 |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.77 | 0.25 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.1 | | | | | 0.1 | 0.1 | 1.2 | | 0.0 |
| Delay (s) | 44.5 | | 44.5 | | | | | 0.9 | 0.3 | 46.2 | | 44.5 |
| Level of Service | D | | D | | | | | A | A | D | | D |
| Approach Delay (s) | 44.5 | | | | 0.0 | | | 0.7 | | | 45.3 | |
| Approach LOS | D | | | | A | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.4 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.09 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 22.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 3 | 145 | 6 | 2 | 3 | 15 | 36 | 11 | 0 | 18 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.87 | | | 0.97 | | | 0.98 | | | 1.00 | |
| Flt Protected | | 1.00 | | | 0.97 | | | 0.99 | | | 1.00 | |
| Satd. Flow (prot) | | 1831 | | | 1982 | | | 2036 | | | 1863 | |
| Flt Permitted | | 1.00 | | | 0.43 | | | 0.96 | | | 1.00 | |
| Satd. Flow (perm) | | 1831 | | | 885 | | | 1978 | | | 1863 | |
| 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) | 0 | 3 | 158 | 7 | 2 | 3 | 16 | 39 | 12 | 0 | 20 | 0 |
| RTOR Reduction (vph) | 0 | 146 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 15 | 0 | 0 | 9 | 0 | 0 | 65 | 0 | 0 | 20 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 7.3 | | | 7.3 | | | 84.7 | | | 84.7 | |
| Effective Green, g (s) | | 7.3 | | | 7.3 | | | 84.7 | | | 84.7 | |
| Actuated g/C Ratio | | 0.07 | | | 0.07 | | | 0.85 | | | 0.85 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 133 | | | 64 | | | 1675 | | | 1577 | |
| v/s Ratio Prot | | 0.01 | | | | | | | | | 0.01 | |
| v/s Ratio Perm | | | | | c0.01 | | | c0.03 | | | | |
| v/c Ratio | | 0.11 | | | 0.14 | | | 0.04 | | | 0.01 | |
| Uniform Delay, d1 | | 43.3 | | | 43.4 | | | 1.2 | | | 1.2 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 0.49 | | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 1.0 | | | 0.0 | | | 0.0 | |
| Delay (s) | | 43.7 | | | 44.5 | | | 0.6 | | | 1.2 | |
| Level of Service | | D | | | D | | | A | | | A | |
| Approach Delay (s) | | 43.7 | | | 44.5 | | | 0.6 | | | 1.2 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 29.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.05 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 25.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

# FUTURE (2013) WITH PROJECT WITH CUMULATIVE

# WITH MITIGATION

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 2 | 2 | 642 | 3 | 52 | 2 | 16 | 334 | 34 | 51 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.93 | | | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | | 0.95 | 1.00 | | 0.99 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 1737 | | | 1774 | 1794 | | 1853 | 1636 | | 2069 | |
| Flt Permitted | | 1.00 | | | 0.72 | 1.00 | | 0.98 | 1.00 | | 0.90 | |
| Satd. Flow (perm) | | 1737 | | | 1350 | 1794 | | 1832 | 1636 | | 1906 | |
| 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) | 0 | 2 | 2 | 698 | 3 | 57 | 2 | 17 | 363 | 37 | 55 | 0 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 0 | 24 | 0 | 0 | 256 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 3 | 0 | 0 | 701 | 33 | 0 | 19 | 107 | 0 | 92 | 0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | 34.3 | | | 34.3 | 34.3 | | 17.7 | 17.7 | | 17.7 | |
| Effective Green, g (s) | | 34.3 | | | 34.3 | 34.3 | | 17.7 | 17.7 | | 17.7 | |
| Actuated g/C Ratio | | 0.57 | | | 0.57 | 0.57 | | 0.29 | 0.29 | | 0.29 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 992 | | | 771 | 1025 | | 540 | 482 | | 562 | |
| v/s Ratio Prot | | 0.00 | | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.52 | 0.02 | | 0.01 | c0.07 | | 0.05 | |
| v/c Ratio | | 0.00 | | | 0.91 | 0.03 | | 0.04 | 0.22 | | 0.16 | |
| Uniform Delay, d1 | | 5.5 | | | 11.5 | 5.6 | | 15.1 | 16.0 | | 15.7 | |
| Progression Factor | | 1.00 | | | 2.14 | 0.41 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 14.1 | 0.0 | | 0.1 | 1.1 | | 0.6 | |
| Delay (s) | | 5.5 | | | 38.7 | 2.3 | | 15.2 | 17.0 | | 16.3 | |
| Level of Service | | A | | | D | A | | B | B | | B | |
| Approach Delay (s) | | 5.5 | | | 35.9 | | | 16.9 | | | 16.3 | |
| Approach LOS | | A | | | D | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 28.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 60.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 243 | 28 | 375 | 648 | 51 | 469 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.98 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3601 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3601 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 264 | 30 | 408 | 704 | 55 | 510 |
| RTOR Reduction (vph) | 8 | 0 | 0 | 0 | 0 | 23 |
| Lane Group Flow (vph) | 286 | 0 | 408 | 704 | 55 | 487 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 14.8 | | 34.8 | 53.6 | 58.4 | 97.2 |
| Effective Green, g (s) | 14.8 | | 34.8 | 53.6 | 58.4 | 97.2 |
| Actuated g/C Ratio | 0.12 | | 0.29 | 0.45 | 0.49 | 0.81 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 444 | | 513 | 1580 | 861 | 1282 |
| v/s Ratio Prot | c0.08 | | c0.23 | 0.20 | 0.03 | c0.31 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.64 | | 0.80 | 0.45 | 0.06 | 0.38 |
| Uniform Delay, d1 | 50.1 | | 39.3 | 22.9 | 16.3 | 3.1 |
| Progression Factor | 0.93 | | 1.00 | 1.00 | 0.46 | 1.29 |
| Incremental Delay, d2 | 2.9 | | 8.3 | 0.2 | 0.1 | 0.1 |
| Delay (s) | 49.3 | | 47.6 | 23.1 | 7.6 | 4.2 |
| Level of Service | D | | D | C | A | A |
| Approach Delay (s) | 49.3 | | | 32.1 | 4.5 | |
| Approach LOS | D | | | C | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 26.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 43.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 510 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 414 | 1 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | | | | | | 0.86 | | 1.00 | 1.00 | |
| Flt Protected | | 0.95 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1833 | | | | | | 1826 | | 1770 | 1863 | |
| Flt Permitted | | 0.95 | | | | | | 1.00 | | 0.76 | 1.00 | |
| Satd. Flow (perm) | | 1833 | | | | | | 1826 | | 1410 | 1863 | |
| 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) | 554 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 450 | 1 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 556 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 450 | 1 | 0 |
| Turn Type | Perm | NA | | | | | | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 43.0 | | | | | | 69.0 | | 69.0 | 69.0 | |
| Effective Green, g (s) | | 43.0 | | | | | | 69.0 | | 69.0 | 69.0 | |
| Actuated g/C Ratio | | 0.36 | | | | | | 0.58 | | 0.58 | 0.58 | |
| Clearance Time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 656 | | | | | | 1049 | | 810 | 1071 | |
| v/s Ratio Prot | | | | | | | | 0.00 | | | 0.00 | |
| v/s Ratio Perm | | 0.30 | | | | | | | | c0.32 | | |
| v/c Ratio | | 0.85 | | | | | | 0.00 | | 0.56 | 0.00 | |
| Uniform Delay, d1 | | 35.5 | | | | | | 10.8 | | 15.9 | 10.8 | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | 0.56 | 0.43 | |
| Incremental Delay, d2 | | 9.9 | | | | | | 0.0 | | 2.4 | 0.0 | |
| Delay (s) | | 45.4 | | | | | | 10.8 | | 11.2 | 4.7 | |
| Level of Service | | D | | | | | | B | | B | A | |
| Approach Delay (s) | | 45.4 | | | 0.0 | | | 10.8 | | | 11.2 | |
| Approach LOS | | D | | | A | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 64.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 302 | 0 | 257 | 205 | 0 | 258 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 328 | 0 | 279 | 223 | 0 | 280 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 89 | 0 | 237 |
| Lane Group Flow (vph) | 328 | 0 | 279 | 134 | 0 | 43 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 19.4 | | 19.4 | 19.4 | | 5.0 |
| Effective Green, g (s) | 19.4 | | 19.4 | 19.4 | | 5.0 |
| Actuated g/C Ratio | 0.60 | | 0.60 | 0.60 | | 0.15 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2055 | | 1059 | 1668 | | 249 |
| v/s Ratio Prot | 0.10 | | c0.16 | | | |
| v/s Ratio Perm | | | | 0.05 | | c0.03 |
| v/c Ratio | 0.16 | | 0.26 | 0.08 | | 0.17 |
| Uniform Delay, d1 | 2.9 | | 3.1 | 2.7 | | 11.9 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.2 | | 0.6 | 0.1 | | 0.3 |
| Delay (s) | 3.0 | | 3.7 | 2.8 | | 12.2 |
| Level of Service | A | | A | A | | B |
| Approach Delay (s) | 3.0 | | 3.3 | | 12.2 | |
| Approach LOS | A | | A | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 5.5 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.24 | | |
| Actuated Cycle Length (s) | 32.4 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 29.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 308 | 0 | 5 | 114 | 2279 | 310 | 2 | 220 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 1.00 | | | | 0.98 | | | 1.00 | | | |
| Flt Protected | 0.95 | | | | 1.00 | | | 1.00 | | | |
| Satd. Flow (prot) | 3436 | | | | 3471 | | | 3538 | | | |
| Flt Permitted | 0.95 | | | | 0.92 | | | 0.87 | | | |
| Satd. Flow (perm) | 3436 | | | | 3188 | | | 3097 | | | |
| 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 |
| Adj. Flow (vph) | 335 | 0 | 5 | 124 | 2477 | 337 | 2 | 239 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 332 | 0 | 0 | 0 | 2930 | 0 | 0 | 241 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 15.1 | | | | 96.9 | | | 96.9 | | | |
| Effective Green, g (s) | 15.1 | | | | 96.9 | | | 96.9 | | | |
| Actuated g/C Ratio | 0.13 | | | | 0.81 | | | 0.81 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 432 | | | | 2574 | | | 2500 | | | |
| v/s Ratio Prot | c0.10 | | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.92 | | | 0.08 | | | |
| v/c Ratio | 0.77 | | | | 1.14 | | | 0.10 | | | |
| Uniform Delay, d1 | 50.8 | | | | 11.5 | | | 2.4 | | | |
| Progression Factor | 0.96 | | | | 0.40 | | | 1.00 | | | |
| Incremental Delay, d2 | 8.0 | | | | 64.1 | | | 0.1 | | | |
| Delay (s) | 56.8 | | | | 68.7 | | | 2.5 | | | |
| Level of Service | E | | | | E | | | A | | | |
| Approach Delay (s) | 56.8 | | | | 68.7 | | | 2.5 | | 0.0 | |
| Approach LOS | E | | | | E | | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 63.0 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 1.09 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 101.3% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 2155 | 30 | 85 | 2 | 0 | 190 | 82 | 31 | 27 | 223 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 1.00 | | 0.85 | | | 1.00 | | 0.97 | | 1.00 | |
| Flt Protected | 0.95 | | 1.00 | | | 1.00 | | 0.97 | | 0.95 | |
| Satd. Flow (prot) | 3435 | | 1441 | | | 3538 | | 3340 | | 3436 | |
| Flt Permitted | 0.95 | | 1.00 | | | 0.95 | | 0.68 | | 0.95 | |
| Satd. Flow (perm) | 3435 | | 1441 | | | 3372 | | 2324 | | 3436 | |
| 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 |
| Adj. Flow (vph) | 2342 | 33 | 92 | 2 | 0 | 207 | 89 | 34 | 29 | 242 | 4 |
| RTOR Reduction (vph) | 17 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 0 |
| Lane Group Flow (vph) | 2368 | 0 | 43 | 0 | 0 | 209 | 0 | 152 | 0 | 208 | 0 |
| Turn Type | NA | | custom | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4 | | | | | 8 | | 6! | | 6! | |
| Permitted Phases | | | 8 | 8 | | | 6 | | | | |
| Actuated Green, G (s) | 76.0 | | 12.9 | | | 12.9 | | 19.1 | | 19.1 | |
| Effective Green, g (s) | 76.0 | | 12.9 | | | 12.9 | | 19.1 | | 19.1 | |
| Actuated g/C Ratio | 0.63 | | 0.11 | | | 0.11 | | 0.16 | | 0.16 | |
| Clearance Time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 2175 | | 154 | | | 362 | | 369 | | 546 | |
| v/s Ratio Prot | c0.69 | | | | | | | | | 0.06 | |
| v/s Ratio Perm | | | 0.03 | | | c0.06 | | c0.07 | | | |
| v/c Ratio | 1.09 | | 0.28 | | | 0.58 | | 1.46dl | | 0.38 | |
| Uniform Delay, d1 | 22.0 | | 49.3 | | | 51.0 | | 45.4 | | 45.2 | |
| Progression Factor | 1.00 | | 1.00 | | | 1.00 | | 1.51 | | 1.00 | |
| Incremental Delay, d2 | 48.2 | | 1.0 | | | 2.2 | | 3.0 | | 2.0 | |
| Delay (s) | 70.2 | | 50.3 | | | 53.2 | | 71.4 | | 47.2 | |
| Level of Service | E | | D | | | D | | E | | D | |
| Approach Delay (s) | 69.6 | | | | | 53.2 | | 71.4 | | 47.2 | |
| Approach LOS | E | | | | | D | | E | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 66.7 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 0.91 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 93.0% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 180 | 125 | 11 | 130 | 143 | 17 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1772 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1772 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 196 | 136 | 12 | 141 | 155 | 18 |
| RTOR Reduction (vph) | 0 | 109 | 0 | 47 | 6 | 5 |
| Lane Group Flow (vph) | 196 | 27 | 12 | 94 | 151 | 11 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 12.0 | 12.0 | 40.0 | 40.0 | 40.0 | 40.0 |
| Effective Green, g (s) | 12.0 | 12.0 | 40.0 | 40.0 | 40.0 | 40.0 |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.67 | 0.67 | 0.67 | 0.67 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 354 | 316 | 1180 | 1055 | 1181 | 1002 |
| v/s Ratio Prot | c0.11 | | 0.01 | | c0.09 | |
| v/s Ratio Perm | | 0.02 | | 0.06 | | 0.01 |
| v/c Ratio | 0.55 | 0.09 | 0.01 | 0.09 | 0.13 | 0.01 |
| Uniform Delay, d1 | 21.6 | 19.5 | 3.4 | 3.5 | 3.6 | 3.4 |
| Progression Factor | 0.88 | 1.30 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.2 | 0.0 | 0.0 | 0.2 | 0.2 | 0.0 |
| Delay (s) | 19.2 | 25.4 | 3.4 | 3.7 | 3.9 | 3.4 |
| Level of Service | B | C | A | A | A | A |
| Approach Delay (s) | 21.7 | | 3.7 | | 3.8 | |
| Approach LOS | C | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.23 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 63 | 71 | 78 | 8 | 9 | 72 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.99 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1631 | |
| Flt Permitted | 0.80 | 1.00 | 1.00 | 1.00 | 0.99 | |
| Satd. Flow (perm) | 1490 | 1863 | 1863 | 1583 | 1631 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 68 | 77 | 85 | 9 | 10 | 78 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 8 | 29 | 0 |
| Lane Group Flow (vph) | 68 | 77 | 85 | 1 | 59 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 5.0 | 5.0 | 5.0 | 5.0 | 21.8 | |
| Effective Green, g (s) | 5.0 | 5.0 | 5.0 | 5.0 | 21.8 | |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.14 | 0.14 | 0.63 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 214 | 267 | 267 | 227 | 1021 | |
| v/s Ratio Prot | | 0.04 | 0.05 | | c0.04 | |
| v/s Ratio Perm | c0.05 | | | 0.00 | | |
| v/c Ratio | 0.32 | 0.29 | 0.32 | 0.01 | 0.06 | |
| Uniform Delay, d1 | 13.4 | 13.3 | 13.4 | 12.8 | 2.5 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.9 | 0.6 | 0.7 | 0.0 | 0.1 | |
| Delay (s) | 14.2 | 13.9 | 14.1 | 12.8 | 2.6 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 14.1 | 13.9 | | 2.6 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 34.8 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 21.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 6 | 16 | 36 | 60 | 31 | 12 | 71 | 28 | 178 | 9 | 32 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.90 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3169 | | 1652 | 3392 | | | 1798 | 1583 | | 1842 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.76 | 1.00 | | 0.90 | 1.00 |
| Satd. Flow (perm) | 1652 | 3169 | | 1652 | 3392 | | | 1412 | 1583 | | 1673 | 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 | 17 | 39 | 65 | 34 | 13 | 77 | 30 | 193 | 10 | 35 | 5 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 5 | 0 | 0 | 0 | 149 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 7 | 37 | 0 | 65 | 42 | 0 | 0 | 107 | 44 | 0 | 45 | 1 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 22.6 | | 4.8 | 26.7 | | | 5.4 | 10.2 | | 5.4 | 6.1 |
| Effective Green, g (s) | 0.7 | 22.6 | | 4.8 | 26.7 | | | 5.4 | 10.2 | | 5.4 | 6.1 |
| Actuated g/C Ratio | 0.02 | 0.50 | | 0.11 | 0.60 | | | 0.12 | 0.23 | | 0.12 | 0.14 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1598 | | 177 | 2021 | | | 170 | 501 | | 201 | 356 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.04 | 0.01 | | | | 0.01 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.08 | 0.02 | | 0.03 | 0.00 |
| v/c Ratio | 0.28 | 0.02 | | 0.37 | 0.02 | | | 0.63 | 0.09 | | 0.22 | 0.00 |
| Uniform Delay, d1 | 21.8 | 5.6 | | 18.6 | 3.7 | | | 18.7 | 13.6 | | 17.8 | 16.7 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 6.0 | 0.0 | | 1.3 | 0.0 | | | 7.1 | 0.1 | | 0.6 | 0.0 |
| Delay (s) | 27.8 | 5.6 | | 19.9 | 3.7 | | | 25.9 | 13.7 | | 18.4 | 16.7 |
| Level of Service | C | A | | B | A | | | C | B | | B | B |
| Approach Delay (s) | | 8.1 | | | 13.1 | | | 18.0 | | | 18.2 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.17 | | |
| Actuated Cycle Length (s) | 44.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 28.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 46 | 156 | 8 | 3 | 43 | 33 | 6 | 4 | 2 | 1791 | 1 | 63 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | 0.95 | 0.95 | |
| Frt | | 0.99 | | | 0.94 | | | 0.98 | | 1.00 | 0.99 | |
| Flt Protected | | 0.99 | | | 1.00 | | | 0.97 | | 0.95 | 0.96 | |
| Satd. Flow (prot) | | 2077 | | | 3422 | | | 2013 | | 1681 | 1897 | |
| Flt Permitted | | 0.91 | | | 0.95 | | | 0.81 | | 0.75 | 0.73 | |
| Satd. Flow (perm) | | 1907 | | | 3246 | | | 1676 | | 1326 | 1452 | |
| 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) | 50 | 170 | 9 | 3 | 47 | 36 | 7 | 4 | 2 | 1947 | 1 | 68 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Lane Group Flow (vph) | 0 | 227 | 0 | 0 | 56 | 0 | 0 | 13 | 0 | 1012 | 1001 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 14.4 | | | 14.4 | | | 68.1 | | 68.1 | 68.1 | |
| Effective Green, g (s) | | 14.4 | | | 14.4 | | | 68.1 | | 68.1 | 68.1 | |
| Actuated g/C Ratio | | 0.16 | | | 0.16 | | | 0.75 | | 0.75 | 0.75 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 303 | | | 516 | | | 1261 | | 997 | 1092 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.12 | | | 0.02 | | | 0.01 | | c0.76 | 0.69 | |
| v/c Ratio | | 0.75 | | | 0.11 | | | 0.01 | | 1.02 | 0.92 | |
| Uniform Delay, d1 | | 36.3 | | | 32.6 | | | 2.8 | | 11.2 | 8.9 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 10.0 | | | 0.1 | | | 0.0 | | 32.3 | 13.4 | |
| Delay (s) | | 46.3 | | | 32.6 | | | 2.8 | | 43.5 | 22.3 | |
| Level of Service | | D | | | C | | | A | | D | C | |
| Approach Delay (s) | | 46.3 | | | 32.6 | | | 2.8 | | | 33.0 | |
| Approach LOS | | D | | | C | | | A | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 34.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.97 | | |
| Actuated Cycle Length (s) | 90.5 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 37 | 352 | 0 | 0 | 0 | 0 | 56 | 44 | 1890 | 0 | 50 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 0.95 | 0.95 | |
| Frt | 0.85 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | 0.95 | |
| Satd. Flow (prot) | 1588 | | 1504 | | | | | 1863 | 1583 | 1681 | 1677 | |
| Flt Permitted | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | 0.95 | |
| Satd. Flow (perm) | 1588 | | 1504 | | | | | 1863 | 1583 | 1681 | 1677 | |
| 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) | 5 | 40 | 383 | 0 | 0 | 0 | 0 | 61 | 48 | 2054 | 0 | 54 |
| RTOR Reduction (vph) | 34 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 180 | 0 | 171 | 0 | 0 | 0 | 0 | 61 | 6 | 1048 | 1058 | 0 |
| Turn Type | NA | | Perm | | | | | NA | custom | Perm | NA | |
| Protected Phases | 8! | | | | | | | 6 | 6 | | 4! | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | |
| Actuated Green, G (s) | 96.0 | | 96.0 | | | | | 16.0 | 16.0 | 96.0 | 96.0 | |
| Effective Green, g (s) | 96.0 | | 96.0 | | | | | 16.0 | 16.0 | 96.0 | 96.0 | |
| Actuated g/C Ratio | 0.80 | | 0.80 | | | | | 0.13 | 0.13 | 0.80 | 0.80 | |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 1270 | | 1203 | | | | | 248 | 211 | 1344 | 1341 | |
| v/s Ratio Prot | 0.11 | | | | | | | c0.03 | 0.00 | | | |
| v/s Ratio Perm | | | 0.11 | | | | | | | 0.62 | 0.63 | |
| v/c Ratio | 0.14 | | 0.14 | | | | | 0.25 | 0.03 | 0.78 | 0.79 | |
| Uniform Delay, d1 | 2.7 | | 2.7 | | | | | 46.6 | 45.2 | 6.4 | 6.5 | |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.61 | 0.06 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.1 | | 0.1 | | | | | 2.3 | 0.3 | 2.9 | 3.2 | |
| Delay (s) | 2.8 | | 2.8 | | | | | 30.8 | 3.1 | 9.3 | 9.7 | |
| Level of Service | A | | A | | | | | C | A | A | A | |
| Approach Delay (s) | 2.8 | | | | 0.0 | | | 18.6 | | | 9.5 | |
| Approach LOS | A | | | | A | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 8.8 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 77.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 3 | 50 | 29 | 5 | 2 | 2179 | 41 | 29 | 2 | 21 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | 0.95 | 0.95 | | | 1.00 | |
| Frt | | 0.88 | | | 0.99 | | 1.00 | 1.00 | | | 1.00 | |
| Flt Protected | | 1.00 | | | 0.96 | | 0.95 | 0.96 | | | 1.00 | |
| Satd. Flow (prot) | | 1850 | | | 2014 | | 1681 | 1908 | | | 1855 | |
| Flt Permitted | | 0.98 | | | 0.64 | | 0.74 | 0.72 | | | 0.96 | |
| Satd. Flow (perm) | | 1825 | | | 1349 | | 1311 | 1441 | | | 1782 | |
| 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) | 3 | 3 | 54 | 32 | 5 | 2 | 2368 | 45 | 32 | 2 | 23 | 0 |
| RTOR Reduction (vph) | 0 | 51 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 0 | 37 | 0 | 1231 | 1214 | 0 | 0 | 25 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 7.0 | | | 7.0 | | 105.0 | 105.0 | | | 105.0 | |
| Effective Green, g (s) | | 7.0 | | | 7.0 | | 105.0 | 105.0 | | | 105.0 | |
| Actuated g/C Ratio | | 0.06 | | | 0.06 | | 0.88 | 0.88 | | | 0.88 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | 4.0 | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 3.0 | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 106 | | | 78 | | 1147 | 1260 | | | 1559 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.01 | | | c0.03 | | c0.94 | 0.84 | | | 0.01 | |
| v/c Ratio | | 0.09 | | | 0.48 | | 1.07 | 0.96 | | | 0.02 | |
| Uniform Delay, d1 | | 53.5 | | | 54.7 | | 7.5 | 6.0 | | | 1.0 | |
| Progression Factor | | 1.00 | | | 1.00 | | 0.95 | 0.78 | | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 4.5 | | 45.0 | 14.4 | | | 0.0 | |
| Delay (s) | | 53.8 | | | 59.2 | | 52.1 | 19.0 | | | 1.0 | |
| Level of Service | | D | | | E | | D | B | | | A | |
| Approach Delay (s) | | 53.8 | | | 59.2 | | | 35.7 | | | 1.0 | |
| Approach LOS | | D | | | E | | | D | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.1 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 1.04 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 84.3% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 1532 | 0 | 13 | 0 | 4 | 27 | 8 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | | | 1.00 | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | | | | 1681 | 1681 | 1794 | | 1863 | 1636 | | 2045 | |
| Flt Permitted | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.90 | |
| Satd. Flow (perm) | | | | 1681 | 1681 | 1794 | | 1863 | 1636 | | 1904 | |
| 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) | 0 | 0 | 0 | 1665 | 0 | 14 | 0 | 4 | 29 | 9 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 22 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 832 | 833 | 9 | 0 | 4 | 7 | 0 | 14 | 0 |
| Turn Type | Perm | | | Split | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | 8 | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | | | 46.0 | 46.0 | 46.0 | | 16.0 | 16.0 | | 16.0 | |
| Effective Green, g (s) | | | | 46.0 | 46.0 | 46.0 | | 16.0 | 16.0 | | 16.0 | |
| Actuated g/C Ratio | | | | 0.66 | 0.66 | 0.66 | | 0.23 | 0.23 | | 0.23 | |
| Clearance Time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | | | 1104 | 1104 | 1178 | | 425 | 373 | | 435 | |
| v/s Ratio Prot | | | | 0.49 | c0.50 | | | 0.00 | | | | |
| v/s Ratio Perm | | | | | | 0.01 | | | 0.00 | | c0.01 | |
| v/c Ratio | | | | 0.75 | 0.75 | 0.01 | | 0.01 | 0.02 | | 0.03 | |
| Uniform Delay, d1 | | | | 8.2 | 8.2 | 4.1 | | 20.9 | 20.9 | | 21.0 | |
| Progression Factor | | | | 0.89 | 0.89 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | | | 2.6 | 2.6 | 0.0 | | 0.0 | 0.1 | | 0.1 | |
| Delay (s) | | | | 9.9 | 9.9 | 4.1 | | 20.9 | 21.0 | | 21.1 | |
| Level of Service | | | | A | A | A | | C | C | | C | |
| Approach Delay (s) | | 0.0 | | | 9.8 | | | 21.0 | | | 21.1 | |
| Approach LOS | | A | | | A | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 56.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 16 | 10 | 9 | 1529 | 17 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | |
| Frt | 0.94 | | 1.00 | 1.00 | 1.00 | |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | |
| Satd. Flow (prot) | 3442 | | 1770 | 3539 | 1770 | |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | |
| Satd. Flow (perm) | 3442 | | 1770 | 3539 | 1770 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 17 | 11 | 10 | 1662 | 18 | 0 |
| RTOR Reduction (vph) | 2 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 26 | 0 | 10 | 1662 | 18 | 0 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 55.1 | | 1.4 | 60.5 | 1.5 | |
| Effective Green, g (s) | 55.1 | | 1.4 | 60.5 | 1.5 | |
| Actuated g/C Ratio | 0.79 | | 0.02 | 0.86 | 0.02 | |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2709 | | 35 | 3058 | 37 | |
| v/s Ratio Prot | 0.01 | | 0.01 | c0.47 | c0.01 | |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.29 | 0.54 | 0.49 | |
| Uniform Delay, d1 | 1.6 | | 33.8 | 1.2 | 33.9 | |
| Progression Factor | 1.65 | | 1.00 | 1.00 | 0.11 | |
| Incremental Delay, d2 | 0.0 | | 4.5 | 0.7 | 9.7 | |
| Delay (s) | 2.6 | | 38.3 | 1.9 | 13.3 | |
| Level of Service | A | | D | A | B | |
| Approach Delay (s) | 2.6 | | | 2.1 | 13.3 | |
| Approach LOS | A | | | A | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.3 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.58 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 52.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 17 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | | | 4.0 | | |
| Lane Util. Factor | | 1.00 | | | | | | | | 1.00 | | |
| Frt | | 0.99 | | | | | | | | 1.00 | | |
| Flt Protected | | 0.96 | | | | | | | | 0.95 | | |
| Satd. Flow (prot) | | 1838 | | | | | | | | 1770 | | |
| Flt Permitted | | 0.96 | | | | | | | | 0.76 | | |
| Satd. Flow (perm) | | 1838 | | | | | | | | 1410 | | |
| 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) | 18 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| Turn Type | Perm | NA | | | | | | | | Perm | | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 2.9 | | | | | | | | 59.1 | | |
| Effective Green, g (s) | | 2.9 | | | | | | | | 59.1 | | |
| Actuated g/C Ratio | | 0.04 | | | | | | | | 0.84 | | |
| Clearance Time (s) | | 4.0 | | | | | | | | 4.0 | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | 3.0 | | |
| Lane Grp Cap (vph) | | 76 | | | | | | | | 1190 | | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.01 | | | | | | | | c0.01 | | |
| v/c Ratio | | 0.28 | | | | | | | | 0.02 | | |
| Uniform Delay, d1 | | 32.5 | | | | | | | | 0.9 | | |
| Progression Factor | | 1.00 | | | | | | | | 0.40 | | |
| Incremental Delay, d2 | | 2.0 | | | | | | | | 0.0 | | |
| Delay (s) | | 34.5 | | | | | | | | 0.4 | | |
| Level of Service | | C | | | | | | | | A | | |
| Approach Delay (s) | | 34.5 | | | 0.0 | | | 0.0 | | | 0.4 | |
| Approach LOS | | C | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.03 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 1519 | 0 | 4 | 14 | 0 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 1651 | 0 | 4 | 15 | 0 | 5 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 2 | 0 | 5 |
| Lane Group Flow (vph) | 1651 | 0 | 4 | 13 | 0 | 0 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 51.2 | | 51.2 | 51.2 | | 1.0 |
| Effective Green, g (s) | 51.2 | | 51.2 | 51.2 | | 1.0 |
| Actuated g/C Ratio | 0.85 | | 0.85 | 0.85 | | 0.02 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2919 | | 1505 | 2370 | | 26 |
| v/s Ratio Prot | c0.48 | | 0.00 | | | |
| v/s Ratio Perm | | | | 0.00 | | c0.00 |
| v/c Ratio | 0.57 | | 0.00 | 0.01 | | 0.00 |
| Uniform Delay, d1 | 1.3 | | 0.7 | 0.7 | | 29.1 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.8 | | 0.0 | 0.0 | | 0.0 |
| Delay (s) | 2.1 | | 0.7 | 0.7 | | 29.2 |
| Level of Service | A | | A | A | | C |
| Approach Delay (s) | 2.1 | | 0.7 | | 29.2 | |
| Approach LOS | A | | A | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 60.2 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 53.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 251 | 0 | 3 | 28 | 122 | 205 | 2 | 2476 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 1.00 | | | | 0.91 | | | 1.00 | | | |
| Flt Protected | 0.95 | | | | 1.00 | | | 1.00 | | | |
| Satd. Flow (prot) | 3438 | | | | 3220 | | | 3539 | | | |
| Flt Permitted | 0.95 | | | | 0.66 | | | 0.95 | | | |
| Satd. Flow (perm) | 3438 | | | | 2144 | | | 3379 | | | |
| 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 |
| Adj. Flow (vph) | 273 | 0 | 3 | 30 | 133 | 223 | 2 | 2691 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 9 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 267 | 0 | 0 | 0 | 342 | 0 | 0 | 2693 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 13.4 | | | | 87.4 | | | 87.4 | | | |
| Effective Green, g (s) | 13.4 | | | | 87.4 | | | 87.4 | | | |
| Actuated g/C Ratio | 0.12 | | | | 0.80 | | | 0.80 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 423 | | | | 1722 | | | 2714 | | | |
| v/s Ratio Prot | c0.08 | | | | | | | | | | |
| v/s Ratio Perm | | | | | 0.16 | | | c0.80 | | | |
| v/c Ratio | 0.63 | | | | 0.20 | | | 0.99 | | | |
| Uniform Delay, d1 | 45.4 | | | | 2.5 | | | 10.4 | | | |
| Progression Factor | 1.00 | | | | 1.00 | | | 1.00 | | | |
| Incremental Delay, d2 | 3.1 | | | | 0.3 | | | 15.6 | | | |
| Delay (s) | 48.4 | | | | 2.8 | | | 25.9 | | | |
| Level of Service | D | | | | A | | | C | | | |
| Approach Delay (s) | 48.4 | | | | 2.8 | | | 25.9 | | 0.0 | |
| Approach LOS | D | | | | A | | | C | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.94 | | |
| Actuated Cycle Length (s) | 108.8 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 83.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | |
| Volume (vph) | 295 | 14 | 41 | 0 | 18 | 222 | 121 | 189 | 18 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 0.99 | | 0.85 | | 1.00 | | 0.95 | | 1.00 | |
| Flt Protected | 0.96 | | 1.00 | | 1.00 | | 0.98 | | 0.95 | |
| Satd. Flow (prot) | 3421 | | 1441 | | 3539 | | 3282 | | 3433 | |
| Flt Permitted | 0.96 | | 1.00 | | 1.00 | | 0.64 | | 0.95 | |
| Satd. Flow (perm) | 3421 | | 1441 | | 3539 | | 2144 | | 3433 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 321 | 15 | 45 | 0 | 20 | 241 | 132 | 205 | 20 | 0 |
| RTOR Reduction (vph) | 72 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 269 | 0 | 8 | 0 | 20 | 0 | 578 | 0 | 20 | 0 |
| Turn Type | NA | | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4 | | | | 8 | | 6! | | 6! | |
| Permitted Phases | | | 4 | | | 6 | | | | |
| Actuated Green, G (s) | 7.9 | | 7.9 | | 0.9 | | 16.4 | | 16.4 | |
| Effective Green, g (s) | 7.9 | | 7.9 | | 0.9 | | 16.4 | | 16.4 | |
| Actuated g/C Ratio | 0.21 | | 0.21 | | 0.02 | | 0.44 | | 0.44 | |
| Clearance Time (s) | 4.0 | | 4.0 | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 726 | | 306 | | 85 | | 945 | | 1513 | |
| v/s Ratio Prot | c0.08 | | | | c0.01 | | | | 0.01 | |
| v/s Ratio Perm | | | 0.01 | | | | c0.27 | | | |
| v/c Ratio | 0.37 | | 0.03 | | 0.24 | | 1.10dl | | 0.01 | |
| Uniform Delay, d1 | 12.5 | | 11.6 | | 17.8 | | 8.0 | | 5.8 | |
| Progression Factor | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.3 | | 0.0 | | 1.4 | | 1.2 | | 0.0 | |
| Delay (s) | 12.8 | | 11.6 | | 19.2 | | 9.1 | | 5.9 | |
| Level of Service | B | | B | | B | | A | | A | |
| Approach Delay (s) | 12.7 | | | | 19.2 | | 9.1 | | 5.9 | |
| Approach LOS | B | | | | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 37.2 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 41.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 140 | 45 | 6 | 148 | 164 | 8 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1773 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1773 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 152 | 49 | 7 | 161 | 178 | 9 |
| RTOR Reduction (vph) | 0 | 39 | 0 | 66 | 11 | 3 |
| Lane Group Flow (vph) | 152 | 10 | 7 | 95 | 168 | 5 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 7.3 | 7.3 | 22.3 | 22.3 | 22.3 | 22.3 |
| Effective Green, g (s) | 7.3 | 7.3 | 22.3 | 22.3 | 22.3 | 22.3 |
| Actuated g/C Ratio | 0.19 | 0.19 | 0.59 | 0.59 | 0.59 | 0.59 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 343 | 307 | 1049 | 938 | 1051 | 892 |
| v/s Ratio Prot | c0.09 | | 0.00 | | c0.09 | |
| v/s Ratio Perm | | 0.01 | | 0.06 | | 0.00 |
| v/c Ratio | 0.44 | 0.03 | 0.01 | 0.10 | 0.16 | 0.01 |
| Uniform Delay, d1 | 13.4 | 12.3 | 3.1 | 3.3 | 3.4 | 3.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.9 | 0.0 | 0.0 | 0.2 | 0.3 | 0.0 |
| Delay (s) | 14.3 | 12.3 | 3.1 | 3.5 | 3.8 | 3.1 |
| Level of Service | B | B | A | A | A | A |
| Approach Delay (s) | 13.8 | | 3.5 | | 3.7 | |
| Approach LOS | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 7.3 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.23 | | |
| Actuated Cycle Length (s) | 37.6 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 30.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 42 | 31 | 79 | 2 | 3 | 72 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.87 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1618 | |
| Flt Permitted | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1863 | 1863 | 1863 | 1583 | 1618 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 46 | 34 | 86 | 2 | 3 | 78 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 2 | 25 | 0 |
| Lane Group Flow (vph) | 46 | 34 | 86 | 0 | 56 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 3.3 | 3.3 | 3.3 | 3.3 | 23.6 | |
| Effective Green, g (s) | 3.3 | 3.3 | 3.3 | 3.3 | 23.6 | |
| Actuated g/C Ratio | 0.09 | 0.09 | 0.09 | 0.09 | 0.68 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 176 | 176 | 176 | 149 | 1094 | |
| v/s Ratio Prot | | 0.02 | c0.05 | | c0.03 | |
| v/s Ratio Perm | 0.02 | | | 0.00 | | |
| v/c Ratio | 0.26 | 0.19 | 0.49 | 0.00 | 0.05 | |
| Uniform Delay, d1 | 14.7 | 14.6 | 15.0 | 14.3 | 1.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.8 | 0.5 | 2.1 | 0.0 | 0.1 | |
| Delay (s) | 15.5 | 15.1 | 17.1 | 14.3 | 2.0 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 15.3 | 17.1 | | 2.0 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 34.9 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 20.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 16 | 147 | 7 | 1 | 12 | 3 | 20 | 2 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.85 | | 1.00 | 0.98 | | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | | 3008 | | 1652 | 3480 | | | 1790 | 1583 | | 1837 | |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Satd. Flow (perm) | | 3008 | | 1652 | 3480 | | | 1863 | 1583 | | 1863 | |
| 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) | 0 | 0 | 17 | 160 | 8 | 1 | 13 | 3 | 22 | 2 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 9 | 0 | 160 | 9 | 0 | 0 | 16 | 4 | 0 | 7 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 22.1 | | 6.2 | 32.3 | | | 1.3 | 7.5 | | 1.3 | |
| Effective Green, g (s) | | 22.1 | | 6.2 | 32.3 | | | 1.3 | 7.5 | | 1.3 | |
| Actuated g/C Ratio | | 0.53 | | 0.15 | 0.78 | | | 0.03 | 0.18 | | 0.03 | |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1598 | | 246 | 2702 | | | 58 | 437 | | 58 | |
| v/s Ratio Prot | | c0.00 | | c0.10 | 0.00 | | | | 0.00 | | | |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | 0.00 | |
| v/c Ratio | | 0.01 | | 0.65 | 0.00 | | | 0.28 | 0.01 | | 0.12 | |
| Uniform Delay, d1 | | 4.6 | | 16.7 | 1.0 | | | 19.7 | 14.0 | | 19.6 | |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | 6.0 | 0.0 | | | 2.6 | 0.0 | | 0.9 | |
| Delay (s) | | 4.6 | | 22.7 | 1.0 | | | 22.3 | 14.0 | | 20.5 | |
| Level of Service | | A | | C | A | | | C | B | | C | |
| Approach Delay (s) | | 4.6 | | | 21.6 | | | 17.5 | | | 20.5 | |
| Approach LOS | | A | | | C | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.15 | | |
| Actuated Cycle Length (s) | 41.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 29.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 15 | 14 | 3 | 0 | 134 | 432 | 0 | 0 | 1 | 12 | 0 | 34 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.89 | | | 0.86 | | | 0.90 | |
| Flt Protected | | 0.98 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Satd. Flow (prot) | | 2038 | | | 3239 | | | 1826 | | | 1876 | |
| Flt Permitted | | 0.70 | | | 1.00 | | | 1.00 | | | 0.96 | |
| Satd. Flow (perm) | | 1463 | | | 3239 | | | 1826 | | | 1824 | |
| 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) | 16 | 15 | 3 | 0 | 146 | 470 | 0 | 0 | 1 | 13 | 0 | 37 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 344 | 0 | 0 | 1 | 0 | 0 | 19 | 0 |
| Lane Group Flow (vph) | 0 | 32 | 0 | 0 | 272 | 0 | 0 | 0 | 0 | 0 | 31 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 8.8 | | | 8.8 | | | 16.1 | | | 16.1 | |
| Effective Green, g (s) | | 8.8 | | | 8.8 | | | 16.1 | | | 16.1 | |
| Actuated g/C Ratio | | 0.27 | | | 0.27 | | | 0.49 | | | 0.49 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 391 | | | 866 | | | 893 | | | 892 | |
| v/s Ratio Prot | | | | | c0.08 | | | 0.00 | | | | |
| v/s Ratio Perm | | 0.02 | | | | | | | | | c0.02 | |
| v/c Ratio | | 0.08 | | | 0.31 | | | 0.00 | | | 0.03 | |
| Uniform Delay, d1 | | 9.0 | | | 9.6 | | | 4.3 | | | 4.4 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.2 | | | 0.0 | | | 0.1 | |
| Delay (s) | | 9.1 | | | 9.8 | | | 4.3 | | | 4.4 | |
| Level of Service | | A | | | A | | | A | | | A | |
| Approach Delay (s) | | 9.1 | | | 9.8 | | | 4.3 | | | 4.4 | |
| Approach LOS | | A | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.4 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.13 | | |
| Actuated Cycle Length (s) | 32.9 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 33.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 7 | 23 | 0 | 0 | 0 | 0 | 1513 | 559 | 5 | 0 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Frt | 0.85 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1583 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| Flt Permitted | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (perm) | 1583 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| 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) | 0 | 8 | 25 | 0 | 0 | 0 | 0 | 1645 | 608 | 5 | 0 | 22 |
| RTOR Reduction (vph) | 15 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 93 | 0 | 0 | 21 |
| Lane Group Flow (vph) | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1645 | 515 | 5 | 0 | 1 |
| Turn Type | NA | | Perm | | | | | NA | Perm | custom | | custom |
| Protected Phases | 8 | | | | | | | 6 | | | | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | 4 |
| Actuated Green, G (s) | 2.7 | | 2.7 | | | | | 59.3 | 59.3 | 2.7 | | 2.7 |
| Effective Green, g (s) | 2.7 | | 2.7 | | | | | 59.3 | 59.3 | 2.7 | | 2.7 |
| Actuated g/C Ratio | 0.04 | | 0.04 | | | | | 0.85 | 0.85 | 0.04 | | 0.04 |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 61 | | 58 | | | | | 1578 | 1341 | 68 | | 69 |
| v/s Ratio Prot | 0.00 | | | | | | | c0.88 | | | | |
| v/s Ratio Perm | | | 0.00 | | | | | | 0.33 | c0.00 | | 0.00 |
| v/c Ratio | 0.03 | | 0.01 | | | | | 1.04 | 0.38 | 0.07 | | 0.01 |
| Uniform Delay, d1 | 32.4 | | 32.4 | | | | | 5.4 | 1.2 | 32.4 | | 32.4 |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.65 | 0.26 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.2 | | 0.1 | | | | | 27.6 | 0.4 | 0.5 | | 0.1 |
| Delay (s) | 32.6 | | 32.4 | | | | | 31.0 | 0.7 | 32.9 | | 32.4 |
| Level of Service | C | | C | | | | | C | A | C | | C |
| Approach Delay (s) | 32.5 | | | | 0.0 | | | 22.9 | | | 32.5 | |
| Approach LOS | C | | | | A | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 23.1 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 1.00 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 96.3% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 2 | 0 | 2058 | 3 | 3 | 0 | 3 | 21 | 3 | 1 | 12 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 0.95 | 0.95 | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.85 | 0.85 | | 1.00 | | | 0.99 | | | 1.00 | |
| Flt Protected | | 1.00 | 1.00 | | 0.98 | | | 0.99 | | | 1.00 | |
| Satd. Flow (prot) | | 1705 | 1504 | | 2060 | | | 2071 | | | 1856 | |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | | | 0.99 | | | 0.99 | |
| Satd. Flow (perm) | | 1705 | 1504 | | 2111 | | | 2060 | | | 1852 | |
| 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) | 2 | 0 | 2237 | 3 | 3 | 0 | 3 | 23 | 3 | 1 | 13 | 0 |
| RTOR Reduction (vph) | 0 | 658 | 658 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 463 | 460 | 0 | 6 | 0 | 0 | 27 | 0 | 0 | 14 | 0 |
| Turn Type | Split | NA | Prot | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | 4 | | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 25.9 | 25.9 | | 1.3 | | | 30.8 | | | 30.8 | |
| Effective Green, g (s) | | 25.9 | 25.9 | | 1.3 | | | 30.8 | | | 30.8 | |
| Actuated g/C Ratio | | 0.37 | 0.37 | | 0.02 | | | 0.44 | | | 0.44 | |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 630 | 556 | | 39 | | | 906 | | | 814 | |
| v/s Ratio Prot | | 0.27 | c0.31 | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.00 | | | c0.01 | | | 0.01 | |
| v/c Ratio | | 0.74 | 0.83 | | 0.15 | | | 0.03 | | | 0.02 | |
| Uniform Delay, d1 | | 19.1 | 20.0 | | 33.8 | | | 11.1 | | | 11.1 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | | | 0.36 | | | 1.00 | |
| Incremental Delay, d2 | | 4.5 | 9.8 | | 1.8 | | | 0.1 | | | 0.0 | |
| Delay (s) | | 23.5 | 29.9 | | 35.6 | | | 4.0 | | | 11.1 | |
| Level of Service | | C | C | | D | | | A | | | B | |
| Approach Delay (s) | | 26.7 | | | 35.6 | | | 4.0 | | | 11.1 | |
| Approach LOS | | C | | | D | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 26.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 70.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 101.6% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 8 | 7 | 639 | 3 | 75 | 5 | 6 | 541 | 19 | 19 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.94 | | | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | 1.00 | | | 0.95 | 1.00 | | 0.98 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 1744 | | | 1774 | 1794 | | 1825 | 1636 | | 2060 | |
| Flt Permitted | | 1.00 | | | 0.71 | 1.00 | | 0.95 | 1.00 | | 0.90 | |
| Satd. Flow (perm) | | 1744 | | | 1332 | 1794 | | 1762 | 1636 | | 1905 | |
| 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) | 0 | 9 | 8 | 695 | 3 | 82 | 5 | 7 | 588 | 21 | 21 | 0 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 0 | 31 | 0 | 0 | 406 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 14 | 0 | 0 | 698 | 51 | 0 | 12 | 182 | 0 | 42 | 0 |
| Turn Type | Perm | NA | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | 68.0 | | | 68.0 | 68.0 | | 34.0 | 34.0 | | 34.0 | |
| Effective Green, g (s) | | 68.0 | | | 68.0 | 68.0 | | 34.0 | 34.0 | | 34.0 | |
| Actuated g/C Ratio | | 0.62 | | | 0.62 | 0.62 | | 0.31 | 0.31 | | 0.31 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1078 | | | 823 | 1109 | | 544 | 505 | | 588 | |
| v/s Ratio Prot | | 0.01 | | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.52 | 0.03 | | 0.01 | c0.11 | | 0.02 | |
| v/c Ratio | | 0.01 | | | 0.85 | 0.05 | | 0.02 | 0.36 | | 0.07 | |
| Uniform Delay, d1 | | 8.1 | | | 16.9 | 8.3 | | 26.4 | 29.5 | | 26.8 | |
| Progression Factor | | 1.00 | | | 0.60 | 0.06 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.0 | | | 7.9 | 0.0 | | 0.1 | 2.0 | | 0.2 | |
| Delay (s) | | 8.1 | | | 18.0 | 0.5 | | 26.5 | 31.5 | | 27.1 | |
| Level of Service | | A | | | B | A | | C | C | | C | |
| Approach Delay (s) | | 8.1 | | | 16.2 | | | 31.4 | | | 27.1 | |
| Approach LOS | | A | | | B | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 57.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 390 | 28 | 456 | 629 | 81 | 816 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.99 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3621 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3621 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 424 | 30 | 496 | 684 | 88 | 887 |
| RTOR Reduction (vph) | 5 | 0 | 0 | 0 | 0 | 6 |
| Lane Group Flow (vph) | 449 | 0 | 496 | 684 | 88 | 881 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 16.9 | | 36.2 | 57.1 | 44.9 | 85.1 |
| Effective Green, g (s) | 16.9 | | 36.2 | 57.1 | 44.9 | 85.1 |
| Actuated g/C Ratio | 0.15 | | 0.33 | 0.52 | 0.41 | 0.77 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 556 | | 582 | 1837 | 722 | 1224 |
| v/s Ratio Prot | c0.12 | | c0.28 | 0.19 | 0.05 | c0.56 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.81 | | 0.85 | 0.37 | 0.12 | 0.72 |
| Uniform Delay, d1 | 45.0 | | 34.4 | 15.8 | 20.3 | 6.4 |
| Progression Factor | 1.03 | | 1.00 | 1.00 | 0.83 | 0.50 |
| Incremental Delay, d2 | 6.7 | | 11.6 | 0.1 | 0.1 | 0.6 |
| Delay (s) | 53.2 | | 46.0 | 15.9 | 16.9 | 3.8 |
| Level of Service | D | | D | B | B | A |
| Approach Delay (s) | 53.2 | | | 28.5 | 5.0 | |
| Approach LOS | D | | | C | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 68.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 890 | 10 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 480 | 4 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Flt Protected | | 0.95 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1834 | | | | | | 2111 | | 1770 | 1863 | |
| Flt Permitted | | 0.95 | | | | | | 1.00 | | 0.76 | 1.00 | |
| Satd. Flow (perm) | | 1834 | | | | | | 2111 | | 1409 | 1863 | |
| 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) | 967 | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 522 | 4 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 978 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 522 | 4 | 0 |
| Turn Type | Perm | NA | | | | | | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 59.8 | | | | | | 42.2 | | 42.2 | 42.2 | |
| Effective Green, g (s) | | 59.8 | | | | | | 42.2 | | 42.2 | 42.2 | |
| Actuated g/C Ratio | | 0.54 | | | | | | 0.38 | | 0.38 | 0.38 | |
| Clearance Time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 997 | | | | | | 809 | | 540 | 714 | |
| v/s Ratio Prot | | | | | | | | 0.00 | | | 0.00 | |
| v/s Ratio Perm | | 0.53 | | | | | | | | c0.37 | | |
| v/c Ratio | | 0.98 | | | | | | 0.00 | | 0.97 | 0.01 | |
| Uniform Delay, d1 | | 24.5 | | | | | | 20.9 | | 33.2 | 20.9 | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | 0.16 | 0.16 | |
| Incremental Delay, d2 | | 23.8 | | | | | | 0.0 | | 23.2 | 0.0 | |
| Delay (s) | | 48.4 | | | | | | 20.9 | | 28.6 | 3.4 | |
| Level of Service | | D | | | | | | C | | C | A | |
| Approach Delay (s) | | 48.4 | | | 0.0 | | | 20.9 | | | 28.4 | |
| Approach LOS | | D | | | A | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 41.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.97 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 89.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 341 | 0 | 439 | 346 | 0 | 294 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 371 | 0 | 477 | 376 | 0 | 320 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 166 | 0 | 254 |
| Lane Group Flow (vph) | 371 | 0 | 477 | 210 | 0 | 66 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 18.9 | | 18.9 | 18.9 | | 7.0 |
| Effective Green, g (s) | 18.9 | | 18.9 | 18.9 | | 7.0 |
| Actuated g/C Ratio | 0.56 | | 0.56 | 0.56 | | 0.21 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1913 | | 986 | 1553 | | 333 |
| v/s Ratio Prot | 0.11 | | c0.27 | | | |
| v/s Ratio Perm | | | | 0.08 | | c0.04 |
| v/c Ratio | 0.19 | | 0.48 | 0.13 | | 0.20 |
| Uniform Delay, d1 | 3.7 | | 4.5 | 3.6 | | 11.1 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.2 | | 1.7 | 0.2 | | 0.3 |
| Delay (s) | 3.9 | | 6.2 | 3.8 | | 11.4 |
| Level of Service | A | | A | A | | B |
| Approach Delay (s) | 3.9 | | 5.2 | | 11.4 | |
| Approach LOS | A | | A | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 6.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.41 | | |
| Actuated Cycle Length (s) | 33.9 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 40.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 248 | 0 | 27 | 68 | 1445 | 394 | 2 | 249 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 0.99 | | | | 0.97 | | | 1.00 | | | |
| Flt Protected | 0.96 | | | | 1.00 | | | 1.00 | | | |
| Satd. Flow (prot) | 3407 | | | | 3423 | | | 3538 | | | |
| Flt Permitted | 0.96 | | | | 0.92 | | | 0.94 | | | |
| Satd. Flow (perm) | 3407 | | | | 3172 | | | 3341 | | | |
| 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 |
| Adj. Flow (vph) | 270 | 0 | 29 | 74 | 1571 | 428 | 2 | 271 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 9 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 290 | 0 | 0 | 0 | 2054 | 0 | 0 | 273 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 14.0 | | | | 88.0 | | | 88.0 | | | |
| Effective Green, g (s) | 14.0 | | | | 88.0 | | | 88.0 | | | |
| Actuated g/C Ratio | 0.13 | | | | 0.80 | | | 0.80 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 433 | | | | 2537 | | | 2672 | | | |
| v/s Ratio Prot | c0.09 | | | | | | | | | | |
| v/s Ratio Perm | | | | | c0.65 | | | 0.08 | | | |
| v/c Ratio | 0.67 | | | | 0.81 | | | 0.10 | | | |
| Uniform Delay, d1 | 45.8 | | | | 6.2 | | | 2.4 | | | |
| Progression Factor | 0.97 | | | | 0.94 | | | 1.00 | | | |
| Incremental Delay, d2 | 4.0 | | | | 2.4 | | | 0.1 | | | |
| Delay (s) | 48.2 | | | | 8.3 | | | 2.5 | | | |
| Level of Service | D | | | | A | | | A | | | |
| Approach Delay (s) | 48.2 | | | | 8.3 | | | 2.5 | | 0.0 | |
| Approach LOS | D | | | | A | | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 79.4% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.

c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 1541 | 32 | 58 | 1 | 0 | 135 | 90 | 16 | 12 | 124 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 1.00 | | 0.85 | | | 1.00 | | 0.98 | | 1.00 | |
| Flt Protected | 0.95 | | 1.00 | | | 1.00 | | 0.96 | | 0.95 | |
| Satd. Flow (prot) | 3433 | | 1441 | | | 3538 | | 3357 | | 3433 | |
| Flt Permitted | 0.95 | | 1.00 | | | 0.95 | | 0.72 | | 0.95 | |
| Satd. Flow (perm) | 3433 | | 1441 | | | 3378 | | 2523 | | 3433 | |
| 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 |
| Adj. Flow (vph) | 1675 | 35 | 63 | 1 | 0 | 147 | 98 | 17 | 13 | 135 | 0 |
| RTOR Reduction (vph) | 3 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 1713 | 0 | 42 | 0 | 0 | 148 | 0 | 128 | 0 | 135 | 0 |
| Turn Type | NA | | Perm | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4! | | | | | 8! | | 2! | | 2! | |
| Permitted Phases | | | 4 | 8 | | | 2 | | | | |
| Actuated Green, G (s) | 82.0 | | 82.0 | | | 82.0 | | 20.0 | | 20.0 | |
| Effective Green, g (s) | 82.0 | | 82.0 | | | 82.0 | | 20.0 | | 20.0 | |
| Actuated g/C Ratio | 0.75 | | 0.75 | | | 0.75 | | 0.18 | | 0.18 | |
| Clearance Time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 2559 | | 1074 | | | 2518 | | 458 | | 624 | |
| v/s Ratio Prot | c0.50 | | | | | | | | | 0.04 | |
| v/s Ratio Perm | | | 0.03 | | | 0.04 | | c0.05 | | | |
| v/c Ratio | 0.67 | | 0.04 | | | 0.06 | | 1.46dl | | 0.22 | |
| Uniform Delay, d1 | 7.1 | | 3.7 | | | 3.7 | | 38.8 | | 38.3 | |
| Progression Factor | 1.00 | | 1.00 | | | 1.00 | | 0.77 | | 1.00 | |
| Incremental Delay, d2 | 0.7 | | 0.0 | | | 0.0 | | 1.4 | | 0.8 | |
| Delay (s) | 7.8 | | 3.7 | | | 3.8 | | 31.2 | | 39.1 | |
| Level of Service | A | | A | | | A | | C | | D | |
| Approach Delay (s) | 7.7 | | | | | 3.8 | | 31.2 | | 39.1 | |
| Approach LOS | A | | | | | A | | C | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.59 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 71.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 273 | 115 | 3 | 135 | 65 | 13 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1772 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1772 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 297 | 125 | 3 | 147 | 71 | 14 |
| RTOR Reduction (vph) | 0 | 92 | 0 | 61 | 8 | 5 |
| Lane Group Flow (vph) | 297 | 33 | 3 | 86 | 64 | 8 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 14.7 | 14.7 | 32.3 | 32.3 | 32.3 | 32.3 |
| Effective Green, g (s) | 14.7 | 14.7 | 32.3 | 32.3 | 32.3 | 32.3 |
| Actuated g/C Ratio | 0.27 | 0.27 | 0.59 | 0.59 | 0.59 | 0.59 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 473 | 423 | 1039 | 929 | 1040 | 883 |
| v/s Ratio Prot | c0.17 | | 0.00 | | 0.04 | |
| v/s Ratio Perm | | 0.02 | | c0.05 | | 0.01 |
| v/c Ratio | 0.63 | 0.08 | 0.00 | 0.09 | 0.06 | 0.01 |
| Uniform Delay, d1 | 17.7 | 15.1 | 4.7 | 5.0 | 4.9 | 4.7 |
| Progression Factor | 0.72 | 1.22 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.5 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 |
| Delay (s) | 14.2 | 18.4 | 4.7 | 5.2 | 5.0 | 4.7 |
| Level of Service | B | B | A | A | A | A |
| Approach Delay (s) | 15.4 | | 5.1 | | 4.9 | |
| Approach LOS | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.26 | | |
| Actuated Cycle Length (s) | 55.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 32.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 65 | 57 | 24 | 8 | 7 | 57 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.99 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1631 | |
| Flt Permitted | 0.80 | 1.00 | 1.00 | 1.00 | 0.99 | |
| Satd. Flow (perm) | 1490 | 1863 | 1863 | 1583 | 1631 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 71 | 62 | 26 | 9 | 8 | 62 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 8 | 23 | 0 |
| Lane Group Flow (vph) | 71 | 62 | 26 | 1 | 47 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 5.0 | 5.0 | 5.0 | 5.0 | 22.8 | |
| Effective Green, g (s) | 5.0 | 5.0 | 5.0 | 5.0 | 22.8 | |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.14 | 0.14 | 0.64 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 208 | 260 | 260 | 221 | 1038 | |
| v/s Ratio Prot | | 0.03 | 0.01 | | c0.03 | |
| v/s Ratio Perm | c0.05 | | | 0.00 | | |
| v/c Ratio | 0.34 | 0.24 | 0.10 | 0.01 | 0.05 | |
| Uniform Delay, d1 | 13.9 | 13.7 | 13.4 | 13.3 | 2.4 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.0 | 0.5 | 0.2 | 0.0 | 0.1 | |
| Delay (s) | 14.9 | 14.2 | 13.6 | 13.3 | 2.5 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 14.6 | 13.5 | | 2.5 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 35.8 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 20.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 8 | 7 | 21 | 39 | 26 | 10 | 45 | 19 | 101 | 10 | 27 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.89 | | 1.00 | 0.96 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | 1.00 |
| Satd. Flow (prot) | 1652 | 3145 | | 1652 | 3389 | | | 1800 | 1583 | | 1837 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.88 | 1.00 |
| Satd. Flow (perm) | 1652 | 3145 | | 1652 | 3389 | | | 1428 | 1583 | | 1645 | 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) | 9 | 8 | 23 | 42 | 28 | 11 | 49 | 21 | 110 | 11 | 29 | 4 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 4 | 0 | 0 | 0 | 89 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 9 | 21 | 0 | 42 | 35 | 0 | 0 | 70 | 21 | 0 | 40 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 24.8 | | 3.9 | 28.0 | | | 4.8 | 8.7 | | 4.8 | 5.5 |
| Effective Green, g (s) | 0.7 | 24.8 | | 3.9 | 28.0 | | | 4.8 | 8.7 | | 4.8 | 5.5 |
| Actuated g/C Ratio | 0.02 | 0.55 | | 0.09 | 0.62 | | | 0.11 | 0.19 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1714 | | 141 | 2085 | | | 150 | 441 | | 173 | 330 |
| v/s Ratio Prot | 0.01 | 0.01 | | c0.03 | c0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.01 | | 0.02 | 0.00 |
| v/c Ratio | 0.36 | 0.01 | | 0.30 | 0.02 | | | 0.47 | 0.05 | | 0.23 | 0.00 |
| Uniform Delay, d1 | 22.2 | 4.7 | | 19.5 | 3.4 | | | 19.1 | 15.0 | | 18.7 | 17.6 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 8.7 | 0.0 | | 1.2 | 0.0 | | | 2.3 | 0.0 | | 0.7 | 0.0 |
| Delay (s) | 30.8 | 4.8 | | 20.7 | 3.4 | | | 21.4 | 15.1 | | 19.3 | 17.6 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 10.6 | | | 12.4 | | | 17.5 | | | 19.2 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 45.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 25.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 35 | 111 | 12 | 2 | 42 | 34 | 8 | 7 | 5 | 1056 | 3 | 59 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.93 | | | 0.97 | | | 0.99 | |
| Flt Protected | | 0.99 | | | 1.00 | | | 0.98 | | | 0.95 | |
| Satd. Flow (prot) | | 2067 | | | 3414 | | | 2005 | | | 2002 | |
| Flt Permitted | | 0.91 | | | 0.95 | | | 0.78 | | | 0.72 | |
| Satd. Flow (perm) | | 1898 | | | 3249 | | | 1605 | | | 1513 | |
| 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) | 38 | 121 | 13 | 2 | 46 | 37 | 9 | 8 | 5 | 1148 | 3 | 64 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 32 | 0 | 0 | 1 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 0 | 169 | 0 | 0 | 53 | 0 | 0 | 21 | 0 | 0 | 1213 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 13.9 | | | 13.9 | | | 88.1 | | | 88.1 | |
| Effective Green, g (s) | | 13.9 | | | 13.9 | | | 88.1 | | | 88.1 | |
| Actuated g/C Ratio | | 0.13 | | | 0.13 | | | 0.80 | | | 0.80 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 239 | | | 410 | | | 1285 | | | 1211 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.09 | | | 0.02 | | | 0.01 | | | c0.80 | |
| v/c Ratio | | 0.71 | | | 0.13 | | | 0.02 | | | 1.00 | |
| Uniform Delay, d1 | | 46.1 | | | 42.7 | | | 2.2 | | | 11.0 | |
| Progression Factor | | 1.00 | | | 0.83 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 9.2 | | | 0.1 | | | 0.0 | | | 26.3 | |
| Delay (s) | | 55.3 | | | 35.6 | | | 2.2 | | | 37.3 | |
| Level of Service | | E | | | D | | | A | | | D | |
| Approach Delay (s) | | 55.3 | | | 35.6 | | | 2.2 | | | 37.3 | |
| Approach LOS | | E | | | D | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 38.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.96 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 90.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 35 | 223 | 0 | 0 | 0 | 0 | 62 | 56 | 1127 | 0 | 37 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Frt | 0.86 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1590 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| Flt Permitted | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (perm) | 1590 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| 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) | 5 | 38 | 242 | 0 | 0 | 0 | 0 | 67 | 61 | 1225 | 0 | 40 |
| RTOR Reduction (vph) | 31 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 9 |
| Lane Group Flow (vph) | 111 | 0 | 112 | 0 | 0 | 0 | 0 | 67 | 9 | 1225 | 0 | 31 |
| Turn Type | NA | | Perm | | | | | NA | Perm | custom | | custom |
| Protected Phases | 8 | | | | | | | 6 | | | | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | 4 |
| Actuated Green, G (s) | 86.0 | | 86.0 | | | | | 16.0 | 16.0 | 86.0 | | 86.0 |
| Effective Green, g (s) | 86.0 | | 86.0 | | | | | 16.0 | 16.0 | 86.0 | | 86.0 |
| Actuated g/C Ratio | 0.78 | | 0.78 | | | | | 0.15 | 0.15 | 0.78 | | 0.78 |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1243 | | 1175 | | | | | 270 | 230 | 1383 | | 1402 |
| v/s Ratio Prot | 0.07 | | | | | | | c0.04 | | | | |
| v/s Ratio Perm | | | 0.07 | | | | | | 0.01 | c0.69 | | 0.02 |
| v/c Ratio | 0.09 | | 0.10 | | | | | 0.25 | 0.04 | 0.89 | | 0.02 |
| Uniform Delay, d1 | 2.8 | | 2.8 | | | | | 41.7 | 40.4 | 8.5 | | 2.7 |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.56 | 0.08 | 0.54 | | 1.00 |
| Incremental Delay, d2 | 0.0 | | 0.0 | | | | | 2.2 | 0.3 | 2.4 | | 0.0 |
| Delay (s) | 2.8 | | 2.9 | | | | | 25.5 | 3.5 | 7.0 | | 2.7 |
| Level of Service | A | | A | | | | | C | A | A | | A |
| Approach Delay (s) | 2.9 | | | | 0.0 | | | 15.0 | | | 6.8 | |
| Approach LOS | A | | | | A | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 6.8 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 9 | 26 | 49 | 4 | 2 | 1261 | 56 | 54 | 4 | 36 | 6 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.91 | | | 1.00 | | | 1.00 | 0.85 | | 0.98 | |
| Flt Protected | | 0.99 | | | 0.96 | | | 0.95 | 1.00 | | 1.00 | |
| Satd. Flow (prot) | | 1914 | | | 2011 | | | 2015 | 1583 | | 1820 | |
| Flt Permitted | | 0.97 | | | 0.81 | | | 0.70 | 1.00 | | 0.93 | |
| Satd. Flow (perm) | | 1872 | | | 1708 | | | 1475 | 1583 | | 1705 | |
| 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) | 5 | 10 | 28 | 53 | 4 | 2 | 1371 | 61 | 59 | 4 | 39 | 7 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 1 | 0 | 0 | 0 | 9 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 0 | 17 | 0 | 0 | 58 | 0 | 0 | 1432 | 50 | 0 | 49 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | 8.1 | | | 8.1 | | | 93.9 | 93.9 | | 93.9 | |
| Effective Green, g (s) | | 8.1 | | | 8.1 | | | 93.9 | 93.9 | | 93.9 | |
| Actuated g/C Ratio | | 0.07 | | | 0.07 | | | 0.85 | 0.85 | | 0.85 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 137 | | | 125 | | | 1259 | 1351 | | 1455 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.01 | | | c0.03 | | | c0.97 | 0.03 | | 0.03 | |
| v/c Ratio | | 0.12 | | | 0.46 | | | 1.14 | 0.04 | | 0.03 | |
| Uniform Delay, d1 | | 47.6 | | | 48.9 | | | 8.0 | 1.2 | | 1.2 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 0.62 | 0.03 | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 2.7 | | | 68.7 | 0.0 | | 0.0 | |
| Delay (s) | | 48.0 | | | 51.6 | | | 73.7 | 0.1 | | 1.3 | |
| Level of Service | | D | | | D | | | E | A | | A | |
| Approach Delay (s) | | 48.0 | | | 51.6 | | | 70.8 | | | 1.3 | |
| Approach LOS | | D | | | D | | | E | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 67.4 | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | 1.08 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 95.8% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 1372 | 0 | 14 | 0 | 7 | 18 | 10 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | | | 1.00 | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | | | 0.95 | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | | | | 1681 | 1681 | 1794 | | 1863 | 1636 | | 2041 | |
| Flt Permitted | | | | 0.76 | 0.76 | 1.00 | | 1.00 | 1.00 | | 0.89 | |
| Satd. Flow (perm) | | | | 1340 | 1340 | 1794 | | 1863 | 1636 | | 1869 | |
| 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) | 0 | 0 | 0 | 1491 | 0 | 15 | 0 | 8 | 20 | 11 | 5 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 16 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 745 | 746 | 11 | 0 | 8 | 4 | 0 | 16 | 0 |
| Turn Type | Perm | | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | | | 81.3 | 81.3 | 81.3 | | 20.7 | 20.7 | | 20.7 | |
| Effective Green, g (s) | | | | 81.3 | 81.3 | 81.3 | | 20.7 | 20.7 | | 20.7 | |
| Actuated g/C Ratio | | | | 0.74 | 0.74 | 0.74 | | 0.19 | 0.19 | | 0.19 | |
| Clearance Time (s) | | | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | | | 990 | 990 | 1325 | | 350 | 307 | | 351 | |
| v/s Ratio Prot | | | | | | | | 0.00 | | | | |
| v/s Ratio Perm | | | | 0.56 | c0.56 | 0.01 | | | 0.00 | | c0.01 | |
| v/c Ratio | | | | 0.75 | 0.75 | 0.01 | | 0.02 | 0.01 | | 0.05 | |
| Uniform Delay, d1 | | | | 8.4 | 8.5 | 3.8 | | 36.4 | 36.3 | | 36.6 | |
| Progression Factor | | | | 0.91 | 0.91 | 0.37 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | | | 3.0 | 3.0 | 0.0 | | 0.1 | 0.1 | | 0.2 | |
| Delay (s) | | | | 10.6 | 10.7 | 1.4 | | 36.5 | 36.4 | | 36.8 | |
| Level of Service | | | | B | B | A | | D | D | | D | |
| Approach Delay (s) | | 0.0 | | | 10.6 | | | 36.4 | | | 36.8 | |
| Approach LOS | | A | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 52.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 11 | 11 | 10 | 1371 | 11 | 11 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.92 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3383 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 12 | 12 | 11 | 1490 | 12 | 12 |
| RTOR Reduction (vph) | 4 | 0 | 0 | 0 | 0 | 9 |
| Lane Group Flow (vph) | 20 | 0 | 11 | 1490 | 12 | 3 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 35.1 | | 5.4 | 44.5 | 2.5 | 11.9 |
| Effective Green, g (s) | 35.1 | | 5.4 | 44.5 | 2.5 | 11.9 |
| Actuated g/C Ratio | 0.64 | | 0.10 | 0.81 | 0.05 | 0.22 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2158 | | 173 | 2863 | 80 | 342 |
| v/s Ratio Prot | 0.01 | | 0.01 | c0.42 | c0.01 | 0.00 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.01 | | 0.06 | 0.52 | 0.15 | 0.01 |
| Uniform Delay, d1 | 3.6 | | 22.5 | 1.7 | 25.2 | 16.9 |
| Progression Factor | 2.06 | | 1.00 | 1.00 | 0.21 | 0.06 |
| Incremental Delay, d2 | 0.0 | | 0.2 | 0.7 | 0.9 | 0.0 |
| Delay (s) | 7.5 | | 22.7 | 2.4 | 6.2 | 1.0 |
| Level of Service | A | | C | A | A | A |
| Approach Delay (s) | 7.5 | | | 2.6 | 3.6 | |
| Approach LOS | A | | | A | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.7 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 55.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 47.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | | | 4.0 | | |
| Lane Util. Factor | | 1.00 | | | | | | | | 1.00 | | |
| Frt | | 1.00 | | | | | | | | 1.00 | | |
| Flt Protected | | 0.95 | | | | | | | | 0.95 | | |
| Satd. Flow (prot) | | 1837 | | | | | | | | 1770 | | |
| Flt Permitted | | 0.95 | | | | | | | | 0.76 | | |
| Satd. Flow (perm) | | 1837 | | | | | | | | 1410 | | |
| 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) | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Turn Type | Perm | NA | | | | | | | | Perm | | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 1.5 | | | | | | | | 45.5 | | |
| Effective Green, g (s) | | 1.5 | | | | | | | | 45.5 | | |
| Actuated g/C Ratio | | 0.03 | | | | | | | | 0.83 | | |
| Clearance Time (s) | | 4.0 | | | | | | | | 4.0 | | |
| Vehicle Extension (s) | | 3.0 | | | | | | | | 3.0 | | |
| Lane Grp Cap (vph) | | 50 | | | | | | | | 1166 | | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.01 | | | | | | | | c0.02 | | |
| v/c Ratio | | 0.50 | | | | | | | | 0.02 | | |
| Uniform Delay, d1 | | 26.4 | | | | | | | | 0.8 | | |
| Progression Factor | | 1.00 | | | | | | | | 0.60 | | |
| Incremental Delay, d2 | | 7.7 | | | | | | | | 0.0 | | |
| Delay (s) | | 34.0 | | | | | | | | 0.5 | | |
| Level of Service | | C | | | | | | | | A | | |
| Approach Delay (s) | | 34.0 | | | 0.0 | | | 0.0 | | | 0.5 | |
| Approach LOS | | C | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.04 | | |
| Actuated Cycle Length (s) | 55.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 13.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 1298 | 0 | 11 | 12 | 0 | 28 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 1411 | 0 | 12 | 13 | 0 | 30 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 2 | 0 | 27 |
| Lane Group Flow (vph) | 1411 | 0 | 12 | 11 | 0 | 3 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 41.3 | | 41.3 | 41.3 | | 1.3 |
| Effective Green, g (s) | 41.3 | | 41.3 | 41.3 | | 1.3 |
| Actuated g/C Ratio | 0.82 | | 0.82 | 0.82 | | 0.03 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2802 | | 1444 | 2274 | | 41 |
| v/s Ratio Prot | c0.41 | | 0.01 | | | |
| v/s Ratio Perm | | | | 0.00 | | c0.00 |
| v/c Ratio | 0.50 | | 0.01 | 0.00 | | 0.07 |
| Uniform Delay, d1 | 1.5 | | 0.9 | 0.9 | | 24.1 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.6 | | 0.0 | 0.0 | | 0.7 |
| Delay (s) | 2.1 | | 0.9 | 0.9 | | 24.7 |
| Level of Service | A | | A | A | | C |
| Approach Delay (s) | 2.1 | | 0.9 | | 24.7 | |
| Approach LOS | A | | A | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 2.5 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 50.6 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 47.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 276 | 0 | 4 | 27 | 59 | 176 | 0 | 2206 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 1.00 | | | | 0.90 | | | 1.00 | | | |
| Flt Protected | 0.95 | | | | 0.99 | | | 1.00 | | | |
| Satd. Flow (prot) | 3437 | | | | 3166 | | | 3539 | | | |
| Flt Permitted | 0.95 | | | | 0.70 | | | 1.00 | | | |
| Satd. Flow (perm) | 3437 | | | | 2212 | | | 3539 | | | |
| 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 |
| Adj. Flow (vph) | 300 | 0 | 4 | 29 | 64 | 191 | 0 | 2398 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 9 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 295 | 0 | 0 | 0 | 246 | 0 | 0 | 2398 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 14.0 | | | | 88.0 | | | 88.0 | | | |
| Effective Green, g (s) | 14.0 | | | | 88.0 | | | 88.0 | | | |
| Actuated g/C Ratio | 0.13 | | | | 0.80 | | | 0.80 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 437 | | | | 1769 | | | 2831 | | | |
| v/s Ratio Prot | c0.09 | | | | | | | c0.68 | | | |
| v/s Ratio Perm | | | | | 0.11 | | | | | | |
| v/c Ratio | 0.68 | | | | 0.14 | | | 0.85 | | | |
| Uniform Delay, d1 | 45.8 | | | | 2.5 | | | 6.8 | | | |
| Progression Factor | 0.97 | | | | 2.24 | | | 1.00 | | | |
| Incremental Delay, d2 | 4.1 | | | | 0.2 | | | 3.4 | | | |
| Delay (s) | 48.4 | | | | 5.7 | | | 10.2 | | | |
| Level of Service | D | | | | A | | | B | | | |
| Approach Delay (s) | 48.4 | | | | 5.7 | | | 10.2 | | 0.0 | |
| Approach LOS | D | | | | A | | | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 75.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.

c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | |
| Volume (vph) | 204 | 5 | 18 | 0 | 27 | 202 | 109 | 164 | 12 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 1.00 | | 0.85 | | 1.00 | | 0.95 | | 1.00 | |
| Flt Protected | 0.95 | | 1.00 | | 1.00 | | 0.98 | | 0.95 | |
| Satd. Flow (prot) | 3431 | | 1441 | | 3539 | | 3286 | | 3433 | |
| Flt Permitted | 0.95 | | 1.00 | | 1.00 | | 0.60 | | 0.95 | |
| Satd. Flow (perm) | 3431 | | 1441 | | 3539 | | 2024 | | 3433 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 222 | 5 | 20 | 0 | 29 | 220 | 118 | 178 | 13 | 0 |
| RTOR Reduction (vph) | 14 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 215 | 0 | 6 | 0 | 29 | 0 | 516 | 0 | 13 | 0 |
| Turn Type | NA | | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4! | | | | 8! | | 6! | | 6! | |
| Permitted Phases | | | 4 | | | 6 | | | | |
| Actuated Green, G (s) | 17.0 | | 17.0 | | 17.0 | | 30.0 | | 30.0 | |
| Effective Green, g (s) | 17.0 | | 17.0 | | 17.0 | | 30.0 | | 30.0 | |
| Actuated g/C Ratio | 0.31 | | 0.31 | | 0.31 | | 0.55 | | 0.55 | |
| Clearance Time (s) | 4.0 | | 4.0 | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 1060 | | 445 | | 1093 | | 1104 | | 1872 | |
| v/s Ratio Prot | c0.06 | | | | 0.01 | | | | 0.00 | |
| v/s Ratio Perm | | | 0.00 | | | | c0.25 | | | |
| v/c Ratio | 0.20 | | 0.01 | | 0.03 | | 1.63dl | | 0.01 | |
| Uniform Delay, d1 | 14.0 | | 13.2 | | 13.2 | | 7.6 | | 5.7 | |
| Progression Factor | 1.00 | | 1.00 | | 1.00 | | 0.95 | | 1.00 | |
| Incremental Delay, d2 | 0.1 | | 0.0 | | 0.0 | | 0.8 | | 0.0 | |
| Delay (s) | 14.1 | | 13.2 | | 13.3 | | 8.0 | | 5.7 | |
| Level of Service | B | | B | | B | | A | | A | |
| Approach Delay (s) | 14.0 | | | | 13.3 | | 8.0 | | 5.7 | |
| Approach LOS | B | | | | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 10.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.37 | | |
| Actuated Cycle Length (s) | 55.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 37.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 87 | 71 | 4 | 146 | 142 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1773 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1773 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 95 | 77 | 4 | 159 | 154 | 5 |
| RTOR Reduction (vph) | 0 | 67 | 0 | 44 | 6 | 1 |
| Lane Group Flow (vph) | 95 | 10 | 4 | 115 | 149 | 3 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 7.3 | 7.3 | 39.7 | 39.7 | 39.7 | 39.7 |
| Effective Green, g (s) | 7.3 | 7.3 | 39.7 | 39.7 | 39.7 | 39.7 |
| Actuated g/C Ratio | 0.13 | 0.13 | 0.72 | 0.72 | 0.72 | 0.72 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 234 | 210 | 1277 | 1142 | 1279 | 1085 |
| v/s Ratio Prot | c0.05 | | 0.00 | | c0.08 | |
| v/s Ratio Perm | | 0.01 | | 0.07 | | 0.00 |
| v/c Ratio | 0.41 | 0.05 | 0.00 | 0.10 | 0.12 | 0.00 |
| Uniform Delay, d1 | 21.9 | 20.8 | 2.1 | 2.3 | 2.3 | 2.1 |
| Progression Factor | 0.75 | 0.88 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.0 |
| Delay (s) | 17.5 | 18.5 | 2.1 | 2.5 | 2.5 | 2.1 |
| Level of Service | B | B | A | A | A | A |
| Approach Delay (s) | 18.0 | | 2.5 | | 2.5 | |
| Approach LOS | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 7.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.16 | | |
| Actuated Cycle Length (s) | 55.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 26.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 34 | 44 | 81 | 5 | 2 | 65 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.87 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1616 | |
| Flt Permitted | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1863 | 1863 | 1863 | 1583 | 1616 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 37 | 48 | 88 | 5 | 2 | 71 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 5 | 23 | 0 |
| Lane Group Flow (vph) | 37 | 48 | 88 | 0 | 50 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 3.3 | 3.3 | 3.3 | 3.3 | 23.5 | |
| Effective Green, g (s) | 3.3 | 3.3 | 3.3 | 3.3 | 23.5 | |
| Actuated g/C Ratio | 0.09 | 0.09 | 0.09 | 0.09 | 0.68 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 176 | 176 | 176 | 150 | 1091 | |
| v/s Ratio Prot | | 0.03 | c0.05 | | c0.03 | |
| v/s Ratio Perm | 0.02 | | | 0.00 | | |
| v/c Ratio | 0.21 | 0.27 | 0.50 | 0.00 | 0.05 | |
| Uniform Delay, d1 | 14.5 | 14.6 | 15.0 | 14.3 | 1.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.6 | 0.8 | 2.2 | 0.0 | 0.1 | |
| Delay (s) | 15.1 | 15.5 | 17.2 | 14.3 | 2.0 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 15.3 | 17.0 | | 2.0 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.10 | | |
| Actuated Cycle Length (s) | 34.8 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 19.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 3 | 9 | 119 | 4 | 1 | 18 | 0 | 19 | 0 | 3 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 0.88 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (prot) | | 3131 | | 1652 | 3433 | | | 1770 | 1583 | | 1863 | 1583 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Satd. Flow (perm) | | 3131 | | 1652 | 3433 | | | 1863 | 1583 | | 1863 | 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) | 0 | 3 | 10 | 129 | 4 | 1 | 20 | 0 | 21 | 0 | 3 | 1 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 1 |
| Lane Group Flow (vph) | 0 | 8 | 0 | 129 | 5 | 0 | 0 | 20 | 3 | 0 | 3 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | | 25.7 | | 4.9 | 29.9 | | | 1.3 | 6.2 | | 1.3 | 2.0 |
| Effective Green, g (s) | | 25.7 | | 4.9 | 29.9 | | | 1.3 | 6.2 | | 1.3 | 2.0 |
| Actuated g/C Ratio | | 0.59 | | 0.11 | 0.68 | | | 0.03 | 0.14 | | 0.03 | 0.05 |
| Clearance Time (s) | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1832 | | 184 | 2338 | | | 55 | 367 | | 55 | 216 |
| v/s Ratio Prot | | c0.00 | | c0.08 | 0.00 | | | | 0.00 | | 0.00 | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.01 | 0.00 | | | 0.00 |
| v/c Ratio | | 0.00 | | 0.70 | 0.00 | | | 0.36 | 0.01 | | 0.05 | 0.00 |
| Uniform Delay, d1 | | 3.8 | | 18.8 | 2.2 | | | 20.9 | 16.2 | | 20.7 | 20.0 |
| Progression Factor | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 0.0 | | 11.4 | 0.0 | | | 4.1 | 0.0 | | 0.4 | 0.0 |
| Delay (s) | | 3.8 | | 30.2 | 2.2 | | | 25.0 | 16.2 | | 21.1 | 20.0 |
| Level of Service | | A | | C | A | | | C | B | | C | B |
| Approach Delay (s) | | 3.8 | | | 29.2 | | | 20.5 | | | 20.8 | |
| Approach LOS | | A | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 25.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.13 | | |
| Actuated Cycle Length (s) | 43.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 27.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 12 | 13 | 1 | 1 | 111 | 374 | 1 | 0 | 0 | 5 | 0 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | | 1.00 | | | 0.88 | | | 1.00 | | | 0.89 | |
| Flt Protected | | 0.98 | | | 1.00 | | | 0.95 | | | 0.99 | |
| Satd. Flow (prot) | | 2053 | | | 3235 | | | 2006 | | | 1862 | |
| Flt Permitted | | 0.73 | | | 0.95 | | | 0.74 | | | 0.98 | |
| Satd. Flow (perm) | | 1524 | | | 3088 | | | 1561 | | | 1834 | |
| 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) | 13 | 14 | 1 | 1 | 121 | 407 | 1 | 0 | 0 | 5 | 0 | 22 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 304 | 0 | 0 | 0 | 0 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 0 | 27 | 0 | 0 | 225 | 0 | 0 | 1 | 0 | 0 | 13 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 8.2 | | | 8.2 | | | 16.1 | | | 16.1 | |
| Effective Green, g (s) | | 8.2 | | | 8.2 | | | 16.1 | | | 16.1 | |
| Actuated g/C Ratio | | 0.25 | | | 0.25 | | | 0.50 | | | 0.50 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 386 | | | 783 | | | 778 | | | 914 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.02 | | | c0.07 | | | 0.00 | | | c0.01 | |
| v/c Ratio | | 0.07 | | | 0.29 | | | 0.00 | | | 0.01 | |
| Uniform Delay, d1 | | 9.2 | | | 9.7 | | | 4.1 | | | 4.1 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.2 | | | 0.0 | | | 0.0 | |
| Delay (s) | | 9.2 | | | 9.9 | | | 4.1 | | | 4.1 | |
| Level of Service | | A | | | A | | | A | | | A | |
| Approach Delay (s) | | 9.2 | | | 9.9 | | | 4.1 | | | 4.1 | |
| Approach LOS | | A | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.6 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 32.3 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 25.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 8 | 26 | 0 | 0 | 0 | 0 | 1301 | 477 | 6 | 0 | 7 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Frt | 0.87 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | | 0.85 |
| Flt Protected | 0.99 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1613 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| Flt Permitted | 0.99 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (perm) | 1613 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| 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) | 3 | 9 | 28 | 0 | 0 | 0 | 0 | 1414 | 518 | 7 | 0 | 8 |
| RTOR Reduction (vph) | 19 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 8 |
| Lane Group Flow (vph) | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1414 | 461 | 7 | 0 | 0 |
| Turn Type | NA | | Perm | | | | | NA | Perm | custom | | custom |
| Protected Phases | 8 | | | | | | | 6 | | | | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | 4 |
| Actuated Green, G (s) | 4.0 | | 4.0 | | | | | 98.0 | 98.0 | 4.0 | | 4.0 |
| Effective Green, g (s) | 4.0 | | 4.0 | | | | | 98.0 | 98.0 | 4.0 | | 4.0 |
| Actuated g/C Ratio | 0.04 | | 0.04 | | | | | 0.89 | 0.89 | 0.04 | | 0.04 |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 58 | | 54 | | | | | 1659 | 1410 | 64 | | 65 |
| v/s Ratio Prot | 0.00 | | | | | | | c0.76 | | | | |
| v/s Ratio Perm | | | 0.00 | | | | | | 0.29 | c0.00 | | 0.00 |
| v/c Ratio | 0.01 | | 0.01 | | | | | 0.85 | 0.33 | 0.11 | | 0.00 |
| Uniform Delay, d1 | 51.1 | | 51.1 | | | | | 2.7 | 0.9 | 51.3 | | 51.1 |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.89 | 0.21 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.1 | | | | | 4.1 | 0.4 | 0.8 | | 0.0 |
| Delay (s) | 51.2 | | 51.2 | | | | | 6.5 | 0.6 | 52.0 | | 51.1 |
| Level of Service | D | | D | | | | | A | A | D | | D |
| Approach Delay (s) | 51.2 | | | | 0.0 | | | 4.9 | | | 51.5 | |
| Approach LOS | D | | | | A | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 6.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 85.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 1 | 0 | 1767 | 4 | 0 | 0 | 11 | 18 | 2 | 0 | 7 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 0.95 | 0.95 | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.85 | 0.85 | | 1.00 | | | 0.99 | | | 1.00 | |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | | | 0.98 | | | 1.00 | |
| Satd. Flow (prot) | | 1705 | 1504 | | 2006 | | | 2058 | | | 1863 | |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | | | 0.95 | | | 1.00 | |
| Satd. Flow (perm) | | 1705 | 1504 | | 2111 | | | 1986 | | | 1863 | |
| 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) | 1 | 0 | 1921 | 4 | 0 | 0 | 12 | 20 | 2 | 0 | 8 | 0 |
| RTOR Reduction (vph) | 0 | 664 | 663 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 298 | 297 | 0 | 4 | 0 | 0 | 33 | 0 | 0 | 8 | 0 |
| Turn Type | Split | NA | Perm | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | | | 4 | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 34.0 | 34.0 | | 1.7 | | | 62.3 | | | 62.3 | |
| Effective Green, g (s) | | 34.0 | 34.0 | | 1.7 | | | 62.3 | | | 62.3 | |
| Actuated g/C Ratio | | 0.31 | 0.31 | | 0.02 | | | 0.57 | | | 0.57 | |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 527 | 464 | | 32 | | | 1124 | | | 1055 | |
| v/s Ratio Prot | | 0.17 | | | | | | | | | 0.00 | |
| v/s Ratio Perm | | | c0.20 | | c0.00 | | | c0.02 | | | | |
| v/c Ratio | | 0.57 | 0.64 | | 0.12 | | | 0.03 | | | 0.01 | |
| Uniform Delay, d1 | | 31.8 | 32.7 | | 53.4 | | | 10.5 | | | 10.4 | |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | | | 0.51 | | | 1.00 | |
| Incremental Delay, d2 | | 1.4 | 2.9 | | 1.8 | | | 0.0 | | | 0.0 | |
| Delay (s) | | 33.2 | 35.6 | | 55.2 | | | 5.4 | | | 10.4 | |
| Level of Service | | C | D | | E | | | A | | | B | |
| Approach Delay (s) | | 34.4 | | | 55.2 | | | 5.4 | | | 10.4 | |
| Approach LOS | | C | | | E | | | A | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 33.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.24 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 89.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 0 | 0 | 205 | 0 | 93 | 0 | 14 | 131 | 31 | 24 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 | 12 | 12 | 13 | 12 | 16 | 12 |
| Total Lost time (s) | | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | | | | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| Frt | | | | | 1.00 | 0.85 | | 1.00 | 0.85 | | 1.00 | |
| Flt Protected | | | | | 0.95 | 1.00 | | 1.00 | 1.00 | | 0.97 | |
| Satd. Flow (prot) | | | | | 1770 | 1794 | | 1863 | 1636 | | 2053 | |
| Flt Permitted | | | | | 0.76 | 1.00 | | 1.00 | 1.00 | | 0.90 | |
| Satd. Flow (perm) | | | | | 1410 | 1794 | | 1863 | 1636 | | 1896 | |
| 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) | 0 | 0 | 0 | 223 | 0 | 101 | 0 | 15 | 142 | 34 | 26 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 74 | 0 | 0 | 60 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 0 | 0 | 0 | 223 | 27 | 0 | 15 | 82 | 0 | 60 | 0 |
| Turn Type | Perm | | | Perm | NA | Perm | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | 8 | 2 | | 2 | 6 | | |
| Actuated Green, G (s) | | | | | 13.3 | 13.3 | | 28.7 | 28.7 | | 28.7 | |
| Effective Green, g (s) | | | | | 13.3 | 13.3 | | 28.7 | 28.7 | | 28.7 | |
| Actuated g/C Ratio | | | | | 0.27 | 0.27 | | 0.57 | 0.57 | | 0.57 | |
| Clearance Time (s) | | | | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | | | | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | | | | 375 | 477 | | 1069 | 939 | | 1088 | |
| v/s Ratio Prot | | | | | | | | 0.01 | | | | |
| v/s Ratio Perm | | | | | c0.16 | 0.01 | | | c0.05 | | 0.03 | |
| v/c Ratio | | | | | 0.59 | 0.06 | | 0.01 | 0.09 | | 0.06 | |
| Uniform Delay, d1 | | | | | 16.0 | 13.7 | | 4.6 | 4.8 | | 4.7 | |
| Progression Factor | | | | | 0.59 | 0.21 | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | | | | 2.5 | 0.0 | | 0.0 | 0.2 | | 0.1 | |
| Delay (s) | | | | | 12.0 | 2.9 | | 4.6 | 5.0 | | 4.8 | |
| Level of Service | | | | | B | A | | A | A | | A | |
| Approach Delay (s) | | 0.0 | | | 9.2 | | | 4.9 | | | 4.8 | |
| Approach LOS | | A | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 7.5 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.25 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 27.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 105 | 11 | 76 | 210 | 91 | 227 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 14 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | | 1.00 | 0.95 | 1.00 | 1.00 |
| Frt | 0.99 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3605 | | 1770 | 3539 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3605 | | 1770 | 3539 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 114 | 12 | 83 | 228 | 99 | 247 |
| RTOR Reduction (vph) | 11 | 0 | 0 | 0 | 0 | 69 |
| Lane Group Flow (vph) | 115 | 0 | 83 | 228 | 99 | 178 |
| Turn Type | NA | | Prot | NA | NA | pt+ov |
| Protected Phases | 4 | | 3 | 8 | 2 | 2 3 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 5.9 | | 6.1 | 16.0 | 26.0 | 36.1 |
| Effective Green, g (s) | 5.9 | | 6.1 | 16.0 | 26.0 | 36.1 |
| Actuated g/C Ratio | 0.12 | | 0.12 | 0.32 | 0.52 | 0.72 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 425 | | 215 | 1132 | 920 | 1142 |
| v/s Ratio Prot | 0.03 | | c0.05 | c0.06 | 0.06 | c0.11 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.27 | | 0.39 | 0.20 | 0.11 | 0.16 |
| Uniform Delay, d1 | 20.1 | | 20.2 | 12.4 | 6.1 | 2.2 |
| Progression Factor | 0.88 | | 1.00 | 1.00 | 0.22 | 0.00 |
| Incremental Delay, d2 | 0.3 | | 1.2 | 0.1 | 0.2 | 0.1 |
| Delay (s) | 18.1 | | 21.4 | 12.4 | 1.6 | 0.1 |
| Level of Service | B | | C | B | A | A |
| Approach Delay (s) | 18.1 | | | 14.8 | 0.5 | |
| Approach LOS | B | | | B | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.0 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.22 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 24.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 318 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 86 | 1 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 16 | 16 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | | 1.00 | | | | | | 1.00 | | 1.00 | 1.00 | |
| Frt | | 1.00 | | | | | | 0.86 | | 1.00 | 1.00 | |
| Flt Protected | | 0.95 | | | | | | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 1833 | | | | | | 1826 | | 1770 | 1863 | |
| Flt Permitted | | 0.95 | | | | | | 1.00 | | 0.76 | 1.00 | |
| Satd. Flow (perm) | | 1833 | | | | | | 1826 | | 1410 | 1863 | |
| 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) | 346 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 93 | 1 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 348 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 93 | 1 | 0 |
| Turn Type | Perm | NA | | | | | | NA | | Perm | NA | |
| Protected Phases | | 4 | | | | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | | | | | | | 6 | | |
| Actuated Green, G (s) | | 14.8 | | | | | | 27.2 | | 27.2 | 27.2 | |
| Effective Green, g (s) | | 14.8 | | | | | | 27.2 | | 27.2 | 27.2 | |
| Actuated g/C Ratio | | 0.30 | | | | | | 0.54 | | 0.54 | 0.54 | |
| Clearance Time (s) | | 4.0 | | | | | | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 542 | | | | | | 993 | | 767 | 1013 | |
| v/s Ratio Prot | | | | | | | | 0.00 | | | 0.00 | |
| v/s Ratio Perm | | 0.19 | | | | | | | | c0.07 | | |
| v/c Ratio | | 0.64 | | | | | | 0.00 | | 0.12 | 0.00 | |
| Uniform Delay, d1 | | 15.3 | | | | | | 5.2 | | 5.6 | 5.2 | |
| Progression Factor | | 1.00 | | | | | | 1.00 | | 0.38 | 0.41 | |
| Incremental Delay, d2 | | 2.6 | | | | | | 0.0 | | 0.3 | 0.0 | |
| Delay (s) | | 17.9 | | | | | | 5.2 | | 2.4 | 2.1 | |
| Level of Service | | B | | | | | | A | | A | A | |
| Approach Delay (s) | | 17.9 | | | 0.0 | | | 5.2 | | | 2.4 | |
| Approach LOS | | B | | | A | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.30 | | |
| Actuated Cycle Length (s) | 50.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 35.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | NBL | NBR | SEL | SER | SWL | SWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 134 | 0 | 106 | 89 | 0 | 88 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 0.88 | | 1.00 |
| Frt | 1.00 | | 1.00 | 0.85 | | 0.85 |
| Flt Protected | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3433 | | 1770 | 2787 | | 1615 |
| Flt Permitted | 0.95 | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3433 | | 1770 | 2787 | | 1615 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 146 | 0 | 115 | 97 | 0 | 96 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 29 | 0 | 88 |
| Lane Group Flow (vph) | 146 | 0 | 115 | 68 | 0 | 8 |
| Parking (#/hr) | | 0 | | | | 0 |
| Turn Type | NA | Perm | NA | Perm | | Perm |
| Protected Phases | 2! | | 6! | | 8 | |
| Permitted Phases | | 2 | | 6 | | 8 |
| Actuated Green, G (s) | 26.9 | | 26.9 | 26.9 | | 3.3 |
| Effective Green, g (s) | 26.9 | | 26.9 | 26.9 | | 3.3 |
| Actuated g/C Ratio | 0.70 | | 0.70 | 0.70 | | 0.09 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 2417 | | 1246 | 1962 | | 139 |
| v/s Ratio Prot | 0.04 | | c0.06 | | | |
| v/s Ratio Perm | | | | 0.02 | | c0.01 |
| v/c Ratio | 0.06 | | 0.09 | 0.03 | | 0.06 |
| Uniform Delay, d1 | 1.7 | | 1.8 | 1.7 | | 16.0 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.0 | | 0.1 | 0.0 | | 0.2 |
| Delay (s) | 1.8 | | 1.9 | 1.7 | | 16.2 |
| Level of Service | A | | A | A | | B |
| Approach Delay (s) | 1.8 | | 1.8 | | 16.2 | |
| Approach LOS | A | | A | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.09 | | |
| Actuated Cycle Length (s) | 38.2 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 16.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 84 | 0 | 2 | 92 | 61 | 191 | 0 | 252 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Lane Util. Factor | 0.97 | | | | 0.95 | | | 0.95 | | | |
| Frt | 1.00 | | | | 0.92 | | | 1.00 | | | |
| Flt Protected | 0.95 | | | | 0.99 | | | 1.00 | | | |
| Satd. Flow (prot) | 3434 | | | | 3201 | | | 3539 | | | |
| Flt Permitted | 0.95 | | | | 0.83 | | | 1.00 | | | |
| Satd. Flow (perm) | 3434 | | | | 2682 | | | 3539 | | | |
| 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 |
| Adj. Flow (vph) | 91 | 0 | 2 | 100 | 66 | 208 | 0 | 274 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 24 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 69 | 0 | 0 | 0 | 310 | 0 | 0 | 274 | 0 | 0 | 0 |
| Turn Type | NA | | | Perm | NA | | Perm | NA | | | |
| Protected Phases | 8! | | | | 2 | | | 6 | | 4! | |
| Permitted Phases | | | | 2 | | | 6 | | | | |
| Actuated Green, G (s) | 3.9 | | | | 27.0 | | | 27.0 | | | |
| Effective Green, g (s) | 3.9 | | | | 27.0 | | | 27.0 | | | |
| Actuated g/C Ratio | 0.10 | | | | 0.69 | | | 0.69 | | | |
| Clearance Time (s) | 4.0 | | | | 4.0 | | | 4.0 | | | |
| Vehicle Extension (s) | 3.0 | | | | 3.0 | | | 3.0 | | | |
| Lane Grp Cap (vph) | 344 | | | | 1861 | | | 2456 | | | |
| v/s Ratio Prot | c0.02 | | | | | | | 0.08 | | | |
| v/s Ratio Perm | | | | | c0.12 | | | | | | |
| v/c Ratio | 0.20 | | | | 0.17 | | | 0.11 | | | |
| Uniform Delay, d1 | 16.1 | | | | 2.1 | | | 2.0 | | | |
| Progression Factor | 1.00 | | | | 1.00 | | | 1.00 | | | |
| Incremental Delay, d2 | 0.3 | | | | 0.2 | | | 0.1 | | | |
| Delay (s) | 16.4 | | | | 2.3 | | | 2.1 | | | |
| Level of Service | B | | | | A | | | A | | | |
| Approach Delay (s) | 16.4 | | | | 2.3 | | | 2.1 | | 0.0 | |
| Approach LOS | B | | | | A | | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.0 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.17 | | |
| Actuated Cycle Length (s) | 38.9 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 30.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | EBR2 | NBL2 | NBL | NBT | SBU | SBT | SBR | NEL | NER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Volume (vph) | 226 | 24 | 37 | 2 | 0 | 82 | 61 | 19 | 23 | 42 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Lane Util. Factor | 0.97 | | 0.91 | | | 0.95 | | 0.95 | | 0.97 | |
| Frt | 0.98 | | 0.85 | | | 1.00 | | 0.97 | | 1.00 | |
| Flt Protected | 0.96 | | 1.00 | | | 1.00 | | 0.97 | | 0.95 | |
| Satd. Flow (prot) | 3403 | | 1441 | | | 3535 | | 3323 | | 3434 | |
| Flt Permitted | 0.96 | | 1.00 | | | 0.95 | | 0.61 | | 0.95 | |
| Satd. Flow (perm) | 3403 | | 1441 | | | 3352 | | 2073 | | 3434 | |
| 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 |
| Adj. Flow (vph) | 246 | 26 | 40 | 2 | 0 | 89 | 66 | 21 | 25 | 46 | 1 |
| RTOR Reduction (vph) | 75 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 |
| Lane Group Flow (vph) | 201 | 0 | 4 | 0 | 0 | 91 | 0 | 112 | 0 | 20 | 0 |
| Turn Type | NA | | custom | Perm | | NA | Perm | NA | | NA | |
| Protected Phases | 4 | | | | | 8 | | 6! | | 6! | |
| Permitted Phases | | | 8 | 8 | | | 6 | | | | |
| Actuated Green, G (s) | 7.7 | | 5.4 | | | 5.4 | | 18.6 | | 18.6 | |
| Effective Green, g (s) | 7.7 | | 5.4 | | | 5.4 | | 18.6 | | 18.6 | |
| Actuated g/C Ratio | 0.18 | | 0.12 | | | 0.12 | | 0.43 | | 0.43 | |
| Clearance Time (s) | 4.0 | | 4.0 | | | 4.0 | | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | 3.0 | | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 599 | | 178 | | | 414 | | 882 | | 1461 | |
| v/s Ratio Prot | c0.06 | | | | | | | | | 0.01 | |
| v/s Ratio Perm | | | 0.00 | | | c0.03 | | c0.05 | | | |
| v/c Ratio | 0.34 | | 0.02 | | | 0.22 | | 0.13 | | 0.01 | |
| Uniform Delay, d1 | 15.8 | | 16.8 | | | 17.3 | | 7.6 | | 7.3 | |
| Progression Factor | 1.00 | | 1.00 | | | 1.00 | | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 0.3 | | 0.1 | | | 0.3 | | 0.3 | | 0.0 | |
| Delay (s) | 16.1 | | 16.9 | | | 17.5 | | 7.9 | | 7.3 | |
| Level of Service | B | | B | | | B | | A | | A | |
| Approach Delay (s) | 16.2 | | | | | 17.5 | | 7.9 | | 7.3 | |
| Approach LOS | B | | | | | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.19 | | |
| Actuated Cycle Length (s) | 43.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 31.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBR | SBL | SBR | NWL | NWR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 40 | 101 | 2 | 29 | 50 | 2 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 1583 | 1770 | 1583 | 1770 | 1504 |
| Flt Permitted | 0.95 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 1583 | 1770 | 1583 | 1770 | 1504 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 43 | 110 | 2 | 32 | 54 | 2 |
| RTOR Reduction (vph) | 0 | 97 | 0 | 11 | 0 | 1 |
| Lane Group Flow (vph) | 43 | 13 | 2 | 21 | 54 | 1 |
| Turn Type | NA | Perm | NA | Perm | NA | Perm |
| Protected Phases | 4 | | 6! | | 2! | |
| Permitted Phases | | 4 | | 6 | | 2 |
| Actuated Green, G (s) | 4.3 | 4.3 | 23.4 | 23.4 | 23.4 | 23.4 |
| Effective Green, g (s) | 4.3 | 4.3 | 23.4 | 23.4 | 23.4 | 23.4 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.66 | 0.66 | 0.66 | 0.66 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 213 | 190 | 1160 | 1037 | 1160 | 985 |
| v/s Ratio Prot | c0.02 | | 0.00 | | c0.03 | |
| v/s Ratio Perm | | 0.01 | | 0.01 | | 0.00 |
| v/c Ratio | 0.20 | 0.07 | 0.00 | 0.02 | 0.05 | 0.00 |
| Uniform Delay, d1 | 14.2 | 13.9 | 2.1 | 2.1 | 2.2 | 2.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.5 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 |
| Delay (s) | 14.6 | 14.1 | 2.1 | 2.2 | 2.3 | 2.1 |
| Level of Service | B | B | A | A | A | A |
| Approach Delay (s) | 14.2 | | 2.2 | | 2.3 | |
| Approach LOS | B | | A | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.8 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.07 | | |
| Actuated Cycle Length (s) | 35.7 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 20.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.
c Critical Lane Group

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 38 | 66 | 36 | 3 | 1 | 16 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 0.87 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1621 | |
| Flt Permitted | 0.87 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Satd. Flow (perm) | 1620 | 1863 | 1863 | 1583 | 1621 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 41 | 72 | 39 | 3 | 1 | 17 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 3 | 6 | 0 |
| Lane Group Flow (vph) | 41 | 72 | 39 | 0 | 12 | 0 |
| Turn Type | Perm | NA | NA | Perm | NA | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | 4 | | | 8 | | |
| Actuated Green, G (s) | 4.6 | 4.6 | 4.6 | 4.6 | 23.0 | |
| Effective Green, g (s) | 4.6 | 4.6 | 4.6 | 4.6 | 23.0 | |
| Actuated g/C Ratio | 0.13 | 0.13 | 0.13 | 0.13 | 0.65 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 209 | 240 | 240 | 204 | 1047 | |
| v/s Ratio Prot | | c0.04 | 0.02 | | c0.01 | |
| v/s Ratio Perm | 0.03 | | | 0.00 | | |
| v/c Ratio | 0.20 | 0.30 | 0.16 | 0.00 | 0.01 | |
| Uniform Delay, d1 | 13.8 | 14.0 | 13.8 | 13.5 | 2.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.5 | 0.7 | 0.3 | 0.0 | 0.0 | |
| Delay (s) | 14.3 | 14.7 | 14.1 | 13.5 | 2.3 | |
| Level of Service | B | B | B | B | A | |
| Approach Delay (s) | | 14.6 | 14.1 | | 2.3 | |
| Approach LOS | | B | B | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.06 | | |
| Actuated Cycle Length (s) | 35.6 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 18.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 5 | 11 | 17 | 40 | 15 | 4 | 54 | 17 | 45 | 6 | 5 | 4 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | 1.00 | 0.91 | | 1.00 | 0.97 | | | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.97 | 1.00 |
| Satd. Flow (prot) | 1652 | 3221 | | 1652 | 3433 | | | 1794 | 1583 | | 1810 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.77 | 1.00 | | 0.78 | 1.00 |
| Satd. Flow (perm) | 1652 | 3221 | | 1652 | 3433 | | | 1432 | 1583 | | 1452 | 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) | 5 | 12 | 18 | 43 | 16 | 4 | 59 | 18 | 49 | 7 | 5 | 4 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 41 | 0 | 0 | 4 |
| Lane Group Flow (vph) | 5 | 22 | 0 | 43 | 18 | 0 | 0 | 77 | 8 | 0 | 12 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | Perm | NA | pm+ov | Perm | NA | pm+ov |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | 3 | | 6 | 7 |
| Permitted Phases | | | | | | | 2 | | 2 | 6 | | 6 |
| Actuated Green, G (s) | 0.7 | 25.6 | | 2.8 | 27.7 | | | 4.9 | 7.7 | | 4.9 | 5.6 |
| Effective Green, g (s) | 0.7 | 25.6 | | 2.8 | 27.7 | | | 4.9 | 7.7 | | 4.9 | 5.6 |
| Actuated g/C Ratio | 0.02 | 0.57 | | 0.06 | 0.61 | | | 0.11 | 0.17 | | 0.11 | 0.12 |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 25 | 1820 | | 102 | 2099 | | | 154 | 408 | | 157 | 335 |
| v/s Ratio Prot | 0.00 | c0.01 | | c0.03 | 0.01 | | | | 0.00 | | | 0.00 |
| v/s Ratio Perm | | | | | | | | c0.05 | 0.00 | | 0.01 | 0.00 |
| v/c Ratio | 0.20 | 0.01 | | 0.42 | 0.01 | | | 0.50 | 0.02 | | 0.08 | 0.00 |
| Uniform Delay, d1 | 22.0 | 4.3 | | 20.5 | 3.4 | | | 19.0 | 15.7 | | 18.2 | 17.4 |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.9 | 0.0 | | 2.8 | 0.0 | | | 2.5 | 0.0 | | 0.2 | 0.0 |
| Delay (s) | 25.9 | 4.3 | | 23.3 | 3.4 | | | 21.6 | 15.7 | | 18.4 | 17.4 |
| Level of Service | C | A | | C | A | | | C | B | | B | B |
| Approach Delay (s) | | 7.4 | | | 17.0 | | | 19.3 | | | 18.1 | |
| Approach LOS | | A | | | B | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 45.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 26.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 53 | 47 | 4 | 2 | 24 | 43 | 2 | 1 | 2 | 7 | 1 | 44 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 10 | 16 | 12 | 13 | 13 | 13 | 12 | 16 | 12 | 12 | 16 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | | 1.00 | | | 0.91 | | | 0.95 | | | 0.89 | |
| Flt Protected | | 0.97 | | | 1.00 | | | 0.98 | | | 0.99 | |
| Satd. Flow (prot) | | 2048 | | | 3309 | | | 1958 | | | 1858 | |
| Flt Permitted | | 0.80 | | | 0.95 | | | 0.96 | | | 0.98 | |
| Satd. Flow (perm) | | 1675 | | | 3132 | | | 1919 | | | 1839 | |
| 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) | 58 | 51 | 4 | 2 | 26 | 47 | 2 | 1 | 2 | 8 | 1 | 48 |
| RTOR Reduction (vph) | 0 | 3 | 0 | 0 | 40 | 0 | 0 | 1 | 0 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 0 | 110 | 0 | 0 | 35 | 0 | 0 | 4 | 0 | 0 | 39 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 5.1 | | | 5.1 | | | 22.3 | | | 22.3 | |
| Effective Green, g (s) | | 5.1 | | | 5.1 | | | 22.3 | | | 22.3 | |
| Actuated g/C Ratio | | 0.14 | | | 0.14 | | | 0.63 | | | 0.63 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 241 | | | 451 | | | 1208 | | | 1158 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.07 | | | 0.01 | | | 0.00 | | | c0.02 | |
| v/c Ratio | | 0.45 | | | 0.08 | | | 0.00 | | | 0.03 | |
| Uniform Delay, d1 | | 13.9 | | | 13.1 | | | 2.4 | | | 2.5 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 1.4 | | | 0.1 | | | 0.0 | | | 0.1 | |
| Delay (s) | | 15.2 | | | 13.2 | | | 2.4 | | | 2.5 | |
| Level of Service | | B | | | B | | | A | | | A | |
| Approach Delay (s) | | 15.2 | | | 13.2 | | | 2.4 | | | 2.5 | |
| Approach LOS | | B | | | B | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 11.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.11 | | |
| Actuated Cycle Length (s) | 35.4 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 22.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | WBR2 | NBL | NBT | NBR | SBL | SBT | SBR | SEL2 | SEL | SER |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 3 | 18 | 40 | 0 | 0 | 0 | 0 | 112 | 58 | 22 | 0 | 21 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 16 |
| Total Lost time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | | | | 1.00 | 1.00 | 1.00 | | 1.00 |
| Frt | 0.86 | | 0.85 | | | | | 1.00 | 0.85 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (prot) | 1601 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| Flt Permitted | 1.00 | | 1.00 | | | | | 1.00 | 1.00 | 0.95 | | 1.00 |
| Satd. Flow (perm) | 1601 | | 1504 | | | | | 1863 | 1583 | 1770 | | 1794 |
| 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) | 3 | 20 | 43 | 0 | 0 | 0 | 0 | 122 | 63 | 24 | 0 | 23 |
| RTOR Reduction (vph) | 31 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 22 |
| Lane Group Flow (vph) | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 122 | 54 | 24 | 0 | 1 |
| Turn Type | NA | | Perm | | | | | NA | Perm | custom | | custom |
| Protected Phases | 8 | | | | | | | 6 | | | | |
| Permitted Phases | | | 8 | | | | | | 6 | 4 | | 4 |
| Actuated Green, G (s) | 5.8 | | 5.8 | | | | | 86.2 | 86.2 | 5.8 | | 5.8 |
| Effective Green, g (s) | 5.8 | | 5.8 | | | | | 86.2 | 86.2 | 5.8 | | 5.8 |
| Actuated g/C Ratio | 0.06 | | 0.06 | | | | | 0.86 | 0.86 | 0.06 | | 0.06 |
| Clearance Time (s) | 4.0 | | 4.0 | | | | | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 92 | | 87 | | | | | 1605 | 1364 | 102 | | 104 |
| v/s Ratio Prot | 0.00 | | | | | | | c0.07 | | | | |
| v/s Ratio Perm | | | 0.00 | | | | | | 0.03 | c0.01 | | 0.00 |
| v/c Ratio | 0.02 | | 0.02 | | | | | 0.08 | 0.04 | 0.24 | | 0.01 |
| Uniform Delay, d1 | 44.4 | | 44.4 | | | | | 1.0 | 1.0 | 45.0 | | 44.4 |
| Progression Factor | 1.00 | | 1.00 | | | | | 0.77 | 0.25 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.1 | | | | | 0.1 | 0.1 | 1.2 | | 0.0 |
| Delay (s) | 44.5 | | 44.5 | | | | | 0.9 | 0.3 | 46.2 | | 44.5 |
| Level of Service | D | | D | | | | | A | A | D | | D |
| Approach Delay (s) | 44.5 | | | | 0.0 | | | 0.7 | | | 45.3 | |
| Approach LOS | D | | | | A | | | A | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.4 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.09 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 22.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 0 | 3 | 145 | 6 | 2 | 3 | 15 | 36 | 11 | 0 | 18 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 16 | 12 | 12 | 12 | 12 |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.87 | | | 0.97 | | | 0.98 | | | 1.00 | |
| Flt Protected | | 1.00 | | | 0.97 | | | 0.99 | | | 1.00 | |
| Satd. Flow (prot) | | 1831 | | | 1982 | | | 2036 | | | 1863 | |
| Flt Permitted | | 1.00 | | | 0.43 | | | 0.96 | | | 1.00 | |
| Satd. Flow (perm) | | 1831 | | | 885 | | | 1978 | | | 1863 | |
| 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) | 0 | 3 | 158 | 7 | 2 | 3 | 16 | 39 | 12 | 0 | 20 | 0 |
| RTOR Reduction (vph) | 0 | 146 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 15 | 0 | 0 | 9 | 0 | 0 | 65 | 0 | 0 | 20 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | | 7.3 | | | 7.3 | | | 84.7 | | | 84.7 | |
| Effective Green, g (s) | | 7.3 | | | 7.3 | | | 84.7 | | | 84.7 | |
| Actuated g/C Ratio | | 0.07 | | | 0.07 | | | 0.85 | | | 0.85 | |
| Clearance Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 133 | | | 64 | | | 1675 | | | 1577 | |
| v/s Ratio Prot | | 0.01 | | | | | | | | | 0.01 | |
| v/s Ratio Perm | | | | | c0.01 | | | c0.03 | | | | |
| v/c Ratio | | 0.11 | | | 0.14 | | | 0.04 | | | 0.01 | |
| Uniform Delay, d1 | | 43.3 | | | 43.4 | | | 1.2 | | | 1.2 | |
| Progression Factor | | 1.00 | | | 1.00 | | | 0.49 | | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 1.0 | | | 0.0 | | | 0.0 | |
| Delay (s) | | 43.7 | | | 44.5 | | | 0.6 | | | 1.2 | |
| Level of Service | | D | | | D | | | A | | | A | |
| Approach Delay (s) | | 43.7 | | | 44.5 | | | 0.6 | | | 1.2 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 29.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.05 | | |
| Actuated Cycle Length (s) | 100.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 25.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

# APPENDIX D

# SIDRA ROUNDABOUT LOS CALCULATION WORKSHEETS

# EXISTING (2012)

Existing (2012) Friday PM Peak Event Traffic Hour

# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 227 | 5.0 | 0.357 | 7.3 | LOS A | 1.2 | 30.9 | 0.20 | 0.79 | 26.5 |
| 8 | T | 134 | 5.0 | 0.357 | 7.3 | LOS A | 1.2 | 30.9 | 0.20 | 0.31 | 30.3 |
| 18 | R | 267 | 5.0 | 0.266 | 6.2 | LOS A | 0.8 | 21.9 | 0.19 | 0.44 | 30.2 |
| Approach | | 628 | 5.0 | 0.357 | 6.8 | LOS A | 1.2 | 30.9 | 0.19 | 0.54 | 28.7 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 57 | 5.0 | 0.092 | 6.9 | LOS A | 0.2 | 6.2 | 0.47 | 0.82 | 27.1 |
| 8X | T | 12 | 5.0 | 0.019 | 6.1 | LOS A | 0.0 | 1.3 | 0.45 | 0.56 | 31.4 |
| 18X | R | 152 | 5.0 | 0.181 | 6.1 | LOS A | 0.5 | 12.5 | 0.33 | 0.59 | 29.9 |
| Approach | | 221 | 5.0 | 0.181 | 6.3 | LOS A | 0.5 | 12.5 | 0.37 | 0.65 | 29.1 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 328 | 5.0 | 0.482 | 11.3 | LOS B | 1.8 | 48.0 | 0.50 | 0.88 | 25.2 |
| 6 | T | 45 | 5.0 | 0.482 | 11.3 | LOS B | 1.8 | 48.0 | 0.50 | 0.64 | 27.3 |
| 16 | R | 5 | 5.0 | 0.007 | 4.8 | LOS A | 0.0 | 0.5 | 0.36 | 0.52 | 31.1 |
| Approach | | 378 | 5.0 | 0.482 | 11.2 | LOS B | 1.8 | 48.0 | 0.50 | 0.84 | 25.5 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.083 | 6.5 | LOS A | 0.2 | 5.6 | 0.45 | 1.06 | 27.6 |
| 4 | T | 51 | 5.0 | 0.083 | 6.5 | LOS A | 0.2 | 5.6 | 0.45 | 0.61 | 31.1 |
| 14 | R | 222 | 5.0 | 0.334 | 9.8 | LOS A | 1.0 | 26.0 | 0.50 | 0.67 | 28.8 |
| Approach | | 275 | 5.0 | 0.334 | 9.2 | LOS A | 1.0 | 26.0 | 0.49 | 0.67 | 29.2 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 21 | 5.0 | 0.388 | 11.0 | LOS B | 1.3 | 32.5 | 0.53 | 1.01 | 25.5 |
| 2 | T | 232 | 5.0 | 0.388 | 11.0 | LOS B | 1.3 | 32.5 | 0.53 | 0.72 | 27.7 |
| 12 | R | 63 | 5.0 | 0.087 | 5.9 | LOS A | 0.2 | 5.6 | 0.39 | 0.64 | 30.1 |
| Approach | | 315 | 5.0 | 0.388 | 9.9 | LOS A | 1.3 | 32.5 | 0.50 | 0.72 | 28.0 |
| All Vehicles | | 1817 | 5.0 | 0.482 | 8.6 | LOS A | 1.8 | 48.0 | 0.38 | 0.67 | 27.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 33 | 5.0 | 0.136 | 4.6 | LOS A | 0.4 | 9.7 | 0.07 | 1.01 | 27.6 |
| 8 | T | 111 | 5.0 | 0.136 | 4.6 | LOS A | 0.4 | 9.7 | 0.07 | 0.28 | 32.5 |
| 18 | R | 207 | 5.0 | 0.195 | 5.2 | LOS A | 0.5 | 14.0 | 0.07 | 0.41 | 30.9 |
| Approach | | 350 | 5.0 | 0.195 | 5.0 | LOS A | 0.5 | 14.0 | 0.07 | 0.43 | 31.0 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 7 | 4.2 | 0.008 | 4.5 | LOS A | 0.0 | 0.5 | 0.32 | 0.67 | 28.2 |
| 8X | T | 13 | 5.0 | 0.016 | 4.6 | LOS A | 0.0 | 1.0 | 0.33 | 0.43 | 32.5 |
| 18X | R | 57 | 5.0 | 0.063 | 4.6 | LOS A | 0.1 | 3.9 | 0.24 | 0.51 | 30.9 |
| Approach | | 76 | 4.9 | 0.063 | 4.6 | LOS A | 0.1 | 3.9 | 0.26 | 0.51 | 30.9 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 267 | 5.0 | 0.289 | 6.8 | LOS A | 0.9 | 22.7 | 0.26 | 0.68 | 27.2 |
| 6 | T | 8 | 5.0 | 0.289 | 6.8 | LOS A | 0.9 | 22.7 | 0.26 | 0.36 | 30.4 |
| 16 | R | 3 | 5.0 | 0.003 | 3.9 | LOS A | 0.0 | 0.2 | 0.21 | 0.43 | 31.9 |
| Approach | | 278 | 5.0 | 0.289 | 6.7 | LOS A | 0.9 | 22.7 | 0.26 | 0.67 | 27.3 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.036 | 4.6 | LOS A | 0.1 | 2.4 | 0.30 | 0.98 | 28.4 |
| 4 | T | 28 | 5.0 | 0.036 | 4.6 | LOS A | 0.1 | 2.4 | 0.30 | 0.42 | 32.5 |
| 14 | R | 191 | 5.0 | 0.224 | 6.5 | LOS A | 0.6 | 16.1 | 0.33 | 0.49 | 31.0 |
| Approach | | 222 | 5.0 | 0.224 | 6.3 | LOS A | 0.6 | 16.1 | 0.33 | 0.49 | 31.2 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 7 | 5.0 | 0.034 | 5.2 | LOS A | 0.1 | 2.1 | 0.37 | 0.91 | 28.0 |
| 2 | T | 18 | 5.0 | 0.034 | 5.2 | LOS A | 0.1 | 2.1 | 0.37 | 0.50 | 31.6 |
| 12 | R | 2 | 5.0 | 0.003 | 4.7 | LOS A | 0.0 | 0.2 | 0.34 | 0.51 | 31.0 |
| Approach | | 27 | 5.0 | 0.034 | 5.2 | LOS A | 0.1 | 2.1 | 0.36 | 0.60 | 30.5 |
| All Vehicles | | 953 | 5.0 | 0.289 | 5.8 | LOS A | 0.9 | 22.7 | 0.21 | 0.52 | 29.8 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 261 | 5.0 | 0.438 | 8.8 | LOS A | 1.6 | 41.4 | 0.29 | 0.80 | 26.0 |
| 8 | T | 163 | 5.0 | 0.438 | 8.8 | LOS A | 1.6 | 41.4 | 0.29 | 0.38 | 29.2 |
| 18 | R | 310 | 5.0 | 0.322 | 7.1 | LOS A | 1.1 | 28.0 | 0.26 | 0.49 | 29.6 |
| Approach | | 734 | 5.0 | 0.438 | 8.1 | LOS A | 1.6 | 41.4 | 0.28 | 0.57 | 28.0 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 126 | 5.0 | 0.223 | 9.3 | LOS A | 0.6 | 15.2 | 0.53 | 0.84 | 26.1 |
| 8X | T | 12 | 5.0 | 0.022 | 6.9 | LOS A | 0.1 | 1.4 | 0.50 | 0.63 | 30.8 |
| 18X | R | 121 | 5.0 | 0.153 | 6.1 | LOS A | 0.4 | 10.3 | 0.36 | 0.62 | 29.9 |
| Approach | | 259 | 5.0 | 0.223 | 7.7 | LOS A | 0.6 | 15.2 | 0.45 | 0.73 | 27.8 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 264 | 5.0 | 0.478 | 12.2 | LOS B | 1.8 | 46.1 | 0.55 | 0.91 | 24.9 |
| 6 | T | 68 | 5.0 | 0.478 | 12.2 | LOS B | 1.8 | 46.1 | 0.55 | 0.69 | 26.8 |
| 16 | R | 28 | 5.0 | 0.042 | 5.8 | LOS A | 0.1 | 2.7 | 0.42 | 0.62 | 30.5 |
| Approach | | 361 | 5.0 | 0.478 | 11.7 | LOS B | 1.8 | 46.1 | 0.54 | 0.85 | 25.6 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.146 | 7.6 | LOS A | 0.4 | 10.1 | 0.48 | 1.07 | 27.2 |
| 4 | T | 87 | 5.0 | 0.146 | 7.6 | LOS A | 0.4 | 10.1 | 0.48 | 0.64 | 30.3 |
| 14 | R | 239 | 5.0 | 0.377 | 11.0 | LOS B | 1.2 | 31.0 | 0.54 | 0.71 | 28.0 |
| Approach | | 328 | 5.0 | 0.377 | 10.1 | LOS B | 1.2 | 31.0 | 0.52 | 0.69 | 28.6 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 32 | 5.0 | 0.469 | 12.1 | LOS B | 1.7 | 44.6 | 0.55 | 1.02 | 25.1 |
| 2 | T | 292 | 5.0 | 0.469 | 12.1 | LOS B | 1.7 | 44.6 | 0.55 | 0.74 | 27.2 |
| 12 | R | 70 | 5.0 | 0.091 | 5.7 | LOS A | 0.2 | 5.9 | 0.37 | 0.61 | 30.3 |
| Approach | | 393 | 5.0 | 0.469 | 11.0 | LOS B | 1.7 | 44.6 | 0.51 | 0.74 | 27.5 |
| All Vehicles | | 2075 | 5.0 | 0.478 | 9.5 | LOS A | 1.8 | 46.1 | 0.43 | 0.69 | 27.5 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 35 | 5.0 | 0.086 | 4.1 | LOS A | 0.2 | 5.9 | 0.06 | 0.93 | 27.9 |
| 8 | T | 57 | 5.0 | 0.086 | 4.1 | LOS A | 0.2 | 5.9 | 0.06 | 0.27 | 32.8 |
| 18 | R | 174 | 5.0 | 0.164 | 4.9 | LOS A | 0.4 | 11.3 | 0.06 | 0.41 | 31.1 |
| Approach | | 265 | 5.0 | 0.164 | 4.6 | LOS A | 0.4 | 11.3 | 0.06 | 0.45 | 30.9 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 3 | 3.3 | 0.004 | 4.1 | LOS A | 0.0 | 0.2 | 0.28 | 0.65 | 28.1 |
| 8X | T | 4 | 5.0 | 0.005 | 4.2 | LOS A | 0.0 | 0.3 | 0.28 | 0.38 | 32.8 |
| 18X | R | 50 | 5.0 | 0.056 | 4.5 | LOS A | 0.1 | 3.3 | 0.22 | 0.49 | 31.0 |
| Approach | | 58 | 4.9 | 0.056 | 4.5 | LOS A | 0.1 | 3.3 | 0.23 | 0.49 | 30.9 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 295 | 5.0 | 0.304 | 6.7 | LOS A | 0.9 | 24.5 | 0.20 | 0.65 | 27.3 |
| 6 | T | 9 | 5.0 | 0.304 | 6.7 | LOS A | 0.9 | 24.5 | 0.20 | 0.30 | 30.6 |
| 16 | R | 4 | 5.0 | 0.004 | 3.7 | LOS A | 0.0 | 0.3 | 0.16 | 0.41 | 32.0 |
| Approach | | 308 | 5.0 | 0.304 | 6.6 | LOS A | 0.9 | 24.5 | 0.20 | 0.64 | 27.4 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 1 | 5.0 | 0.063 | 5.0 | LOS A | 0.2 | 4.2 | 0.32 | 1.02 | 28.2 |
| 4 | T | 51 | 5.0 | 0.063 | 5.0 | LOS A | 0.2 | 4.2 | 0.32 | 0.45 | 32.2 |
| 14 | R | 232 | 5.0 | 0.276 | 7.3 | LOS A | 0.8 | 20.8 | 0.37 | 0.52 | 30.6 |
| Approach | | 284 | 5.0 | 0.276 | 6.9 | LOS A | 0.8 | 20.8 | 0.36 | 0.51 | 30.8 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 2 | 5.0 | 0.036 | 5.6 | LOS A | 0.1 | 2.2 | 0.40 | 0.97 | 27.9 |
| 2 | T | 23 | 5.0 | 0.036 | 5.6 | LOS A | 0.1 | 2.2 | 0.40 | 0.55 | 31.4 |
| 12 | R | 2 | 5.0 | 0.003 | 5.0 | LOS A | 0.0 | 0.2 | 0.37 | 0.53 | 30.8 |
| Approach | | 27 | 5.0 | 0.036 | 5.5 | LOS A | 0.1 | 2.2 | 0.39 | 0.58 | 31.0 |
| All Vehicles | | 941 | 5.0 | 0.304 | 6.0 | LOS A | 0.9 | 24.5 | 0.22 | 0.54 | 29.6 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Existing (2012) Monday PM Peak Hour

# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 122 | 5.0 | 0.167 | 4.9 | LOS A | 0.5 | 12.4 | 0.08 | 0.79 | 27.5 |
| 8 | T | 54 | 5.0 | 0.167 | 4.9 | LOS A | 0.5 | 12.4 | 0.08 | 0.25 | 32.2 |
| 18 | R | 186 | 5.0 | 0.176 | 5.0 | LOS A | 0.5 | 12.3 | 0.07 | 0.41 | 31.0 |
| Approach | | 362 | 5.0 | 0.176 | 5.0 | LOS A | 0.5 | 12.4 | 0.08 | 0.51 | 29.7 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 37 | 5.0 | 0.047 | 5.0 | LOS A | 0.1 | 3.1 | 0.34 | 0.71 | 28.0 |
| 8X | T | 5 | 5.0 | 0.007 | 4.6 | LOS A | 0.0 | 0.4 | 0.33 | 0.42 | 32.5 |
| 18X | R | 71 | 5.0 | 0.079 | 4.8 | LOS A | 0.2 | 4.8 | 0.23 | 0.51 | 30.8 |
| Approach | | 113 | 5.0 | 0.079 | 4.8 | LOS A | 0.2 | 4.8 | 0.27 | 0.57 | 29.8 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 90 | 5.0 | 0.111 | 5.0 | LOS A | 0.3 | 7.2 | 0.25 | 0.70 | 28.1 |
| 6 | T | 11 | 5.0 | 0.111 | 5.0 | LOS A | 0.3 | 7.2 | 0.25 | 0.36 | 31.7 |
| 16 | R | 2 | 5.0 | 0.002 | 4.0 | LOS A | 0.0 | 0.2 | 0.25 | 0.44 | 31.7 |
| Approach | | 103 | 5.0 | 0.111 | 5.0 | LOS A | 0.3 | 7.2 | 0.25 | 0.66 | 28.5 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 1 | 5.0 | 0.047 | 4.5 | LOS A | 0.1 | 3.1 | 0.28 | 1.01 | 28.4 |
| 4 | T | 40 | 5.0 | 0.047 | 4.5 | LOS A | 0.1 | 3.1 | 0.28 | 0.41 | 32.6 |
| 14 | R | 101 | 5.0 | 0.114 | 5.1 | LOS A | 0.3 | 7.4 | 0.28 | 0.43 | 32.0 |
| Approach | | 142 | 5.0 | 0.114 | 5.0 | LOS A | 0.3 | 7.4 | 0.28 | 0.43 | 32.1 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 5 | 5.0 | 0.051 | 4.7 | LOS A | 0.1 | 3.2 | 0.29 | 0.91 | 28.2 |
| 2 | T | 38 | 5.0 | 0.051 | 4.7 | LOS A | 0.1 | 3.2 | 0.29 | 0.46 | 31.9 |
| 12 | R | 10 | 5.0 | 0.011 | 4.1 | LOS A | 0.0 | 0.7 | 0.25 | 0.48 | 31.3 |
| Approach | | 53 | 5.0 | 0.051 | 4.6 | LOS A | 0.1 | 3.2 | 0.29 | 0.51 | 31.3 |
| All Vehicles | | 774 | 5.0 | 0.176 | 4.9 | LOS A | 0.5 | 12.4 | 0.18 | 0.53 | 30.1 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Existing (2012) Friday PM Peak Event Traffic Hour

# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 92 | 5.0 | 0.085 | 7.1 | LOS A | 0.2 | 5.6 | 0.47 | 0.63 | 30.7 |
| 18 | R | 8 | 5.0 | 0.085 | 7.0 | LOS A | 0.2 | 5.4 | 0.46 | 0.75 | 29.9 |
| Approach | | 100 | 5.0 | 0.085 | 7.1 | LOS A | 0.2 | 5.6 | 0.47 | 0.64 | 30.6 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 2 | 5.0 | 0.004 | 6.4 | LOS A | 0.0 | 0.2 | 0.48 | 0.74 | 26.7 |
| 8X | T | 109 | 5.0 | 0.185 | 8.4 | LOS A | 0.5 | 12.4 | 0.50 | 0.65 | 29.8 |
| 18X | R | 10 | 5.0 | 0.011 | 4.3 | LOS A | 0.0 | 0.7 | 0.27 | 0.50 | 31.1 |
| Approach | | 121 | 5.0 | 0.185 | 8.0 | LOS A | 0.5 | 12.4 | 0.48 | 0.64 | 29.9 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 288 | 5.0 | 0.268 | 5.9 | LOS A | 0.8 | 21.0 | 0.02 | 0.67 | 27.3 |
| 4 | T | 28 | 5.0 | 0.026 | 3.6 | LOS A | 0.1 | 1.7 | 0.02 | 0.30 | 33.3 |
| Approach | | 316 | 5.0 | 0.268 | 5.7 | LOS A | 0.8 | 21.0 | 0.02 | 0.64 | 27.7 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 426 | 5.0 | 0.500 | 10.9 | LOS B | 2.0 | 51.9 | 0.45 | 0.81 | 25.1 |
| 2 | T | 75 | 5.0 | 0.090 | 5.2 | LOS A | 0.2 | 6.1 | 0.32 | 0.46 | 32.1 |
| 12 | R | 90 | 5.0 | 0.108 | 5.4 | LOS A | 0.3 | 7.4 | 0.32 | 0.55 | 30.6 |
| Approach | | 591 | 5.0 | 0.500 | 9.3 | LOS A | 2.0 | 51.9 | 0.41 | 0.73 | 26.4 |
| All Vehicles | | 1128 | 5.0 | 0.500 | 8.0 | LOS A | 2.0 | 51.9 | 0.32 | 0.68 | 27.4 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 18 | 5.0 | 0.013 | 4.6 | LOS A | 0.0 | 0.8 | 0.32 | 0.42 | 32.5 |
| 18 | R | 2 | 5.0 | 0.013 | 4.5 | LOS A | 0.0 | 0.8 | 0.31 | 0.58 | 31.3 |
| Approach | | 21 | 5.0 | 0.013 | 4.6 | LOS A | 0.0 | 0.8 | 0.32 | 0.44 | 32.4 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.001 | 4.3 | LOS A | 0.0 | 0.1 | 0.33 | 0.66 | 27.6 |
| 8X | T | 20 | 5.0 | 0.024 | 4.7 | LOS A | 0.1 | 1.5 | 0.32 | 0.44 | 32.5 |
| 18X | R | 2 | 5.0 | 0.002 | 3.7 | LOS A | 0.0 | 0.1 | 0.11 | 0.44 | 31.6 |
| Approach | | 23 | 5.0 | 0.024 | 4.6 | LOS A | 0.1 | 1.5 | 0.30 | 0.45 | 32.1 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 52 | 5.0 | 0.049 | 3.8 | LOS A | 0.1 | 3.0 | 0.01 | 0.68 | 28.3 |
| 4 | T | 10 | 5.0 | 0.009 | 3.4 | LOS A | 0.0 | 0.6 | 0.01 | 0.30 | 33.5 |
| Approach | | 62 | 5.0 | 0.049 | 3.7 | LOS A | 0.1 | 3.0 | 0.01 | 0.62 | 29.0 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 301 | 5.0 | 0.293 | 6.4 | LOS A | 0.9 | 23.5 | 0.15 | 0.65 | 27.0 |
| 2 | T | 28 | 5.0 | 0.028 | 3.8 | LOS A | 0.1 | 1.8 | 0.12 | 0.31 | 33.2 |
| 12 | R | 43 | 5.0 | 0.042 | 3.9 | LOS A | 0.1 | 2.8 | 0.12 | 0.43 | 31.7 |
| Approach | | 373 | 5.0 | 0.293 | 5.9 | LOS A | 0.9 | 23.5 | 0.15 | 0.60 | 27.8 |
| All Vehicles | | 478 | 5.0 | 0.293 | 5.5 | LOS A | 0.9 | 23.5 | 0.14 | 0.59 | 28.3 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Existing (2012) Saturday Midday Peak Event Traffic Hour

# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 48 | 5.0 | 0.047 | 7.4 | LOS A | 0.1 | 3.1 | 0.52 | 0.67 | 30.5 |
| 18 | R | 2 | 5.0 | 0.047 | 7.2 | LOS A | 0.1 | 2.9 | 0.51 | 0.75 | 30.0 |
| Approach | | 50 | 5.0 | 0.047 | 7.4 | LOS A | 0.1 | 3.1 | 0.52 | 0.67 | 30.5 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.002 | 6.7 | LOS A | 0.0 | 0.1 | 0.52 | 0.74 | 26.5 |
| 8X | T | 89 | 5.0 | 0.165 | 8.8 | LOS A | 0.4 | 10.8 | 0.54 | 0.68 | 29.6 |
| 18X | R | 4 | 5.0 | 0.005 | 4.2 | LOS A | 0.0 | 0.3 | 0.26 | 0.49 | 31.2 |
| Approach | | 95 | 5.0 | 0.165 | 8.6 | LOS A | 0.4 | 10.8 | 0.53 | 0.67 | 29.6 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 296 | 5.0 | 0.275 | 6.0 | LOS A | 0.8 | 21.8 | 0.01 | 0.68 | 27.3 |
| 4 | T | 13 | 5.0 | 0.012 | 3.4 | LOS A | 0.0 | 0.8 | 0.01 | 0.30 | 33.4 |
| Approach | | 309 | 5.0 | 0.275 | 5.9 | LOS A | 0.8 | 21.8 | 0.01 | 0.66 | 27.4 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 608 | 5.0 | 0.709 | 17.3 | LOS B | 4.4 | 115.6 | 0.60 | 0.90 | 22.7 |
| 2 | T | 34 | 5.0 | 0.040 | 4.6 | LOS A | 0.1 | 2.6 | 0.30 | 0.43 | 32.5 |
| 12 | R | 62 | 5.0 | 0.073 | 5.0 | LOS A | 0.2 | 4.9 | 0.31 | 0.54 | 30.9 |
| Approach | | 703 | 5.0 | 0.709 | 15.6 | LOS B | 4.4 | 115.6 | 0.56 | 0.84 | 23.5 |
| All Vehicles | | 1157 | 5.0 | 0.709 | 12.1 | LOS B | 4.4 | 115.6 | 0.41 | 0.77 | 25.1 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 13 | 5.0 | 0.009 | 4.3 | LOS A | 0.0 | 0.6 | 0.28 | 0.38 | 32.7 |
| 18 | R | 2 | 5.0 | 0.009 | 4.2 | LOS A | 0.0 | 0.5 | 0.27 | 0.54 | 31.5 |
| Approach | | 15 | 5.0 | 0.009 | 4.3 | LOS A | 0.0 | 0.6 | 0.28 | 0.41 | 32.6 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.001 | 4.0 | LOS A | 0.0 | 0.1 | 0.29 | 0.65 | 27.8 |
| 8X | T | 28 | 5.0 | 0.033 | 4.5 | LOS A | 0.1 | 2.0 | 0.28 | 0.41 | 32.6 |
| 18X | R | 1 | 5.0 | 0.001 | 3.7 | LOS A | 0.0 | 0.1 | 0.11 | 0.44 | 31.6 |
| Approach | | 30 | 5.0 | 0.033 | 4.4 | LOS A | 0.1 | 2.0 | 0.27 | 0.42 | 32.4 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 67 | 5.0 | 0.063 | 3.9 | LOS A | 0.1 | 3.9 | 0.01 | 0.68 | 28.3 |
| 4 | T | 11 | 5.0 | 0.010 | 3.4 | LOS A | 0.0 | 0.6 | 0.01 | 0.30 | 33.5 |
| Approach | | 78 | 5.0 | 0.063 | 3.8 | LOS A | 0.1 | 3.9 | 0.01 | 0.62 | 28.9 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 224 | 5.0 | 0.221 | 5.6 | LOS A | 0.6 | 16.2 | 0.16 | 0.66 | 27.4 |
| 2 | T | 5 | 5.0 | 0.005 | 3.6 | LOS A | 0.0 | 0.3 | 0.14 | 0.31 | 33.3 |
| 12 | R | 20 | 5.0 | 0.019 | 3.7 | LOS A | 0.0 | 1.2 | 0.14 | 0.43 | 31.8 |
| Approach | | 249 | 5.0 | 0.221 | 5.5 | LOS A | 0.6 | 16.2 | 0.16 | 0.63 | 27.8 |
| All Vehicles | | 373 | 5.0 | 0.221 | 5.0 | LOS A | 0.6 | 16.2 | 0.14 | 0.60 | 28.4 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 37 | 5.0 | 0.028 | 4.7 | LOS A | 0.1 | 1.8 | 0.31 | 0.43 | 32.4 |
| 18 | R | 9 | 5.0 | 0.028 | 4.6 | LOS A | 0.1 | 1.7 | 0.30 | 0.55 | 31.4 |
| Approach | | 46 | 5.0 | 0.028 | 4.6 | LOS A | 0.1 | 1.8 | 0.31 | 0.45 | 32.2 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 2 | 5.0 | 0.003 | 4.5 | LOS A | 0.0 | 0.2 | 0.32 | 0.67 | 27.5 |
| 8X | T | 87 | 5.0 | 0.105 | 5.4 | LOS A | 0.3 | 6.8 | 0.32 | 0.47 | 31.9 |
| 18X | R | 1 | 5.0 | 0.001 | 3.7 | LOS A | 0.0 | 0.1 | 0.13 | 0.44 | 31.6 |
| Approach | | 90 | 5.0 | 0.105 | 5.4 | LOS A | 0.3 | 6.8 | 0.32 | 0.48 | 31.8 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 88 | 5.0 | 0.082 | 4.1 | LOS A | 0.2 | 5.2 | 0.02 | 0.67 | 28.2 |
| 4 | T | 14 | 5.0 | 0.013 | 3.5 | LOS A | 0.0 | 0.8 | 0.02 | 0.30 | 33.4 |
| Approach | | 102 | 5.0 | 0.082 | 4.0 | LOS A | 0.2 | 5.2 | 0.02 | 0.62 | 28.8 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 240 | 5.0 | 0.241 | 6.0 | LOS A | 0.7 | 18.0 | 0.19 | 0.66 | 27.2 |
| 2 | T | 26 | 5.0 | 0.026 | 3.9 | LOS A | 0.1 | 1.7 | 0.16 | 0.33 | 33.1 |
| 12 | R | 39 | 5.0 | 0.039 | 4.0 | LOS A | 0.1 | 2.6 | 0.17 | 0.44 | 31.6 |
| Approach | | 305 | 5.0 | 0.241 | 5.5 | LOS A | 0.7 | 18.0 | 0.18 | 0.61 | 28.1 |
| All Vehicles | | 543 | 5.0 | 0.241 | 5.1 | LOS A | 0.7 | 18.0 | 0.19 | 0.58 | 29.0 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# FUTURE (2013) WITH PROJECT

# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 117 | 5.0 | 2.271 | 586.2 | LOS F | 543.5 | 14130.3 | 1.00 | 0.37 | 2.5 |
| 8 | T | 2321 | 5.0 | 2.271 | 586.2 | LOS F | 543.5 | 14130.3 | 1.00 | 0.37 | 2.2 |
| 18 | R | 337 | 5.0 | 0.314 | 6.5 | LOS A | 1.1 | 28.0 | 0.03 | 0.41 | 30.0 |
| Approach | | 2775 | 5.0 | 2.271 | 515.8 | LOS F | 543.5 | 14130.3 | 0.88 | 0.38 | 2.5 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 7 | 5.0 | 0.018 | 10.5 | LOS B | 0.0 | 1.2 | 0.68 | 0.90 | 25.1 |
| 8X | T | 157 | 5.0 | 0.411 | 18.0 | LOS B | 1.2 | 31.6 | 0.75 | 0.87 | 24.7 |
| 18X | R | 155 | 5.0 | 0.185 | 6.2 | LOS A | 0.5 | 12.9 | 0.34 | 0.59 | 29.8 |
| Approach | | 318 | 5.0 | 0.411 | 12.1 | LOS B | 1.2 | 31.6 | 0.55 | 0.74 | 27.0 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 335 | 5.0 | 0.775 | 35.5 | LOS D | 3.6 | 94.8 | 0.85 | 1.12 | 18.0 |
| 6 | T | 1 | 5.0 | 0.775 | 35.5 | LOS D | 3.6 | 94.8 | 0.85 | 1.05 | 18.1 |
| 16 | R | 5 | 5.0 | 0.013 | 9.1 | LOS A | 0.0 | 0.8 | 0.63 | 0.77 | 28.4 |
| Approach | | 341 | 5.0 | 0.775 | 35.0 | LOS D | 3.6 | 94.8 | 0.85 | 1.11 | 18.1 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.069 | 5.2 | LOS A | 0.2 | 4.6 | 0.35 | 1.01 | 28.1 |
| 4 | T | 52 | 5.0 | 0.069 | 5.2 | LOS A | 0.2 | 4.6 | 0.35 | 0.48 | 32.0 |
| 14 | R | 187 | 5.0 | 0.232 | 7.0 | LOS A | 0.6 | 16.7 | 0.38 | 0.54 | 30.8 |
| Approach | | 241 | 5.0 | 0.232 | 6.6 | LOS A | 0.6 | 16.7 | 0.37 | 0.53 | 31.0 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.003 | 5.1 | LOS A | 0.0 | 0.2 | 0.40 | 0.77 | 27.9 |
| 2 | T | 1 | 5.0 | 0.003 | 5.1 | LOS A | 0.0 | 0.2 | 0.40 | 0.49 | 31.0 |
| 12 | R | 1 | 5.0 | 0.001 | 4.6 | LOS A | 0.0 | 0.1 | 0.35 | 0.50 | 31.0 |
| Approach | | 3 | 5.0 | 0.003 | 4.9 | LOS A | 0.0 | 0.2 | 0.38 | 0.59 | 29.8 |
| All Vehicles | | 3679 | 5.0 | 2.271 | 393.7 | LOS F | 543.5 | 14130.3 | 0.82 | 0.49 | 3.2 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 28 | 5.0 | 0.138 | 4.6 | LOS A | 0.4 | 9.9 | 0.02 | 1.07 | 27.5 |
| 8 | T | 120 | 5.0 | 0.138 | 4.6 | LOS A | 0.4 | 9.9 | 0.02 | 0.28 | 32.5 |
| 18 | R | 223 | 5.0 | 0.208 | 5.3 | LOS A | 0.6 | 15.1 | 0.02 | 0.41 | 30.8 |
| Approach | | 371 | 5.0 | 0.208 | 5.0 | LOS A | 0.6 | 15.1 | 0.02 | 0.42 | 31.0 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 2 | 2.5 | 0.003 | 4.3 | LOS A | 0.0 | 0.2 | 0.32 | 0.66 | 27.8 |
| 8X | T | 13 | 5.0 | 0.016 | 4.6 | LOS A | 0.0 | 1.0 | 0.33 | 0.43 | 32.5 |
| 18X | R | 58 | 5.0 | 0.065 | 4.6 | LOS A | 0.2 | 4.0 | 0.24 | 0.51 | 30.9 |
| Approach | | 73 | 4.9 | 0.065 | 4.6 | LOS A | 0.2 | 4.0 | 0.26 | 0.50 | 31.0 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 273 | 5.0 | 0.287 | 6.7 | LOS A | 0.9 | 22.4 | 0.26 | 0.67 | 27.2 |
| 6 | T | 1 | 5.0 | 0.287 | 6.7 | LOS A | 0.9 | 22.4 | 0.26 | 0.35 | 30.4 |
| 16 | R | 3 | 5.0 | 0.003 | 3.8 | LOS A | 0.0 | 0.2 | 0.21 | 0.43 | 31.9 |
| Approach | | 277 | 5.0 | 0.287 | 6.7 | LOS A | 0.9 | 22.4 | 0.26 | 0.67 | 27.3 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.653 | 15.2 | LOS B | 3.8 | 98.5 | 0.57 | 1.07 | 24.1 |
| 4 | T | 551 | 5.0 | 0.653 | 15.2 | LOS B | 3.8 | 98.5 | 0.57 | 0.71 | 26.0 |
| 14 | R | 2140 | 5.0 | 2.487 | 685.3 | LOS F | 428.2 | 11132.9 | 1.00 | 7.95 | 1.9 |
| Approach | | 2693 | 5.0 | 2.487 | 547.7 | LOS F | 428.2 | 11132.9 | 0.91 | 6.46 | 2.4 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.007 | 11.4 | LOS B | 0.0 | 0.4 | 0.72 | 0.94 | 25.2 |
| 2 | T | 1 | 5.0 | 0.007 | 11.4 | LOS B | 0.0 | 0.4 | 0.72 | 0.82 | 27.0 |
| 12 | R | 1 | 5.0 | 0.002 | 7.4 | LOS A | 0.0 | 0.1 | 0.57 | 0.65 | 29.2 |
| Approach | | 3 | 5.0 | 0.007 | 10.0 | LOS B | 0.0 | 0.4 | 0.67 | 0.80 | 26.9 |
| All Vehicles | | 3417 | 5.0 | 2.487 | 432.8 | LOS F | 428.2 | 11132.9 | 0.75 | 5.21 | 2.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Future (2013) With Project Saturday Midday Peak Event Traffic Hour

# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 73 | 5.0 | 1.425 | 210.5 | LOS F | 260.2 | 6765.3 | 1.00 | 0.28 | 6.2 |
| 8 | T | 1458 | 5.0 | 1.425 | 210.5 | LOS F | 260.2 | 6765.3 | 1.00 | 0.28 | 5.5 |
| 18 | R | 428 | 5.0 | 0.399 | 7.6 | LOS A | 1.5 | 40.2 | 0.03 | 0.41 | 29.3 |
| Approach | | 1959 | 5.0 | 1.425 | 166.1 | LOS F | 260.2 | 6765.3 | 0.79 | 0.31 | 6.8 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 1 | 0.0 | 0.003 | 10.5 | LOS B | 0.0 | 0.2 | 0.70 | 0.84 | 25.0 |
| 8X | T | 113 | 5.0 | 0.344 | 18.3 | LOS B | 1.0 | 25.4 | 0.77 | 0.88 | 24.6 |
| 18X | R | 123 | 5.0 | 0.157 | 6.2 | LOS A | 0.4 | 10.6 | 0.37 | 0.63 | 29.8 |
| Approach | | 237 | 5.0 | 0.344 | 12.0 | LOS B | 1.0 | 25.4 | 0.56 | 0.75 | 27.0 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 270 | 5.0 | 0.602 | 22.4 | LOS C | 2.2 | 58.3 | 0.77 | 1.01 | 21.2 |
| 6 | T | 1 | 5.0 | 0.602 | 22.4 | LOS C | 2.2 | 58.3 | 0.77 | 0.91 | 22.0 |
| 16 | R | 29 | 5.0 | 0.070 | 9.5 | LOS A | 0.2 | 4.5 | 0.62 | 0.78 | 28.1 |
| Approach | | 300 | 5.0 | 0.602 | 21.2 | LOS C | 2.2 | 58.3 | 0.75 | 0.98 | 21.7 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.109 | 5.4 | LOS A | 0.3 | 7.6 | 0.33 | 1.02 | 28.0 |
| 4 | T | 89 | 5.0 | 0.109 | 5.4 | LOS A | 0.3 | 7.6 | 0.33 | 0.46 | 31.9 |
| 14 | R | 182 | 5.0 | 0.214 | 6.5 | LOS A | 0.6 | 15.2 | 0.34 | 0.49 | 31.2 |
| Approach | | 273 | 5.0 | 0.214 | 6.1 | LOS A | 0.6 | 15.2 | 0.33 | 0.49 | 31.4 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.003 | 5.0 | LOS A | 0.0 | 0.2 | 0.39 | 0.77 | 27.9 |
| 2 | T | 1 | 5.0 | 0.003 | 5.0 | LOS A | 0.0 | 0.2 | 0.39 | 0.48 | 31.1 |
| 12 | R | 1 | 5.0 | 0.001 | 4.5 | LOS A | 0.0 | 0.1 | 0.34 | 0.50 | 31.1 |
| Approach | | 3 | 5.0 | 0.003 | 4.8 | LOS A | 0.0 | 0.2 | 0.37 | 0.58 | 29.9 |
| All Vehicles | | 2772 | 5.0 | 1.425 | 121.3 | LOS F | 260.2 | 6765.3 | 0.72 | 0.44 | 8.7 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Future (2013) With Project Sunday Night-Monday Early Morning Peak Event Traffic Hour

# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 28 | 5.0 | 0.082 | 4.1 | LOS A | 0.2 | 5.6 | 0.02 | 1.00 | 27.8 |
| 8 | T | 60 | 5.0 | 0.082 | 4.1 | LOS A | 0.2 | 5.6 | 0.02 | 0.27 | 32.9 |
| 18 | R | 191 | 5.0 | 0.178 | 5.0 | LOS A | 0.5 | 12.5 | 0.02 | 0.42 | 31.0 |
| Approach | | 279 | 5.0 | 0.178 | 4.7 | LOS A | 0.5 | 12.5 | 0.02 | 0.44 | 31.0 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 1 | 0.0 | 0.001 | 4.0 | LOS A | 0.0 | 0.1 | 0.28 | 0.65 | 27.8 |
| 8X | T | 4 | 5.0 | 0.005 | 4.2 | LOS A | 0.0 | 0.3 | 0.28 | 0.38 | 32.8 |
| 18X | R | 51 | 5.0 | 0.057 | 4.6 | LOS A | 0.1 | 3.4 | 0.22 | 0.50 | 31.0 |
| Approach | | 57 | 4.9 | 0.057 | 4.5 | LOS A | 0.1 | 3.4 | 0.23 | 0.49 | 31.0 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 300 | 5.0 | 0.300 | 6.6 | LOS A | 0.9 | 24.1 | 0.19 | 0.64 | 27.3 |
| 6 | T | 1 | 5.0 | 0.300 | 6.6 | LOS A | 0.9 | 24.1 | 0.19 | 0.30 | 30.6 |
| 16 | R | 4 | 5.0 | 0.004 | 3.6 | LOS A | 0.0 | 0.3 | 0.15 | 0.41 | 32.0 |
| Approach | | 305 | 5.0 | 0.300 | 6.6 | LOS A | 0.9 | 24.1 | 0.19 | 0.64 | 27.4 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 1 | 5.0 | 0.601 | 13.7 | LOS B | 3.1 | 80.4 | 0.54 | 1.08 | 24.7 |
| 4 | T | 498 | 5.0 | 0.601 | 13.7 | LOS B | 3.1 | 80.4 | 0.54 | 0.70 | 26.8 |
| 14 | R | 1905 | 5.0 | 2.257 | 582.5 | LOS F | 355.9 | 9252.5 | 1.00 | 7.62 | 2.2 |
| Approach | | 2404 | 5.0 | 2.257 | 464.5 | LOS F | 355.9 | 9252.5 | 0.91 | 6.19 | 2.7 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.007 | 11.0 | LOS B | 0.0 | 0.4 | 0.71 | 0.94 | 25.3 |
| 2 | T | 1 | 5.0 | 0.007 | 11.0 | LOS B | 0.0 | 0.4 | 0.71 | 0.80 | 27.2 |
| 12 | R | 1 | 5.0 | 0.002 | 7.5 | LOS A | 0.0 | 0.1 | 0.57 | 0.66 | 29.1 |
| Approach | | 3 | 5.0 | 0.007 | 9.8 | LOS A | 0.0 | 0.4 | 0.66 | 0.80 | 27.0 |
| All Vehicles | | 3049 | 5.0 | 2.257 | 367.5 | LOS F | 355.9 | 9252.5 | 0.74 | 4.99 | 3.4 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Future (2013) With Project Monday AM Peak Hour

# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 92 | 5.0 | 0.143 | 4.6 | LOS A | 0.4 | 10.3 | 0.02 | 0.86 | 27.5 |
| 8 | T | 61 | 5.0 | 0.143 | 4.6 | LOS A | 0.4 | 10.3 | 0.02 | 0.25 | 32.5 |
| 18 | R | 208 | 5.0 | 0.193 | 5.1 | LOS A | 0.5 | 13.8 | 0.02 | 0.42 | 30.9 |
| Approach | | 361 | 5.0 | 0.193 | 4.9 | LOS A | 0.5 | 13.8 | 0.02 | 0.50 | 30.1 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 8 | 5.0 | 0.009 | 4.5 | LOS A | 0.0 | 0.6 | 0.32 | 0.68 | 27.8 |
| 8X | T | 5 | 5.0 | 0.007 | 4.5 | LOS A | 0.0 | 0.4 | 0.32 | 0.41 | 32.6 |
| 18X | R | 72 | 5.0 | 0.080 | 4.8 | LOS A | 0.2 | 4.9 | 0.24 | 0.51 | 30.8 |
| Approach | | 85 | 5.0 | 0.080 | 4.7 | LOS A | 0.2 | 4.9 | 0.25 | 0.52 | 30.6 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 91 | 5.0 | 0.097 | 4.7 | LOS A | 0.2 | 6.3 | 0.21 | 0.66 | 28.2 |
| 6 | T | 1 | 5.0 | 0.097 | 4.7 | LOS A | 0.2 | 6.3 | 0.21 | 0.32 | 32.0 |
| 16 | R | 2 | 5.0 | 0.002 | 3.8 | LOS A | 0.0 | 0.1 | 0.21 | 0.42 | 31.9 |
| Approach | | 95 | 5.0 | 0.097 | 4.7 | LOS A | 0.2 | 6.3 | 0.21 | 0.65 | 28.3 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 1 | 5.0 | 0.078 | 4.6 | LOS A | 0.2 | 5.2 | 0.24 | 1.02 | 28.3 |
| 4 | T | 71 | 5.0 | 0.078 | 4.6 | LOS A | 0.2 | 5.2 | 0.24 | 0.38 | 32.5 |
| 14 | R | 203 | 5.0 | 0.218 | 6.0 | LOS A | 0.6 | 15.7 | 0.26 | 0.41 | 31.5 |
| Approach | | 275 | 5.0 | 0.218 | 5.6 | LOS A | 0.6 | 15.7 | 0.25 | 0.40 | 31.7 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.003 | 4.5 | LOS A | 0.0 | 0.2 | 0.34 | 0.75 | 28.1 |
| 2 | T | 1 | 5.0 | 0.003 | 4.5 | LOS A | 0.0 | 0.2 | 0.34 | 0.45 | 31.4 |
| 12 | R | 1 | 5.0 | 0.001 | 4.2 | LOS A | 0.0 | 0.1 | 0.30 | 0.48 | 31.3 |
| Approach | | 3 | 5.0 | 0.003 | 4.4 | LOS A | 0.0 | 0.2 | 0.33 | 0.56 | 30.1 |
| All Vehicles | | 818 | 5.0 | 0.218 | 5.1 | LOS A | 0.6 | 15.7 | 0.15 | 0.49 | 30.4 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 239 | 5.0 | 0.277 | 12.6 | LOS B | 0.8 | 20.2 | 0.66 | 0.78 | 27.4 |
| 18 | R | 8 | 5.0 | 0.277 | 12.2 | LOS B | 0.8 | 19.5 | 0.65 | 0.86 | 27.0 |
| Approach | | 247 | 5.0 | 0.277 | 12.6 | LOS B | 0.8 | 20.2 | 0.66 | 0.78 | 27.4 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 2 | 5.0 | 0.006 | 9.7 | LOS A | 0.0 | 0.4 | 0.65 | 0.85 | 25.3 |
| 8X | T | 207 | 5.0 | 0.513 | 20.5 | LOS C | 1.7 | 43.6 | 0.77 | 0.90 | 23.6 |
| 18X | R | 10 | 5.0 | 0.010 | 3.8 | LOS A | 0.0 | 0.6 | 0.18 | 0.46 | 31.5 |
| Approach | | 218 | 5.0 | 0.513 | 19.7 | LOS B | 1.7 | 43.6 | 0.74 | 0.88 | 23.9 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 123 | 5.0 | 0.114 | 4.4 | LOS A | 0.3 | 7.5 | 0.02 | 0.67 | 28.2 |
| 4 | T | 29 | 5.0 | 0.027 | 3.6 | LOS A | 0.1 | 1.8 | 0.02 | 0.30 | 33.3 |
| Approach | | 152 | 5.0 | 0.114 | 4.2 | LOS A | 0.3 | 7.5 | 0.02 | 0.60 | 28.9 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 2298 | 5.0 | 2.392 | 641.4 | LOS F | 468.7 | 12186.2 | 1.00 | 6.12 | 2.3 |
| 2 | T | 77 | 5.0 | 0.081 | 4.5 | LOS A | 0.2 | 5.5 | 0.21 | 0.37 | 32.6 |
| 12 | R | 92 | 5.0 | 0.097 | 4.7 | LOS A | 0.3 | 6.7 | 0.22 | 0.47 | 31.1 |
| Approach | | 2467 | 5.0 | 2.392 | 597.6 | LOS F | 468.7 | 12186.2 | 0.95 | 5.73 | 2.4 |
| All Vehicles | | 3085 | 5.0 | 2.392 | 480.6 | LOS F | 468.7 | 12186.2 | 0.86 | 4.74 | 2.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Future (2013) With Project Friday Night-Saturday Early Morning Peak Event Traffic Hour

# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 18 | 5.0 | 0.016 | 5.9 | LOS A | 0.0 | 1.1 | 0.44 | 0.54 | 31.5 |
| 18 | R | 2 | 5.0 | 0.016 | 5.8 | LOS A | 0.0 | 1.0 | 0.42 | 0.67 | 30.6 |
| Approach | | 21 | 5.0 | 0.016 | 5.9 | LOS A | 0.0 | 1.1 | 0.43 | 0.56 | 31.4 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.002 | 5.1 | LOS A | 0.0 | 0.1 | 0.40 | 0.68 | 27.3 |
| 8X | T | 20 | 5.0 | 0.028 | 5.4 | LOS A | 0.1 | 1.7 | 0.39 | 0.52 | 31.9 |
| 18X | R | 2 | 5.0 | 0.002 | 4.1 | LOS A | 0.0 | 0.1 | 0.25 | 0.47 | 31.3 |
| Approach | | 23 | 5.0 | 0.028 | 5.3 | LOS A | 0.1 | 1.7 | 0.38 | 0.52 | 31.6 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 373 | 5.0 | 0.404 | 7.6 | LOS A | 1.5 | 38.4 | 0.02 | 0.71 | 26.6 |
| 4 | T | 205 | 5.0 | 0.404 | 5.5 | LOS A | 1.5 | 38.4 | 0.01 | 0.28 | 31.9 |
| Approach | | 578 | 5.0 | 0.404 | 6.9 | LOS A | 1.5 | 38.4 | 0.02 | 0.56 | 28.1 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 308 | 5.0 | 0.438 | 11.2 | LOS B | 1.5 | 39.8 | 0.52 | 0.88 | 24.9 |
| 2 | T | 28 | 5.0 | 0.041 | 5.7 | LOS A | 0.1 | 2.7 | 0.41 | 0.54 | 31.7 |
| 12 | R | 45 | 5.0 | 0.065 | 6.0 | LOS A | 0.2 | 4.3 | 0.42 | 0.64 | 30.2 |
| Approach | | 380 | 5.0 | 0.438 | 10.2 | LOS B | 1.5 | 39.8 | 0.50 | 0.82 | 25.8 |
| All Vehicles | | 1002 | 5.0 | 0.438 | 8.1 | LOS A | 1.5 | 39.8 | 0.22 | 0.66 | 27.3 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 133 | 5.0 | 0.148 | 10.0 | LOS B | 0.4 | 9.9 | 0.61 | 0.73 | 28.8 |
| 18 | R | 2 | 5.0 | 0.148 | 9.7 | LOS A | 0.4 | 9.5 | 0.60 | 0.79 | 28.6 |
| Approach | | 135 | 5.0 | 0.148 | 10.0 | LOS A | 0.4 | 9.9 | 0.61 | 0.73 | 28.8 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.002 | 8.3 | LOS A | 0.0 | 0.2 | 0.62 | 0.78 | 25.9 |
| 8X | T | 147 | 5.0 | 0.332 | 13.8 | LOS B | 0.9 | 24.5 | 0.68 | 0.80 | 26.7 |
| 18X | R | 4 | 5.0 | 0.004 | 3.7 | LOS A | 0.0 | 0.3 | 0.15 | 0.45 | 31.5 |
| Approach | | 152 | 5.0 | 0.332 | 13.5 | LOS B | 0.9 | 24.5 | 0.66 | 0.79 | 26.8 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 115 | 5.0 | 0.107 | 4.3 | LOS A | 0.3 | 7.0 | 0.01 | 0.67 | 28.1 |
| 4 | T | 13 | 5.0 | 0.012 | 3.4 | LOS A | 0.0 | 0.8 | 0.01 | 0.30 | 33.4 |
| Approach | | 128 | 5.0 | 0.107 | 4.2 | LOS A | 0.3 | 7.0 | 0.01 | 0.64 | 28.5 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 1675 | 5.0 | 1.712 | 337.5 | LOS F | 262.0 | 6811.2 | 1.00 | 4.08 | 4.0 |
| 2 | T | 35 | 5.0 | 0.036 | 4.0 | LOS A | 0.1 | 2.3 | 0.19 | 0.34 | 33.0 |
| 12 | R | 63 | 5.0 | 0.065 | 4.3 | LOS A | 0.2 | 4.3 | 0.19 | 0.46 | 31.4 |
| Approach | | 1773 | 5.0 | 1.712 | 319.1 | LOS F | 262.0 | 6811.2 | 0.96 | 3.88 | 4.2 |
| All Vehicles | | 2188 | 5.0 | 1.712 | 260.4 | LOS F | 262.0 | 6811.2 | 0.86 | 3.28 | 4.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Future (2013) With Project Sunday Night-Monday Early Morning Peak Event Traffic Hour

# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 13 | 5.0 | 0.011 | 5.3 | LOS A | 0.0 | 0.7 | 0.39 | 0.48 | 32.0 |
| 18 | R | 2 | 5.0 | 0.011 | 5.2 | LOS A | 0.0 | 0.7 | 0.38 | 0.61 | 30.9 |
| Approach | | 15 | 5.0 | 0.011 | 5.3 | LOS A | 0.0 | 0.7 | 0.39 | 0.50 | 31.8 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.001 | 4.6 | LOS A | 0.0 | 0.1 | 0.36 | 0.67 | 27.5 |
| 8X | T | 29 | 5.0 | 0.038 | 5.1 | LOS A | 0.1 | 2.4 | 0.35 | 0.48 | 32.2 |
| 18X | R | 1 | 5.0 | 0.001 | 3.8 | LOS A | 0.0 | 0.1 | 0.23 | 0.46 | 31.5 |
| Approach | | 32 | 5.0 | 0.038 | 5.0 | LOS A | 0.1 | 2.4 | 0.34 | 0.49 | 32.0 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 338 | 5.0 | 0.361 | 7.0 | LOS A | 1.2 | 32.1 | 0.01 | 0.71 | 26.9 |
| 4 | T | 178 | 5.0 | 0.361 | 5.1 | LOS A | 1.2 | 32.1 | 0.01 | 0.28 | 32.1 |
| Approach | | 516 | 5.0 | 0.361 | 6.4 | LOS A | 1.2 | 32.1 | 0.01 | 0.56 | 28.4 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 222 | 5.0 | 0.301 | 8.5 | LOS A | 0.9 | 22.6 | 0.45 | 0.83 | 26.1 |
| 2 | T | 5 | 5.0 | 0.008 | 5.1 | LOS A | 0.0 | 0.5 | 0.38 | 0.46 | 32.2 |
| 12 | R | 20 | 5.0 | 0.027 | 5.3 | LOS A | 0.1 | 1.8 | 0.39 | 0.58 | 30.7 |
| Approach | | 247 | 5.0 | 0.301 | 8.2 | LOS A | 0.9 | 22.6 | 0.44 | 0.80 | 26.5 |
| All Vehicles | | 810 | 5.0 | 0.361 | 6.8 | LOS A | 1.2 | 32.1 | 0.16 | 0.63 | 27.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Future (2013) With Project Monday AM Peak Hour

# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 38 | 5.0 | 0.029 | 4.7 | LOS A | 0.1 | 1.9 | 0.32 | 0.43 | 32.4 |
| 18 | R | 9 | 5.0 | 0.029 | 4.6 | LOS A | 0.1 | 1.7 | 0.30 | 0.55 | 31.4 |
| Approach | | 47 | 5.0 | 0.029 | 4.7 | LOS A | 0.1 | 1.9 | 0.31 | 0.45 | 32.2 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 2 | 5.0 | 0.003 | 4.5 | LOS A | 0.0 | 0.2 | 0.32 | 0.67 | 27.6 |
| 8X | T | 89 | 5.0 | 0.108 | 5.4 | LOS A | 0.3 | 7.0 | 0.32 | 0.47 | 31.9 |
| 18X | R | 1 | 5.0 | 0.001 | 3.7 | LOS A | 0.0 | 0.1 | 0.12 | 0.44 | 31.6 |
| Approach | | 92 | 5.0 | 0.108 | 5.4 | LOS A | 0.3 | 7.0 | 0.32 | 0.48 | 31.8 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 87 | 5.0 | 0.081 | 4.0 | LOS A | 0.2 | 5.1 | 0.02 | 0.67 | 28.3 |
| 4 | T | 25 | 5.0 | 0.023 | 3.5 | LOS A | 0.1 | 1.5 | 0.02 | 0.30 | 33.4 |
| Approach | | 112 | 5.0 | 0.081 | 3.9 | LOS A | 0.2 | 5.1 | 0.02 | 0.59 | 29.2 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 246 | 5.0 | 0.248 | 6.1 | LOS A | 0.7 | 18.7 | 0.20 | 0.67 | 27.2 |
| 2 | T | 26 | 5.0 | 0.027 | 3.9 | LOS A | 0.1 | 1.7 | 0.17 | 0.33 | 33.1 |
| 12 | R | 40 | 5.0 | 0.041 | 4.0 | LOS A | 0.1 | 2.7 | 0.17 | 0.45 | 31.6 |
| Approach | | 312 | 5.0 | 0.248 | 5.6 | LOS A | 0.7 | 18.7 | 0.20 | 0.61 | 28.0 |
| All Vehicles | | 563 | 5.0 | 0.248 | 5.2 | LOS A | 0.7 | 18.7 | 0.19 | 0.57 | 29.1 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# FUTURE (2013) WITH PROJECT WITH CUMULATIVE

# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 117 | 5.0 | 2.271 | 586.2 | LOS F | 543.5 | 14130.3 | 1.00 | 0.37 | 2.5 |
| 8 | T | 2321 | 5.0 | 2.271 | 586.2 | LOS F | 543.5 | 14130.3 | 1.00 | 0.37 | 2.2 |
| 18 | R | 337 | 5.0 | 0.314 | 6.5 | LOS A | 1.1 | 28.0 | 0.03 | 0.41 | 30.0 |
| Approach | | 2775 | 5.0 | 2.271 | 515.8 | LOS F | 543.5 | 14130.3 | 0.88 | 0.38 | 2.5 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 7 | 5.0 | 0.018 | 10.5 | LOS B | 0.0 | 1.2 | 0.68 | 0.90 | 25.1 |
| 8X | T | 157 | 5.0 | 0.411 | 18.0 | LOS B | 1.2 | 31.6 | 0.75 | 0.87 | 24.7 |
| 18X | R | 155 | 5.0 | 0.185 | 6.2 | LOS A | 0.5 | 12.9 | 0.34 | 0.59 | 29.8 |
| Approach | | 318 | 5.0 | 0.411 | 12.1 | LOS B | 1.2 | 31.6 | 0.55 | 0.74 | 27.0 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 335 | 5.0 | 0.775 | 35.5 | LOS D | 3.6 | 94.8 | 0.85 | 1.12 | 18.0 |
| 6 | T | 1 | 5.0 | 0.775 | 35.5 | LOS D | 3.6 | 94.8 | 0.85 | 1.05 | 18.1 |
| 16 | R | 5 | 5.0 | 0.013 | 9.1 | LOS A | 0.0 | 0.8 | 0.63 | 0.77 | 28.4 |
| Approach | | 341 | 5.0 | 0.775 | 35.0 | LOS D | 3.6 | 94.8 | 0.85 | 1.11 | 18.1 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.069 | 5.2 | LOS A | 0.2 | 4.6 | 0.35 | 1.01 | 28.1 |
| 4 | T | 52 | 5.0 | 0.069 | 5.2 | LOS A | 0.2 | 4.6 | 0.35 | 0.48 | 32.0 |
| 14 | R | 187 | 5.0 | 0.232 | 7.0 | LOS A | 0.6 | 16.7 | 0.38 | 0.54 | 30.8 |
| Approach | | 241 | 5.0 | 0.232 | 6.6 | LOS A | 0.6 | 16.7 | 0.37 | 0.53 | 31.0 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.003 | 5.1 | LOS A | 0.0 | 0.2 | 0.40 | 0.77 | 27.9 |
| 2 | T | 1 | 5.0 | 0.003 | 5.1 | LOS A | 0.0 | 0.2 | 0.40 | 0.49 | 31.0 |
| 12 | R | 1 | 5.0 | 0.001 | 4.6 | LOS A | 0.0 | 0.1 | 0.35 | 0.50 | 31.0 |
| Approach | | 3 | 5.0 | 0.003 | 4.9 | LOS A | 0.0 | 0.2 | 0.38 | 0.59 | 29.8 |
| All Vehicles | | 3679 | 5.0 | 2.271 | 393.7 | LOS F | 543.5 | 14130.3 | 0.82 | 0.49 | 3.2 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 28 | 5.0 | 0.138 | 4.6 | LOS A | 0.4 | 9.9 | 0.02 | 1.07 | 27.5 |
| 8 | T | 120 | 5.0 | 0.138 | 4.6 | LOS A | 0.4 | 9.9 | 0.02 | 0.28 | 32.5 |
| 18 | R | 223 | 5.0 | 0.208 | 5.3 | LOS A | 0.6 | 15.1 | 0.02 | 0.41 | 30.8 |
| Approach | | 371 | 5.0 | 0.208 | 5.0 | LOS A | 0.6 | 15.1 | 0.02 | 0.42 | 31.0 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 2 | 2.5 | 0.003 | 4.3 | LOS A | 0.0 | 0.2 | 0.32 | 0.66 | 27.8 |
| 8X | T | 13 | 5.0 | 0.016 | 4.6 | LOS A | 0.0 | 1.0 | 0.33 | 0.43 | 32.5 |
| 18X | R | 58 | 5.0 | 0.065 | 4.6 | LOS A | 0.2 | 4.0 | 0.24 | 0.51 | 30.9 |
| Approach | | 73 | 4.9 | 0.065 | 4.6 | LOS A | 0.2 | 4.0 | 0.26 | 0.50 | 31.0 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 273 | 5.0 | 0.287 | 6.7 | LOS A | 0.9 | 22.4 | 0.26 | 0.67 | 27.2 |
| 6 | T | 1 | 5.0 | 0.287 | 6.7 | LOS A | 0.9 | 22.4 | 0.26 | 0.35 | 30.4 |
| 16 | R | 3 | 5.0 | 0.003 | 3.8 | LOS A | 0.0 | 0.2 | 0.21 | 0.43 | 31.9 |
| Approach | | 277 | 5.0 | 0.287 | 6.7 | LOS A | 0.9 | 22.4 | 0.26 | 0.67 | 27.3 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.653 | 15.2 | LOS B | 3.8 | 98.5 | 0.57 | 1.07 | 24.1 |
| 4 | T | 551 | 5.0 | 0.653 | 15.2 | LOS B | 3.8 | 98.5 | 0.57 | 0.71 | 26.0 |
| 14 | R | 2140 | 5.0 | 2.487 | 685.3 | LOS F | 428.2 | 11132.9 | 1.00 | 7.95 | 1.9 |
| Approach | | 2693 | 5.0 | 2.487 | 547.7 | LOS F | 428.2 | 11132.9 | 0.91 | 6.46 | 2.4 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.007 | 11.4 | LOS B | 0.0 | 0.4 | 0.72 | 0.94 | 25.2 |
| 2 | T | 1 | 5.0 | 0.007 | 11.4 | LOS B | 0.0 | 0.4 | 0.72 | 0.82 | 27.0 |
| 12 | R | 1 | 5.0 | 0.002 | 7.4 | LOS A | 0.0 | 0.1 | 0.57 | 0.65 | 29.2 |
| Approach | | 3 | 5.0 | 0.007 | 10.0 | LOS B | 0.0 | 0.4 | 0.67 | 0.80 | 26.9 |
| All Vehicles | | 3417 | 5.0 | 2.487 | 432.8 | LOS F | 428.2 | 11132.9 | 0.75 | 5.21 | 2.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 73 | 5.0 | 1.425 | 210.5 | LOS F | 260.2 | 6765.3 | 1.00 | 0.28 | 6.2 |
| 8 | T | 1458 | 5.0 | 1.425 | 210.5 | LOS F | 260.2 | 6765.3 | 1.00 | 0.28 | 5.5 |
| 18 | R | 428 | 5.0 | 0.399 | 7.6 | LOS A | 1.5 | 40.2 | 0.03 | 0.41 | 29.3 |
| Approach | | 1959 | 5.0 | 1.425 | 166.1 | LOS F | 260.2 | 6765.3 | 0.79 | 0.31 | 6.8 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 1 | 0.0 | 0.003 | 10.5 | LOS B | 0.0 | 0.2 | 0.70 | 0.84 | 25.0 |
| 8X | T | 113 | 5.0 | 0.344 | 18.3 | LOS B | 1.0 | 25.4 | 0.77 | 0.88 | 24.6 |
| 18X | R | 123 | 5.0 | 0.157 | 6.2 | LOS A | 0.4 | 10.6 | 0.37 | 0.63 | 29.8 |
| Approach | | 237 | 5.0 | 0.344 | 12.0 | LOS B | 1.0 | 25.4 | 0.56 | 0.75 | 27.0 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 270 | 5.0 | 0.602 | 22.4 | LOS C | 2.2 | 58.3 | 0.77 | 1.01 | 21.2 |
| 6 | T | 1 | 5.0 | 0.602 | 22.4 | LOS C | 2.2 | 58.3 | 0.77 | 0.91 | 22.0 |
| 16 | R | 29 | 5.0 | 0.070 | 9.5 | LOS A | 0.2 | 4.5 | 0.62 | 0.78 | 28.1 |
| Approach | | 300 | 5.0 | 0.602 | 21.2 | LOS C | 2.2 | 58.3 | 0.75 | 0.98 | 21.7 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 2 | 5.0 | 0.109 | 5.4 | LOS A | 0.3 | 7.6 | 0.33 | 1.02 | 28.0 |
| 4 | T | 89 | 5.0 | 0.109 | 5.4 | LOS A | 0.3 | 7.6 | 0.33 | 0.46 | 31.9 |
| 14 | R | 182 | 5.0 | 0.214 | 6.5 | LOS A | 0.6 | 15.2 | 0.34 | 0.49 | 31.2 |
| Approach | | 273 | 5.0 | 0.214 | 6.1 | LOS A | 0.6 | 15.2 | 0.33 | 0.49 | 31.4 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.003 | 5.0 | LOS A | 0.0 | 0.2 | 0.39 | 0.77 | 27.9 |
| 2 | T | 1 | 5.0 | 0.003 | 5.0 | LOS A | 0.0 | 0.2 | 0.39 | 0.48 | 31.1 |
| 12 | R | 1 | 5.0 | 0.001 | 4.5 | LOS A | 0.0 | 0.1 | 0.34 | 0.50 | 31.1 |
| Approach | | 3 | 5.0 | 0.003 | 4.8 | LOS A | 0.0 | 0.2 | 0.37 | 0.58 | 29.9 |
| All Vehicles | | 2772 | 5.0 | 1.425 | 121.3 | LOS F | 260.2 | 6765.3 | 0.72 | 0.44 | 8.7 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 28 | 5.0 | 0.082 | 4.1 | LOS A | 0.2 | 5.6 | 0.02 | 1.00 | 27.8 |
| 8 | T | 60 | 5.0 | 0.082 | 4.1 | LOS A | 0.2 | 5.6 | 0.02 | 0.27 | 32.9 |
| 18 | R | 191 | 5.0 | 0.178 | 5.0 | LOS A | 0.5 | 12.5 | 0.02 | 0.42 | 31.0 |
| Approach | | 279 | 5.0 | 0.178 | 4.7 | LOS A | 0.5 | 12.5 | 0.02 | 0.44 | 31.0 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 1 | 0.0 | 0.001 | 4.0 | LOS A | 0.0 | 0.1 | 0.28 | 0.65 | 27.8 |
| 8X | T | 4 | 5.0 | 0.005 | 4.2 | LOS A | 0.0 | 0.3 | 0.28 | 0.38 | 32.8 |
| 18X | R | 51 | 5.0 | 0.057 | 4.6 | LOS A | 0.1 | 3.4 | 0.22 | 0.50 | 31.0 |
| Approach | | 57 | 4.9 | 0.057 | 4.5 | LOS A | 0.1 | 3.4 | 0.23 | 0.49 | 31.0 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 300 | 5.0 | 0.300 | 6.6 | LOS A | 0.9 | 24.1 | 0.19 | 0.64 | 27.3 |
| 6 | T | 1 | 5.0 | 0.300 | 6.6 | LOS A | 0.9 | 24.1 | 0.19 | 0.30 | 30.6 |
| 16 | R | 4 | 5.0 | 0.004 | 3.6 | LOS A | 0.0 | 0.3 | 0.15 | 0.41 | 32.0 |
| Approach | | 305 | 5.0 | 0.300 | 6.6 | LOS A | 0.9 | 24.1 | 0.19 | 0.64 | 27.4 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 1 | 5.0 | 0.601 | 13.7 | LOS B | 3.1 | 80.4 | 0.54 | 1.08 | 24.7 |
| 4 | T | 498 | 5.0 | 0.601 | 13.7 | LOS B | 3.1 | 80.4 | 0.54 | 0.70 | 26.8 |
| 14 | R | 1905 | 5.0 | 2.257 | 582.5 | LOS F | 355.9 | 9252.5 | 1.00 | 7.62 | 2.2 |
| Approach | | 2404 | 5.0 | 2.257 | 464.5 | LOS F | 355.9 | 9252.5 | 0.91 | 6.19 | 2.7 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.007 | 11.0 | LOS B | 0.0 | 0.4 | 0.71 | 0.94 | 25.3 |
| 2 | T | 1 | 5.0 | 0.007 | 11.0 | LOS B | 0.0 | 0.4 | 0.71 | 0.80 | 27.2 |
| 12 | R | 1 | 5.0 | 0.002 | 7.5 | LOS A | 0.0 | 0.1 | 0.57 | 0.66 | 29.1 |
| Approach | | 3 | 5.0 | 0.007 | 9.8 | LOS A | 0.0 | 0.4 | 0.66 | 0.80 | 27.0 |
| All Vehicles | | 3049 | 5.0 | 2.257 | 367.5 | LOS F | 355.9 | 9252.5 | 0.74 | 4.99 | 3.4 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Future (2013) With Project With Cumulative Monday AM Peak Hour

# MOVEMENT SUMMARY

**Site: I-10 WB Ramps and Morongo Trail**

Roundabout with 6 legs, 2-lane approaches & circulating road, and 1-lane exits
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Apache Trail | | | | | | | | | | | |
| 3 | L | 92 | 5.0 | 0.143 | 4.6 | LOS A | 0.4 | 10.3 | 0.02 | 0.86 | 27.5 |
| 8 | T | 61 | 5.0 | 0.143 | 4.6 | LOS A | 0.4 | 10.3 | 0.02 | 0.25 | 32.5 |
| 18 | R | 208 | 5.0 | 0.193 | 5.1 | LOS A | 0.5 | 13.8 | 0.02 | 0.42 | 30.9 |
| Approach | | 361 | 5.0 | 0.193 | 4.9 | LOS A | 0.5 | 13.8 | 0.02 | 0.50 | 30.1 |
| South East: I-10 Apache Trail WB Off-Ramp | | | | | | | | | | | |
| 3X | L | 8 | 5.0 | 0.009 | 4.5 | LOS A | 0.0 | 0.6 | 0.32 | 0.68 | 27.8 |
| 8X | T | 5 | 5.0 | 0.007 | 4.5 | LOS A | 0.0 | 0.4 | 0.32 | 0.41 | 32.6 |
| 18X | R | 72 | 5.0 | 0.080 | 4.8 | LOS A | 0.2 | 4.9 | 0.24 | 0.51 | 30.8 |
| Approach | | 85 | 5.0 | 0.080 | 4.7 | LOS A | 0.2 | 4.9 | 0.25 | 0.52 | 30.6 |
| East: Seminole Road | | | | | | | | | | | |
| 1 | L | 91 | 5.0 | 0.097 | 4.7 | LOS A | 0.2 | 6.3 | 0.21 | 0.66 | 28.2 |
| 6 | T | 1 | 5.0 | 0.097 | 4.7 | LOS A | 0.2 | 6.3 | 0.21 | 0.32 | 32.0 |
| 16 | R | 2 | 5.0 | 0.002 | 3.8 | LOS A | 0.0 | 0.1 | 0.21 | 0.42 | 31.9 |
| Approach | | 95 | 5.0 | 0.097 | 4.7 | LOS A | 0.2 | 6.3 | 0.21 | 0.65 | 28.3 |
| North: Apache Trail | | | | | | | | | | | |
| 7 | L | 1 | 5.0 | 0.078 | 4.6 | LOS A | 0.2 | 5.2 | 0.24 | 1.02 | 28.3 |
| 4 | T | 71 | 5.0 | 0.078 | 4.6 | LOS A | 0.2 | 5.2 | 0.24 | 0.38 | 32.5 |
| 14 | R | 203 | 5.0 | 0.218 | 6.0 | LOS A | 0.6 | 15.7 | 0.26 | 0.41 | 31.5 |
| Approach | | 275 | 5.0 | 0.218 | 5.6 | LOS A | 0.6 | 15.7 | 0.25 | 0.40 | 31.7 |
| West: Seminole Road | | | | | | | | | | | |
| 5 | L | 1 | 5.0 | 0.003 | 4.5 | LOS A | 0.0 | 0.2 | 0.34 | 0.75 | 28.1 |
| 2 | T | 1 | 5.0 | 0.003 | 4.5 | LOS A | 0.0 | 0.2 | 0.34 | 0.45 | 31.4 |
| 12 | R | 1 | 5.0 | 0.001 | 4.2 | LOS A | 0.0 | 0.1 | 0.30 | 0.48 | 31.3 |
| Approach | | 3 | 5.0 | 0.003 | 4.4 | LOS A | 0.0 | 0.2 | 0.33 | 0.56 | 30.1 |
| All Vehicles | | 818 | 5.0 | 0.218 | 5.1 | LOS A | 0.6 | 15.7 | 0.15 | 0.49 | 30.4 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 239 | 5.0 | 0.277 | 12.6 | LOS B | 0.8 | 20.2 | 0.66 | 0.78 | 27.4 |
| 18 | R | 8 | 5.0 | 0.277 | 12.2 | LOS B | 0.8 | 19.5 | 0.65 | 0.86 | 27.0 |
| Approach | | 247 | 5.0 | 0.277 | 12.6 | LOS B | 0.8 | 20.2 | 0.66 | 0.78 | 27.4 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 2 | 5.0 | 0.006 | 9.7 | LOS A | 0.0 | 0.4 | 0.65 | 0.85 | 25.3 |
| 8X | T | 207 | 5.0 | 0.513 | 20.5 | LOS C | 1.7 | 43.6 | 0.77 | 0.90 | 23.6 |
| 18X | R | 10 | 5.0 | 0.010 | 3.8 | LOS A | 0.0 | 0.6 | 0.18 | 0.46 | 31.5 |
| Approach | | 218 | 5.0 | 0.513 | 19.7 | LOS B | 1.7 | 43.6 | 0.74 | 0.88 | 23.9 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 123 | 5.0 | 0.114 | 4.4 | LOS A | 0.3 | 7.5 | 0.02 | 0.67 | 28.2 |
| 4 | T | 29 | 5.0 | 0.027 | 3.6 | LOS A | 0.1 | 1.8 | 0.02 | 0.30 | 33.3 |
| Approach | | 152 | 5.0 | 0.114 | 4.2 | LOS A | 0.3 | 7.5 | 0.02 | 0.60 | 28.9 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 2298 | 5.0 | 2.392 | 641.4 | LOS F | 468.7 | 12186.2 | 1.00 | 6.12 | 2.3 |
| 2 | T | 77 | 5.0 | 0.081 | 4.5 | LOS A | 0.2 | 5.5 | 0.21 | 0.37 | 32.6 |
| 12 | R | 92 | 5.0 | 0.097 | 4.7 | LOS A | 0.3 | 6.7 | 0.22 | 0.47 | 31.1 |
| Approach | | 2467 | 5.0 | 2.392 | 597.6 | LOS F | 468.7 | 12186.2 | 0.95 | 5.73 | 2.4 |
| All Vehicles | | 3085 | 5.0 | 2.392 | 480.6 | LOS F | 468.7 | 12186.2 | 0.86 | 4.74 | 2.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 18 | 5.0 | 0.016 | 5.9 | LOS A | 0.0 | 1.1 | 0.44 | 0.54 | 31.5 |
| 18 | R | 2 | 5.0 | 0.016 | 5.8 | LOS A | 0.0 | 1.0 | 0.42 | 0.67 | 30.6 |
| Approach | | 21 | 5.0 | 0.016 | 5.9 | LOS A | 0.0 | 1.1 | 0.43 | 0.56 | 31.4 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.002 | 5.1 | LOS A | 0.0 | 0.1 | 0.40 | 0.68 | 27.3 |
| 8X | T | 20 | 5.0 | 0.028 | 5.4 | LOS A | 0.1 | 1.7 | 0.39 | 0.52 | 31.9 |
| 18X | R | 2 | 5.0 | 0.002 | 4.1 | LOS A | 0.0 | 0.1 | 0.25 | 0.47 | 31.3 |
| Approach | | 23 | 5.0 | 0.028 | 5.3 | LOS A | 0.1 | 1.7 | 0.38 | 0.52 | 31.6 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 373 | 5.0 | 0.404 | 7.6 | LOS A | 1.5 | 38.4 | 0.02 | 0.71 | 26.6 |
| 4 | T | 205 | 5.0 | 0.404 | 5.5 | LOS A | 1.5 | 38.4 | 0.01 | 0.28 | 31.9 |
| Approach | | 578 | 5.0 | 0.404 | 6.9 | LOS A | 1.5 | 38.4 | 0.02 | 0.56 | 28.1 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 308 | 5.0 | 0.438 | 11.2 | LOS B | 1.5 | 39.8 | 0.52 | 0.88 | 24.9 |
| 2 | T | 28 | 5.0 | 0.041 | 5.7 | LOS A | 0.1 | 2.7 | 0.41 | 0.54 | 31.7 |
| 12 | R | 45 | 5.0 | 0.065 | 6.0 | LOS A | 0.2 | 4.3 | 0.42 | 0.64 | 30.2 |
| Approach | | 380 | 5.0 | 0.438 | 10.2 | LOS B | 1.5 | 39.8 | 0.50 | 0.82 | 25.8 |
| All Vehicles | | 1002 | 5.0 | 0.438 | 8.1 | LOS A | 1.5 | 39.8 | 0.22 | 0.66 | 27.3 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 133 | 5.0 | 0.148 | 10.0 | LOS B | 0.4 | 9.9 | 0.61 | 0.73 | 28.8 |
| 18 | R | 2 | 5.0 | 0.148 | 9.7 | LOS A | 0.4 | 9.5 | 0.60 | 0.79 | 28.6 |
| Approach | | 135 | 5.0 | 0.148 | 10.0 | LOS A | 0.4 | 9.9 | 0.61 | 0.73 | 28.8 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.002 | 8.3 | LOS A | 0.0 | 0.2 | 0.62 | 0.78 | 25.9 |
| 8X | T | 147 | 5.0 | 0.332 | 13.8 | LOS B | 0.9 | 24.5 | 0.68 | 0.80 | 26.7 |
| 18X | R | 4 | 5.0 | 0.004 | 3.7 | LOS A | 0.0 | 0.3 | 0.15 | 0.45 | 31.5 |
| Approach | | 152 | 5.0 | 0.332 | 13.5 | LOS B | 0.9 | 24.5 | 0.66 | 0.79 | 26.8 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 115 | 5.0 | 0.107 | 4.3 | LOS A | 0.3 | 7.0 | 0.01 | 0.67 | 28.1 |
| 4 | T | 13 | 5.0 | 0.012 | 3.4 | LOS A | 0.0 | 0.8 | 0.01 | 0.30 | 33.4 |
| Approach | | 128 | 5.0 | 0.107 | 4.2 | LOS A | 0.3 | 7.0 | 0.01 | 0.64 | 28.5 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 1675 | 5.0 | 1.712 | 337.5 | LOS F | 262.0 | 6811.2 | 1.00 | 4.08 | 4.0 |
| 2 | T | 35 | 5.0 | 0.036 | 4.0 | LOS A | 0.1 | 2.3 | 0.19 | 0.34 | 33.0 |
| 12 | R | 63 | 5.0 | 0.065 | 4.3 | LOS A | 0.2 | 4.3 | 0.19 | 0.46 | 31.4 |
| Approach | | 1773 | 5.0 | 1.712 | 319.1 | LOS F | 262.0 | 6811.2 | 0.96 | 3.88 | 4.2 |
| All Vehicles | | 2188 | 5.0 | 1.712 | 260.4 | LOS F | 262.0 | 6811.2 | 0.86 | 3.28 | 4.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 13 | 5.0 | 0.011 | 5.3 | LOS A | 0.0 | 0.7 | 0.39 | 0.48 | 32.0 |
| 18 | R | 2 | 5.0 | 0.011 | 5.2 | LOS A | 0.0 | 0.7 | 0.38 | 0.61 | 30.9 |
| Approach | | 15 | 5.0 | 0.011 | 5.3 | LOS A | 0.0 | 0.7 | 0.39 | 0.50 | 31.8 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 1 | 5.0 | 0.001 | 4.6 | LOS A | 0.0 | 0.1 | 0.36 | 0.67 | 27.5 |
| 8X | T | 29 | 5.0 | 0.038 | 5.1 | LOS A | 0.1 | 2.4 | 0.35 | 0.48 | 32.2 |
| 18X | R | 1 | 5.0 | 0.001 | 3.8 | LOS A | 0.0 | 0.1 | 0.23 | 0.46 | 31.5 |
| Approach | | 32 | 5.0 | 0.038 | 5.0 | LOS A | 0.1 | 2.4 | 0.34 | 0.49 | 32.0 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 338 | 5.0 | 0.361 | 7.0 | LOS A | 1.2 | 32.1 | 0.01 | 0.71 | 26.9 |
| 4 | T | 178 | 5.0 | 0.361 | 5.1 | LOS A | 1.2 | 32.1 | 0.01 | 0.28 | 32.1 |
| Approach | | 516 | 5.0 | 0.361 | 6.4 | LOS A | 1.2 | 32.1 | 0.01 | 0.56 | 28.4 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 222 | 5.0 | 0.301 | 8.5 | LOS A | 0.9 | 22.6 | 0.45 | 0.83 | 26.1 |
| 2 | T | 5 | 5.0 | 0.008 | 5.1 | LOS A | 0.0 | 0.5 | 0.38 | 0.46 | 32.2 |
| 12 | R | 20 | 5.0 | 0.027 | 5.3 | LOS A | 0.1 | 1.8 | 0.39 | 0.58 | 30.7 |
| Approach | | 247 | 5.0 | 0.301 | 8.2 | LOS A | 0.9 | 22.6 | 0.44 | 0.80 | 26.5 |
| All Vehicles | | 810 | 5.0 | 0.361 | 6.8 | LOS A | 1.2 | 32.1 | 0.16 | 0.63 | 27.9 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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Future (2013) With Project With Cumulative Monday AM Peak Hour

# MOVEMENT SUMMARY

**Site: I-10 EB Ramps and Apache Trail**

Roundabout with 5 legs, and 2-lane approaches & circulating road
Needs attention to turn designations and matching lane disciplines
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flow veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | 95% Back of Queue Vehicles veh | 95% Back of Queue Distance ft | Prop. Queued | Effective Stop Rate per veh | Average Speed mph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South: RoadName | | | | | | | | | | | |
| 8 | T | 38 | 5.0 | 0.029 | 4.7 | LOS A | 0.1 | 1.9 | 0.32 | 0.43 | 32.4 |
| 18 | R | 9 | 5.0 | 0.029 | 4.6 | LOS A | 0.1 | 1.7 | 0.30 | 0.55 | 31.4 |
| Approach | | 47 | 5.0 | 0.029 | 4.7 | LOS A | 0.1 | 1.9 | 0.31 | 0.45 | 32.2 |
| South East: RoadName | | | | | | | | | | | |
| 3X | L | 2 | 5.0 | 0.003 | 4.5 | LOS A | 0.0 | 0.2 | 0.32 | 0.67 | 27.6 |
| 8X | T | 89 | 5.0 | 0.108 | 5.4 | LOS A | 0.3 | 7.0 | 0.32 | 0.47 | 31.9 |
| 18X | R | 1 | 5.0 | 0.001 | 3.7 | LOS A | 0.0 | 0.1 | 0.12 | 0.44 | 31.6 |
| Approach | | 92 | 5.0 | 0.108 | 5.4 | LOS A | 0.3 | 7.0 | 0.32 | 0.48 | 31.8 |
| North: RoadName | | | | | | | | | | | |
| 7 | L | 87 | 5.0 | 0.081 | 4.0 | LOS A | 0.2 | 5.1 | 0.02 | 0.67 | 28.3 |
| 4 | T | 25 | 5.0 | 0.023 | 3.5 | LOS A | 0.1 | 1.5 | 0.02 | 0.30 | 33.4 |
| Approach | | 112 | 5.0 | 0.081 | 3.9 | LOS A | 0.2 | 5.1 | 0.02 | 0.59 | 29.2 |
| West: RoadName | | | | | | | | | | | |
| 5 | L | 246 | 5.0 | 0.248 | 6.1 | LOS A | 0.7 | 18.7 | 0.20 | 0.67 | 27.2 |
| 2 | T | 26 | 5.0 | 0.027 | 3.9 | LOS A | 0.1 | 1.7 | 0.17 | 0.33 | 33.1 |
| 12 | R | 40 | 5.0 | 0.041 | 4.0 | LOS A | 0.1 | 2.7 | 0.17 | 0.45 | 31.6 |
| Approach | | 312 | 5.0 | 0.248 | 5.6 | LOS A | 0.7 | 18.7 | 0.20 | 0.61 | 28.0 |
| All Vehicles | | 563 | 5.0 | 0.248 | 5.2 | LOS A | 0.7 | 18.7 | 0.19 | 0.57 | 29.1 |

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Model used. Geometric Delay not included.


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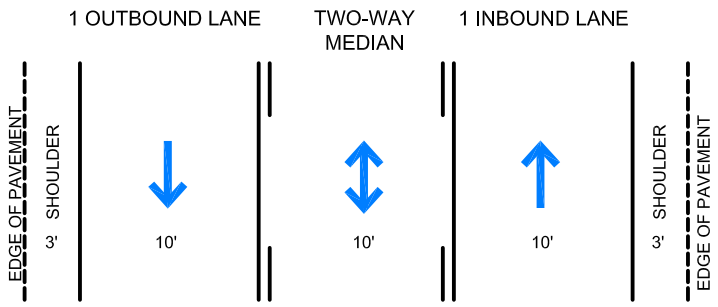
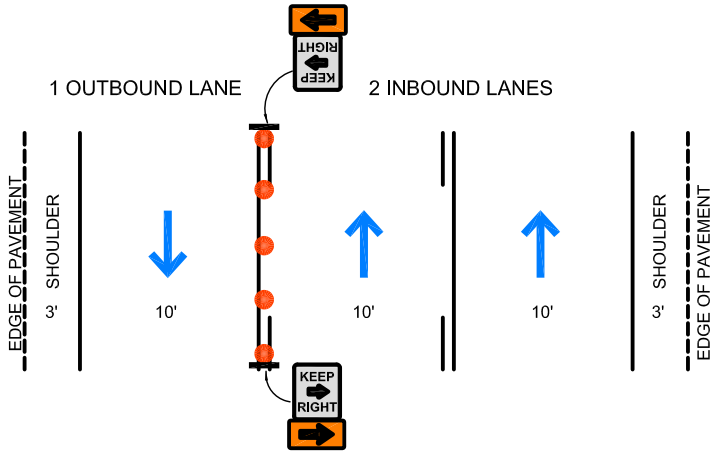
# APPENDIX E

# CONCEPTUAL MITIGATION PLAN

## TYPICAL NON-EVENT DAY LANE CONFIGURATION




## TYPICAL EVENT ARRIVAL PERIOD LANE CONFIGURATION




## TYPICAL EVENT DEPARTURE PERIOD LANE CONFIGURATION

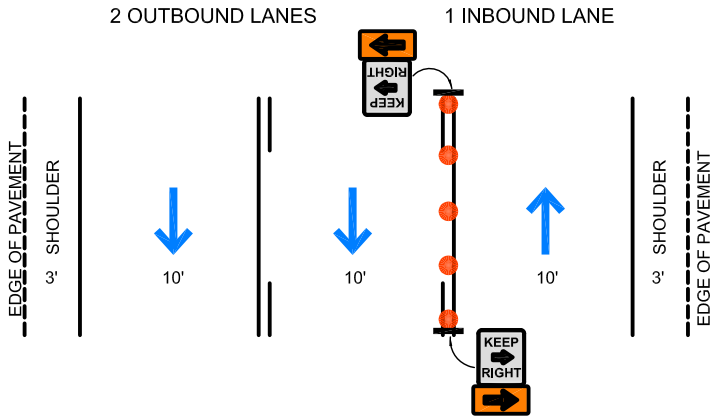



FIGURE E-1

5/28/2013

FN: MORONGO OUTDOOR ENTERTAINMENT\LANE CONFIG SECTIONS

SEMINOLE DRIVE WIDENING AND
EVENT-DAY TEMPORARY TRAFFIC CONTROL
REVERSIBLE LANE CONFIGURATIONS

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www.crainandassociates.com

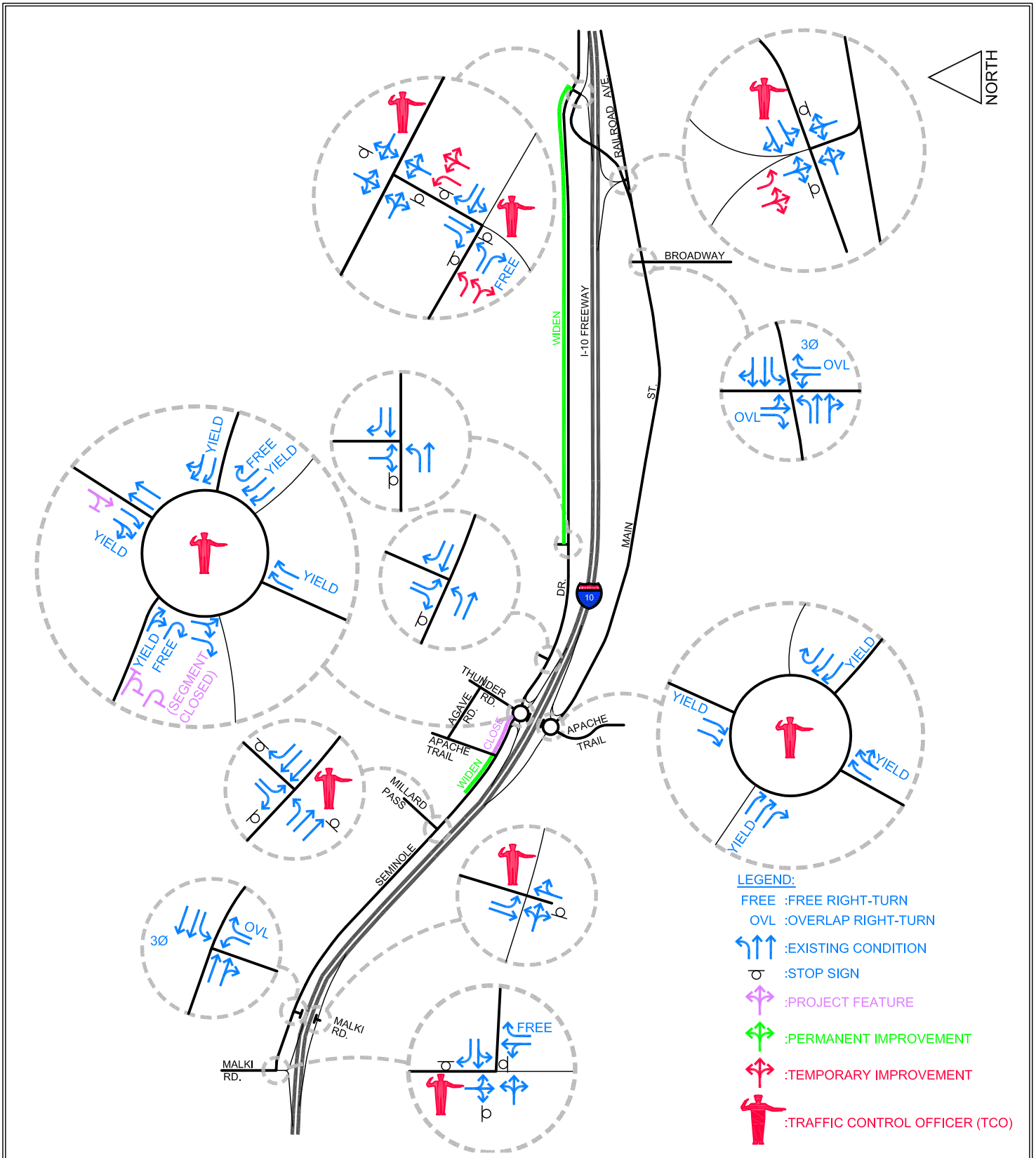


FIGURE E-2

5/28/2013

FN: MORONGO OUTDOOR ENTERTAINMENT\EVENT ARRIVAL_PLAN

STUDY AREA MITIGATION MEASURES
LANE CONFIGURATIONS FOR THE
EVENT ARRIVAL PERIOD

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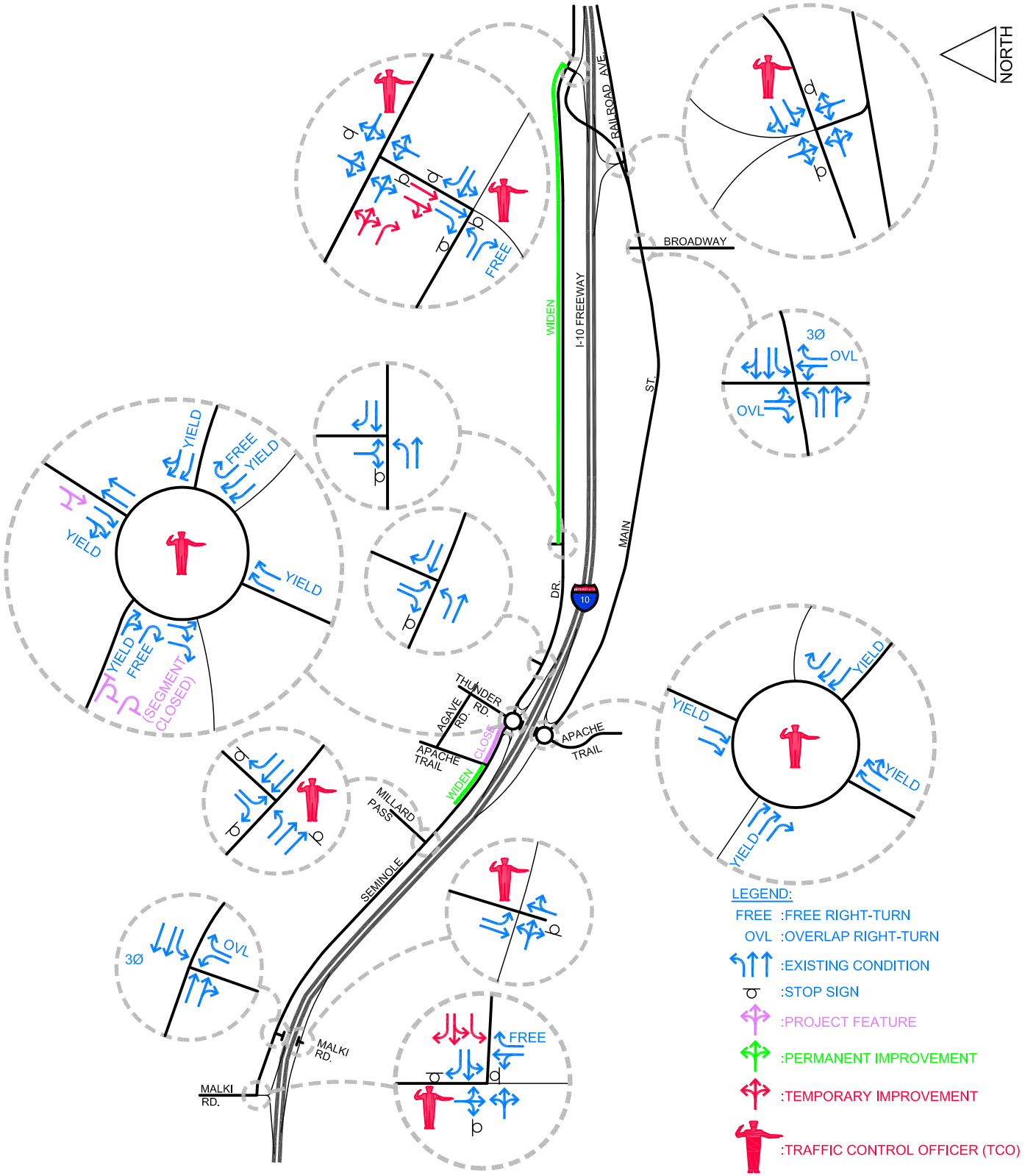


FIGURE E-3

12/7/2012

FN: MORONGO OUTDOOR ENTERTAINMENT\EVENT DEPARTURE_PLAN

STUDY AREA MITIGATION MEASURES
LANE CONFIGURATIONS FOR THE
EVENT DEPARTURE PERIOD

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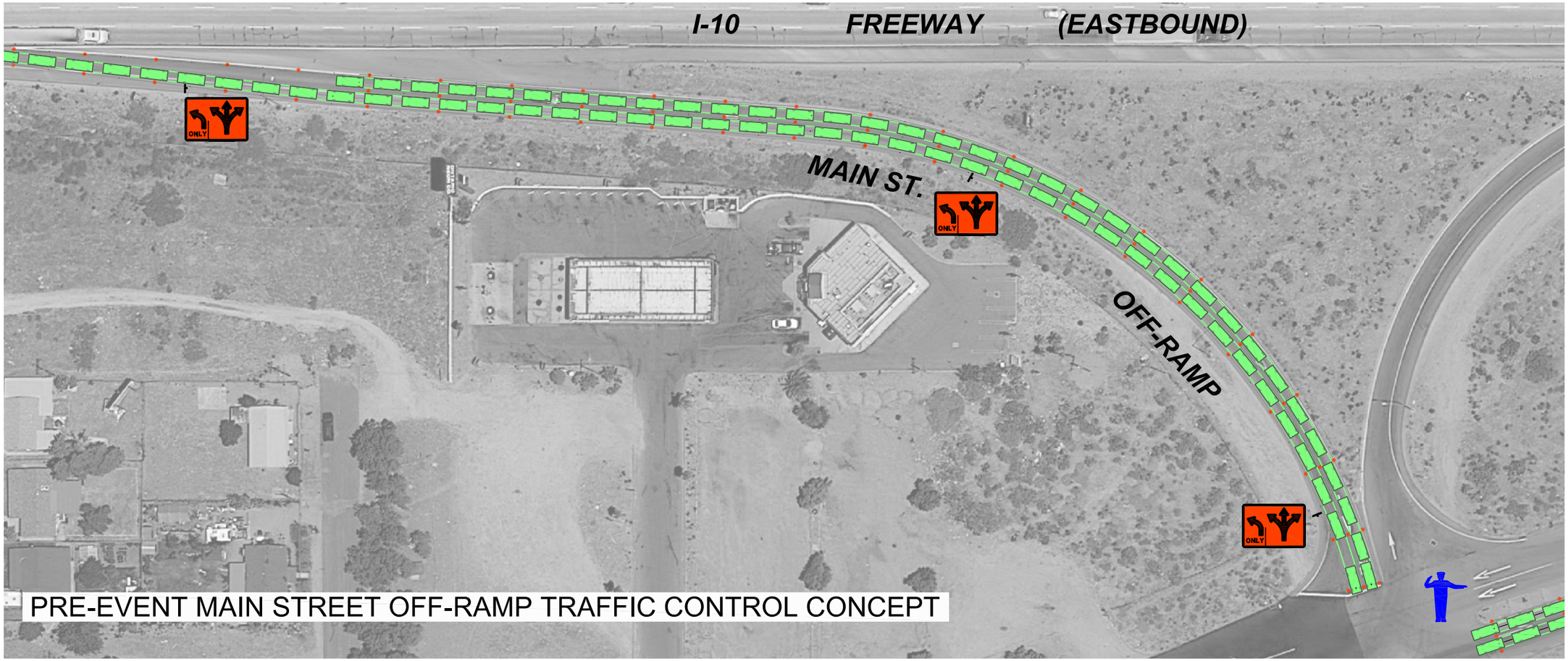


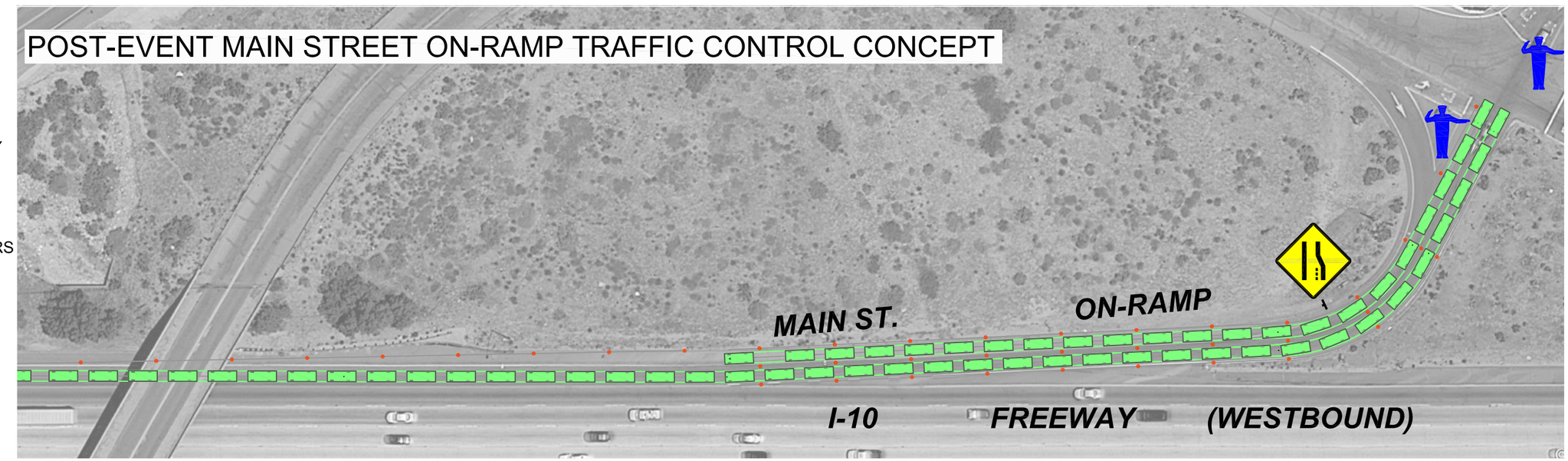


LEGEND

- TEMPORARY SIGN
- TCO's
- DELINEATORS

FIGURE E-4

2/28/2013

:FN MORONGO ENT\MAINRAMPDELINEATION

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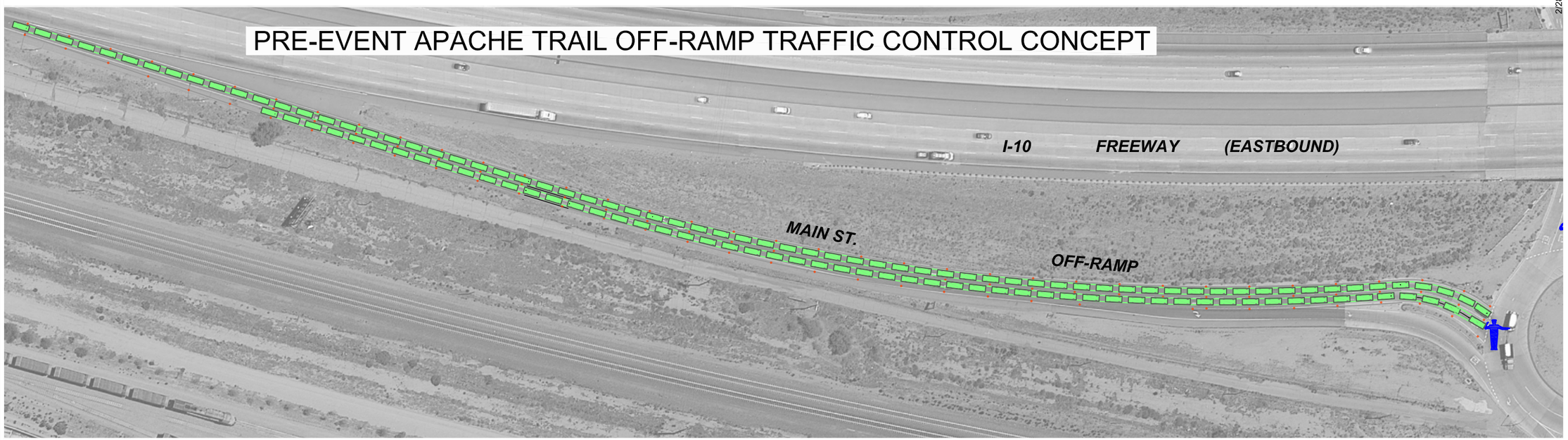
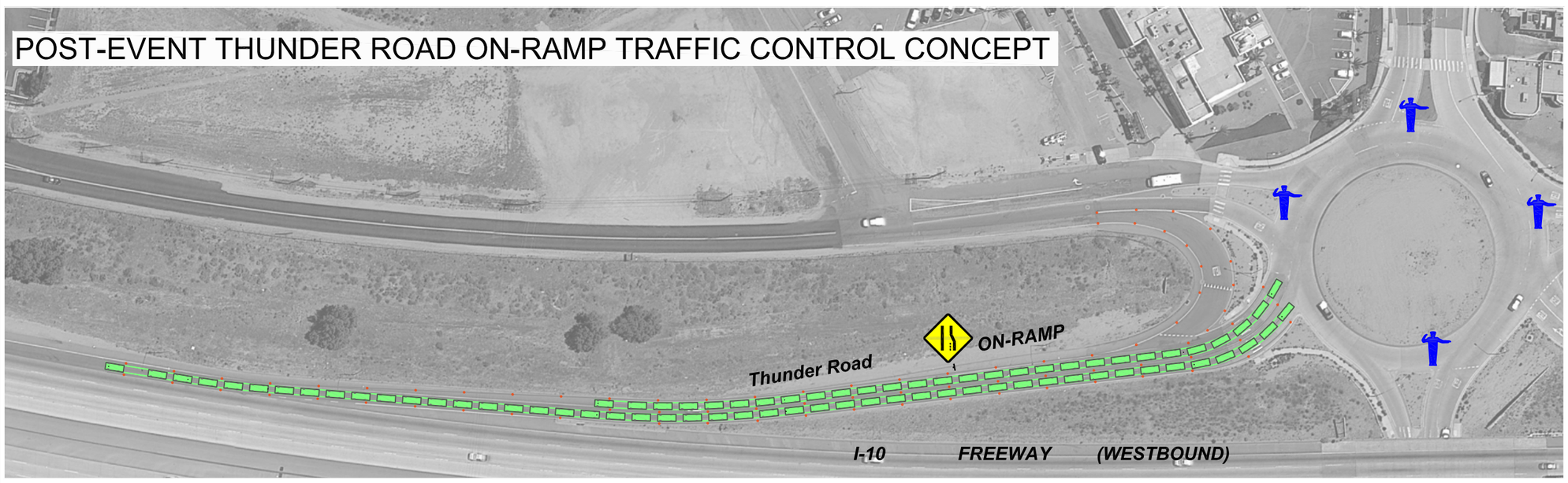
I-10 FREEWAY MAIN STREET ON- AND OFF-RAMPS
RECOMMENDED EVENT-DAY TEMPORARY CAPACITY INCREASE
USING TEMPORARY TRAFFIC CONTROL DEVICES




LEGEND

- TEMPORARY SIGN
- TCO's
- DELINEATORS

FIGURE E-5

2/28/2013

:FN MORONGO ENT\THUNDERAPACHERAMPS

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I-10 FREEWAY THUNDER RD./APACHE TRAIL ON- AND OFF-RAMPS
RECOMMENDED EVENT-DAY TEMPORARY CAPACITY INCREASE
USINGTRAFFIC CONTROL DEVICES

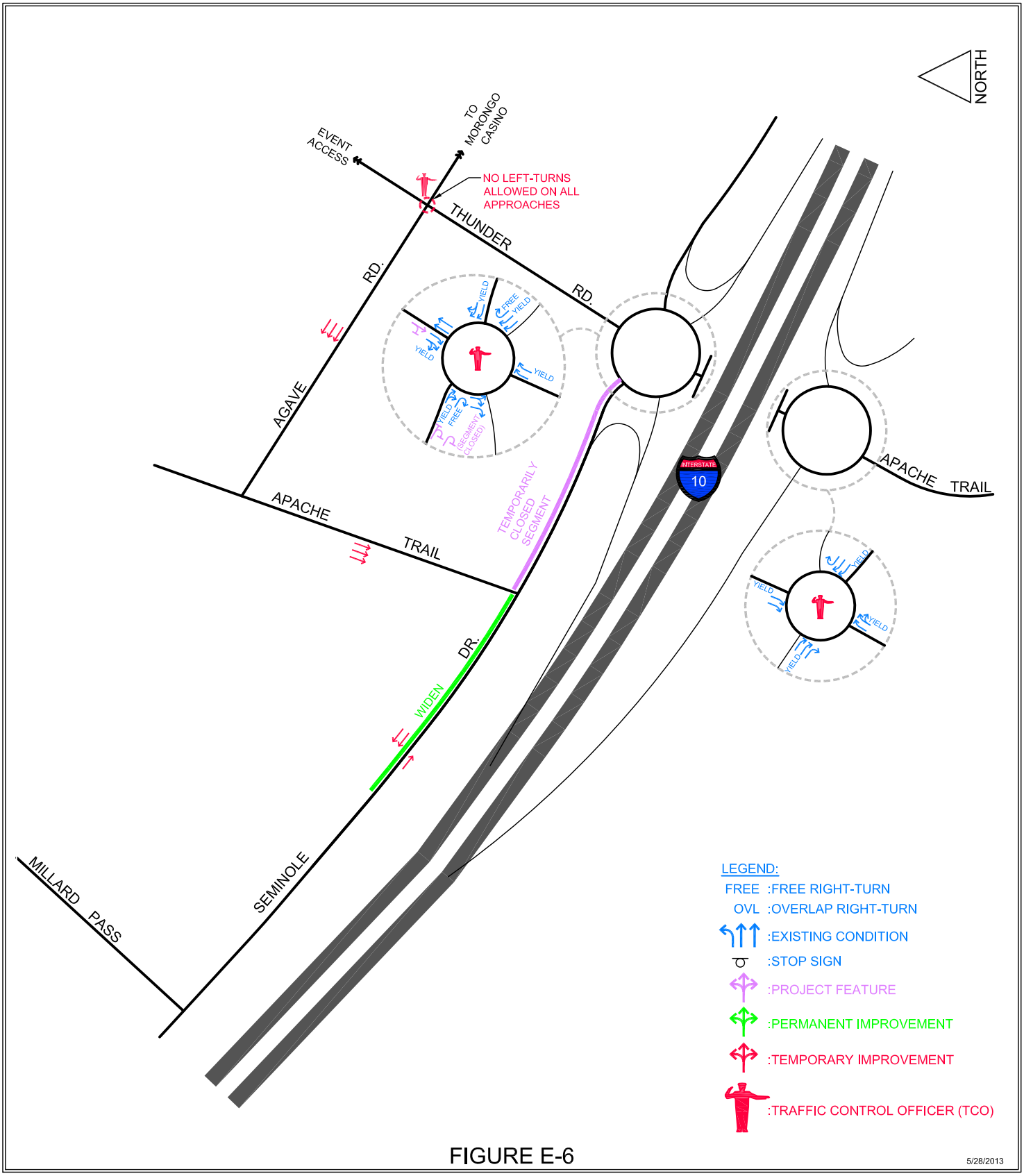


FIGURE E-6

5/28/2013

FN: MORONGO OUTDOOR ENTERTAINMENT\ONE-WAY DEPARTURE_PLAN

AGAVE ROAD/APACHE TRAIL
ONE-WAY DEPARTURE CONFIGURATION

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# APPENDIX F

## 9/19/2012 Development Team Email

## George Rhyner

**Subject:** Morongo Traffic
**Attachments:** Event_Matrix.xlsx

**From:** remygarson@gmail.com [mailto:remygarson@gmail.com] **On Behalf Of** Remy Garson
**Sent:** Wednesday, September 19, 2012 9:51 AM
**To:** dskidmore@crainandassociates.com
**Subject:** Morongo Traffic

Hi Diana,
It was great meeting you last week. Here is some of the info you requested:

**1. Projected Number of Events and Attendance**

See attached "Event Matrix"

**2. Preliminary Traffic Plan Concepts**

A. Traffic for the venue and traffic for the hotel/casino will be kept separate
B. The Main Street Exit (east of the roundabout) will serve as the primary access point to the venue. Inbound traffic will flow from Main Street to Seminole Drive and into the venue (outbound traffic will flow in the reverse). The Reservation/Outlet Mall Exit (west of the roundabout) will serve as a secondary access point. Traffic will flow from Johnson Ln to Seminole drive, past the Morongo Gas station north of the roundabout, and will then follow a path to the venue that goes around the back (north) of the casino/hotel (outbound traffic will flow in the reverse). The roundabout exit will serve as a tertiary access point. Traffic will flow through the roundabout, on to Seminole Drive, and will then follow the same aforementioned route around the back (north) of the casino/hotel (outbound traffic will flow in the reverse).

**3. Traffic Mitigation Methods**

We are very willing to consider any number of ideas/programs to mitigate traffic, such as:
A. Shuttle Bus Program
B. Advance dissemination of directions and parking maps/information to attendees
C. Incentives to arrive early: food and drink coupons, gifts
D. Coupons and gifts given to car pool vehicles
E. Signage and personnel directing traffic
F. The advance assignment of parking lot sections with instruction to use a designated highway exit for entering/exiting the venue
G. Programming methods: i) late night shows and official after parties will distribute departure traffic from the peak period until later in the evening. ii) efforts will be made to prevent an overlap of outlet mall and rush hour traffic with traffic for events at the venue.
H. Onsite camping accommodations to reduce traffic during peak periods. This will be offered for 1-day music festivals, as well as multi-day events.
I. Arena style parking lot design is most efficient for traffic mitigation

**4. Concert/Festival Data**

A. 1-Day Music Festival (without camping): starts at 12pm and ends at 2am (doors open at 10am)

Arrival:
12pm -15% *in the case where camping is available, much of this crowd has been onsite since the previous evening
1pm - 9%
2pm - 10%
3pm - 11%
4pm - 11%
5pm - 13%
6pm - 12%
7pm - 8%
8pm - 6%
9pm - 4%
10pm -1%

Departure:
5pm - <1%
6pm - 1%
7pm - 3%
8pm - 3%
9pm - 3%
10pm - 3%
11pm - 5%
12am - 13%
1am - 16%
2am - 39%
3am - 13%

B. 2-Day Festival: starts Saturday at 12pm and ends Sunday night at approx 11pm/12am

i) If camping is available, then
a. up to 50% less traffic leaving the site on Saturday
b. many people will leave earlier throughout the day on Sunday when compared to a 1-day festival without camping and
c. some people will remain in camping until Monday.

ii) If no camping is available, then
a. Departure rates remain similar to those of a 1-day festival without camping
b. many people will leave earlier throughout the day on Sunday when compared to a 1-day festival without camping and
c. the full crowd will have left the venue by the end of Sunday night

**C. Transportation Behavior**

i) Festivals without shuttle bus programs:

Bus: 1.10%
Own Vehicle: 91.80%
Air: 4.97%
Other: 2.13%

ii) With a shuttle bus program, the bus figure jumps to up to 33%, decreasing own vehicle percentage to

59.18%. The use of shuttle buses have become an increasingly popular trend. The Coachella Valley Music Festival has come to rely heavily on shuttle buses, as the site's parking infrastructure and access are inferior to that of Morongo's.

D. Party size within private vehicles average 2.5 - 3 ppl per vehicle

--
Remy Garson
Garson Entertainment Group, LLC
Mobile: (917) 771-7166
E-Mail: remy@ggopgroup.com

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Remy Garson
Garson Entertainment Group, LLC
Phone: (917) 771-7166
E-Mail: remy@ggopgroup.com

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**Event Size (# of people)**

**Selected**

| | | | | |
|---|---|---|---|---|
| 70,000 | 70,000 | 70,000 | 70,000 | 70,000 |
| 60,000 | 60,000 | 60,000 | 60,000 | 60,000 |
| 40,000 | 40,000 | 40,000 | 40,000 | 40,000 |
| 40,000 | 40,000 | 40,000 | 40,000 | 40,000 |
| 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| 11,000 | 11,000 | 11,000 | 11,000 | 11,000 |
| 7,000 | 7,000 | 7,000 | 7,000 | 7,000 |
| 3,000 | 3,000 | 3,000 | 3,000 | 3,000 |

**# of Events**

**Base Case**

| | | | | | |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 2 | 3 |
| 0 | 0 | 0 | 2 | 1 | 2 |
| 0 | 0 | 2 | 1 | 1 | 2 |
| 0 | 1 | 2 | 2 | 2 | 1 |
| 0 | 1 | 3 | 4 | 4 | 2 |
| 0 | 2 | 12 | 12 | 12 | 12 |
| 0 | 3 | 12 | 12 | 12 | 12 |
| 0 | 5 | 6 | 12 | 12 | 12 |
| 0 | 10 | 12 | 12 | 18 | 18 |

**Upside Case**

| | | | | | |
|---|---|---|---|---|---|
| 70,000 | 0 | 0 | 1 | 3 | 4 |
| 60,000 | 0 | 0 | 3 | 2 | 3 |
| 40,000 | 0 | 2 | 2 | 2 | 3 |
| 40,000 | 1 | 2 | 3 | 3 | 2 |
| 20,000 | 1 | 3 | 5 | 5 | 3 |
| 20,000 | 2 | 12 | 13 | 13 | 13 |