**RAMEY KEMP ASSOCIATES**
*TOGETHER WE ARE LIMITLESS*

T 919 872 5115
5808 Faringdon Pl,
Raleigh, NC 27609

April 3, 2023

Mr. Randy Formica
Town of Blacksburg
Director of Engineering and GIS Department
400 South Main Street
Blacksburg, Virginia 24060
Phone: (540) 443-1300

Reference: **Glade Heights** – Traffic Impact Analysis (TIA) Addendum
Town of Blacksburg, Virginia

Dear Mr. Formica,

Ramey Kemp Associates (RKA) has performed this addendum to the previously submitted TIA (submitted by RKA on January 11, 2023) in coordination with the Town.

It is our understanding that recent work session conversations on the Glade Heights project has resulted in the omission of the cross-connectivity to Village Way (to the north). Because of the removal of this cross-connectivity, previously re-rerouted trips from the subdivision to the north would no longer be able to use the internal roadway network within the proposed development to reach Glade Road and proposed development traffic heading to Toms Creek Road would no longer be able to access that road directly through the adjacent subdivision. See attached for the site location map and revised site plan.

**Methodology**
In conjunction with the Town, it was determined that the only intersections previously studied that would be affected by this plan change are:

- Prices Fork Road and University City Boulevard
- Prices Fork Road and Old Glade Road
- University City Boulevard and Glade Road
- Glade Road and Old Glade Road
- Glade Road and Shadow Lake Road

In order to account for the removal of the cross-connectivity, the site trip distributions from the previously submitted TIA were modified based on a review of the existing traffic volumes, the adjacent roadway network, and engineering judgement (revised trip distributions are in **red**):

- 10% to / from the north on University City Boulevard (increased to 15%)
- 40% to / from the east on Prices Fork Road
- 30% to / from the west on Prices Fork Road (increased to 40%)
- 5% to / from the west on Glade Road
- 15% to / from the east on Toms Creek Road (reduced to 0%)

See attached for an illustration of the revised site trip distributions, site trip assignments, and build peak hour traffic volumes.

**VDOT Turn Lane Warrant Analysis**

The updated projected build-out AM and PM peak hour traffic volumes at the proposed entrance on Glade Road were compared to the turn lane warrants in the Virginia Department of Transportation (VDOT) *Access Management Design Standards for Entrances and Intersections*. A westbound right-turn lane along Glade Road is warranted at the proposed site access.

**Traffic Capacity Analysis**

Per coordination with the Town, this addendum only reanalyzed the operations at the aforementioned study intersections under the build traffic conditions. The analysis was performed utilizing the same methodology from the previously submitted TIA.

***Prices Fork Road and University City Boulevard***

Table 1 summarizes the capacity analysis results for the signalized intersection of Prices Fork Road and University City Boulevard. The Synchro outputs are enclosed for reference.

**Table 1: Level-of-Service Summary for Prices Fork Road and University City Boulevard**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| No-Build (2026) Conditions *From previously submitted TIA* | EBL | E | 66 | 240 | C (30) | F | 82 | 240 | D (42) |
| | EBT (2) | B | 16 | 273 | | C | 22 | 287 | |
| | EBR | B | 12 | 200 | | B | 17 | 77 | |
| | WBL | E | 72 | 49 | | E | 71 | 217 | |
| | WBT (2) | C | 22 | 284 | | D | 40 | 702 | |
| | WBR | B | 20 | 74 | | C | 33 | 325 | |
| | NBL | E | 68 | 76 | | E | 67 | 241 | |
| | NBT/R | E | 68 | 68 | | E | 68 | 226 | |
| | SBL (2) | E | 60 | 446 | | E | 57 | 754 | |
| | SBT/R | D | 54 | 164 | | D | 51 | 754 | |
| Build (2026) Conditions | EBL | E | 66 | 230 | C (31) | F | 82 | 240 | D (43) |
| | EBT (2) | B | 17 | 265 | | C | 23 | 291 | |
| | EBR | B | 12 | 89 | | B | 17 | 238 | |
| | WBL | E | 72 | 46 | | E | 71 | 249 | |
| | WBT (2) | C | 23 | 328 | | D | 42 | 695 | |
| | WBR | C | 21 | 132 | | C | 34 | 325 | |
| | NBL | E | 68 | 76 | | E | 67 | 172 | |
| | NBT/R | E | 68 | 77 | | E | 68 | 203 | |
| | SBL (2) | E | 60 | 488 | | E | 58 | 761 | |
| | SBT/R | D | 53 | 214 | | D | 50 | 755 | |

Capacity analysis indicates that the signalized intersection is expected to operate at an overall LOS D or better during the AM and PM peak hours for the build traffic conditions. All lane groups are expected to operate at LOS E or better, with the exception of the eastbound left-turn movement during the PM peak hour for all future traffic conditions. When comparing build to no-build conditions, all levels of service are expected to be maintained. Furthermore, the site trips are expected to increase the total volume at this intersection by approximately 2% during the AM and PM peak hours.

Due to minimal impacts from the proposed development, no improvements are recommended at this intersection at build-out of the proposed community.

***Prices Fork Road and Old Glade Road***

Table 2 summarizes the capacity analysis results for the unsignalized intersection of Prices Fork Road and Old Glade Road. The Synchro outputs are enclosed for reference.

**Table 2: Level-of-Service Summary for Prices Fork Road & Old Glade Road**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| No-Build (2026) Conditions *From previously submitted TIA* | EBL[2] | B | 10 | 30 | N/A[3] | D | 34 | 163 | N/A[3] |
| | EBT (2) | -- | -- | -- | | -- | -- | -- | |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | WBT/R | -- | -- | -- | | -- | -- | -- | |
| | SBR[1] | B | 15 | 58 | | F | 87 | 290 | |
| Build (2026) Conditions | EBL[2] | B | 11 | 33 | N/A[3] | E | 49 | 233 | N/A[3] |
| | EBT (2) | -- | -- | -- | | -- | -- | -- | |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | WBT/R | -- | -- | -- | | -- | -- | -- | |
| | SBR[1] | C | 16 | 73 | | F | 118 | 360 | |

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Capacity analysis indicates that for build traffic conditions, the minor-street approach is expected to operate at LOS C during the AM peak hour and LOS F during the PM peak hour. The major street left-turn movement is expected to operate at LOS B during the AM peak hour and LOS E during the PM peak hour. Based on SimTraffic performance reports, which calculates delay per vehicle based on simulation modeling of the study network taking into account the effect of adjacent signals, it is expected that delays in the field are significantly less than the synchro reports calculate. SimTraffic performance reports indicate that the southbound right turn and eastbound left turn delay per vehicle are expected to be less than 29.5 seconds per vehicle, which correlates to LOS C or better. The site trips are expected to increase the total volume at this intersection by approximately 3% during the AM and PM peak hours.

While increased delays are expected during the PM peak hour, less than desirable levels of operation currently exist. Additionally, no laneage improvements are expected to decrease delays and the proximity to the signalized intersection of Prices Fork Road and University City Boulevard make traffic control improvements impractical.

Based on the minimal site traffic utilizing the intersection, no improvements are recommended at this intersection at build-out of the proposed community.

***University City Boulevard and Glade Road***

Table 3 summarizes the capacity analysis results for the signalized intersection of University City Boulevard and Glade Road. The Synchro outputs are enclosed for reference.

**Table 3: Level-of-Service Summary for University City Boulevard & Glade Road/Starbucks Driveway**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| No-Build (2026) Conditions *From previously submitted TIA* | EBL/T | C | 27 | 216 | B (17) | C | 27 | 211 | B (14) |
| | EBR | C | 27 | 111 | | C | 27 | 176 | |
| | WBL/T/R | C | 31 | 169 | | C | 29 | 164 | |
| | NBL | A | 6 | 52 | | A | 8 | 116 | |
| | NBT/TR | A | 4 | 86 | | A | 5 | 154 | |
| | SBL/T | A | 9 | 134 | | B | 12 | 162 | |
| | SBT/R | A | 9 | 105 | | B | 13 | 159 | |
| Build (2026) Conditions | EBL/T | C | 27 | 197 | B (18) | C | 27 | 197 | B (15) |
| | EBR | C | 28 | 114 | | C | 27 | 117 | |
| | WBL/T/R | C | 31 | 164 | | C | 29 | 164 | |
| | NBL | A | 7 | 54 | | A | 8 | 137 | |
| | NBT/TR | A | 5 | 79 | | A | 6 | 154 | |
| | SBL/T | A | 10 | 124 | | B | 13 | 170 | |
| | SBT/R | A | 10 | 104 | | B | 14 | 145 | |

Capacity analysis indicates that the signalized intersection is expected to operate at an overall LOS B during the AM and PM peak hours for the build traffic conditions. All lane groups are expected to operate at LOS C or better during the AM and PM peak hours. When comparing build to no-build conditions, all levels of service are expected to be maintained.

Due to minimal impacts from the proposed development, no improvements are recommended at this intersection at build-out of the proposed community.

***Old Glade Road and Glade Road***

Table 4 summarizes the capacity analysis results for the unsignalized intersection of Old Glade Road and Glade Road. The Synchro outputs are enclosed for reference.

**Table 4: Level-of-Service Summary for Old Glade Road & Glade Road**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| No-Build (2026) Conditions *From previously submitted TIA* | EBT | -- | -- | -- | N/A[3] | -- | -- | -- | N/A[3] |
| | EBR | -- | -- | -- | | -- | -- | -- | |
| | WBL/T[2] | A | 9 | 10 | | A | 8 | 10 | |
| | NBL[1] | B | 15 | 20 | | E | 37 | 135 | |
| | NBR | A | 10 | 13 | | A | 10 | 15 | |
| Build (2026) Conditions | EBT | -- | -- | -- | N/A[3] | -- | -- | -- | N/A[3] |
| | EBR | -- | -- | -- | | -- | -- | -- | |
| | WBL/T[2] | A | 9 | 10 | | A | 8 | 13 | |
| | NBL[1] | C | 17 | 30 | | F | 71 | 300 | |
| | NBR | B | 10 | 13 | | B | 10 | 15 | |
| Build (2026) Conditions (All-Way Stop) | EBT | B | 11 | 35 | B (11) | B | 13 | 38 | C (19) |
| | EBR | A | 10 | 38 | | B | 11 | 25 | |
| | WBL/T | B | 11 | 30 | | C | 24 | 143 | |
| | NBL | B | 11 | 23 | | C | 23 | 118 | |
| | NBR | A | 10 | 15 | | B | 11 | 25 | |

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Capacity analysis indicates that for build traffic conditions, the minor-street approach is expected to operate at LOS C or better during the AM peak hour and LOS F or better during the PM peak hour. The major street left-turn movement is expected to operate at LOS A during the AM and PM peak hours. While the northbound approach is expected to increase in delays, it is not uncommon for the minor-street approach to experience higher delays during the peak hour when the mainline traffic is the highest. Based on the aforementioned SimTraffic modeling, heavy queues are not expected to be a consistent issue as the average queue is not expected to exceed 115 feet during the PM peak hour. SimTraffic performance reports calculate the northbound left delay per vehicle to be approximately 23 seconds during the PM peak hour (which correlates to LOS C or better).

As mentioned in the previously submitted TIA, this intersection is not anticipated to meet the necessary warrants for the installation of a traffic signal. It is our understanding however that the Town is considering a project to implement an all-way stop at this location.

Capacity analysis indicates that for build traffic conditions, the overall intersection is expected to operate at LOS C or better during the AM and PM peak hours. All lane groups are also expected to operate at LOS C or better.

There are no recommended improvements for the developer.

***Glade Road and Proposed Site Access***

Table 9 summarizes the capacity analysis results for the proposed intersection of Glade Road and the Site Access. The Synchro outputs are enclosed for reference.

**Table 9: Level-of-Service Summary for Glade Road and Site Access**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Build (2026) Conditions | EBL/T[2] | A | 8 | 0 | N/A[3] | A | 8 | 0 | N/A[3] |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | **WBR** | -- | -- | -- | | -- | -- | -- | |
| | **SBL/R[1]** | B | 13 | 15 | | B | 14 | 13 | |

**Bold indicates improvements.**

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

As mentioned previously, a westbound right-turn lane is warranted and recommended. Capacity analysis indicates that with this improvement, all approaches are expected to operate at LOS B or better during the weekday AM and PM peak hours. Due to acceptable levels of service, no additional improvements are recommended.

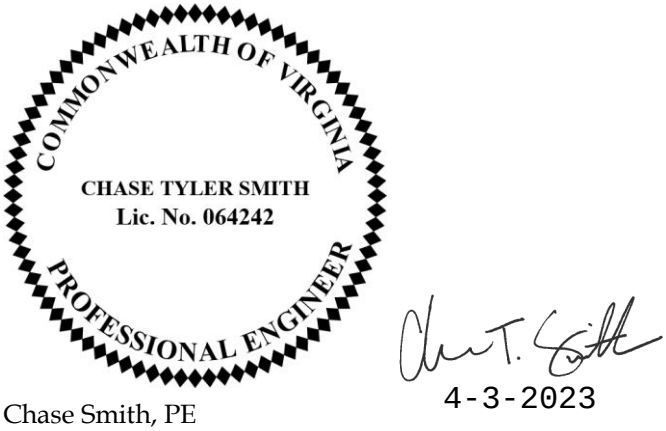
**Recommendations**
Based on the updated traffic capacity analysis, all study intersections are expected to operate at acceptable levels at build out of the proposed community with the following improvement.

- Construct a westbound right turn lane on Glade Road at the proposed site access location. Based on the results of the TIA and the VDOT *Access Management Design Standards for Entrances and Intersections,* a turn lane with a minimum of 100 feet of storage should be provided.

See attached for an illustration of the recommended lane configurations for the study intersections.

We appreciate your attention to this matter. Please contact me at (336) 714-0112 if you have any questions about this report.

Sincerely yours,




Chase Smith, PE
*Infrastructure Consulting Services, Inc.*
*dba*
***Ramey Kemp Associates***

License #0407008438

Enclosures: Scoping Confirmation, Figures, Synchro and SimTraffic output

Copy to: Ms. Meredith Jones, Eden & Associates, P. C.

# TECHNICAL APPENDIX

## Meredith Jones

**From:** Chase Smith <csmith@rameykemp.com>
**Sent:** Thursday, April 27, 2023 6:04 PM
**To:** Meredith Jones
**Subject:** Fwd: 4/23 Letter to TC: safety accuracy and equity concerns- Glade Rd

Thanks,

Chase Smith

Begin forwarded message:

> **From:** Chase Smith <csmith@rameykemp.com>
> **Date:** April 24, 2023 at 09:02:00 EDT
> **To:** Randy Formica <RFormica@blacksburg.gov>
> **Cc:** Meredith Jones <meredith@edenandassociates.com>
> **Subject: RE: 4/23 Letter to TC: safety accuracy and equity concerns- Glade Rd**
>
> Good Find. Thanks for the heads up Randy.
>
> **Chase Smith, PE**
> **Traffic Engineering Project Manager**
> D 336 714 0112 | T 336 725 5470 | C 336 813 9289
> rameykemp.com
>
> ---
>
> **From:** Randy Formica <RFormica@blacksburg.gov>
> **Sent:** Monday, April 24, 2023 8:51 AM
> **To:** Chase Smith <csmith@rameykemp.com>
> **Cc:** Meredith Jones <meredith@edenandassociates.com>
> **Subject:** RE: 4/23 Letter to TC: safety accuracy and equity concerns- Glade Rd
>
> Chase,
>
> I will add your email below to the addendum to address this. Thanks.
>
> Randy
>
> Randy Formica, PE ENV SP, Director
> Engineering and GIS Department
> Town of Blacksburg
> rformica@blacksburg
> 540-443-1300
>
> **From:** Chase Smith <csmith@rameykemp.com>
> **Sent:** Monday, April 24, 2023 8:38 AM
> **To:** Randy Formica <RFormica@blacksburg.gov>

**Cc:** Meredith Jones <meredith@edenandassociates.com>
**Subject:** RE: 4/23 Letter to TC: safety accuracy and equity concerns- Glade Rd



Not impacted at all. Just reference the TIA.

We did not provide the cover letter, can this just be updated?

**Chase Smith, PE**
**Traffic Engineering Project Manager**
D 336 714 0112 | T 336 725 5470 | C 336 813 9289
rameykemp.com

---

**From:** Randy Formica <RFormica@blacksburg.gov>
**Sent:** Monday, April 24, 2023 8:37 AM
**To:** Chase Smith <csmith@rameykemp.com>
**Cc:** Meredith Jones <meredith@edenandassociates.com>
**Subject:** RE: 4/23 Letter to TC: safety accuracy and equity concerns- Glade Rd

Chase, My assumption would have been that the LOS analysis would not have been significantly impacted with removal of the connection, however, the cover letter of April 3rd does reference the intersection as being impacted; it references "Sunset" Lake Road rather than "Shadowlake" Road.

Randy

Randy Formica, PE ENV SP, Director
Engineering and GIS Department
Town of Blacksburg
rformica@blacksburg
540-443-1300

**From:** Chase Smith <csmith@rameykemp.com>
**Sent:** Monday, April 24, 2023 8:32 AM
**To:** Randy Formica <RFormica@blacksburg.gov>
**Cc:** Meredith Jones <meredith@edenandassociates.com>
**Subject:** RE: 4/23 Letter to TC: safety accuracy and equity concerns- Glade Rd
**Importance:** High



Randy,

We didn't include this intersection in the addendum because the results wouldn't have changed from the TIA to the addendum. The elimination of the cross-access wasn't going to result in anymore trips heading west of the site on Glade Road.

**Chase Smith, PE**
**Traffic Engineering Project Manager**

D 336 714 0112 | T 336 725 5470 | C 336 813 9289

rameykemp.com

---

**From:** Randy Formica <RFormica@blacksburg.gov>
**Sent:** Monday, April 24, 2023 7:21:06 AM
**To:** Meredith Jones <meredith@edenandassociates.com>
**Subject:** RE: 4/23 Letter to TC: safety accuracy and equity concerns- Glade Rd

Meredith,

The revised Glade/Shadowlake/Lark revised LOS analysis is missing in the April 3, 2023 addendum. The cover letter states it was included but I didn't see it. I assume it was done but didn't get included. Can you check on that? Thanks.

Randy

Randy Formica, PE ENV SP, Director
Engineering and GIS Department
Town of Blacksburg
rformica@blacksburg
540-443-1300

**From:** Amy Burton <aburtons@vt.edu>
**Sent:** Sunday, April 23, 2023 9:31 AM
**To:** Town Council <TownCouncil@blacksburg.gov>; Kinsey O'Shea <KOShea@blacksburg.gov>; Randy Formica <RFormica@blacksburg.gov>; Anne McClung <amcclung@blacksburg.gov>; Meredith Jones <meredith@edenandassociates.com>; Matt Hanratty <mhanratty@blacksburg.gov>
**Subject:** 4/23 Letter to TC: safety accuracy and equity concerns- Glade Rd



Good morning,

Please see the attached document and share it online. I ask that these concerns be considered and addressed by the Town Council.

Sincerely,

Amy Burton

# APPENDIX A

## Scoping Confirmation

## Chase Smith

From: Randy Formica <RFormica@blacksburg.gov>
Sent: Wednesday, March 22, 2023 2:43 PM
To: Chase Smith
Cc: Matt Hanratty; Meredith Jones; Kinsey O'Shea
Subject: RE: Glade Heights TIA Submittal

I think then we are good with the scope. Thanks.

Randy

Randy Formica, PE ENV SP, Director
Engineering and GIS Department
Town of Blacksburg
rformica@blacksburg
540-443-1300

From: Chase Smith <csmith@rameykemp.com>
Sent: Wednesday, March 22, 2023 2:29 PM
To: Randy Formica <RFormica@blacksburg.gov>
Cc: Matt Hanratty <mhanratty@blacksburg.gov>; Meredith Jones <meredith@edenandassociates.com>; Kinsey O'Shea <KOShea@blacksburg.gov>
Subject: Re: Glade Heights TIA Submittal



Exactly.

Thanks,

Chase Smith

> On Mar 22, 2023, at 14:22, Randy Formica <RFormica@blacksburg.gov> wrote:
>
> Chase,
>
> That explanation is very helpful. Thanks for the further explanation. I believe we are in agreement on the scope per your further explanation. I understand what you are saying on the Toms Creek Road intersections. I guess I didn't think those intersections through enough. Toms Creek Road without the connection is basically the 2026 No-build scenario, correct?
>
> Randy
>
> Randy Formica, PE ENV SP, Director

Engineering and GIS Department
Town of Blacksburg
rformica@blacksburg
540-443-1300

From: Chase Smith <csmith@rameykemp.com>
Sent: Wednesday, March 22, 2023 2:15 PM
To: Randy Formica <RFormica@blacksburg.gov>
Cc: Matt Hanratty <mhanratty@blacksburg.gov>; Meredith Jones <meredith@edenandassociates.com>; Kinsey O'Shea <KOShea@blacksburg.gov>
Subject: Re: Glade Heights TIA Submittal



Randy,

I should explained further. An addendum letter would essentially cover everything we need for this change. It would include updated exhibits, it would include explanations to why the letter is being provided, it would provide updates to the build scenario in synchro and simtraffic. It just would be much more concise version of the TIA and would not regurgitate any of the existing or no build items again.

I'm not sure why we would need to include the intersections on Tom's creek considering eliminating the cross access eliminates any proposed development traffic utilizing those intersections.

Thanks,

Chase Smith

> On Mar 22, 2023, at 14:01, Randy Formica <RFormica@blacksburg.gov> wrote:
>
> Chase,
>
> I have a few comments on your proposed revised scope. Since the connection will be eliminated, traffic that would have utilized the connection will be re-distributed at the Toms Creek Road/Redbud and Toms Creek Road/Honeysuckle intersections so both of those intersections need to be included in the revised analysis along with the intersections you listed. Also, does your revised scope include re-analyzing the Synchro runs for the Build scenarios at each of the intersections? You did not list that specifically but the revision should include re-running the Synchro analyses and provide the revised LOS and queuing results for each intersection. I think both the applicant and Town Staff will receive questions about this scenario (from Town Council and the public) and require the revised LOS and queuing data to accurately provide answers to those questions. Based on this, I don't think just an addendum letter is enough. We will need to see the Build scenario Synchro results and any revised exhibits impacted by the elimination of the connection plus your addendum letter.
>
> Please let me know if you have any questions.

Randy

Randy Formica, PE ENV SP, Director
Engineering and GIS Department
Town of Blacksburg
rformica@blacksburg
540-443-1300

From: Chase Smith <csmith@rameykemp.com>
Sent: Wednesday, March 22, 2023 11:07 AM
To: Randy Formica <RFormica@blacksburg.gov>
Cc: Matt Hanratty <mhanratty@blacksburg.gov>; Meredith Jones <meredith@edenandassociates.com>; Kinsey O'Shea <KOShea@blacksburg.gov>
Subject: RE: Glade Heights TIA Submittal



Good Morning Randy,

I just talked with Meredith Jones over at Eden Associates. It sounds like there is a necessary modification of the site plan to remove any cross connectivity for this project to the subdivision to the north. I wanted to reach out to you to get the ball rolling on what exactly you need from us. In other instances, we would recommend just a simple addendum letter where we focus on the intersections in which the future build analysis has a potential to change. That would be the intersections from the site access eastward toward UCB and Prices Fork. Are you okay with us moving forward with an addendum letter built on the same assumptions from the TIA just with modified trip distributions at the intersections of:

1. Prices Fork and Old Glade
2. Prices Fork and UCB
3. UCB and Glade
4. Glade and Old Glade
5. Glade and Site Access

Let us know if you need something more formal to knock out the scope for this one.

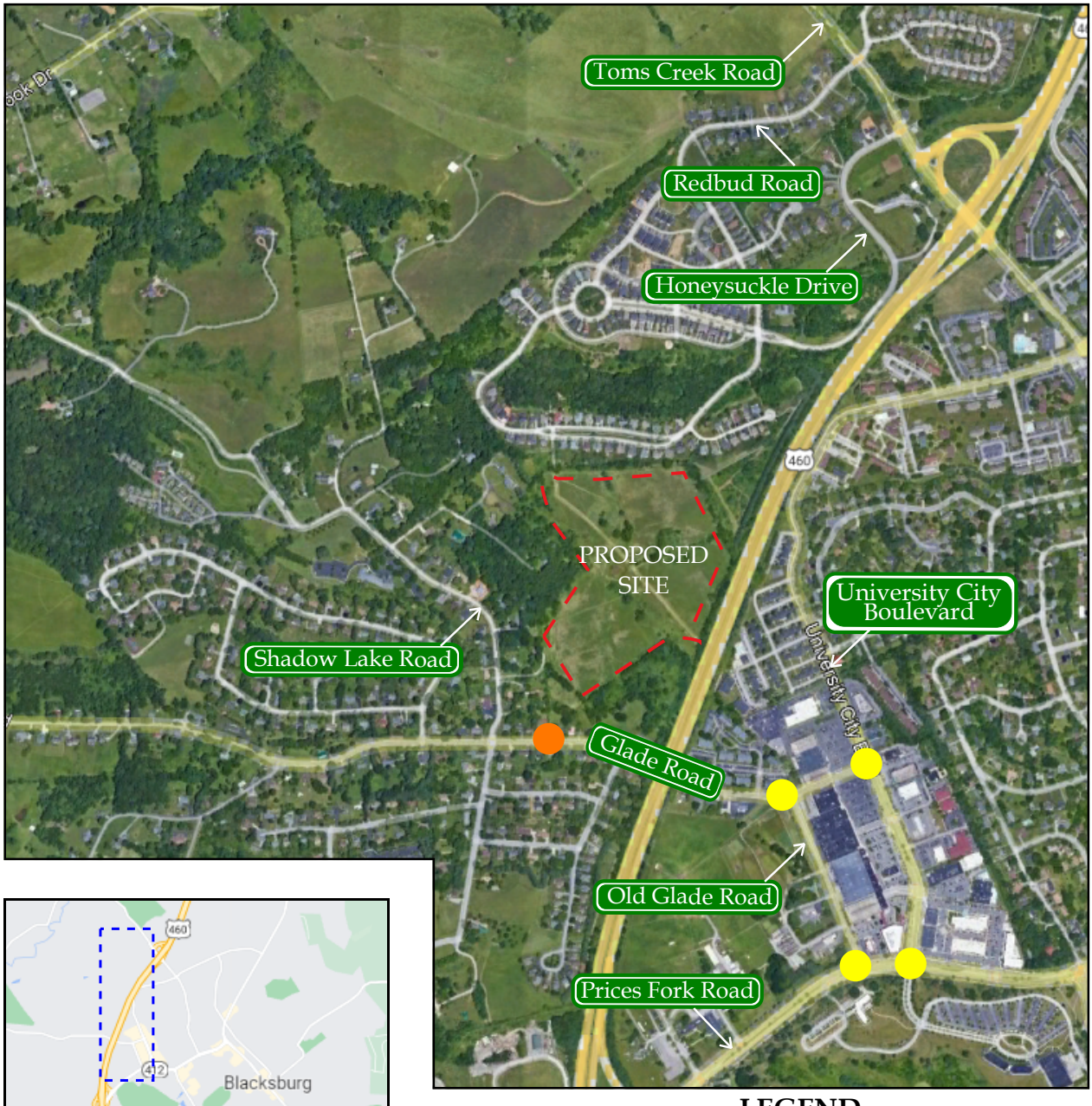
Thanks!

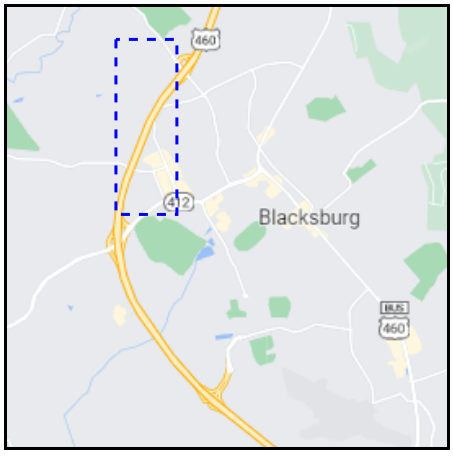
Chase Smith, PE
Traffic Engineering Project Manager
D 336 714 0112 | T 336 725 5470 | C 336 813 9289
rameykemp.com

From: Joshua Middleton <JMiddleton@blacksburg.gov>
Sent: Wednesday, January 11, 2023 2:18 PM
To: Anna Irby <airby@rameykemp.com>

# APPENDIX B

## FIGURES




N

**LEGEND**

- Proposed Site Location
- Study Area
- Study Intersection
- Proposed Access

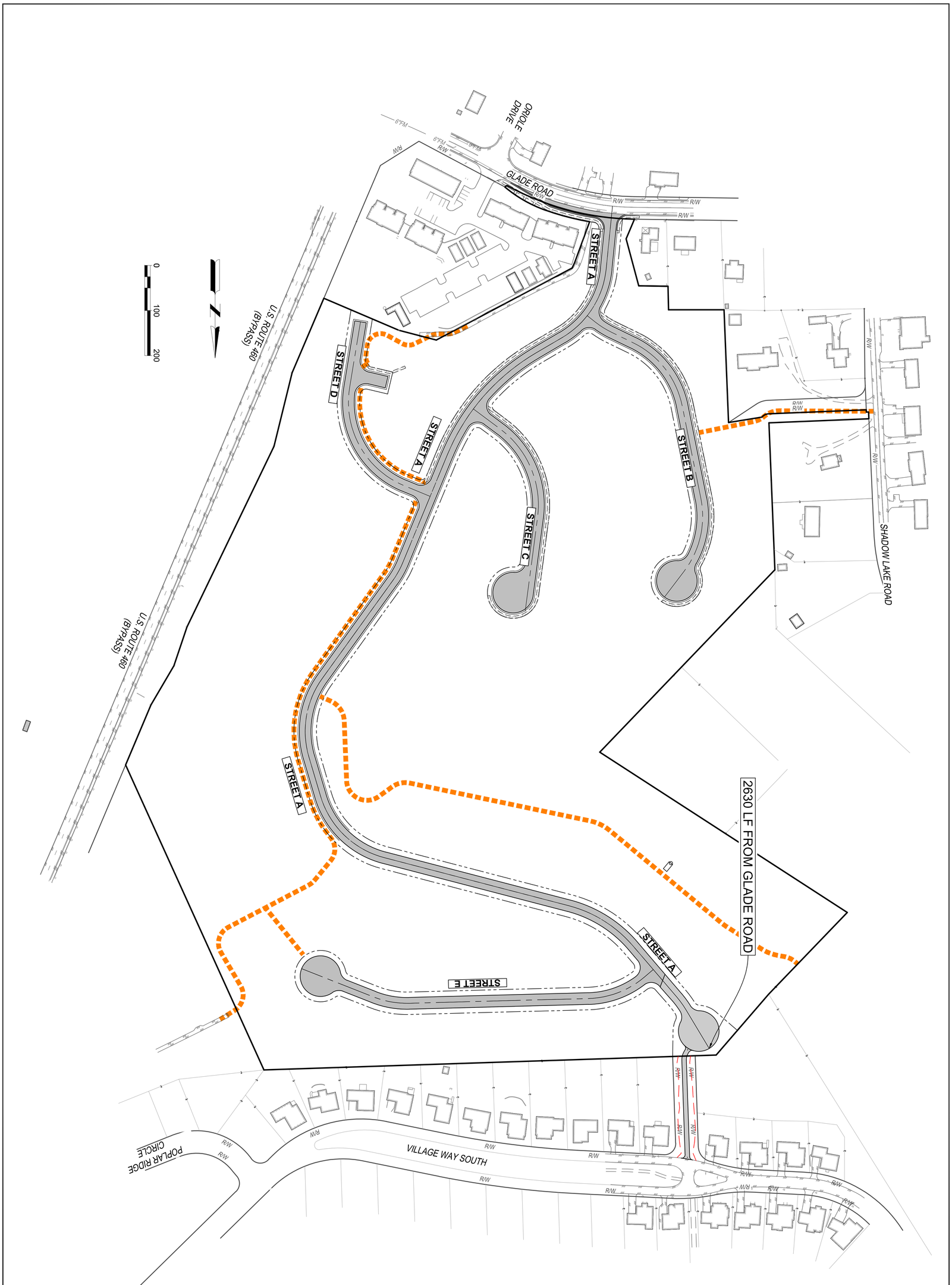
RKA
RAMEY KEMP ASSOCIATES

Glade Heights
Blacksburg, VA

Site Location Map

Scale: Not to Scale | Figure 1

C:\DROPBOX\E&A\CARY HOPPER\GLADE SPRING\CAD\MISC COORDINATION EXHIBITS\2023.01.26 STREET A CUL DE SAC EXHIBIT.DWG
3/17/2023 1:53:26 PM




| | | | |
|---|---|---|---|
| Sheet No. | Checked By: | Drawn By: | PROPOSED DEVELOPMENT OF |
| 1 of 1 | MTJ | MSF | GLADE SPRING CROSSING |
| EX1 | Date: 03/14/2023 | Scale: AS SHOWN | PROPERTY OF GLADE HGTS, LLC - TAX PARCELS 225-(A)-3, 225-(A)-4, & 224-(A)-57; 45.0976 AC. |
| | | | TOWN OF BLACKSBURG - PRICES FORK DISTRICT MONTGOMERY COUNTY, VIRGINIA |

STREET A CUL DE SAC CONCEPT OVERVIEW EXHIBIT

PRELIMINARY

| No. | Revision Issue | Date |
|---|---|---|
| | | |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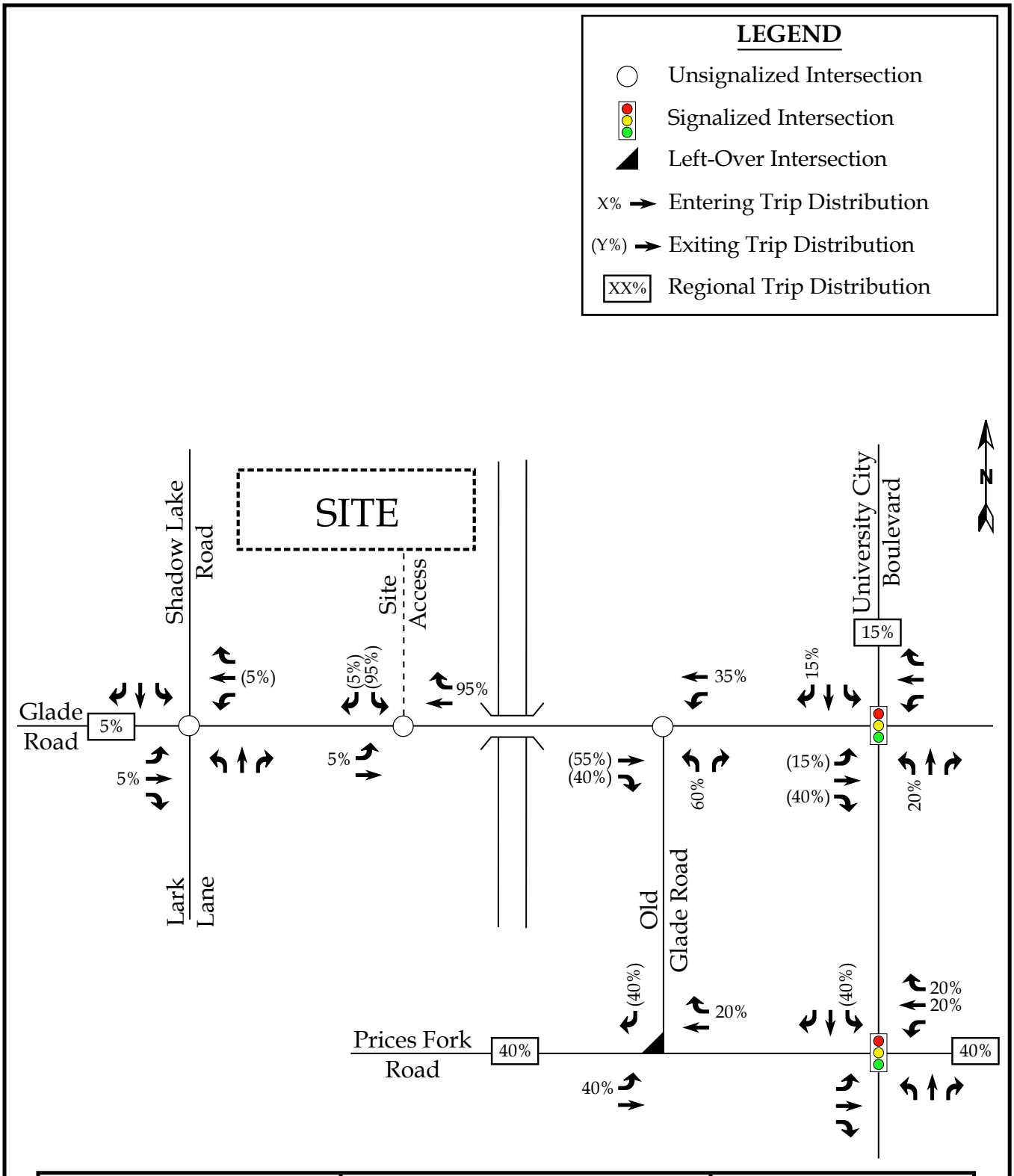
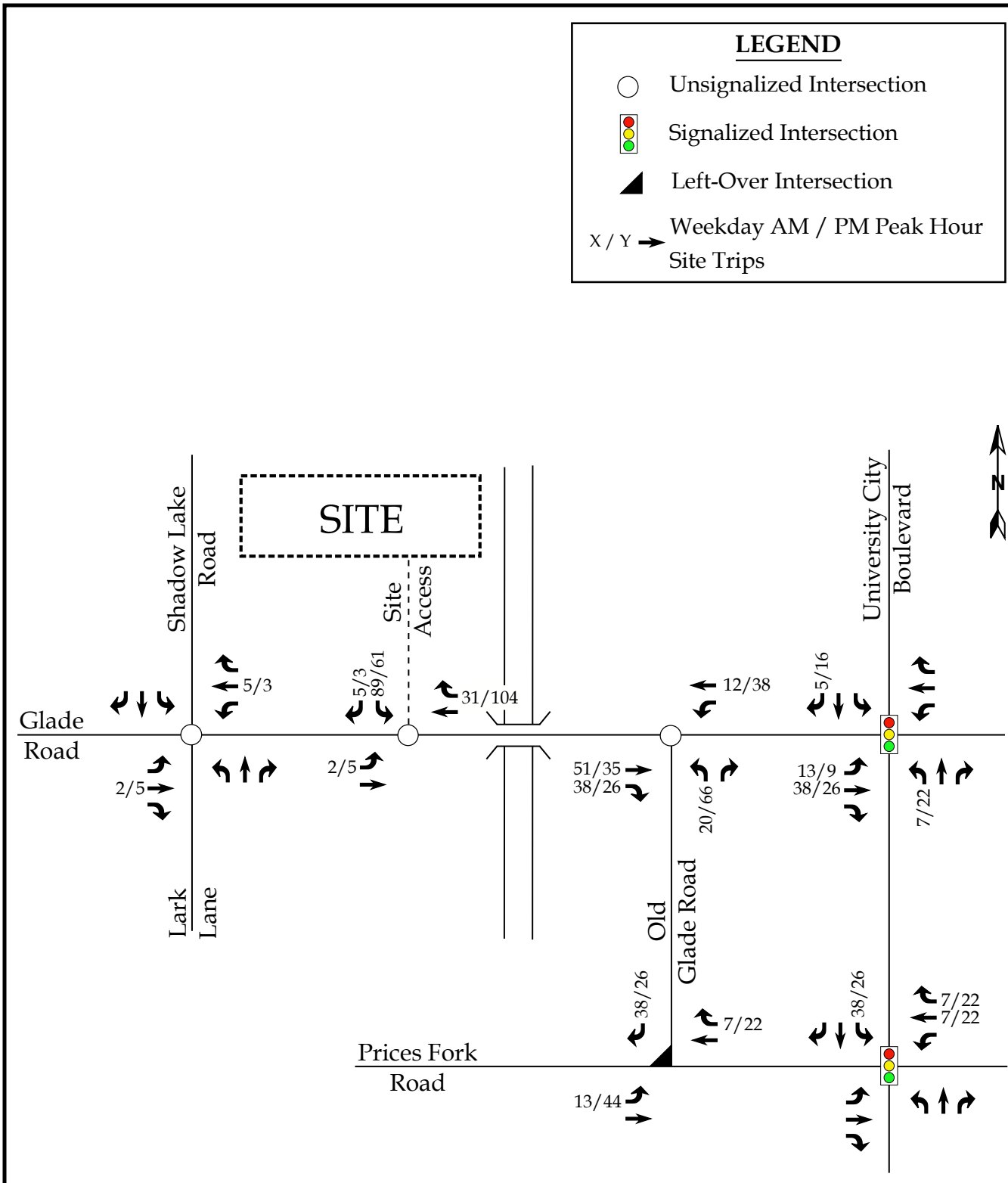



RAMEY KEMP ASSOCIATES

Glade Heights
Blacksburg, VA

Site Trip Distribution

Scale: Not to Scale | Figure 3

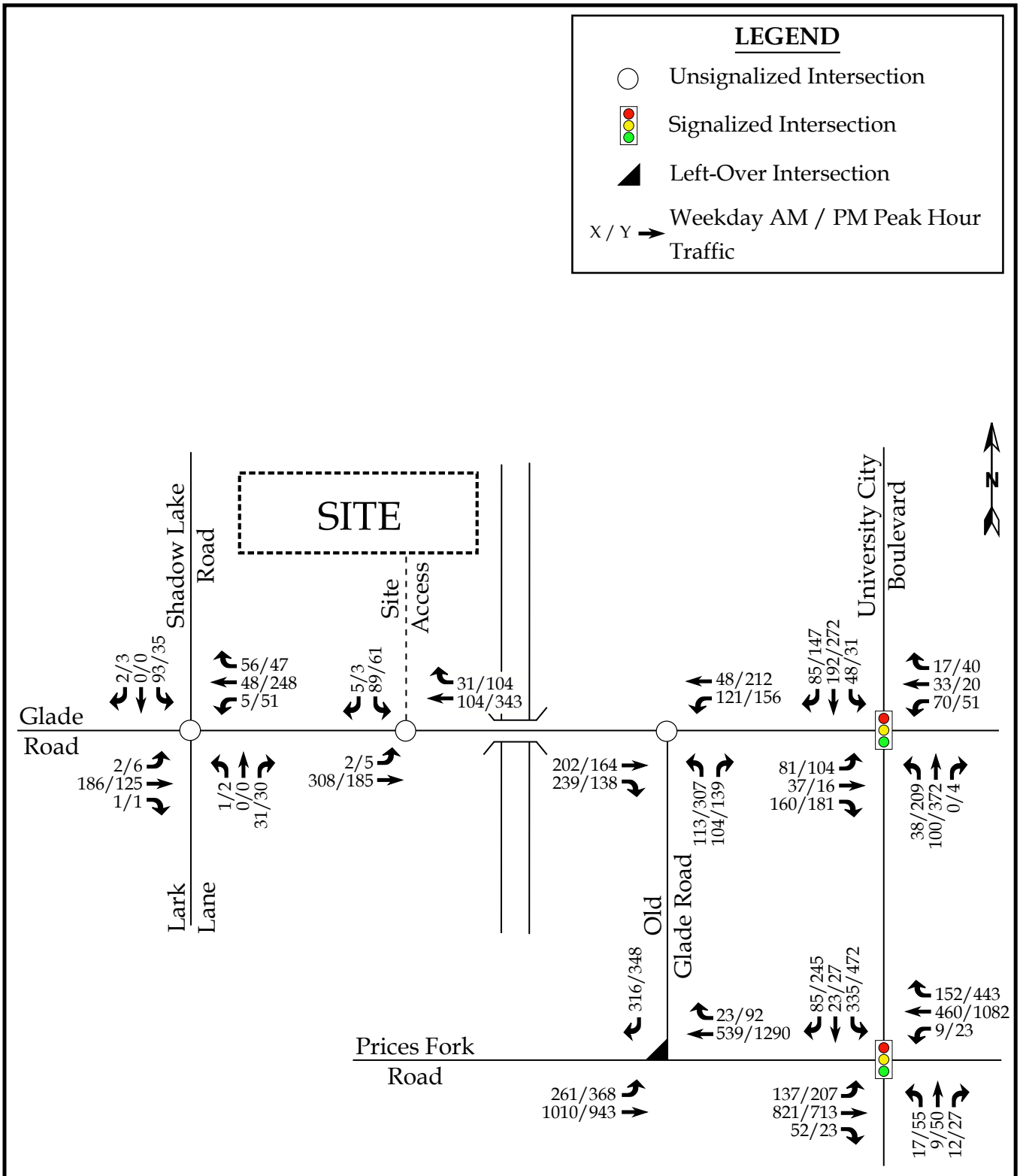



RAMEY KEMP ASSOCIATES

Glade Heights
Blacksburg, VA

Site Trip Assignment

Scale: Not to Scale | Figure 4

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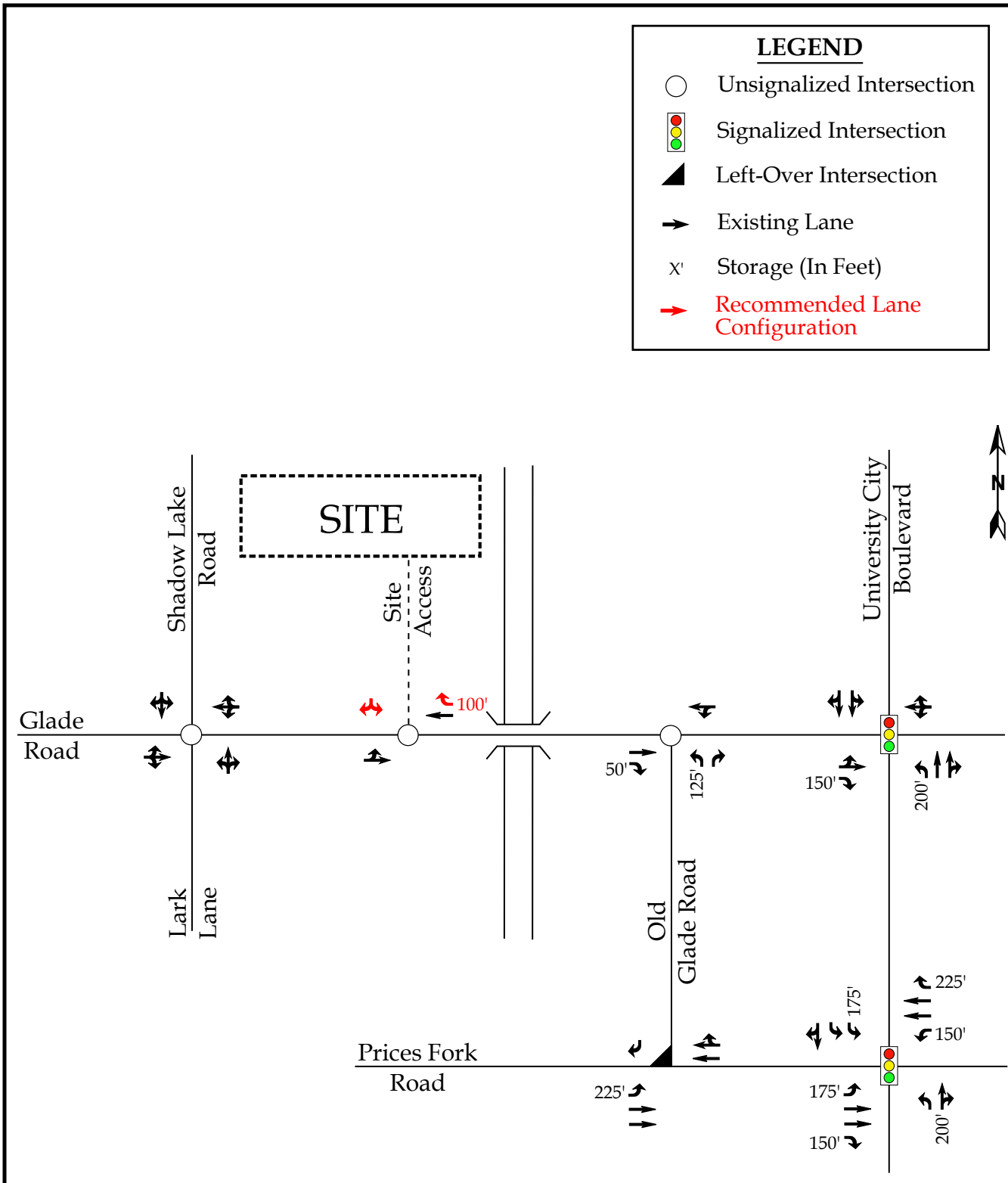
Glade Heights
Blacksburg, VA

2026 Build
Peak Hour Traffic

Scale: Not to Scale | Figure 5

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Glade Heights
Blacksburg, VA

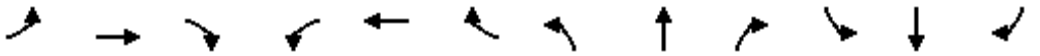
Recommended Lane Configurations

Scale: Not to Scale | Figure 6

# APPENDIX C

## CAPACITY ANALYSIS CALCULATIONS

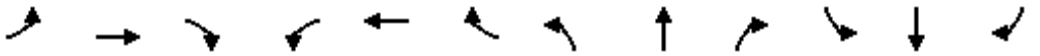
# Prices Fork Road and University City Boulevard



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 137 | 821 | 52 | 9 | 460 | 152 | 17 | 9 | 12 | 335 | 23 | 85 |
| Future Volume (vph) | 137 | 821 | 52 | 9 | 460 | 152 | 17 | 9 | 12 | 335 | 23 | 85 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | | 1.00 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1703 | 3438 | 1497 | 1805 | 3312 | 1515 | 1703 | 1602 | | 3367 | 1602 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1703 | 3438 | 1497 | 1805 | 3312 | 1515 | 1703 | 1602 | | 3367 | 1602 | |
| 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) | 149 | 892 | 57 | 10 | 500 | 165 | 18 | 10 | 13 | 364 | 25 | 92 |
| RTOR Reduction (vph) | 0 | 0 | 23 | 0 | 0 | 84 | 0 | 12 | 0 | 0 | 76 | 0 |
| Lane Group Flow (vph) | 149 | 892 | 34 | 10 | 500 | 81 | 18 | 11 | 0 | 364 | 41 | 0 |
| Confl. Peds. (#/hr) | | | 6 | | | 2 | | | 5 | | | 4 |
| Heavy Vehicles (%) | 6% | 5% | 4% | 0% | 9% | 5% | 6% | 17% | 0% | 4% | 0% | 4% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Split | NA | | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | 2 | | | | | | |
| Actuated Green, G (s) | 18.9 | 88.2 | 88.2 | 3.4 | 72.1 | 72.1 | 6.9 | 6.9 | | 23.7 | 23.7 | |
| Effective Green, g (s) | 21.3 | 89.9 | 89.9 | 5.2 | 73.8 | 73.8 | 8.7 | 8.7 | | 26.2 | 26.2 | |
| Actuated g/C Ratio | 0.14 | 0.60 | 0.60 | 0.03 | 0.49 | 0.49 | 0.06 | 0.06 | | 0.17 | 0.17 | |
| Clearance Time (s) | 7.4 | 6.7 | 6.7 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | | 7.5 | 7.5 | |
| Vehicle Extension (s) | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 241 | 2060 | 897 | 62 | 1629 | 745 | 98 | 92 | | 588 | 279 | |
| v/s Ratio Prot | c0.09 | c0.26 | | 0.01 | 0.15 | | c0.01 | 0.01 | | c0.11 | 0.03 | |
| v/s Ratio Perm | | | 0.02 | | | 0.05 | | | | | | |
| v/c Ratio | 0.62 | 0.43 | 0.04 | 0.16 | 0.31 | 0.11 | 0.18 | 0.12 | | 0.62 | 0.15 | |
| Uniform Delay, d1 | 60.5 | 16.3 | 12.3 | 70.3 | 22.8 | 20.5 | 67.3 | 67.0 | | 57.3 | 52.4 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.3 | 0.7 | 0.1 | 1.7 | 0.5 | 0.3 | 0.9 | 0.6 | | 2.2 | 0.3 | |
| Delay (s) | 65.9 | 16.9 | 12.4 | 72.0 | 23.3 | 20.7 | 68.2 | 67.6 | | 59.5 | 52.8 | |
| Level of Service | E | B | B | E | C | C | E | E | | E | D | |
| Approach Delay (s) | | 23.3 | | | 23.4 | | | 67.8 | | | 57.9 | |
| Approach LOS | | C | | | C | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 31.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 60.8% | 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 | | | | | | | | | | | | |
| Traffic Volume (vph) | 207 | 713 | 23 | 23 | 1082 | 443 | 55 | 50 | 27 | 472 | 27 | 245 |
| Future Volume (vph) | 207 | 713 | 23 | 23 | 1082 | 443 | 55 | 50 | 27 | 472 | 27 | 245 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.93 | 1.00 | 1.00 | 0.97 | 1.00 | 0.99 | | 1.00 | 0.95 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.86 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1787 | 3539 | 1498 | 1805 | 3574 | 1547 | 1805 | 1774 | | 3467 | 1552 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1787 | 3539 | 1498 | 1805 | 3574 | 1547 | 1805 | 1774 | | 3467 | 1552 | |
| 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) | 225 | 775 | 25 | 25 | 1176 | 482 | 60 | 54 | 29 | 513 | 29 | 266 |
| RTOR Reduction (vph) | 0 | 0 | 12 | 0 | 0 | 180 | 0 | 13 | 0 | 0 | 200 | 0 |
| Lane Group Flow (vph) | 225 | 775 | 13 | 25 | 1176 | 302 | 60 | 70 | 0 | 513 | 95 | 0 |
| Confl. Peds. (#/hr) | | | 20 | | | 13 | | | 22 | | | 28 |
| Heavy Vehicles (%) | 1% | 2% | 0% | 0% | 1% | 1% | 0% | 0% | 0% | 1% | 0% | 1% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Split | NA | | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | 2 | | | | | | |
| Actuated Green, G (s) | 20.2 | 76.4 | 76.4 | 5.8 | 61.4 | 61.4 | 10.5 | 10.5 | | 29.5 | 29.5 | |
| Effective Green, g (s) | 22.6 | 78.1 | 78.1 | 7.6 | 63.1 | 63.1 | 12.3 | 12.3 | | 32.0 | 32.0 | |
| Actuated g/C Ratio | 0.15 | 0.52 | 0.52 | 0.05 | 0.42 | 0.42 | 0.08 | 0.08 | | 0.21 | 0.21 | |
| Clearance Time (s) | 7.4 | 6.7 | 6.7 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | | 7.5 | 7.5 | |
| Vehicle Extension (s) | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 269 | 1842 | 779 | 91 | 1503 | 650 | 148 | 145 | | 739 | 331 | |
| v/s Ratio Prot | c0.13 | 0.22 | | 0.01 | c0.33 | | 0.03 | c0.04 | | c0.15 | 0.06 | |
| v/s Ratio Perm | | | 0.01 | | | 0.20 | | | | | | |
| v/c Ratio | 0.84 | 0.42 | 0.02 | 0.27 | 0.78 | 0.46 | 0.41 | 0.48 | | 0.69 | 0.29 | |
| Uniform Delay, d1 | 61.9 | 22.1 | 17.4 | 68.5 | 37.5 | 31.3 | 65.4 | 65.8 | | 54.5 | 49.4 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 20.4 | 0.7 | 0.0 | 2.2 | 4.1 | 2.4 | 1.8 | 2.5 | | 3.1 | 0.7 | |
| Delay (s) | 82.3 | 22.8 | 17.4 | 70.8 | 41.7 | 33.7 | 67.2 | 68.3 | | 57.5 | 50.1 | |
| Level of Service | F | C | B | E | D | C | E | E | | E | D | |
| Approach Delay (s) | | 35.7 | | | 39.8 | | | 67.9 | | | 54.8 | |
| Approach LOS | | D | | | D | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 43.1 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 87.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

# Prices Fork Road and Old Glade Road

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.6 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 261 | 1010 | 539 | 23 | 0 | 316 |
| Future Vol, veh/h | 261 | 1010 | 539 | 23 | 0 | 316 |
| Conflicting Peds, #/hr | 6 | 0 | 0 | 6 | 0 | 6 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Stop |
| Storage Length | 225 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 4 | 8 | 6 | 0 | 2 |
| Mvmt Flow | 284 | 1098 | 586 | 25 | 0 | 343 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 617 | 0 | - | 0 | - | 318 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | 4.18 | - | - | - | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | 2.24 | - | - | - | - | 3.32 |
| Pot Cap-1 Maneuver | 945 | - | - | - | 0 | 678 |
| Stage 1 | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | 0 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 940 | - | - | - | - | 670 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 2.2 | 0 | 15.9 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 940 | - | - | - | 670 |
| HCM Lane V/C Ratio | 0.302 | - | - | - | 0.513 |
| HCM Control Delay (s) | 10.5 | - | - | - | 15.9 |
| HCM Lane LOS | B | - | - | - | C |
| HCM 95th %tile Q(veh) | 1.3 | - | - | - | 2.9 |

## 2: Prices Fork Road & Old Glade Road Performance by approach

| Approach | EB | WB | SB | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.3 | 0.0 | 0.0 | 0.3 |
| Total Delay (hr) | 2.0 | 0.4 | 0.4 | 2.7 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 19.4 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 368 | 943 | 1290 | 92 | 0 | 348 |
| Future Vol, veh/h | 368 | 943 | 1290 | 92 | 0 | 348 |
| Conflicting Peds, #/hr | 12 | 0 | 0 | 12 | 0 | 12 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Stop |
| Storage Length | 225 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 0 | 2 |
| Mvmt Flow | 396 | 1014 | 1387 | 99 | 0 | 374 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1498 | 0 | - | 0 | - | 767 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | 4.1 | - | - | - | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | 2.2 | - | - | - | - | 3.32 |
| Pot Cap-1 Maneuver | 454 | - | - | - | 0 | ~ 345 |
| Stage 1 | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | 0 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 449 | - | - | - | - | ~ 337 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 13.7 | 0 | 117.7 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 449 | - | - | - | 337 |
| HCM Lane V/C Ratio | 0.881 | - | - | - | 1.11 |
| HCM Control Delay (s) | 48.7 | - | - | - | 117.7 |
| HCM Lane LOS | E | - | - | - | F |
| HCM 95th %tile Q(veh) | 9.3 | - | - | - | 14.4 |

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

## 2: Prices Fork Road & Old Glade Road Performance by approach

| Approach | EB | WB | SB | All |
|---|---|---|---|---|
| Denied Del/Veh (s) | 2.3 | 0.0 | 0.0 | 1.0 |
| Total Del/Veh (s) | 29.1 | 5.0 | 23.7 | 17.5 |

# University City Boulevard and Glade Road

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 81 | 37 | 160 | 70 | 33 | 17 | 38 | 100 | 0 | 48 | 192 | 85 |
| Future Volume (veh/h) | 81 | 37 | 160 | 70 | 33 | 17 | 38 | 100 | 0 | 48 | 192 | 85 |
| Number | 3 | 8 | 18 | 7 | 4 | 14 | 1 | 6 | 16 | 5 | 2 | 12 |
| Initial Q, veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj (A_pbT) | 0.99 | | 0.99 | 0.99 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Lanes Open During Work Zone | | | | | | | | | | | | |
| Adj Sat Flow, veh/h/ln | 1767 | 1900 | 1870 | 1885 | 1900 | 1900 | 1826 | 1707 | 1900 | 1870 | 1796 | 1781 |
| Adj Flow Rate, veh/h | 88 | 40 | 174 | 76 | 36 | 18 | 41 | 109 | 0 | 52 | 209 | 92 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 9 | 0 | 2 | 1 | 0 | 0 | 5 | 13 | 0 | 2 | 7 | 8 |
| Opposing Right Turn Influence | Yes | | | Yes | | | Yes | | | Yes | | |
| Cap, veh/h | 269 | 112 | 331 | 172 | 80 | 28 | 690 | 2128 | 0 | 269 | 1019 | 439 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Prop Arrive On Green | 0.18 | 0.21 | 0.21 | 0.18 | 0.21 | 0.18 | 0.05 | 0.66 | 0.00 | 0.52 | 0.54 | 0.52 |
| Unsig. Movement Delay | | | | | | | | | | | | |
| Ln Grp Delay, s/veh | 26.9 | 0.0 | 27.6 | 30.8 | 0.0 | 0.0 | 6.6 | 4.6 | 0.0 | 9.6 | 0.0 | 9.8 |
| Ln Grp LOS | C | A | C | C | A | A | A | A | A | A | A | A |
| Approach Vol, veh/h | | 302 | | | 130 | | | 150 | | | 353 | |
| Approach Delay, s/veh | | 27.3 | | | 30.8 | | | 5.2 | | | 9.7 | |
| Approach LOS | | C | | | C | | | A | | | A | |

| Timer: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Case No | 1.2 | 8.3 | | 8.0 | | 4.0 | | 7.0 |
| Phs Duration (G+Y+Rc), s | 9.0 | 45.2 | | 20.8 | | 54.2 | | 20.8 |
| Change Period (Y+Rc), s | 6.1 | 6.1 | | * 7.2 | | 6.1 | | * 7.2 |
| Max Green (Gmax), s | 8.9 | 28.9 | | * 18 | | 43.9 | | * 18 |
| Max Allow Headway (MAH), s | 4.5 | 10.6 | | 4.7 | | 10.5 | | 4.6 |
| Max Q Clear (g_c+I1), s | 2.7 | 6.5 | | 12.8 | | 2.9 | | 9.4 |
| Green Ext Time (g_e), s | 0.0 | 7.1 | | 0.2 | | 2.6 | | 0.8 |
| Prob of Phs Call (p_c) | 0.57 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| Prob of Max Out (p_x) | 0.13 | 0.00 | | 0.84 | | 0.00 | | 0.17 |

| Left-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | | 7 | | | | 3 |
| Mvmt Sat Flow, veh/h | 1739 | 387 | | 453 | | | | 895 |

| Through Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 2 | | 4 | | 6 | | 8 |
| Mvmt Sat Flow, veh/h | | 1899 | | 381 | | 3329 | | 534 |

| Right-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 12 | | 14 | | 16 | | 18 |
| Mvmt Sat Flow, veh/h | | 818 | | 134 | | 0 | | 1572 |

| Left Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 3 |
| Lane Assignment | L (Pr/Pm) | L+T | | L+T+R | | | | L+T |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lanes in Grp | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 41 | 186 | 0 | 130 | 0 | 0 | 0 | 128 |
| Grp Sat Flow (s), veh/h/ln | 1739 | 1619 | 0 | 969 | 0 | 0 | 0 | 1429 |
| Q Serve Time (g_s), s | 0.7 | 0.0 | 0.0 | 4.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.7 | 4.1 | 0.0 | 10.8 | 0.0 | 0.0 | 0.0 | 5.9 |
| Perm LT Sat Flow (s_l), veh/h/ln | 1052 | 1303 | 0 | 1179 | 0 | 0 | 0 | 1364 |
| Shared LT Sat Flow (s_sh), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1367 |
| Perm LT Eff Green (g_p), s | 40.2 | 39.1 | 0.0 | 13.6 | 0.0 | 0.0 | 0.0 | 13.6 |
| Perm LT Serve Time (g_u), s | 35.8 | 39.1 | 0.0 | 7.7 | 0.0 | 0.0 | 0.0 | 2.8 |
| Perm LT Q Serve Time (g_ps), s | 0.2 | 0.0 | 0.0 | 4.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time to First Blk (g_f), s | 0.0 | 5.1 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.9 |
| Serve Time pre Blk (g_fs), s | 0.0 | 4.1 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.9 |
| Prop LT Inside Lane (P_L) | 1.00 | 0.28 | 0.00 | 0.58 | 0.00 | 0.00 | 0.00 | 0.69 |
| Lane Grp Cap (c), veh/h | 690 | 906 | 0 | 252 | 0 | 0 | 0 | 340 |
| V/C Ratio (X) | 0.06 | 0.21 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 0.38 |
| Avail Cap (c_a), veh/h | 829 | 906 | 0 | 329 | 0 | 0 | 0 | 424 |
| Upstream Filter (I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 6.6 | 9.1 | 0.0 | 29.2 | 0.0 | 0.0 | 0.0 | 26.2 |
| Incr Delay (d2), s/veh | 0.0 | 0.5 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.7 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 6.6 | 9.6 | 0.0 | 30.8 | 0.0 | 0.0 | 0.0 | 26.9 |
| 1st-Term Q (Q1), veh/ln | 0.2 | 1.5 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 2.1 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.3 | 1.7 | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 | 2.1 |
| %ile Storage Ratio (RQ%) | 0.03 | 0.14 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.11 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Middle Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 8 |
| Lane Assignment | | | | | | T | | |
| Lanes in Grp | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Grp Vol (v), veh/h | 0 | 0 | 0 | 0 | 0 | 109 | 0 | 0 |
| Grp Sat Flow (s), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 1622 | 0 | 0 |
| Q Serve Time (g_s), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| Lane Grp Cap (c), veh/h | 0 | 0 | 0 | 0 | 0 | 2128 | 0 | 0 |
| V/C Ratio (X) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Avail Cap (c_a), veh/h | 0 | 0 | 0 | 0 | 0 | 2128 | 0 | 0 |
| Upstream Filter (I) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d1), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.6 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.6 | 0.0 | 0.0 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

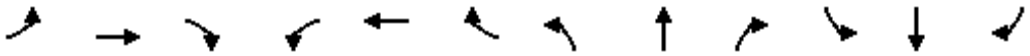
| Right Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 |
| Lane Assignment | | T+R | | | | | | R |
| Lanes in Grp | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 0 | 167 | 0 | 0 | 0 | 0 | 0 | 174 |
| Grp Sat Flow (s), veh/h/ln | 0 | 1485 | 0 | 0 | 0 | 0 | 0 | 1572 |
| Q Serve Time (g_s), s | 0.0 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.4 |
| Cycle Q Clear Time (g_c), s | 0.0 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.4 |
| Prot RT Sat Flow (s_R), veh/h/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prot RT Eff Green (g_R), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prop RT Outside Lane (P_R) | 0.00 | 0.55 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 1.00 |
| Lane Grp Cap (c), veh/h | 0 | 797 | 0 | 0 | 0 | 0 | 0 | 331 |
| V/C Ratio (X) | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.53 |
| Avail Cap (c_a), veh/h | 0 | 797 | 0 | 0 | 0 | 0 | 0 | 419 |
| Upstream Filter (I) | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 0.0 | 9.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 26.3 |
| Incr Delay (d2), s/veh | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 9.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27.6 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.48 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 17.6 |
| HCM 6th LOS | B |

Notes

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

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



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 104 | 16 | 181 | 51 | 20 | 40 | 209 | 372 | 4 | 31 | 272 | 147 |
| Future Volume (veh/h) | 104 | 16 | 181 | 51 | 20 | 40 | 209 | 372 | 4 | 31 | 272 | 147 |
| Number | 3 | 8 | 18 | 7 | 4 | 14 | 1 | 6 | 16 | 5 | 2 | 12 |
| Initial Q, veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj (A_pbT) | 0.98 | | 0.97 | 0.98 | | 0.97 | 0.99 | | 0.98 | 0.99 | | 0.97 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Lanes Open During Work Zone | | | | | | | | | | | | |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1885 | 1900 | 1900 | 1856 | 1885 |
| Adj Flow Rate, veh/h | 108 | 17 | 189 | 53 | 21 | 42 | 218 | 388 | 4 | 32 | 283 | 153 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 |
| Opposing Right Turn Influence | Yes | | | Yes | | | Yes | | | Yes | | |
| Cap, veh/h | 312 | 44 | 347 | 138 | 68 | 77 | 653 | 2342 | 24 | 118 | 955 | 491 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Prop Arrive On Green | 0.19 | 0.22 | 0.22 | 0.19 | 0.22 | 0.19 | 0.11 | 0.65 | 0.63 | 0.46 | 0.47 | 0.46 |
| Unsig. Movement Delay | | | | | | | | | | | | |
| Ln Grp Delay, s/veh | 27.1 | 0.0 | 27.2 | 28.7 | 0.0 | 0.0 | 8.3 | 5.6 | 5.6 | 13.1 | 0.0 | 13.7 |
| Ln Grp LOS | C | A | C | C | A | A | A | A | A | B | A | B |
| Approach Vol, veh/h | | 314 | | | 116 | | | 610 | | | 468 | |
| Approach Delay, s/veh | | 27.2 | | | 28.7 | | | 6.6 | | | 13.4 | |
| Approach LOS | | C | | | C | | | A | | | B | |

| Timer: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Case No | 1.2 | 8.3 | | 8.0 | | 4.0 | | 7.0 |
| Phs Duration (G+Y+Rc), s | 13.0 | 40.4 | | 21.6 | | 53.4 | | 21.6 |
| Change Period (Y+Rc), s | 6.1 | 6.1 | | * 7.2 | | 6.1 | | * 7.2 |
| Max Green (Gmax), s | 18.9 | 18.9 | | * 18 | | 43.9 | | * 18 |
| Max Allow Headway (MAH), s | 4.5 | 10.6 | | 4.8 | | 10.4 | | 4.7 |
| Max Q Clear (g_c+I1), s | 6.3 | 8.9 | | 12.3 | | 5.2 | | 10.0 |
| Green Ext Time (g_e), s | 0.7 | 5.3 | | 0.2 | | 10.1 | | 0.8 |
| Prob of Phs Call (p_c) | 0.99 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| Prob of Max Out (p_x) | 0.01 | 0.00 | | 0.60 | | 0.00 | | 0.25 |

| Left-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | | 7 | | | | 3 |
| Mvmt Sat Flow, veh/h | 1810 | 135 | | 309 | | | | 1006 |

| Through Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 2 | | 4 | | 6 | | 8 |
| Mvmt Sat Flow, veh/h | | 2026 | | 305 | | 3631 | | 200 |

| Right-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 12 | | 14 | | 16 | | 18 |
| Mvmt Sat Flow, veh/h | | 1041 | | 349 | | 37 | | 1564 |

| Left Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 3 |
| Lane Assignment | L (Pr/Pm) | L+T | | L+T+R | | | | L+T |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lanes in Grp | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 218 | 252 | 0 | 116 | 0 | 0 | 0 | 125 |
| Grp Sat Flow (s), veh/h/ln | 1810 | 1733 | 0 | 963 | 0 | 0 | 0 | 1206 |
| Q Serve Time (g_s), s | 4.3 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 4.3 | 6.3 | 0.0 | 10.3 | 0.0 | 0.0 | 0.0 | 7.4 |
| Perm LT Sat Flow (s_l), veh/h/ln | 959 | 993 | 0 | 1173 | 0 | 0 | 0 | 1334 |
| Shared LT Sat Flow (s_sh), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1110 |
| Perm LT Eff Green (g_p), s | 35.4 | 34.3 | 0.0 | 14.4 | 0.0 | 0.0 | 0.0 | 14.4 |
| Perm LT Serve Time (g_u), s | 28.4 | 34.3 | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 | 4.1 |
| Perm LT Q Serve Time (g_ps), s | 2.0 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time to First Blk (g_f), s | 0.0 | 12.4 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.3 |
| Serve Time pre Blk (g_fs), s | 0.0 | 6.3 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.3 |
| Prop LT Inside Lane (P_L) | 1.00 | 0.13 | 0.00 | 0.46 | 0.00 | 0.00 | 0.00 | 0.86 |
| Lane Grp Cap (c), veh/h | 653 | 845 | 0 | 255 | 0 | 0 | 0 | 321 |
| V/C Ratio (X) | 0.33 | 0.30 | 0.00 | 0.45 | 0.00 | 0.00 | 0.00 | 0.39 |
| Avail Cap (c_a), veh/h | 942 | 845 | 0 | 318 | 0 | 0 | 0 | 384 |
| Upstream Filter (I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 8.0 | 12.2 | 0.0 | 27.4 | 0.0 | 0.0 | 0.0 | 26.3 |
| Incr Delay (d2), s/veh | 0.3 | 0.9 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.8 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 8.3 | 13.1 | 0.0 | 28.7 | 0.0 | 0.0 | 0.0 | 27.1 |
| 1st-Term Q (Q1), veh/ln | 1.5 | 2.5 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 2.1 |
| 2nd-Term Q (Q2), veh/ln | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 1.6 | 2.7 | 0.0 | 2.1 | 0.0 | 0.0 | 0.0 | 2.1 |
| %ile Storage Ratio (RQ%) | 0.20 | 0.23 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.10 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Middle Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 8 |
| Lane Assignment | | | | | | T | | |
| Lanes in Grp | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Grp Vol (v), veh/h | 0 | 0 | 0 | 0 | 0 | 191 | 0 | 0 |
| Grp Sat Flow (s), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 1791 | 0 | 0 |
| Q Serve Time (g_s), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 | 0.0 |
| Lane Grp Cap (c), veh/h | 0 | 0 | 0 | 0 | 0 | 1155 | 0 | 0 |
| V/C Ratio (X) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 |
| Avail Cap (c_a), veh/h | 0 | 0 | 0 | 0 | 0 | 1155 | 0 | 0 |
| Upstream Filter (I) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d1), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.6 | 0.0 | 0.0 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Right Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 |
| Lane Assignment | | T+R | | | | T+R | | R |
| Lanes in Grp | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Grp Vol (v), veh/h | 0 | 216 | 0 | 0 | 0 | 201 | 0 | 189 |
| Grp Sat Flow (s), veh/h/ln | 0 | 1469 | 0 | 0 | 0 | 1878 | 0 | 1564 |
| Q Serve Time (g_s), s | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 | 8.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 | 8.0 |
| Prot RT Sat Flow (s_R), veh/h/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prot RT Eff Green (g_R), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prop RT Outside Lane (P_R) | 0.00 | 0.71 | 0.00 | 0.36 | 0.00 | 0.02 | 0.00 | 1.00 |
| Lane Grp Cap (c), veh/h | 0 | 693 | 0 | 0 | 0 | 1211 | 0 | 347 |
| V/C Ratio (X) | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.17 | 0.00 | 0.55 |
| Avail Cap (c_a), veh/h | 0 | 693 | 0 | 0 | 0 | 1211 | 0 | 417 |
| Upstream Filter (I) | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 0.0 | 12.6 | 0.0 | 0.0 | 0.0 | 5.3 | 0.0 | 25.8 |
| Incr Delay (d2), s/veh | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 1.3 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 13.7 | 0.0 | 0.0 | 0.0 | 5.6 | 0.0 | 27.2 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 2.2 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 2.9 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 3.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.51 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 14.7 |
| HCM 6th LOS | B |

Notes

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

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

# Glade Road and Old Glade Road

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.9 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 202 | 239 | 121 | 48 | 113 | 104 |
| Future Vol, veh/h | 202 | 239 | 121 | 48 | 113 | 104 |
| Conflicting Peds, #/hr | 0 | 0 | 1 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 50 | - | - | 125 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 2 | 4 | 8 | 7 | 11 |
| Mvmt Flow | 220 | 260 | 132 | 52 | 123 | 113 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 481 | 0 | 537 | 222 |
| Stage 1 | - | - | - | - | 221 | - |
| Stage 2 | - | - | - | - | 316 | - |
| Critical Hdwy | - | - | 4.14 | - | 6.47 | 6.31 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.236 | - | 3.563 | 3.399 |
| Pot Cap-1 Maneuver | - | - | 1071 | - | 496 | 796 |
| Stage 1 | - | - | - | - | 804 | - |
| Stage 2 | - | - | - | - | 728 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1070 | - | 433 | 794 |
| Mov Cap-2 Maneuver | - | - | - | - | 433 | - |
| Stage 1 | - | - | - | - | 803 | - |
| Stage 2 | - | - | - | - | 636 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.3 | 13.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 433 | 794 | - | - | 1070 | - |
| HCM Lane V/C Ratio | 0.284 | 0.142 | - | - | 0.123 | - |
| HCM Control Delay (s) | 16.6 | 10.3 | - | - | 8.8 | 0 |
| HCM Lane LOS | C | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.2 | 0.5 | - | - | 0.4 | - |

## 4: Old Glade Road & Glade Road Performance by approach

| Approach | EB | WB | NB | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.2 | 0.2 | 0.4 | 0.8 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 29.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 164 | 138 | 156 | 212 | 307 | 139 |
| Future Vol, veh/h | 164 | 138 | 156 | 212 | 307 | 139 |
| Conflicting Peds, #/hr | 0 | 1 | 0 | 0 | 1 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 50 | - | - | 125 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 4 | 0 | 1 | 0 | 1 |
| Mvmt Flow | 178 | 150 | 170 | 230 | 334 | 151 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 329 | 0 | 750 | 179 |
| Stage 1 | - | - | - | - | 179 | - |
| Stage 2 | - | - | - | - | 571 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.309 |
| Pot Cap-1 Maneuver | - | - | 1242 | - | 382 | 866 |
| Stage 1 | - | - | - | - | 857 | - |
| Stage 2 | - | - | - | - | 569 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1241 | - | ~ 321 | 865 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 321 | - |
| Stage 1 | - | - | - | - | 856 | - |
| Stage 2 | - | - | - | - | 479 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 3.5 | 70.6 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 321 | 865 | - | - | 1241 | - |
| HCM Lane V/C Ratio | 1.04 | 0.175 | - | - | 0.137 | - |
| HCM Control Delay (s) | 98.1 | 10 | - | - | 8.4 | 0 |
| HCM Lane LOS | F | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 12 | 0.6 | - | - | 0.5 | - |

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

## 4: Old Glade Road & Glade Road Performance by approach

| Approach | EB | WB | NB | All |
|---|---|---|---|---|
| Denied Del/Veh (s) | 0.4 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 1.2 | 2.6 | 16.5 | 7.8 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10.6 |
| Intersection LOS | B |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 202 | 239 | 121 | 48 | 113 | 104 |
| Future Vol, veh/h | 202 | 239 | 121 | 48 | 113 | 104 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 0 | 2 | 4 | 8 | 7 | 11 |
| Mvmt Flow | 220 | 260 | 132 | 52 | 123 | 113 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 1 |

| Approach | EB | WB | NB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 1 | 2 | 0 |
| Conflicting Approach Left | | NB | EB |
| Conflicting Lanes Left | 0 | 2 | 2 |
| Conflicting Approach Right | NB | | WB |
| Conflicting Lanes Right | 2 | 0 | 1 |
| HCM Control Delay | 10.4 | 11.2 | 10.5 |
| HCM LOS | B | B | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 |
|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 0% | 0% | 72% |
| Vol Thru, % | 0% | 0% | 100% | 0% | 28% |
| Vol Right, % | 0% | 100% | 0% | 100% | 0% |
| Sign Control | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 113 | 104 | 202 | 239 | 169 |
| LT Vol | 113 | 0 | 0 | 0 | 121 |
| Through Vol | 0 | 0 | 202 | 0 | 48 |
| RT Vol | 0 | 104 | 0 | 239 | 0 |
| Lane Flow Rate | 123 | 113 | 220 | 260 | 184 |
| Geometry Grp | 7 | 7 | 7 | 7 | 4 |
| Degree of Util (X) | 0.23 | 0.176 | 0.329 | 0.34 | 0.295 |
| Departure Headway (Hd) | 6.733 | 5.589 | 5.388 | 4.717 | 5.786 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes |
| Cap | 536 | 645 | 661 | 753 | 625 |
| Service Time | 4.441 | 3.296 | 3.18 | 2.508 | 3.786 |
| HCM Lane V/C Ratio | 0.229 | 0.175 | 0.333 | 0.345 | 0.294 |
| HCM Control Delay | 11.4 | 9.5 | 10.8 | 10 | 11.2 |
| HCM Lane LOS | B | A | B | A | B |
| HCM 95th-tile Q | 0.9 | 0.6 | 1.4 | 1.5 | 1.2 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 18.5 |
| Intersection LOS | C |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 164 | 138 | 156 | 212 | 307 | 139 |
| Future Vol, veh/h | 164 | 138 | 156 | 212 | 307 | 139 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 0 | 4 | 0 | 1 | 0 | 1 |
| Mvmt Flow | 178 | 150 | 170 | 230 | 334 | 151 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 1 |

| Approach | EB | WB | NB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 1 | 2 | 0 |
| Conflicting Approach Left | | NB | EB |
| Conflicting Lanes Left | 0 | 2 | 2 |
| Conflicting Approach Right | NB | | WB |
| Conflicting Lanes Right | 2 | 0 | 1 |
| HCM Control Delay | 11.9 | 23.5 | 18.9 |
| HCM LOS | B | C | C |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 |
|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 0% | 0% | 42% |
| Vol Thru, % | 0% | 0% | 100% | 0% | 58% |
| Vol Right, % | 0% | 100% | 0% | 100% | 0% |
| Sign Control | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 307 | 139 | 164 | 138 | 368 |
| LT Vol | 307 | 0 | 0 | 0 | 156 |
| Through Vol | 0 | 0 | 164 | 0 | 212 |
| RT Vol | 0 | 139 | 0 | 138 | 0 |
| Lane Flow Rate | 334 | 151 | 178 | 150 | 400 |
| Geometry Grp | 7 | 7 | 7 | 7 | 4 |
| Degree of Util (X) | 0.658 | 0.247 | 0.333 | 0.253 | 0.708 |
| Departure Headway (Hd) | 7.097 | 5.895 | 6.718 | 6.072 | 6.373 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes |
| Cap | 507 | 607 | 533 | 588 | 564 |
| Service Time | 4.858 | 3.655 | 4.493 | 3.847 | 4.435 |
| HCM Lane V/C Ratio | 0.659 | 0.249 | 0.334 | 0.255 | 0.709 |
| HCM Control Delay | 22.6 | 10.6 | 12.8 | 10.9 | 23.5 |
| HCM Lane LOS | C | B | B | B | C |
| HCM 95th-tile Q | 4.7 | 1 | 1.5 | 1 | 5.7 |

# Glade Road and Site Access

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

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 308 | 104 | 31 | 89 | 5 |
| Future Vol, veh/h | 2 | 308 | 104 | 31 | 89 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 100 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 335 | 113 | 34 | 97 | 5 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 147 | 0 | - | 0 | 452 | 113 |
| Stage 1 | - | - | - | - | 113 | - |
| Stage 2 | - | - | - | - | 339 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1435 | - | - | - | 565 | 940 |
| Stage 1 | - | - | - | - | 912 | - |
| Stage 2 | - | - | - | - | 722 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1435 | - | - | - | 564 | 940 |
| Mov Cap-2 Maneuver | - | - | - | - | 564 | - |
| Stage 1 | - | - | - | - | 910 | - |
| Stage 2 | - | - | - | - | 722 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 12.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1435 | - | - | - | 576 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.177 |
| HCM Control Delay (s) | 7.5 | 0 | - | - | 12.6 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.6 |

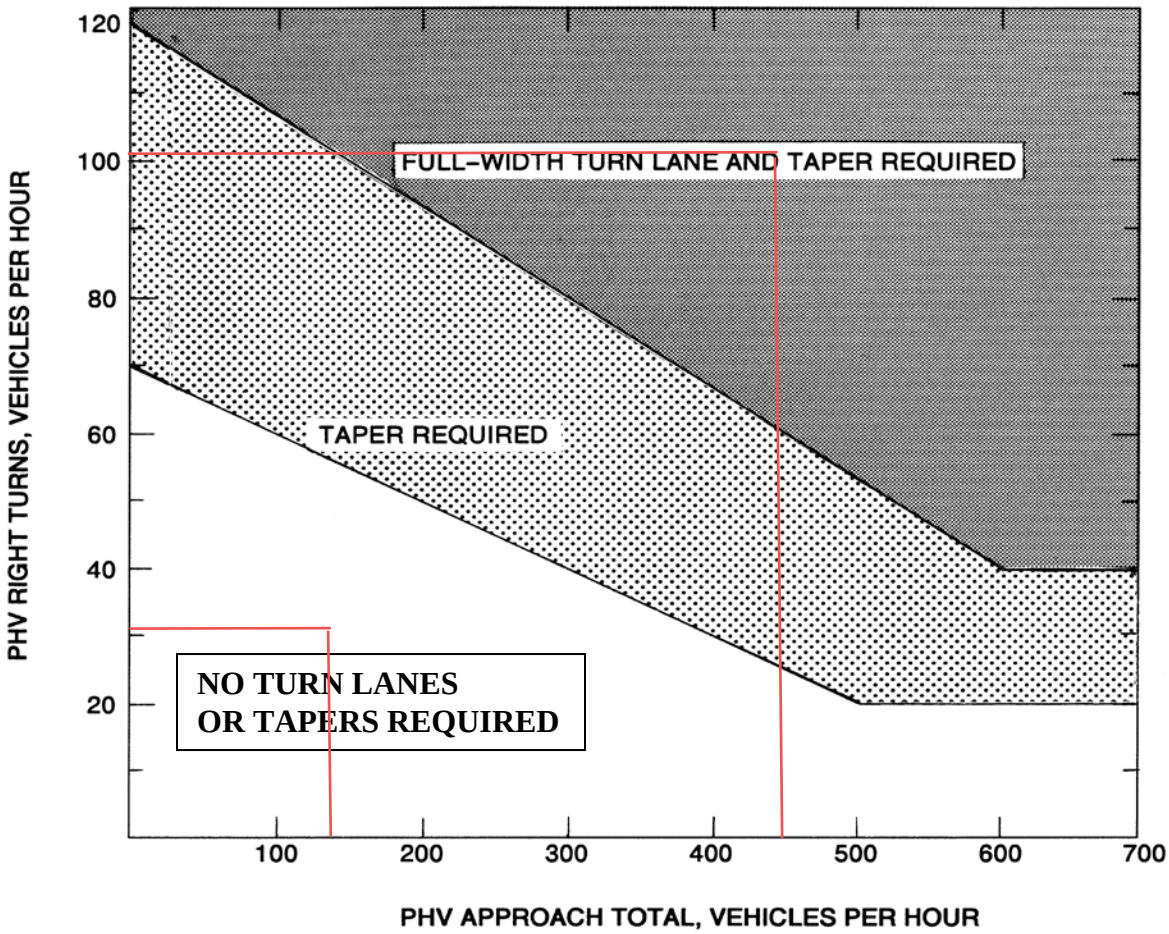
| Intersection | |
|---|---|
| Int Delay, s/veh | 1.3 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 185 | 343 | 104 | 61 | 3 |
| Future Vol, veh/h | 5 | 185 | 343 | 104 | 61 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 100 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 201 | 373 | 113 | 66 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 486 | 0 | - | 0 | 584 | 373 |
| Stage 1 | - | - | - | - | 373 | - |
| Stage 2 | - | - | - | - | 211 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1077 | - | - | - | 474 | 673 |
| Stage 1 | - | - | - | - | 696 | - |
| Stage 2 | - | - | - | - | 824 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1077 | - | - | - | 472 | 673 |
| Mov Cap-2 Maneuver | - | - | - | - | 472 | - |
| Stage 1 | - | - | - | - | 693 | - |
| Stage 2 | - | - | - | - | 824 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.2 | 0 | 13.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1077 | - | - | - | 479 |
| HCM Lane V/C Ratio | 0.005 | - | - | - | 0.145 |
| HCM Control Delay (s) | 8.4 | 0 | - | - | 13.8 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.5 |




Appropriate Radius required at all Intersections and Entrances (Commercial or Private).

**LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

**Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.
Adjusted right turns = PHV Right Turns - 20
If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour
D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.

When right turn facilities are warranted, see Figure 3-1 for design criteria.*

**FIGURE 3-26 WARRANTS FOR RIGHT TURN TREATMENT (2-LANE HIGHWAY)**

* Rev. 1/15

# APPENDIX D

## SIMTRAFFIC QUEUEING REPORTS

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 230 | 265 | 252 | 89 | 46 | 328 | 288 | 132 | 76 | 77 | 274 | 488 |
| Average Queue (ft) | 144 | 174 | 149 | 15 | 9 | 150 | 109 | 36 | 18 | 19 | 163 | 218 |
| 95th Queue (ft) | 233 | 302 | 273 | 56 | 32 | 279 | 237 | 87 | 52 | 55 | 277 | 386 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 2 | 7 | 1 | 0 | | | | | | | | 0 |
| Queuing Penalty (veh) | 0 | 37 | 6 | 0 | | | | | | | | 0 |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 14 | 13 | 8 | | | 11 | 0 | | | | 8 | 21 |
| Queuing Penalty (veh) | 58 | 18 | 4 | | | 1 | 1 | | | | 14 | 36 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 214 |
| Average Queue (ft) | 65 |
| 95th Queue (ft) | 160 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 205 | 300 | 232 | 109 | 50 | 114 |
| Average Queue (ft) | 70 | 48 | 24 | 3 | 1 | 9 |
| 95th Queue (ft) | 141 | 185 | 128 | 30 | 9 | 64 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | 0 | 1 | | | | |
| Queuing Penalty (veh) | 0 | 3 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 197 | 114 | 164 | 54 | 79 | 4 | 124 | 104 |
| Average Queue (ft) | 82 | 43 | 76 | 16 | 22 | 0 | 55 | 38 |
| 95th Queue (ft) | 150 | 83 | 139 | 41 | 60 | 3 | 104 | 85 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 1 | | | | | | | |
| Queuing Penalty (veh) | 2 | | | | | | | |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | WB | NB | NB |
|---|---|---|---|---|
| Directions Served | R | LT | L | R |
| Maximum Queue (ft) | 54 | 77 | 93 | 85 |
| Average Queue (ft) | 7 | 31 | 45 | 39 |
| 95th Queue (ft) | 35 | 66 | 81 | 68 |
| Link Distance (ft) | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 50 | | 125 | |
| Storage Blk Time (%) | 0 | | | |
| Queuing Penalty (veh) | 0 | | | |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 10 | 27 | 36 | 74 |
| Average Queue (ft) | 0 | 1 | 18 | 38 |
| 95th Queue (ft) | 5 | 13 | 39 | 61 |
| Link Distance (ft) | 692 | 617 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 8: Glade Road & Site Access

| Movement | EB | SB |
|---|---|---|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 12 | 69 |
| Average Queue (ft) | 0 | 31 |
| 95th Queue (ft) | 6 | 55 |
| Link Distance (ft) | 617 | 1018 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Network Summary

Network wide Queuing Penalty: 180

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 240 | 291 | 257 | 238 | 249 | 690 | 695 | 325 | 172 | 203 | 275 | 761 |
| Average Queue (ft) | 195 | 199 | 162 | 14 | 55 | 376 | 349 | 167 | 69 | 94 | 243 | 689 |
| 95th Queue (ft) | 273 | 350 | 315 | 88 | 172 | 733 | 732 | 384 | 162 | 191 | 311 | 894 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 12 | 21 | 3 | 0 | | 2 | 3 | | | | | 57 |
| Queuing Penalty (veh) | 0 | 100 | 13 | 0 | | 0 | 0 | | | | | 0 |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 43 | 20 | 14 | | 0 | 35 | 23 | | 2 | 2 | 69 | 77 |
| Queuing Penalty (veh) | 153 | 42 | 3 | | 0 | 8 | 102 | | 1 | 1 | 163 | 181 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 755 |
| Average Queue (ft) | 641 |
| 95th Queue (ft) | 948 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | 44 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 325 | 600 | 562 | 202 | 199 | 437 |
| Average Queue (ft) | 270 | 359 | 201 | 30 | 20 | 204 |
| 95th Queue (ft) | 401 | 732 | 552 | 134 | 101 | 456 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | 12 | 0 | 0 | 0 | |
| Queuing Penalty (veh) | | 0 | 0 | 1 | 0 | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | 42 | 8 | | | | |
| Queuing Penalty (veh) | 202 | 29 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 197 | 117 | 164 | 137 | 154 | 121 | 170 | 145 |
| Average Queue (ft) | 97 | 47 | 74 | 57 | 68 | 13 | 79 | 66 |
| 95th Queue (ft) | 175 | 72 | 136 | 106 | 132 | 60 | 134 | 122 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 3 | | | 0 | 0 | | 0 | 0 |
| Queuing Penalty (veh) | 6 | | | 0 | 0 | | 0 | 0 |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | WB | NB | NB |
|---|---|---|---|---|
| Directions Served | R | LT | L | R |
| Maximum Queue (ft) | 41 | 76 | 215 | 208 |
| Average Queue (ft) | 4 | 33 | 114 | 59 |
| 95th Queue (ft) | 26 | 70 | 213 | 192 |
| Link Distance (ft) | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 50 | | 125 | |
| Storage Blk Time (%) | 0 | | 14 | |
| Queuing Penalty (veh) | 0 | | 19 | |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 43 | 54 | 40 | 50 |
| Average Queue (ft) | 3 | 7 | 18 | 24 |
| 95th Queue (ft) | 19 | 32 | 40 | 49 |
| Link Distance (ft) | 692 | 617 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 8: Glade Road & Site Access

| Movement | EB | SB |
|---|---|---|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 45 | 54 |
| Average Queue (ft) | 4 | 24 |
| 95th Queue (ft) | 22 | 42 |
| Link Distance (ft) | 617 | 1018 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Network Summary

Network wide Queuing Penalty: 1025

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | EB | WB | NB | NB |
|---|---|---|---|---|---|
| Directions Served | T | R | LT | L | R |
| Maximum Queue (ft) | 86 | 98 | 84 | 78 | 76 |
| Average Queue (ft) | 49 | 54 | 46 | 37 | 39 |
| 95th Queue (ft) | 72 | 81 | 74 | 66 | 66 |
| Link Distance (ft) | 1423 | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | 50 | | 125 | |
| Storage Blk Time (%) | 3 | 5 | | 0 | |
| Queuing Penalty (veh) | 8 | 10 | | 0 | |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | EB | WB | NB | NB |
|---|---|---|---|---|---|
| Directions Served | T | R | LT | L | R |
| Maximum Queue (ft) | 75 | 88 | 148 | 179 | 78 |
| Average Queue (ft) | 44 | 45 | 74 | 75 | 39 |
| 95th Queue (ft) | 69 | 72 | 120 | 144 | 67 |
| Link Distance (ft) | 1423 | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | 50 | | 125 | |
| Storage Blk Time (%) | 3 | 2 | | 2 | |
| Queuing Penalty (veh) | 4 | 4 | | 3 | |

# Original TIA

**RAMEY KEMP ASSOCIATES**
*TOGETHER WE ARE LIMITLESS*

T 919 872 5115
5808 Faringdon Pl,
Raleigh, NC 27609

January 11, 2023

Mr. Joshua Middleton
Town Engineer
400 South Main Street
Blacksburg, Virginia 24060
Phone: (540) 443-1353

Reference: **Glade Heights** – Traffic Impact Analysis (TIA)
Town of Blacksburg, Virginia

Dear Mr. Middleton,

Glade Spring Crossing LLC is proposing to construct a residential development bound by Village Way (north), Glade Road (south), US Route 460 (east) and Shadow Lake Road (west). The development plan includes a maximum of 180 single family residences with one (1) new driveway proposed along Glade Road and interconnectivity proposed with Village Way which feeds into Toms Creek Road. If approved, the proposed neighborhood is expected to be built-out by 2026.

Ramey Kemp Associates (RKA) has performed this Traffic Impact Analysis (TIA) in coordination with the Town. Figure 1 shows the site location and study intersections, and Figure 2 shows the preliminary site plan.

**Existing Roadway Conditions**
Prices Fork Road is a four-lane Minor Arterial with an average daily traffic (ADT) volume of approximately 23,000 vehicles per day (vpd) and a posted speed limit of 40 and 35 miles per hour (mph) within the study area. The ADTs are based on the most recent Virginia Department of Transportation (VDOT) Traffic Data publications from 2021.

University City Boulevard is a four-lane Major Collector with an average daily traffic (ADT) volume of approximately 8,300 vehicles per day (vpd) and a posted speed limit of 25 miles per hour (mph) within the study area. The ADTs are based on the most recent VDOT Traffic Data publications from 2021.

Glade Road is a two-lane Major Collector with an average daily traffic (ADT) volume of approximately 2,000 vehicles per day (vpd) and a posted speed limit of 25 miles per hour (mph) in the vicinity of the site. The ADTs are based on the most recent VDOT Traffic Data publications from 2021.

Old Glade Road is a local roadway with an ADT volume of approximately 6,200 vpd and a posted speed limit of 25 mph within the study area. This ADT is based on the traffic counts from 2022 and assuming the weekday PM peak hour volume accounts for 10% of the average daily traffic.

Toms Creek Road is a two-lane Major Collector with an average daily traffic (ADT) volume of approximately 1,800 vehicles per day (vpd) and a posted speed limit of 25 miles per hour (mph) within the study area. The ADTs are based on the most recent VDOT Traffic Data publications from 2021.

Redbud Road is a local roadway with an ADT volume of approximately 720 vpd and a posted speed limit of 25 mph in the vicinity of the site. This ADT is based on the traffic counts from 2022 and assuming the weekday PM peak hour volume accounts for 10% of the average daily traffic.

Honeysuckle Drive is a local roadway with an ADT volume of approximately 1,300 vpd and a posted speed limit of 25 mph in the vicinity of the site. This ADT is based on the traffic counts from 2022 and assuming the weekday PM peak hour volume accounts for 10% of the average daily traffic.

Figure 3 shows the existing traffic control and roadway configurations at the study intersection.

**Existing Traffic Volumes**
The AM peak hour (7:00 to 9:00 AM) and PM peak hour (4:00 to 6:00 PM) turning movement counts were conducted by Burns Services, Inc. at the following intersections during the week of April 7th, 2022:

- Prices Fork Road and University City Boulevard
- Prices Fork Road and Old Glade Road
- University City Boulevard and Glade Road
- Old Glade Road and Glade Road
- Glade Road and Shadow Lake Road
- Toms Creek Road and Redbud Road
- Toms Creek Road and Honeysuckle Drive

Through coordination with the Town, it was determined based on traffic trends, traffic patterns have nearly returned to 'pre-COVID' levels and since counts were taken while school was in session, no traffic adjustments were necessary. The traffic count data is enclosed, and the existing 2022 volumes are shown in Figure 4.

**Approved Developments**
Through coordination with the Town, three (3) approved developments were included in this TIA: Berewick, Sturbridge/The Union, and The Farm. It was assumed that all adjacent developments would be constructed and fully operational by 2026.

The Berewick development is assumed to consist of 76 single family units and is located on Toms Creek Road north of Redbud Road.

The Sturbridge/The Union development consists of 1,038 bedrooms of off-campus student housing and is located on University City Boulevard opposite of Broce Drive.

The Farm development is assumed to consist of 8 single family units and 90 bedrooms of off-campus student housing and is located on Glade Road opposite of Oriole Drive.

**Background Traffic Growth**
Based on discussion with the Town, the 2022 peak hour traffic volumes were grown by an annual rate of 0.5% per year to estimate the no-build 2026 peak hour traffic volumes which are shown in Figure 5.

**Trip Generation**

Table 1 shows a conservative estimate of the trip generation potential of the proposed community based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual – 11th Edition*. It is our understanding that the development is anticipated to consist of some combination of attached and detached single-family housing. However, for the purpose of this TIA, all units were assumed to be detached.

**Table 1: ITE Trip Generation – Weekday – 11th Edition**

| Land Use (ITE Land Use Code) | Size | Weekday Daily Traffic (vpd) | | AM Peak Hour (vph) | | PM Peak Hour (vph) | |
|---|---|---|---|---|---|---|---|
| | | Enter | Exit | Enter | Exit | Enter | Exit |
| Single Family Detached Housing (210) | 180 units | 867 | 867 | 33 | 94 | 109 | 64 |

Based on information contained within the Trip Generation Manual, the development could be expected to generate approximately 1,734 trips on a typical weekday with 127 trips (33 entering and 94 exiting) generated during the AM peak hour and 173 trips (109 entering and 64 exiting) generated during the PM peak hour.

**Site Trip Distribution**
The following site trip distribution was applied based on a review of the existing traffic volumes, the adjacent roadway network, and engineering judgement:

- 10% to / from the north on University City Boulevard
- 40% to / from the east on Prices Fork Road
- 30% to / from the west on Prices Fork Road
- 5% to/from the west on Glade Road
- 15% to/from the east on Toms Creek Road

Figure 6 shows the site trip distribution, Figure 7 shows the site trip assignment, and Figure 8 shows the build 2026 peak hour traffic volumes.

Through coordination with the Town, it was determined that 30% of the existing traffic utilizing Honeysuckle Drive or Redbud Road to access the Village neighborhood to the north of the proposed site would utilize the proposed interconnectivity to access Glade Road instead of continuing to utilize the Toms Creek Road. Therefore, rerouted traffic assumptions for 30% of this traffic were calculated. Refer to Figure 10 for an illustration of the rerouted traffic throughout the study network.

**VDOT Turn Lane Warrant Analysis**
The projected build-out AM and PM peak hour traffic volumes at the proposed entrance on Glade Road were compared to the turn lane warrants in the Virginia Department of Transportation (VDOT) *Access Management Design Standards for Entrances and Intersections*. A westbound right-turn lane along Glade Road is warranted at the proposed site access.

**Traffic Capacity Analysis**

Traffic capacity analysis for the study intersections was performed using Synchro 10, which is a comprehensive software package that allows the user to model signalized and unsignalized intersections to determine levels-of-service based on the thresholds specified in the Highway Capacity Manual (HCM) – 6th Edition. Through coordination with the Town, HCM 2000 was utilized at the intersection of Prices Fork Road and University City Boulevard due to HCM 6th Edition methodology conflicting with the exiting phasing configuration.

Per coordination with the Town, all analysis scenarios utilized the actual heavy vehicle percentages (HVP) by movement that were collected in the turning movement counts. Additionally, the existing analysis scenario utilized the calculated peak hour factor (PHF) from the collected traffic counts for the overall intersection. For future analysis scenarios, a minimum PHF of 0.92 and the calculated PHF from the collected traffic counts was utilized. A PHF of 0.92 was used at the proposed access location during the build traffic conditions. Existing pedestrian volumes from the collected traffic counts were analyzed within the analysis scenarios for all traffic conditions.

***Prices Fork Road and University City Boulevard***

Table 2 summarizes the capacity analysis results for the signalized intersection of Prices Fork Road and University City Boulevard. The Synchro outputs are enclosed for reference.

**Table 2: Level-of-Service Summary for Prices Fork Road and University City Boulevard**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Existing (2022) Conditions | EBL | E | 66 | 234 | C (29) | E | 76 | 240 | D (40) |
| | EBT (2) | B | 16 | 260 | | C | 21 | 298 | |
| | EBR | B | 11 | 77 | | B | 16 | 198 | |
| | WBL | E | 72 | 41 | | E | 71 | 249 | |
| | WBT (2) | C | 22 | 275 | | D | 37 | 680 | |
| | WBR | B | 20 | 78 | | C | 29 | 325 | |
| | NBL | E | 68 | 55 | | E | 67 | 221 | |
| | NBT/R | E | 67 | 82 | | E | 68 | 222 | |
| | SBL (2) | E | 60 | 291 | | E | 57 | 729 | |
| | SBT/R | D | 55 | 168 | | D | 51 | 714 | |
| No-Build (2026) Conditions | EBL | E | 66 | 240 | C (30) | F | 82 | 240 | D (42) |
| | EBT (2) | B | 16 | 273 | | C | 22 | 287 | |
| | EBR | B | 12 | 200 | | B | 17 | 77 | |
| | WBL | E | 72 | 49 | | E | 71 | 217 | |
| | WBT (2) | C | 22 | 284 | | D | 40 | 702 | |
| | WBR | B | 20 | 74 | | C | 33 | 325 | |
| | NBL | E | 68 | 76 | | E | 67 | 241 | |
| | NBT/R | E | 68 | 68 | | E | 68 | 226 | |
| | SBL (2) | E | 60 | 446 | | E | 57 | 754 | |
| | SBT/R | D | 54 | 164 | | D | 51 | 754 | |
| Build (2026) Conditions | EBL | E | 66 | 240 | C (31) | F | 80 | 240 | D (43) |
| | EBT (2) | B | 17 | 273 | | C | 23 | 280 | |
| | EBR | B | 12 | 201 | | B | 17 | 82 | |
| | WBL | E | 72 | 86 | | E | 71 | 249 | |
| | WBT (2) | C | 23 | 292 | | D | 42 | 700 | |
| | WBR | C | 21 | 90 | | C | 33 | 325 | |
| | NBL | E | 68 | 74 | | E | 67 | 183 | |
| | NBT/R | E | 68 | 88 | | E | 68 | 226 | |
| | SBL (2) | E | 60 | 520 | | E | 58 | 751 | |
| | SBT/R | D | 53 | 200 | | D | 50 | 747 | |

Capacity analysis indicates that the signalized intersection is expected to operate at an overall LOS D or better during the AM and PM peak hours for all traffic conditions. All lane groups are expected to operate at LOS E or better during the AM and PM peak hours for all traffic conditions, with the exception of the eastbound left-turn movement during the PM peak hour for all future traffic conditions. When comparing build to no-build conditions, delays are not expected to increase by more than 2 seconds, and all levels of service are expected to be maintained. Additionally, queues are not expected to increase by more than 32 feet (approximately 1 vehicle). Furthermore, the site trips are expected to increase the total volume at this intersection by approximately 2% during the AM and PM peak hours.

Due to minimal impacts from the proposed development, no improvements are recommended at this intersection at build-out of the proposed community.

***Prices Fork Road and Old Glade Road***

Table 3 summarizes the capacity analysis results for the unsignalized intersection of Prices Fork Road and Old Glade Road. The Synchro outputs are enclosed for reference.

**Table 3: Level-of-Service Summary for Prices Fork Road & Old Glade Road**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Existing (2022) Conditions | EBL[2] | B | 11 | 40 | N/A[3] | D | 28 | 135 | N/A[3] |
| | EBT (2) | -- | -- | -- | | -- | -- | -- | |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | WBT/R | -- | -- | -- | | -- | -- | -- | |
| | SBR[1] | C | 17 | 83 | | F | 68 | 248 | |
| No-Build (2026) Conditions | EBL[2] | B | 10 | 30 | N/A[3] | D | 34 | 163 | N/A[3] |
| | EBT (2) | -- | -- | -- | | -- | -- | -- | |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | WBT/R | -- | -- | -- | | -- | -- | -- | |
| | SBR[1] | B | 15 | 58 | | F | 87 | 290 | |
| Build (2026) Conditions | EBL[2] | B | 11 | 33 | N/A[3] | F | 56 | 260 | N/A[3] |
| | EBT (2) | -- | -- | -- | | -- | -- | -- | |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | WBT/R | -- | -- | -- | | -- | -- | -- | |
| | SBR[1] | C | 16 | 75 | | F | 127 | 378 | |

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Capacity analysis indicates that the minor-street approach is expected to operate at LOS C or better during the AM peak hour and LOS F during the PM peak hour. The major street left-turn movement is expected to operate at LOS B during the AM peak hour and LOS F or better during the PM peak hours for all traffic conditions. Based on SimTraffic performance reports, which calculates delay per vehicle based on simulation modeling of the study network taking into account the effect of adjacent signals, it is expected that delays in the field are significantly less than the synchro reports calculate. SimTraffic performance reports indicate that the southbound right turn and eastbound left turn delay per vehicle are expected to be 35.0 seconds or less per vehicle, which correlates to LOS E or better. The site trips are expected to increase the total volume at this intersection by less than 4% during the AM and PM peak hours.

While increased delays are expected during the PM peak hour, less than desirable levels of operation currently exist. Additionally, no laneage improvements are expected to decrease delays and the proximity to the signalized intersection of Prices Fork Road and University City Boulevard make traffic control improvements impractical.

Based on the minimal site traffic utilizing the intersection, no improvements are recommended at this intersection at build-out of the proposed community.

***University City Boulevard and Glade Road***

Table 4 summarizes the capacity analysis results for the signalized intersection of University City Boulevard and Glade Road. The Synchro outputs are enclosed for reference.

**Table 4: Level-of-Service Summary for University City Boulevard & Glade Road/Starbucks Driveway**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Existing (2022) Conditions | EBL/T | C | 26 | 165 | B (17) | C | 27 | 243 | B (14) |
| | EBR | C | 25 | 63 | | C | 27 | 180 | |
| | WBL/T/R | C | 31 | 155 | | C | 29 | 168 | |
| | NBL | A | 7 | 46 | | A | 7 | 106 | |
| | NBT/TR | A | 5 | 64 | | A | 5 | 138 | |
| | SBL/T | A | 9 | 104 | | B | 11 | 136 | |
| | SBT/R | A | 10 | 91 | | B | 12 | 125 | |
| No-Build (2026) Conditions | EBL/T | C | 27 | 216 | B (17) | C | 27 | 211 | B (14) |
| | EBR | C | 27 | 111 | | C | 27 | 176 | |
| | WBL/T/R | C | 31 | 169 | | C | 29 | 164 | |
| | NBL | A | 6 | 52 | | A | 8 | 116 | |
| | NBT/TR | A | 4 | 86 | | A | 5 | 154 | |
| | SBL/T | A | 9 | 134 | | B | 12 | 162 | |
| | SBT/R | A | 9 | 105 | | B | 13 | 159 | |
| Build (2026) Conditions | EBL/T | C | 27 | 155 | B (18) | C | 27 | 184 | B (15) |
| | EBR | C | 29 | 80 | | C | 28 | 98 | |
| | WBL/T/R | C | 31 | 171 | | C | 29 | 177 | |
| | NBL | A | 7 | 61 | | A | 8 | 125 | |
| | NBT/TR | A | 5 | 77 | | A | 5 | 156 | |
| | SBL/T | A | 9 | 119 | | B | 13 | 149 | |
| | SBT/R | A | 10 | 107 | | B | 13 | 164 | |

Capacity analysis indicates that the signalized intersection is expected to operate at an overall LOS B during the AM and PM peak hours for all traffic conditions. All lane groups are expected to operate at LOS C or better during the AM and PM peak hours for all traffic conditions. When comparing build to no-build conditions, delays are not expected to increase by more than 2 seconds, and all levels of service are expected to be maintained. Additionally, queues are not expected to increase by more than 13 feet (approximately 1 vehicle). Furthermore, the site trips are expected to increase the total volume at this intersection by approximately 5% and 2% during the AM and PM peak hours, respectively.

Due to minimal impacts from the proposed development, no improvements are recommended at this intersection at build-out of the proposed community.

***Old Glade Road and Glade Road***

Table 5 summarizes the capacity analysis results for the unsignalized intersection of Old Glade Road and Glade Road. The Synchro outputs are enclosed for reference.

**Table 5: Level-of-Service Summary for Old Glade Road & Glade Road**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Existing (2022) Conditions | EBT | -- | -- | -- | N/A[3] | -- | -- | -- | N/A[3] |
| | EBR | -- | -- | -- | | -- | -- | -- | |
| | WBL/T[2] | A | 9 | 10 | | A | 8 | 10 | |
| | NBL[1] | B | 15 | 20 | | D | 28 | 103 | |
| | NBR[1] | A | 10 | 13 | | A | 10 | 15 | |
| No-Build (2026) Conditions | EBT | -- | -- | -- | N/A[3] | -- | -- | -- | N/A[3] |
| | EBR | -- | -- | -- | | -- | -- | -- | |
| | WBL/T[2] | A | 9 | 10 | | A | 8 | 10 | |
| | NBL[1] | B | 15 | 20 | | E | 37 | 135 | |
| | NBR | A | 10 | 13 | | A | 10 | 15 | |
| Build (2026) Conditions | EBT | -- | -- | -- | N/A[3] | -- | -- | -- | N/A[3] |
| | EBR | -- | -- | -- | | -- | -- | -- | |
| | WBL/T[2] | A | 9 | 10 | | A | 8 | 13 | |
| | NBL[1] | C | 17 | 33 | | F | 133 | 378 | |
| | NBR | B | 10 | 13 | | B | 10 | 15 | |
| Build (2026) Conditions (All-Way Stop) | EBT | B | 11 | 40 | B (11) | B | 13 | 40 | C (20) |
| | EBR | B | 10 | 40 | | B | 11 | 28 | |
| | WBL/T | B | 11 | 30 | | C | 24 | 145 | |
| | NBL | B | 12 | 25 | | D | 27 | 148 | |
| | NBR | A | 10 | 15 | | B | 11 | 25 | |

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Capacity analysis indicates that the minor-street approach is expected to operate at LOS C or better during the AM peak hour and LOS E or better during the PM peak hour with the exception of the build PM traffic conditions. The major street left-turn movement is expected to operate at LOS A during the AM and PM peak hours for all traffic conditions. While the northbound approach is expected to increase in delays, it is not uncommon for the minor-street approach to experience higher delays during the peak hour when the mainline traffic is the highest. It should be mentioned that heavy queues are not expected to be a consistent issue as the average queue is not expected to exceed 135 feet during the PM peak hour. SimTraffic performance reports calculate the northbound left delay per vehicle to be approximately 23 seconds during the PM peak hour (which correlates to LOS C or better).

As requested by the Town, a signal warrant was analyzed according to the methodology contained within the Manual on Uniform Traffic Control Devices (MUTCD). 12-hour traffic counts were collected in April of 2022, while schools were in session and projected to the build out year (2026) with the aforementioned growth rate. The estimated new site traffic was added to the projected 2026 traffic volumes to determine the volumes used for the analysis. Based on the findings, a traffic signal is not expected to meet warrants. See attached for more information regarding the signal warrant analysis.

Through coordination with the Town, an all-way stop was considered as a potential improvement. Based on criteria and methodology contained within the MUTCD, the traffic volumes under no-build traffic conditions (future traffic without the construction of the proposed development) warrant the recommendation of an all-way stop. Build traffic volumes were analyzed with the all-way stop and capacity analysis indicates that the intersection will operate at an overall LOS C or better during both peak hours. Additionally, the northbound left delays and queues are expected to be significantly reduced. However, it should be noted that all-way stops where multiple approaches have turn-lanes can cause driver confusion and could be a potential safety concern. It is recommended that the Town consider the potential for an all-way stop due to existing traffic concerns. There are no recommended improvements for the developer.

***Glade Road and Shadow Lake Road***

Table 6 summarizes the capacity analysis results for the unsignalized intersection of Glade Road and Shadow Lake Road. The Synchro outputs are enclosed for reference.

**Table 6: Level-of-Service Summary for Glade Road and Shadow Lake Road**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Existing (2022) Conditions | EBL/T/R[2] | A | 8 | 0 | N/A[3] | A | 8 | 0 | N/A[3] |
| | WBL/T/R[2] | A | 8 | 0 | | A | 8 | 3 | |
| | NBL/T/R[1] | A | 10 | 5 | | A | 9 | 3 | |
| | SBL/T/R[1] | B | 13 | 23 | | B | 14 | 8 | |
| No-Build (2026) Conditions | EBL/T/R[2] | A | 7 | 0 | N/A[3] | A | 8 | 0 | N/A[3] |
| | WBL/T/R[2] | A | 8 | 0 | | A | 8 | 3 | |
| | NBL/T/R[1] | A | 10 | 3 | | A | 9 | 3 | |
| | SBL/T/R[1] | B | 12 | 15 | | B | 15 | 8 | |
| Build (2026) Conditions | EBL/T/R[2] | A | 8 | 0 | N/A[3] | A | 8 | 0 | N/A[3] |
| | WBL/T/R[2] | A | 8 | 0 | | A | 8 | 3 | |
| | NBL/T/R[1] | A | 10 | 3 | | A | 9 | 3 | |
| | SBL/T/R[1] | B | 12 | 15 | | B | 15 | 8 | |

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Capacity analysis indicates that all approaches are expected to operate at LOS B or better during the weekday AM and PM peak hours for all traffic conditions. The site trips are expected to increase the total volume at this intersection by less than 2% during the AM and PM peak hours.

Based on minimal impacts from the proposed development and minimal site traffic utilizing the intersection, no improvements are recommended at this intersection at build-out of the proposed community.

***Toms Creek Road and Redbud Road***

Table 7 summarizes the capacity analysis results for the unsignalized intersection of Toms Creek Road and Redbud Road. The Synchro outputs are enclosed for reference.

**Table 7: Level-of-Service Summary for Toms Creek Road and Redbud Road**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Existing (2022) Conditions | EBL/T/R[2] | A | 0 | 0 | N/A[3] | A | 8 | 0 | N/A[3] |
| | WBL/T/R[2] | A | 8 | 0 | | A | 7 | 3 | |
| | NBL/T/R[1] | A | 9 | 5 | | A | 9 | 3 | |
| | SBL/T/R[1] | A | 10 | 5 | | B | 11 | 3 | |
| No-Build (2026) Conditions | EBL/T/R[2] | A | 0 | 0 | N/A[3] | A | 8 | 0 | N/A[3] |
| | WBL/T/R[2] | A | 8 | 0 | | A | 7 | 3 | |
| | NBL/T/R[1] | A | 9 | 5 | | A | 9 | 3 | |
| | SBL/T/R[1] | B | 11 | 5 | | B | 12 | 3 | |
| Build (2026) Conditions | EBL/T/R[2] | A | 0 | 0 | N/A[3] | A | 8 | 0 | N/A[3] |
| | WBL/T/R[2] | A | 8 | 0 | | A | 7 | 3 | |
| | NBL/T/R[1] | A | 9 | 3 | | A | 9 | 3 | |
| | SBL/T/R[1] | B | 10 | 5 | | B | 11 | 3 | |

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Capacity analysis indicates that all approaches are expected to operate at LOS B or better during the weekday AM and PM peak hours for all traffic conditions. The site trips are expected to increase the total volume at this intersection by less than 3% during the AM and PM peak hours.

Based on minimal impacts from the proposed development and minimal site traffic utilizing the intersection, no improvements are recommended at this intersection at build-out of the proposed community.

***Toms Creek Road and Honeysuckle Drive***

Table 8 summarizes the capacity analysis results for the unsignalized intersection of Toms Creek Road and Honeysuckle Drive. The Synchro outputs are enclosed for reference.

**Table 8: Level-of-Service Summary for Toms Creek Road and Honeysuckle Drive**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Existing (2022) Conditions | EBT/R | -- | -- | -- | N/A[3] | -- | -- | -- | N/A[3] |
| | WBL[2] | A | 8 | 3 | | A | 8 | 5 | |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | NBL/R[1] | A | 10 | 8 | | A | 9 | 3 | |
| No-Build (2026) Conditions | EBT/R | -- | -- | -- | N/A[3] | -- | -- | -- | N/A[3] |
| | WBL[2] | A | 8 | 3 | | A | 8 | 5 | |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | NBL/R[1] | A | 10 | 8 | | A | 9 | 3 | |
| Build (2026) Conditions | EBT/R | -- | -- | -- | N/A[3] | -- | -- | -- | N/A[3] |
| | WBL[2] | A | 8 | 3 | | A | 8 | 5 | |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | NBL/R[1] | A | 10 | 8 | | A | 9 | 3 | |

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

Capacity analysis indicates that all approaches are expected to operate at LOS A during the weekday AM and PM peak hours for all traffic conditions. The site trips are expected to increase the total volume at this intersection by approximtaley 5% during the AM and PM peak hours.

Based on minimal impacts from the proposed development and minimal site traffic utilizing the intersection, no improvements are recommended at this intersection at build-out of the proposed community.

***Glade Road and Proposed Site Access***

Table 9 summarizes the capacity analysis results for the proposed intersection of Glade Road and the Site Access. The Synchro outputs are enclosed for reference.

**Table 9: Level-of-Service Summary for Glade Road and Site Access**

| CONDITION | LANE GROUP | AM PEAK HOUR | | | | PM PEAK HOUR | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) | Lane LOS | Lane Delay (sec) | Lane Queue (ft) | Overall LOS (Delay) |
| Build (2026) Conditions | EBL/T[2] | A | 8 | 0 | N/A[3] | A | 8 | 0 | N/A[3] |
| | WBT | -- | -- | -- | | -- | -- | -- | |
| | **WBR** | -- | -- | -- | | -- | -- | -- | |
| | **SBL/R[1]** | B | 13 | 20 | | B | 14 | 15 | |

**Bold indicates improvements.**

1. Level of service for minor approach
2. Level of service for major-street left-turn movement
3. HCM methodology does not provide lane group or overall LOS, delay, and queue lengths for major street through movements or right turns at unsignalized intersections.

As mentioned previously, a westbound right-turn lane is warranted and recommended. Capacity analysis indicates that with this improvement, all approaches are expected to operate at LOS B or better during the weekday AM and PM peak hours. Due to acceptable levels of service, no additional improvements are recommended.

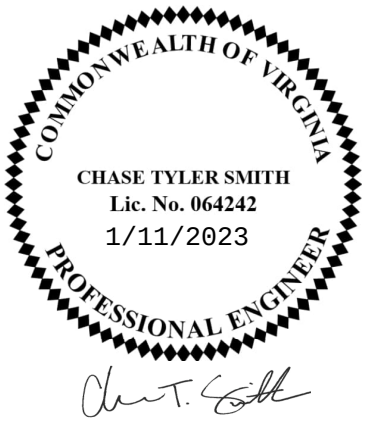
**Recommendations**
Based on the traffic capacity analysis, all study intersections are expected to operate at acceptable levels at build out of the proposed community with the following improvement.

- Construct a westbound right turn lane on Glade Road at the proposed site access location. Based on the results of the TIA and the VDOT *Access Management Design Standards for Entrances and Intersections*, a turn lane with a minimum of 100 feet of storage should be provided.

Refer to Figure 9 for an illustration of the recommended lane configurations for the study intersections.

We appreciate your attention to this matter. Please contact me at (336) 714-0112 if you have any questions about this report.

Sincerely yours,




Chase Smith, PE
*Infrastructure Consulting Services, Inc.*
*dba*
***Ramey Kemp Associates***

License #0407008438

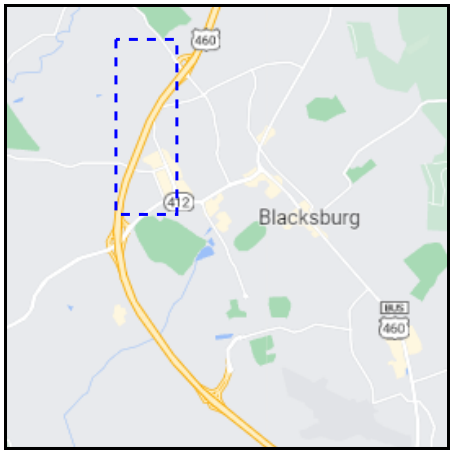
Enclosures: Figures, Traffic count data, Synchro and SimTraffic output

Copy to: Ms. Meredith Jones, Eden & Associates, P. C.

# TECHNICAL APPENDIX

# APPENDIX A

## FIGURES


N

**LEGEND**

- Proposed Site Location
- Study Area
- Study Intersection
- Proposed Access

RKA
RAMEY KEMP ASSOCIATES

Glade Heights
Blacksburg, VA

Site Location Map

Scale: Not to Scale | Figure 1

SHADOW LAKE ROAD

CREEK VALLEY OVERLAY

PROP. PUMP STATION

VILLAGE WAY S

GLADE ROAD

US ROUTE 460

TOTAL OPEN SPACE:
18.60 AC (41.2%)

| | | |
|---|---|---|
| 24 | 48x48 PAD (BRADFORD, WESTFIELD) | |
| 18 | 45x63 PAD (BRADFORD, WESTFIELD, CORVALLIS, LINDEN III/TERRACE) | |
| **SUBTOTAL: 42** | | |
| 16 | 28x28 PAD (24x28 or 28x24 UNIT) (WORK FORCE CONCEPTS) | |
| 118 | 18x30 PAD (ATTACHED/DETACHED) (WORK FORCE CONCEPT) | |
| **SUBTOTAL: 134** | | |
| | +36 MARKET RATE | |
| **TOTAL: 170** | | |
| **TOTAL: 176** | | |

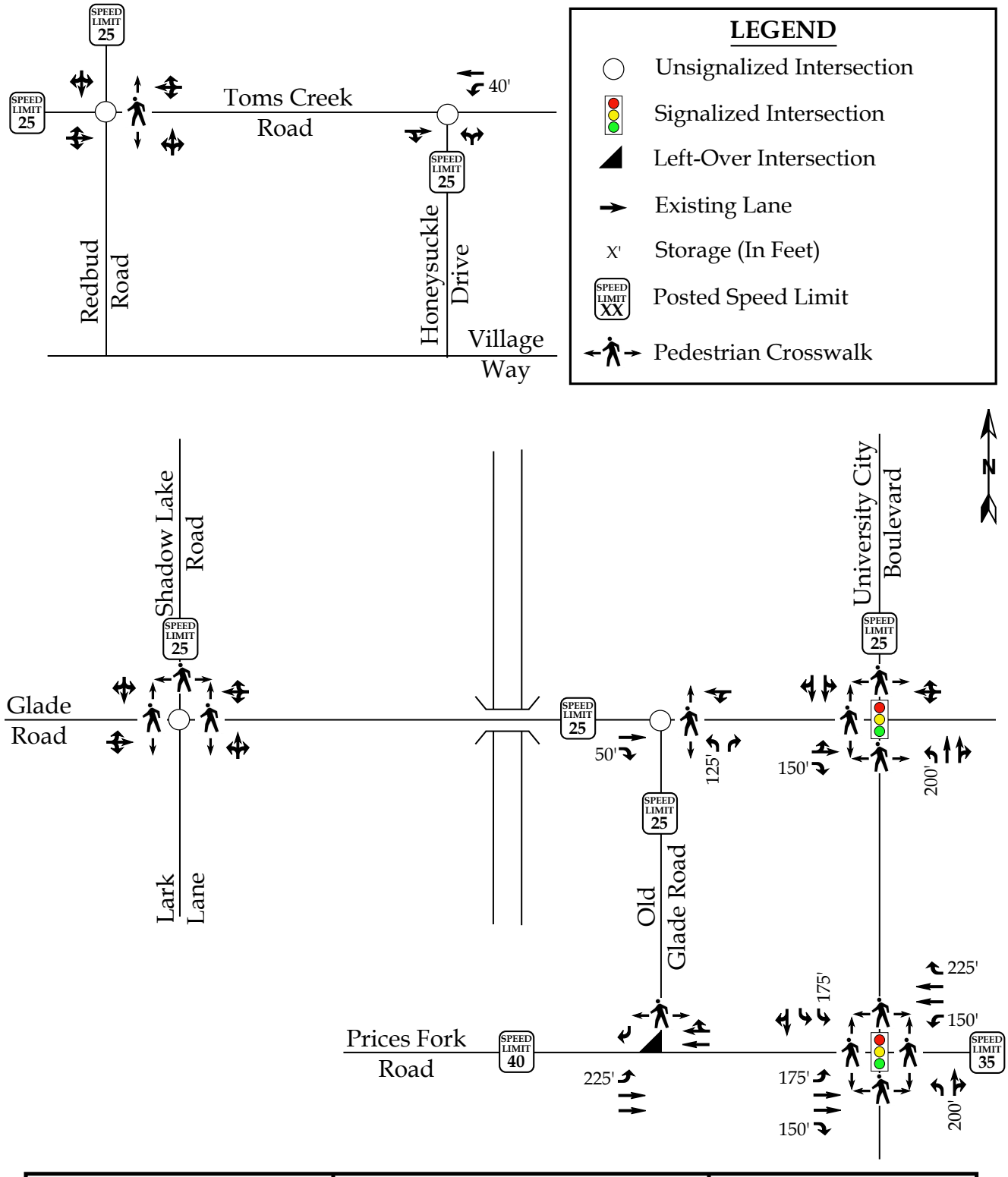
| DWELLING TYPE: | NO. DWELLING UNITS |
|---|---|
| 18x30 DETACHED | 38 |
| 18x30 DUPLEX | 68 = 34x2 |
| 18x30 QUAD | 12 = 3x4 |
| **18x30 UNIT TOTAL =** | **118** |
| 4 D.U./AC. = | 45.0976 AC x 4 D.U./AC |
| **TOTAL ALLOWED =** | **180 D.U.** |

0 200 400

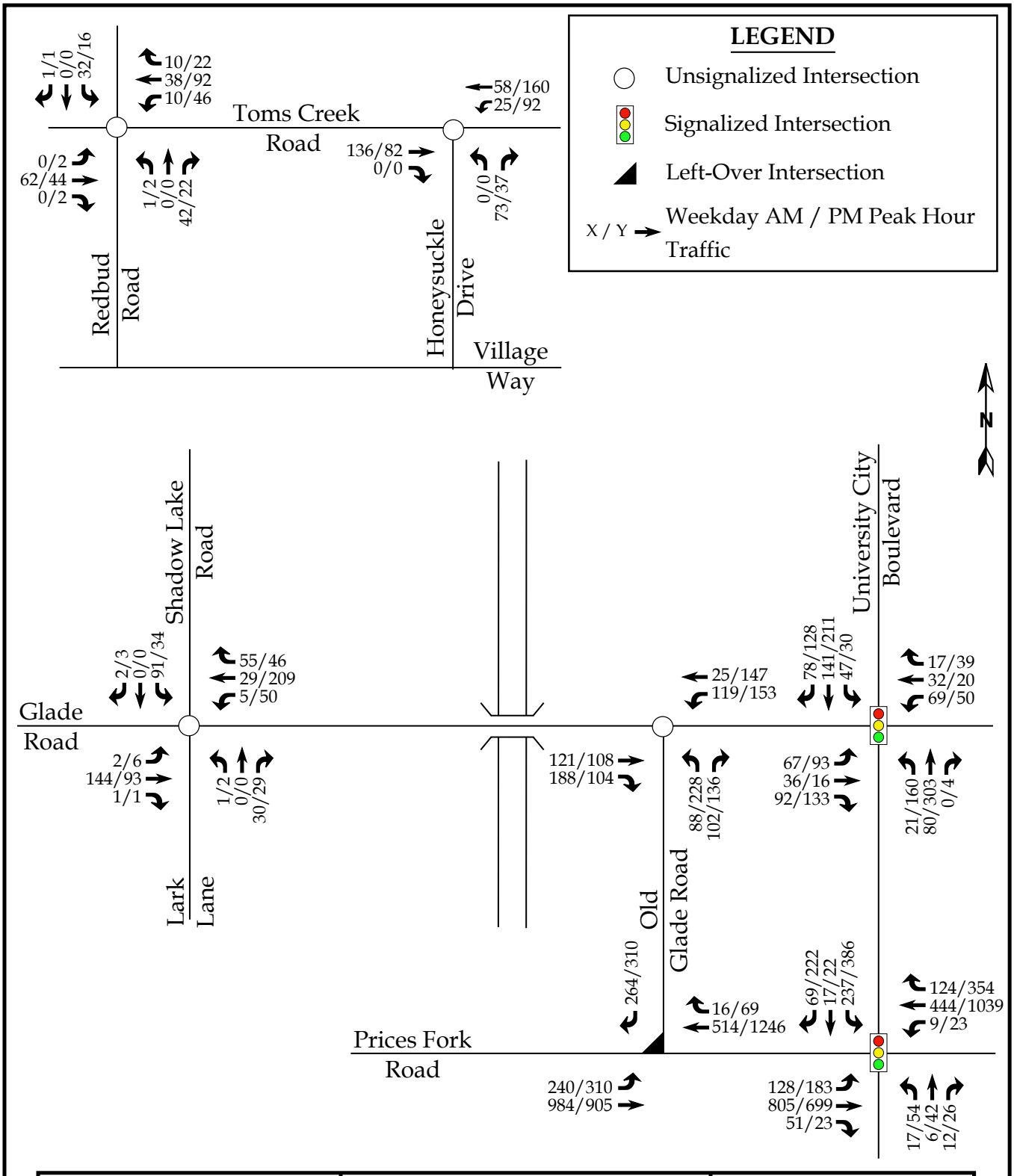
**GLADE HEIGHTS**
CONCEPT PLAN 1: THROUGH-ROAD OPTION - 06/10/2022

1000 BLOCK GLADE ROAD
BLACKSBURG, VA 24060

EDEN & ASSOCIATES
engineering • planning • development




| | | |
|---|---|---|
| RKA RAMEY KEMP ASSOCIATES | Glade Heights<br>Blacksburg, VA | 2022 Existing Lane Configurations<br>Scale: Not to Scale \| Figure 3 |

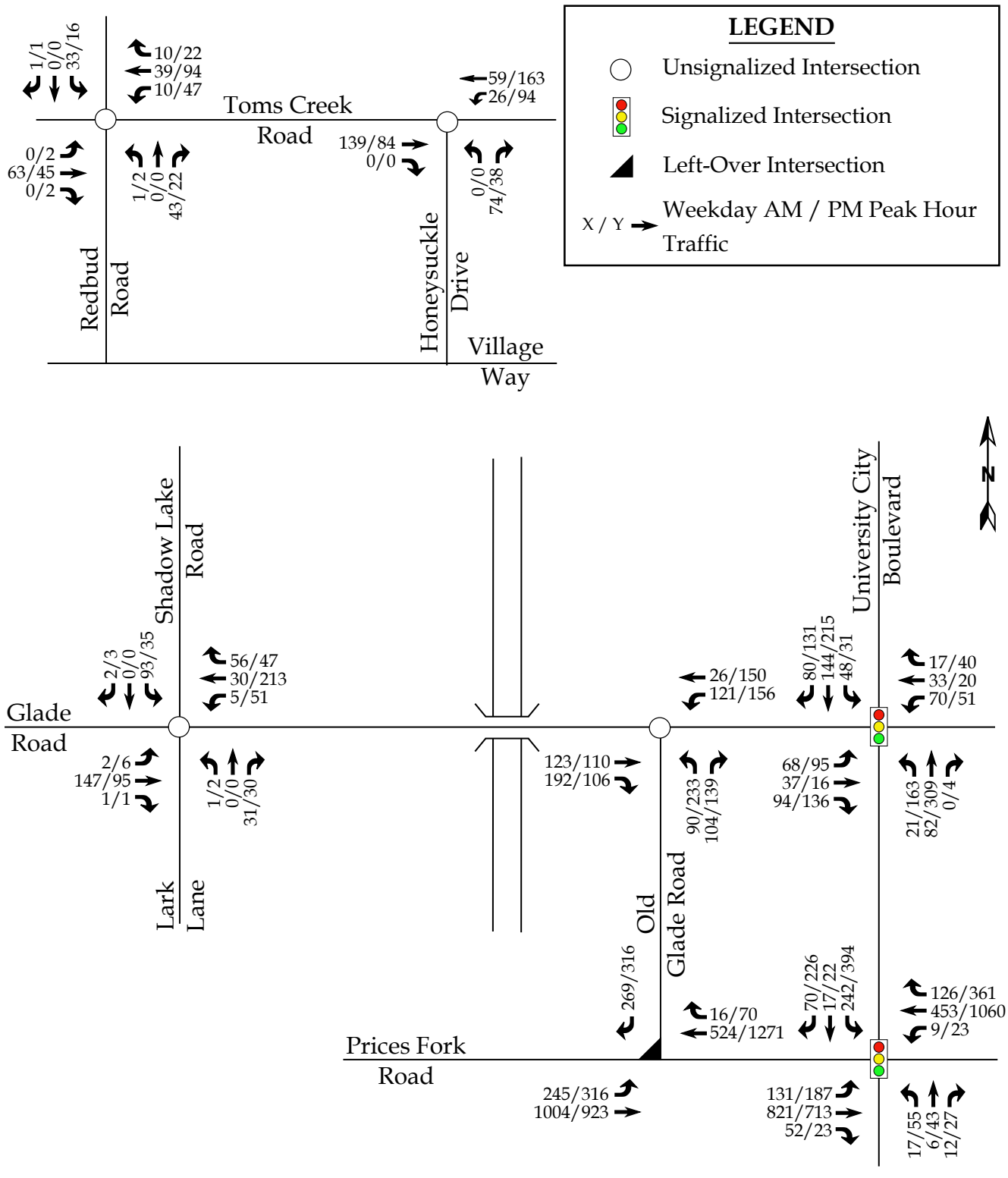



RAMEY KEMP ASSOCIATES

Glade Heights
Blacksburg, VA

2022 Existing
Peak Hour Traffic

Scale: Not to Scale | Figure 4

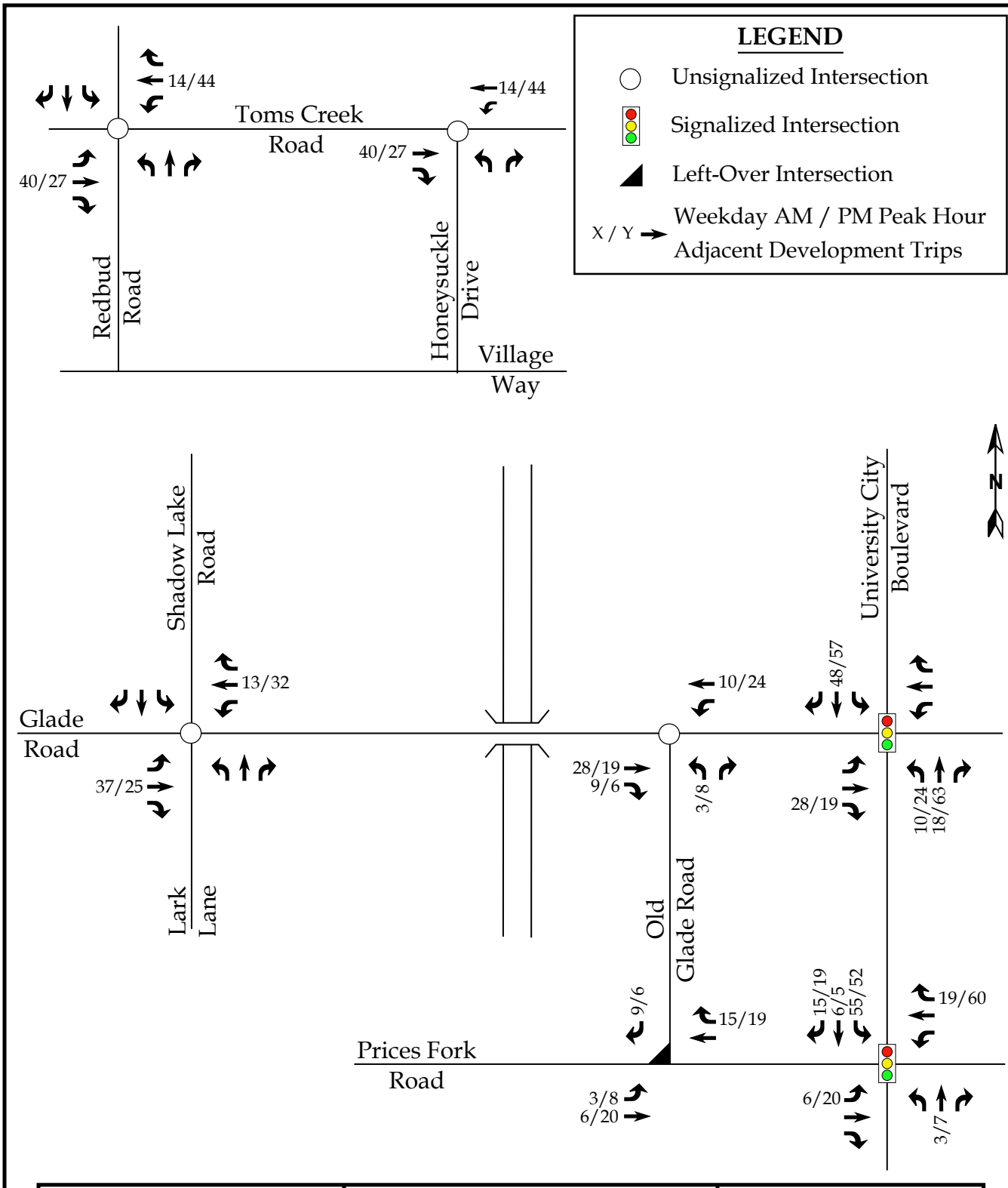



RAMEY KEMP ASSOCIATES

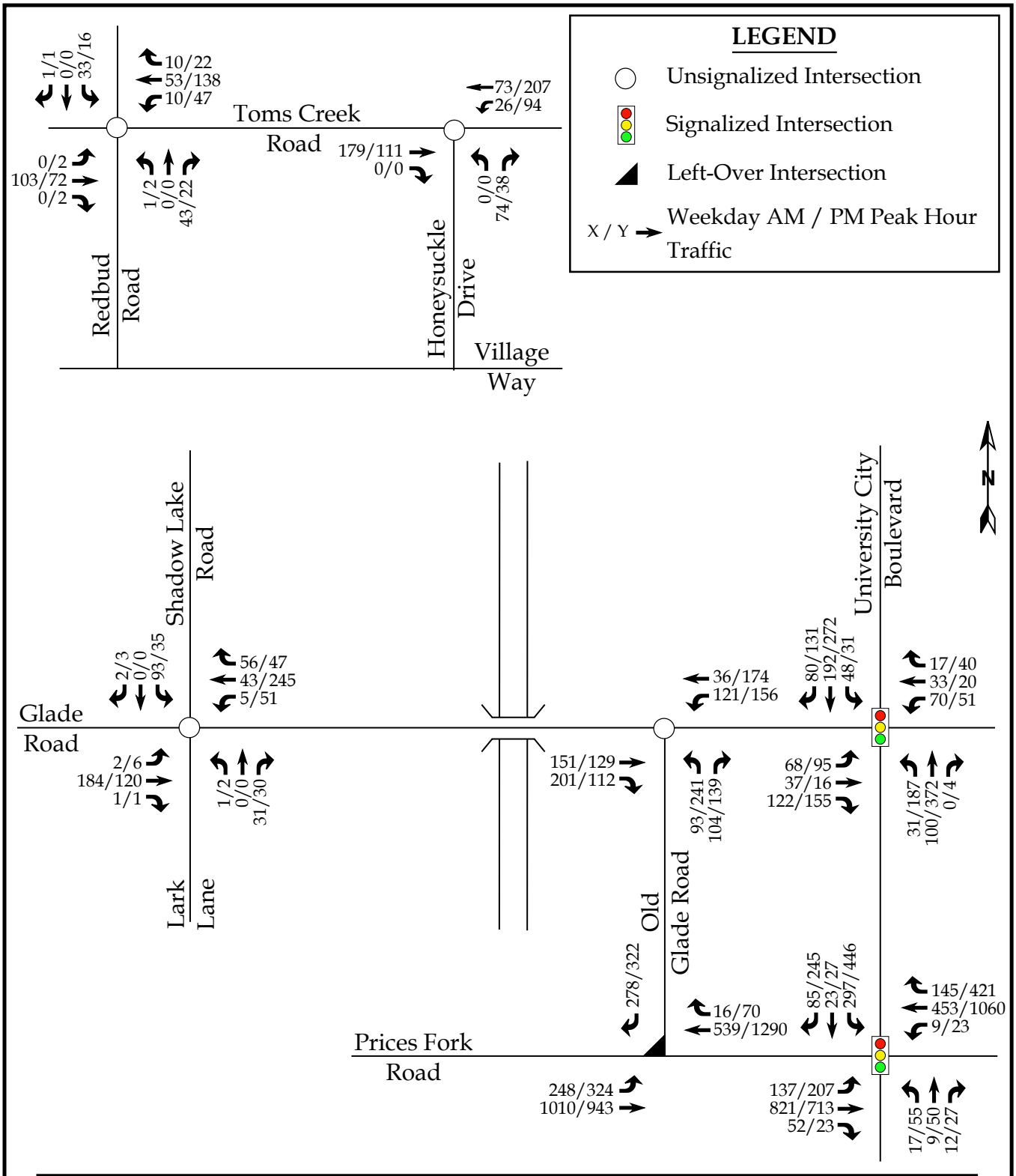
Glade Heights
Blacksburg, VA

2026 Projected
Peak Hour Traffic

Scale: Not to Scale | Figure 5




| | | |
|---|---|---|
| RKA RAMEY KEMP ASSOCIATES | Glade Heights<br>Blacksburg, VA | Peak Hour Adjacent Development Trips<br>Scale: Not to Scale \| Figure 6 |

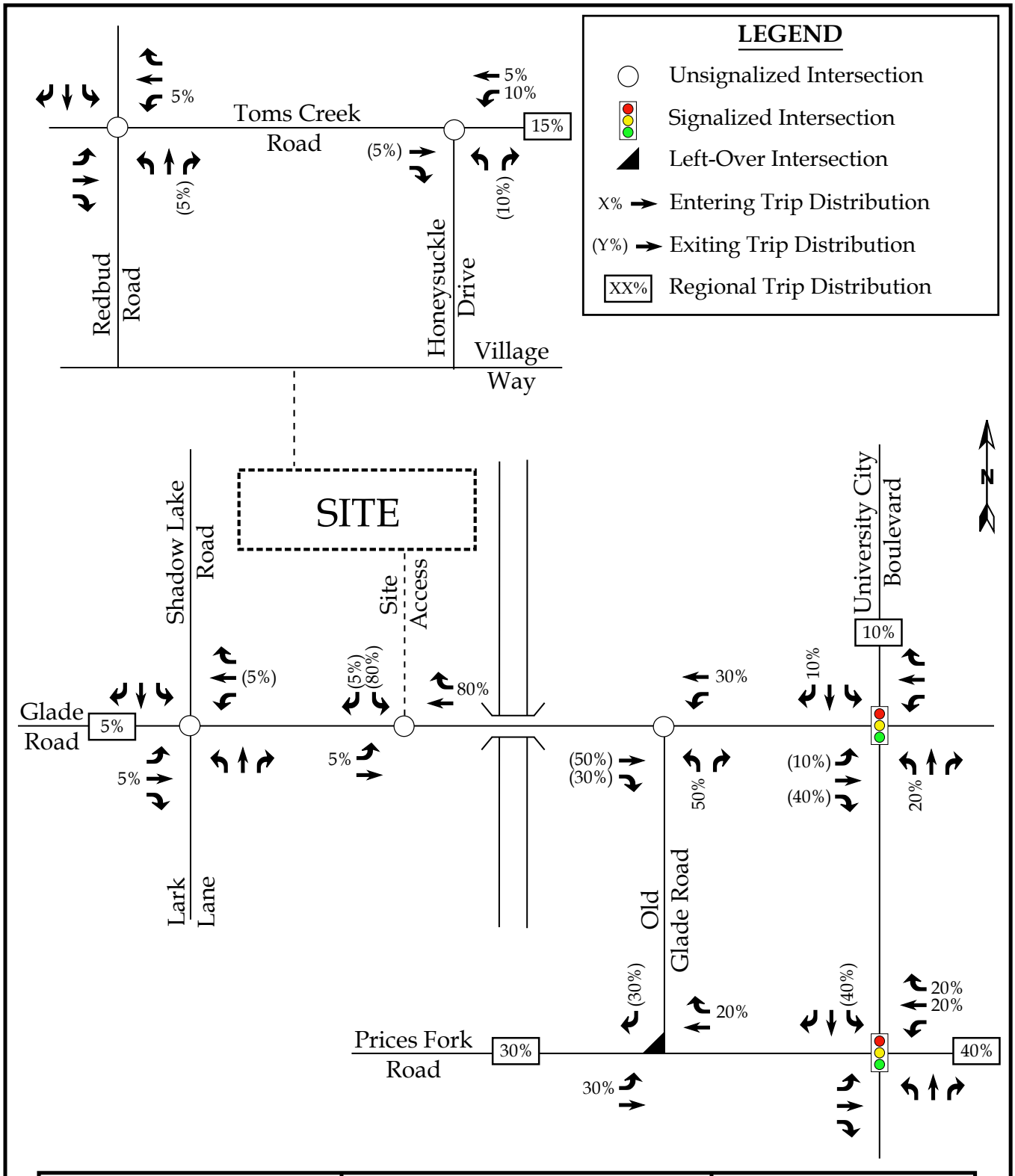



RAMEY KEMP ASSOCIATES

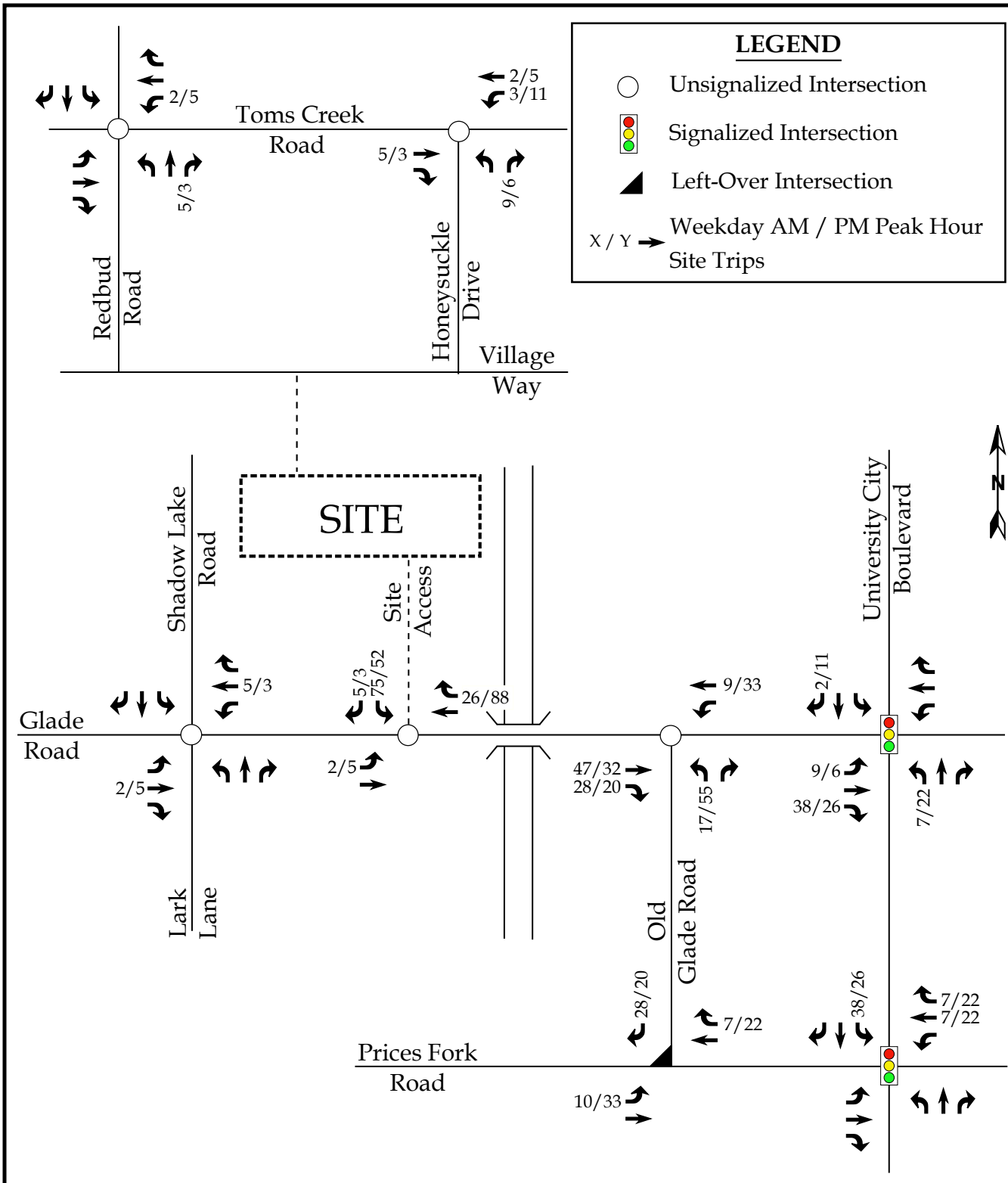
Glade Heights
Blacksburg, VA

2026 No-Build
Peak Hour Traffic

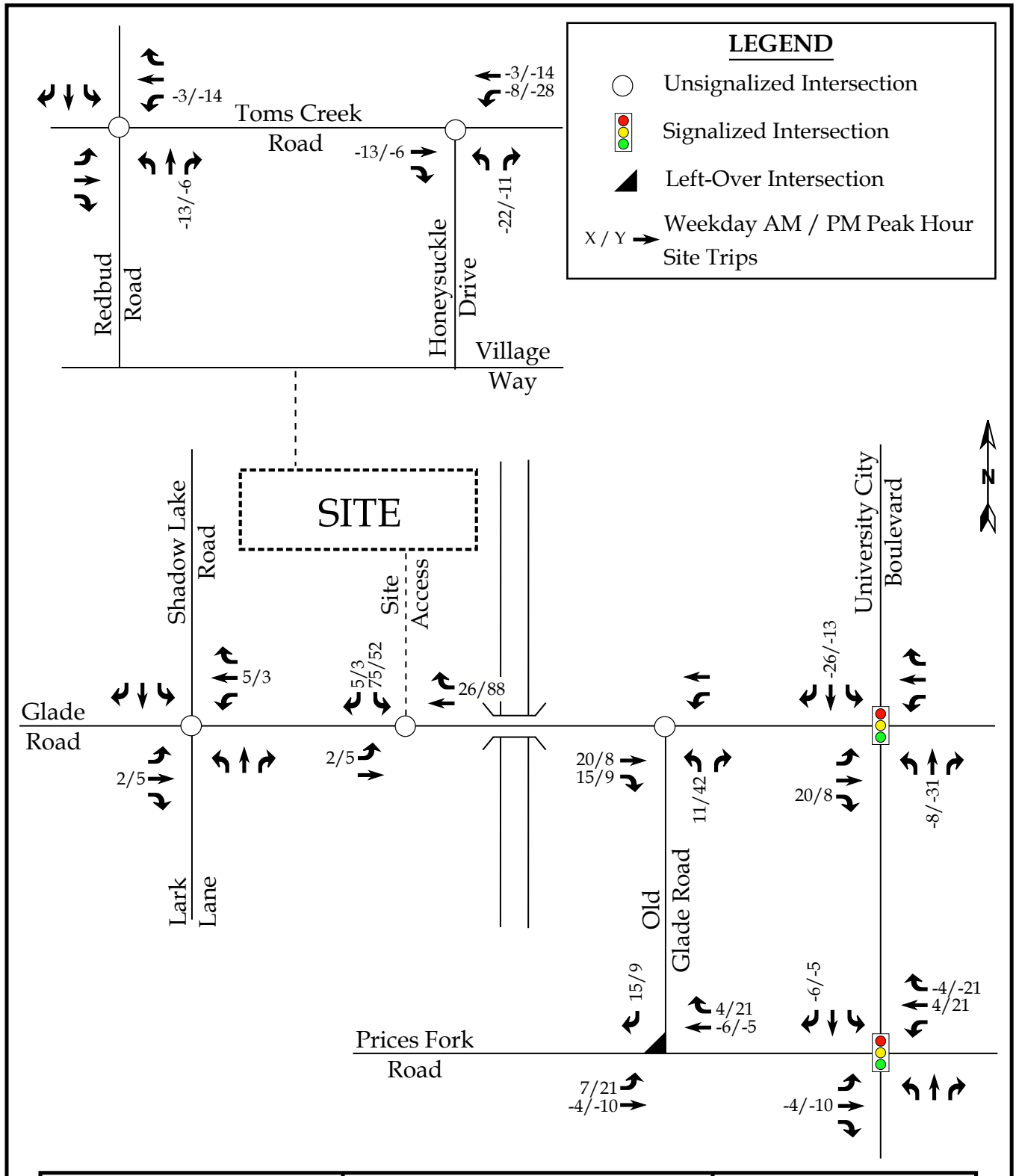
Scale: Not to Scale | Figure 7



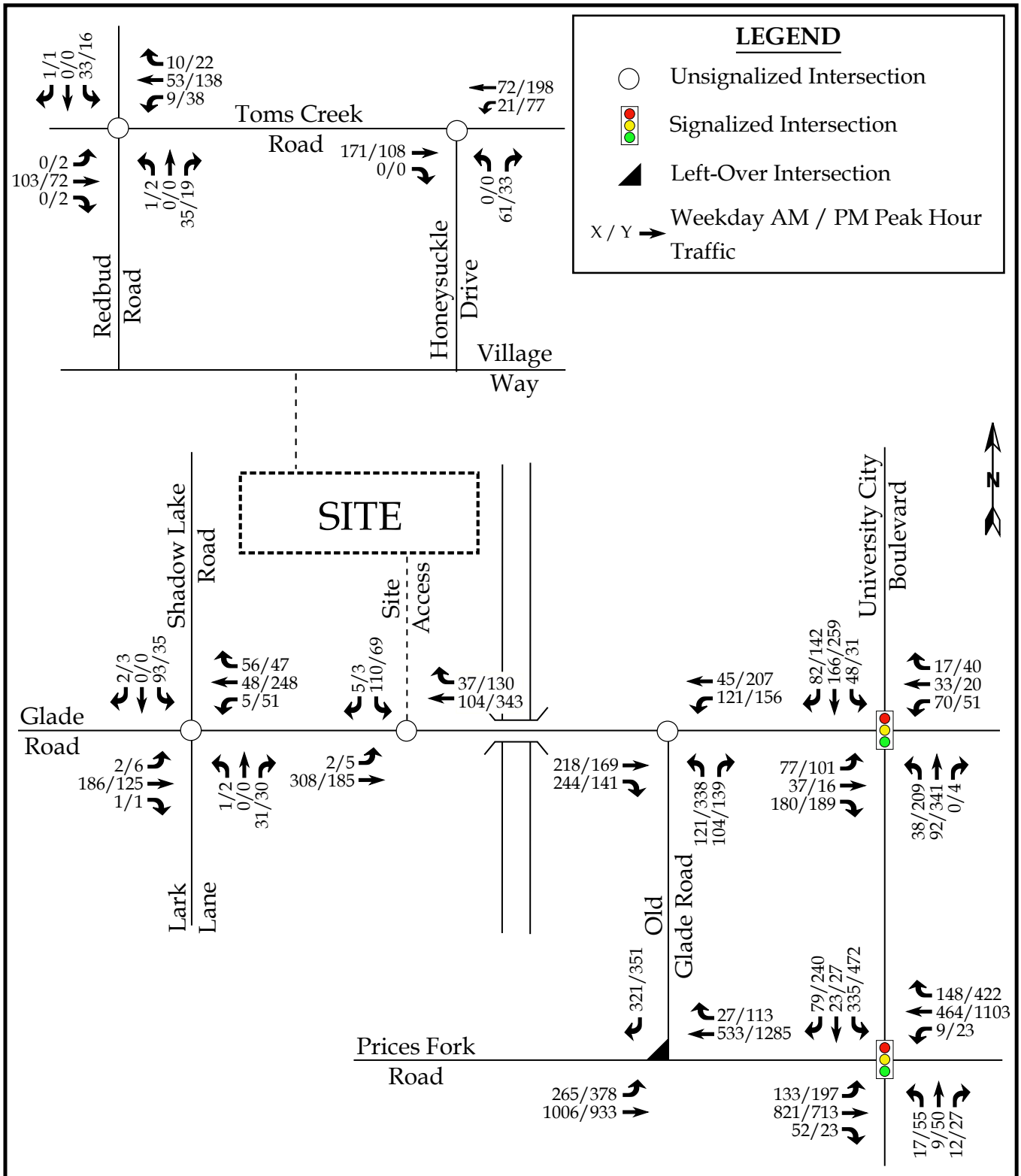

| RAMEY KEMP ASSOCIATES | Glade Heights<br>Blacksburg, VA | Site Trip Distribution | |
|---|---|---|---|
| | | Scale: Not to Scale | Figure 8 |



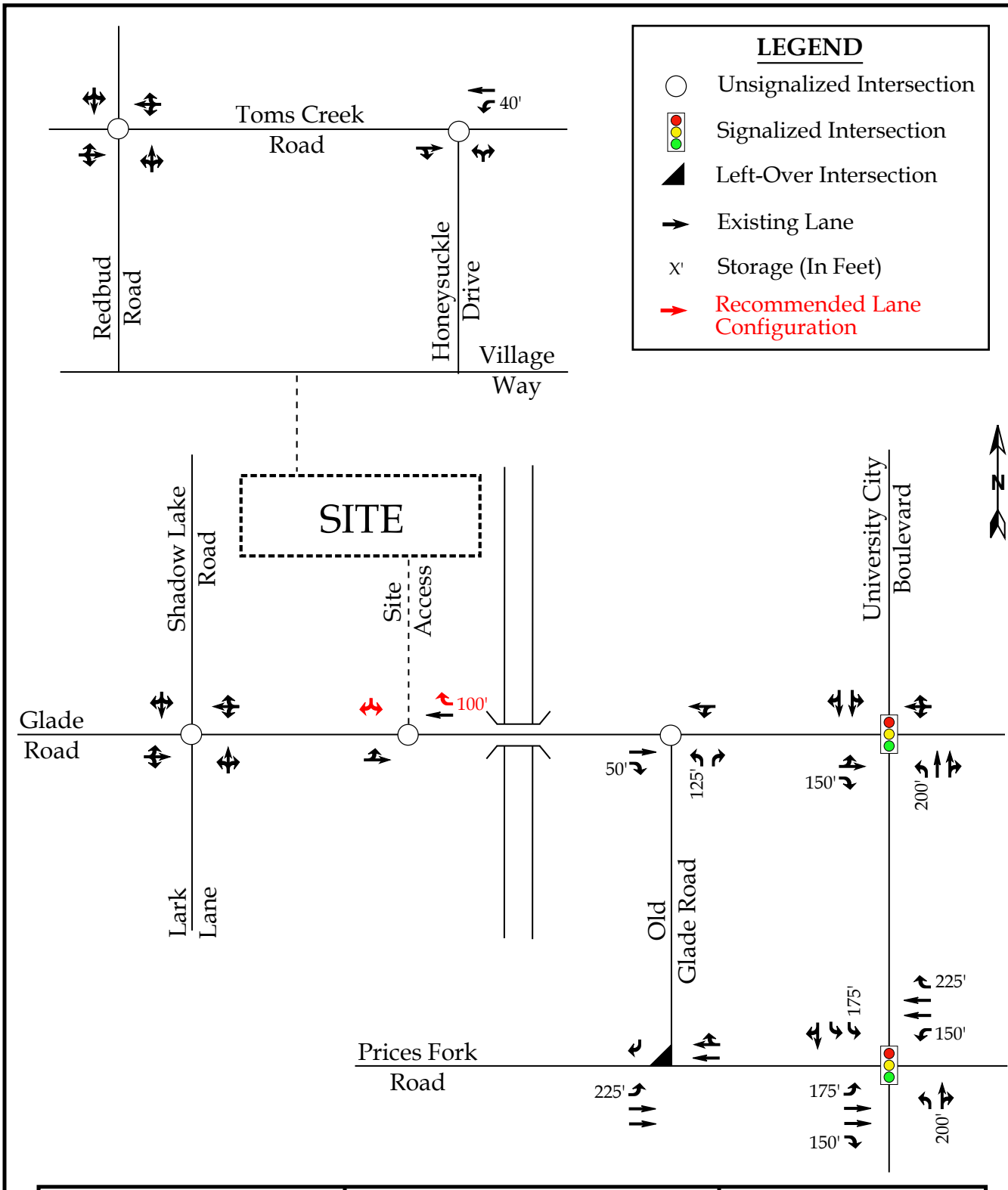

| | | |
|---|---|---|
| RKA RAMEY KEMP ASSOCIATES | Glade Heights<br>Blacksburg, VA | Site Trip Assignment<br>Scale: Not to Scale \| Figure 9 |




| RAMEY KEMP ASSOCIATES | Glade Heights<br>Blacksburg, VA | Rerouted Village<br>Existing Traffic |
|---|---|---|
| | | Scale: Not to Scale \| Figure 10 |




| | | |
|---|---|---|
| RKA RAMEY KEMP ASSOCIATES | Glade Heights<br>Blacksburg, VA | 2026 Build<br>Peak Hour Traffic |
| | | Scale: Not to Scale \| Figure 11 |




| RAMEY KEMP ASSOCIATES | Glade Heights<br>Blacksburg, VA | Recommended Lane Configurations | |
|---|---|---|---|
| | | Scale: Not to Scale | Figure 12 |

# APPENDIX B

## COUNT DATA

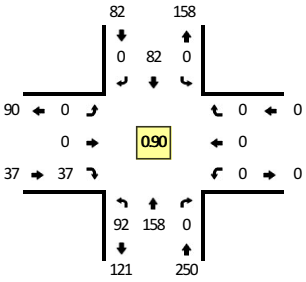
Type of peak hour being reported: Intersection Peak

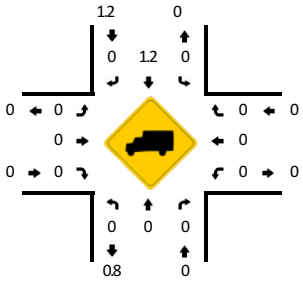
Method for determining peak hour: Total Entering Volume

**LOCATION:** Toms Creek Rd -- Honeysuckle Dr
**CITY/STATE:** Blacksburg, VA

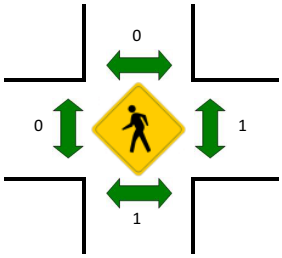
**QC JOB #:** 15762701
**DATE:** Wed, Apr 6 2022

**Peak-Hour: 5:15 PM -- 6:15 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

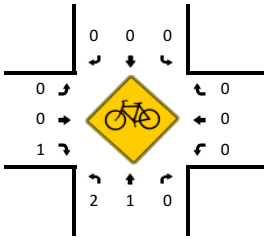


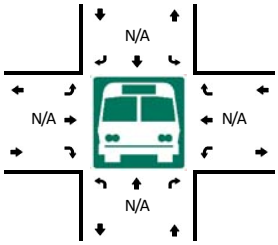




Quality Counts
DATA THAT DRIVES COMMUNITIES

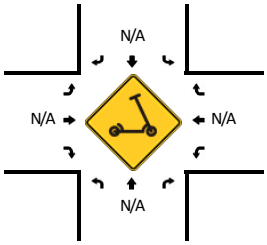











| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Honeysuckle Dr (Eastbound) | | | | Honeysuckle Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 4 | 7 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 34 | |
| 7:15 AM | 0 | 6 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 44 | |
| 7:30 AM | 1 | 12 | 0 | 0 | 0 | 30 | 1 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 57 | |
| 7:45 AM | 5 | 9 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 79 | 214 |
| 8:00 AM | 4 | 18 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 57 | 237 |
| 8:15 AM | 6 | 9 | 0 | 1 | 0 | 27 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 62 | 255 |
| 8:30 AM | 4 | 12 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 71 | 269 |
| 8:45 AM | 10 | 19 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 83 | 273 |
| 9:00 AM | 7 | 15 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 50 | 266 |
| 9:15 AM | 9 | 11 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 48 | 252 |
| 9:30 AM | 7 | 12 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 46 | 227 |
| 9:45 AM | 5 | 9 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 46 | 190 |
| 10:00 AM | 8 | 11 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 41 | 181 |
| 10:15 AM | 9 | 4 | 0 | 0 | 0 | 19 | 0 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 41 | 174 |
| 10:30 AM | 8 | 12 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 41 | 169 |
| 10:45 AM | 8 | 12 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 51 | 174 |
| 11:00 AM | 10 | 19 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 53 | 186 |
| 11:15 AM | 4 | 15 | 0 | 1 | 0 | 16 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 45 | 190 |
| 11:30 AM | 6 | 13 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 40 | 189 |
| 11:45 AM | 6 | 14 | 0 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 46 | 184 |
| 12:00 PM | 9 | 29 | 0 | 1 | 0 | 22 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 66 | 197 |
| 12:15 PM | 12 | 24 | 0 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 61 | 213 |
| 12:30 PM | 16 | 24 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 70 | 243 |
| 12:45 PM | 7 | 22 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 63 | 260 |
| 1:00 PM | 7 | 18 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 45 | 239 |
| 1:15 PM | 15 | 19 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 65 | 243 |
| 1:30 PM | 8 | 17 | 0 | 0 | 0 | 16 | 0 | 0 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 53 | 226 |
| 1:45 PM | 8 | 17 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 45 | 208 |
| 2:00 PM | 9 | 19 | 0 | 0 | 0 | 19 | 0 | 0 | 1 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 61 | 224 |
| 2:15 PM | 13 | 11 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 44 | 203 |
| 2:30 PM | 10 | 23 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 50 | 200 |
| 2:45 PM | 10 | 25 | 0 | 1 | 0 | 26 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 69 | 224 |
| 3:00 PM | 10 | 21 | 0 | 0 | 0 | 23 | 1 | 0 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 65 | 228 |
| 3:15 PM | 8 | 32 | 0 | 0 | 0 | 22 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 68 | 252 |
| 3:30 PM | 12 | 34 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 79 | 281 |
| 3:45 PM | 13 | 43 | 0 | 0 | 0 | 27 | 2 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 95 | 307 |
| 4:00 PM | 16 | 22 | 0 | 0 | 0 | 20 | 1 | 0 | 2 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 70 | 312 |
| 4:15 PM | 15 | 29 | 0 | 0 | 0 | 22 | 1 | 0 | 2 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 82 | 326 |
| 4:30 PM | 12 | 21 | 0 | 0 | 0 | 24 | 1 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 65 | 312 |

| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Honeysuckle Dr (Eastbound) | | | | Honeysuckle Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 11 | 33 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 75 | 292 |
| 5:00 PM | 12 | 29 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 75 | 297 |
| 5:15 PM | 17 | 46 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 102 | 317 |
| 5:30 PM | 26 | 41 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 92 | 344 |
| 5:45 PM | 17 | 36 | 0 | 1 | 0 | 16 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 78 | 347 |
| 6:00 PM | 30 | 35 | 0 | 1 | 0 | 22 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 97 | 369 |
| 6:15 PM | 13 | 28 | 0 | 1 | 0 | 16 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 66 | 333 |
| 6:30 PM | 9 | 29 | 0 | 1 | 0 | 20 | 1 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 67 | 308 |
| 6:45 PM | 11 | 13 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 75 | 305 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 68 | 184 | 0 | 0 | 0 | 96 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 408 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 4 | | | | 0 | | | | 0 | | | | 0 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 4 | | 0 | 0 | 0 | | 4 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

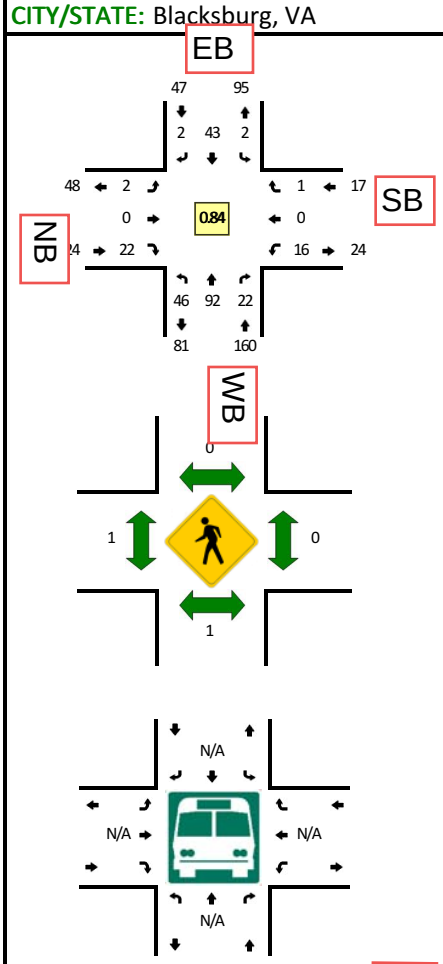
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

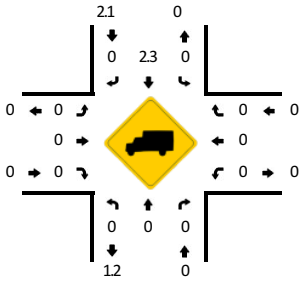
**LOCATION:** Toms Creek Rd -- Redbud Rd
**CITY/STATE:** Blacksburg, VA

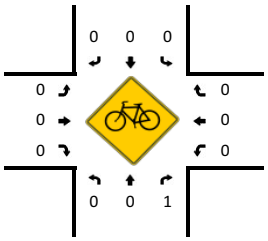
**QC JOB #:** 15762702
**DATE:** Wed, Apr 6 2022

**Peak-Hour: 5:15 PM -- 6:15 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**



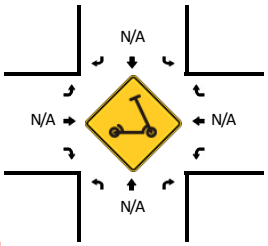

Quality Counts
DATA THAT DRIVES COMMUNITIES










| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) WB | | | | Toms Creek Rd (Southbound) EB | | | | Redbud Rd (Eastbound) NB | | | | Redbud Rd (Westbound) SB | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 1 | 4 | 1 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 0 | 22 | |
| 7:15 AM | 1 | 4 | 3 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 11 | 0 | 8 | 0 | 0 | 0 | 35 | |
| 7:30 AM | 3 | 5 | 3 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 12 | 0 | 8 | 0 | 0 | 0 | 45 | |
| 7:45 AM | 2 | 5 | 2 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 19 | 0 | 13 | 0 | 1 | 0 | 61 | 163 |
| 8:00 AM | 6 | 10 | 3 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 41 | 182 |
| 8:15 AM | 0 | 8 | 1 | 0 | 0 | 15 | 0 | 0 | 1 | 0 | 6 | 0 | 5 | 0 | 0 | 0 | 36 | 183 |
| 8:30 AM | 2 | 4 | 4 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 14 | 0 | 7 | 0 | 0 | 0 | 47 | 185 |
| 8:45 AM | 6 | 9 | 6 | 0 | 0 | 19 | 0 | 0 | 1 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 54 | 178 |
| 9:00 AM | 2 | 10 | 2 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 0 | 0 | 31 | 168 |
| 9:15 AM | 3 | 7 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 26 | 158 |
| 9:30 AM | 3 | 8 | 1 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 33 | 144 |
| 9:45 AM | 2 | 5 | 3 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 32 | 122 |
| 10:00 AM | 2 | 7 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 0 | 26 | 117 |
| 10:15 AM | 1 | 3 | 2 | 0 | 0 | 14 | 1 | 0 | 0 | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 26 | 117 |
| 10:30 AM | 2 | 7 | 3 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 24 | 108 |
| 10:45 AM | 3 | 7 | 2 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 0 | 1 | 0 | 34 | 110 |
| 11:00 AM | 3 | 9 | 4 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 0 | 33 | 117 |
| 11:15 AM | 3 | 10 | 3 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 32 | 123 |
| 11:30 AM | 1 | 13 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 24 | 123 |
| 11:45 AM | 4 | 8 | 3 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 35 | 124 |
| 12:00 PM | 6 | 13 | 6 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 4 | 0 | 6 | 1 | 0 | 0 | 48 | 139 |
| 12:15 PM | 7 | 18 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 7 | 0 | 5 | 0 | 0 | 0 | 43 | 150 |
| 12:30 PM | 6 | 12 | 5 | 0 | 0 | 12 | 0 | 0 | 0 | 1 | 6 | 0 | 3 | 0 | 0 | 0 | 45 | 171 |
| 12:45 PM | 5 | 15 | 3 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 50 | 186 |
| 1:00 PM | 3 | 11 | 4 | 0 | 1 | 9 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 1 | 0 | 0 | 35 | 173 |
| 1:15 PM | 1 | 15 | 3 | 0 | 0 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 38 | 168 |
| 1:30 PM | 2 | 14 | 2 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 34 | 157 |
| 1:45 PM | 5 | 12 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 29 | 136 |
| 2:00 PM | 2 | 11 | 5 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 40 | 141 |
| 2:15 PM | 3 | 5 | 3 | 0 | 0 | 10 | 1 | 0 | 1 | 0 | 2 | 0 | 5 | 0 | 1 | 0 | 31 | 134 |
| 2:30 PM | 4 | 14 | 5 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 40 | 140 |
| 2:45 PM | 6 | 14 | 1 | 0 | 0 | 15 | 0 | 0 | 1 | 0 | 9 | 0 | 2 | 1 | 0 | 0 | 49 | 160 |
| 3:00 PM | 6 | 17 | 1 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 0 | 0 | 49 | 169 |
| 3:15 PM | 5 | 19 | 6 | 0 | 2 | 8 | 0 | 0 | 0 | 0 | 11 | 0 | 3 | 0 | 0 | 0 | 54 | 192 |
| 3:30 PM | 12 | 17 | 5 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 3 | 1 | 5 | 0 | 0 | 0 | 56 | 208 |
| 3:45 PM | 12 | 21 | 11 | 0 | 0 | 22 | 1 | 0 | 1 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 76 | 235 |
| 4:00 PM | 6 | 14 | 4 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 0 | 46 | 232 |
| 4:15 PM | 2 | 22 | 4 | 0 | 0 | 10 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 0 | 1 | 0 | 53 | 231 |
| 4:30 PM | 8 | 11 | 4 | 1 | 0 | 14 | 0 | 0 | 1 | 0 | 7 | 0 | 3 | 0 | 0 | 0 | 49 | 224 |

| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Redbud Rd (Eastbound) | | | | Redbud Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 8 | 19 | 5 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 50 | 198 |
| 5:00 PM | 6 | 15 | 5 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 0 | 51 | 203 |
| 5:15 PM | 13 | 30 | 5 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 4 | 0 | 7 | 0 | 1 | 0 | 74 | 224 |
| 5:30 PM | 13 | 22 | 6 | 0 | 1 | 12 | 1 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 0 | 63 | 238 |
| 5:45 PM | 12 | 19 | 4 | 0 | 0 | 10 | 1 | 0 | 1 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 55 | 243 |
| 6:00 PM | 8 | 21 | 7 | 0 | 1 | 7 | 0 | 0 | 1 | 0 | 7 | 0 | 4 | 0 | 0 | 0 | 56 | 248 |
| 6:15 PM | 8 | 15 | 4 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 7 | 0 | 2 | 1 | 0 | 0 | 46 | 220 |
| 6:30 PM | 8 | 17 | 6 | 0 | 0 | 9 | 0 | 0 | 2 | 0 | 4 | 0 | 4 | 1 | 0 | 0 | 51 | 208 |
| 6:45 PM | 5 | 6 | 4 | 0 | 0 | 22 | 2 | 0 | 1 | 0 | 7 | 0 | 5 | 0 | 0 | 0 | 52 | 205 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 52 | 120 | 20 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 16 | 0 | 28 | 0 | 4 | 0 | 296 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

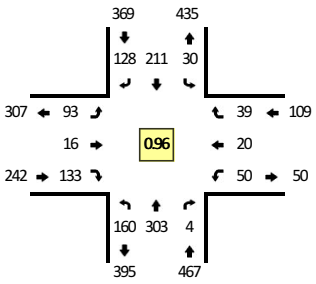
Type of peak hour being reported: Intersection Peak

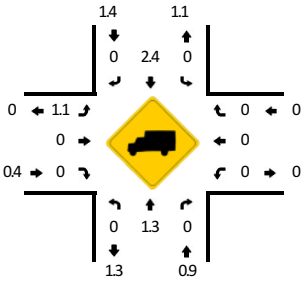
Method for determining peak hour: Total Entering Volume

**LOCATION:** University City Blvd -- Glade Rd/Starbucks Dwy
**CITY/STATE:** Blacksburg, VA

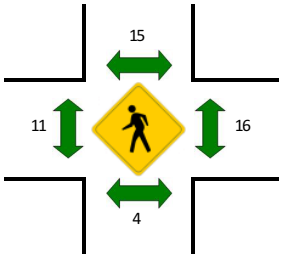
**QC JOB #:** 15762703
**DATE:** Wed, Apr 6 2022

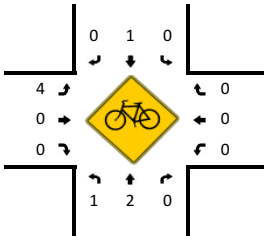
**Peak-Hour: 5:15 PM -- 6:15 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

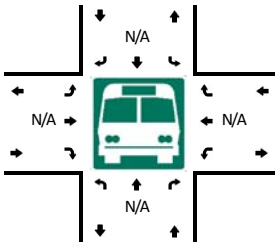


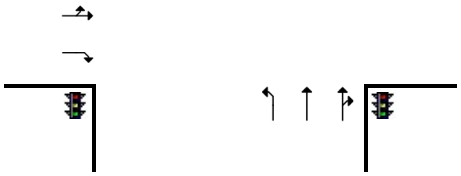



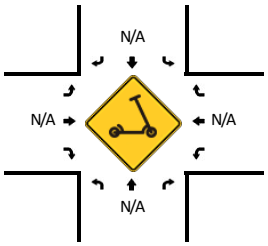

Quality Counts
DATA THAT DRIVES COMMUNITIES






| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Glade Rd/Starbucks Dwy (Eastbound) | | | | Glade Rd/Starbucks Dwy (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 4 | 8 | 0 | 0 | 11 | 14 | 4 | 0 | 15 | 4 | 9 | 0 | 9 | 5 | 4 | 0 | 87 | |
| 7:15 AM | 6 | 15 | 1 | 0 | 8 | 16 | 10 | 0 | 13 | 9 | 10 | 0 | 15 | 5 | 8 | 0 | 116 | |
| 7:30 AM | 8 | 11 | 0 | 0 | 13 | 26 | 13 | 0 | 21 | 12 | 22 | 0 | 15 | 13 | 2 | 0 | 156 | |
| 7:45 AM | 6 | 16 | 5 | 0 | 19 | 36 | 32 | 0 | 18 | 6 | 21 | 0 | 17 | 20 | 6 | 0 | 202 | 561 |
| 8:00 AM | 6 | 16 | 0 | 0 | 6 | 35 | 18 | 0 | 14 | 11 | 31 | 0 | 22 | 10 | 4 | 0 | 173 | 647 |
| 8:15 AM | 8 | 20 | 0 | 0 | 6 | 24 | 12 | 0 | 21 | 9 | 15 | 0 | 8 | 7 | 3 | 0 | 133 | 664 |
| 8:30 AM | 4 | 21 | 0 | 0 | 16 | 30 | 24 | 0 | 13 | 7 | 19 | 0 | 19 | 9 | 2 | 0 | 164 | 672 |
| 8:45 AM | 3 | 23 | 0 | 0 | 19 | 52 | 24 | 0 | 19 | 9 | 27 | 0 | 20 | 6 | 8 | 0 | 210 | 680 |
| 9:00 AM | 11 | 29 | 0 | 0 | 10 | 28 | 19 | 0 | 11 | 10 | 11 | 0 | 17 | 4 | 13 | 0 | 163 | 670 |
| 9:15 AM | 10 | 25 | 1 | 0 | 9 | 37 | 20 | 0 | 15 | 7 | 22 | 0 | 11 | 5 | 6 | 0 | 168 | 705 |
| 9:30 AM | 12 | 14 | 2 | 0 | 7 | 38 | 21 | 0 | 13 | 7 | 13 | 0 | 13 | 6 | 5 | 0 | 151 | 692 |
| 9:45 AM | 10 | 29 | 2 | 0 | 8 | 39 | 14 | 0 | 15 | 6 | 25 | 0 | 13 | 8 | 5 | 0 | 174 | 656 |
| 10:00 AM | 16 | 28 | 3 | 0 | 8 | 36 | 24 | 0 | 12 | 5 | 20 | 0 | 9 | 6 | 5 | 0 | 172 | 665 |
| 10:15 AM | 17 | 35 | 3 | 0 | 7 | 32 | 27 | 0 | 16 | 6 | 21 | 0 | 12 | 9 | 7 | 0 | 192 | 689 |
| 10:30 AM | 15 | 30 | 2 | 0 | 20 | 33 | 24 | 0 | 12 | 2 | 27 | 0 | 19 | 6 | 7 | 0 | 197 | 735 |
| 10:45 AM | 16 | 30 | 0 | 1 | 12 | 24 | 19 | 1 | 19 | 3 | 22 | 0 | 17 | 3 | 6 | 0 | 173 | 734 |
| 11:00 AM | 20 | 35 | 1 | 0 | 10 | 46 | 25 | 0 | 17 | 3 | 25 | 0 | 9 | 1 | 14 | 0 | 206 | 768 |
| 11:15 AM | 17 | 42 | 4 | 0 | 8 | 40 | 32 | 0 | 22 | 5 | 24 | 0 | 7 | 4 | 12 | 0 | 217 | 793 |
| 11:30 AM | 26 | 42 | 1 | 1 | 11 | 29 | 23 | 0 | 22 | 3 | 27 | 0 | 14 | 9 | 9 | 0 | 217 | 813 |
| 11:45 AM | 15 | 48 | 0 | 0 | 3 | 57 | 30 | 0 | 27 | 3 | 34 | 0 | 17 | 11 | 11 | 0 | 256 | 896 |
| 12:00 PM | 19 | 48 | 1 | 0 | 9 | 39 | 34 | 0 | 24 | 8 | 30 | 0 | 9 | 6 | 7 | 0 | 234 | 924 |
| 12:15 PM | 32 | 47 | 2 | 0 | 7 | 42 | 27 | 0 | 28 | 2 | 21 | 0 | 25 | 8 | 13 | 0 | 254 | 961 |
| 12:30 PM | 24 | 84 | 2 | 0 | 5 | 49 | 30 | 0 | 25 | 5 | 27 | 0 | 16 | 7 | 12 | 0 | 286 | 1030 |
| 12:45 PM | 16 | 62 | 1 | 1 | 12 | 37 | 23 | 0 | 21 | 5 | 33 | 0 | 8 | 8 | 11 | 0 | 238 | 1012 |
| 1:00 PM | 23 | 56 | 1 | 2 | 15 | 46 | 27 | 0 | 24 | 6 | 38 | 0 | 10 | 10 | 7 | 0 | 265 | 1043 |
| 1:15 PM | 19 | 56 | 3 | 1 | 9 | 45 | 23 | 0 | 19 | 6 | 18 | 0 | 15 | 6 | 8 | 0 | 228 | 1017 |
| 1:30 PM | 28 | 58 | 1 | 0 | 3 | 41 | 20 | 0 | 18 | 2 | 18 | 0 | 15 | 8 | 7 | 0 | 219 | 950 |
| 1:45 PM | 20 | 49 | 3 | 0 | 8 | 41 | 24 | 0 | 31 | 7 | 25 | 0 | 9 | 4 | 9 | 0 | 230 | 942 |
| 2:00 PM | 17 | 62 | 2 | 1 | 8 | 43 | 22 | 0 | 19 | 2 | 23 | 0 | 18 | 6 | 9 | 0 | 232 | 909 |
| 2:15 PM | 22 | 39 | 2 | 0 | 7 | 46 | 32 | 0 | 19 | 9 | 30 | 0 | 13 | 6 | 8 | 0 | 233 | 914 |
| 2:30 PM | 28 | 46 | 2 | 0 | 4 | 51 | 21 | 0 | 22 | 3 | 24 | 0 | 9 | 7 | 8 | 0 | 225 | 920 |
| 2:45 PM | 34 | 53 | 1 | 2 | 2 | 37 | 20 | 0 | 19 | 5 | 14 | 0 | 9 | 4 | 11 | 0 | 211 | 901 |
| 3:00 PM | 26 | 50 | 0 | 0 | 6 | 48 | 30 | 0 | 20 | 7 | 20 | 0 | 10 | 8 | 12 | 0 | 237 | 906 |
| 3:15 PM | 23 | 50 | 3 | 0 | 6 | 43 | 26 | 0 | 18 | 2 | 30 | 0 | 13 | 3 | 9 | 0 | 226 | 899 |
| 3:30 PM | 14 | 56 | 2 | 0 | 3 | 43 | 13 | 0 | 13 | 3 | 19 | 0 | 18 | 6 | 2 | 0 | 192 | 866 |
| 3:45 PM | 22 | 77 | 1 | 0 | 3 | 56 | 27 | 0 | 30 | 2 | 37 | 0 | 10 | 5 | 4 | 0 | 274 | 929 |
| 4:00 PM | 32 | 76 | 0 | 0 | 5 | 54 | 22 | 0 | 16 | 1 | 22 | 0 | 8 | 3 | 5 | 0 | 244 | 936 |
| 4:15 PM | 33 | 60 | 1 | 1 | 7 | 39 | 33 | 0 | 22 | 4 | 30 | 0 | 10 | 4 | 15 | 0 | 259 | 969 |
| 4:30 PM | 31 | 66 | 2 | 0 | 6 | 50 | 33 | 0 | 35 | 6 | 31 | 0 | 7 | 6 | 10 | 0 | 283 | 1060 |

| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Glade Rd/Starbucks Dwy (Eastbound) | | | | Glade Rd/Starbucks Dwy (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 33 | 66 | 1 | 0 | 6 | 48 | 32 | 0 | 30 | 4 | 32 | 0 | 5 | 3 | 8 | 0 | 268 | 1054 |
| 5:00 PM | 39 | 71 | 1 | 0 | 7 | 43 | 40 | 0 | 22 | 7 | 29 | 0 | 10 | 2 | 12 | 0 | 283 | 1093 |
| 5:15 PM | 39 | 81 | 0 | 0 | 7 | 49 | 37 | 0 | 24 | 8 | 32 | 0 | 20 | 5 | 6 | 0 | 308 | 1142 |
| 5:30 PM | 39 | 75 | 1 | 0 | 9 | 61 | 41 | 0 | 22 | 2 | 25 | 0 | 12 | 7 | 9 | 0 | 303 | 1162 |
| 5:45 PM | 41 | 74 | 1 | 1 | 8 | 50 | 26 | 0 | 25 | 2 | 40 | 0 | 7 | 4 | 11 | 0 | 290 | 1184 |
| 6:00 PM | 40 | 73 | 2 | 0 | 6 | 51 | 24 | 0 | 22 | 4 | 36 | 0 | 11 | 4 | 13 | 0 | 286 | 1187 |
| 6:15 PM | 27 | 55 | 1 | 0 | 8 | 50 | 53 | 0 | 24 | 7 | 42 | 0 | 7 | 8 | 5 | 0 | 287 | 1166 |
| 6:30 PM | 50 | 63 | 2 | 1 | 5 | 38 | 25 | 0 | 20 | 1 | 28 | 0 | 6 | 6 | 7 | 0 | 252 | 1115 |
| 6:45 PM | 35 | 54 | 1 | 0 | 7 | 51 | 27 | 0 | 21 | 3 | 32 | 0 | 13 | 4 | 6 | 0 | 254 | 1079 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 156 | 324 | 0 | 0 | 28 | 196 | 148 | 0 | 96 | 32 | 128 | 0 | 80 | 20 | 24 | 0 | 1232 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 4 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 4 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 24 | | | | 8 | | | | 24 | | | 56 |
| Bicycles | 4 | 4 | 0 | | 0 | 0 | 0 | | 4 | 0 | 0 | | 0 | 0 | 0 | | 12 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** Old Glade Rd -- Glade Rd

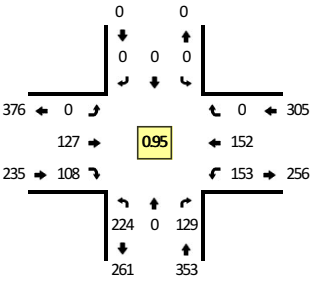
**CITY/STATE:** Blacksburg, VA

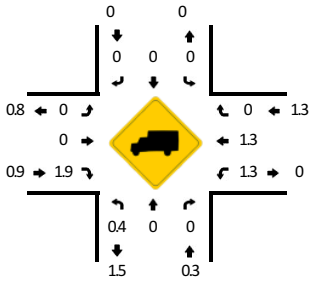
**QC JOB #:** 15762704

**DATE:** Wed, Apr 6 2022

**Peak-Hour: 5:00 PM -- 6:00 PM**

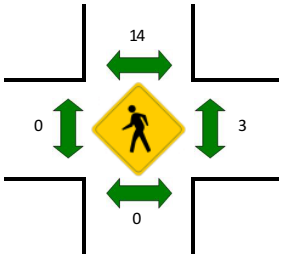
**Peak 15-Min: 5:15 PM -- 5:30 PM**



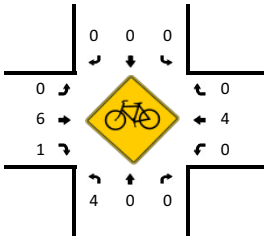



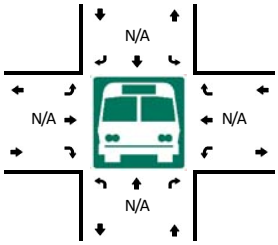

Quality Counts

DATA THAT DRIVES COMMUNITIES

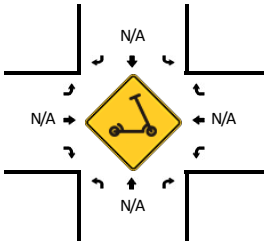











| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 21 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 19 | 0 | 8 | 5 | 0 | 0 | 87 | |
| 7:15 AM | 9 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 36 | 0 | 13 | 10 | 0 | 0 | 112 | |
| 7:30 AM | 18 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 44 | 0 | 34 | 2 | 0 | 0 | 147 | |
| 7:45 AM | 23 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 52 | 0 | 41 | 11 | 0 | 0 | 193 | 539 |
| 8:00 AM | 34 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 53 | 0 | 22 | 9 | 0 | 0 | 186 | 638 |
| 8:15 AM | 13 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 39 | 0 | 22 | 3 | 0 | 0 | 117 | 643 |
| 8:30 AM | 20 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 37 | 0 | 27 | 9 | 0 | 0 | 143 | 639 |
| 8:45 AM | 29 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 35 | 0 | 19 | 11 | 0 | 0 | 147 | 593 |
| 9:00 AM | 25 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 20 | 0 | 19 | 11 | 0 | 0 | 114 | 521 |
| 9:15 AM | 16 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 16 | 0 | 15 | 10 | 0 | 0 | 103 | 507 |
| 9:30 AM | 13 | 0 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 33 | 20 | 0 | 24 | 12 | 0 | 0 | 118 | 482 |
| 9:45 AM | 13 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 23 | 0 | 16 | 10 | 0 | 0 | 101 | 436 |
| 10:00 AM | 28 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 21 | 0 | 25 | 10 | 0 | 0 | 121 | 443 |
| 10:15 AM | 13 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 23 | 0 | 20 | 16 | 0 | 0 | 112 | 452 |
| 10:30 AM | 17 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 20 | 0 | 30 | 11 | 0 | 0 | 117 | 451 |
| 10:45 AM | 37 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 20 | 0 | 22 | 8 | 0 | 0 | 137 | 487 |
| 11:00 AM | 17 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 15 | 0 | 20 | 18 | 0 | 0 | 119 | 485 |
| 11:15 AM | 27 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 15 | 0 | 25 | 21 | 0 | 0 | 138 | 511 |
| 11:30 AM | 26 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 21 | 0 | 32 | 17 | 0 | 0 | 157 | 551 |
| 11:45 AM | 19 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 32 | 0 | 42 | 22 | 0 | 0 | 172 | 586 |
| 12:00 PM | 26 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 24 | 0 | 27 | 21 | 0 | 0 | 155 | 622 |
| 12:15 PM | 26 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 20 | 0 | 28 | 31 | 0 | 0 | 151 | 635 |
| 12:30 PM | 27 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 11 | 0 | 23 | 29 | 0 | 0 | 144 | 622 |
| 12:45 PM | 19 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 19 | 0 | 29 | 12 | 0 | 0 | 139 | 589 |
| 1:00 PM | 23 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 24 | 0 | 29 | 23 | 0 | 0 | 149 | 583 |
| 1:15 PM | 21 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 20 | 0 | 22 | 20 | 0 | 0 | 126 | 558 |
| 1:30 PM | 34 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 17 | 0 | 26 | 13 | 0 | 0 | 127 | 541 |
| 1:45 PM | 28 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 19 | 0 | 22 | 14 | 0 | 0 | 131 | 533 |
| 2:00 PM | 10 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 13 | 0 | 27 | 21 | 0 | 0 | 123 | 507 |
| 2:15 PM | 21 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 20 | 0 | 22 | 18 | 0 | 0 | 127 | 508 |
| 2:30 PM | 36 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 17 | 0 | 30 | 16 | 0 | 0 | 152 | 533 |
| 2:45 PM | 39 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 25 | 0 | 42 | 28 | 0 | 0 | 171 | 573 |
| 3:00 PM | 56 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 35 | 0 | 23 | 33 | 0 | 0 | 207 | 657 |
| 3:15 PM | 36 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 25 | 0 | 30 | 20 | 0 | 0 | 158 | 688 |
| 3:30 PM | 28 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 31 | 0 | 26 | 16 | 0 | 0 | 152 | 688 |
| 3:45 PM | 37 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 25 | 0 | 23 | 34 | 0 | 0 | 174 | 691 |
| 4:00 PM | 40 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 18 | 0 | 25 | 35 | 0 | 0 | 163 | 647 |
| 4:15 PM | 45 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 24 | 0 | 30 | 19 | 0 | 0 | 172 | 661 |
| 4:30 PM | 49 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 35 | 0 | 31 | 25 | 0 | 0 | 197 | 706 |

| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 30 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 25 | 0 | 43 | 30 | 0 | 0 | 197 | 729 |
| 5:00 PM | 51 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 28 | 0 | 37 | 39 | 0 | 0 | 218 | 784 |
| 5:15 PM | 63 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 25 | 0 | 33 | 47 | 0 | 0 | 235 | 847 |
| 5:30 PM | 57 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 29 | 0 | 45 | 34 | 0 | 0 | 224 | 874 |
| 5:45 PM | 53 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 26 | 0 | 38 | 32 | 0 | 0 | 216 | 893 |
| 6:00 PM | 54 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 15 | 0 | 29 | 37 | 0 | 0 | 196 | 871 |
| 6:15 PM | 30 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 22 | 0 | 53 | 32 | 0 | 0 | 193 | 829 |
| 6:30 PM | 40 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 13 | 0 | 34 | 34 | 0 | 0 | 170 | 775 |
| 6:45 PM | 42 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 26 | 0 | 32 | 33 | 0 | 0 | 183 | 742 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 252 | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 128 | 100 | 0 | 132 | 188 | 0 | 0 | 940 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 4 | | 0 | 4 | 0 | | 8 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 12 | | | | 0 | | | | 4 | | | 16 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 0 | | 0 | 8 | 0 | | 12 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

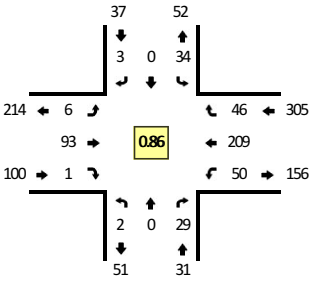
Type of peak hour being reported: Intersection Peak

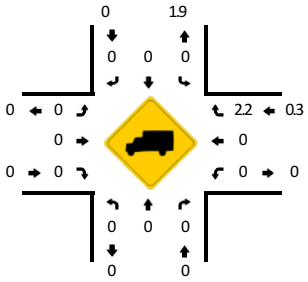
Method for determining peak hour: Total Entering Volume

**LOCATION:** Shadow Lake Rd/Lark Ln -- Glade Rd
**CITY/STATE:** Blacksburg, VA

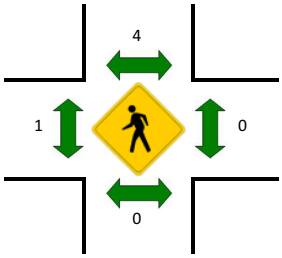
**QC JOB #:** 15762705
**DATE:** Wed, Apr 6 2022

**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

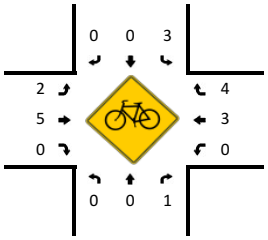


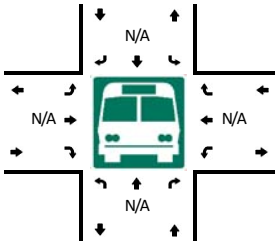




Quality Counts
DATA THAT DRIVES COMMUNITIES

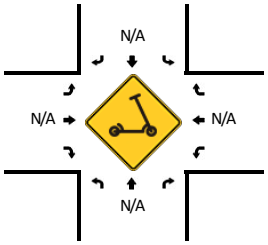











| 15-Min Count Period Beginning At | Shadow Lake Rd/Lark Ln (Northbound) | | | | Shadow Lake Rd/Lark Ln (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 0 | 7 | 0 | 8 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 12 | 10 | 0 | 53 | |
| 7:15 AM | 0 | 0 | 7 | 0 | 10 | 0 | 1 | 0 | 0 | 33 | 1 | 0 | 1 | 4 | 8 | 0 | 65 | |
| 7:30 AM | 1 | 0 | 9 | 0 | 15 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 1 | 6 | 6 | 0 | 68 | |
| 7:45 AM | 0 | 0 | 11 | 0 | 36 | 0 | 0 | 0 | 2 | 53 | 0 | 0 | 2 | 6 | 20 | 0 | 130 | 316 |
| 8:00 AM | 0 | 0 | 3 | 0 | 30 | 0 | 1 | 0 | 0 | 28 | 0 | 0 | 1 | 13 | 21 | 0 | 97 | 360 |
| 8:15 AM | 0 | 0 | 11 | 0 | 11 | 0 | 0 | 0 | 0 | 23 | 1 | 0 | 2 | 5 | 4 | 0 | 57 | 352 |
| 8:30 AM | 0 | 0 | 12 | 0 | 11 | 0 | 0 | 0 | 0 | 28 | 1 | 0 | 2 | 12 | 6 | 0 | 72 | 356 |
| 8:45 AM | 1 | 0 | 11 | 0 | 15 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 7 | 17 | 5 | 0 | 77 | 303 |
| 9:00 AM | 1 | 0 | 3 | 0 | 5 | 0 | 2 | 0 | 0 | 17 | 0 | 0 | 2 | 19 | 8 | 0 | 57 | 263 |
| 9:15 AM | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 3 | 12 | 2 | 0 | 46 | 252 |
| 9:30 AM | 0 | 0 | 6 | 0 | 10 | 0 | 0 | 0 | 1 | 19 | 0 | 0 | 3 | 7 | 4 | 0 | 50 | 230 |
| 9:45 AM | 0 | 0 | 4 | 0 | 6 | 0 | 1 | 0 | 1 | 30 | 0 | 0 | 1 | 14 | 3 | 0 | 60 | 213 |
| 10:00 AM | 0 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 3 | 16 | 6 | 0 | 47 | 203 |
| 10:15 AM | 0 | 0 | 5 | 0 | 6 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 2 | 9 | 6 | 0 | 54 | 211 |
| 10:30 AM | 0 | 0 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 3 | 9 | 2 | 0 | 43 | 204 |
| 10:45 AM | 0 | 0 | 2 | 0 | 8 | 0 | 1 | 0 | 0 | 21 | 1 | 0 | 4 | 18 | 5 | 0 | 60 | 204 |
| 11:00 AM | 0 | 0 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 5 | 16 | 5 | 0 | 51 | 208 |
| 11:15 AM | 0 | 1 | 6 | 0 | 11 | 0 | 0 | 0 | 1 | 21 | 0 | 0 | 6 | 23 | 8 | 0 | 77 | 231 |
| 11:30 AM | 0 | 0 | 9 | 0 | 8 | 1 | 0 | 0 | 1 | 22 | 0 | 0 | 6 | 20 | 8 | 0 | 75 | 263 |
| 11:45 AM | 0 | 0 | 3 | 0 | 3 | 0 | 1 | 0 | 0 | 33 | 0 | 0 | 0 | 13 | 9 | 0 | 62 | 265 |
| 12:00 PM | 0 | 0 | 2 | 0 | 10 | 0 | 0 | 0 | 0 | 22 | 1 | 0 | 5 | 20 | 7 | 0 | 67 | 281 |
| 12:15 PM | 0 | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 5 | 28 | 10 | 0 | 73 | 277 |
| 12:30 PM | 1 | 0 | 4 | 0 | 6 | 1 | 1 | 0 | 0 | 13 | 1 | 0 | 5 | 31 | 11 | 0 | 74 | 276 |
| 12:45 PM | 0 | 0 | 3 | 0 | 5 | 1 | 0 | 0 | 0 | 32 | 4 | 0 | 4 | 17 | 7 | 0 | 73 | 287 |
| 1:00 PM | 0 | 0 | 5 | 0 | 13 | 0 | 1 | 0 | 0 | 21 | 0 | 0 | 7 | 21 | 6 | 0 | 74 | 294 |
| 1:15 PM | 1 | 0 | 4 | 0 | 5 | 0 | 1 | 0 | 0 | 17 | 1 | 0 | 4 | 15 | 7 | 0 | 55 | 276 |
| 1:30 PM | 0 | 0 | 8 | 0 | 5 | 0 | 1 | 0 | 0 | 18 | 1 | 0 | 7 | 17 | 10 | 0 | 67 | 269 |
| 1:45 PM | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 19 | 1 | 0 | 4 | 21 | 7 | 0 | 57 | 253 |
| 2:00 PM | 1 | 0 | 2 | 0 | 8 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 9 | 14 | 1 | 0 | 52 | 231 |
| 2:15 PM | 1 | 0 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 4 | 18 | 4 | 0 | 57 | 233 |
| 2:30 PM | 1 | 0 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 25 | 10 | 0 | 69 | 235 |
| 2:45 PM | 0 | 0 | 4 | 0 | 12 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 8 | 23 | 24 | 0 | 88 | 266 |
| 3:00 PM | 0 | 0 | 6 | 0 | 26 | 0 | 0 | 0 | 1 | 19 | 0 | 0 | 9 | 40 | 24 | 0 | 125 | 339 |
| 3:15 PM | 1 | 0 | 10 | 0 | 11 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 6 | 29 | 11 | 0 | 85 | 367 |
| 3:30 PM | 0 | 0 | 4 | 0 | 11 | 0 | 2 | 0 | 0 | 26 | 0 | 0 | 2 | 19 | 8 | 0 | 72 | 370 |
| 3:45 PM | 0 | 0 | 4 | 0 | 10 | 1 | 0 | 0 | 1 | 19 | 0 | 0 | 9 | 34 | 16 | 0 | 94 | 376 |
| 4:00 PM | 1 | 1 | 1 | 0 | 11 | 0 | 2 | 0 | 1 | 19 | 0 | 0 | 5 | 37 | 12 | 0 | 90 | 341 |
| 4:15 PM | 0 | 0 | 5 | 0 | 5 | 0 | 1 | 0 | 1 | 30 | 0 | 0 | 9 | 29 | 14 | 0 | 94 | 350 |
| 4:30 PM | 0 | 0 | 6 | 0 | 15 | 0 | 2 | 0 | 1 | 29 | 0 | 0 | 5 | 44 | 10 | 0 | 112 | 390 |

| 15-Min Count Period Beginning At | Shadow Lake Rd/Lark Ln (Northbound) | | | | Shadow Lake Rd/Lark Ln (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 1 | 0 | 7 | 0 | 12 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 5 | 30 | 9 | 0 | 84 | 380 |
| 5:00 PM | 0 | 0 | 11 | 0 | 6 | 0 | 1 | 0 | 1 | 13 | 0 | 0 | 12 | 44 | 14 | 0 | 102 | 392 |
| 5:15 PM | 0 | 0 | 6 | 0 | 14 | 0 | 1 | 0 | 1 | 19 | 0 | 0 | 16 | 69 | 12 | 0 | 138 | 436 |
| 5:30 PM | 2 | 0 | 5 | 0 | 7 | 0 | 0 | 0 | 2 | 31 | 0 | 0 | 9 | 48 | 10 | 0 | 114 | 438 |
| 5:45 PM | 0 | 0 | 7 | 0 | 7 | 0 | 1 | 0 | 2 | 30 | 1 | 0 | 13 | 48 | 10 | 0 | 119 | 473 |
| 6:00 PM | 1 | 0 | 5 | 0 | 6 | 0 | 0 | 0 | 1 | 21 | 0 | 0 | 11 | 42 | 13 | 0 | 100 | 471 |
| 6:15 PM | 0 | 0 | 6 | 0 | 8 | 0 | 0 | 0 | 1 | 26 | 1 | 0 | 9 | 35 | 8 | 0 | 94 | 427 |
| 6:30 PM | 0 | 1 | 5 | 0 | 4 | 0 | 2 | 0 | 1 | 20 | 0 | 0 | 6 | 41 | 10 | 0 | 90 | 403 |
| 6:45 PM | 0 | 0 | 2 | 0 | 10 | 1 | 0 | 0 | 0 | 25 | 1 | 0 | 8 | 49 | 8 | 0 | 104 | 388 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 24 | 0 | 56 | 0 | 4 | 0 | 4 | 76 | 0 | 0 | 64 | 276 | 48 | 0 | 552 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 8 | | | | 0 | | | | 0 | | | 8 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 12 | | 16 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

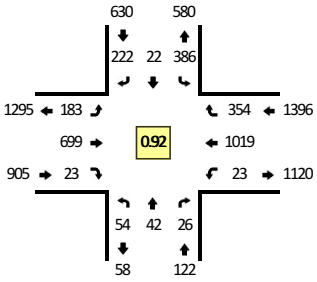
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

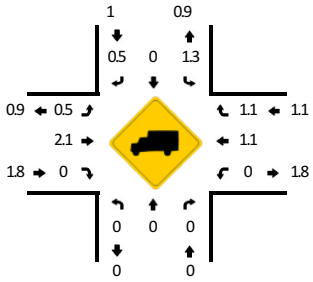
**LOCATION:** University City Blvd -- Prices Fork Rd
**CITY/STATE:** Blacksburg, VA

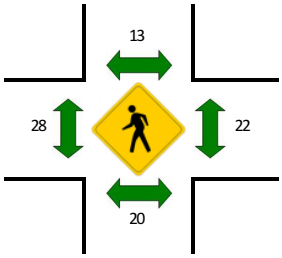
**QC JOB #:** 15762706
**DATE:** Wed, Apr 6 2022

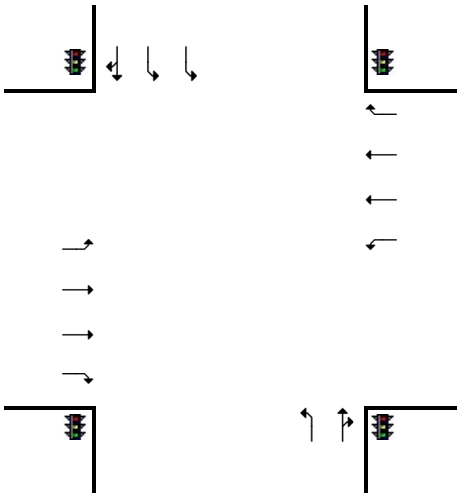
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

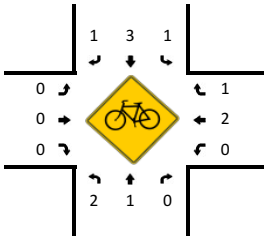


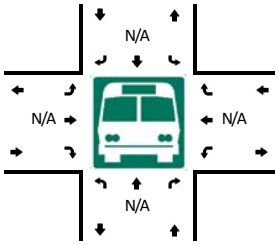


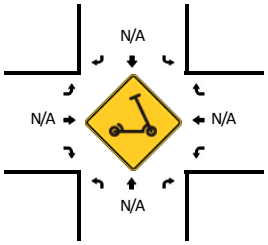





| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 1 | 2 | 0 | 0 | 37 | 3 | 11 | 0 | 15 | 122 | 8 | 0 | 0 | 53 | 14 | 0 | 266 | |
| 7:15 AM | 3 | 0 | 1 | 0 | 43 | 2 | 17 | 0 | 19 | 131 | 2 | 0 | 1 | 68 | 21 | 0 | 308 | |
| 7:30 AM | 3 | 1 | 1 | 0 | 45 | 5 | 26 | 0 | 20 | 170 | 8 | 0 | 4 | 124 | 21 | 0 | 428 | |
| 7:45 AM | 1 | 1 | 5 | 0 | 74 | 7 | 19 | 0 | 34 | 236 | 22 | 0 | 4 | 122 | 30 | 0 | 555 | 1557 |
| 8:00 AM | 2 | 1 | 4 | 0 | 65 | 4 | 16 | 0 | 27 | 205 | 10 | 0 | 2 | 88 | 29 | 0 | 453 | 1744 |
| 8:15 AM | 7 | 0 | 2 | 0 | 35 | 2 | 15 | 0 | 30 | 158 | 13 | 0 | 3 | 61 | 29 | 0 | 355 | 1791 |
| 8:30 AM | 7 | 4 | 1 | 0 | 63 | 4 | 19 | 0 | 37 | 206 | 6 | 0 | 0 | 70 | 36 | 0 | 453 | 1816 |
| 8:45 AM | 1 | 4 | 4 | 0 | 67 | 3 | 22 | 0 | 29 | 235 | 12 | 0 | 12 | 87 | 40 | 0 | 516 | 1777 |
| 9:00 AM | 2 | 4 | 5 | 0 | 55 | 10 | 21 | 0 | 32 | 190 | 5 | 0 | 8 | 102 | 55 | 0 | 489 | 1813 |
| 9:15 AM | 1 | 1 | 1 | 0 | 55 | 4 | 17 | 0 | 24 | 113 | 3 | 0 | 0 | 69 | 41 | 1 | 330 | 1788 |
| 9:30 AM | 2 | 2 | 2 | 0 | 48 | 4 | 16 | 0 | 21 | 136 | 9 | 0 | 2 | 90 | 40 | 0 | 372 | 1707 |
| 9:45 AM | 3 | 3 | 3 | 0 | 75 | 2 | 20 | 0 | 33 | 199 | 9 | 0 | 1 | 87 | 39 | 0 | 474 | 1665 |
| 10:00 AM | 5 | 7 | 5 | 0 | 63 | 3 | 18 | 0 | 19 | 138 | 4 | 0 | 0 | 104 | 79 | 1 | 446 | 1622 |
| 10:15 AM | 1 | 3 | 4 | 0 | 83 | 0 | 22 | 0 | 29 | 109 | 7 | 0 | 1 | 97 | 63 | 0 | 419 | 1711 |
| 10:30 AM | 4 | 1 | 4 | 0 | 61 | 4 | 25 | 0 | 20 | 109 | 5 | 0 | 1 | 75 | 46 | 0 | 355 | 1694 |
| 10:45 AM | 2 | 5 | 5 | 0 | 64 | 3 | 19 | 0 | 31 | 144 | 8 | 0 | 6 | 94 | 50 | 0 | 431 | 1651 |
| 11:00 AM | 3 | 3 | 6 | 0 | 78 | 4 | 19 | 0 | 25 | 121 | 6 | 0 | 3 | 122 | 67 | 0 | 457 | 1662 |
| 11:15 AM | 4 | 2 | 5 | 0 | 57 | 4 | 33 | 1 | 29 | 102 | 9 | 0 | 2 | 122 | 69 | 1 | 440 | 1683 |
| 11:30 AM | 4 | 2 | 8 | 0 | 106 | 2 | 22 | 0 | 33 | 111 | 2 | 0 | 6 | 116 | 89 | 0 | 501 | 1829 |
| 11:45 AM | 8 | 3 | 7 | 0 | 78 | 9 | 42 | 0 | 37 | 146 | 11 | 0 | 7 | 118 | 72 | 2 | 540 | 1938 |
| 12:00 PM | 9 | 8 | 3 | 0 | 88 | 10 | 26 | 0 | 35 | 165 | 9 | 0 | 2 | 130 | 76 | 0 | 561 | 2042 |
| 12:15 PM | 11 | 8 | 3 | 0 | 107 | 10 | 42 | 0 | 33 | 118 | 5 | 0 | 7 | 144 | 111 | 0 | 599 | 2201 |
| 12:30 PM | 2 | 9 | 2 | 0 | 100 | 5 | 38 | 0 | 36 | 124 | 3 | 0 | 6 | 121 | 85 | 0 | 531 | 2231 |
| 12:45 PM | 5 | 1 | 5 | 0 | 90 | 9 | 27 | 0 | 40 | 148 | 10 | 0 | 1 | 138 | 55 | 2 | 531 | 2222 |
| 1:00 PM | 6 | 2 | 3 | 0 | 110 | 9 | 43 | 0 | 32 | 157 | 11 | 0 | 2 | 147 | 71 | 0 | 593 | 2254 |
| 1:15 PM | 6 | 5 | 9 | 0 | 84 | 3 | 29 | 0 | 20 | 133 | 5 | 0 | 7 | 139 | 68 | 3 | 511 | 2166 |
| 1:30 PM | 10 | 5 | 3 | 0 | 80 | 2 | 33 | 0 | 31 | 120 | 3 | 0 | 3 | 161 | 87 | 1 | 539 | 2174 |
| 1:45 PM | 4 | 4 | 4 | 0 | 78 | 3 | 29 | 0 | 37 | 134 | 7 | 0 | 3 | 137 | 48 | 2 | 490 | 2133 |
| 2:00 PM | 3 | 8 | 4 | 0 | 79 | 2 | 37 | 0 | 36 | 142 | 2 | 0 | 4 | 125 | 64 | 3 | 509 | 2049 |
| 2:15 PM | 11 | 5 | 7 | 0 | 87 | 7 | 49 | 0 | 34 | 126 | 5 | 0 | 4 | 149 | 58 | 0 | 542 | 2080 |
| 2:30 PM | 4 | 5 | 0 | 0 | 67 | 1 | 37 | 0 | 41 | 102 | 3 | 0 | 5 | 205 | 84 | 1 | 555 | 2096 |
| 2:45 PM | 2 | 3 | 0 | 0 | 58 | 1 | 43 | 0 | 26 | 137 | 6 | 0 | 5 | 172 | 77 | 0 | 530 | 2136 |
| 3:00 PM | 8 | 3 | 6 | 0 | 63 | 3 | 32 | 0 | 41 | 151 | 4 | 0 | 4 | 139 | 64 | 0 | 518 | 2145 |
| 3:15 PM | 4 | 4 | 4 | 0 | 95 | 3 | 42 | 0 | 30 | 159 | 4 | 0 | 4 | 143 | 69 | 3 | 564 | 2167 |
| 3:30 PM | 5 | 6 | 4 | 0 | 80 | 8 | 36 | 0 | 34 | 148 | 11 | 0 | 2 | 186 | 71 | 1 | 592 | 2204 |
| 3:45 PM | 6 | 13 | 3 | 0 | 82 | 7 | 52 | 0 | 43 | 171 | 10 | 0 | 1 | 181 | 67 | 1 | 637 | 2311 |
| 4:00 PM | 14 | 8 | 6 | 0 | 86 | 2 | 37 | 0 | 51 | 139 | 2 | 0 | 3 | 249 | 86 | 1 | 684 | 2477 |
| 4:15 PM | 14 | 7 | 2 | 0 | 77 | 3 | 47 | 0 | 45 | 124 | 5 | 0 | 4 | 238 | 86 | 1 | 653 | 2566 |
| 4:30 PM | 14 | 7 | 1 | 0 | 63 | 5 | 50 | 0 | 37 | 138 | 1 | 0 | 2 | 227 | 63 | 0 | 608 | 2582 |

| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 7 | 8 | 4 | 0 | 86 | 6 | 50 | 0 | 44 | 133 | 7 | 0 | 5 | 218 | 101 | 3 | 672 | 2617 |
| 5:00 PM | 20 | 10 | 8 | 0 | 78 | 5 | 56 | 0 | 42 | 191 | 7 | 0 | 3 | 246 | 82 | 1 | 749 | 2682 |
| 5:15 PM | 15 | 15 | 7 | 0 | 105 | 2 | 62 | 0 | 49 | 186 | 7 | 0 | 5 | 279 | 96 | 2 | 830 | 2859 |
| 5:30 PM | 13 | 8 | 9 | 0 | 83 | 5 | 55 | 1 | 40 | 135 | 6 | 0 | 2 | 273 | 110 | 1 | 741 | 2992 |
| 5:45 PM | 6 | 9 | 2 | 0 | 119 | 10 | 49 | 0 | 52 | 187 | 3 | 0 | 3 | 221 | 66 | 6 | 733 | 3053 |
| 6:00 PM | 2 | 4 | 5 | 0 | 66 | 3 | 35 | 2 | 53 | 148 | 3 | 0 | 4 | 197 | 84 | 0 | 606 | 2910 |
| 6:15 PM | 7 | 5 | 5 | 0 | 111 | 4 | 40 | 1 | 46 | 163 | 6 | 0 | 7 | 189 | 74 | 3 | 661 | 2741 |
| 6:30 PM | 7 | 3 | 3 | 0 | 91 | 4 | 37 | 0 | 43 | 155 | 4 | 0 | 1 | 186 | 84 | 3 | 621 | 2621 |
| 6:45 PM | 3 | 2 | 1 | 0 | 95 | 2 | 24 | 0 | 31 | 141 | 2 | 0 | 4 | 185 | 88 | 2 | 580 | 2468 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 60 | 60 | 28 | 0 | 420 | 8 | 248 | 0 | 196 | 744 | 28 | 0 | 20 | 1116 | 384 | 8 | 3320 |
| Heavy Trucks | 0 | 0 | 0 | | 4 | 0 | 0 | | 0 | 12 | 0 | | 0 | 12 | 4 | | 32 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 16 | | | | 24 | | | | 28 | | | | 40 | | | 108 |
| Bicycles | 4 | 0 | 0 | | 0 | 0 | 4 | | 0 | 0 | 0 | | 0 | 0 | 4 | | 12 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

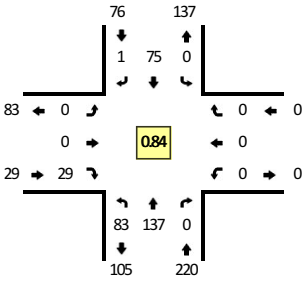
Type of peak hour being reported: Intersection Peak

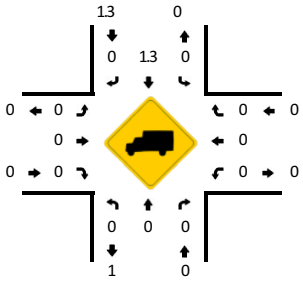
Method for determining peak hour: Total Entering Volume

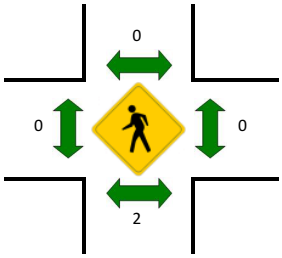
**LOCATION:** Toms Creek Rd -- Honeysuckle Dr
**CITY/STATE:** Blacksburg, VA

**QC JOB #:** 15762708
**DATE:** Thu, Apr 7 2022

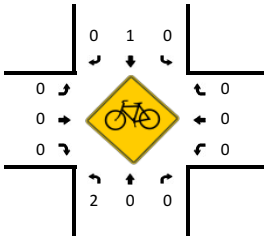
**Peak-Hour: 4:45 PM -- 5:45 PM**
**Peak 15-Min: 5:30 PM -- 5:45 PM**

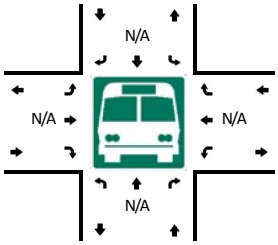


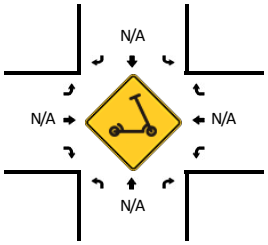












| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Honeysuckle Dr (Eastbound) | | | | Honeysuckle Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 5 | 4 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 24 | |
| 7:15 AM | 2 | 11 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 51 | |
| 7:30 AM | 2 | 5 | 0 | 0 | 0 | 39 | 1 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 63 | |
| 7:45 AM | 2 | 9 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 70 | 208 |
| 8:00 AM | 7 | 17 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 54 | 238 |
| 8:15 AM | 4 | 11 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 52 | 239 |
| 8:30 AM | 4 | 6 | 0 | 2 | 0 | 33 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 62 | 238 |
| 8:45 AM | 9 | 16 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 76 | 244 |
| 9:00 AM | 12 | 13 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 64 | 254 |
| 9:15 AM | 8 | 13 | 0 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 51 | 253 |
| 9:30 AM | 7 | 14 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 41 | 232 |
| 9:45 AM | 7 | 14 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 46 | 202 |
| 10:00 AM | 5 | 12 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 41 | 179 |
| 10:15 AM | 1 | 8 | 0 | 1 | 0 | 11 | 0 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 30 | 158 |
| 10:30 AM | 6 | 17 | 0 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 46 | 163 |
| 10:45 AM | 12 | 17 | 0 | 1 | 0 | 23 | 0 | 0 | 1 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 66 | 183 |
| 11:00 AM | 7 | 12 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 44 | 186 |
| 11:15 AM | 5 | 10 | 0 | 0 | 0 | 13 | 0 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 37 | 193 |
| 11:30 AM | 8 | 16 | 0 | 1 | 0 | 15 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 49 | 196 |
| 11:45 AM | 9 | 21 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 66 | 196 |
| 12:00 PM | 12 | 22 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 64 | 216 |
| 12:15 PM | 12 | 15 | 0 | 0 | 0 | 20 | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 56 | 235 |
| 12:30 PM | 12 | 11 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 45 | 231 |
| 12:45 PM | 13 | 16 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 60 | 225 |
| 1:00 PM | 7 | 17 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 51 | 212 |
| 1:15 PM | 10 | 14 | 0 | 0 | 0 | 18 | 1 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 52 | 208 |
| 1:30 PM | 16 | 20 | 0 | 0 | 0 | 11 | 1 | 0 | 1 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 65 | 228 |
| 1:45 PM | 6 | 18 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 54 | 222 |
| 2:00 PM | 9 | 15 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 54 | 225 |
| 2:15 PM | 10 | 10 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 40 | 213 |
| 2:30 PM | 6 | 14 | 0 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 43 | 191 |
| 2:45 PM | 12 | 22 | 0 | 1 | 0 | 14 | 0 | 0 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 64 | 201 |
| 3:00 PM | 9 | 23 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 61 | 208 |
| 3:15 PM | 13 | 26 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 72 | 240 |
| 3:30 PM | 7 | 21 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 59 | 256 |
| 3:45 PM | 12 | 18 | 0 | 0 | 0 | 20 | 0 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 58 | 250 |
| 4:00 PM | 10 | 30 | 0 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 61 | 250 |
| 4:15 PM | 8 | 28 | 0 | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 66 | 244 |
| 4:30 PM | 12 | 45 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 86 | 271 |

| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Honeysuckle Dr (Eastbound) | | | | Honeysuckle Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 22 | 37 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 87 | 300 |
| 5:00 PM | 10 | 29 | 0 | 0 | 0 | 19 | 1 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 68 | 307 |
| 5:15 PM | 22 | 32 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 73 | 314 |
| 5:30 PM | 28 | 39 | 0 | 1 | 0 | 22 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 97 | 325 |
| 5:45 PM | 13 | 40 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 86 | 324 |
| 6:00 PM | 3 | 28 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 56 | 312 |
| 6:15 PM | 11 | 21 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 52 | 291 |
| 6:30 PM | 14 | 20 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 62 | 256 |
| 6:45 PM | 4 | 20 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 52 | 222 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 112 | 156 | 0 | 4 | 0 | 88 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 388 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 4 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 4 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

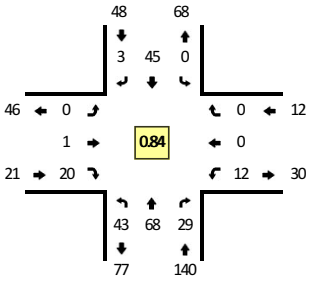
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

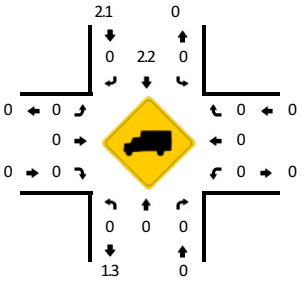
**LOCATION:** Toms Creek Rd -- Redbud Rd
**CITY/STATE:** Blacksburg, VA

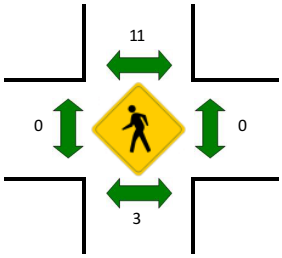
**QC JOB #:** 15762709
**DATE:** Thu, Apr 7 2022

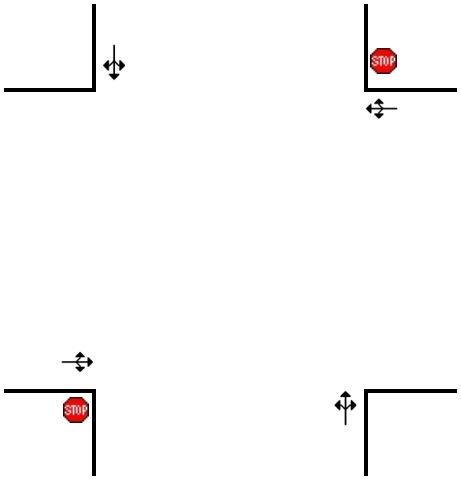
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:45 PM -- 6:00 PM**

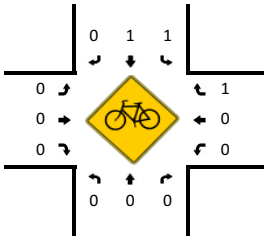


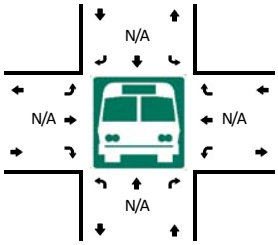

Quality Counts
DATA THAT DRIVES COMMUNITIES

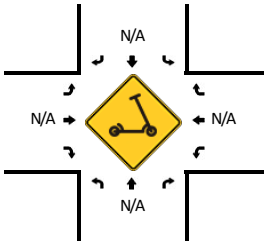



| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Redbud Rd (Eastbound) | | | | Redbud Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 1 | 5 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 16 | |
| 7:15 AM | 3 | 6 | 2 | 0 | 0 | 11 | 0 | 0 | 0 | 1 | 8 | 0 | 7 | 0 | 0 | 0 | 38 | |
| 7:30 AM | 1 | 4 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 17 | 0 | 7 | 0 | 0 | 0 | 45 | |
| 7:45 AM | 4 | 4 | 1 | 0 | 0 | 13 | 0 | 0 | 1 | 0 | 10 | 0 | 14 | 0 | 0 | 0 | 47 | 146 |
| 8:00 AM | 4 | 9 | 3 | 0 | 0 | 11 | 0 | 0 | 2 | 0 | 8 | 0 | 5 | 0 | 0 | 0 | 42 | 172 |
| 8:15 AM | 2 | 5 | 2 | 0 | 0 | 20 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 36 | 170 |
| 8:30 AM | 2 | 8 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 12 | 0 | 5 | 0 | 0 | 0 | 43 | 168 |
| 8:45 AM | 5 | 5 | 3 | 0 | 0 | 15 | 3 | 0 | 0 | 0 | 10 | 0 | 8 | 0 | 0 | 0 | 49 | 170 |
| 9:00 AM | 6 | 7 | 3 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 0 | 6 | 0 | 1 | 0 | 38 | 166 |
| 9:15 AM | 4 | 6 | 3 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 5 | 0 | 7 | 0 | 0 | 0 | 32 | 162 |
| 9:30 AM | 2 | 12 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 28 | 147 |
| 9:45 AM | 2 | 8 | 4 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 32 | 130 |
| 10:00 AM | 4 | 4 | 3 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 27 | 119 |
| 10:15 AM | 3 | 6 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 21 | 108 |
| 10:30 AM | 6 | 7 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 29 | 109 |
| 10:45 AM | 5 | 14 | 3 | 0 | 0 | 17 | 1 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 46 | 123 |
| 11:00 AM | 2 | 8 | 2 | 0 | 0 | 10 | 0 | 0 | 1 | 0 | 6 | 0 | 1 | 1 | 0 | 0 | 31 | 127 |
| 11:15 AM | 2 | 7 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 23 | 129 |
| 11:30 AM | 6 | 11 | 1 | 0 | 0 | 10 | 0 | 0 | 1 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 36 | 136 |
| 11:45 AM | 3 | 15 | 3 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 1 | 0 | 0 | 44 | 134 |
| 12:00 PM | 5 | 12 | 4 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 42 | 145 |
| 12:15 PM | 5 | 7 | 2 | 0 | 0 | 18 | 0 | 0 | 1 | 0 | 3 | 0 | 2 | 1 | 0 | 0 | 39 | 161 |
| 12:30 PM | 3 | 6 | 4 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 24 | 149 |
| 12:45 PM | 2 | 10 | 2 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 43 | 148 |
| 1:00 PM | 4 | 8 | 6 | 0 | 0 | 5 | 0 | 0 | 1 | 1 | 8 | 0 | 3 | 0 | 0 | 0 | 36 | 142 |
| 1:15 PM | 3 | 10 | 1 | 0 | 1 | 10 | 1 | 0 | 0 | 0 | 6 | 0 | 2 | 1 | 0 | 0 | 35 | 138 |
| 1:30 PM | 3 | 13 | 4 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 31 | 145 |
| 1:45 PM | 2 | 11 | 2 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 9 | 0 | 3 | 0 | 0 | 0 | 35 | 137 |
| 2:00 PM | 5 | 10 | 5 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 40 | 141 |
| 2:15 PM | 2 | 5 | 3 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 29 | 135 |
| 2:30 PM | 3 | 9 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 26 | 130 |
| 2:45 PM | 6 | 15 | 2 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 38 | 133 |
| 3:00 PM | 4 | 14 | 6 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 7 | 0 | 3 | 1 | 0 | 0 | 43 | 136 |
| 3:15 PM | 7 | 12 | 6 | 0 | 1 | 9 | 0 | 0 | 1 | 0 | 9 | 0 | 3 | 0 | 0 | 0 | 48 | 155 |
| 3:30 PM | 6 | 8 | 5 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 0 | 43 | 172 |
| 3:45 PM | 6 | 10 | 4 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 40 | 174 |
| 4:00 PM | 8 | 13 | 6 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 43 | 174 |
| 4:15 PM | 3 | 25 | 1 | 0 | 0 | 8 | 0 | 0 | 1 | 0 | 7 | 0 | 2 | 0 | 0 | 0 | 47 | 173 |
| 4:30 PM | 12 | 30 | 5 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 60 | 190 |

| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Redbud Rd (Eastbound) | | | | Redbud Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 7 | 24 | 5 | 0 | 1 | 10 | 1 | 0 | 0 | 0 | 8 | 0 | 5 | 0 | 0 | 0 | 61 | 211 |
| 5:00 PM | 8 | 15 | 7 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 50 | 218 |
| 5:15 PM | 9 | 17 | 5 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 44 | 215 |
| 5:30 PM | 15 | 16 | 8 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 61 | 216 |
| 5:45 PM | 11 | 20 | 9 | 0 | 0 | 12 | 1 | 0 | 0 | 1 | 8 | 0 | 4 | 0 | 0 | 0 | 66 | 221 |
| 6:00 PM | 5 | 16 | 6 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 47 | 218 |
| 6:15 PM | 8 | 7 | 6 | 0 | 1 | 10 | 0 | 0 | 1 | 0 | 4 | 0 | 2 | 0 | 1 | 0 | 40 | 214 |
| 6:30 PM | 6 | 12 | 2 | 0 | 1 | 9 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 1 | 1 | 0 | 37 | 190 |
| 6:45 PM | 3 | 12 | 5 | 0 | 2 | 8 | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 1 | 0 | 40 | 164 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 44 | 80 | 36 | 0 | 0 | 48 | 4 | 0 | 0 | 4 | 32 | 0 | 16 | 0 | 0 | 0 | 264 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 4 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 4 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

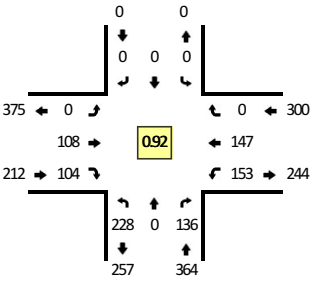
Type of peak hour being reported: Intersection Peak

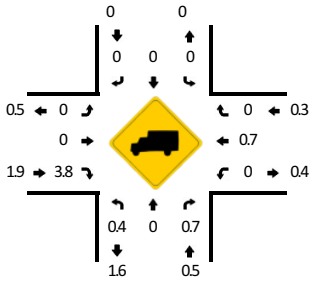
Method for determining peak hour: Total Entering Volume

**LOCATION:** Old Glade Rd -- Glade Rd
**CITY/STATE:** Blacksburg, VA

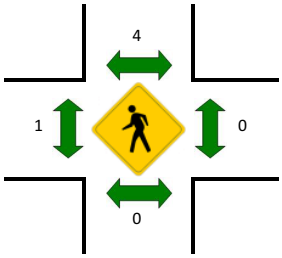
**QC JOB #:** 15762711
**DATE:** Thu, Apr 7 2022

**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:30 PM -- 5:45 PM**

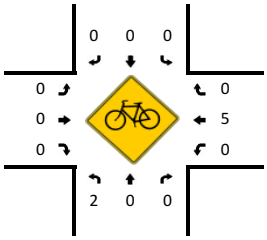


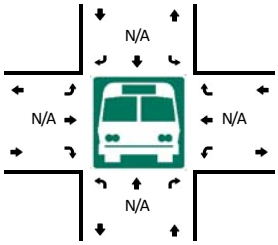




Quality Counts
DATA THAT DRIVES COMMUNITIES

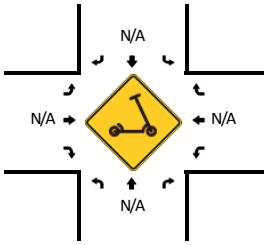











| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 21 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 17 | 0 | 6 | 2 | 0 | 0 | 86 | |
| 7:15 AM | 10 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 28 | 0 | 18 | 8 | 0 | 0 | 113 | |
| 7:30 AM | 14 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 45 | 0 | 26 | 7 | 0 | 0 | 139 | |
| 7:45 AM | 24 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 49 | 0 | 40 | 10 | 0 | 0 | 178 | 516 |
| 8:00 AM | 22 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 36 | 0 | 19 | 11 | 0 | 0 | 148 | 578 |
| 8:15 AM | 12 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 40 | 0 | 16 | 9 | 0 | 1 | 112 | 577 |
| 8:30 AM | 17 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 40 | 0 | 18 | 4 | 0 | 0 | 123 | 561 |
| 8:45 AM | 28 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 38 | 0 | 17 | 13 | 0 | 0 | 147 | 530 |
| 9:00 AM | 22 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 18 | 0 | 20 | 12 | 0 | 0 | 126 | 508 |
| 9:15 AM | 13 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 25 | 0 | 9 | 16 | 0 | 0 | 115 | 511 |
| 9:30 AM | 8 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 20 | 0 | 17 | 13 | 0 | 0 | 112 | 500 |
| 9:45 AM | 20 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 22 | 0 | 20 | 8 | 0 | 0 | 113 | 466 |
| 10:00 AM | 15 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 18 | 0 | 25 | 15 | 0 | 0 | 123 | 463 |
| 10:15 AM | 13 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 0 | 22 | 9 | 0 | 0 | 98 | 446 |
| 10:30 AM | 21 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 12 | 0 | 18 | 14 | 0 | 0 | 111 | 445 |
| 10:45 AM | 19 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 17 | 0 | 26 | 17 | 0 | 0 | 120 | 452 |
| 11:00 AM | 18 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 22 | 0 | 33 | 20 | 0 | 0 | 142 | 471 |
| 11:15 AM | 31 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 0 | 22 | 13 | 0 | 0 | 117 | 490 |
| 11:30 AM | 23 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 12 | 0 | 31 | 14 | 0 | 0 | 129 | 508 |
| 11:45 AM | 31 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 20 | 0 | 26 | 9 | 0 | 0 | 128 | 516 |
| 12:00 PM | 25 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 28 | 0 | 23 | 21 | 0 | 0 | 156 | 530 |
| 12:15 PM | 24 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 15 | 0 | 41 | 21 | 0 | 0 | 163 | 576 |
| 12:30 PM | 31 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 22 | 0 | 35 | 27 | 0 | 0 | 167 | 614 |
| 12:45 PM | 31 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 26 | 0 | 24 | 26 | 0 | 0 | 156 | 642 |
| 1:00 PM | 19 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 13 | 0 | 24 | 16 | 0 | 0 | 123 | 609 |
| 1:15 PM | 27 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 18 | 0 | 27 | 17 | 0 | 0 | 134 | 580 |
| 1:30 PM | 18 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 11 | 0 | 30 | 23 | 0 | 0 | 130 | 543 |
| 1:45 PM | 21 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 18 | 0 | 29 | 20 | 0 | 0 | 138 | 525 |
| 2:00 PM | 21 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 20 | 0 | 19 | 12 | 0 | 0 | 109 | 511 |
| 2:15 PM | 20 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 18 | 0 | 23 | 13 | 0 | 1 | 114 | 491 |
| 2:30 PM | 17 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 20 | 0 | 34 | 13 | 0 | 0 | 111 | 472 |
| 2:45 PM | 22 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 19 | 0 | 26 | 16 | 0 | 0 | 120 | 454 |
| 3:00 PM | 39 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 16 | 0 | 23 | 13 | 0 | 0 | 146 | 491 |
| 3:15 PM | 42 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 22 | 0 | 28 | 24 | 0 | 0 | 173 | 550 |
| 3:30 PM | 28 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 24 | 0 | 24 | 19 | 0 | 0 | 134 | 573 |
| 3:45 PM | 39 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 20 | 0 | 34 | 33 | 0 | 0 | 184 | 637 |
| 4:00 PM | 31 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 17 | 0 | 32 | 18 | 0 | 0 | 160 | 651 |
| 4:15 PM | 47 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 19 | 0 | 36 | 32 | 0 | 0 | 171 | 649 |
| 4:30 PM | 30 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 26 | 0 | 29 | 31 | 0 | 0 | 174 | 689 |

| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 37 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 21 | 0 | 34 | 29 | 0 | 0 | 179 | 684 |
| 5:00 PM | 52 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 36 | 0 | 46 | 33 | 0 | 0 | 221 | 745 |
| 5:15 PM | 55 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 18 | 0 | 36 | 56 | 0 | 0 | 237 | 811 |
| 5:30 PM | 61 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 54 | 30 | 0 | 0 | 238 | 875 |
| 5:45 PM | 60 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 20 | 0 | 17 | 28 | 0 | 0 | 180 | 876 |
| 6:00 PM | 37 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 22 | 0 | 35 | 29 | 0 | 0 | 176 | 831 |
| 6:15 PM | 43 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 23 | 0 | 32 | 29 | 0 | 0 | 185 | 779 |
| 6:30 PM | 49 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 13 | 0 | 37 | 32 | 0 | 0 | 193 | 734 |
| 6:45 PM | 39 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 23 | 0 | 23 | 38 | 0 | 0 | 176 | 730 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 244 | 0 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 120 | 0 | 216 | 120 | 0 | 0 | 952 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 4 | | 0 | 0 | 0 | | 4 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 4 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 4 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

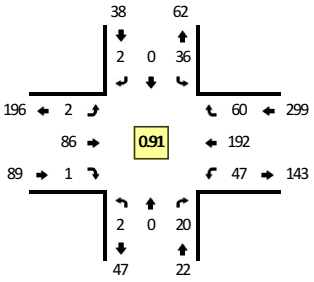
Type of peak hour being reported: Intersection Peak

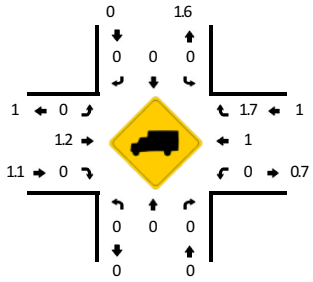
Method for determining peak hour: Total Entering Volume

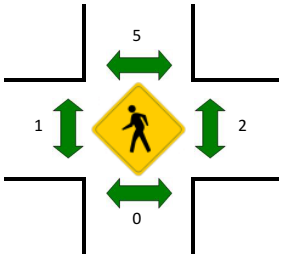
**LOCATION:** Shadow Lake Rd/Lark Ln -- Glade Rd
**CITY/STATE:** Blacksburg, VA

**QC JOB #:** 15762712
**DATE:** Thu, Apr 7 2022

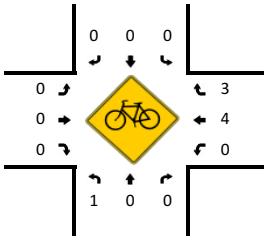
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

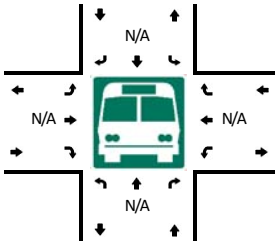


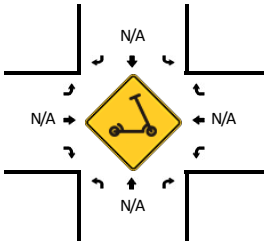












| 15-Min Count Period Beginning At | Shadow Lake Rd/Lark Ln (Northbound) | | | | Shadow Lake Rd/Lark Ln (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 0 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 11 | 5 | 0 | 45 | |
| 7:15 AM | 0 | 0 | 3 | 0 | 14 | 0 | 3 | 0 | 1 | 22 | 1 | 0 | 1 | 5 | 4 | 0 | 54 | |
| 7:30 AM | 0 | 0 | 8 | 0 | 15 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 4 | 5 | 3 | 0 | 69 | |
| 7:45 AM | 0 | 0 | 11 | 0 | 11 | 0 | 0 | 0 | 1 | 39 | 0 | 0 | 4 | 10 | 5 | 0 | 81 | 249 |
| 8:00 AM | 0 | 0 | 7 | 0 | 14 | 0 | 1 | 1 | 0 | 29 | 0 | 0 | 3 | 10 | 8 | 0 | 73 | 277 |
| 8:15 AM | 0 | 0 | 7 | 0 | 16 | 0 | 0 | 0 | 1 | 23 | 1 | 0 | 4 | 7 | 6 | 0 | 65 | 288 |
| 8:30 AM | 0 | 0 | 12 | 0 | 10 | 0 | 1 | 0 | 0 | 30 | 0 | 0 | 0 | 8 | 4 | 0 | 65 | 284 |
| 8:45 AM | 0 | 0 | 9 | 0 | 13 | 0 | 0 | 0 | 2 | 24 | 0 | 0 | 5 | 17 | 8 | 0 | 78 | 281 |
| 9:00 AM | 0 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 2 | 20 | 2 | 0 | 58 | 266 |
| 9:15 AM | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 3 | 10 | 6 | 1 | 54 | 255 |
| 9:30 AM | 0 | 1 | 3 | 0 | 8 | 0 | 1 | 0 | 0 | 24 | 1 | 0 | 2 | 8 | 3 | 0 | 51 | 241 |
| 9:45 AM | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 1 | 14 | 6 | 0 | 47 | 210 |
| 10:00 AM | 0 | 0 | 5 | 0 | 4 | 1 | 0 | 0 | 0 | 17 | 0 | 0 | 3 | 11 | 5 | 0 | 46 | 198 |
| 10:15 AM | 0 | 0 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | 12 | 1 | 0 | 3 | 5 | 6 | 0 | 42 | 186 |
| 10:30 AM | 0 | 0 | 5 | 0 | 7 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 6 | 19 | 4 | 0 | 57 | 192 |
| 10:45 AM | 1 | 0 | 7 | 0 | 5 | 0 | 0 | 0 | 1 | 14 | 0 | 0 | 5 | 18 | 3 | 0 | 54 | 199 |
| 11:00 AM | 0 | 1 | 9 | 0 | 8 | 0 | 1 | 0 | 0 | 12 | 0 | 0 | 2 | 16 | 5 | 0 | 54 | 207 |
| 11:15 AM | 0 | 0 | 5 | 0 | 7 | 0 | 0 | 0 | 0 | 16 | 1 | 0 | 5 | 18 | 9 | 0 | 61 | 226 |
| 11:30 AM | 0 | 1 | 6 | 0 | 5 | 0 | 1 | 0 | 1 | 13 | 1 | 0 | 9 | 11 | 7 | 0 | 55 | 224 |
| 11:45 AM | 1 | 0 | 7 | 0 | 8 | 1 | 0 | 0 | 0 | 12 | 0 | 0 | 3 | 18 | 5 | 0 | 55 | 225 |
| 12:00 PM | 0 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 7 | 14 | 9 | 0 | 68 | 239 |
| 12:15 PM | 0 | 0 | 4 | 0 | 6 | 0 | 0 | 0 | 1 | 11 | 0 | 0 | 3 | 17 | 8 | 0 | 50 | 228 |
| 12:30 PM | 0 | 0 | 5 | 0 | 7 | 1 | 0 | 0 | 0 | 22 | 0 | 0 | 7 | 22 | 9 | 0 | 73 | 246 |
| 12:45 PM | 1 | 0 | 3 | 0 | 12 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 7 | 26 | 9 | 0 | 83 | 274 |
| 1:00 PM | 0 | 0 | 6 | 0 | 5 | 0 | 0 | 0 | 0 | 17 | 2 | 0 | 5 | 13 | 5 | 0 | 53 | 259 |
| 1:15 PM | 2 | 0 | 3 | 0 | 8 | 1 | 0 | 0 | 1 | 19 | 0 | 0 | 5 | 17 | 9 | 0 | 65 | 274 |
| 1:30 PM | 0 | 1 | 5 | 0 | 7 | 0 | 1 | 0 | 0 | 14 | 1 | 0 | 3 | 19 | 10 | 0 | 61 | 262 |
| 1:45 PM | 0 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 5 | 19 | 7 | 0 | 58 | 237 |
| 2:00 PM | 0 | 1 | 4 | 0 | 7 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | 6 | 15 | 6 | 0 | 51 | 235 |
| 2:15 PM | 0 | 0 | 5 | 0 | 6 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | 4 | 11 | 3 | 1 | 42 | 212 |
| 2:30 PM | 0 | 0 | 4 | 0 | 3 | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 3 | 11 | 7 | 0 | 51 | 202 |
| 2:45 PM | 0 | 0 | 7 | 0 | 8 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 5 | 15 | 9 | 0 | 59 | 203 |
| 3:00 PM | 0 | 0 | 3 | 0 | 8 | 0 | 0 | 0 | 0 | 13 | 2 | 0 | 11 | 20 | 8 | 0 | 65 | 217 |
| 3:15 PM | 1 | 0 | 6 | 0 | 9 | 0 | 0 | 0 | 1 | 22 | 2 | 0 | 8 | 35 | 10 | 0 | 94 | 269 |
| 3:30 PM | 0 | 0 | 7 | 0 | 5 | 0 | 0 | 0 | 1 | 19 | 0 | 0 | 4 | 17 | 11 | 0 | 64 | 282 |
| 3:45 PM | 0 | 0 | 5 | 0 | 11 | 0 | 0 | 0 | 2 | 17 | 0 | 0 | 9 | 42 | 11 | 0 | 97 | 320 |
| 4:00 PM | 2 | 0 | 10 | 0 | 9 | 0 | 1 | 0 | 0 | 14 | 0 | 0 | 1 | 25 | 8 | 1 | 71 | 326 |
| 4:15 PM | 0 | 0 | 4 | 0 | 6 | 0 | 0 | 0 | 1 | 20 | 0 | 0 | 5 | 36 | 22 | 0 | 94 | 326 |
| 4:30 PM | 0 | 0 | 8 | 0 | 11 | 0 | 2 | 0 | 0 | 23 | 0 | 0 | 7 | 23 | 12 | 0 | 86 | 348 |

| 15-Min Count Period Beginning At | Shadow Lake Rd/Lark Ln (Northbound) | | | | Shadow Lake Rd/Lark Ln (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 10 | 33 | 12 | 0 | 87 | 338 |
| 5:00 PM | 1 | 0 | 6 | 0 | 12 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 12 | 46 | 11 | 1 | 104 | 371 |
| 5:15 PM | 1 | 0 | 5 | 0 | 7 | 0 | 1 | 0 | 1 | 18 | 1 | 0 | 19 | 50 | 20 | 0 | 123 | 400 |
| 5:30 PM | 0 | 0 | 5 | 0 | 11 | 0 | 0 | 0 | 1 | 26 | 0 | 0 | 8 | 48 | 14 | 0 | 113 | 427 |
| 5:45 PM | 0 | 0 | 4 | 0 | 6 | 0 | 1 | 0 | 0 | 27 | 0 | 0 | 7 | 48 | 15 | 0 | 108 | 448 |
| 6:00 PM | 0 | 0 | 6 | 0 | 4 | 0 | 1 | 0 | 2 | 28 | 0 | 0 | 6 | 32 | 11 | 0 | 90 | 434 |
| 6:15 PM | 0 | 0 | 2 | 0 | 9 | 1 | 1 | 0 | 0 | 27 | 0 | 0 | 5 | 40 | 10 | 0 | 95 | 406 |
| 6:30 PM | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 1 | 19 | 0 | 0 | 17 | 34 | 13 | 0 | 91 | 384 |
| 6:45 PM | 0 | 0 | 5 | 0 | 7 | 1 | 0 | 0 | 0 | 24 | 1 | 0 | 11 | 38 | 9 | 0 | 96 | 372 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 4 | 0 | 20 | 0 | 28 | 0 | 4 | 0 | 4 | 72 | 4 | 0 | 76 | 200 | 80 | 0 | 492 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 4 | | 8 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 4 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 8 | | 16 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

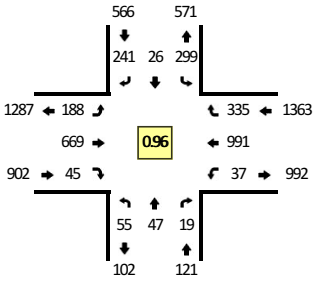
Type of peak hour being reported: Intersection Peak

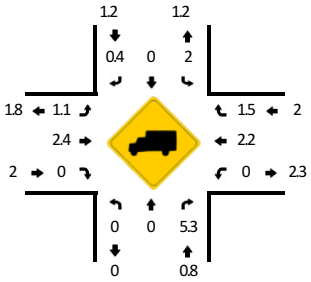
Method for determining peak hour: Total Entering Volume

**LOCATION:** University City Blvd -- Prices Fork Rd
**CITY/STATE:** Blacksburg, VA

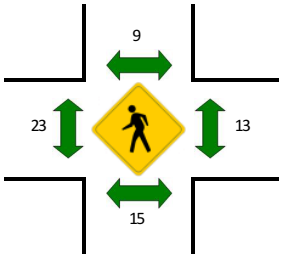
**QC JOB #:** 15762713
**DATE:** Thu, Apr 7 2022

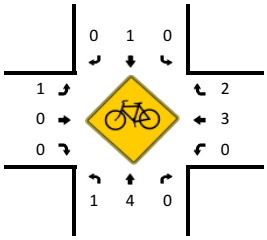
**Peak-Hour: 4:45 PM -- 5:45 PM**
**Peak 15-Min: 5:00 PM -- 5:15 PM**

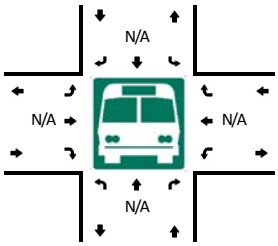


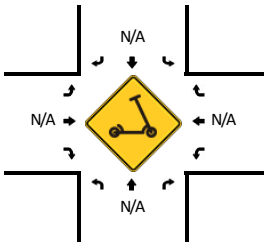



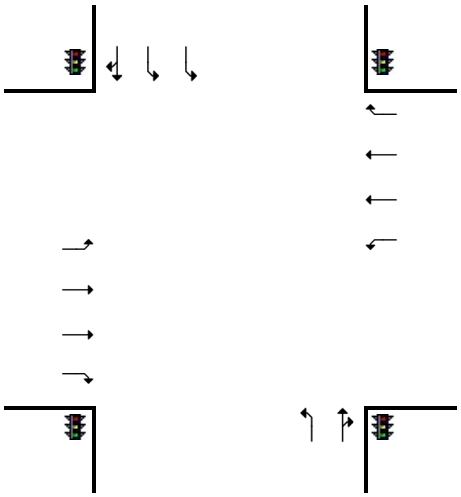

Quality Counts
DATA THAT DRIVES COMMUNITIES



| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 3 | 2 | 1 | 0 | 27 | 4 | 8 | 0 | 12 | 120 | 2 | 0 | 2 | 44 | 15 | 0 | 240 | |
| 7:15 AM | 2 | 1 | 1 | 0 | 34 | 4 | 11 | 0 | 16 | 135 | 2 | 0 | 1 | 89 | 21 | 0 | 317 | |
| 7:30 AM | 0 | 1 | 0 | 0 | 39 | 4 | 26 | 0 | 19 | 198 | 11 | 0 | 2 | 118 | 17 | 0 | 435 | |
| 7:45 AM | 4 | 2 | 1 | 0 | 71 | 8 | 23 | 0 | 37 | 237 | 15 | 0 | 12 | 146 | 35 | 1 | 592 | 1584 |
| 8:00 AM | 3 | 3 | 1 | 0 | 58 | 6 | 15 | 0 | 49 | 191 | 7 | 0 | 2 | 78 | 27 | 1 | 441 | 1785 |
| 8:15 AM | 1 | 0 | 2 | 0 | 39 | 4 | 19 | 0 | 26 | 127 | 6 | 0 | 2 | 63 | 26 | 0 | 315 | 1783 |
| 8:30 AM | 2 | 3 | 2 | 0 | 46 | 2 | 16 | 0 | 32 | 124 | 2 | 0 | 1 | 66 | 34 | 0 | 330 | 1678 |
| 8:45 AM | 5 | 1 | 3 | 0 | 61 | 4 | 24 | 0 | 36 | 200 | 8 | 0 | 3 | 86 | 38 | 0 | 469 | 1555 |
| 9:00 AM | 2 | 2 | 1 | 0 | 74 | 5 | 24 | 0 | 36 | 225 | 7 | 0 | 1 | 76 | 39 | 0 | 492 | 1606 |
| 9:15 AM | 3 | 6 | 3 | 0 | 77 | 6 | 22 | 0 | 37 | 204 | 7 | 0 | 2 | 90 | 46 | 1 | 504 | 1795 |
| 9:30 AM | 3 | 1 | 1 | 0 | 65 | 4 | 14 | 0 | 26 | 122 | 7 | 0 | 4 | 93 | 26 | 0 | 366 | 1831 |
| 9:45 AM | 2 | 2 | 2 | 0 | 57 | 2 | 20 | 0 | 27 | 130 | 8 | 0 | 0 | 92 | 47 | 0 | 389 | 1751 |
| 10:00 AM | 1 | 3 | 3 | 0 | 63 | 3 | 21 | 0 | 29 | 92 | 4 | 0 | 3 | 76 | 49 | 0 | 347 | 1606 |
| 10:15 AM | 1 | 2 | 1 | 0 | 76 | 1 | 28 | 0 | 21 | 118 | 5 | 0 | 2 | 88 | 44 | 0 | 387 | 1489 |
| 10:30 AM | 0 | 2 | 4 | 0 | 72 | 9 | 15 | 0 | 27 | 143 | 5 | 0 | 0 | 84 | 37 | 1 | 399 | 1522 |
| 10:45 AM | 6 | 7 | 7 | 0 | 58 | 6 | 23 | 0 | 29 | 167 | 9 | 0 | 4 | 116 | 63 | 0 | 495 | 1628 |
| 11:00 AM | 5 | 3 | 1 | 0 | 65 | 4 | 34 | 0 | 39 | 99 | 7 | 0 | 5 | 146 | 53 | 1 | 462 | 1743 |
| 11:15 AM | 6 | 8 | 8 | 0 | 68 | 7 | 32 | 0 | 37 | 93 | 11 | 0 | 2 | 110 | 52 | 1 | 435 | 1791 |
| 11:30 AM | 1 | 6 | 3 | 0 | 57 | 5 | 35 | 0 | 38 | 100 | 8 | 0 | 6 | 101 | 43 | 0 | 403 | 1795 |
| 11:45 AM | 4 | 5 | 10 | 0 | 79 | 6 | 31 | 0 | 42 | 143 | 9 | 0 | 6 | 122 | 62 | 3 | 522 | 1822 |
| 12:00 PM | 8 | 8 | 5 | 0 | 94 | 8 | 37 | 0 | 38 | 175 | 10 | 0 | 5 | 148 | 73 | 1 | 610 | 1970 |
| 12:15 PM | 6 | 7 | 4 | 0 | 99 | 9 | 42 | 0 | 35 | 162 | 12 | 0 | 4 | 152 | 96 | 6 | 634 | 2169 |
| 12:30 PM | 4 | 5 | 8 | 0 | 114 | 7 | 37 | 0 | 47 | 123 | 8 | 0 | 9 | 176 | 82 | 1 | 621 | 2387 |
| 12:45 PM | 6 | 3 | 6 | 0 | 84 | 8 | 40 | 0 | 33 | 123 | 5 | 0 | 4 | 135 | 84 | 3 | 534 | 2399 |
| 1:00 PM | 15 | 3 | 6 | 0 | 89 | 2 | 36 | 0 | 35 | 122 | 7 | 0 | 6 | 134 | 82 | 1 | 538 | 2327 |
| 1:15 PM | 2 | 2 | 4 | 0 | 82 | 6 | 35 | 0 | 29 | 136 | 8 | 0 | 4 | 110 | 58 | 2 | 478 | 2171 |
| 1:30 PM | 4 | 3 | 5 | 0 | 84 | 6 | 49 | 0 | 29 | 146 | 15 | 0 | 4 | 132 | 48 | 4 | 529 | 2079 |
| 1:45 PM | 13 | 12 | 4 | 0 | 90 | 4 | 28 | 0 | 24 | 162 | 11 | 0 | 4 | 148 | 88 | 1 | 589 | 2134 |
| 2:00 PM | 8 | 11 | 7 | 0 | 64 | 6 | 44 | 0 | 26 | 93 | 9 | 0 | 4 | 181 | 65 | 0 | 518 | 2114 |
| 2:15 PM | 7 | 2 | 4 | 0 | 71 | 4 | 30 | 0 | 34 | 112 | 6 | 0 | 3 | 154 | 59 | 3 | 489 | 2125 |
| 2:30 PM | 4 | 3 | 0 | 0 | 68 | 1 | 43 | 0 | 35 | 103 | 3 | 0 | 1 | 148 | 53 | 2 | 464 | 2060 |
| 2:45 PM | 3 | 6 | 4 | 0 | 86 | 5 | 39 | 0 | 37 | 127 | 6 | 1 | 1 | 146 | 63 | 1 | 525 | 1996 |
| 3:00 PM | 4 | 3 | 6 | 0 | 79 | 2 | 28 | 0 | 37 | 172 | 15 | 0 | 3 | 150 | 61 | 2 | 562 | 2040 |
| 3:15 PM | 4 | 8 | 4 | 0 | 90 | 4 | 48 | 0 | 40 | 194 | 10 | 0 | 2 | 191 | 81 | 0 | 676 | 2227 |
| 3:30 PM | 13 | 9 | 4 | 0 | 62 | 1 | 41 | 0 | 45 | 129 | 6 | 0 | 4 | 252 | 59 | 2 | 627 | 2390 |
| 3:45 PM | 12 | 7 | 3 | 0 | 67 | 3 | 43 | 0 | 46 | 125 | 4 | 0 | 2 | 185 | 79 | 2 | 578 | 2443 |
| 4:00 PM | 12 | 6 | 4 | 0 | 72 | 1 | 71 | 0 | 38 | 121 | 3 | 0 | 3 | 192 | 73 | 0 | 596 | 2477 |
| 4:15 PM | 8 | 8 | 4 | 0 | 57 | 3 | 48 | 0 | 41 | 151 | 5 | 0 | 4 | 206 | 67 | 1 | 603 | 2404 |
| 4:30 PM | 6 | 6 | 3 | 0 | 85 | 6 | 58 | 0 | 33 | 125 | 7 | 0 | 6 | 223 | 80 | 2 | 640 | 2417 |

| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 13 | 17 | 7 | 0 | 78 | 8 | 61 | 0 | 42 | 160 | 11 | 0 | 8 | 223 | 79 | 1 | 708 | 2547 |
| 5:00 PM | 23 | 12 | 7 | 0 | 79 | 6 | 64 | 0 | 45 | 161 | 11 | 0 | 7 | 263 | 90 | 2 | 770 | 2721 |
| 5:15 PM | 13 | 13 | 3 | 0 | 67 | 7 | 66 | 0 | 49 | 165 | 11 | 0 | 10 | 255 | 93 | 0 | 752 | 2870 |
| 5:30 PM | 6 | 5 | 2 | 0 | 74 | 5 | 50 | 1 | 52 | 183 | 12 | 0 | 6 | 250 | 73 | 3 | 722 | 2952 |
| 5:45 PM | 5 | 5 | 2 | 0 | 100 | 4 | 37 | 0 | 35 | 160 | 1 | 0 | 0 | 185 | 70 | 0 | 604 | 2848 |
| 6:00 PM | 4 | 1 | 2 | 0 | 114 | 7 | 47 | 0 | 32 | 151 | 5 | 0 | 3 | 174 | 70 | 1 | 611 | 2689 |
| 6:15 PM | 1 | 3 | 7 | 0 | 82 | 4 | 34 | 0 | 39 | 130 | 6 | 0 | 3 | 208 | 73 | 0 | 590 | 2527 |
| 6:30 PM | 8 | 6 | 3 | 0 | 86 | 3 | 33 | 0 | 41 | 152 | 3 | 0 | 7 | 179 | 59 | 3 | 583 | 2388 |
| 6:45 PM | 3 | 4 | 4 | 0 | 73 | 2 | 36 | 0 | 39 | 162 | 1 | 0 | 3 | 143 | 74 | 1 | 545 | 2329 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 92 | 48 | 28 | 0 | 316 | 24 | 256 | 0 | 180 | 644 | 44 | 0 | 28 | 1052 | 360 | 8 | 3080 |
| Heavy Trucks | 0 | 0 | 4 | | 8 | 0 | 4 | | 0 | 16 | 0 | | 0 | 28 | 4 | | 64 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 20 | | | | 4 | | | | 24 | | | | 20 | | | 68 |
| Bicycles | 0 | 4 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 0 | | 8 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

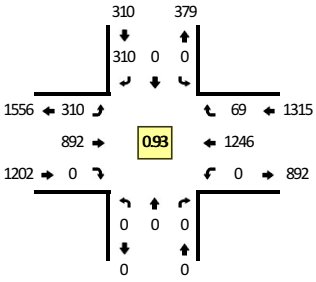
Type of peak hour being reported: Intersection Peak

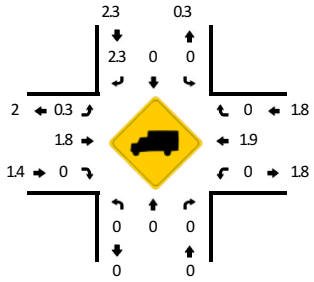
Method for determining peak hour: Total Entering Volume

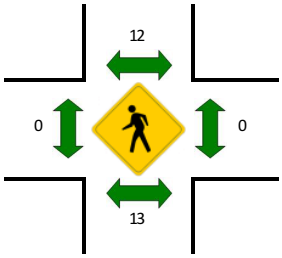
**LOCATION:** Old Glade Rd -- Prices Fork Rd
**CITY/STATE:** Blacksburg, VA

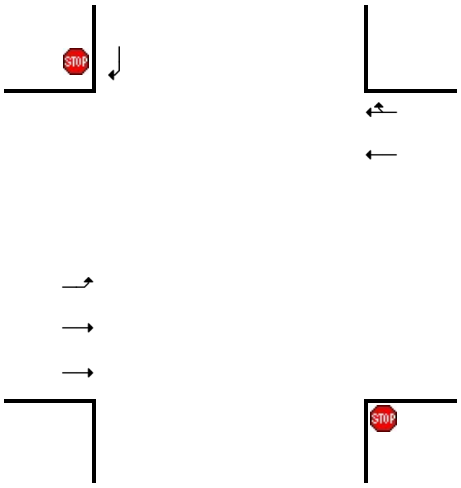
**QC JOB #:** 15762714
**DATE:** Thu, Apr 7 2022

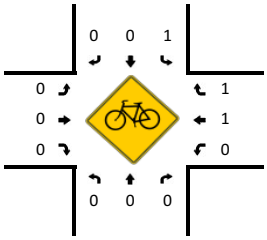
**Peak-Hour: 4:45 PM -- 5:45 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

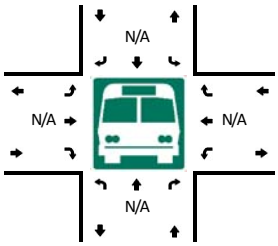


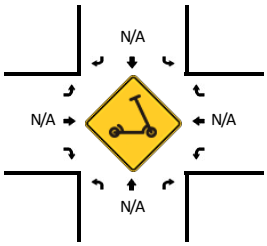




| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 0 | 58 | 147 | 0 | 0 | 0 | 50 | 4 | 0 | 281 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 46 | 140 | 0 | 0 | 0 | 73 | 3 | 0 | 304 | |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 46 | 193 | 0 | 0 | 0 | 157 | 0 | 0 | 449 | |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 0 | 62 | 306 | 0 | 0 | 0 | 169 | 2 | 0 | 634 | 1668 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 74 | 250 | 0 | 0 | 0 | 109 | 7 | 0 | 494 | 1881 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 58 | 177 | 0 | 0 | 0 | 79 | 7 | 0 | 383 | 1960 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 57 | 159 | 0 | 0 | 0 | 84 | 3 | 0 | 354 | 1865 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 63 | 203 | 0 | 0 | 0 | 94 | 12 | 0 | 426 | 1657 |
| 9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 66 | 254 | 0 | 0 | 0 | 100 | 3 | 0 | 474 | 1637 |
| 9:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 50 | 301 | 0 | 0 | 0 | 104 | 4 | 0 | 504 | 1758 |
| 9:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 32 | 139 | 0 | 0 | 0 | 102 | 6 | 0 | 325 | 1729 |
| 9:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 40 | 175 | 0 | 0 | 0 | 108 | 4 | 0 | 366 | 1669 |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 44 | 134 | 0 | 1 | 0 | 97 | 12 | 0 | 324 | 1519 |
| 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 37 | 142 | 0 | 0 | 0 | 98 | 4 | 0 | 329 | 1344 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 45 | 162 | 0 | 0 | 0 | 109 | 7 | 0 | 359 | 1378 |
| 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 49 | 215 | 0 | 0 | 0 | 116 | 8 | 0 | 427 | 1439 |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 0 | 45 | 152 | 0 | 0 | 0 | 182 | 12 | 0 | 447 | 1562 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 46 | 146 | 0 | 0 | 0 | 135 | 14 | 0 | 395 | 1628 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 40 | 127 | 0 | 0 | 0 | 139 | 9 | 0 | 363 | 1632 |
| 11:45 AM | 0 | 0 | 0 | 0 | 1 | 0 | 53 | 0 | 48 | 192 | 0 | 0 | 0 | 142 | 16 | 0 | 452 | 1657 |
| 12:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 58 | 0 | 54 | 215 | 0 | 0 | 0 | 155 | 12 | 0 | 495 | 1705 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 51 | 222 | 0 | 0 | 0 | 189 | 11 | 0 | 525 | 1835 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 54 | 173 | 0 | 0 | 0 | 201 | 13 | 0 | 503 | 1975 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 48 | 166 | 0 | 0 | 0 | 178 | 12 | 0 | 474 | 1997 |
| 1:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 0 | 47 | 157 | 0 | 0 | 0 | 180 | 7 | 0 | 440 | 1942 |
| 1:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 52 | 179 | 0 | 0 | 0 | 159 | 8 | 0 | 449 | 1866 |
| 1:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 42 | 0 | 40 | 188 | 0 | 0 | 0 | 162 | 4 | 0 | 437 | 1800 |
| 1:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 52 | 0 | 47 | 203 | 0 | 0 | 0 | 171 | 15 | 0 | 489 | 1815 |
| 2:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 44 | 135 | 0 | 0 | 0 | 227 | 14 | 0 | 470 | 1845 |
| 2:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 32 | 143 | 0 | 0 | 0 | 182 | 11 | 0 | 412 | 1808 |
| 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 31 | 140 | 0 | 0 | 0 | 181 | 10 | 0 | 424 | 1795 |
| 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 46 | 172 | 0 | 0 | 0 | 194 | 9 | 0 | 475 | 1781 |
| 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 59 | 220 | 0 | 0 | 0 | 167 | 10 | 0 | 519 | 1830 |
| 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 85 | 253 | 0 | 0 | 0 | 232 | 14 | 0 | 634 | 2052 |
| 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 40 | 162 | 0 | 0 | 0 | 264 | 13 | 0 | 537 | 2165 |
| 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 63 | 189 | 0 | 0 | 0 | 237 | 10 | 0 | 570 | 2260 |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 64 | 167 | 0 | 0 | 0 | 263 | 14 | 0 | 561 | 2302 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 0 | 54 | 182 | 0 | 0 | 0 | 265 | 17 | 0 | 577 | 2245 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 51 | 156 | 0 | 0 | 0 | 253 | 16 | 0 | 538 | 2246 |

| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 55 | 231 | 0 | 0 | 0 | 282 | 11 | 0 | 645 | 2321 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 0 | 80 | 212 | 0 | 0 | 0 | 331 | 19 | 0 | 725 | 2485 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 82 | 0 | 88 | 232 | 0 | 0 | 0 | 340 | 19 | 0 | 761 | 2669 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 87 | 217 | 0 | 0 | 0 | 293 | 20 | 0 | 696 | 2827 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 72 | 210 | 0 | 0 | 0 | 245 | 18 | 0 | 602 | 2784 |
| 6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 58 | 192 | 0 | 1 | 0 | 207 | 10 | 0 | 526 | 2585 |
| 6:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 81 | 189 | 0 | 0 | 0 | 231 | 13 | 0 | 580 | 2404 |
| 6:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 65 | 169 | 0 | 0 | 0 | 218 | 17 | 0 | 527 | 2235 |
| 6:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 59 | 219 | 0 | 0 | 0 | 173 | 18 | 0 | 530 | 2163 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 328 | 0 | 352 | 928 | 0 | 0 | 0 | 1360 | 76 | 0 | 3044 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 16 | | 4 | 12 | 0 | | 0 | 24 | 0 | | 56 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 4 | | | | 4 | | | | 0 | | | | 0 | | | 8 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 4/21/2022 12:25 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

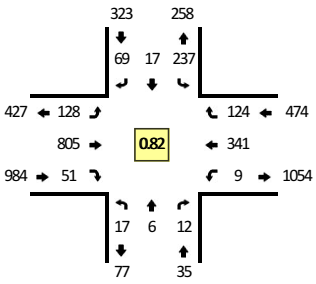
Type of peak hour being reported: Intersection Peak

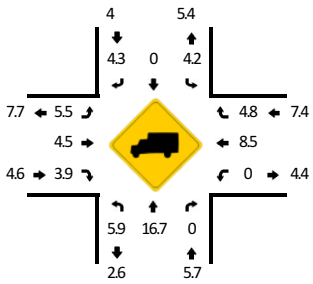
Method for determining peak hour: Total Entering Volume

**LOCATION:** University City Blvd -- Prices Fork Rd
**CITY/STATE:** Blacksburg, VA

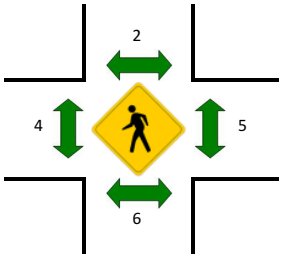
**QC JOB #:** 15762725
**DATE:** Wed, Apr 6 2022

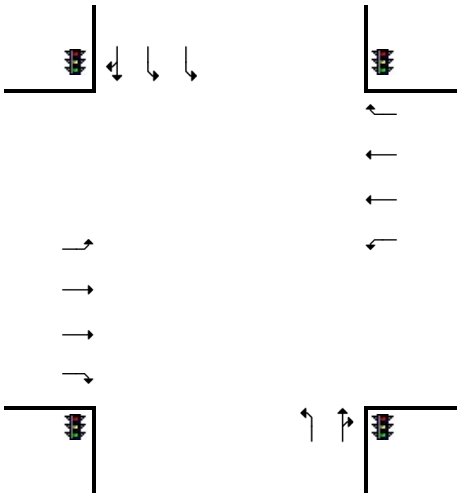
**Peak-Hour: 7:45 AM -- 8:45 AM**
**Peak 15-Min: 7:45 AM -- 8:00 AM**

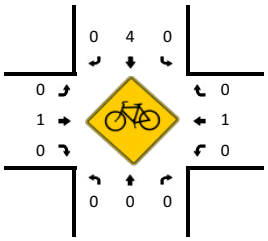


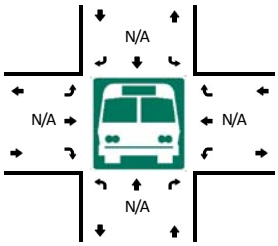



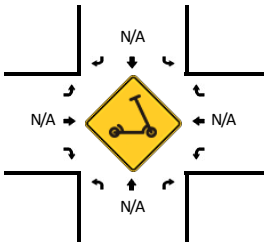

Quality Counts
DATA THAT DRIVES COMMUNITIES






| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 1 | 2 | 0 | 0 | 37 | 3 | 11 | 0 | 15 | 122 | 8 | 0 | 0 | 53 | 14 | 0 | 266 | |
| 7:15 AM | 3 | 0 | 1 | 0 | 43 | 2 | 17 | 0 | 19 | 131 | 2 | 0 | 1 | 68 | 21 | 0 | 308 | |
| 7:30 AM | 3 | 1 | 1 | 0 | 45 | 5 | 26 | 0 | 20 | 170 | 8 | 0 | 4 | 124 | 21 | 0 | 428 | |
| 7:45 AM | 1 | 1 | 5 | 0 | 74 | 7 | 19 | 0 | 34 | 236 | 22 | 0 | 4 | 122 | 30 | 0 | 555 | 1557 |
| 8:00 AM | 2 | 1 | 4 | 0 | 65 | 4 | 16 | 0 | 27 | 205 | 10 | 0 | 2 | 88 | 29 | 0 | 453 | 1744 |
| 8:15 AM | 7 | 0 | 2 | 0 | 35 | 2 | 15 | 0 | 30 | 158 | 13 | 0 | 3 | 61 | 29 | 0 | 355 | 1791 |
| 8:30 AM | 7 | 4 | 1 | 0 | 63 | 4 | 19 | 0 | 37 | 206 | 6 | 0 | 0 | 70 | 36 | 0 | 453 | 1816 |
| 8:45 AM | 1 | 4 | 4 | 0 | 67 | 3 | 22 | 0 | 29 | 235 | 12 | 0 | 12 | 87 | 40 | 0 | 516 | 1777 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 4 | 4 | 20 | 0 | 296 | 28 | 76 | 0 | 136 | 944 | 88 | 0 | 16 | 488 | 120 | 0 | 2220 |
| Heavy Trucks | 0 | 0 | 0 | | 8 | 0 | 4 | | 4 | 36 | 4 | | 0 | 32 | 8 | | 96 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

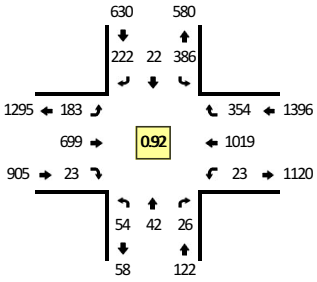
Type of peak hour being reported: Intersection Peak

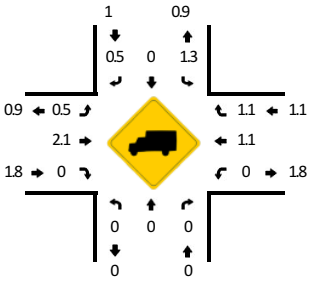
Method for determining peak hour: Total Entering Volume

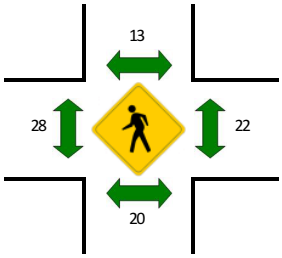
**LOCATION:** University City Blvd -- Prices Fork Rd
**CITY/STATE:** Blacksburg, VA

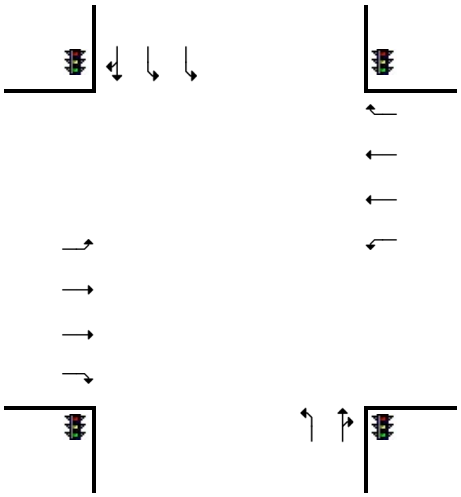
**QC JOB #:** 15762726
**DATE:** Wed, Apr 6 2022

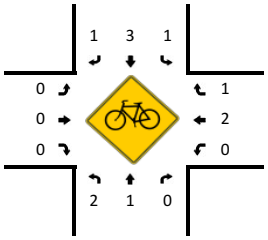
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

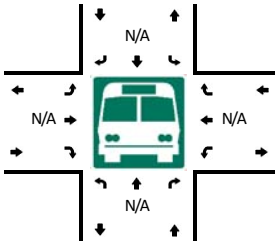


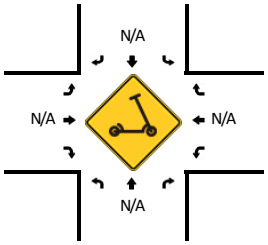






| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 14 | 8 | 6 | 0 | 86 | 2 | 37 | 0 | 51 | 139 | 2 | 0 | 3 | 249 | 86 | 1 | 684 | |
| 4:15 PM | 14 | 7 | 2 | 0 | 77 | 3 | 47 | 0 | 45 | 124 | 5 | 0 | 4 | 238 | 86 | 1 | 653 | |
| 4:30 PM | 14 | 7 | 1 | 0 | 63 | 5 | 50 | 0 | 37 | 138 | 1 | 0 | 2 | 227 | 63 | 0 | 608 | |
| 4:45 PM | 7 | 8 | 4 | 0 | 86 | 6 | 50 | 0 | 44 | 133 | 7 | 0 | 5 | 218 | 101 | 3 | 672 | 2617 |
| 5:00 PM | 20 | 10 | 8 | 0 | 78 | 5 | 56 | 0 | 42 | 191 | 7 | 0 | 3 | 246 | 82 | 1 | 749 | 2682 |
| 5:15 PM | 15 | 15 | 7 | 0 | 105 | 2 | 62 | 0 | 49 | 186 | 7 | 0 | 5 | 279 | 96 | 2 | 830 | 2859 |
| 5:30 PM | 13 | 8 | 9 | 0 | 83 | 5 | 55 | 1 | 40 | 135 | 6 | 0 | 2 | 273 | 110 | 1 | 741 | 2992 |
| 5:45 PM | 6 | 9 | 2 | 0 | 119 | 10 | 49 | 0 | 52 | 187 | 3 | 0 | 3 | 221 | 66 | 6 | 733 | 3053 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 60 | 60 | 28 | 0 | 420 | 8 | 248 | 0 | 196 | 744 | 28 | 0 | 20 | 1116 | 384 | 8 | 3320 |
| Heavy Trucks | 0 | 0 | 0 | | 4 | 0 | 0 | | 0 | 12 | 0 | | 0 | 12 | 4 | | 32 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 16 | | | | 24 | | | | 28 | | | | 40 | | | 108 |
| Bicycles | 4 | 0 | 0 | | 0 | 0 | 4 | | 0 | 0 | 0 | | 0 | 0 | 4 | | 12 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

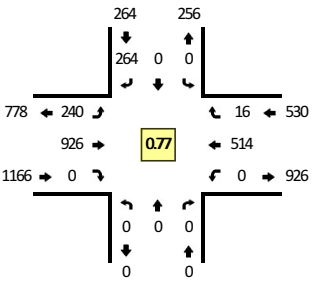
Type of peak hour being reported: Intersection Peak

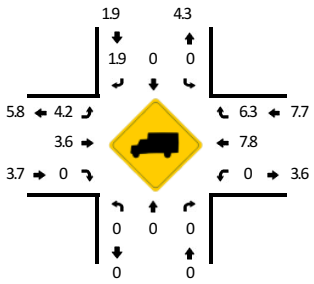
Method for determining peak hour: Total Entering Volume

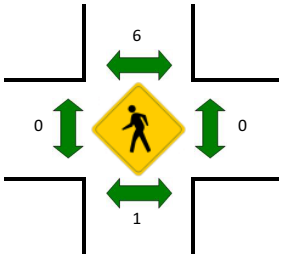
**LOCATION:** Old Glade Rd -- Prices Fork Rd
**CITY/STATE:** Blacksburg, VA

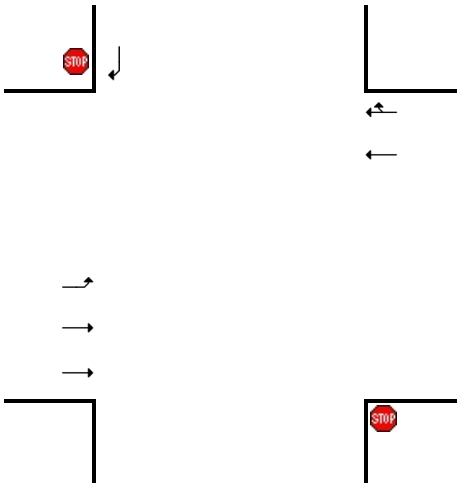
**QC JOB #:** 15762741
**DATE:** Thu, Apr 7 2022

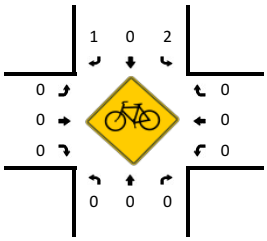
**Peak-Hour: 7:30 AM -- 8:30 AM**
**Peak 15-Min: 7:45 AM -- 8:00 AM**

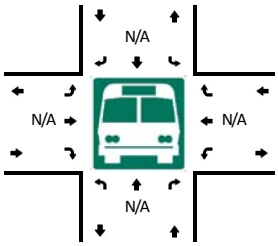


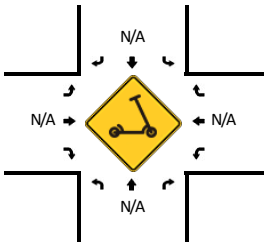




| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 21 | 0 | 58 | 147 | 0 | 0 | 0 | 50 | 4 | 0 | 281 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 46 | 140 | 0 | 0 | 0 | 73 | 3 | 0 | 304 | |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 46 | 193 | 0 | 0 | 0 | 157 | 0 | 0 | 449 | |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 0 | 62 | 306 | 0 | 0 | 0 | 169 | 2 | 0 | 634 | 1668 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 74 | 250 | 0 | 0 | 0 | 109 | 7 | 0 | 494 | 1881 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 58 | 177 | 0 | 0 | 0 | 79 | 7 | 0 | 383 | 1960 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 57 | 159 | 0 | 0 | 0 | 84 | 3 | 0 | 354 | 1865 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 63 | 203 | 0 | 0 | 0 | 94 | 12 | 0 | 426 | 1657 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 380 | 0 | 248 | 1224 | 0 | 0 | 0 | 676 | 8 | 0 | 2536 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 4 | | 8 | 32 | 0 | | 0 | 32 | 0 | | 76 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 4 | | | | 0 | | | | 0 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

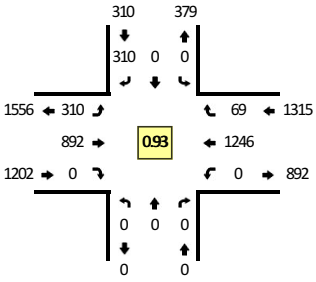
Type of peak hour being reported: Intersection Peak

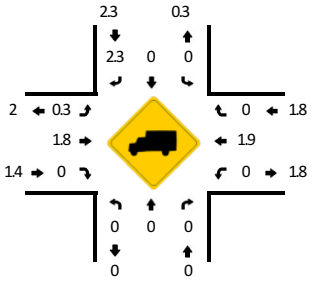
Method for determining peak hour: Total Entering Volume

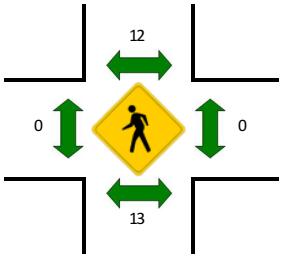
**LOCATION:** Old Glade Rd -- Prices Fork Rd
**CITY/STATE:** Blacksburg, VA

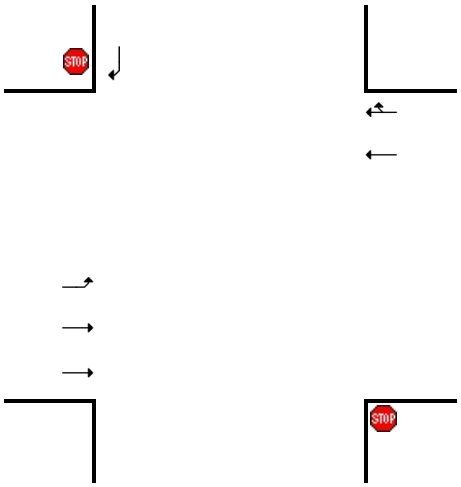
**QC JOB #:** 15762742
**DATE:** Thu, Apr 7 2022

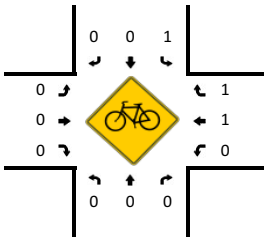
**Peak-Hour: 4:45 PM -- 5:45 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

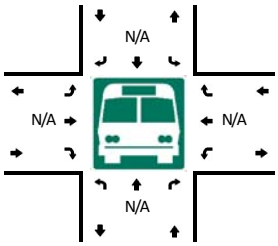


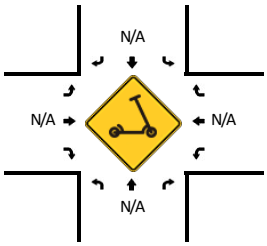




| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Prices Fork Rd (Eastbound) | | | | Prices Fork Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 64 | 167 | 0 | 0 | 0 | 263 | 14 | 0 | 561 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 0 | 54 | 182 | 0 | 0 | 0 | 265 | 17 | 0 | 577 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 0 | 51 | 156 | 0 | 0 | 0 | 253 | 16 | 0 | 538 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 0 | 55 | 231 | 0 | 0 | 0 | 282 | 11 | 0 | 645 | 2321 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 0 | 80 | 212 | 0 | 0 | 0 | 331 | 19 | 0 | 725 | 2485 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 82 | 0 | 88 | 232 | 0 | 0 | 0 | 340 | 19 | 0 | 761 | 2669 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 87 | 217 | 0 | 0 | 0 | 293 | 20 | 0 | 696 | 2827 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 0 | 72 | 210 | 0 | 0 | 0 | 245 | 18 | 0 | 602 | 2784 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 0 | 0 | 0 | 0 | 328 | 0 | 352 | 928 | 0 | 0 | 0 | 1360 | 76 | 0 | 3044 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 16 | | 4 | 12 | 0 | | 0 | 24 | 0 | | 56 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 4 | | | | 4 | | | | 0 | | | | 0 | | | 8 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

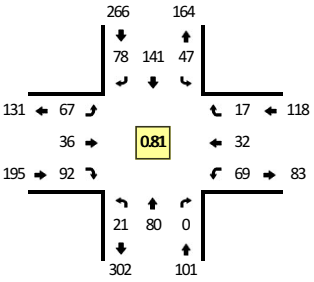
Type of peak hour being reported: Intersection Peak

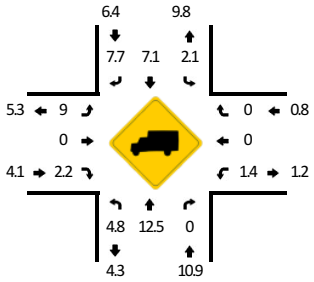
Method for determining peak hour: Total Entering Volume

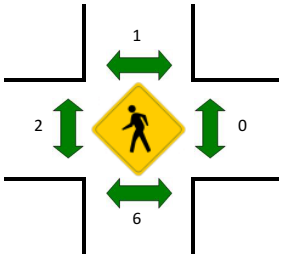
**LOCATION:** University City Blvd -- Glade Rd/Starbucks Dwy
**CITY/STATE:** Blacksburg, VA

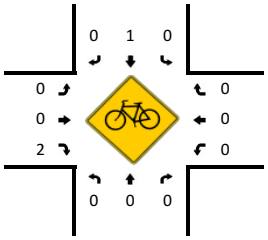
**QC JOB #:** 15762719
**DATE:** Wed, Apr 6 2022

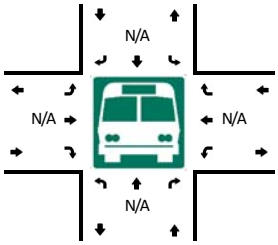
**Peak-Hour: 8:00 AM -- 9:00 AM**
**Peak 15-Min: 8:45 AM -- 9:00 AM**

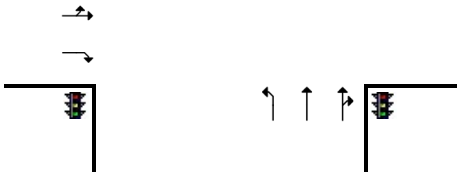


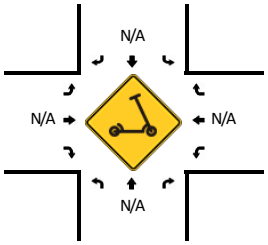






| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Glade Rd/Starbucks Dwy (Eastbound) | | | | Glade Rd/Starbucks Dwy (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 4 | 8 | 0 | 0 | 11 | 14 | 4 | 0 | 15 | 4 | 9 | 0 | 9 | 5 | 4 | 0 | 87 | |
| 7:15 AM | 6 | 15 | 1 | 0 | 8 | 16 | 10 | 0 | 13 | 9 | 10 | 0 | 15 | 5 | 8 | 0 | 116 | |
| 7:30 AM | 8 | 11 | 0 | 0 | 13 | 26 | 13 | 0 | 21 | 12 | 22 | 0 | 15 | 13 | 2 | 0 | 156 | |
| 7:45 AM | 6 | 16 | 5 | 0 | 19 | 36 | 32 | 0 | 18 | 6 | 21 | 0 | 17 | 20 | 6 | 0 | 202 | 561 |
| 8:00 AM | 6 | 16 | 0 | 0 | 6 | 35 | 18 | 0 | 14 | 11 | 31 | 0 | 22 | 10 | 4 | 0 | 173 | 647 |
| 8:15 AM | 8 | 20 | 0 | 0 | 6 | 24 | 12 | 0 | 21 | 9 | 15 | 0 | 8 | 7 | 3 | 0 | 133 | 664 |
| 8:30 AM | 4 | 21 | 0 | 0 | 16 | 30 | 24 | 0 | 13 | 7 | 19 | 0 | 19 | 9 | 2 | 0 | 164 | 672 |
| 8:45 AM | 3 | 23 | 0 | 0 | 19 | 52 | 24 | 0 | 19 | 9 | 27 | 0 | 20 | 6 | 8 | 0 | 210 | 680 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 12 | 92 | 0 | 0 | 76 | 208 | 96 | 0 | 76 | 36 | 108 | 0 | 80 | 24 | 32 | 0 | 840 |
| Heavy Trucks | 0 | 12 | 0 | | 4 | 16 | 4 | | 4 | 0 | 0 | | 0 | 0 | 0 | | 40 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 4 | | | | 0 | | | | 0 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 4 | | 0 | 0 | 0 | | 4 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

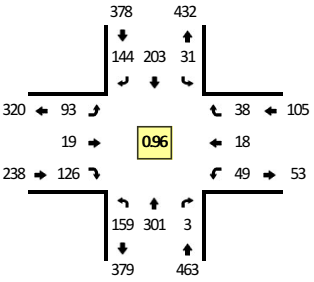
Type of peak hour being reported: Intersection Peak

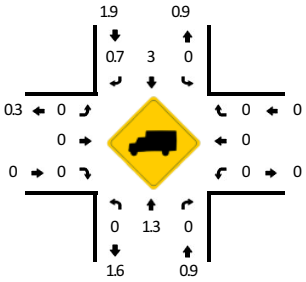
Method for determining peak hour: Total Entering Volume

**LOCATION:** University City Blvd -- Glade Rd/Starbucks Dwy
**CITY/STATE:** Blacksburg, VA

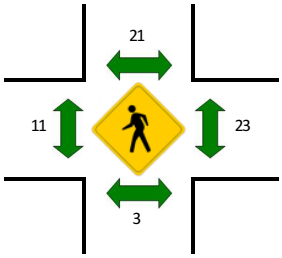
**QC JOB #:** 15762720
**DATE:** Wed, Apr 6 2022

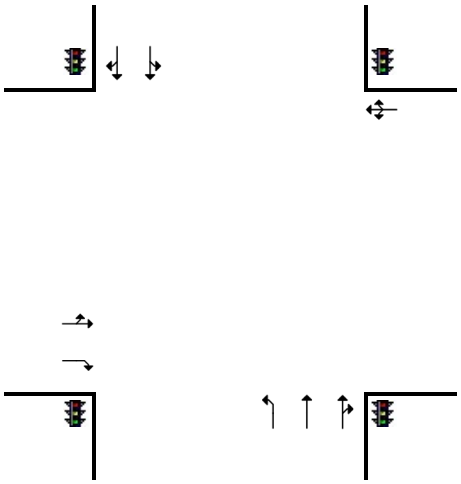
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

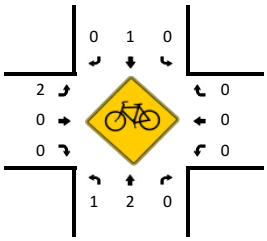


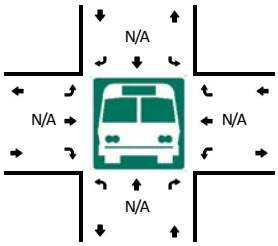




Quality Counts
DATA THAT DRIVES COMMUNITIES

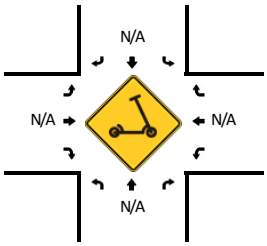







| 15-Min Count Period Beginning At | University City Blvd (Northbound) | | | | University City Blvd (Southbound) | | | | Glade Rd/Starbucks Dwy (Eastbound) | | | | Glade Rd/Starbucks Dwy (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 32 | 76 | 0 | 0 | 5 | 54 | 22 | 0 | 16 | 1 | 22 | 0 | 8 | 3 | 5 | 0 | 244 | |
| 4:15 PM | 33 | 60 | 1 | 1 | 7 | 39 | 33 | 0 | 22 | 4 | 30 | 0 | 10 | 4 | 15 | 0 | 259 | |
| 4:30 PM | 31 | 66 | 2 | 0 | 6 | 50 | 33 | 0 | 35 | 6 | 31 | 0 | 7 | 6 | 10 | 0 | 283 | |
| 4:45 PM | 33 | 66 | 1 | 0 | 6 | 48 | 32 | 0 | 30 | 4 | 32 | 0 | 5 | 3 | 8 | 0 | 268 | 1054 |
| 5:00 PM | 39 | 71 | 1 | 0 | 7 | 43 | 40 | 0 | 22 | 7 | 29 | 0 | 10 | 2 | 12 | 0 | 283 | 1093 |
| 5:15 PM | 39 | 81 | 0 | 0 | 7 | 49 | 37 | 0 | 24 | 8 | 32 | 0 | 20 | 5 | 6 | 0 | 308 | 1142 |
| 5:30 PM | 39 | 75 | 1 | 0 | 9 | 61 | 41 | 0 | 22 | 2 | 25 | 0 | 12 | 7 | 9 | 0 | 303 | 1162 |
| 5:45 PM | 41 | 74 | 1 | 1 | 8 | 50 | 26 | 0 | 25 | 2 | 40 | 0 | 7 | 4 | 11 | 0 | 290 | 1184 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 156 | 324 | 0 | 0 | 28 | 196 | 148 | 0 | 96 | 32 | 128 | 0 | 80 | 20 | 24 | 0 | 1232 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 4 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 4 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 24 | | | | 8 | | | | 24 | | | 56 |
| Bicycles | 4 | 4 | 0 | | 0 | 0 | 0 | | 4 | 0 | 0 | | 0 | 0 | 0 | | 12 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

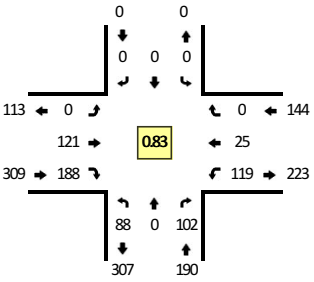
Report generated on 11/10/2022 5:22 PM

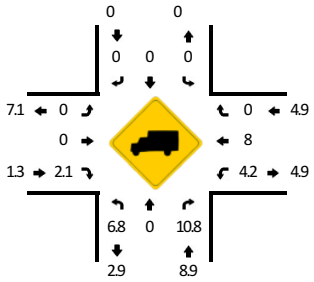
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

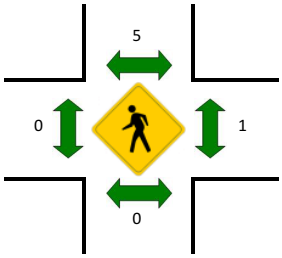
**LOCATION:** Old Glade Rd -- Glade Rd | **QC JOB #:** 15762721
**CITY/STATE:** Blacksburg, VA | **DATE:** Wed, Apr 6 2022

**Peak-Hour: 7:30 AM -- 8:30 AM**
**Peak 15-Min: 7:45 AM -- 8:00 AM**

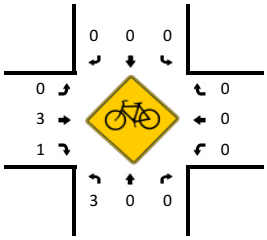


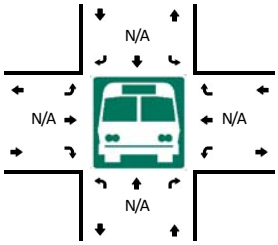




Quality Counts
DATA THAT DRIVES COMMUNITIES

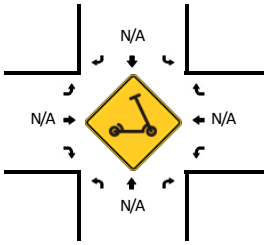











| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 21 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 19 | 0 | 8 | 5 | 0 | 0 | 87 | |
| 7:15 AM | 9 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 36 | 0 | 13 | 10 | 0 | 0 | 112 | |
| 7:30 AM | 18 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 44 | 0 | 34 | 2 | 0 | 0 | 147 | |
| 7:45 AM | 23 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 52 | 0 | 41 | 11 | 0 | 0 | 193 | 539 |
| 8:00 AM | 34 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 53 | 0 | 22 | 9 | 0 | 0 | 186 | 638 |
| 8:15 AM | 13 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 39 | 0 | 22 | 3 | 0 | 0 | 117 | 643 |
| 8:30 AM | 20 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 37 | 0 | 27 | 9 | 0 | 0 | 143 | 639 |
| 8:45 AM | 29 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 35 | 0 | 19 | 11 | 0 | 0 | 147 | 593 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 92 | 0 | 96 | 0 | 0 | 0 | 0 | 0 | 0 | 168 | 208 | 0 | 164 | 44 | 0 | 0 | 772 |
| Heavy Trucks | 4 | 0 | 12 | | 0 | 0 | 0 | | 0 | 0 | 8 | | 8 | 0 | 0 | | 32 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 4 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 4 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

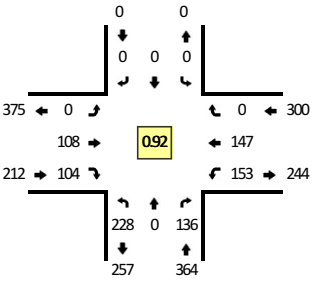
Type of peak hour being reported: Intersection Peak

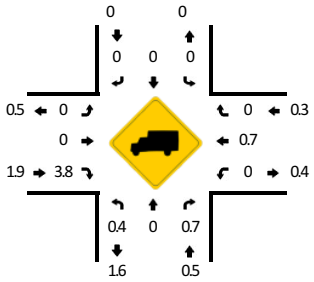
Method for determining peak hour: Total Entering Volume

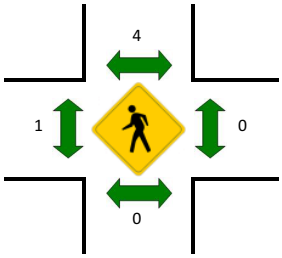
**LOCATION:** Old Glade Rd -- Glade Rd
**CITY/STATE:** Blacksburg, VA

**QC JOB #:** 15762736
**DATE:** Thu, Apr 7 2022

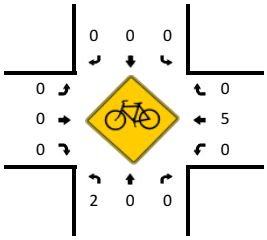
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:30 PM -- 5:45 PM**

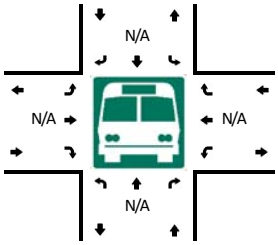


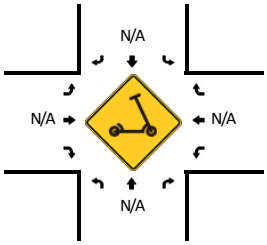












| 15-Min Count Period Beginning At | Old Glade Rd (Northbound) | | | | Old Glade Rd (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 31 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 17 | 0 | 32 | 18 | 0 | 0 | 160 | |
| 4:15 PM | 47 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 19 | 0 | 36 | 32 | 0 | 0 | 171 | |
| 4:30 PM | 30 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 26 | 0 | 29 | 31 | 0 | 0 | 174 | |
| 4:45 PM | 37 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 21 | 0 | 34 | 29 | 0 | 0 | 179 | 684 |
| 5:00 PM | 52 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 36 | 0 | 46 | 33 | 0 | 0 | 221 | 745 |
| 5:15 PM | 55 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 18 | 0 | 36 | 56 | 0 | 0 | 237 | 811 |
| 5:30 PM | 61 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 30 | 0 | 54 | 30 | 0 | 0 | 238 | 875 |
| 5:45 PM | 60 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 20 | 0 | 17 | 28 | 0 | 0 | 180 | 876 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 244 | 0 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 120 | 0 | 216 | 120 | 0 | 0 | 952 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 4 | | 0 | 0 | 0 | | 4 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 4 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 4 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

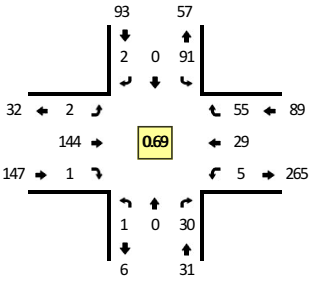
Type of peak hour being reported: Intersection Peak

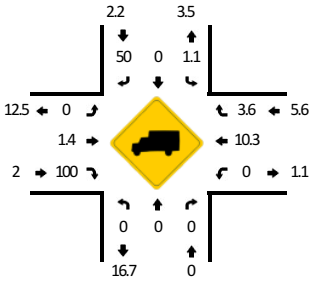
Method for determining peak hour: Total Entering Volume

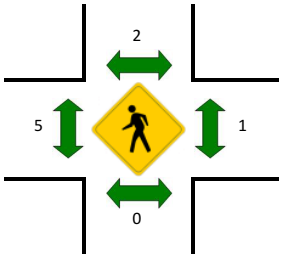
**LOCATION:** Shadow Lake Rd/Lark Ln -- Glade Rd
**CITY/STATE:** Blacksburg, VA

**QC JOB #:** 15762723
**DATE:** Wed, Apr 6 2022

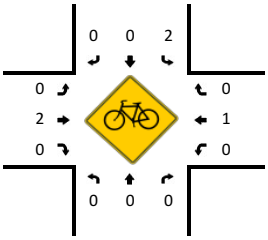
**Peak-Hour: 7:15 AM -- 8:15 AM**
**Peak 15-Min: 7:45 AM -- 8:00 AM**

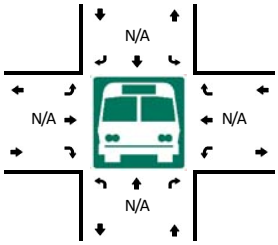


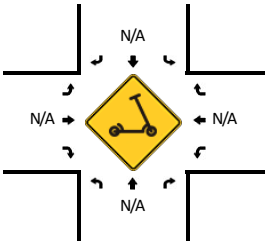












| 15-Min Count Period Beginning At | Shadow Lake Rd/Lark Ln (Northbound) | | | | Shadow Lake Rd/Lark Ln (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 0 | 7 | 0 | 8 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 12 | 10 | 0 | 53 | |
| 7:15 AM | 0 | 0 | 7 | 0 | 10 | 0 | 1 | 0 | 0 | 33 | 1 | 0 | 1 | 4 | 8 | 0 | 65 | |
| 7:30 AM | 1 | 0 | 9 | 0 | 15 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 1 | 6 | 6 | 0 | 68 | |
| 7:45 AM | 0 | 0 | 11 | 0 | 36 | 0 | 0 | 0 | 2 | 53 | 0 | 0 | 2 | 6 | 20 | 0 | 130 | 316 |
| 8:00 AM | 0 | 0 | 3 | 0 | 30 | 0 | 1 | 0 | 0 | 28 | 0 | 0 | 1 | 13 | 21 | 0 | 97 | 360 |
| 8:15 AM | 0 | 0 | 11 | 0 | 11 | 0 | 0 | 0 | 0 | 23 | 1 | 0 | 2 | 5 | 4 | 0 | 57 | 352 |
| 8:30 AM | 0 | 0 | 12 | 0 | 11 | 0 | 0 | 0 | 0 | 28 | 1 | 0 | 2 | 12 | 6 | 0 | 72 | 356 |
| 8:45 AM | 1 | 0 | 11 | 0 | 15 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 7 | 17 | 5 | 0 | 77 | 303 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 44 | 0 | 144 | 0 | 0 | 0 | 8 | 212 | 0 | 0 | 8 | 24 | 80 | 0 | 520 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 0 | | 0 | 4 | 0 | | 8 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 4 | | | | 0 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 0 | | 4 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

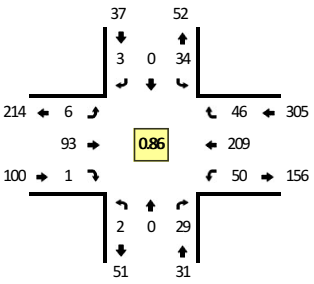
Type of peak hour being reported: Intersection Peak

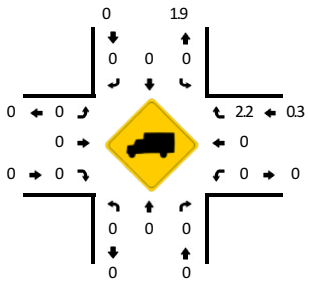
Method for determining peak hour: Total Entering Volume

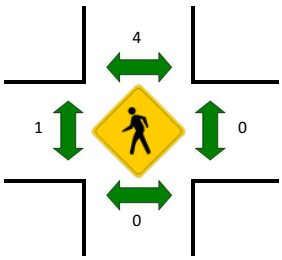
**LOCATION:** Shadow Lake Rd/Lark Ln -- Glade Rd
**CITY/STATE:** Blacksburg, VA

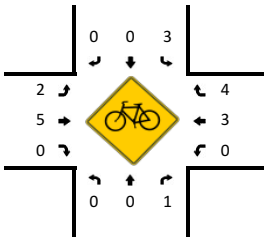
**QC JOB #:** 15762724
**DATE:** Wed, Apr 6 2022

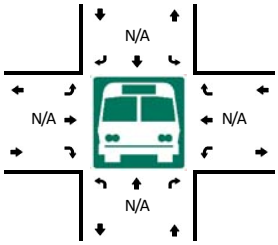
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

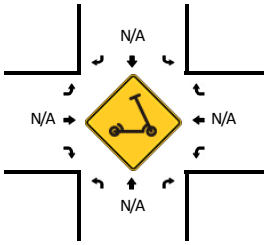



| 15-Min Count Period Beginning At | Shadow Lake Rd/Lark Ln (Northbound) | | | | Shadow Lake Rd/Lark Ln (Southbound) | | | | Glade Rd (Eastbound) | | | | Glade Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 1 | 1 | 1 | 0 | 11 | 0 | 2 | 0 | 1 | 19 | 0 | 0 | 5 | 37 | 12 | 0 | 90 | |
| 4:15 PM | 0 | 0 | 5 | 0 | 5 | 0 | 1 | 0 | 1 | 30 | 0 | 0 | 9 | 29 | 14 | 0 | 94 | |
| 4:30 PM | 0 | 0 | 6 | 0 | 15 | 0 | 2 | 0 | 1 | 29 | 0 | 0 | 5 | 44 | 10 | 0 | 112 | |
| 4:45 PM | 1 | 0 | 7 | 0 | 12 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 5 | 30 | 9 | 0 | 84 | 380 |
| 5:00 PM | 0 | 0 | 11 | 0 | 6 | 0 | 1 | 0 | 1 | 13 | 0 | 0 | 12 | 44 | 14 | 0 | 102 | 392 |
| 5:15 PM | 0 | 0 | 6 | 0 | 14 | 0 | 1 | 0 | 1 | 19 | 0 | 0 | 16 | 69 | 12 | 0 | 138 | 436 |
| 5:30 PM | 2 | 0 | 5 | 0 | 7 | 0 | 0 | 0 | 2 | 31 | 0 | 0 | 9 | 48 | 10 | 0 | 114 | 438 |
| 5:45 PM | 0 | 0 | 7 | 0 | 7 | 0 | 1 | 0 | 2 | 30 | 1 | 0 | 13 | 48 | 10 | 0 | 119 | 473 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 24 | 0 | 56 | 0 | 4 | 0 | 4 | 76 | 0 | 0 | 64 | 276 | 48 | 0 | 552 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 8 | | | | 0 | | | | 0 | | | 8 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 12 | | 16 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

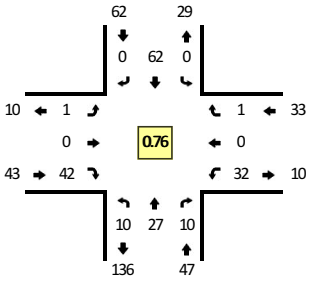
Type of peak hour being reported: Intersection Peak

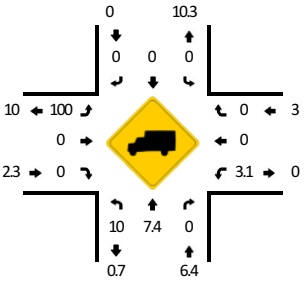
Method for determining peak hour: Total Entering Volume

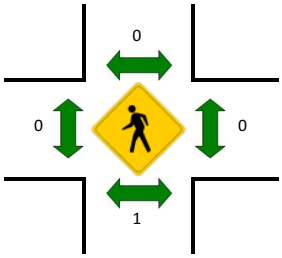
**LOCATION:** Toms Creek Rd -- Redbud Rd
**CITY/STATE:** Blacksburg, VA

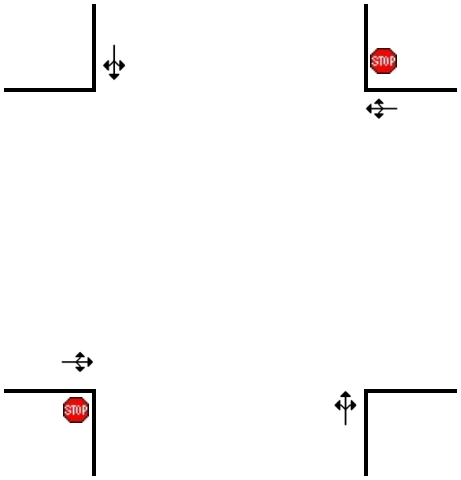
**QC JOB #:** 15762717
**DATE:** Wed, Apr 6 2022

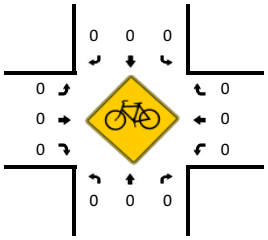
**Peak-Hour: 7:45 AM -- 8:45 AM**
**Peak 15-Min: 7:45 AM -- 8:00 AM**

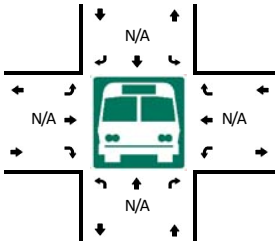


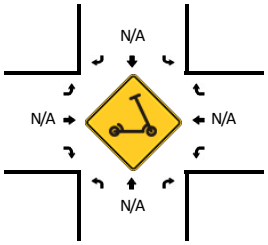






| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Redbud Rd (Eastbound) | | | | Redbud Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 1 | 4 | 1 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 0 | 22 | |
| 7:15 AM | 1 | 4 | 3 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 11 | 0 | 8 | 0 | 0 | 0 | 35 | |
| 7:30 AM | 3 | 5 | 3 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 12 | 0 | 8 | 0 | 0 | 0 | 45 | |
| 7:45 AM | 2 | 5 | 2 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 19 | 0 | 13 | 0 | 1 | 0 | 61 | 163 |
| 8:00 AM | 6 | 10 | 3 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 41 | 182 |
| 8:15 AM | 0 | 8 | 1 | 0 | 0 | 15 | 0 | 0 | 1 | 0 | 6 | 0 | 5 | 0 | 0 | 0 | 36 | 183 |
| 8:30 AM | 2 | 4 | 4 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 14 | 0 | 7 | 0 | 0 | 0 | 47 | 185 |
| 8:45 AM | 6 | 9 | 6 | 0 | 0 | 19 | 0 | 0 | 1 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 54 | 178 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 8 | 20 | 8 | 0 | 0 | 76 | 0 | 0 | 0 | 0 | 76 | 0 | 52 | 0 | 4 | 0 | 244 |
| Heavy Trucks | 0 | 4 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 4 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

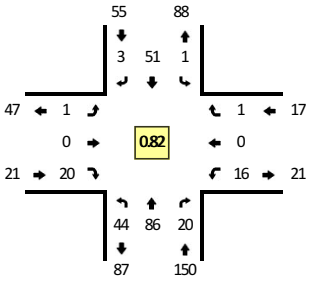
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

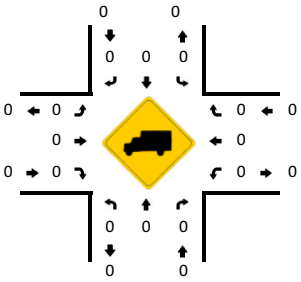
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

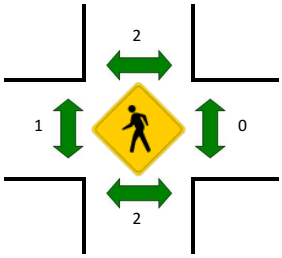
**LOCATION:** Toms Creek Rd -- Redbud Rd
**CITY/STATE:** Blacksburg, VA

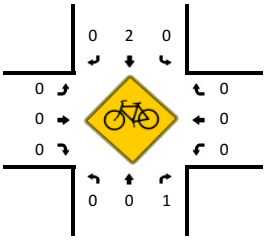
**QC JOB #:** 15762718
**DATE:** Wed, Apr 6 2022

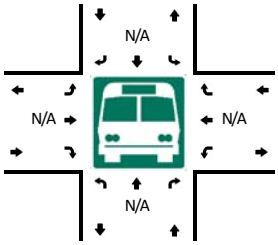
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

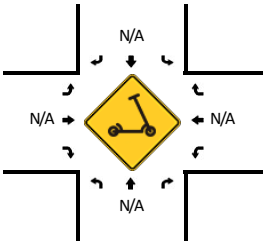



| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Redbud Rd (Eastbound) | | | | Redbud Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 6 | 14 | 4 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 0 | 46 | |
| 4:15 PM | 2 | 22 | 4 | 0 | 0 | 10 | 0 | 0 | 1 | 0 | 6 | 0 | 7 | 0 | 1 | 0 | 53 | |
| 4:30 PM | 8 | 11 | 4 | 1 | 0 | 14 | 0 | 0 | 1 | 0 | 7 | 0 | 3 | 0 | 0 | 0 | 49 | |
| 4:45 PM | 8 | 19 | 5 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 50 | 198 |
| 5:00 PM | 6 | 15 | 5 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 0 | 51 | 203 |
| 5:15 PM | 13 | 30 | 5 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 4 | 0 | 7 | 0 | 1 | 0 | 74 | 224 |
| 5:30 PM | 13 | 22 | 6 | 0 | 1 | 12 | 1 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 0 | 63 | 238 |
| 5:45 PM | 12 | 19 | 4 | 0 | 0 | 10 | 1 | 0 | 1 | 0 | 5 | 0 | 3 | 0 | 0 | 0 | 55 | 243 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 52 | 120 | 20 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 16 | 0 | 28 | 0 | 4 | 0 | 296 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

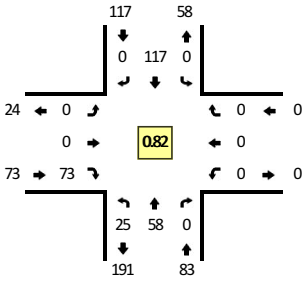
Type of peak hour being reported: Intersection Peak

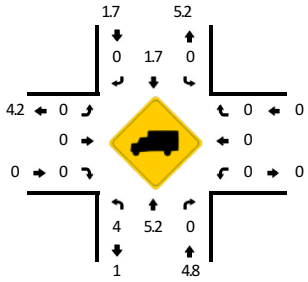
Method for determining peak hour: Total Entering Volume

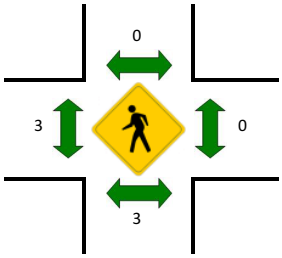
**LOCATION:** Toms Creek Rd -- Honeysuckle Dr
**CITY/STATE:** Blacksburg, VA

**QC JOB #:** 15762715
**DATE:** Wed, Apr 6 2022

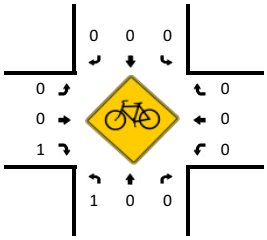
**Peak-Hour: 8:00 AM -- 9:00 AM**
**Peak 15-Min: 8:45 AM -- 9:00 AM**

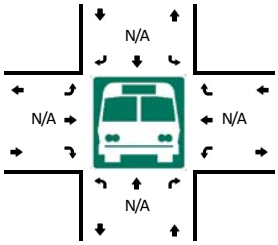


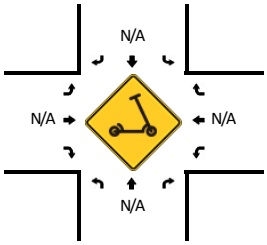












| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Honeysuckle Dr (Eastbound) | | | | Honeysuckle Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 4 | 7 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 34 | |
| 7:15 AM | 0 | 6 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 44 | |
| 7:30 AM | 1 | 12 | 0 | 0 | 0 | 30 | 1 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 57 | |
| 7:45 AM | 5 | 9 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 79 | 214 |
| 8:00 AM | 4 | 18 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 57 | 237 |
| 8:15 AM | 6 | 9 | 0 | 1 | 0 | 27 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 62 | 255 |
| 8:30 AM | 4 | 12 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 71 | 269 |
| 8:45 AM | 10 | 19 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 83 | 273 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 40 | 76 | 0 | 0 | 0 | 124 | 0 | 0 | 0 | 0 | 92 | 0 | 0 | 0 | 0 | 0 | 332 |
| Heavy Trucks | 0 | 4 | 0 | | 0 | 4 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 8 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

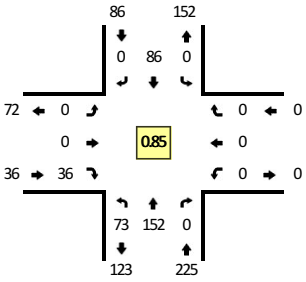
Type of peak hour being reported: Intersection Peak

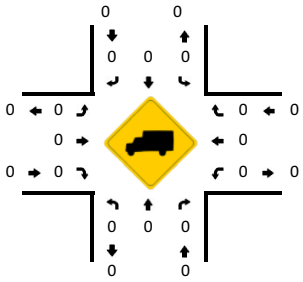
Method for determining peak hour: Total Entering Volume

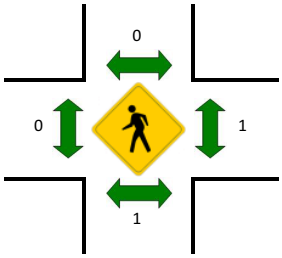
**LOCATION:** Toms Creek Rd -- Honeysuckle Dr
**CITY/STATE:** Blacksburg, VA

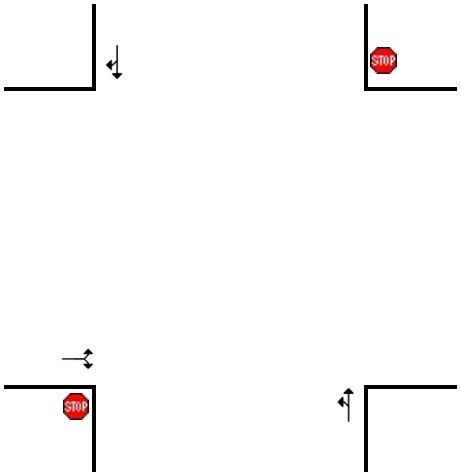
**QC JOB #:** 15762716
**DATE:** Wed, Apr 6 2022

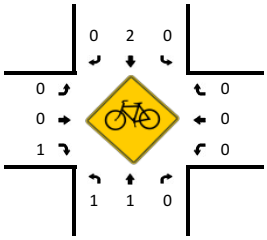
**Peak-Hour: 5:00 PM -- 6:00 PM**
**Peak 15-Min: 5:15 PM -- 5:30 PM**

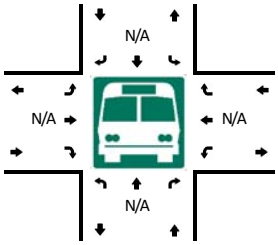


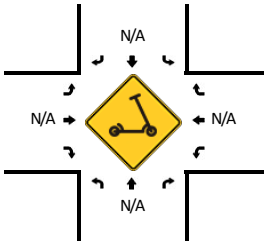




| 15-Min Count Period Beginning At | Toms Creek Rd (Northbound) | | | | Toms Creek Rd (Southbound) | | | | Honeysuckle Dr (Eastbound) | | | | Honeysuckle Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 16 | 22 | 0 | 0 | 0 | 20 | 1 | 0 | 2 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 70 | |
| 4:15 PM | 15 | 29 | 0 | 0 | 0 | 22 | 1 | 0 | 2 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 82 | |
| 4:30 PM | 12 | 21 | 0 | 0 | 0 | 24 | 1 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 65 | |
| 4:45 PM | 11 | 33 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 75 | 292 |
| 5:00 PM | 12 | 29 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 75 | 297 |
| 5:15 PM | 17 | 46 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 102 | 317 |
| 5:30 PM | 26 | 41 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 92 | 344 |
| 5:45 PM | 17 | 36 | 0 | 1 | 0 | 16 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 78 | 347 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 68 | 184 | 0 | 0 | 0 | 96 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 408 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Buses | | | | | | | | | | | | | | | | | |
| Pedestrians | | 4 | | | | 0 | | | | 0 | | | | 0 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 4 | | 0 | 0 | 0 | | 4 |
| Scooters | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/10/2022 5:22 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

# APPENDIX C

## ADJACENT DEVELOPMENT INFORMATION

GAY AND NEEL, INC.
ENGINEERING ◆ LANDSCAPE ARCHITECTURE ◆ SURVEYING
540.381.6011 www.gayandneel.com

Job Name Glade Road
Job No. 1108.7 Time
By BAP Date 5/17/19
Record Of Communication Turn Lane Analysis Sheet No. Of

Glade Road: Boxwood Dr. → Oriole Dr.

* AADT: 3000
DIR Factor: 0.564
K Factor: 0.103

Multi-Family Housing (Low Rise) – Peak Enters:
$T_1 = .66(X) + 1.41$ X = 93 BR units
$= .66(93) + 1.41$
$T_1 \approx 63$ → (63)(.59 Enters) = 37.17 ≈ 37 Trips

OFF-Campus Student Apartments – Peak Enters:
$T_2 = 0.33(X) - 7.94$ X = 42 BR units
$= 0.33(42) - 7.94$
$T_2 = 5.92 \approx 6$ → (6)(.52 Enters) ≈ 3 Trips

Total Trip Generation: [40 Trips]

Left Turn Analysis: Existing:
VPH Opposing Volume – (3000)(1-0.564)(0.103) = 129 Trips
VPH Advancing Volume – (3000)(.564)(0.103) = 180 Trips
*Advancing Volume Headed Towards Oriole Dr.

Peak Enters – 40 Trips
Peak Left Turn Enters (58.4%) ≈ 23 Trips
Peak Right Turn Enters (41.6%) ≈ 17 Trips
Total Opposing: 129 + 17 = 146 Trips
Total Advancing: 180 + 23 = 203 Trips
% Vehicles Making Left Turn Into Site: [23/203] ≈ 10% = L

Right Turn Analysis:
VPH Advancing Volume = (129+17) = 146 Trips
* Advancing Volume Headed Towards Boxwood Dr.
Peak Right Turn Enters (41.6%) = 17 Trips

## Sturbridge Square

Existing Traffic on University City Boulevard (Manual Traffic Count Data)

*Note: Traffic counts were performed during the AM and PM peak hours on a Wednesday and a Thursday to capture both class schedules at Virginia Tech. The Wednesday traffic was used for the AM peak hour and the Thursday traffic was used for the PM peak hour.

Southbound AM Peak Hour = 253 vph * 1.5% growth rate for 2 years = 261 vph
Southbound PM Peak Hour = 406 vph * 1.5% growth rate for 2 years = 418 vph
Northbound AM Peak Hour = 64 vph * 1.5% growth rate for 2 years = 66 vph
Northbound PM Peak Hour = 296 vph * 1.5% growth rate for 2 years = 305 vph

Trip Generation – As shown in the rezoning document.

*Note: Trip generation for the existing development equates to approximately 42% of the trip generation of the proposed development. Therefore, it was assumed that 58% of the proposed trips are new trips on the roadway.

Trip Reductions
58% bus reduction based on information provided by the Town
4% pedestrian reduction based on bicycle/pedestrian accommodations in the vicinity of the project
3% bicycle reduction based on bicycle/pedestrian accommodations in the vicinity of the project

Total = 65% bus/bike/ped reduction

### Southern Access Point (60% of Entering Traffic)

AM Peak Hour
59 entering trips * 60% utilizing this entrance * 65% bus/bike/ped reduction = 12 entering vehicles

Right turns = 12 entering trips * 0.3 = 4 right turns
Advancing volume = 261 vph + 4 vph * 58% = 263 vph

From VDOT Road Design Manual, Appendix F, Figure 3-26 → **No Right Turn Lane Warranted**

Left turns = 12 entering trips * 0.7 = 8 left turns (11% of advancing volume)
Advancing volume = 66 vph + 8 vph * 58% + 6 vph * 58% = 74 vph
Opposing volume = 263 vph

From VDOT Road Design Manual, Appendix F, Figure 3-5 → **No Left Turn Lane Warranted**

PM Peak Hour
274 entering trips * 60% utilizing this entrance * 65% bus/bike/ped reduction = 58 entering vehicles

Right turns = 58 entering trips * 0.3 = 17 right turns
Advancing volume = 418 vph + 17 vph * 58% = 428 vph

From VDOT Road Design Manual, Appendix F, Figure 3-26 → **No Right Turn Lane Warranted**

Left turns = 58 entering trips * 0.7 = 41 left turns (12% of advancing volume)
Advancing volume = 305 vph + 41 vph * 58% + 27 vph * 58% = 344 vph
Opposing volume = 428 vph

From VDOT Road Design Manual, Appendix F, Figure 3-6 → **No Left Turn Lane Warranted**

## Northern Access Point (40% of Entering Traffic)

AM Peak Hour
59 entering trips * 40% utilizing this entrance * 65% bus/bike/ped reduction = 8 entering vehicles

Right turns = 8 entering trips * 0.3 = 2 right turns
Advancing volume = 261 vph + 2 vph * 58% + 4 vph * 58% = 264 vph

From VDOT Road Design Manual, Appendix F, Figure 3-26 → **No Right Turn Lane Warranted**

Left turns = 8 entering trips * 0.7 = 6 left turns (9% of advancing volume)
Advancing volume = 66 vph + 6 vph * 58% = 69 vph
Opposing volume = 264 vph

From VDOT Road Design Manual, Appendix F, Figure 3-5 → **No Left Turn Lane Warranted**

PM Peak Hour
274 entering trips * 40% utilizing this entrance * 65% bus/bike/ped reduction = 38 entering vehicles

Right turns = 38 entering trips * 0.3 = 11 right turns
Advancing volume = 418 vph + 11 vph * 58% + 17 vph * 58% = 434 vph

From VDOT Road Design Manual, Appendix F, Figure 3-26 → **No Right Turn Lane Warranted**

Left turns = 38 entering trips * 0.7 = 27 left turns (8% of advancing volume)
Advancing volume = 305 vph + 27 vph * 58% = 321 vph
Opposing volume = 434 vph

From VDOT Road Design Manual, Appendix F, Figure 3-6 → **No Left Turn Lane Warranted**

# Traffic Impact Analysis: Berewick
# Town of Blacksburg, VA
# Tax Map No. 195-A-5
# Parcel ID 006160

## July 1, 2020


EDEN & ASSOCIATES
engineering • planning • development

**1109 Brookdale Street, Suite B**
**Martinsville, Virginia 24112**
**Ph. 276.632.6231**
**Fax 276.632.3648**
**www.edenandassociates.com**

## Part I: Introduction

Lucas TRC, LLC proposes to develop an eighty-four (84) parcel development along Toms Creek Road at Tax Parcel 195-A-5. The proposed development includes a new roadway connection to Toms Creek Road, between the intersection of "Toms Creek Road & Redbud Road" and the existing access to Toms Creek Park, on the eastern side of Toms Creek Road. Seventy-nine (79) lots will utilize the proposed roadway network. Five (5) proposed lots will have direct access to Redbud Road, adjacent to Brookfield Village. The property is currently zoned RR-1 (Rural Residential 1) with a request for PRD (Planned Residential District).

Toms Creek Road is a two-lane, undivided roadway that provides north / south access from US 460 Bypass to Laurel Drive, becoming Meadowbrook Drive and providing access to Glade Road. The proposed street network will connect to Toms Creek Road and ultimately extend to two undeveloped properties, Tax Parcels 165-A-7 and 195-1-1A. Extension of the roadway network by others could ultimately connect to Hidden Valley Drive and/or Redbud Road. The site has limiting factors relative to two tributaries flowing to Tom's Creek. The proposed development proposes a single crossing of a tributary, thus limiting the immediate ability to connect to other existing roadways. A conceptual plan and preliminary plat, prepared by Eden & Associates, PC is included for reference of this analysis.

The traffic impact analysis includes the following specific items:
a) analysis for any required turn lane and / or taper along Toms Creek Road;
b) analysis for any impacts / Level of Service (LOS) to the signalized intersection at US 460 Bypass and Toms Creek Road;
c) analysis for any impacts / LOS to the signalized intersection at Toms Creek Road / Patrick Henry Drive / University City Boulevard.

## Part II: Executive Summary

(A) The proposed development, utilizing a new connection to Toms Creek Road for seventy-nine (79) proposed lots is positioned with adequate intersection sight distance along Toms Creek Road. The proposed development does not warrant any additional right turn lane / taper or left turn lane. The proposed intersection is adequate into the foreseeable future, as traffic could increase by an additional 50% prior to any right turn taper being warranted. Traffic would need to increase to four times the anticipated traffic patterns to warrant a left turn lane.

The proposed five (5) lots along Redbud Road has little impact to the intersection of Redbud Road and Toms Creek Road. The existing roadway serves fifty-five dwellings / lots. The existing traffic at the intersection of Redbud Road and Toms Creek Road can easily accommodate the traffic from five additional lots. The analysis is performed similar to the process performed at the proposed connection; however, Redbud Road has fewer right turns than the turns proposed by the development.

(B) The total proposed development has no significant impact to the signalized intersection at US 460 Bypass and Toms Creek Road. The proposed development does not degrade the overall level of service below LOS C. The Traffic Impact Statement from other proposed developments, *"The View (Frith Property)"* and *"Terrace View"*, in the area show the overall signalized intersection to operate at a Level of Service B or better and for each lane group to operate at a Level of Service C or better. Specific reference is directed to "Table 3" from "The View (Frith Property)" for 'Build (2020) Conditions.

The proposed development introduces additional traffic to the signal. This analysis utilizes a potential ninety-five (95) dwellings; however, the actual number of dwellings proposed is eighty-four (84). This analysis incorporates the proposed development and other known proposed developments, not yet finalized, uses a background growth rate of 0.5% for the existing traffic, and evaluates Year 2028. As shown in the "Capacity Analysis Results" for the signal at "Tom's Creek Road and WB US 460 Ramp", the level of impact to the AM Peak Hour is approximately 0.6 seconds, and remains at LOS A. The delay to the PM Peak Hour is increased from approximately 11.2 to 14.8, an increase in 3.6 seconds; however, the overall level of service remains at LOS B. In addition, no segment is below a LOS C; the results of this analysis are similar to previous reports.

(C ) The total proposed development has no significant impact to the signalized intersection at Toms Creek Road / Patrick Henry Drive / University City Boulevard. The proposed development does not degrade the overall level of service below LOS C. The Traffic Impact Statement from other proposed developments, *"The View (Frith Property)"* and *"Terrace View"*, in the area show the overall signalized intersection to operate at a Level of Service B during the AM Peak Hour and Level of Service C during the PM Peak Hour. Specific reference is directed to "Table 8" from "Terrace View" for '2020 Buildout Conditions. Within the previous study, the analysis shows that the "WBTR" lane operates at a LOS C ( 21.8 sec/veh) during the AM Peak Hour and a LOS D (45.1 sec/veh) during the PM Peak Hour.

As shown in the "Capacity Analysis Results" for the signal at "Tom's Creek Road and University City Blvd / Patrick Henry Dr", the level of impact to the intersection during the AM Peak Hour is approximately 0.8 sec/veh, and remains at LOS B. The delay to the PM Peak Hour is increased from approximately 29.5 to 31.5, an increase of 2.0 sec/veh; however, the overall level of service remains at LOS C. While the previous reports show a segment LOS D for the WBTR, this analysis shows that two segments, WBT/R and NBT/R depict a LOS D. Overall, the signal remains as a LOS C at 31.5 sec/veh. While the reported LOS is at the upper portion of LOS C, it is not at the upper limit (35 sec/veh).

The proposed road crossing of the tributary to Tom's Creek is designed to insure the 100-year flow does not overtop the roadway, the impacts to floodwaters do not impact upstream properties, and the flood elevation of waters crossing Toms Creek Road is not increased.

The proposed roadway network meets the requirements of the Virginia Department of Transportation relative to extension to undeveloped properties. The extension to undeveloped properties provides for potential "second connections" without additional crossing of tributaries.

## Part III: Existing Roadway Data

Toms Creek Road is Town of Blacksburg Maintained. The Town has classified the roadway as a Collector Road with posted speed limit (25 MPH). Historically, traffic counts were performed along Toms Creek Road by other developments on April 4th, April 5th, and April 18th of 2018 relative to rezoning applications in the area between US 460 Bypass and Patrick Henry Drive. In addition, VDOT has provided published counts for 2018 in the segment between US460 Bypass and Patrick Henry Drive as well as the segment between US 460 Bypass and Redbud Road.

In review of the available information for the segment between US 460 Bypass and Patrick Henry Drive, it appears that traffic counts collected on Wednesday, April 18, 2018 is approximately 10% higher than the averaged traffic collected on Wednesday, April 4 and Thursday, April 5, 2018. The counts gathered on April 18, 2018 appear to be 30% higher than the VDOT 2018 published rates; to that extent, if VDOT published data is utilized, it shall be adjusted accordingly as a conservative measure to approximate anticipated traffic during normal operations.

Relative to the roadway segment from US 460 (Bypass Interchange) to Redbud Road (local road) the VDOT published information includes and ADT: 1800; K: 0.113; and Peak Hour Direction: 0.679. In addition, twelve-hour (12-hr) counts were taken on Thursday May 28, 2020 and Wednesday June 3, 2020. Due to the COVID-19 restrictions, these counts were collected to analyze percentages at the intersection of "Toms Creek Road and Redbud Road" rather than the overall volume of traffic. Results of the counts (in ½ hour increments) are provided in the attachment titled "Gathered Traffic Counts - Intersection of Toms Creek Road and Redbud Road".

As the VDOT 2018 published counts are the most recent counts meeting count criteria, this analysis takes the conservative approach to adjust the published counts to the percent volume shown by other counts of 2018 (an adjustment of 30%).

The proposed connection on Toms Creek Road (a collector road) is described as follows:
Minimum Distance (road connection to Redbud Road) = 600 LF or greater. (250 LF Table 2-2)
Minimum distance (road connection to US 460 Interchange) = 1,440 LF or greater. (750 LF Table 2-4).
Minimum distance of road connection to US 460 Interchange Signalized Intersection = 2,160 LF. (750 LF Table 2-4).

*For reference, the applicable VDOT design standards are referenced in parenthesis ( ), with the minimum spacing requirement.*

This Traffic Impact Statement is based on utilizing a conservative approach on multiple levels. The basis of analysis includes the following:

- A conservative background growth estimate of 0.5 percent (VDOT recommended) is utilized for known traffic counts;
- Known anticipated trip generation from rezoned properties, in which the development is not yet finalized, is incorporated into the analysis;
- In areas where traffic counts conflict, the most conservative estimate is utilized;

## Part IV: Analysis of Existing Traffic

VDOT has published traffic counts for this area and is attached. Given the existing dwellings, the existing traffic appears to be less than anticipated, using 10 trips per dwelling from the ITE Trip Generation Manual. While published counts are utilized, additional data suggests that published counts could fluctuate as much as 30% above the published counts, to that extent, the published counts have been adjusted upward accordingly.

The published counts for Toms Creek Road are on a segment between US 460 Bypass and Redbud Road; however, no distribution of existing trips at the Toms Creek Road / Redbud Road intersection is published. An initial analysis of distribution based on the percentage of dwellings at each segment was utilized; however, actual 2020 traffic counts did not support the original distribution. A revised distribution, based on "actual 2020 counts", is utilized to determine the amount of traffic adjacent the proposed connection. The line item "Trips to Remainder" describes the anticipated traffic along Tom's Creek Road, across the site.

## Part V: Analysis of Proposed Traffic

Using the 10$^{th}$ Edition of the ITE Trip Generation Manual, ITE Land Use for Single-Family Detached (210). The number of proposed dwellings utilizing the new connection is 79 dwellings. 5 proposed dwellings will utilize Redbud Road. The anticipated Daily, AM peak trips, and PM peak trips are calculated and depicted as attached. While the directional distribution of Toms Creek Road would suggest a 68/32 split relative to "toward US 460" or "away from US 460", the existing traffic patterns at Redbud Road suggest that a more conservative approach be utilized. The site distribution of 92/8 has been utilized.
The proposed connection is analyzed for any need relative to right turn taper, right turn lane, and left turn lane. No taper or lane is warranted.

Beyond the site connection point, the signalized intersection at Toms Creek / US 460 Bypass has been analyzed for capacity and Level of Service (LOS). The preliminary distribution of traffic was circulated to the Town of Blacksburg and VDOT. The trip distribution is based in part on visual analysis of the existing traffic patterns and the 2018 counted traffic. The findings are described in the Executive Summary above.

In addition, the signalized intersection at Toms Creek Road / Patrick Henry Drive / University City Boulevard has been analyzed for capacity and Level of Service (LOS). The findings are described in the Executive Summary above.

## Part VI: Analysis of Existing and Proposed Traffic – Turn Lane

As depicted in "Post-developed Traffic Volume – Analysis for Turn Lane", the existing and proposed traffic is analyzed to determine the need for either a left turn lane or right turn lane. As summarized at the bottom of the page, using the assumption of a single connection to Tom's Creek Road, no right turn lane is warranted based on anticipated peak hour trips. As no charts exists for a left turn lane warrant for design speeds of 30 MPH, no left turn lane is warranted. Further analysis of a left turn lane warrant for design speeds of 40 MPH was performed; no left turn lane is warranted. While the analysis was for eighty (80) lots, seventy-nine (79) lots are proposed to utilize this connection.

## Part VII: Analysis of Existing and Proposed Traffic – US 460 Interchange

As depicted by the existing traffic counts, the interchange on the west side of US 460 experiences approximately 1,800 existing daily trips, or approximately 203 hourly trips. Given the traffic counts of April 4th, 5th, and 18th, 2018, the published traffic counts were adjusted to a conservative estimate. A full analysis for each of the referenced signalized intersections is completed. As reported above, each signal remains at an overall LOS C or better. The full analysis is provided by the report prepared by Ramey Kemp Associates and is attached.

## Part VIII. Attachments

Existing Published Traffic Counts – East of US 460 (Analysis of data)

Background Growth Rate Analysis

Existing Published Traffic Counts – East of US 460 (VDOT published counts)

Existing Published Traffic Counts – West of US 460 (Analysis of data)

Existing Published Traffic Counts – West of US 460 (VDOT published count)

Gathered Traffic Counts – Map of Movements

Gathered Traffic Counts - Intersection of Toms Creek Road and Redbud Road

Proposed Trip Generation – based on dwelling units

Combination of Existing and Proposed Traffic – Turn Lane Warrant Analysis

Table 3-1 – Left Turn Lane Warrant Threshold

Figure 3-26 – Right Turn Taper / Lane Warrant Threshold

Aerial Map depicting dwellings within the area

Proposed Development Concept Plan

Traffic Projections (by Ramey Kemp Associates)

Trip Generation Summary and Capacity Analysis (by Ramey Kemp Associates)

Full Report of Signalized Intersections (by Ramey Kemp Associates)

| | | | | | |
|---|---|---|---|---|---|
| **Published Traffic Count (2018)** | | | | | |
| Count Taken between US 460 and Prices Fork Road (East of US 460) | | | | | |
| **Toms Creek Road (NB and SB)** | | | | | |
| AADT | 9,300 | | | | |
| K Factor | 0.087 | | | | |
| Peak Hour Trips | 809 | | | | |
| Direction Factor | 0.601 | | | | |
| **PHV** | 486 | Peak direction (AM is SB, toward Prices Fork Rd) | | | |
| | 323 | Non-peak direction (AM is NB, toward US 460) | | | |
| | | | | | |
| Validation of VDOT 2018 counts using Averaged counts of 4/4/2018 and 4/5/2018 | | | | | |
| PM Peak Hour Count: | | 1057 | vehicles | 1.31 | |
| Validation of VDOT 2018 counts using counts of 4/18/2018 | | | | | |
| PM Peak Hour Count: | | 1183 | vehicles | 1.46 | |
| | | | | | |
| Recommendation: | Given two known counts over three days that exceed published AADT, | | | | |
| | adjust the published AADT based on other known data. | | | | |
| | | | | | |
| Background Growth Rate: | | | | | |
| Given seven counts over a 10-year period, a background growth rate can be established. Rather than utilize a negative growth rate, the VDOT recommended growth rate of 0.5% annual growth is used to address development on properties that do not include "rezoning" or "special exception". Known planned developments / redevelopments are incoproated into the analysis. This process, in addition to the 0.5% growth rate, more than adequately anticipates future traffic patterns. Utilizing this approach, the overall increase in traffic by other developments is more efficiently evaluated and could be described as a traffic growth rate of 4% to 5% between the years of 2018 and when development is finalized. | | | | | |

| **Background Growth Rate** | | | | |
|---|---|---|---|---|
| Utilizing Route 3159 (Toms Creek Rd) from US 460 to Prices Fork Rd | | | | |
| The segment utilized has more traffic counts performed on a more routine basis. | | | | |
| Year | AADT | Yearly Growth Rate | Peak Hr Factor | Directional Peak |
| 2018 | 9300 | -1% | 0.087 | 0.601 |
| 2017 | 9400 | 1% | 0.093 | 0.502 |
| 2015 | 9200 | 2% | 0.087 | 0.601 |
| 2014 | 9000 | -11% | 0.087 | 0.601 |
| 2012 | 11000 | 3% | 0.091 | 0.505 |
| 2009 | 10000 | -10% | 0.099 | 0.517 |
| 2008 | 11000 | | 0.096 | 0.523 |
| | | | | |
| Average Background Growth Rate: | | -3% | As calculated over 10 years | |
| | | | | |
| Background Growth Rate Used: | | 0.50% | As recommended by VDOT | |
| | | | | |
| **NOTES:** | | | | |

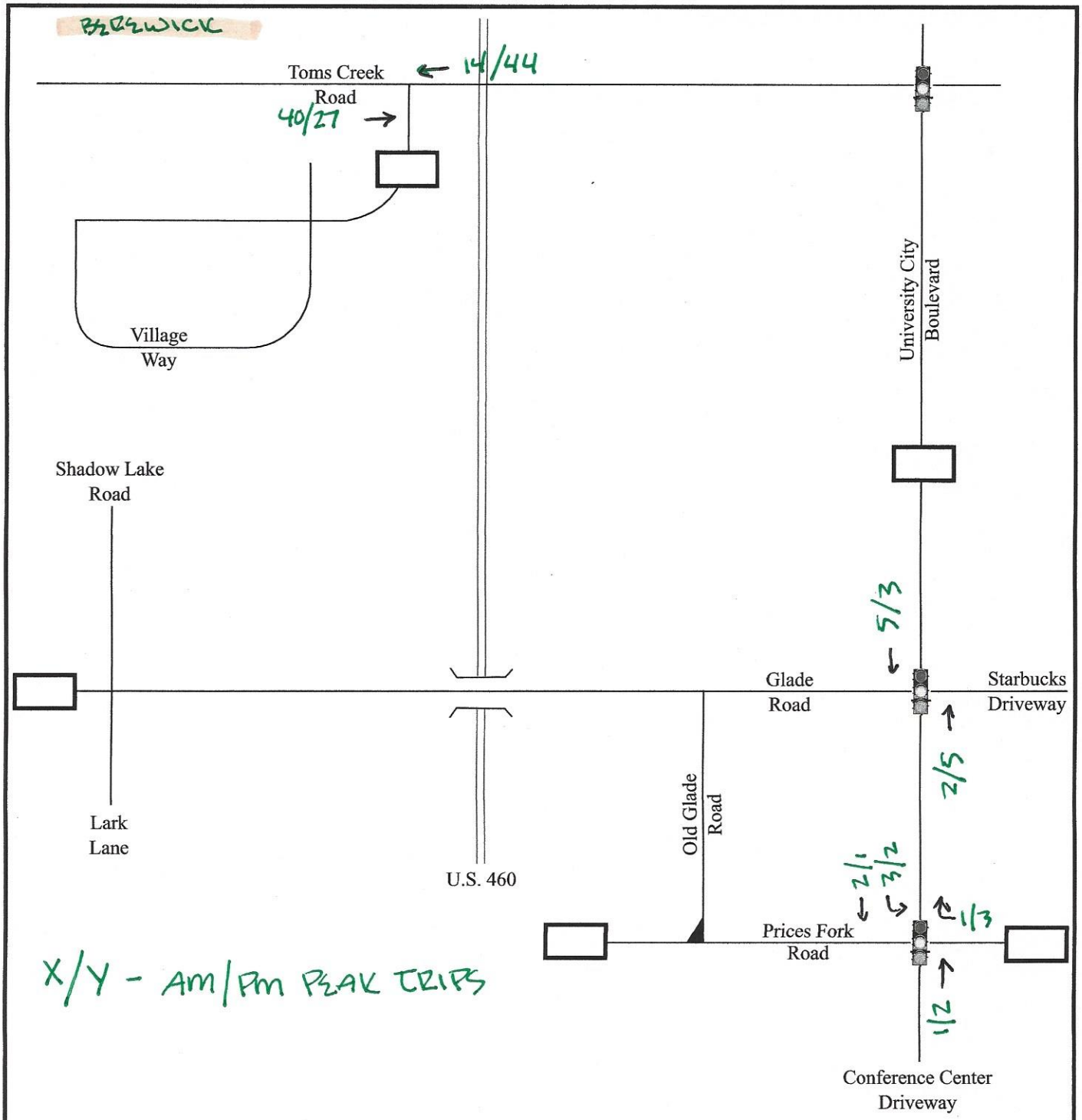
1. Background Growth Rate is to approximate development of parcels where no rezoning or special exception process is utilized.

2. A more appropriate approximation is to utilize the anticipated counts from any rezoning / special use process to better anticipate traffic in areas where development has not yet occurred.

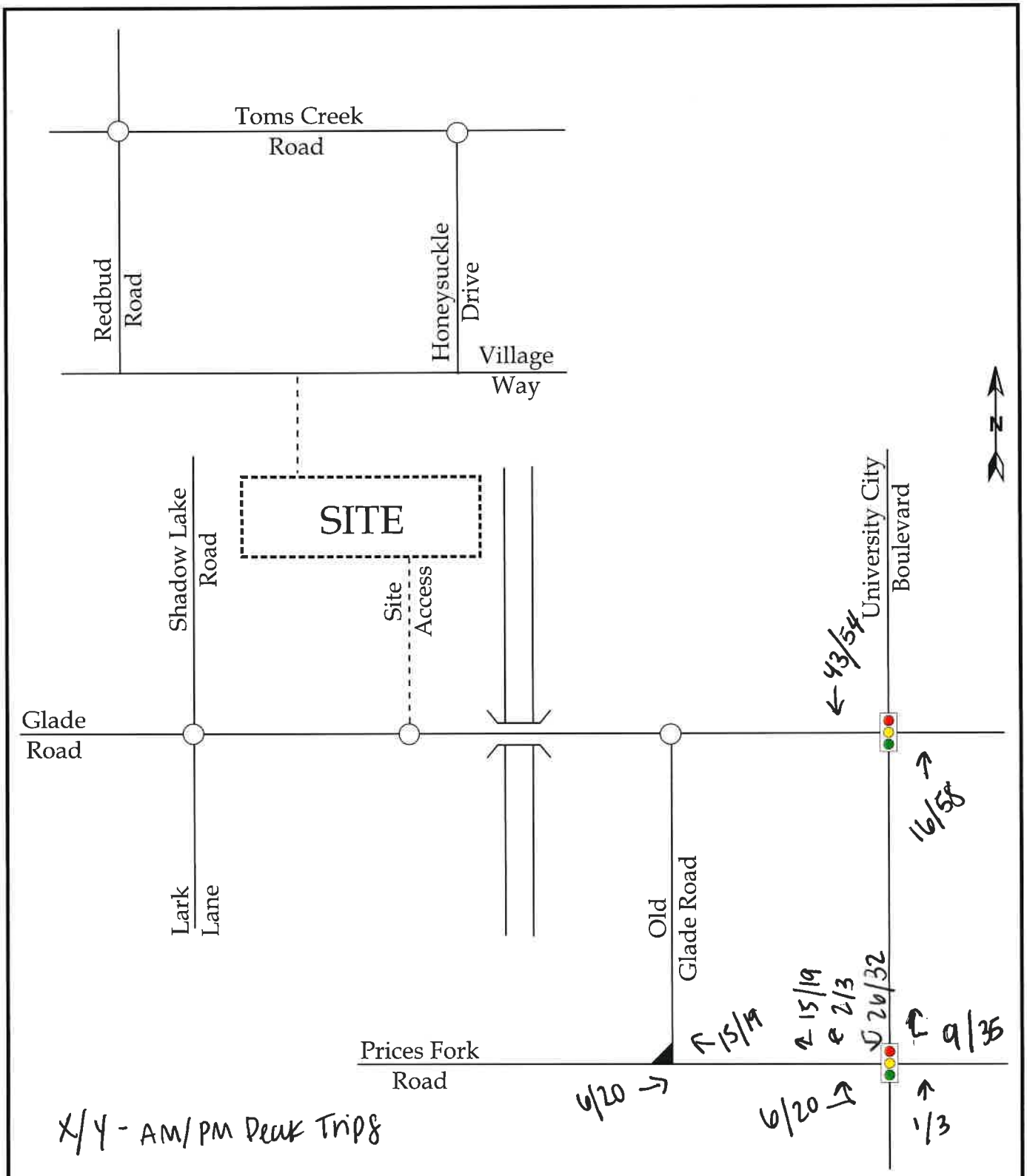
2. Deerfield was rezoned July 1991 and constructed prior to 2018 traffic counts.

3. Brookfield Village was rezoned September 1996 and constructed prior to 2018 traffic counts.

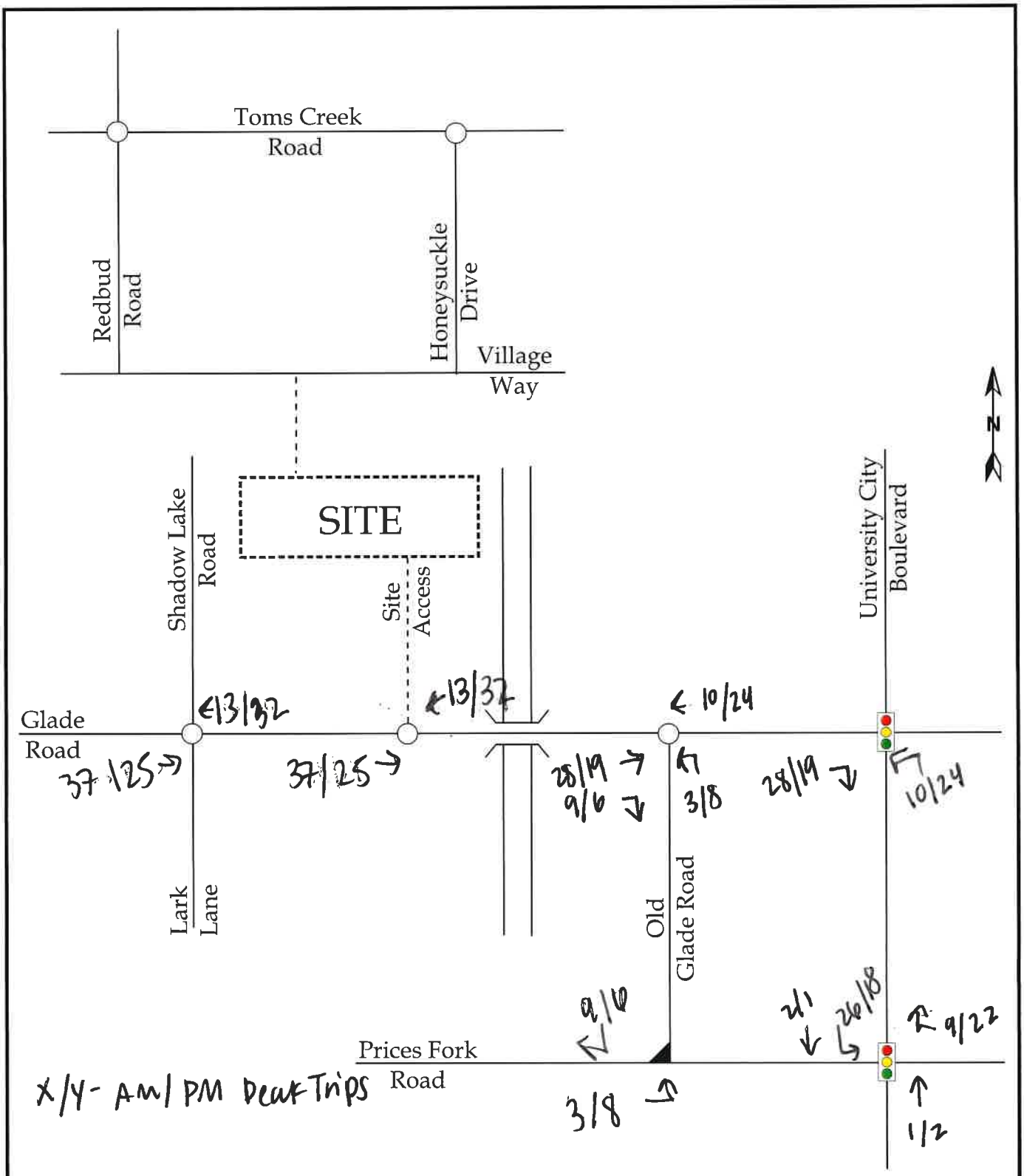
4. The Village at Toms Creek was rezoned and revised October 2001. While a majority of the dwellings have been constructed, the background growth rate will accommodate the remaining dwellings to be constructed.




| | | |
|---|---|---|
| Moving forward. RKA RAMEY KEMP ASSOCIATES | BERGWICK<br>TRIP ASSIGNMENT | Scale: Not to Scale |




| RKA RAMEY KEMP ASSOCIATES | Glade Heights<br>Blacksburg, VA | Sturbridge Trip Assignment<br>Scale: Not to Scale |
|---|---|---|




RKA
RAMEY KEMP ASSOCIATES

Glade Heights
Blacksburg, VA

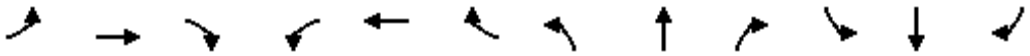
The Farm
Trip Assignment

Scale: Not to Scale

# APPENDIX D

## CAPACITY ANALYSIS CALCULATIONS

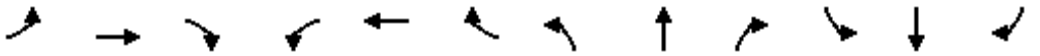
# Prices Fork Road and University City Boulevard



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 128 | 805 | 51 | 9 | 444 | 124 | 17 | 6 | 12 | 237 | 17 | 69 |
| Future Volume (vph) | 128 | 805 | 51 | 9 | 444 | 124 | 17 | 6 | 12 | 237 | 17 | 69 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 0.90 | | 1.00 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1703 | 3438 | 1497 | 1805 | 3312 | 1515 | 1703 | 1597 | | 3367 | 1597 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1703 | 3438 | 1497 | 1805 | 3312 | 1515 | 1703 | 1597 | | 3367 | 1597 | |
| Peak-hour factor, PHF | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Adj. Flow (vph) | 156 | 982 | 62 | 11 | 541 | 151 | 21 | 7 | 15 | 289 | 21 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 24 | 0 | 0 | 74 | 0 | 14 | 0 | 0 | 71 | 0 |
| Lane Group Flow (vph) | 156 | 982 | 38 | 11 | 541 | 77 | 21 | 8 | 0 | 289 | 34 | 0 |
| Confl. Peds. (#/hr) | | | 6 | | | 2 | | | 5 | | | 4 |
| Heavy Vehicles (%) | 6% | 5% | 4% | 0% | 9% | 5% | 6% | 17% | 0% | 4% | 0% | 4% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Split | NA | | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | 2 | | | | | | |
| Actuated Green, G (s) | 19.4 | 90.9 | 90.9 | 3.4 | 74.3 | 74.3 | 7.0 | 7.0 | | 20.9 | 20.9 | |
| Effective Green, g (s) | 21.8 | 92.6 | 92.6 | 5.2 | 76.0 | 76.0 | 8.8 | 8.8 | | 23.4 | 23.4 | |
| Actuated g/C Ratio | 0.15 | 0.62 | 0.62 | 0.03 | 0.51 | 0.51 | 0.06 | 0.06 | | 0.16 | 0.16 | |
| Clearance Time (s) | 7.4 | 6.7 | 6.7 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | | 7.5 | 7.5 | |
| Vehicle Extension (s) | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 247 | 2122 | 924 | 62 | 1678 | 767 | 99 | 93 | | 525 | 249 | |
| v/s Ratio Prot | c0.09 | c0.29 | | 0.01 | 0.16 | | c0.01 | 0.00 | | c0.09 | 0.02 | |
| v/s Ratio Perm | | | 0.03 | | | 0.05 | | | | | | |
| v/c Ratio | 0.63 | 0.46 | 0.04 | 0.18 | 0.32 | 0.10 | 0.21 | 0.08 | | 0.55 | 0.14 | |
| Uniform Delay, d1 | 60.3 | 15.4 | 11.3 | 70.3 | 21.8 | 19.2 | 67.3 | 66.8 | | 58.4 | 54.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.8 | 0.7 | 0.1 | 1.9 | 0.5 | 0.3 | 1.1 | 0.4 | | 1.5 | 0.3 | |
| Delay (s) | 66.1 | 16.1 | 11.4 | 72.2 | 22.3 | 19.5 | 68.4 | 67.2 | | 60.0 | 54.9 | |
| Level of Service | E | B | B | E | C | B | E | E | | E | D | |
| Approach Delay (s) | | 22.4 | | | 22.5 | | | 67.8 | | | 58.6 | |
| Approach LOS | | C | | | C | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 29.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 57.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

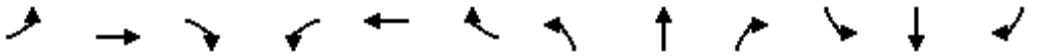
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 183 | 699 | 23 | 23 | 1039 | 354 | 54 | 42 | 26 | 386 | 22 | 222 |
| Future Volume (vph) | 183 | 699 | 23 | 23 | 1039 | 354 | 54 | 42 | 26 | 386 | 22 | 222 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.93 | 1.00 | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.95 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 0.94 | | 1.00 | 0.86 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1787 | 3539 | 1498 | 1805 | 3574 | 1547 | 1805 | 1763 | | 3467 | 1549 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1787 | 3539 | 1498 | 1805 | 3574 | 1547 | 1805 | 1763 | | 3467 | 1549 | |
| 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) | 199 | 760 | 25 | 25 | 1129 | 385 | 59 | 46 | 28 | 420 | 24 | 241 |
| RTOR Reduction (vph) | 0 | 0 | 12 | 0 | 0 | 144 | 0 | 15 | 0 | 0 | 193 | 0 |
| Lane Group Flow (vph) | 199 | 760 | 13 | 25 | 1129 | 241 | 59 | 59 | 0 | 420 | 72 | 0 |
| Confl. Peds. (#/hr) | | | 20 | | | 13 | | | 22 | | | 28 |
| Heavy Vehicles (%) | 1% | 2% | 0% | 0% | 1% | 1% | 0% | 0% | 0% | 1% | 0% | 1% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Split | NA | | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | 2 | | | | | | |
| Actuated Green, G (s) | 19.2 | 78.7 | 78.7 | 5.8 | 64.7 | 64.7 | 10.3 | 10.3 | | 27.4 | 27.4 | |
| Effective Green, g (s) | 21.6 | 80.4 | 80.4 | 7.6 | 66.4 | 66.4 | 12.1 | 12.1 | | 29.9 | 29.9 | |
| Actuated g/C Ratio | 0.14 | 0.54 | 0.54 | 0.05 | 0.44 | 0.44 | 0.08 | 0.08 | | 0.20 | 0.20 | |
| Clearance Time (s) | 7.4 | 6.7 | 6.7 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | | 7.5 | 7.5 | |
| Vehicle Extension (s) | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 257 | 1896 | 802 | 91 | 1582 | 684 | 145 | 142 | | 691 | 308 | |
| v/s Ratio Prot | c0.11 | 0.21 | | 0.01 | c0.32 | | 0.03 | c0.03 | | c0.12 | 0.05 | |
| v/s Ratio Perm | | | 0.01 | | | 0.16 | | | | | | |
| v/c Ratio | 0.77 | 0.40 | 0.02 | 0.27 | 0.71 | 0.35 | 0.41 | 0.42 | | 0.61 | 0.23 | |
| Uniform Delay, d1 | 61.9 | 20.6 | 16.3 | 68.5 | 34.1 | 27.6 | 65.5 | 65.6 | | 54.7 | 50.4 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 14.3 | 0.6 | 0.0 | 2.2 | 2.8 | 1.4 | 1.9 | 2.0 | | 1.8 | 0.5 | |
| Delay (s) | 76.1 | 21.2 | 16.3 | 70.8 | 36.8 | 29.0 | 67.4 | 67.6 | | 56.5 | 51.0 | |
| Level of Service | E | C | B | E | D | C | E | E | | E | D | |
| Approach Delay (s) | | 32.2 | | | 35.4 | | | 67.5 | | | 54.3 | |
| Approach LOS | | C | | | D | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 39.6 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 82.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

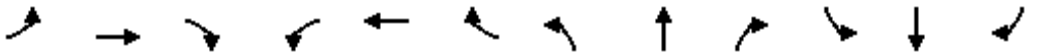
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 137 | 821 | 52 | 9 | 453 | 145 | 17 | 9 | 12 | 297 | 23 | 85 |
| Future Volume (vph) | 137 | 821 | 52 | 9 | 453 | 145 | 17 | 9 | 12 | 297 | 23 | 85 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | | 1.00 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1703 | 3438 | 1497 | 1805 | 3312 | 1515 | 1703 | 1602 | | 3367 | 1602 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1703 | 3438 | 1497 | 1805 | 3312 | 1515 | 1703 | 1602 | | 3367 | 1602 | |
| 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) | 149 | 892 | 57 | 10 | 492 | 158 | 18 | 10 | 13 | 323 | 25 | 92 |
| RTOR Reduction (vph) | 0 | 0 | 22 | 0 | 0 | 79 | 0 | 12 | 0 | 0 | 77 | 0 |
| Lane Group Flow (vph) | 149 | 892 | 35 | 10 | 492 | 79 | 18 | 11 | 0 | 323 | 40 | 0 |
| Confl. Peds. (#/hr) | | | 6 | | | 2 | | | 5 | | | 4 |
| Heavy Vehicles (%) | 6% | 5% | 4% | 0% | 9% | 5% | 6% | 17% | 0% | 4% | 0% | 4% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Split | NA | | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | 2 | | | | | | |
| Actuated Green, G (s) | 18.9 | 89.7 | 89.7 | 3.4 | 73.6 | 73.6 | 6.9 | 6.9 | | 22.2 | 22.2 | |
| Effective Green, g (s) | 21.3 | 91.4 | 91.4 | 5.2 | 75.3 | 75.3 | 8.7 | 8.7 | | 24.7 | 24.7 | |
| Actuated g/C Ratio | 0.14 | 0.61 | 0.61 | 0.03 | 0.50 | 0.50 | 0.06 | 0.06 | | 0.16 | 0.16 | |
| Clearance Time (s) | 7.4 | 6.7 | 6.7 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | | 7.5 | 7.5 | |
| Vehicle Extension (s) | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 241 | 2094 | 912 | 62 | 1662 | 760 | 98 | 92 | | 554 | 263 | |
| v/s Ratio Prot | c0.09 | c0.26 | | 0.01 | 0.15 | | c0.01 | 0.01 | | c0.10 | 0.03 | |
| v/s Ratio Perm | | | 0.02 | | | 0.05 | | | | | | |
| v/c Ratio | 0.62 | 0.43 | 0.04 | 0.16 | 0.30 | 0.10 | 0.18 | 0.12 | | 0.58 | 0.15 | |
| Uniform Delay, d1 | 60.5 | 15.5 | 11.7 | 70.3 | 21.8 | 19.6 | 67.3 | 67.0 | | 57.9 | 53.7 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.3 | 0.6 | 0.1 | 1.7 | 0.5 | 0.3 | 0.9 | 0.6 | | 1.9 | 0.4 | |
| Delay (s) | 65.9 | 16.1 | 11.8 | 72.0 | 22.3 | 19.9 | 68.2 | 67.6 | | 59.7 | 54.1 | |
| Level of Service | E | B | B | E | C | B | E | E | | E | D | |
| Approach Delay (s) | | 22.6 | | | 22.5 | | | 67.8 | | | 58.2 | |
| Approach LOS | | C | | | C | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 59.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

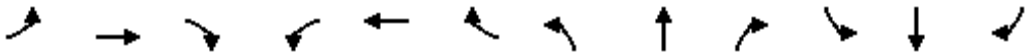
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 207 | 713 | 23 | 23 | 1060 | 421 | 55 | 50 | 27 | 446 | 27 | 245 |
| Future Volume (vph) | 207 | 713 | 23 | 23 | 1060 | 421 | 55 | 50 | 27 | 446 | 27 | 245 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.93 | 1.00 | 1.00 | 0.97 | 1.00 | 0.99 | | 1.00 | 0.95 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.86 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1787 | 3539 | 1498 | 1805 | 3574 | 1547 | 1805 | 1774 | | 3467 | 1552 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1787 | 3539 | 1498 | 1805 | 3574 | 1547 | 1805 | 1774 | | 3467 | 1552 | |
| 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) | 225 | 775 | 25 | 25 | 1152 | 458 | 60 | 54 | 29 | 485 | 29 | 266 |
| RTOR Reduction (vph) | 0 | 0 | 12 | 0 | 0 | 174 | 0 | 13 | 0 | 0 | 202 | 0 |
| Lane Group Flow (vph) | 225 | 775 | 13 | 25 | 1152 | 284 | 60 | 70 | 0 | 485 | 93 | 0 |
| Confl. Peds. (#/hr) | | | 20 | | | 13 | | | 22 | | | 28 |
| Heavy Vehicles (%) | 1% | 2% | 0% | 0% | 1% | 1% | 0% | 0% | 0% | 1% | 0% | 1% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Split | NA | | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | 2 | | | | | | |
| Actuated Green, G (s) | 20.2 | 77.0 | 77.0 | 5.8 | 62.0 | 62.0 | 10.5 | 10.5 | | 28.9 | 28.9 | |
| Effective Green, g (s) | 22.6 | 78.7 | 78.7 | 7.6 | 63.7 | 63.7 | 12.3 | 12.3 | | 31.4 | 31.4 | |
| Actuated g/C Ratio | 0.15 | 0.52 | 0.52 | 0.05 | 0.42 | 0.42 | 0.08 | 0.08 | | 0.21 | 0.21 | |
| Clearance Time (s) | 7.4 | 6.7 | 6.7 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | | 7.5 | 7.5 | |
| Vehicle Extension (s) | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 269 | 1856 | 785 | 91 | 1517 | 656 | 148 | 145 | | 725 | 324 | |
| v/s Ratio Prot | c0.13 | 0.22 | | 0.01 | c0.32 | | 0.03 | c0.04 | | c0.14 | 0.06 | |
| v/s Ratio Perm | | | 0.01 | | | 0.18 | | | | | | |
| v/c Ratio | 0.84 | 0.42 | 0.02 | 0.27 | 0.76 | 0.43 | 0.41 | 0.48 | | 0.67 | 0.29 | |
| Uniform Delay, d1 | 61.9 | 21.7 | 17.1 | 68.5 | 36.6 | 30.4 | 65.4 | 65.8 | | 54.5 | 49.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 20.4 | 0.7 | 0.0 | 2.2 | 3.6 | 2.1 | 1.8 | 2.5 | | 2.6 | 0.7 | |
| Delay (s) | 82.3 | 22.4 | 17.1 | 70.8 | 40.3 | 32.5 | 67.2 | 68.3 | | 57.1 | 50.6 | |
| Level of Service | F | C | B | E | D | C | E | E | | E | D | |
| Approach Delay (s) | | 35.4 | | | 38.6 | | | 67.9 | | | 54.6 | |
| Approach LOS | | D | | | D | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 42.3 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 86.4% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

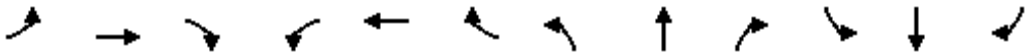
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 133 | 821 | 52 | 9 | 464 | 148 | 17 | 9 | 12 | 335 | 23 | 79 |
| Future Volume (vph) | 133 | 821 | 52 | 9 | 464 | 148 | 17 | 9 | 12 | 335 | 23 | 79 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 | 0.98 | 1.00 | 0.99 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 0.92 | | 1.00 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1703 | 3438 | 1497 | 1805 | 3312 | 1515 | 1703 | 1602 | | 3367 | 1606 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1703 | 3438 | 1497 | 1805 | 3312 | 1515 | 1703 | 1602 | | 3367 | 1606 | |
| 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) | 145 | 892 | 57 | 10 | 504 | 161 | 18 | 10 | 13 | 364 | 25 | 86 |
| RTOR Reduction (vph) | 0 | 0 | 23 | 0 | 0 | 82 | 0 | 12 | 0 | 0 | 71 | 0 |
| Lane Group Flow (vph) | 145 | 892 | 34 | 10 | 504 | 79 | 18 | 11 | 0 | 364 | 40 | 0 |
| Confl. Peds. (#/hr) | | | 6 | | | 2 | | | 5 | | | 4 |
| Heavy Vehicles (%) | 6% | 5% | 4% | 0% | 9% | 5% | 6% | 17% | 0% | 4% | 0% | 4% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Split | NA | | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | 2 | | | | | | |
| Actuated Green, G (s) | 18.7 | 88.2 | 88.2 | 3.4 | 72.3 | 72.3 | 6.9 | 6.9 | | 23.7 | 23.7 | |
| Effective Green, g (s) | 21.1 | 89.9 | 89.9 | 5.2 | 74.0 | 74.0 | 8.7 | 8.7 | | 26.2 | 26.2 | |
| Actuated g/C Ratio | 0.14 | 0.60 | 0.60 | 0.03 | 0.49 | 0.49 | 0.06 | 0.06 | | 0.17 | 0.17 | |
| Clearance Time (s) | 7.4 | 6.7 | 6.7 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | | 7.5 | 7.5 | |
| Vehicle Extension (s) | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 239 | 2060 | 897 | 62 | 1633 | 747 | 98 | 92 | | 588 | 280 | |
| v/s Ratio Prot | c0.09 | c0.26 | | 0.01 | 0.15 | | c0.01 | 0.01 | | c0.11 | 0.02 | |
| v/s Ratio Perm | | | 0.02 | | | 0.05 | | | | | | |
| v/c Ratio | 0.61 | 0.43 | 0.04 | 0.16 | 0.31 | 0.11 | 0.18 | 0.12 | | 0.62 | 0.14 | |
| Uniform Delay, d1 | 60.6 | 16.3 | 12.3 | 70.3 | 22.7 | 20.3 | 67.3 | 67.0 | | 57.3 | 52.4 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.0 | 0.7 | 0.1 | 1.7 | 0.5 | 0.3 | 0.9 | 0.6 | | 2.2 | 0.3 | |
| Delay (s) | 65.5 | 16.9 | 12.4 | 72.0 | 23.2 | 20.6 | 68.2 | 67.6 | | 59.5 | 52.7 | |
| Level of Service | E | B | B | E | C | C | E | E | | E | D | |
| Approach Delay (s) | | 23.1 | | | 23.3 | | | 67.8 | | | 57.9 | |
| Approach LOS | | C | | | C | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 31.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 60.6% | 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 | | | | | | | | | | | | |
| Traffic Volume (vph) | 197 | 713 | 23 | 23 | 1103 | 422 | 55 | 50 | 27 | 472 | 27 | 240 |
| Future Volume (vph) | 197 | 713 | 23 | 23 | 1103 | 422 | 55 | 50 | 27 | 472 | 27 | 240 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | | 0.97 | 1.00 | |
| Frpb, ped/bikes | 1.00 | 1.00 | 0.93 | 1.00 | 1.00 | 0.97 | 1.00 | 0.99 | | 1.00 | 0.95 | |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.86 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1787 | 3539 | 1498 | 1805 | 3574 | 1547 | 1805 | 1774 | | 3467 | 1553 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1787 | 3539 | 1498 | 1805 | 3574 | 1547 | 1805 | 1774 | | 3467 | 1553 | |
| 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) | 214 | 775 | 25 | 25 | 1199 | 459 | 60 | 54 | 29 | 513 | 29 | 261 |
| RTOR Reduction (vph) | 0 | 0 | 12 | 0 | 0 | 167 | 0 | 13 | 0 | 0 | 199 | 0 |
| Lane Group Flow (vph) | 214 | 775 | 13 | 25 | 1199 | 292 | 60 | 70 | 0 | 513 | 91 | 0 |
| Confl. Peds. (#/hr) | | | 20 | | | 13 | | | 22 | | | 28 |
| Heavy Vehicles (%) | 1% | 2% | 0% | 0% | 1% | 1% | 0% | 0% | 0% | 1% | 0% | 1% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Split | NA | | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | 2 | | | | | | |
| Actuated Green, G (s) | 19.6 | 76.4 | 76.4 | 5.8 | 62.0 | 62.0 | 10.5 | 10.5 | | 29.5 | 29.5 | |
| Effective Green, g (s) | 22.0 | 78.1 | 78.1 | 7.6 | 63.7 | 63.7 | 12.3 | 12.3 | | 32.0 | 32.0 | |
| Actuated g/C Ratio | 0.15 | 0.52 | 0.52 | 0.05 | 0.42 | 0.42 | 0.08 | 0.08 | | 0.21 | 0.21 | |
| Clearance Time (s) | 7.4 | 6.7 | 6.7 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | | 7.5 | 7.5 | |
| Vehicle Extension (s) | 4.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 3.0 | 3.0 | | 4.0 | 4.0 | |
| Lane Grp Cap (vph) | 262 | 1842 | 779 | 91 | 1517 | 656 | 148 | 145 | | 739 | 331 | |
| v/s Ratio Prot | c0.12 | 0.22 | | 0.01 | c0.34 | | 0.03 | c0.04 | | c0.15 | 0.06 | |
| v/s Ratio Perm | | | 0.01 | | | 0.19 | | | | | | |
| v/c Ratio | 0.82 | 0.42 | 0.02 | 0.27 | 0.79 | 0.44 | 0.41 | 0.48 | | 0.69 | 0.27 | |
| Uniform Delay, d1 | 62.0 | 22.1 | 17.4 | 68.5 | 37.4 | 30.6 | 65.4 | 65.8 | | 54.5 | 49.3 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 18.4 | 0.7 | 0.0 | 2.2 | 4.3 | 2.2 | 1.8 | 2.5 | | 3.1 | 0.6 | |
| Delay (s) | 80.4 | 22.8 | 17.4 | 70.8 | 41.6 | 32.8 | 67.2 | 68.3 | | 57.5 | 49.9 | |
| Level of Service | F | C | B | E | D | C | E | E | | E | D | |
| Approach Delay (s) | | 34.8 | | | 39.7 | | | 67.9 | | | 54.8 | |
| Approach LOS | | C | | | D | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 42.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 150.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 87.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

# Prices Fork Road and Old Glade Road

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.6 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 240 | 984 | 514 | 16 | 0 | 264 |
| Future Vol, veh/h | 240 | 984 | 514 | 16 | 0 | 264 |
| Conflicting Peds, #/hr | 6 | 0 | 0 | 6 | 0 | 6 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Stop |
| Storage Length | 225 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 4 | 4 | 8 | 6 | 0 | 2 |
| Mvmt Flow | 312 | 1278 | 668 | 21 | 0 | 343 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 695 | 0 | - | 0 | - | 357 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | 4.18 | - | - | - | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | 2.24 | - | - | - | - | 3.32 |
| Pot Cap-1 Maneuver | 883 | - | - | - | 0 | 639 |
| Stage 1 | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | 0 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 878 | - | - | - | - | 632 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 2.2 | 0 | 17.2 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 878 | - | - | - | 632 |
| HCM Lane V/C Ratio | 0.355 | - | - | - | 0.542 |
| HCM Control Delay (s) | 11.3 | - | - | - | 17.2 |
| HCM Lane LOS | B | - | - | - | C |
| HCM 95th %tile Q(veh) | 1.6 | - | - | - | 3.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 10.5 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 310 | 905 | 1246 | 69 | 0 | 310 |
| Future Vol, veh/h | 310 | 905 | 1246 | 69 | 0 | 310 |
| Conflicting Peds, #/hr | 12 | 0 | 0 | 12 | 0 | 12 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Stop |
| Storage Length | 225 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 0 | 2 |
| Mvmt Flow | 333 | 973 | 1340 | 74 | 0 | 333 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1426 | 0 | - | 0 | - | 731 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | 4.1 | - | - | - | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | 2.2 | - | - | - | - | 3.32 |
| Pot Cap-1 Maneuver | 483 | - | - | - | 0 | 364 |
| Stage 1 | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | 0 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 477 | - | - | - | - | 356 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 7.2 | 0 | 67.6 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 477 | - | - | - | 356 |
| HCM Lane V/C Ratio | 0.699 | - | - | - | 0.936 |
| HCM Control Delay (s) | 28.2 | - | - | - | 67.6 |
| HCM Lane LOS | D | - | - | - | F |
| HCM 95th %tile Q(veh) | 5.4 | - | - | - | 9.9 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.1 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 248 | 1010 | 539 | 16 | 0 | 278 |
| Future Vol, veh/h | 248 | 1010 | 539 | 16 | 0 | 278 |
| Conflicting Peds, #/hr | 6 | 0 | 0 | 6 | 0 | 6 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Stop |
| Storage Length | 225 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 4 | 8 | 6 | 0 | 2 |
| Mvmt Flow | 270 | 1098 | 586 | 17 | 0 | 302 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 609 | 0 | - | 0 | - | 314 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | 4.18 | - | - | - | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | 2.24 | - | - | - | - | 3.32 |
| Pot Cap-1 Maneuver | 952 | - | - | - | 0 | 682 |
| Stage 1 | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | 0 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 947 | - | - | - | - | 674 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 2 | 0 | 14.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 947 | - | - | - | 674 |
| HCM Lane V/C Ratio | 0.285 | - | - | - | 0.448 |
| HCM Control Delay (s) | 10.3 | - | - | - | 14.6 |
| HCM Lane LOS | B | - | - | - | B |
| HCM 95th %tile Q(veh) | 1.2 | - | - | - | 2.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 13.2 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 324 | 943 | 1290 | 70 | 0 | 322 |
| Future Vol, veh/h | 324 | 943 | 1290 | 70 | 0 | 322 |
| Conflicting Peds, #/hr | 12 | 0 | 0 | 12 | 0 | 12 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Stop |
| Storage Length | 225 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 0 | 2 |
| Mvmt Flow | 348 | 1014 | 1387 | 75 | 0 | 346 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1474 | 0 | - | 0 | - | 755 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | 4.1 | - | - | - | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | 2.2 | - | - | - | - | 3.32 |
| Pot Cap-1 Maneuver | 463 | - | - | - | 0 | 351 |
| Stage 1 | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | 0 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 458 | - | - | - | - | ~ 343 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.6 | 0 | 86.7 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 458 | - | - | - | 343 |
| HCM Lane V/C Ratio | 0.761 | - | - | - | 1.009 |
| HCM Control Delay (s) | 33.8 | - | - | - | 86.7 |
| HCM Lane LOS | D | - | - | - | F |
| HCM 95th %tile Q(veh) | 6.5 | - | - | - | 11.6 |

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

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 265 | 1006 | 533 | 27 | 0 | 321 |
| Future Vol, veh/h | 265 | 1006 | 533 | 27 | 0 | 321 |
| Conflicting Peds, #/hr | 6 | 0 | 0 | 6 | 0 | 6 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Stop |
| Storage Length | 225 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 4 | 8 | 6 | 0 | 2 |
| Mvmt Flow | 288 | 1093 | 579 | 29 | 0 | 349 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 614 | 0 | - | 0 | - | 316 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | 4.18 | - | - | - | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | 2.24 | - | - | - | - | 3.32 |
| Pot Cap-1 Maneuver | 948 | - | - | - | 0 | 680 |
| Stage 1 | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | 0 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 943 | - | - | - | - | 672 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 2.2 | 0 | 16 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 943 | - | - | - | 672 |
| HCM Lane V/C Ratio | 0.305 | - | - | - | 0.519 |
| HCM Control Delay (s) | 10.5 | - | - | - | 16 |
| HCM Lane LOS | B | - | - | - | C |
| HCM 95th %tile Q(veh) | 1.3 | - | - | - | 3 |

## 2: Prices Fork Road & Old Glade Road Performance by approach

| Approach | EB | WB | SB | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.3 | 0.0 | 0.0 | 0.3 |
| Total Delay (hr) | 2.6 | 0.4 | 0.4 | 3.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 21.5 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 378 | 933 | 1285 | 113 | 0 | 351 |
| Future Vol, veh/h | 378 | 933 | 1285 | 113 | 0 | 351 |
| Conflicting Peds, #/hr | 12 | 0 | 0 | 12 | 0 | 12 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | Stop |
| Storage Length | 225 | - | - | - | - | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 0 | 2 |
| Mvmt Flow | 406 | 1003 | 1382 | 122 | 0 | 377 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 1516 | 0 | - | 0 | - | 776 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | 4.1 | - | - | - | - | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | 2.2 | - | - | - | - | 3.32 |
| Pot Cap-1 Maneuver | 446 | - | - | - | 0 | ~ 340 |
| Stage 1 | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | 0 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 441 | - | - | - | - | ~ 332 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 16.2 | 0 | 127.2 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 441 | - | - | - | 332 |
| HCM Lane V/C Ratio | 0.922 | - | - | - | 1.137 |
| HCM Control Delay (s) | 56.3 | - | - | - | 127.2 |
| HCM Lane LOS | F | - | - | - | F |
| HCM 95th %tile Q(veh) | 10.4 | - | - | - | 15.1 |

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

## 2: Prices Fork Road & Old Glade Road Performance by approach

| Approach | EB | WB | SB | All |
|---|---|---|---|---|
| Denied Del/Veh (s) | 13.4 | 0.0 | 0.1 | 5.8 |
| Total Del/Veh (s) | 35.3 | 5.0 | 30.5 | 21.1 |

# University City Boulevard and Glade Road

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 67 | 36 | 92 | 69 | 32 | 17 | 21 | 80 | 0 | 47 | 141 | 78 |
| Future Volume (veh/h) | 67 | 36 | 92 | 69 | 32 | 17 | 21 | 80 | 0 | 47 | 141 | 78 |
| Number | 3 | 8 | 18 | 7 | 4 | 14 | 1 | 6 | 16 | 5 | 2 | 12 |
| Initial Q, veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj (A_pbT) | 0.99 | | 0.99 | 0.99 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Lanes Open During Work Zone | | | | | | | | | | | | |
| Adj Sat Flow, veh/h/ln | 1767 | 1900 | 1870 | 1885 | 1900 | 1900 | 1826 | 1707 | 1900 | 1870 | 1796 | 1781 |
| Adj Flow Rate, veh/h | 83 | 44 | 114 | 85 | 40 | 21 | 26 | 99 | 0 | 58 | 174 | 96 |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Percent Heavy Veh, % | 9 | 0 | 2 | 1 | 0 | 0 | 5 | 13 | 0 | 2 | 7 | 8 |
| Opposing Right Turn Influence | Yes | | | Yes | | | Yes | | | Yes | | |
| Cap, veh/h | 262 | 128 | 339 | 181 | 85 | 32 | 696 | 2112 | 0 | 320 | 907 | 492 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Prop Arrive On Green | 0.19 | 0.22 | 0.22 | 0.19 | 0.22 | 0.19 | 0.04 | 0.65 | 0.00 | 0.53 | 0.54 | 0.53 |
| Unsig. Movement Delay | | | | | | | | | | | | |
| Ln Grp Delay, s/veh | 26.4 | 0.0 | 25.4 | 30.8 | 0.0 | 0.0 | 6.7 | 4.8 | 0.0 | 9.3 | 0.0 | 9.5 |
| Ln Grp LOS | C | A | C | C | A | A | A | A | A | A | A | A |
| Approach Vol, veh/h | | 241 | | | 146 | | | 125 | | | 328 | |
| Approach Delay, s/veh | | 26.0 | | | 30.8 | | | 5.2 | | | 9.4 | |
| Approach LOS | | C | | | C | | | A | | | A | |

| Timer: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Case No | 1.2 | 8.3 | | 8.0 | | 4.0 | | 7.0 |
| Phs Duration (G+Y+Rc), s | 8.2 | 45.6 | | 21.2 | | 53.8 | | 21.2 |
| Change Period (Y+Rc), s | 6.1 | 6.1 | | * 7.2 | | 6.1 | | * 7.2 |
| Max Green (Gmax), s | 8.9 | 28.9 | | * 18 | | 43.9 | | * 18 |
| Max Allow Headway (MAH), s | 4.5 | 10.6 | | 4.6 | | 10.5 | | 4.6 |
| Max Q Clear (g_c+I1), s | 2.5 | 6.1 | | 13.3 | | 2.8 | | 7.7 |
| Green Ext Time (g_e), s | 0.0 | 6.6 | | 0.2 | | 2.3 | | 0.7 |
| Prob of Phs Call (p_c) | 0.42 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| Prob of Max Out (p_x) | 0.07 | 0.00 | | 1.00 | | 0.00 | | 0.05 |

| Left-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | | 7 | | | | 3 |
| Mvmt Sat Flow, veh/h | 1739 | 472 | | 489 | | | | 848 |

| Through Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 2 | | 4 | | 6 | | 8 |
| Mvmt Sat Flow, veh/h | | 1674 | | 392 | | 3329 | | 594 |

| Right-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 12 | | 14 | | 16 | | 18 |
| Mvmt Sat Flow, veh/h | | 909 | | 148 | | 0 | | 1572 |

| Left Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 3 |
| Lane Assignment | L (Pr/Pm) | L+T | | L+T+R | | | | L+T |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lanes in Grp | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 26 | 173 | 0 | 146 | 0 | 0 | 0 | 127 |
| Grp Sat Flow (s), veh/h/ln | 1739 | 1586 | 0 | 1030 | 0 | 0 | 0 | 1441 |
| Q Serve Time (g_s), s | 0.5 | 0.0 | 0.0 | 5.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.5 | 3.7 | 0.0 | 11.3 | 0.0 | 0.0 | 0.0 | 5.7 |
| Perm LT Sat Flow (s_l), veh/h/ln | 1082 | 1314 | 0 | 1240 | 0 | 0 | 0 | 1356 |
| Shared LT Sat Flow (s_sh), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1377 |
| Perm LT Eff Green (g_p), s | 40.6 | 39.5 | 0.0 | 14.0 | 0.0 | 0.0 | 0.0 | 14.0 |
| Perm LT Serve Time (g_u), s | 36.5 | 39.5 | 0.0 | 8.3 | 0.0 | 0.0 | 0.0 | 2.7 |
| Perm LT Q Serve Time (g_ps), s | 0.1 | 0.0 | 0.0 | 5.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time to First Blk (g_f), s | 0.0 | 4.0 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 1.1 |
| Serve Time pre Blk (g_fs), s | 0.0 | 3.7 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 1.1 |
| Prop LT Inside Lane (P_L) | 1.00 | 0.34 | 0.00 | 0.58 | 0.00 | 0.00 | 0.00 | 0.65 |
| Lane Grp Cap (c), veh/h | 696 | 900 | 0 | 268 | 0 | 0 | 0 | 348 |
| V/C Ratio (X) | 0.04 | 0.19 | 0.00 | 0.54 | 0.00 | 0.00 | 0.00 | 0.36 |
| Avail Cap (c_a), veh/h | 854 | 900 | 0 | 340 | 0 | 0 | 0 | 425 |
| Upstream Filter (I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 6.7 | 8.8 | 0.0 | 29.1 | 0.0 | 0.0 | 0.0 | 25.8 |
| Incr Delay (d2), s/veh | 0.0 | 0.5 | 0.0 | 1.7 | 0.0 | 0.0 | 0.0 | 0.6 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 6.7 | 9.3 | 0.0 | 30.8 | 0.0 | 0.0 | 0.0 | 26.4 |
| 1st-Term Q (Q1), veh/ln | 0.2 | 1.4 | 0.0 | 2.6 | 0.0 | 0.0 | 0.0 | 2.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.2 | 1.5 | 0.0 | 2.7 | 0.0 | 0.0 | 0.0 | 2.1 |
| %ile Storage Ratio (RQ%) | 0.02 | 0.13 | 0.00 | 0.16 | 0.00 | 0.00 | 0.00 | 0.10 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Middle Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 8 |
| Lane Assignment | | | | | | T | | |
| Lanes in Grp | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Grp Vol (v), veh/h | 0 | 0 | 0 | 0 | 0 | 99 | 0 | 0 |
| Grp Sat Flow (s), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 1622 | 0 | 0 |
| Q Serve Time (g_s), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| Lane Grp Cap (c), veh/h | 0 | 0 | 0 | 0 | 0 | 2112 | 0 | 0 |
| V/C Ratio (X) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Avail Cap (c_a), veh/h | 0 | 0 | 0 | 0 | 0 | 2112 | 0 | 0 |
| Upstream Filter (I) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d1), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.7 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.8 | 0.0 | 0.0 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

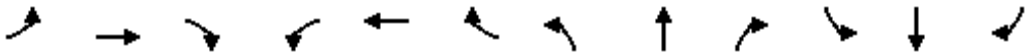
| Right Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 |
| Lane Assignment | | T+R | | | | | | R |
| Lanes in Grp | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 0 | 155 | 0 | 0 | 0 | 0 | 0 | 114 |
| Grp Sat Flow (s), veh/h/ln | 0 | 1469 | 0 | 0 | 0 | 0 | 0 | 1572 |
| Q Serve Time (g_s), s | 0.0 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.6 |
| Cycle Q Clear Time (g_c), s | 0.0 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.6 |
| Prot RT Sat Flow (s_R), veh/h/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prot RT Eff Green (g_R), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prop RT Outside Lane (P_R) | 0.00 | 0.62 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 1.00 |
| Lane Grp Cap (c), veh/h | 0 | 796 | 0 | 0 | 0 | 0 | 0 | 339 |
| V/C Ratio (X) | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.34 |
| Avail Cap (c_a), veh/h | 0 | 796 | 0 | 0 | 0 | 0 | 0 | 419 |
| Upstream Filter (I) | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 0.0 | 9.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.9 |
| Incr Delay (d2), s/veh | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.4 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 17.3 |
| HCM 6th LOS | B |

Notes

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

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



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 93 | 16 | 133 | 50 | 20 | 39 | 160 | 303 | 4 | 30 | 211 | 128 |
| Future Volume (veh/h) | 93 | 16 | 133 | 50 | 20 | 39 | 160 | 303 | 4 | 30 | 211 | 128 |
| Number | 3 | 8 | 18 | 7 | 4 | 14 | 1 | 6 | 16 | 5 | 2 | 12 |
| Initial Q, veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj (A_pbT) | 0.98 | | 0.97 | 0.98 | | 0.97 | 0.99 | | 0.98 | 0.98 | | 0.98 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Lanes Open During Work Zone | | | | | | | | | | | | |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1885 | 1900 | 1900 | 1856 | 1885 |
| Adj Flow Rate, veh/h | 97 | 17 | 139 | 52 | 21 | 41 | 167 | 316 | 4 | 31 | 220 | 133 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 |
| Opposing Right Turn Influence | Yes | | | Yes | | | Yes | | | Yes | | |
| Cap, veh/h | 307 | 49 | 329 | 143 | 71 | 81 | 700 | 2375 | 30 | 144 | 958 | 548 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Prop Arrive On Green | 0.18 | 0.21 | 0.21 | 0.18 | 0.21 | 0.18 | 0.09 | 0.66 | 0.64 | 0.49 | 0.50 | 0.49 |
| Unsig. Movement Delay | | | | | | | | | | | | |
| Ln Grp Delay, s/veh | 27.3 | 0.0 | 26.5 | 28.7 | 0.0 | 0.0 | 7.4 | 5.1 | 5.1 | 11.1 | 0.0 | 11.6 |
| Ln Grp LOS | C | A | C | C | A | A | A | A | A | B | A | B |
| Approach Vol, veh/h | | 253 | | | 114 | | | 487 | | | 384 | |
| Approach Delay, s/veh | | 26.8 | | | 28.7 | | | 5.9 | | | 11.4 | |
| Approach LOS | | C | | | C | | | A | | | B | |

| Timer: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Case No | 1.2 | 8.3 | | 8.0 | | 4.0 | | 7.0 |
| Phs Duration (G+Y+Rc), s | 11.6 | 42.6 | | 20.8 | | 54.2 | | 20.8 |
| Change Period (Y+Rc), s | 6.1 | 6.1 | | * 7.2 | | 6.1 | | * 7.2 |
| Max Green (Gmax), s | 18.9 | 18.9 | | * 18 | | 43.9 | | * 18 |
| Max Allow Headway (MAH), s | 4.5 | 10.6 | | 4.7 | | 10.4 | | 4.7 |
| Max Q Clear (g_c+I1), s | 5.1 | 7.3 | | 11.1 | | 4.5 | | 8.3 |
| Green Ext Time (g_e), s | 0.5 | 5.0 | | 0.2 | | 8.1 | | 0.7 |
| Prob of Phs Call (p_c) | 0.97 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| Prob of Max Out (p_x) | 0.00 | 0.00 | | 0.21 | | 0.00 | | 0.08 |

| Left-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | | 7 | | | | 3 |
| Mvmt Sat Flow, veh/h | 1810 | 176 | | 347 | | | | 1036 |

| Through Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 2 | | 4 | | 6 | | 8 |
| Mvmt Sat Flow, veh/h | | 1908 | | 334 | | 3621 | | 230 |

| Right-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 12 | | 14 | | 16 | | 18 |
| Mvmt Sat Flow, veh/h | | 1092 | | 383 | | 46 | | 1562 |

| Left Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 3 |
| Lane Assignment | L (Pr/Pm) | L+T | | L+T+R | | | | L+T |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lanes in Grp | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 167 | 206 | 0 | 114 | 0 | 0 | 0 | 114 |
| Grp Sat Flow (s), veh/h/ln | 1810 | 1716 | 0 | 1065 | 0 | 0 | 0 | 1266 |
| Q Serve Time (g_s), s | 3.1 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 3.1 | 4.7 | 0.0 | 9.1 | 0.0 | 0.0 | 0.0 | 6.3 |
| Perm LT Sat Flow (s_l), veh/h/ln | 1034 | 1060 | 0 | 1223 | 0 | 0 | 0 | 1333 |
| Shared LT Sat Flow (s_sh), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1173 |
| Perm LT Eff Green (g_p), s | 37.6 | 36.5 | 0.0 | 13.6 | 0.0 | 0.0 | 0.0 | 13.6 |
| Perm LT Serve Time (g_u), s | 32.4 | 36.5 | 0.0 | 7.3 | 0.0 | 0.0 | 0.0 | 4.5 |
| Perm LT Q Serve Time (g_ps), s | 1.0 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time to First Blk (g_f), s | 0.0 | 10.7 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.4 |
| Serve Time pre Blk (g_fs), s | 0.0 | 4.7 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.4 |
| Prop LT Inside Lane (P_L) | 1.00 | 0.15 | 0.00 | 0.46 | 0.00 | 0.00 | 0.00 | 0.85 |
| Lane Grp Cap (c), veh/h | 700 | 891 | 0 | 263 | 0 | 0 | 0 | 319 |
| V/C Ratio (X) | 0.24 | 0.23 | 0.00 | 0.43 | 0.00 | 0.00 | 0.00 | 0.36 |
| Avail Cap (c_a), veh/h | 1024 | 891 | 0 | 343 | 0 | 0 | 0 | 396 |
| Upstream Filter (I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 7.2 | 10.5 | 0.0 | 27.6 | 0.0 | 0.0 | 0.0 | 26.6 |
| Incr Delay (d2), s/veh | 0.2 | 0.6 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.7 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 7.4 | 11.1 | 0.0 | 28.7 | 0.0 | 0.0 | 0.0 | 27.3 |
| 1st-Term Q (Q1), veh/ln | 1.1 | 1.9 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 1.9 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 1.1 | 2.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 1.9 |
| %ile Storage Ratio (RQ%) | 0.14 | 0.17 | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 | 0.10 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Middle Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 8 |
| Lane Assignment | | | | | | T | | |
| Lanes in Grp | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Grp Vol (v), veh/h | 0 | 0 | 0 | 0 | 0 | 156 | 0 | 0 |
| Grp Sat Flow (s), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 1791 | 0 | 0 |
| Q Serve Time (g_s), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Lane Grp Cap (c), veh/h | 0 | 0 | 0 | 0 | 0 | 1174 | 0 | 0 |
| V/C Ratio (X) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 |
| Avail Cap (c_a), veh/h | 0 | 0 | 0 | 0 | 0 | 1174 | 0 | 0 |
| Upstream Filter (I) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d1), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.9 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.1 | 0.0 | 0.0 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Right Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 |
| Lane Assignment | | T+R | | | | T+R | | R |
| Lanes in Grp | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Grp Vol (v), veh/h | 0 | 178 | 0 | 0 | 0 | 164 | 0 | 139 |
| Grp Sat Flow (s), veh/h/ln | 0 | 1461 | 0 | 0 | 0 | 1876 | 0 | 1562 |
| Q Serve Time (g_s), s | 0.0 | 5.3 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 5.8 |
| Cycle Q Clear Time (g_c), s | 0.0 | 5.3 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 5.8 |
| Prot RT Sat Flow (s_R), veh/h/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prot RT Eff Green (g_R), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prop RT Outside Lane (P_R) | 0.00 | 0.75 | 0.00 | 0.36 | 0.00 | 0.02 | 0.00 | 1.00 |
| Lane Grp Cap (c), veh/h | 0 | 733 | 0 | 0 | 0 | 1230 | 0 | 329 |
| V/C Ratio (X) | 0.00 | 0.24 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.42 |
| Avail Cap (c_a), veh/h | 0 | 733 | 0 | 0 | 0 | 1230 | 0 | 417 |
| Upstream Filter (I) | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 0.0 | 10.9 | 0.0 | 0.0 | 0.0 | 4.9 | 0.0 | 25.6 |
| Incr Delay (d2), s/veh | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.9 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 11.6 | 0.0 | 0.0 | 0.0 | 5.1 | 0.0 | 26.5 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 1.8 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.1 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.01 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 14.0 |
| HCM 6th LOS | B |

Notes

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

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 68 | 37 | 122 | 70 | 33 | 17 | 31 | 100 | 0 | 48 | 192 | 80 |
| Future Volume (veh/h) | 68 | 37 | 122 | 70 | 33 | 17 | 31 | 100 | 0 | 48 | 192 | 80 |
| Number | 3 | 8 | 18 | 7 | 4 | 14 | 1 | 6 | 16 | 5 | 2 | 12 |
| Initial Q, veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj (A_pbT) | 0.99 | | 0.99 | 0.99 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Lanes Open During Work Zone | | | | | | | | | | | | |
| Adj Sat Flow, veh/h/ln | 1767 | 1900 | 1870 | 1885 | 1900 | 1900 | 1826 | 1707 | 1900 | 1870 | 1796 | 1781 |
| Adj Flow Rate, veh/h | 74 | 40 | 133 | 76 | 36 | 18 | 34 | 109 | 0 | 52 | 209 | 87 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 9 | 0 | 2 | 1 | 0 | 0 | 5 | 13 | 0 | 2 | 7 | 8 |
| Opposing Right Turn Influence | Yes | | | Yes | | | Yes | | | Yes | | |
| Cap, veh/h | 250 | 124 | 312 | 175 | 82 | 29 | 705 | 2168 | 0 | 280 | 1064 | 435 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Prop Arrive On Green | 0.17 | 0.20 | 0.20 | 0.17 | 0.20 | 0.17 | 0.05 | 0.67 | 0.00 | 0.54 | 0.55 | 0.54 |
| Unsig. Movement Delay | | | | | | | | | | | | |
| Ln Grp Delay, s/veh | 27.2 | 0.0 | 27.2 | 30.9 | 0.0 | 0.0 | 6.2 | 4.3 | 0.0 | 8.9 | 0.0 | 9.1 |
| Ln Grp LOS | C | A | C | C | A | A | A | A | A | A | A | A |
| Approach Vol, veh/h | | 247 | | | 130 | | | 143 | | | 348 | |
| Approach Delay, s/veh | | 27.2 | | | 30.9 | | | 4.8 | | | 9.0 | |
| Approach LOS | | C | | | C | | | A | | | A | |

| Timer: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Case No | 1.2 | 8.3 | | 8.0 | | 4.0 | | 7.0 |
| Phs Duration (G+Y+Rc), s | 8.6 | 46.5 | | 19.9 | | 55.1 | | 19.9 |
| Change Period (Y+Rc), s | 6.1 | 6.1 | | * 7.2 | | 6.1 | | * 7.2 |
| Max Green (Gmax), s | 8.9 | 28.9 | | * 18 | | 43.9 | | * 18 |
| Max Allow Headway (MAH), s | 4.5 | 10.6 | | 4.7 | | 10.5 | | 4.6 |
| Max Q Clear (g_c+I1), s | 2.6 | 6.2 | | 11.8 | | 2.9 | | 7.6 |
| Green Ext Time (g_e), s | 0.0 | 7.0 | | 0.2 | | 2.6 | | 0.7 |
| Prob of Phs Call (p_c) | 0.51 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| Prob of Max Out (p_x) | 0.10 | 0.00 | | 0.37 | | 0.00 | | 0.05 |

| Left-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | | 7 | | | | 3 |
| Mvmt Sat Flow, veh/h | 1739 | 395 | | 499 | | | | 859 |

| Through Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 2 | | 4 | | 6 | | 8 |
| Mvmt Sat Flow, veh/h | | 1925 | | 414 | | 3329 | | 626 |

| Right-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 12 | | 14 | | 16 | | 18 |
| Mvmt Sat Flow, veh/h | | 787 | | 147 | | 0 | | 1571 |

| Left Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 3 |
| Lane Assignment | L (Pr/Pm) | L+T | | L+T+R | | | | L+T |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lanes in Grp | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 34 | 183 | 0 | 130 | 0 | 0 | 0 | 114 |
| Grp Sat Flow (s), veh/h/ln | 1739 | 1615 | 0 | 1060 | 0 | 0 | 0 | 1485 |
| Q Serve Time (g_s), s | 0.6 | 0.0 | 0.0 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.6 | 3.8 | 0.0 | 9.8 | 0.0 | 0.0 | 0.0 | 5.0 |
| Perm LT Sat Flow (s_l), veh/h/ln | 1056 | 1303 | 0 | 1223 | 0 | 0 | 0 | 1363 |
| Shared LT Sat Flow (s_sh), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1424 |
| Perm LT Eff Green (g_p), s | 41.5 | 40.4 | 0.0 | 12.7 | 0.0 | 0.0 | 0.0 | 12.7 |
| Perm LT Serve Time (g_u), s | 37.2 | 40.4 | 0.0 | 7.7 | 0.0 | 0.0 | 0.0 | 2.9 |
| Perm LT Q Serve Time (g_ps), s | 0.1 | 0.0 | 0.0 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time to First Blk (g_f), s | 0.0 | 5.0 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 1.1 |
| Serve Time pre Blk (g_fs), s | 0.0 | 3.8 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 1.1 |
| Prop LT Inside Lane (P_L) | 1.00 | 0.28 | 0.00 | 0.58 | 0.00 | 0.00 | 0.00 | 0.65 |
| Lane Grp Cap (c), veh/h | 705 | 931 | 0 | 255 | 0 | 0 | 0 | 330 |
| V/C Ratio (X) | 0.05 | 0.20 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 | 0.35 |
| Avail Cap (c_a), veh/h | 853 | 931 | 0 | 351 | 0 | 0 | 0 | 434 |
| Upstream Filter (I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 6.2 | 8.4 | 0.0 | 29.4 | 0.0 | 0.0 | 0.0 | 26.6 |
| Incr Delay (d2), s/veh | 0.0 | 0.5 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.6 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 6.2 | 8.9 | 0.0 | 30.9 | 0.0 | 0.0 | 0.0 | 27.2 |
| 1st-Term Q (Q1), veh/ln | 0.2 | 1.4 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 1.9 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.2 | 1.5 | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 | 1.9 |
| %ile Storage Ratio (RQ%) | 0.03 | 0.13 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.09 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Middle Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 8 |
| Lane Assignment | | | | | | T | | |
| Lanes in Grp | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Grp Vol (v), veh/h | 0 | 0 | 0 | 0 | 0 | 109 | 0 | 0 |
| Grp Sat Flow (s), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 1622 | 0 | 0 |
| Q Serve Time (g_s), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| Lane Grp Cap (c), veh/h | 0 | 0 | 0 | 0 | 0 | 2168 | 0 | 0 |
| V/C Ratio (X) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Avail Cap (c_a), veh/h | 0 | 0 | 0 | 0 | 0 | 2168 | 0 | 0 |
| Upstream Filter (I) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d1), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.3 | 0.0 | 0.0 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Right Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 |
| Lane Assignment | | T+R | | | | | | R |
| Lanes in Grp | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 0 | 165 | 0 | 0 | 0 | 0 | 0 | 133 |
| Grp Sat Flow (s), veh/h/ln | 0 | 1491 | 0 | 0 | 0 | 0 | 0 | 1571 |
| Q Serve Time (g_s), s | 0.0 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.6 |
| Cycle Q Clear Time (g_c), s | 0.0 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.6 |
| Prot RT Sat Flow (s_R), veh/h/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prot RT Eff Green (g_R), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prop RT Outside Lane (P_R) | 0.00 | 0.53 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 1.00 |
| Lane Grp Cap (c), veh/h | 0 | 825 | 0 | 0 | 0 | 0 | 0 | 312 |
| V/C Ratio (X) | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.43 |
| Avail Cap (c_a), veh/h | 0 | 825 | 0 | 0 | 0 | 0 | 0 | 419 |
| Upstream Filter (I) | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 0.0 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 26.3 |
| Incr Delay (d2), s/veh | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27.2 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 16.8 |
| HCM 6th LOS | B |

Notes

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

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 95 | 16 | 155 | 51 | 20 | 40 | 187 | 372 | 4 | 31 | 272 | 131 |
| Future Volume (veh/h) | 95 | 16 | 155 | 51 | 20 | 40 | 187 | 372 | 4 | 31 | 272 | 131 |
| Number | 3 | 8 | 18 | 7 | 4 | 14 | 1 | 6 | 16 | 5 | 2 | 12 |
| Initial Q, veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj (A_pbT) | 0.98 | | 0.97 | 0.98 | | 0.97 | 0.99 | | 0.98 | 0.99 | | 0.98 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Lanes Open During Work Zone | | | | | | | | | | | | |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1885 | 1900 | 1900 | 1856 | 1885 |
| Adj Flow Rate, veh/h | 99 | 17 | 161 | 53 | 21 | 42 | 195 | 388 | 4 | 32 | 283 | 136 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 |
| Opposing Right Turn Influence | Yes | | | Yes | | | Yes | | | Yes | | |
| Cap, veh/h | 309 | 48 | 334 | 143 | 69 | 81 | 666 | 2370 | 24 | 125 | 1025 | 471 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Prop Arrive On Green | 0.18 | 0.21 | 0.21 | 0.18 | 0.21 | 0.18 | 0.10 | 0.65 | 0.64 | 0.47 | 0.49 | 0.47 |
| Unsig. Movement Delay | | | | | | | | | | | | |
| Ln Grp Delay, s/veh | 27.2 | 0.0 | 26.9 | 28.7 | 0.0 | 0.0 | 7.8 | 5.4 | 5.4 | 12.1 | 0.0 | 12.7 |
| Ln Grp LOS | C | A | C | C | A | A | A | A | A | B | A | B |
| Approach Vol, veh/h | | 277 | | | 116 | | | 587 | | | 451 | |
| Approach Delay, s/veh | | 27.0 | | | 28.7 | | | 6.2 | | | 12.4 | |
| Approach LOS | | C | | | C | | | A | | | B | |

| Timer: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Case No | 1.2 | 8.3 | | 8.0 | | 4.0 | | 7.0 |
| Phs Duration (G+Y+Rc), s | 12.3 | 41.6 | | 21.1 | | 53.9 | | 21.1 |
| Change Period (Y+Rc), s | 6.1 | 6.1 | | * 7.2 | | 6.1 | | * 7.2 |
| Max Green (Gmax), s | 18.9 | 18.9 | | * 18 | | 43.9 | | * 18 |
| Max Allow Headway (MAH), s | 4.5 | 10.6 | | 4.7 | | 10.4 | | 4.7 |
| Max Q Clear (g_c+I1), s | 5.8 | 8.4 | | 11.4 | | 5.1 | | 8.8 |
| Green Ext Time (g_e), s | 0.6 | 5.3 | | 0.2 | | 10.1 | | 0.8 |
| Prob of Phs Call (p_c) | 0.98 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| Prob of Max Out (p_x) | 0.00 | 0.00 | | 0.29 | | 0.00 | | 0.12 |

| Left-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | | 7 | | | | 3 |
| Mvmt Sat Flow, veh/h | 1810 | 145 | | 339 | | | | 1026 |

| Through Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 2 | | 4 | | 6 | | 8 |
| Mvmt Sat Flow, veh/h | | 2100 | | 324 | | 3631 | | 223 |

| Right-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 12 | | 14 | | 16 | | 18 |
| Mvmt Sat Flow, veh/h | | 965 | | 376 | | 37 | | 1563 |

| Left Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 3 |
| Lane Assignment | L (Pr/Pm) | L+T | | L+T+R | | | | L+T |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lanes in Grp | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 195 | 241 | 0 | 116 | 0 | 0 | 0 | 116 |
| Grp Sat Flow (s), veh/h/ln | 1810 | 1723 | 0 | 1040 | 0 | 0 | 0 | 1249 |
| Q Serve Time (g_s), s | 3.8 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 3.8 | 5.8 | 0.0 | 9.4 | 0.0 | 0.0 | 0.0 | 6.6 |
| Perm LT Sat Flow (s_l), veh/h/ln | 974 | 994 | 0 | 1201 | 0 | 0 | 0 | 1332 |
| Shared LT Sat Flow (s_sh), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1155 |
| Perm LT Eff Green (g_p), s | 36.6 | 35.5 | 0.0 | 13.9 | 0.0 | 0.0 | 0.0 | 13.9 |
| Perm LT Serve Time (g_u), s | 30.2 | 35.5 | 0.0 | 7.3 | 0.0 | 0.0 | 0.0 | 4.4 |
| Perm LT Q Serve Time (g_ps), s | 1.6 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time to First Blk (g_f), s | 0.0 | 12.0 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.3 |
| Serve Time pre Blk (g_fs), s | 0.0 | 5.8 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.3 |
| Prop LT Inside Lane (P_L) | 1.00 | 0.13 | 0.00 | 0.46 | 0.00 | 0.00 | 0.00 | 0.85 |
| Lane Grp Cap (c), veh/h | 666 | 870 | 0 | 262 | 0 | 0 | 0 | 320 |
| V/C Ratio (X) | 0.29 | 0.28 | 0.00 | 0.44 | 0.00 | 0.00 | 0.00 | 0.36 |
| Avail Cap (c_a), veh/h | 971 | 870 | 0 | 336 | 0 | 0 | 0 | 393 |
| Upstream Filter (I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 7.5 | 11.3 | 0.0 | 27.5 | 0.0 | 0.0 | 0.0 | 26.5 |
| Incr Delay (d2), s/veh | 0.2 | 0.8 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.7 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 7.8 | 12.1 | 0.0 | 28.7 | 0.0 | 0.0 | 0.0 | 27.2 |
| 1st-Term Q (Q1), veh/ln | 1.3 | 2.3 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 1.9 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 1.3 | 2.5 | 0.0 | 2.1 | 0.0 | 0.0 | 0.0 | 2.0 |
| %ile Storage Ratio (RQ%) | 0.17 | 0.21 | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 | 0.10 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Middle Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 8 |
| Lane Assignment | | | | | | T | | |
| Lanes in Grp | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Grp Vol (v), veh/h | 0 | 0 | 0 | 0 | 0 | 191 | 0 | 0 |
| Grp Sat Flow (s), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 1791 | 0 | 0 |
| Q Serve Time (g_s), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 | 0.0 | 0.0 |
| Lane Grp Cap (c), veh/h | 0 | 0 | 0 | 0 | 0 | 1169 | 0 | 0 |
| V/C Ratio (X) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 | 0.00 | 0.00 |
| Avail Cap (c_a), veh/h | 0 | 0 | 0 | 0 | 0 | 1169 | 0 | 0 |
| Upstream Filter (I) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d1), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.4 | 0.0 | 0.0 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

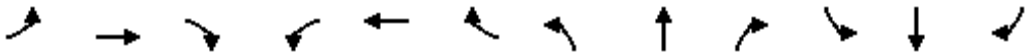
| Right Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 |
| Lane Assignment | | T+R | | | | T+R | | R |
| Lanes in Grp | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Grp Vol (v), veh/h | 0 | 210 | 0 | 0 | 0 | 201 | 0 | 161 |
| Grp Sat Flow (s), veh/h/ln | 0 | 1487 | 0 | 0 | 0 | 1878 | 0 | 1563 |
| Q Serve Time (g_s), s | 0.0 | 6.4 | 0.0 | 0.0 | 0.0 | 3.1 | 0.0 | 6.8 |
| Cycle Q Clear Time (g_c), s | 0.0 | 6.4 | 0.0 | 0.0 | 0.0 | 3.1 | 0.0 | 6.8 |
| Prot RT Sat Flow (s_R), veh/h/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prot RT Eff Green (g_R), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prop RT Outside Lane (P_R) | 0.00 | 0.65 | 0.00 | 0.36 | 0.00 | 0.02 | 0.00 | 1.00 |
| Lane Grp Cap (c), veh/h | 0 | 726 | 0 | 0 | 0 | 1225 | 0 | 334 |
| V/C Ratio (X) | 0.00 | 0.29 | 0.00 | 0.00 | 0.00 | 0.16 | 0.00 | 0.48 |
| Avail Cap (c_a), veh/h | 0 | 726 | 0 | 0 | 0 | 1225 | 0 | 417 |
| Upstream Filter (I) | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 0.0 | 11.7 | 0.0 | 0.0 | 0.0 | 5.1 | 0.0 | 25.8 |
| Incr Delay (d2), s/veh | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 1.1 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 12.7 | 0.0 | 0.0 | 0.0 | 5.4 | 0.0 | 26.9 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.5 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 2.2 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 2.6 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.18 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.43 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 14.0 |
| HCM 6th LOS | B |

Notes

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

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



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 77 | 37 | 180 | 70 | 33 | 17 | 38 | 92 | 0 | 48 | 166 | 83 |
| Future Volume (veh/h) | 77 | 37 | 180 | 70 | 33 | 17 | 38 | 92 | 0 | 48 | 166 | 83 |
| Number | 3 | 8 | 18 | 7 | 4 | 14 | 1 | 6 | 16 | 5 | 2 | 12 |
| Initial Q, veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj (A_pbT) | 0.99 | | 0.99 | 0.99 | | 0.99 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Lanes Open During Work Zone | | | | | | | | | | | | |
| Adj Sat Flow, veh/h/ln | 1767 | 1900 | 1870 | 1885 | 1900 | 1900 | 1826 | 1707 | 1900 | 1870 | 1796 | 1781 |
| Adj Flow Rate, veh/h | 84 | 40 | 196 | 76 | 36 | 18 | 41 | 100 | 0 | 52 | 180 | 90 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 9 | 0 | 2 | 1 | 0 | 0 | 5 | 13 | 0 | 2 | 7 | 8 |
| Opposing Right Turn Influence | Yes | | | Yes | | | Yes | | | Yes | | |
| Cap, veh/h | 265 | 116 | 327 | 172 | 80 | 28 | 713 | 2136 | 0 | 293 | 959 | 470 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Prop Arrive On Green | 0.18 | 0.21 | 0.21 | 0.18 | 0.21 | 0.18 | 0.05 | 0.66 | 0.00 | 0.52 | 0.54 | 0.52 |
| Unsig. Movement Delay | | | | | | | | | | | | |
| Ln Grp Delay, s/veh | 26.9 | 0.0 | 28.6 | 30.8 | 0.0 | 0.0 | 6.6 | 4.6 | 0.0 | 9.4 | 0.0 | 9.6 |
| Ln Grp LOS | C | A | C | C | A | A | A | A | A | A | A | A |
| Approach Vol, veh/h | | 320 | | | 130 | | | 141 | | | 322 | |
| Approach Delay, s/veh | | 28.0 | | | 30.8 | | | 5.1 | | | 9.5 | |
| Approach LOS | | C | | | C | | | A | | | A | |

| Timer: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Case No | 1.2 | 8.3 | | 8.0 | | 4.0 | | 7.0 |
| Phs Duration (G+Y+Rc), s | 9.0 | 45.4 | | 20.6 | | 54.4 | | 20.6 |
| Change Period (Y+Rc), s | 6.1 | 6.1 | | * 7.2 | | 6.1 | | * 7.2 |
| Max Green (Gmax), s | 8.9 | 28.9 | | * 18 | | 43.9 | | * 18 |
| Max Allow Headway (MAH), s | 4.5 | 10.6 | | 4.8 | | 10.5 | | 4.6 |
| Max Q Clear (g_c+I1), s | 2.7 | 6.0 | | 12.6 | | 2.8 | | 10.5 |
| Green Ext Time (g_e), s | 0.0 | 6.5 | | 0.2 | | 2.4 | | 0.8 |
| Prob of Phs Call (p_c) | 0.57 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| Prob of Max Out (p_x) | 0.13 | 0.00 | | 0.75 | | 0.00 | | 0.29 |

| Left-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | | 7 | | | | 3 |
| Mvmt Sat Flow, veh/h | 1739 | 428 | | 459 | | | | 885 |

| Through Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 2 | | 4 | | 6 | | 8 |
| Mvmt Sat Flow, veh/h | | 1780 | | 386 | | 3329 | | 556 |

| Right-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 12 | | 14 | | 16 | | 18 |
| Mvmt Sat Flow, veh/h | | 873 | | 136 | | 0 | | 1571 |

| Left Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 3 |
| Lane Assignment | L (Pr/Pm) | L+T | | L+T+R | | | | L+T |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lanes in Grp | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 41 | 170 | 0 | 130 | 0 | 0 | 0 | 124 |
| Grp Sat Flow (s), veh/h/ln | 1739 | 1605 | 0 | 980 | 0 | 0 | 0 | 1441 |
| Q Serve Time (g_s), s | 0.7 | 0.0 | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.7 | 3.7 | 0.0 | 10.6 | 0.0 | 0.0 | 0.0 | 5.6 |
| Perm LT Sat Flow (s_l), veh/h/ln | 1082 | 1313 | 0 | 1156 | 0 | 0 | 0 | 1364 |
| Shared LT Sat Flow (s_sh), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1379 |
| Perm LT Eff Green (g_p), s | 40.4 | 39.3 | 0.0 | 13.4 | 0.0 | 0.0 | 0.0 | 13.4 |
| Perm LT Serve Time (g_u), s | 36.4 | 39.3 | 0.0 | 7.8 | 0.0 | 0.0 | 0.0 | 2.8 |
| Perm LT Q Serve Time (g_ps), s | 0.2 | 0.0 | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time to First Blk (g_f), s | 0.0 | 4.5 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 1.0 |
| Serve Time pre Blk (g_fs), s | 0.0 | 3.7 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 1.0 |
| Prop LT Inside Lane (P_L) | 1.00 | 0.31 | 0.00 | 0.58 | 0.00 | 0.00 | 0.00 | 0.68 |
| Lane Grp Cap (c), veh/h | 713 | 904 | 0 | 251 | 0 | 0 | 0 | 338 |
| V/C Ratio (X) | 0.06 | 0.19 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 0.37 |
| Avail Cap (c_a), veh/h | 852 | 904 | 0 | 330 | 0 | 0 | 0 | 426 |
| Upstream Filter (I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 6.5 | 8.9 | 0.0 | 29.2 | 0.0 | 0.0 | 0.0 | 26.3 |
| Incr Delay (d2), s/veh | 0.0 | 0.5 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 0.7 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 6.6 | 9.4 | 0.0 | 30.8 | 0.0 | 0.0 | 0.0 | 26.9 |
| 1st-Term Q (Q1), veh/ln | 0.2 | 1.4 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 2.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.3 | 1.5 | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 | 2.1 |
| %ile Storage Ratio (RQ%) | 0.03 | 0.13 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.10 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Middle Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 8 |
| Lane Assignment | | | | | | T | | |
| Lanes in Grp | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Grp Vol (v), veh/h | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 0 |
| Grp Sat Flow (s), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 1622 | 0 | 0 |
| Q Serve Time (g_s), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| Lane Grp Cap (c), veh/h | 0 | 0 | 0 | 0 | 0 | 2136 | 0 | 0 |
| V/C Ratio (X) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 |
| Avail Cap (c_a), veh/h | 0 | 0 | 0 | 0 | 0 | 2136 | 0 | 0 |
| Upstream Filter (I) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d1), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.6 | 0.0 | 0.0 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

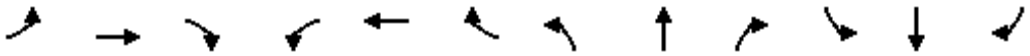
| Right Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 |
| Lane Assignment | | T+R | | | | | | R |
| Lanes in Grp | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 0 | 152 | 0 | 0 | 0 | 0 | 0 | 196 |
| Grp Sat Flow (s), veh/h/ln | 0 | 1476 | 0 | 0 | 0 | 0 | 0 | 1571 |
| Q Serve Time (g_s), s | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.5 |
| Cycle Q Clear Time (g_c), s | 0.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.5 |
| Prot RT Sat Flow (s_R), veh/h/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prot RT Eff Green (g_R), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prop RT Outside Lane (P_R) | 0.00 | 0.59 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 1.00 |
| Lane Grp Cap (c), veh/h | 0 | 795 | 0 | 0 | 0 | 0 | 0 | 327 |
| V/C Ratio (X) | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 |
| Avail Cap (c_a), veh/h | 0 | 795 | 0 | 0 | 0 | 0 | 0 | 419 |
| Upstream Filter (I) | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 0.0 | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 26.9 |
| Incr Delay (d2), s/veh | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.55 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 18.3 |
| HCM 6th LOS | B |

Notes

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

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



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 101 | 16 | 189 | 51 | 20 | 40 | 209 | 341 | 4 | 31 | 259 | 142 |
| Future Volume (veh/h) | 101 | 16 | 189 | 51 | 20 | 40 | 209 | 341 | 4 | 31 | 259 | 142 |
| Number | 3 | 8 | 18 | 7 | 4 | 14 | 1 | 6 | 16 | 5 | 2 | 12 |
| Initial Q, veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj (A_pbT) | 0.98 | | 0.97 | 0.98 | | 0.97 | 0.99 | | 0.98 | 0.98 | | 0.97 |
| Parking Bus Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Lanes Open During Work Zone | | | | | | | | | | | | |
| Adj Sat Flow, veh/h/ln | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1885 | 1900 | 1900 | 1856 | 1885 |
| Adj Flow Rate, veh/h | 105 | 17 | 197 | 53 | 21 | 42 | 218 | 355 | 4 | 32 | 270 | 148 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 |
| Opposing Right Turn Influence | Yes | | | Yes | | | Yes | | | Yes | | |
| Cap, veh/h | 311 | 45 | 343 | 139 | 68 | 78 | 665 | 2348 | 26 | 122 | 953 | 496 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Prop Arrive On Green | 0.19 | 0.22 | 0.22 | 0.19 | 0.22 | 0.19 | 0.11 | 0.65 | 0.63 | 0.46 | 0.47 | 0.46 |
| Unsig. Movement Delay | | | | | | | | | | | | |
| Ln Grp Delay, s/veh | 27.1 | 0.0 | 27.7 | 28.7 | 0.0 | 0.0 | 8.2 | 5.4 | 5.4 | 12.8 | 0.0 | 13.4 |
| Ln Grp LOS | C | A | C | C | A | A | A | A | A | B | A | B |
| Approach Vol, veh/h | | 319 | | | 116 | | | 577 | | | 450 | |
| Approach Delay, s/veh | | 27.5 | | | 28.7 | | | 6.5 | | | 13.1 | |
| Approach LOS | | C | | | C | | | A | | | B | |

| Timer: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 |
| Case No | 1.2 | 8.3 | | 8.0 | | 4.0 | | 7.0 |
| Phs Duration (G+Y+Rc), s | 13.0 | 40.6 | | 21.5 | | 53.5 | | 21.5 |
| Change Period (Y+Rc), s | 6.1 | 6.1 | | * 7.2 | | 6.1 | | * 7.2 |
| Max Green (Gmax), s | 18.9 | 18.9 | | * 18 | | 43.9 | | * 18 |
| Max Allow Headway (MAH), s | 4.5 | 10.6 | | 4.8 | | 10.4 | | 4.7 |
| Max Q Clear (g_c+I1), s | 6.3 | 8.6 | | 12.1 | | 4.9 | | 10.4 |
| Green Ext Time (g_e), s | 0.7 | 5.2 | | 0.2 | | 9.2 | | 0.8 |
| Prob of Phs Call (p_c) | 0.99 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| Prob of Max Out (p_x) | 0.01 | 0.00 | | 0.49 | | 0.00 | | 0.30 |

| Left-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | | 7 | | | | 3 |
| Mvmt Sat Flow, veh/h | 1810 | 143 | | 317 | | | | 1012 |

| Through Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 2 | | 4 | | 6 | | 8 |
| Mvmt Sat Flow, veh/h | | 2011 | | 310 | | 3627 | | 207 |

| Right-Turn Movement Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | | 12 | | 14 | | 16 | | 18 |
| Mvmt Sat Flow, veh/h | | 1047 | | 356 | | 41 | | 1564 |

| Left Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 1 | 5 | 0 | 7 | 0 | 0 | 0 | 3 |
| Lane Assignment | L (Pr/Pm) | L+T | | L+T+R | | | | L+T |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Lanes in Grp | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| Grp Vol (v), veh/h | 218 | 242 | 0 | 116 | 0 | 0 | 0 | 122 |
| Grp Sat Flow (s), veh/h/ln | 1810 | 1733 | 0 | 983 | 0 | 0 | 0 | 1219 |
| Q Serve Time (g_s), s | 4.3 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 4.3 | 6.0 | 0.0 | 10.1 | 0.0 | 0.0 | 0.0 | 7.1 |
| Perm LT Sat Flow (s_l), veh/h/ln | 975 | 1023 | 0 | 1164 | 0 | 0 | 0 | 1334 |
| Shared LT Sat Flow (s_sh), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1122 |
| Perm LT Eff Green (g_p), s | 35.6 | 34.5 | 0.0 | 14.3 | 0.0 | 0.0 | 0.0 | 14.3 |
| Perm LT Serve Time (g_u), s | 28.9 | 34.5 | 0.0 | 7.1 | 0.0 | 0.0 | 0.0 | 4.2 |
| Perm LT Q Serve Time (g_ps), s | 1.9 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time to First Blk (g_f), s | 0.0 | 12.0 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.3 |
| Serve Time pre Blk (g_fs), s | 0.0 | 6.0 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.3 |
| Prop LT Inside Lane (P_L) | 1.00 | 0.13 | 0.00 | 0.46 | 0.00 | 0.00 | 0.00 | 0.86 |
| Lane Grp Cap (c), veh/h | 665 | 850 | 0 | 257 | 0 | 0 | 0 | 321 |
| V/C Ratio (X) | 0.33 | 0.29 | 0.00 | 0.45 | 0.00 | 0.00 | 0.00 | 0.38 |
| Avail Cap (c_a), veh/h | 955 | 850 | 0 | 322 | 0 | 0 | 0 | 387 |
| Upstream Filter (I) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 7.9 | 12.0 | 0.0 | 27.4 | 0.0 | 0.0 | 0.0 | 26.4 |
| Incr Delay (d2), s/veh | 0.3 | 0.8 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.7 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 8.2 | 12.8 | 0.0 | 28.7 | 0.0 | 0.0 | 0.0 | 27.1 |
| 1st-Term Q (Q1), veh/ln | 1.5 | 2.4 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| 2nd-Term Q (Q2), veh/ln | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 1.5 | 2.6 | 0.0 | 2.1 | 0.0 | 0.0 | 0.0 | 2.1 |
| %ile Storage Ratio (RQ%) | 0.19 | 0.21 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.10 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Middle Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 2 | 0 | 4 | 0 | 6 | 0 | 8 |
| Lane Assignment | | | | | | T | | |
| Lanes in Grp | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Grp Vol (v), veh/h | 0 | 0 | 0 | 0 | 0 | 175 | 0 | 0 |
| Grp Sat Flow (s), veh/h/ln | 0 | 0 | 0 | 0 | 0 | 1791 | 0 | 0 |
| Q Serve Time (g_s), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 |
| Cycle Q Clear Time (g_c), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 |
| Lane Grp Cap (c), veh/h | 0 | 0 | 0 | 0 | 0 | 1159 | 0 | 0 |
| V/C Ratio (X) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.00 |
| Avail Cap (c_a), veh/h | 0 | 0 | 0 | 0 | 0 | 1159 | 0 | 0 |
| Upstream Filter (I) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d1), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.2 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.4 | 0.0 | 0.0 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Right Lane Group Data | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Assigned Mvmt | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 |
| Lane Assignment | | T+R | | | | T+R | | R |
| Lanes in Grp | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Grp Vol (v), veh/h | 0 | 208 | 0 | 0 | 0 | 184 | 0 | 197 |
| Grp Sat Flow (s), veh/h/ln | 0 | 1468 | 0 | 0 | 0 | 1877 | 0 | 1564 |
| Q Serve Time (g_s), s | 0.0 | 6.6 | 0.0 | 0.0 | 0.0 | 2.9 | 0.0 | 8.4 |
| Cycle Q Clear Time (g_c), s | 0.0 | 6.6 | 0.0 | 0.0 | 0.0 | 2.9 | 0.0 | 8.4 |
| Prot RT Sat Flow (s_R), veh/h/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prot RT Eff Green (g_R), s | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Prop RT Outside Lane (P_R) | 0.00 | 0.71 | 0.00 | 0.36 | 0.00 | 0.02 | 0.00 | 1.00 |
| Lane Grp Cap (c), veh/h | 0 | 696 | 0 | 0 | 0 | 1215 | 0 | 343 |
| V/C Ratio (X) | 0.00 | 0.30 | 0.00 | 0.00 | 0.00 | 0.15 | 0.00 | 0.57 |
| Avail Cap (c_a), veh/h | 0 | 696 | 0 | 0 | 0 | 1215 | 0 | 417 |
| Upstream Filter (I) | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d1), s/veh | 0.0 | 12.4 | 0.0 | 0.0 | 0.0 | 5.2 | 0.0 | 26.1 |
| Incr Delay (d2), s/veh | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 1.5 |
| Initial Q Delay (d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Delay (d), s/veh | 0.0 | 13.4 | 0.0 | 0.0 | 0.0 | 5.4 | 0.0 | 27.7 |
| 1st-Term Q (Q1), veh/ln | 0.0 | 2.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 3.1 |
| 2nd-Term Q (Q2), veh/ln | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| 3rd-Term Q (Q3), veh/ln | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile Back of Q Factor (f_B%) | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| %ile Back of Q (50%), veh/ln | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 3.2 |
| %ile Storage Ratio (RQ%) | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.53 |
| Initial Q (Qb), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Final (Residual) Q (Qe), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Delay (ds), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Q (Qs), veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sat Cap (cs), veh/h | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Q Clear Time (tc), h | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 14.9 |
| HCM 6th LOS | B |

Notes

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

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

# Glade Road and Old Glade Road

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 121 | 188 | 119 | 25 | 88 | 102 |
| Future Vol, veh/h | 121 | 188 | 119 | 25 | 88 | 102 |
| Conflicting Peds, #/hr | 0 | 0 | 1 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 50 | - | - | 125 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 83 | 83 | 83 | 83 | 83 | 83 |
| Heavy Vehicles, % | 0 | 2 | 4 | 8 | 7 | 11 |
| Mvmt Flow | 146 | 227 | 143 | 30 | 106 | 123 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 374 | 0 | 463 | 148 |
| Stage 1 | - | - | - | - | 147 | - |
| Stage 2 | - | - | - | - | 316 | - |
| Critical Hdwy | - | - | 4.14 | - | 6.47 | 6.31 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.236 | - | 3.563 | 3.399 |
| Pot Cap-1 Maneuver | - | - | 1174 | - | 548 | 876 |
| Stage 1 | - | - | - | - | 868 | - |
| Stage 2 | - | - | - | - | 728 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1173 | - | 480 | 874 |
| Mov Cap-2 Maneuver | - | - | - | - | 480 | - |
| Stage 1 | - | - | - | - | 867 | - |
| Stage 2 | - | - | - | - | 638 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 7 | 12 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 480 | 874 | - | - | 1173 | - |
| HCM Lane V/C Ratio | 0.221 | 0.141 | - | - | 0.122 | - |
| HCM Control Delay (s) | 14.6 | 9.8 | - | - | 8.5 | 0 |
| HCM Lane LOS | B | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.8 | 0.5 | - | - | 0.4 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 10.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 108 | 104 | 153 | 147 | 228 | 136 |
| Future Vol, veh/h | 108 | 104 | 153 | 147 | 228 | 136 |
| Conflicting Peds, #/hr | 0 | 1 | 0 | 0 | 1 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 50 | - | - | 125 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 4 | 0 | 1 | 0 | 1 |
| Mvmt Flow | 117 | 113 | 166 | 160 | 248 | 148 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 231 | 0 | 611 | 118 |
| Stage 1 | - | - | - | - | 118 | - |
| Stage 2 | - | - | - | - | 493 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.309 |
| Pot Cap-1 Maneuver | - | - | 1349 | - | 460 | 937 |
| Stage 1 | - | - | - | - | 912 | - |
| Stage 2 | - | - | - | - | 618 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1348 | - | 397 | 936 |
| Mov Cap-2 Maneuver | - | - | - | - | 397 | - |
| Stage 1 | - | - | - | - | 911 | - |
| Stage 2 | - | - | - | - | 534 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 4.1 | 21.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 397 | 936 | - | - | 1348 | - |
| HCM Lane V/C Ratio | 0.624 | 0.158 | - | - | 0.123 | - |
| HCM Control Delay (s) | 28 | 9.6 | - | - | 8 | 0 |
| HCM Lane LOS | D | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 4.1 | 0.6 | - | - | 0.4 | - |

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

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 151 | 201 | 121 | 36 | 93 | 104 |
| Future Vol, veh/h | 151 | 201 | 121 | 36 | 93 | 104 |
| Conflicting Peds, #/hr | 0 | 0 | 1 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 50 | - | - | 125 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 2 | 4 | 8 | 7 | 11 |
| Mvmt Flow | 164 | 218 | 132 | 39 | 101 | 113 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 383 | 0 | 468 | 166 |
| Stage 1 | - | - | - | - | 165 | - |
| Stage 2 | - | - | - | - | 303 | - |
| Critical Hdwy | - | - | 4.14 | - | 6.47 | 6.31 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.236 | - | 3.563 | 3.399 |
| Pot Cap-1 Maneuver | - | - | 1165 | - | 544 | 855 |
| Stage 1 | - | - | - | - | 852 | - |
| Stage 2 | - | - | - | - | 738 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1164 | - | 480 | 853 |
| Mov Cap-2 Maneuver | - | - | - | - | 480 | - |
| Stage 1 | - | - | - | - | 851 | - |
| Stage 2 | - | - | - | - | 652 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.5 | 12.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 480 | 853 | - | - | 1164 | - |
| HCM Lane V/C Ratio | 0.211 | 0.133 | - | - | 0.113 | - |
| HCM Control Delay (s) | 14.5 | 9.9 | - | - | 8.5 | 0 |
| HCM Lane LOS | B | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.8 | 0.5 | - | - | 0.4 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 12.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 129 | 112 | 156 | 174 | 241 | 139 |
| Future Vol, veh/h | 129 | 112 | 156 | 174 | 241 | 139 |
| Conflicting Peds, #/hr | 0 | 1 | 0 | 0 | 1 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 50 | - | - | 125 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 4 | 0 | 1 | 0 | 1 |
| Mvmt Flow | 140 | 122 | 170 | 189 | 262 | 151 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 263 | 0 | 671 | 141 |
| Stage 1 | - | - | - | - | 141 | - |
| Stage 2 | - | - | - | - | 530 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.309 |
| Pot Cap-1 Maneuver | - | - | 1313 | - | 425 | 910 |
| Stage 1 | - | - | - | - | 891 | - |
| Stage 2 | - | - | - | - | 594 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1312 | - | 363 | 909 |
| Mov Cap-2 Maneuver | - | - | - | - | 363 | - |
| Stage 1 | - | - | - | - | 890 | - |
| Stage 2 | - | - | - | - | 507 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 3.9 | 26.9 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 363 | 909 | - | - | 1312 | - |
| HCM Lane V/C Ratio | 0.722 | 0.166 | - | - | 0.129 | - |
| HCM Control Delay (s) | 36.8 | 9.7 | - | - | 8.2 | 0 |
| HCM Lane LOS | E | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 5.4 | 0.6 | - | - | 0.4 | - |

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

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 218 | 244 | 121 | 46 | 121 | 104 |
| Future Vol, veh/h | 218 | 244 | 121 | 46 | 121 | 104 |
| Conflicting Peds, #/hr | 0 | 0 | 1 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 50 | - | - | 125 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 2 | 4 | 8 | 7 | 11 |
| Mvmt Flow | 237 | 265 | 132 | 50 | 132 | 113 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 503 | 0 | 552 | 239 |
| Stage 1 | - | - | - | - | 238 | - |
| Stage 2 | - | - | - | - | 314 | - |
| Critical Hdwy | - | - | 4.14 | - | 6.47 | 6.31 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.47 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.47 | - |
| Follow-up Hdwy | - | - | 2.236 | - | 3.563 | 3.399 |
| Pot Cap-1 Maneuver | - | - | 1051 | - | 486 | 778 |
| Stage 1 | - | - | - | - | 790 | - |
| Stage 2 | - | - | - | - | 729 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1050 | - | 423 | 777 |
| Mov Cap-2 Maneuver | - | - | - | - | 423 | - |
| Stage 1 | - | - | - | - | 789 | - |
| Stage 2 | - | - | - | - | 635 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.5 | 14.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 423 | 777 | - | - | 1050 | - |
| HCM Lane V/C Ratio | 0.311 | 0.145 | - | - | 0.125 | - |
| HCM Control Delay (s) | 17.3 | 10.4 | - | - | 8.9 | 0 |
| HCM Lane LOS | C | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.3 | 0.5 | - | - | 0.4 | - |

## 4: Old Glade Road & Glade Road Performance by approach

| Approach | EB | WB | NB | All |
|---|---|---|---|---|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.3 | 0.2 | 0.5 | 0.9 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 41.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 169 | 141 | 156 | 207 | 338 | 139 |
| Future Vol, veh/h | 169 | 141 | 156 | 207 | 338 | 139 |
| Conflicting Peds, #/hr | 0 | 1 | 0 | 0 | 1 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 50 | - | - | 125 | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 4 | 0 | 1 | 0 | 1 |
| Mvmt Flow | 184 | 153 | 170 | 225 | 367 | 151 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 338 | 0 | 751 | 185 |
| Stage 1 | - | - | - | - | 185 | - |
| Stage 2 | - | - | - | - | 566 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.309 |
| Pot Cap-1 Maneuver | - | - | 1232 | - | 381 | 860 |
| Stage 1 | - | - | - | - | 852 | - |
| Stage 2 | - | - | - | - | 572 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1231 | - | ~ 320 | 859 |
| Mov Cap-2 Maneuver | - | - | - | - | ~ 320 | - |
| Stage 1 | - | - | - | - | 851 | - |
| Stage 2 | - | - | - | - | 481 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 3.6 | 97 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 320 | 859 | - | - | 1231 | - |
| HCM Lane V/C Ratio | 1.148 | 0.176 | - | - | 0.138 | - |
| HCM Control Delay (s) | 132.8 | 10.1 | - | - | 8.4 | 0 |
| HCM Lane LOS | F | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 15.1 | 0.6 | - | - | 0.5 | - |

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

## 4: Old Glade Road & Glade Road Performance by approach

| Approach | EB | WB | NB | All |
|---|---|---|---|---|
| Denied Del/Veh (s) | 0.4 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 1.5 | 2.8 | 22.5 | 10.7 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10.8 |
| Intersection LOS | B |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 218 | 244 | 121 | 46 | 121 | 104 |
| Future Vol, veh/h | 218 | 244 | 121 | 46 | 121 | 104 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 0 | 2 | 4 | 8 | 7 | 11 |
| Mvmt Flow | 237 | 265 | 132 | 50 | 132 | 113 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 1 |

| Approach | EB | WB | NB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 1 | 2 | 0 |
| Conflicting Approach Left | | NB | EB |
| Conflicting Lanes Left | 0 | 2 | 2 |
| Conflicting Approach Right | NB | | WB |
| Conflicting Lanes Right | 2 | 0 | 1 |
| HCM Control Delay | 10.6 | 11.3 | 10.7 |
| HCM LOS | B | B | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 |
|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 0% | 0% | 72% |
| Vol Thru, % | 0% | 0% | 100% | 0% | 28% |
| Vol Right, % | 0% | 100% | 0% | 100% | 0% |
| Sign Control | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 121 | 104 | 218 | 244 | 167 |
| LT Vol | 121 | 0 | 0 | 0 | 121 |
| Through Vol | 0 | 0 | 218 | 0 | 46 |
| RT Vol | 0 | 104 | 0 | 244 | 0 |
| Lane Flow Rate | 132 | 113 | 237 | 265 | 182 |
| Geometry Grp | 7 | 7 | 7 | 7 | 4 |
| Degree of Util (X) | 0.248 | 0.177 | 0.357 | 0.35 | 0.295 |
| Departure Headway (Hd) | 6.784 | 5.639 | 5.419 | 4.747 | 5.848 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes |
| Cap | 531 | 639 | 656 | 748 | 619 |
| Service Time | 4.493 | 3.348 | 3.216 | 2.544 | 3.848 |
| HCM Lane V/C Ratio | 0.249 | 0.177 | 0.361 | 0.354 | 0.294 |
| HCM Control Delay | 11.7 | 9.6 | 11.2 | 10.1 | 11.3 |
| HCM Lane LOS | B | A | B | B | B |
| HCM 95th-tile Q | 1 | 0.6 | 1.6 | 1.6 | 1.2 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 20.1 |
| Intersection LOS | C |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 169 | 141 | 156 | 207 | 338 | 139 |
| Future Vol, veh/h | 169 | 141 | 156 | 207 | 338 | 139 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 0 | 4 | 0 | 1 | 0 | 1 |
| Mvmt Flow | 184 | 153 | 170 | 225 | 367 | 151 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 1 |

| Approach | EB | WB | NB |
|---|---|---|---|
| Opposing Approach | WB | EB | |
| Opposing Lanes | 1 | 2 | 0 |
| Conflicting Approach Left | | NB | EB |
| Conflicting Lanes Left | 0 | 2 | 2 |
| Conflicting Approach Right | NB | | WB |
| Conflicting Lanes Right | 2 | 0 | 1 |
| HCM Control Delay | 12.3 | 24.2 | 22.1 |
| HCM LOS | B | C | C |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 |
|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 0% | 0% | 43% |
| Vol Thru, % | 0% | 0% | 100% | 0% | 57% |
| Vol Right, % | 0% | 100% | 0% | 100% | 0% |
| Sign Control | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 338 | 139 | 169 | 141 | 363 |
| LT Vol | 338 | 0 | 0 | 0 | 156 |
| Through Vol | 0 | 0 | 169 | 0 | 207 |
| RT Vol | 0 | 139 | 0 | 141 | 0 |
| Lane Flow Rate | 367 | 151 | 184 | 153 | 395 |
| Geometry Grp | 7 | 7 | 7 | 7 | 4 |
| Degree of Util (X) | 0.728 | 0.249 | 0.35 | 0.264 | 0.713 |
| Departure Headway (Hd) | 7.132 | 5.929 | 6.853 | 6.206 | 6.506 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes |
| Cap | 507 | 603 | 522 | 575 | 552 |
| Service Time | 4.899 | 3.695 | 4.638 | 3.991 | 4.577 |
| HCM Lane V/C Ratio | 0.724 | 0.25 | 0.352 | 0.266 | 0.716 |
| HCM Control Delay | 26.8 | 10.7 | 13.3 | 11.2 | 24.2 |
| HCM Lane LOS | D | B | B | B | C |
| HCM 95th-tile Q | 5.9 | 1 | 1.6 | 1.1 | 5.8 |

# Traffic Signal Warrant Analysis

## Multi-Way Stop Warrants

| | |
|---|---|
| Project Name | Glade Heights |
| Project/File # | 0 |
| Scenario | 2026 No-Build |

| Intersection Information | | | |
|---|---|---|---|
| Major Street (E/W Road) | Glade Road | Minor Street (N/S Road) | Old Glade Road |
| Analyzed with | 1 approach lane | Analyzed with | 2 or more approach lanes |
| Total Approach Volume | 4882 vehicles | Total Approach Volume | 2658 vehicles |
| Total Ped/Bike Volume | 0 crossings | Total Ped/Bike Volume | 0 crossings |
| Right turn reduction of | 0 percent applied | Right turn reduction of | 0 percent applied |

No high speed or isolated community reduction applied to the Multi-Way Stop Warrant thresholds.

| Condition A - Traffic Signal Warrant | |
|---|---|
| | |
| Condition Satisfied? | Satisfied |
| Criteria* | Traffic Signal Warranted & Justified |

* Multi-way stop control may be used as an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

| Condition B - Crash Experience | |
|---|---|
| | |
| Condition Satisfied? | Not satisfied |
| Required values reached for | 4 correctable crashes |
| Criteria - Crash Experience | 5 or more correctable crashes in 12-month period |

| Condition C - Intersection Volume & Delay | |
|---|---|
| | |
| Condition Satisfied? | Not Satisfied |
| Required values reached for | 8 hours & 0 sec. average delay/veh |
| Criteria - Major Street (veh/hr) | 300 for any 8 hours of an average day |
| Criteria - Minor Street (total vol-veh, ped, & bikes/hr) | 200 for the same 8 hours of an average day |
| Criteria - Delay (average sec/veh) | 30 during the highest hour |

| Condition D - Combination Volume, Crash Experience, & Delay | |
|---|---|
| | |
| Condition Satisfied? | Not Satisfied |
| Required values reached for | 11 hours, 4 crashes, & 0 sec. average delay/veh |
| Criteria - Major Street (veh/hr) | 240 for any 8 hours of an average day |
| Criteria - Minor Street (total vol-veh, ped, & bikes/hr) | 160 for the same 8 hours of an average day |
| Criteria - Crash Experience | 4 or more correctable crashes in 12-month period |
| Criteria - Delay (average sec/veh) | 24 during the highest hour |

# Traffic Signal Warrant Analysis

## Warrants 1 - 3 (Volume Warrants)

| | |
|---|---|
| Project Name | Glade Heights |
| Project/File # | 0 |
| Scenario | 2026 Build |

| Intersection Information | | | |
|---|---|---|---|
| Major Street (E/W Road) | Glade Road | Minor Street (N/S Road) | Old Glade Road |
| Analyzed with | 1 approach lane | Analyzed with | 2 or more approach lanes |
| Total Approach Volume | 5634 vehicles | Total Approach Volume | 2994 vehicles |
| Total Ped/Bike Volume | 0 crossings | Total Ped/Bike Volume | 0 crossings |
| Right turn reduction of | 0 percent applied | Right turn reduction of | 0 percent applied |

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

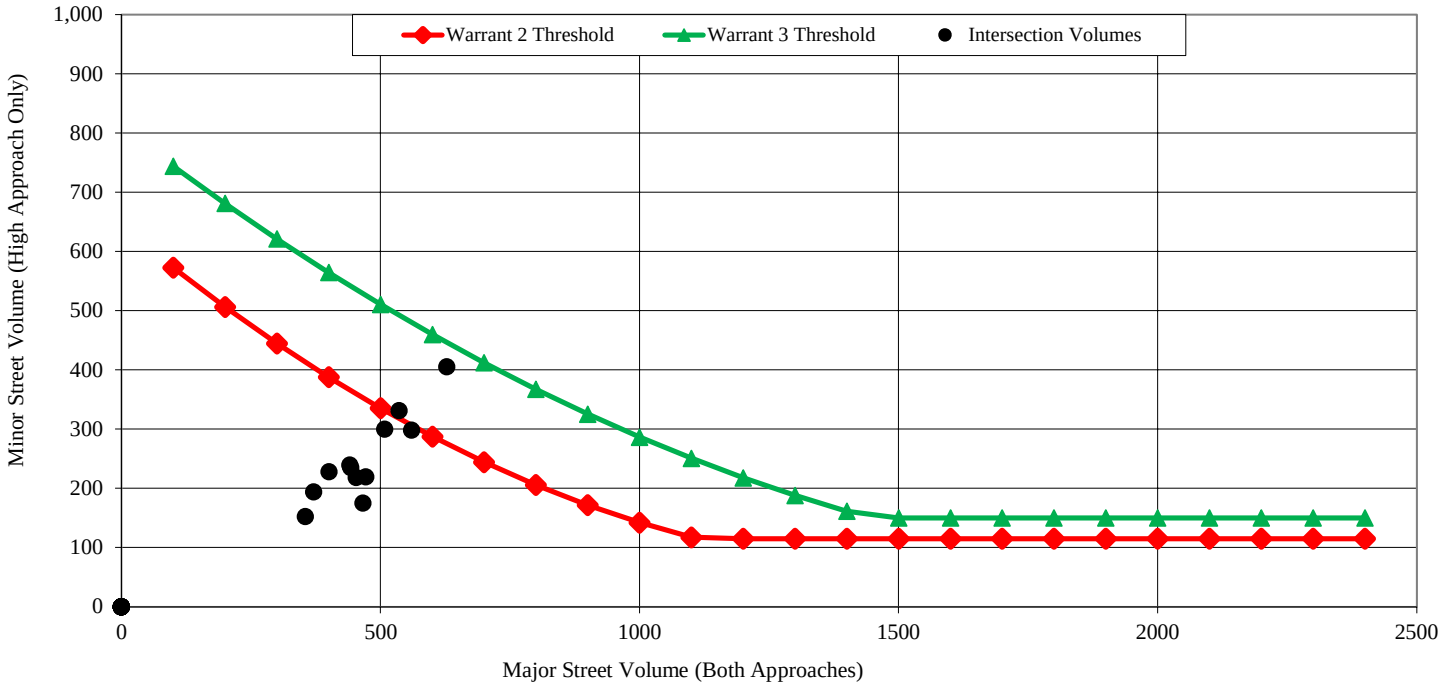
| Warrant 1, Eight Hour Vehicular Volume | | | |
|---|---|---|---|
| | Condition A | Condition B | Condition A+B* |
| Condition Satisfied? | Not Satisfied | Not Satisfied | Not Satisfied |
| Required values reached for | 4 hours | 0 hours | 10 (Cond. A) & 1 (Cond. B) |
| Criteria - Major Street (veh/hr) | 500 | 750 | 400 (Cond. A) & 600 (Cond. B) |
| Criteria - Minor Street (veh/hr) | 200 | 100 | 160 (Cond. A) & 80 (Cond. B) |

* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

| Warrant 2, Four Hour Vehicular Volume | |
|---|---|
| | |
| Condition Satisfied? | Not Satisfied |
| Required values reached for | 2 hours |
| Criteria | See Figure Below |

| Warrant 3, Peak Hour Vehicular Volume | | |
|---|---|---|
| | Condition A | Condition B |
| Condition Satisfied? | Not Satisfied | Not Satisfied |
| Required values reached for | 1033 total, 405 minor, 0 delay | 0 hours |
| Criteria - Total Approach Volume (veh in one hour) | 650 | See Figure Below |
| Criteria - Minor Street High Side Volume (veh in one hour) | 150 | |
| Criteria - Minor Street High Side Delay (veh-hrs) | 5 | |

Figure 4C-1 (Warrant 2) & Figure 4C-3 (Warrant 3)



# Traffic Signal Warrant Analysis

## Warrants 4 to 6 (Pedestrian, School, Coordinated Systems)

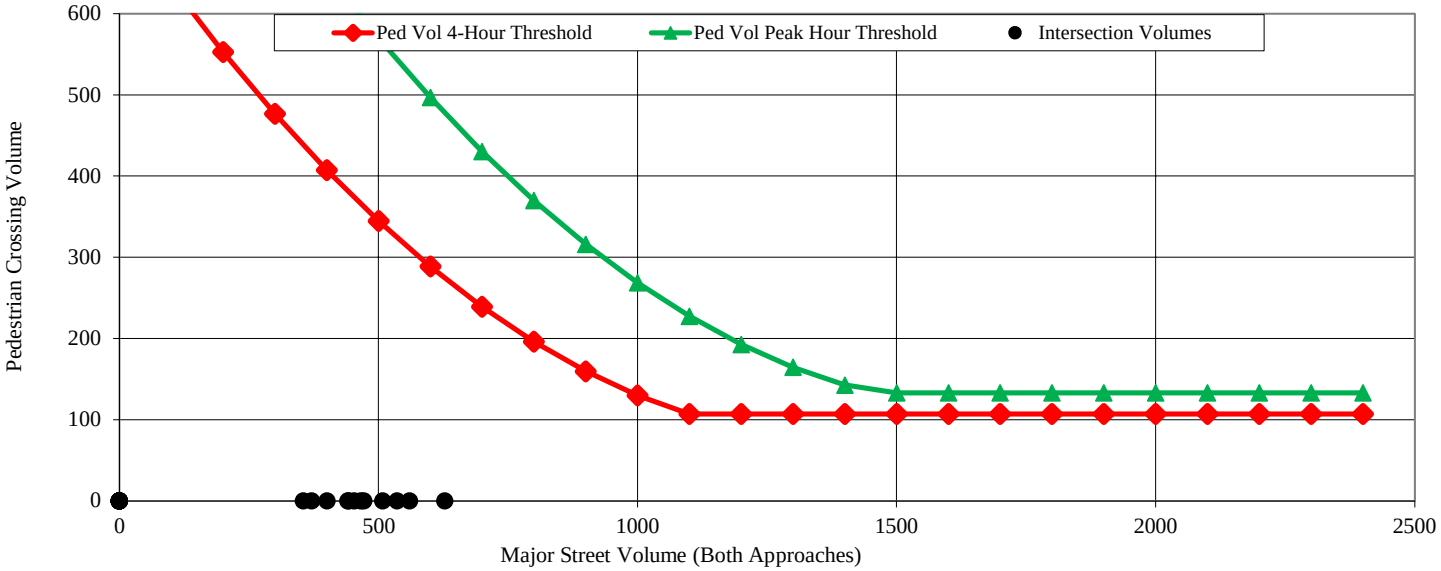
| | |
|---|---|
| Project Name | Glade Heights |
| Project/File # | 0 |
| Scenario | 2026 Build |

| Intersection Information | | | |
|---|---|---|---|
| Major Street (E/W Road) | Glade Road | Minor Street (N/S Road) | Old Glade Road |
| Analyzed with | 1 approach lane | Analyzed with | 2 or more approach lanes |
| Total Approach Volume | 5634 vehicles | Total Approach Volume | 2994 vehicles |
| Total Ped/Bike Volume | 0 crossings | Total Ped/Bike Volume | 0 crossings |
| Right turn reduction of | 0 percent applied | Right turn reduction of | 0 percent applied |

No high speed or isolated community reduction applied to the Pedestrian Warrant thresholds.

| Warrant 4, Pedestrian Volume | | |
|---|---|---|
| | Condition A - Four Hour Vol. | Condition B - Peak Hour Vol. |
| Condition Satisfied? | Not Examined | Not Examined |
| Required values reached for | | |
| Criteria - Min. Distance to Nearest Controlled Crossing | | |
| Criteria - Major Street Volume and Crossing Volume | | |

Figure 4C-5 & Figure 4C-7 (Warrant 4 Four Hour & Peak Hour)




| Warrant 5, School Crossing | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Criteria - School Crossing Data | |

| Warrant 6, Coordinated Signal System | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Criteria - Coordinated Signal System | |

# Traffic Signal Warrant Analysis

## Warrants 7-9 (Crash, Network, Rail Crossing)

| | |
|---|---|
| Project Name | Glade Heights |
| Project/File # | 0 |
| Scenario | 2026 Build |

| Intersection Information | | | |
|---|---|---|---|
| Major Street (E/W Road) | Glade Road | Minor Street (N/S Road) | Old Glade Road |
| Analyzed with | 1 approach lane | Analyzed with | 2 or more approach lanes |
| Total Approach Volume | 5634 vehicles | Total Approach Volume | 2994 vehicles |
| Total Ped/Bike Volume | 0 crossings | Total Ped/Bike Volume | 0 crossings |
| Right turn reduction of | 0 percent applied | Right turn reduction of | 0 percent applied |

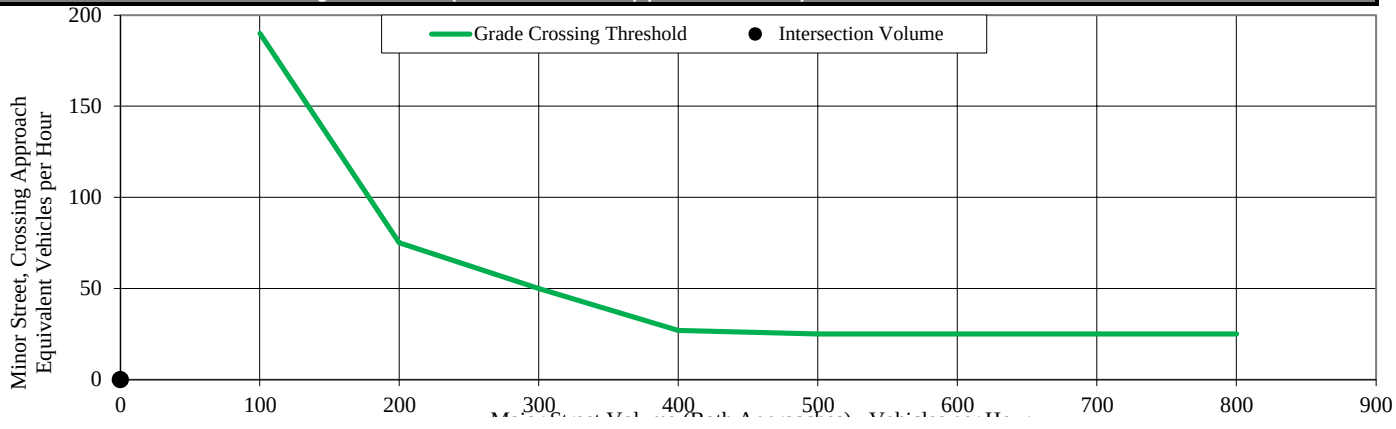
Reduction applied to Crash and Roadway Network Warrant thresholds due to high speed on Glade Road .

| Warrant 7, Crash Experience | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Required values reached for | |
| Criteria - Alternatives | |
| Criteria - Reported Crashes (within 12-month period) | |
| Criteria - Major Street (veh/hr)<br>- Minor Street (veh/hr) | |
| (Alternative Volume Requirement) Criteria - Pedestrian Volume | |

| Warrant 8, Roadway Network | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Required values reached for | |
| Criteria - Common Intersection of Two Major Routes | |
| Criteria - Existing or Immediately Projected Entering Volume | |
| Criteria - Warrants | |
| (Alternative Requirement) Criteria - Non-normal Business Day | |

| Warrant 9, Intersection Near a Grade Crossing | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Required values reached for | |
| Criteria - Alternatives | |
| Criteria - Max. Distance to Nearest Controlled Crossing | |
| Criteria - Major Street Volume and Crossing Volume | |

Figure 4C-10 (Two or More Approach Lanes): Distance D = 70 feet



Major Street Volume (Both Approaches) - Vehicles per Hour

# Traffic Signal Warrant Analysis

## Multi-Way Stop Warrants

| | |
|---|---|
| Project Name | Glade Heights |
| Project/File # | 0 |
| Scenario | 2026 Build |

| Intersection Information | | | |
|---|---|---|---|
| Major Street (E/W Road) | Glade Road | Minor Street (N/S Road) | Old Glade Road |
| Analyzed with | 1 approach lane | Analyzed with | 2 or more approach lanes |
| Total Approach Volume | 5634 vehicles | Total Approach Volume | 2994 vehicles |
| Total Ped/Bike Volume | 0 crossings | Total Ped/Bike Volume | 0 crossings |
| Right turn reduction of | 0 percent applied | Right turn reduction of | 0 percent applied |

No high speed or isolated community reduction applied to the Multi-Way Stop Warrant thresholds.

| Condition A - Traffic Signal Warrant | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Criteria* | |

* Multi-way stop control may be used as an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

| Condition B - Crash Experience | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Required values reached for | |
| Criteria - Crash Experience | |

| Condition C - Intersection Volume & Delay | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Required values reached for | |
| Criteria - Major Street (veh/hr) | |
| Criteria - Minor Street (total vol-veh, ped, & bikes/hr) | |
| Criteria - Delay (average sec/veh) | |

| Condition D - Combination Volume, Crash Experience, & Delay | |
|---|---|
| | |
| Condition Satisfied? | Not Examined |
| Required values reached for | |
| Criteria - Major Street (veh/hr) | |
| Criteria - Minor Street (total vol-veh, ped, & bikes/hr) | |
| Criteria - Crash Experience | |
| Criteria - Delay (average sec/veh) | |

# Glade Road and Shadow Lake Road

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 144 | 1 | 5 | 29 | 55 | 1 | 0 | 30 | 91 | 0 | 2 |
| Future Vol, veh/h | 2 | 144 | 1 | 5 | 29 | 55 | 1 | 0 | 30 | 91 | 0 | 2 |
| Conflicting Peds, #/hr | 7 | 0 | 0 | 1 | 0 | 3 | 5 | 0 | 1 | 3 | 0 | 7 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| Heavy Vehicles, % | 0 | 1 | 100 | 0 | 10 | 4 | 0 | 0 | 0 | 1 | 0 | 50 |
| Mvmt Flow | 3 | 209 | 1 | 7 | 42 | 80 | 1 | 0 | 43 | 132 | 0 | 3 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 129 | 0 | 0 | 211 | 0 | 0 | 322 | 360 | 214 | 343 | 320 | 96 |
| Stage 1 | - | - | - | - | - | - | 217 | 217 | - | 103 | 103 | - |
| Stage 2 | - | - | - | - | - | - | 105 | 143 | - | 240 | 217 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.11 | 6.5 | 6.7 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.11 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.11 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.509 | 4 | 3.75 |
| Pot Cap-1 Maneuver | 1469 | - | - | 1372 | - | - | 635 | 570 | 831 | 613 | 600 | 844 |
| Stage 1 | - | - | - | - | - | - | 790 | 727 | - | 905 | 814 | - |
| Stage 2 | - | - | - | - | - | - | 906 | 782 | - | 766 | 727 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1459 | - | - | 1371 | - | - | 624 | 561 | 828 | 572 | 590 | 833 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 624 | 561 | - | 572 | 590 | - |
| Stage 1 | - | - | - | - | - | - | 788 | 725 | - | 897 | 803 | - |
| Stage 2 | - | - | - | - | - | - | 891 | 772 | - | 722 | 725 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0.4 | 9.7 | 13.1 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 819 | 1459 | - | - | 1371 | - | - | 576 |
| HCM Lane V/C Ratio | 0.055 | 0.002 | - | - | 0.005 | - | - | 0.234 |
| HCM Control Delay (s) | 9.7 | 7.5 | 0 | - | 7.6 | 0 | - | 13.1 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.2 | 0 | - | - | 0 | - | - | 0.9 |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 6 | 93 | 1 | 50 | 209 | 46 | 2 | 0 | 29 | 34 | 0 | 3 |
| Future Vol, veh/h | 6 | 93 | 1 | 50 | 209 | 46 | 2 | 0 | 29 | 34 | 0 | 3 |
| Conflicting Peds, #/hr | 5 | 0 | 1 | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 0 | 5 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 7 | 108 | 1 | 58 | 243 | 53 | 2 | 0 | 34 | 40 | 0 | 3 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 301 | 0 | 0 | 110 | 0 | 0 | 516 | 541 | 114 | 535 | 515 | 280 |
| Stage 1 | - | - | - | - | - | - | 124 | 124 | - | 391 | 391 | - |
| Stage 2 | - | - | - | - | - | - | 392 | 417 | - | 144 | 124 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1272 | - | - | 1493 | - | - | 473 | 451 | 944 | 459 | 466 | 764 |
| Stage 1 | - | - | - | - | - | - | 885 | 797 | - | 637 | 611 | - |
| Stage 2 | - | - | - | - | - | - | 637 | 595 | - | 864 | 797 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1266 | - | - | 1492 | - | - | 449 | 425 | 940 | 421 | 439 | 757 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 449 | 425 | - | 421 | 439 | - |
| Stage 1 | - | - | - | - | - | - | 879 | 791 | - | 630 | 579 | - |
| Stage 2 | - | - | - | - | - | - | 601 | 564 | - | 825 | 791 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.5 | 1.2 | 9.3 | 14.1 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 878 | 1266 | - | - | 1492 | - | - | 437 |
| HCM Lane V/C Ratio | 0.041 | 0.006 | - | - | 0.039 | - | - | 0.098 |
| HCM Control Delay (s) | 9.3 | 7.9 | 0 | - | 7.5 | 0 | - | 14.1 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0.1 | - | - | 0.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.6 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ⇕ | | | ⇕ | | | ⇕ | | | ⇕ | |
| Traffic Vol, veh/h | 2 | 184 | 1 | 5 | 43 | 56 | 1 | 0 | 31 | 93 | 0 | 2 |
| Future Vol, veh/h | 2 | 184 | 1 | 5 | 43 | 56 | 1 | 0 | 31 | 93 | 0 | 2 |
| Conflicting Peds, #/hr | 7 | 0 | 0 | 1 | 0 | 3 | 5 | 0 | 1 | 3 | 0 | 7 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 1 | 100 | 0 | 10 | 4 | 0 | 0 | 0 | 1 | 0 | 50 |
| Mvmt Flow | 2 | 200 | 1 | 5 | 47 | 61 | 1 | 0 | 34 | 101 | 0 | 2 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 115 | 0 | 0 | 202 | 0 | 0 | 302 | 331 | 205 | 320 | 301 | 92 |
| Stage 1 | - | - | - | - | - | - | 206 | 206 | - | 95 | 95 | - |
| Stage 2 | - | - | - | - | - | - | 96 | 125 | - | 225 | 206 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.11 | 6.5 | 6.7 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.11 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.11 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.509 | 4 | 3.75 |
| Pot Cap-1 Maneuver | 1487 | - | - | 1382 | - | - | 654 | 592 | 841 | 635 | 615 | 848 |
| Stage 1 | - | - | - | - | - | - | 801 | 735 | - | 914 | 820 | - |
| Stage 2 | - | - | - | - | - | - | 916 | 796 | - | 780 | 735 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1477 | - | - | 1381 | - | - | 644 | 584 | 838 | 601 | 606 | 837 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 644 | 584 | - | 601 | 606 | - |
| Stage 1 | - | - | - | - | - | - | 799 | 733 | - | 906 | 811 | - |
| Stage 2 | - | - | - | - | - | - | 904 | 787 | - | 745 | 733 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0.4 | 9.5 | 12.2 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 830 | 1477 | - | - | 1381 | - | - | 605 |
| HCM Lane V/C Ratio | 0.042 | 0.001 | - | - | 0.004 | - | - | 0.171 |
| HCM Control Delay (s) | 9.5 | 7.4 | 0 | - | 7.6 | 0 | - | 12.2 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0 | - | - | 0.6 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 6 | 120 | 1 | 51 | 245 | 47 | 2 | 0 | 30 | 35 | 0 | 3 |
| Future Vol, veh/h | 6 | 120 | 1 | 51 | 245 | 47 | 2 | 0 | 30 | 35 | 0 | 3 |
| Conflicting Peds, #/hr | 5 | 0 | 1 | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 0 | 5 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 7 | 130 | 1 | 55 | 266 | 51 | 2 | 0 | 33 | 38 | 0 | 3 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 322 | 0 | 0 | 132 | 0 | 0 | 554 | 578 | 136 | 572 | 553 | 302 |
| Stage 1 | - | - | - | - | - | - | 146 | 146 | - | 407 | 407 | - |
| Stage 2 | - | - | - | - | - | - | 408 | 432 | - | 165 | 146 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1249 | - | - | 1466 | - | - | 446 | 430 | 918 | 434 | 444 | 742 |
| Stage 1 | - | - | - | - | - | - | 861 | 780 | - | 625 | 601 | - |
| Stage 2 | - | - | - | - | - | - | 624 | 586 | - | 842 | 780 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1243 | - | - | 1465 | - | - | 424 | 405 | 914 | 398 | 419 | 735 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 424 | 405 | - | 398 | 419 | - |
| Stage 1 | - | - | - | - | - | - | 855 | 775 | - | 618 | 570 | - |
| Stage 2 | - | - | - | - | - | - | 590 | 556 | - | 804 | 775 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.4 | 1.1 | 9.4 | 14.7 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 852 | 1243 | - | - | 1465 | - | - | 413 |
| HCM Lane V/C Ratio | 0.041 | 0.005 | - | - | 0.038 | - | - | 0.1 |
| HCM Control Delay (s) | 9.4 | 7.9 | 0 | - | 7.6 | 0 | - | 14.7 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0.1 | - | - | 0.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.6 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 186 | 1 | 5 | 48 | 56 | 1 | 0 | 31 | 93 | 0 | 2 |
| Future Vol, veh/h | 2 | 186 | 1 | 5 | 48 | 56 | 1 | 0 | 31 | 93 | 0 | 2 |
| Conflicting Peds, #/hr | 7 | 0 | 0 | 1 | 0 | 3 | 5 | 0 | 1 | 3 | 0 | 7 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 1 | 100 | 0 | 10 | 4 | 0 | 0 | 0 | 1 | 0 | 50 |
| Mvmt Flow | 2 | 202 | 1 | 5 | 52 | 61 | 1 | 0 | 34 | 101 | 0 | 2 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 120 | 0 | 0 | 204 | 0 | 0 | 309 | 338 | 207 | 327 | 308 | 97 |
| Stage 1 | - | - | - | - | - | - | 208 | 208 | - | 100 | 100 | - |
| Stage 2 | - | - | - | - | - | - | 101 | 130 | - | 227 | 208 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.11 | 6.5 | 6.7 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.11 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.11 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.509 | 4 | 3.75 |
| Pot Cap-1 Maneuver | 1480 | - | - | 1380 | - | - | 647 | 586 | 839 | 628 | 609 | 843 |
| Stage 1 | - | - | - | - | - | - | 799 | 734 | - | 909 | 816 | - |
| Stage 2 | - | - | - | - | - | - | 910 | 792 | - | 778 | 734 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1470 | - | - | 1379 | - | - | 637 | 578 | 836 | 594 | 600 | 832 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 637 | 578 | - | 594 | 600 | - |
| Stage 1 | - | - | - | - | - | - | 797 | 732 | - | 901 | 807 | - |
| Stage 2 | - | - | - | - | - | - | 898 | 783 | - | 743 | 732 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.1 | 0.3 | 9.5 | 12.3 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 828 | 1470 | - | - | 1379 | - | - | 598 |
| HCM Lane V/C Ratio | 0.042 | 0.001 | - | - | 0.004 | - | - | 0.173 |
| HCM Control Delay (s) | 9.5 | 7.5 | 0 | - | 7.6 | 0 | - | 12.3 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0 | - | - | 0.6 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 6 | 125 | 1 | 51 | 248 | 47 | 2 | 0 | 30 | 35 | 0 | 3 |
| Future Vol, veh/h | 6 | 125 | 1 | 51 | 248 | 47 | 2 | 0 | 30 | 35 | 0 | 3 |
| Conflicting Peds, #/hr | 5 | 0 | 1 | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 0 | 5 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 7 | 136 | 1 | 55 | 270 | 51 | 2 | 0 | 33 | 38 | 0 | 3 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 326 | 0 | 0 | 138 | 0 | 0 | 564 | 588 | 142 | 582 | 563 | 306 |
| Stage 1 | - | - | - | - | - | - | 152 | 152 | - | 411 | 411 | - |
| Stage 2 | - | - | - | - | - | - | 412 | 436 | - | 171 | 152 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1245 | - | - | 1458 | - | - | 439 | 424 | 911 | 427 | 438 | 739 |
| Stage 1 | - | - | - | - | - | - | 855 | 775 | - | 622 | 598 | - |
| Stage 2 | - | - | - | - | - | - | 621 | 583 | - | 836 | 775 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1239 | - | - | 1457 | - | - | 417 | 400 | 907 | 392 | 413 | 732 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 417 | 400 | - | 392 | 413 | - |
| Stage 1 | - | - | - | - | - | - | 849 | 770 | - | 615 | 568 | - |
| Stage 2 | - | - | - | - | - | - | 587 | 553 | - | 798 | 770 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.4 | 1.1 | 9.4 | 14.8 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 845 | 1239 | - | - | 1457 | - | - | 407 |
| HCM Lane V/C Ratio | 0.041 | 0.005 | - | - | 0.038 | - | - | 0.101 |
| HCM Control Delay (s) | 9.4 | 7.9 | 0 | - | 7.6 | 0 | - | 14.8 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0.1 | - | - | 0.3 |

# Toms Creek Road and Redbud Road

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.1 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 62 | 0 | 10 | 38 | 10 | 1 | 0 | 42 | 32 | 0 | 1 |
| Future Vol, veh/h | 0 | 62 | 0 | 10 | 38 | 10 | 1 | 0 | 42 | 32 | 0 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Heavy Vehicles, % | 0 | 0 | 0 | 10 | 7 | 0 | 100 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 0 | 82 | 0 | 13 | 50 | 13 | 1 | 0 | 55 | 42 | 0 | 1 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 64 | 0 | 0 | 83 | 0 | 0 | 166 | 173 | 84 | 195 | 167 | 58 |
| Stage 1 | - | - | - | - | - | - | 83 | 83 | - | 84 | 84 | - |
| Stage 2 | - | - | - | - | - | - | 83 | 90 | - | 111 | 83 | - |
| Critical Hdwy | 4.1 | - | - | 4.2 | - | - | 8.1 | 6.5 | 6.2 | 7.13 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.1 | 5.5 | - | 6.13 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 7.1 | 5.5 | - | 6.13 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.29 | - | - | 4.4 | 4 | 3.3 | 3.527 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1551 | - | - | 1465 | - | - | 622 | 724 | 981 | 762 | 729 | 1014 |
| Stage 1 | - | - | - | - | - | - | 730 | 830 | - | 922 | 829 | - |
| Stage 2 | - | - | - | - | - | - | 730 | 824 | - | 892 | 830 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1550 | - | - | 1464 | - | - | 616 | 716 | 979 | 712 | 721 | 1013 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 616 | 716 | - | 712 | 721 | - |
| Stage 1 | - | - | - | - | - | - | 729 | 829 | - | 921 | 821 | - |
| Stage 2 | - | - | - | - | - | - | 722 | 816 | - | 841 | 829 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 1.3 | 9 | 10.3 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 966 | 1550 | - | - | 1464 | - | - | 718 |
| HCM Lane V/C Ratio | 0.059 | - | - | - | 0.009 | - | - | 0.06 |
| HCM Control Delay (s) | 9 | 0 | - | - | 7.5 | 0 | - | 10.3 |
| HCM Lane LOS | A | A | - | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.2 | 0 | - | - | 0 | - | - | 0.2 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 3 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 44 | 2 | 46 | 92 | 22 | 2 | 0 | 22 | 16 | 0 | 1 |
| Future Vol, veh/h | 2 | 44 | 2 | 46 | 92 | 22 | 2 | 0 | 22 | 16 | 0 | 1 |
| Conflicting Peds, #/hr | 2 | 0 | 3 | 3 | 0 | 2 | 3 | 0 | 3 | 2 | 0 | 2 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 2 | 54 | 2 | 56 | 112 | 27 | 2 | 0 | 27 | 20 | 0 | 1 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 141 | 0 | 0 | 59 | 0 | 0 | 303 | 315 | 61 | 316 | 303 | 131 |
| Stage 1 | - | - | - | - | - | - | 62 | 62 | - | 240 | 240 | - |
| Stage 2 | - | - | - | - | - | - | 241 | 253 | - | 76 | 63 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1455 | - | - | 1558 | - | - | 653 | 604 | 1010 | 641 | 613 | 924 |
| Stage 1 | - | - | - | - | - | - | 954 | 847 | - | 768 | 711 | - |
| Stage 2 | - | - | - | - | - | - | 767 | 701 | - | 938 | 846 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1452 | - | - | 1554 | - | - | 629 | 577 | 1004 | 602 | 585 | 920 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 629 | 577 | - | 602 | 585 | - |
| Stage 1 | - | - | - | - | - | - | 950 | 844 | - | 766 | 682 | - |
| Stage 2 | - | - | - | - | - | - | 734 | 672 | - | 909 | 843 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.3 | 2.1 | 8.9 | 11.1 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 956 | 1452 | - | - | 1554 | - | - | 614 |
| HCM Lane V/C Ratio | 0.031 | 0.002 | - | - | 0.036 | - | - | 0.034 |
| HCM Control Delay (s) | 8.9 | 7.5 | 0 | - | 7.4 | 0 | - | 11.1 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0.1 | - | - | 0.1 |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 103 | 0 | 10 | 53 | 10 | 1 | 0 | 43 | 33 | 0 | 1 |
| Future Vol, veh/h | 0 | 103 | 0 | 10 | 53 | 10 | 1 | 0 | 43 | 33 | 0 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 10 | 7 | 0 | 100 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 0 | 112 | 0 | 11 | 58 | 11 | 1 | 0 | 47 | 36 | 0 | 1 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 70 | 0 | 0 | 113 | 0 | 0 | 199 | 205 | 114 | 224 | 200 | 65 |
| Stage 1 | - | - | - | - | - | - | 113 | 113 | - | 87 | 87 | - |
| Stage 2 | - | - | - | - | - | - | 86 | 92 | - | 137 | 113 | - |
| Critical Hdwy | 4.1 | - | - | 4.2 | - | - | 8.1 | 6.5 | 6.2 | 7.13 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.1 | 5.5 | - | 6.13 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 7.1 | 5.5 | - | 6.13 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.29 | - | - | 4.4 | 4 | 3.3 | 3.527 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1544 | - | - | 1428 | - | - | 589 | 695 | 944 | 729 | 699 | 1005 |
| Stage 1 | - | - | - | - | - | - | 701 | 806 | - | 918 | 827 | - |
| Stage 2 | - | - | - | - | - | - | 727 | 823 | - | 864 | 806 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1543 | - | - | 1427 | - | - | 584 | 688 | 942 | 687 | 692 | 1004 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 584 | 688 | - | 687 | 692 | - |
| Stage 1 | - | - | - | - | - | - | 700 | 805 | - | 917 | 820 | - |
| Stage 2 | - | - | - | - | - | - | 720 | 816 | - | 820 | 805 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 1 | 9.1 | 10.5 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 929 | 1543 | - | - | 1427 | - | - | 693 |
| HCM Lane V/C Ratio | 0.051 | - | - | - | 0.008 | - | - | 0.053 |
| HCM Control Delay (s) | 9.1 | 0 | - | - | 7.5 | 0 | - | 10.5 |
| HCM Lane LOS | A | A | - | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.2 | 0 | - | - | 0 | - | - | 0.2 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 72 | 2 | 47 | 138 | 22 | 2 | 0 | 22 | 16 | 0 | 1 |
| Future Vol, veh/h | 2 | 72 | 2 | 47 | 138 | 22 | 2 | 0 | 22 | 16 | 0 | 1 |
| Conflicting Peds, #/hr | 2 | 0 | 3 | 3 | 0 | 2 | 3 | 0 | 3 | 2 | 0 | 2 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 2 | 78 | 2 | 51 | 150 | 24 | 2 | 0 | 24 | 17 | 0 | 1 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 176 | 0 | 0 | 83 | 0 | 0 | 354 | 364 | 85 | 364 | 353 | 167 |
| Stage 1 | - | - | - | - | - | - | 86 | 86 | - | 266 | 266 | - |
| Stage 2 | - | - | - | - | - | - | 268 | 278 | - | 98 | 87 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1412 | - | - | 1527 | - | - | 605 | 567 | 980 | 596 | 575 | 882 |
| Stage 1 | - | - | - | - | - | - | 927 | 827 | - | 744 | 692 | - |
| Stage 2 | - | - | - | - | - | - | 742 | 684 | - | 913 | 827 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1409 | - | - | 1523 | - | - | 583 | 543 | 974 | 562 | 550 | 878 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 583 | 543 | - | 562 | 550 | - |
| Stage 1 | - | - | - | - | - | - | 923 | 824 | - | 742 | 665 | - |
| Stage 2 | - | - | - | - | - | - | 712 | 657 | - | 887 | 824 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.2 | 1.7 | 9 | 11.5 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 922 | 1409 | - | - | 1523 | - | - | 574 |
| HCM Lane V/C Ratio | 0.028 | 0.002 | - | - | 0.034 | - | - | 0.032 |
| HCM Control Delay (s) | 9 | 7.6 | 0 | - | 7.4 | 0 | - | 11.5 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0.1 | - | - | 0.1 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 3 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 103 | 0 | 9 | 53 | 10 | 1 | 0 | 35 | 33 | 0 | 1 |
| Future Vol, veh/h | 0 | 103 | 0 | 9 | 53 | 10 | 1 | 0 | 35 | 33 | 0 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 10 | 7 | 0 | 100 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 0 | 112 | 0 | 10 | 58 | 11 | 1 | 0 | 38 | 36 | 0 | 1 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 70 | 0 | 0 | 113 | 0 | 0 | 197 | 203 | 114 | 217 | 198 | 65 |
| Stage 1 | - | - | - | - | - | - | 113 | 113 | - | 85 | 85 | - |
| Stage 2 | - | - | - | - | - | - | 84 | 90 | - | 132 | 113 | - |
| Critical Hdwy | 4.1 | - | - | 4.2 | - | - | 8.1 | 6.5 | 6.2 | 7.13 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.1 | 5.5 | - | 6.13 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 7.1 | 5.5 | - | 6.13 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.29 | - | - | 4.4 | 4 | 3.3 | 3.527 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1544 | - | - | 1428 | - | - | 591 | 697 | 944 | 737 | 701 | 1005 |
| Stage 1 | - | - | - | - | - | - | 701 | 806 | - | 920 | 828 | - |
| Stage 2 | - | - | - | - | - | - | 729 | 824 | - | 869 | 806 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1543 | - | - | 1427 | - | - | 587 | 691 | 942 | 702 | 695 | 1004 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 587 | 691 | - | 702 | 695 | - |
| Stage 1 | - | - | - | - | - | - | 700 | 805 | - | 919 | 821 | - |
| Stage 2 | - | - | - | - | - | - | 723 | 817 | - | 833 | 805 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0 | 0.9 | 9.1 | 10.4 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 926 | 1543 | - | - | 1427 | - | - | 708 |
| HCM Lane V/C Ratio | 0.042 | - | - | - | 0.007 | - | - | 0.052 |
| HCM Control Delay (s) | 9.1 | 0 | - | - | 7.5 | 0 | - | 10.4 |
| HCM Lane LOS | A | A | - | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0 | - | - | 0.2 |

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

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 72 | 2 | 38 | 138 | 22 | 2 | 0 | 19 | 16 | 0 | 1 |
| Future Vol, veh/h | 2 | 72 | 2 | 38 | 138 | 22 | 2 | 0 | 19 | 16 | 0 | 1 |
| Conflicting Peds, #/hr | 2 | 0 | 3 | 3 | 0 | 2 | 3 | 0 | 3 | 2 | 0 | 2 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 2 | 78 | 2 | 41 | 150 | 24 | 2 | 0 | 21 | 17 | 0 | 1 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 176 | 0 | 0 | 83 | 0 | 0 | 334 | 344 | 85 | 343 | 333 | 167 |
| Stage 1 | - | - | - | - | - | - | 86 | 86 | - | 246 | 246 | - |
| Stage 2 | - | - | - | - | - | - | 248 | 258 | - | 97 | 87 | - |
| Critical Hdwy | 4.1 | - | - | 4.1 | - | - | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.1 | 5.5 | - | 6.1 | 5.5 | - |
| Follow-up Hdwy | 2.2 | - | - | 2.2 | - | - | 3.5 | 4 | 3.3 | 3.5 | 4 | 3.3 |
| Pot Cap-1 Maneuver | 1412 | - | - | 1527 | - | - | 623 | 582 | 980 | 615 | 590 | 882 |
| Stage 1 | - | - | - | - | - | - | 927 | 827 | - | 762 | 706 | - |
| Stage 2 | - | - | - | - | - | - | 760 | 698 | - | 914 | 827 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 1409 | - | - | 1523 | - | - | 604 | 561 | 974 | 585 | 569 | 878 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 604 | 561 | - | 585 | 569 | - |
| Stage 1 | - | - | - | - | - | - | 923 | 824 | - | 760 | 683 | - |
| Stage 2 | - | - | - | - | - | - | 734 | 676 | - | 891 | 824 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.2 | 1.4 | 9 | 11.2 |
| HCM LOS | | | A | B |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 920 | 1409 | - | - | 1523 | - | - | 597 |
| HCM Lane V/C Ratio | 0.025 | 0.002 | - | - | 0.027 | - | - | 0.031 |
| HCM Control Delay (s) | 9 | 7.6 | 0 | - | 7.4 | 0 | - | 11.2 |
| HCM Lane LOS | A | A | A | - | A | A | - | B |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0.1 | - | - | 0.1 |

# Toms Creek Road and Honeysuckle Drive

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 136 | 0 | 25 | 58 | 0 | 73 |
| Future Vol, veh/h | 136 | 0 | 25 | 58 | 0 | 73 |
| Conflicting Peds, #/hr | 0 | 3 | 6 | 0 | 3 | 6 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 40 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 2 | 0 | 4 | 5 | 0 | 0 |
| Mvmt Flow | 166 | 0 | 30 | 71 | 0 | 89 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 172 | 0 | 306 | 178 |
| Stage 1 | - | - | - | - | 172 | - |
| Stage 2 | - | - | - | - | 134 | - |
| Critical Hdwy | - | - | 4.14 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.236 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1393 | - | 690 | 870 |
| Stage 1 | - | - | - | - | 863 | - |
| Stage 2 | - | - | - | - | 897 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1385 | - | 669 | 860 |
| Mov Cap-2 Maneuver | - | - | - | - | 669 | - |
| Stage 1 | - | - | - | - | 858 | - |
| Stage 2 | - | - | - | - | 875 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 2.3 | 9.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 860 | - | - | 1385 | - |
| HCM Lane V/C Ratio | 0.104 | - | - | 0.022 | - |
| HCM Control Delay (s) | 9.7 | - | - | 7.7 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 82 | 0 | 92 | 160 | 0 | 37 |
| Future Vol, veh/h | 82 | 0 | 92 | 160 | 0 | 37 |
| Conflicting Peds, #/hr | 0 | 0 | 1 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 40 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 96 | 0 | 108 | 188 | 0 | 44 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 97 | 0 | 501 | 98 |
| Stage 1 | - | - | - | - | 97 | - |
| Stage 2 | - | - | - | - | 404 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1509 | - | 533 | 963 |
| Stage 1 | - | - | - | - | 932 | - |
| Stage 2 | - | - | - | - | 679 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1508 | - | 494 | 961 |
| Mov Cap-2 Maneuver | - | - | - | - | 494 | - |
| Stage 1 | - | - | - | - | 931 | - |
| Stage 2 | - | - | - | - | 630 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 2.8 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 961 | - | - | 1508 | - |
| HCM Lane V/C Ratio | 0.045 | - | - | 0.072 | - |
| HCM Control Delay (s) | 8.9 | - | - | 7.6 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.2 | - |

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

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 179 | 0 | 26 | 73 | 0 | 74 |
| Future Vol, veh/h | 179 | 0 | 26 | 73 | 0 | 74 |
| Conflicting Peds, #/hr | 0 | 3 | 6 | 0 | 3 | 6 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 40 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 0 | 4 | 5 | 0 | 0 |
| Mvmt Flow | 195 | 0 | 28 | 79 | 0 | 80 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 201 | 0 | 339 | 207 |
| Stage 1 | - | - | - | - | 201 | - |
| Stage 2 | - | - | - | - | 138 | - |
| Critical Hdwy | - | - | 4.14 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.236 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1359 | - | 661 | 839 |
| Stage 1 | - | - | - | - | 838 | - |
| Stage 2 | - | - | - | - | 894 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1351 | - | 641 | 829 |
| Mov Cap-2 Maneuver | - | - | - | - | 641 | - |
| Stage 1 | - | - | - | - | 833 | - |
| Stage 2 | - | - | - | - | 873 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 2 | 9.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 829 | - | - | 1351 | - |
| HCM Lane V/C Ratio | 0.097 | - | - | 0.021 | - |
| HCM Control Delay (s) | 9.8 | - | - | 7.7 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 111 | 0 | 94 | 207 | 0 | 38 |
| Future Vol, veh/h | 111 | 0 | 94 | 207 | 0 | 38 |
| Conflicting Peds, #/hr | 0 | 0 | 1 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 40 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 121 | 0 | 102 | 225 | 0 | 41 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 122 | 0 | 551 | 123 |
| Stage 1 | - | - | - | - | 122 | - |
| Stage 2 | - | - | - | - | 429 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1478 | - | 499 | 933 |
| Stage 1 | - | - | - | - | 908 | - |
| Stage 2 | - | - | - | - | 661 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1477 | - | 464 | 931 |
| Mov Cap-2 Maneuver | - | - | - | - | 464 | - |
| Stage 1 | - | - | - | - | 907 | - |
| Stage 2 | - | - | - | - | 615 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 2.4 | 9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 931 | - | - | 1477 | - |
| HCM Lane V/C Ratio | 0.044 | - | - | 0.069 | - |
| HCM Control Delay (s) | 9 | - | - | 7.6 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.2 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 171 | 0 | 21 | 72 | 0 | 61 |
| Future Vol, veh/h | 171 | 0 | 21 | 72 | 0 | 61 |
| Conflicting Peds, #/hr | 0 | 3 | 6 | 0 | 3 | 6 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 40 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 0 | 4 | 5 | 0 | 0 |
| Mvmt Flow | 186 | 0 | 23 | 78 | 0 | 66 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 192 | 0 | 319 | 198 |
| Stage 1 | - | - | - | - | 192 | - |
| Stage 2 | - | - | - | - | 127 | - |
| Critical Hdwy | - | - | 4.14 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.236 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1370 | - | 678 | 848 |
| Stage 1 | - | - | - | - | 845 | - |
| Stage 2 | - | - | - | - | 904 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1362 | - | 660 | 838 |
| Mov Cap-2 Maneuver | - | - | - | - | 660 | - |
| Stage 1 | - | - | - | - | 840 | - |
| Stage 2 | - | - | - | - | 886 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.7 | 9.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 838 | - | - | 1362 | - |
| HCM Lane V/C Ratio | 0.079 | - | - | 0.017 | - |
| HCM Control Delay (s) | 9.7 | - | - | 7.7 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0.1 | - |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 108 | 0 | 77 | 198 | 0 | 33 |
| Future Vol, veh/h | 108 | 0 | 77 | 198 | 0 | 33 |
| Conflicting Peds, #/hr | 0 | 0 | 1 | 0 | 0 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 40 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 117 | 0 | 84 | 215 | 0 | 36 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 118 | 0 | 501 | 119 |
| Stage 1 | - | - | - | - | 118 | - |
| Stage 2 | - | - | - | - | 383 | - |
| Critical Hdwy | - | - | 4.1 | - | 6.4 | 6.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.4 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.4 | - |
| Follow-up Hdwy | - | - | 2.2 | - | 3.5 | 3.3 |
| Pot Cap-1 Maneuver | - | - | 1483 | - | 533 | 938 |
| Stage 1 | - | - | - | - | 912 | - |
| Stage 2 | - | - | - | - | 694 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1482 | - | 502 | 936 |
| Mov Cap-2 Maneuver | - | - | - | - | 502 | - |
| Stage 1 | - | - | - | - | 911 | - |
| Stage 2 | - | - | - | - | 654 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 2.1 | 9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 936 | - | - | 1482 | - |
| HCM Lane V/C Ratio | 0.038 | - | - | 0.056 | - |
| HCM Control Delay (s) | 9 | - | - | 7.6 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.2 | - |

# Glade Road and Site Access

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

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 308 | 104 | 37 | 110 | 5 |
| Future Vol, veh/h | 2 | 308 | 104 | 37 | 110 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 100 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 335 | 113 | 40 | 120 | 5 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 153 | 0 | - | 0 | 452 | 113 |
| Stage 1 | - | - | - | - | 113 | - |
| Stage 2 | - | - | - | - | 339 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1428 | - | - | - | 565 | 940 |
| Stage 1 | - | - | - | - | 912 | - |
| Stage 2 | - | - | - | - | 722 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1428 | - | - | - | 564 | 940 |
| Mov Cap-2 Maneuver | - | - | - | - | 564 | - |
| Stage 1 | - | - | - | - | 910 | - |
| Stage 2 | - | - | - | - | 722 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 13 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1428 | - | - | - | 574 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.218 |
| HCM Control Delay (s) | 7.5 | 0 | - | - | 13 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.8 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.4 |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 185 | 343 | 130 | 69 | 3 |
| Future Vol, veh/h | 5 | 185 | 343 | 130 | 69 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | 100 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 201 | 373 | 141 | 75 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 514 | 0 | - | 0 | 584 | 373 |
| Stage 1 | - | - | - | - | 373 | - |
| Stage 2 | - | - | - | - | 211 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | 1052 | - | - | - | 474 | 673 |
| Stage 1 | - | - | - | - | 696 | - |
| Stage 2 | - | - | - | - | 824 | - |
| Platoon blocked, % | | - | - | - | | |
| Mov Cap-1 Maneuver | 1052 | - | - | - | 472 | 673 |
| Mov Cap-2 Maneuver | - | - | - | - | 472 | - |
| Stage 1 | - | - | - | - | 693 | - |
| Stage 2 | - | - | - | - | 824 | - |

| Approach | EB | WB | SB |
|---|---|---|---|
| HCM Control Delay, s | 0.2 | 0 | 14 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1052 | - | - | - | 478 |
| HCM Lane V/C Ratio | 0.005 | - | - | - | 0.164 |
| HCM Control Delay (s) | 8.4 | 0 | - | - | 14 |
| HCM Lane LOS | A | A | - | - | B |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.6 |

# Traffic Signal Warrant Analysis

## Warrants 1 - 3 (Volume Warrants)

| | |
|---|---|
| Project Name | Glade Heights |
| Project/File # | 0 |
| Scenario | 2026 Build |

| Intersection Information | | | |
|---|---|---|---|
| Major Street (E/W Road) | Glade Road | Minor Street (N/S Road) | Old Glade Road |
| Analyzed with | 1 approach lane | Analyzed with | 2 or more approach lanes |
| Total Approach Volume | 5634 vehicles | Total Approach Volume | 2994 vehicles |
| Total Ped/Bike Volume | 0 crossings | Total Ped/Bike Volume | 0 crossings |
| Right turn reduction of | 0 percent applied | Right turn reduction of | 0 percent applied |

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

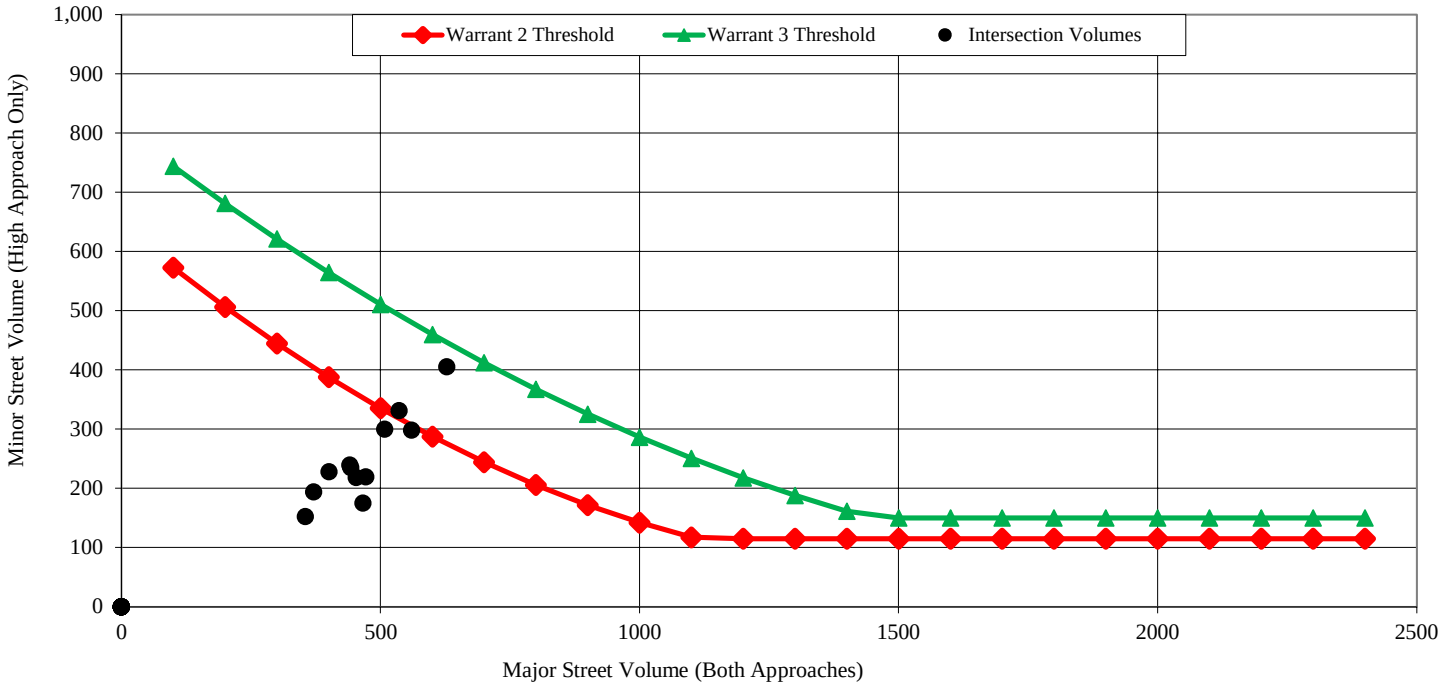
| Warrant 1, Eight Hour Vehicular Volume | | | |
|---|---|---|---|
| | Condition A | Condition B | Condition A+B* |
| Condition Satisfied? | Not Satisfied | Not Satisfied | Not Satisfied |
| Required values reached for | 4 hours | 0 hours | 10 (Cond. A) & 1 (Cond. B) |
| Criteria - Major Street (veh/hr) | 500 | 750 | 400 (Cond. A) & 600 (Cond. B) |
| Criteria - Minor Street (veh/hr) | 200 | 100 | 160 (Cond. A) & 80 (Cond. B) |

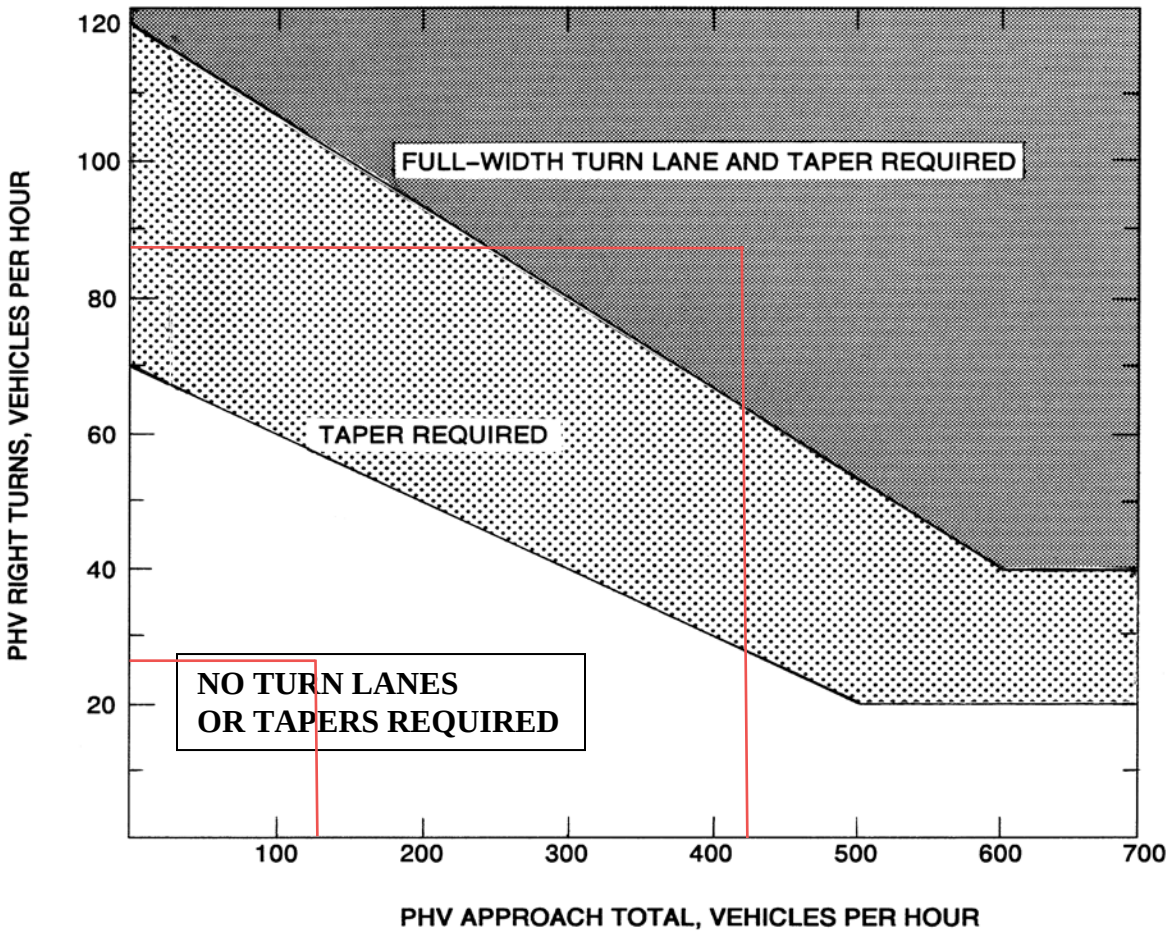
* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

| Warrant 2, Four Hour Vehicular Volume | |
|---|---|
| | |
| Condition Satisfied? | Not Satisfied |
| Required values reached for | 2 hours |
| Criteria | See Figure Below |

| Warrant 3, Peak Hour Vehicular Volume | | |
|---|---|---|
| | Condition A | Condition B |
| Condition Satisfied? | Not Satisfied | Not Satisfied |
| Required values reached for | 1033 total, 405 minor, 0 delay | 0 hours |
| Criteria - Total Approach Volume (veh in one hour) | 650 | See Figure Below |
| Criteria - Minor Street High Side Volume (veh in one hour) | 150 | |
| Criteria - Minor Street High Side Delay (veh-hrs) | 5 | |

Figure 4C-1 (Warrant 2) & Figure 4C-3 (Warrant 3)






Appropriate Radius required at all Intersections and Entrances (Commercial or Private).

**LEGEND**

**PHV** - Peak Hour Volume (also Design Hourly Volume equivalent)

**Adjustment for Right Turns**

For posted speeds at or under 45 mph, PHV right turns > 40, and PHV total < 300.
Adjusted right turns = PHV Right Turns - 20
If PHV is not known use formula: PHV = ADT x K x D

K = the percent of AADT occurring in the peak hour
D = the percent of traffic in the peak direction of flow

Note: An average of 11% for K x D will suffice.

When right turn facilities are warranted, see Figure 3-1 for design criteria.*

**FIGURE 3-26 WARRANTS FOR RIGHT TURN TREATMENT (2-LANE HIGHWAY)**

* Rev. 1/15

# APPENDIX E

## SIMTRAFFIC QUEUEING REPORTS

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 234 | 260 | 247 | 77 | 41 | 275 | 247 | 78 | 55 | 82 | 263 | 291 |
| Average Queue (ft) | 130 | 156 | 130 | 12 | 10 | 124 | 86 | 30 | 17 | 17 | 111 | 151 |
| 95th Queue (ft) | 221 | 291 | 259 | 52 | 32 | 254 | 210 | 64 | 48 | 50 | 222 | 242 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 1 | 5 | 2 | 0 | | | | | | | | |
| Queuing Penalty (veh) | 0 | 30 | 10 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 8 | 12 | 7 | | | 8 | 0 | | | | 1 | 8 |
| Queuing Penalty (veh) | 37 | 16 | 4 | | | 1 | 0 | | | | 1 | 10 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 168 |
| Average Queue (ft) | 48 |
| 95th Queue (ft) | 119 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 216 | 265 | 229 | 44 | 26 | 130 |
| Average Queue (ft) | 55 | 34 | 22 | 2 | 1 | 9 |
| 95th Queue (ft) | 131 | 152 | 126 | 16 | 13 | 67 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | | 1 | | | | |
| Queuing Penalty (veh) | | 2 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 165 | 63 | 155 | 46 | 64 | 8 | 104 | 91 |
| Average Queue (ft) | 72 | 34 | 72 | 8 | 15 | 0 | 41 | 29 |
| 95th Queue (ft) | 134 | 57 | 131 | 30 | 45 | 4 | 85 | 67 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 1 | | | | | | | |
| Queuing Penalty (veh) | 1 | | | | | | | |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | WB | NB | NB |
|---|---|---|---|---|
| Directions Served | R | LT | L | R |
| Maximum Queue (ft) | 50 | 66 | 85 | 78 |
| Average Queue (ft) | 3 | 23 | 33 | 36 |
| 95th Queue (ft) | 21 | 57 | 62 | 64 |
| Link Distance (ft) | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 50 | | 125 | |
| Storage Blk Time (%) | 0 | | | 0 |
| Queuing Penalty (veh) | 0 | | | 0 |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 6 | 25 | 35 | 76 |
| Average Queue (ft) | 0 | 1 | 19 | 36 |
| 95th Queue (ft) | 0 | 11 | 40 | 64 |
| Link Distance (ft) | 692 | 610 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 6: Redbud Road & Toms Creek Road

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 12 | 60 | 54 |
| Average Queue (ft) | 1 | 24 | 19 |
| 95th Queue (ft) | 6 | 49 | 44 |
| Link Distance (ft) | 580 | 647 | 786 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 7: Honeysuckle Drive & Toms Creek Road

| Movement | EB | WB | WB | NB |
|---|---|---|---|---|
| Directions Served | TR | L | T | LR |
| Maximum Queue (ft) | 6 | 36 | 6 | 54 |
| Average Queue (ft) | 0 | 4 | 0 | 27 |
| 95th Queue (ft) | 4 | 21 | 5 | 50 |
| Link Distance (ft) | 580 | | 811 | 619 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 40 | | |
| Storage Blk Time (%) | | 0 | 0 | |
| Queuing Penalty (veh) | | 0 | 0 | |

## Network Summary

Network wide Queuing Penalty: 113

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 240 | 298 | 251 | 198 | 249 | 680 | 662 | 325 | 221 | 222 | 275 | 729 |
| Average Queue (ft) | 202 | 219 | 169 | 14 | 35 | 344 | 317 | 148 | 71 | 79 | 244 | 525 |
| 95th Queue (ft) | 275 | 347 | 316 | 88 | 121 | 704 | 672 | 367 | 159 | 178 | 321 | 833 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 16 | 29 | 2 | 0 | | 2 | 1 | | | | | 14 |
| Queuing Penalty (veh) | 0 | 130 | 11 | 0 | | 0 | 0 | | | | | 0 |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 47 | 25 | 13 | | 0 | 34 | 20 | 0 | 0 | 1 | 56 | 73 |
| Queuing Penalty (veh) | 164 | 45 | 3 | | 2 | 8 | 73 | 1 | 0 | 1 | 108 | 140 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 714 |
| Average Queue (ft) | 446 |
| 95th Queue (ft) | 819 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | 14 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 325 | 570 | 479 | 211 | 165 | 334 |
| Average Queue (ft) | 205 | 222 | 130 | 20 | 14 | 105 |
| 95th Queue (ft) | 365 | 516 | 388 | 106 | 74 | 287 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | 1 | | 0 | | |
| Queuing Penalty (veh) | | 0 | | 0 | | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | 16 | 13 | | | | |
| Queuing Penalty (veh) | 71 | 39 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 243 | 180 | 168 | 106 | 138 | 100 | 136 | 125 |
| Average Queue (ft) | 91 | 42 | 76 | 43 | 60 | 9 | 61 | 48 |
| 95th Queue (ft) | 184 | 97 | 145 | 84 | 113 | 47 | 113 | 101 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 4 | | | | 0 | | | |
| Queuing Penalty (veh) | 6 | | | | 0 | | | |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | WB | NB | NB |
|---|---|---|---|---|
| Directions Served | R | LT | L | R |
| Maximum Queue (ft) | 30 | 84 | 184 | 64 |
| Average Queue (ft) | 2 | 24 | 68 | 35 |
| 95th Queue (ft) | 14 | 60 | 136 | 59 |
| Link Distance (ft) | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 50 | | 125 | |
| Storage Blk Time (%) | 0 | | 3 | |
| Queuing Penalty (veh) | 0 | | 4 | |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 30 | 45 | 40 | 66 |
| Average Queue (ft) | 1 | 5 | 16 | 21 |
| 95th Queue (ft) | 11 | 27 | 39 | 52 |
| Link Distance (ft) | 692 | 610 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 6: Redbud Road & Toms Creek Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 14 | 30 | 37 | 32 |
| Average Queue (ft) | 0 | 2 | 16 | 13 |
| 95th Queue (ft) | 6 | 15 | 40 | 36 |
| Link Distance (ft) | 940 | 580 | 647 | 786 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 7: Honeysuckle Drive & Toms Creek Road

| Movement | WB | WB | NB |
|---|---|---|---|
| Directions Served | L | T | LR |
| Maximum Queue (ft) | 36 | 6 | 43 |
| Average Queue (ft) | 7 | 0 | 23 |
| 95th Queue (ft) | 28 | 6 | 45 |
| Link Distance (ft) | | 811 | 619 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 40 | | |
| Storage Blk Time (%) | 0 | 0 | |
| Queuing Penalty (veh) | 1 | 0 | |

## Network Summary

Network wide Queuing Penalty: 806

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 240 | 273 | 262 | 200 | 49 | 284 | 226 | 74 | 76 | 68 | 273 | 446 |
| Average Queue (ft) | 153 | 190 | 157 | 25 | 9 | 145 | 100 | 33 | 16 | 17 | 151 | 206 |
| 95th Queue (ft) | 251 | 311 | 293 | 114 | 32 | 262 | 222 | 68 | 47 | 51 | 271 | 360 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 5 | 16 | 2 | 0 | | | | | | | | |
| Queuing Penalty (veh) | 0 | 82 | 11 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 21 | 16 | 10 | | | 10 | 0 | | | | 10 | 23 |
| Queuing Penalty (veh) | 86 | 23 | 5 | | | 1 | 0 | | | | 15 | 34 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 164 |
| Average Queue (ft) | 54 |
| 95th Queue (ft) | 127 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 174 | 290 | 271 | 86 | 56 | 130 |
| Average Queue (ft) | 74 | 91 | 67 | 8 | 4 | 8 |
| 95th Queue (ft) | 200 | 323 | 273 | 45 | 33 | 59 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | 0 | | | | |
| Queuing Penalty (veh) | | 0 | | | | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | | 7 | | | | |
| Queuing Penalty (veh) | | 17 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 216 | 111 | 169 | 52 | 86 | 8 | 134 | 105 |
| Average Queue (ft) | 78 | 43 | 75 | 12 | 21 | 0 | 51 | 34 |
| 95th Queue (ft) | 156 | 91 | 141 | 36 | 61 | 5 | 102 | 82 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 2 | | | | | | 0 | |
| Queuing Penalty (veh) | 3 | | | | | | 0 | |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | EB | WB | NB | NB |
|---|---|---|---|---|---|
| Directions Served | T | R | LT | L | R |
| Maximum Queue (ft) | 6 | 44 | 71 | 78 | 70 |
| Average Queue (ft) | 0 | 4 | 29 | 35 | 38 |
| 95th Queue (ft) | 5 | 22 | 66 | 63 | 65 |
| Link Distance (ft) | 1428 | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | 50 | | 125 | |
| Storage Blk Time (%) | | 0 | | 0 | |
| Queuing Penalty (veh) | | 0 | | 0 | |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 6 | 25 | 41 | 69 |
| Average Queue (ft) | 0 | 2 | 19 | 38 |
| 95th Queue (ft) | 4 | 12 | 40 | 58 |
| Link Distance (ft) | 692 | 610 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 6: Redbud Road & Toms Creek Road

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 17 | 56 | 41 |
| Average Queue (ft) | 1 | 24 | 18 |
| 95th Queue (ft) | 9 | 49 | 42 |
| Link Distance (ft) | 580 | 647 | 786 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 7: Honeysuckle Drive & Toms Creek Road

| Movement | EB | WB | WB | NB |
|---|---|---|---|---|
| Directions Served | TR | L | T | LR |
| Maximum Queue (ft) | 18 | 36 | 17 | 52 |
| Average Queue (ft) | 1 | 6 | 1 | 30 |
| 95th Queue (ft) | 8 | 26 | 9 | 46 |
| Link Distance (ft) | 580 | | 811 | 619 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 40 | | |
| Storage Blk Time (%) | | 0 | 0 | |
| Queuing Penalty (veh) | | 0 | 0 | |

## Network Summary

Network wide Queuing Penalty: 278

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 240 | 287 | 252 | 77 | 217 | 691 | 702 | 325 | 241 | 226 | 275 | 754 |
| Average Queue (ft) | 211 | 226 | 185 | 9 | 41 | 400 | 364 | 185 | 71 | 87 | 243 | 643 |
| 95th Queue (ft) | 270 | 343 | 315 | 59 | 135 | 767 | 737 | 410 | 176 | 179 | 306 | 929 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 22 | 34 | 3 | 0 | | 3 | 3 | | | | | 43 |
| Queuing Penalty (veh) | 0 | 161 | 15 | 0 | | 0 | 0 | | | | | 0 |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 53 | 32 | 14 | | | 37 | 24 | 0 | 1 | 3 | 67 | 76 |
| Queuing Penalty (veh) | 191 | 66 | 3 | | | 8 | 101 | 1 | 0 | 2 | 150 | 168 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 754 |
| Average Queue (ft) | 592 |
| 95th Queue (ft) | 925 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | 34 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 325 | 590 | 508 | 186 | 141 | 339 |
| Average Queue (ft) | 212 | 249 | 152 | 19 | 14 | 110 |
| 95th Queue (ft) | 364 | 547 | 412 | 97 | 73 | 282 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | 4 | 0 | 0 | | |
| Queuing Penalty (veh) | | 0 | 0 | 0 | | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | 17 | 14 | | | | |
| Queuing Penalty (veh) | 79 | 47 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 211 | 176 | 164 | 116 | 154 | 125 | 162 | 159 |
| Average Queue (ft) | 93 | 48 | 70 | 53 | 72 | 9 | 76 | 61 |
| 95th Queue (ft) | 170 | 100 | 134 | 98 | 136 | 55 | 132 | 125 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 4 | | | | 0 | | 0 | 0 |
| Queuing Penalty (veh) | 6 | | | | 0 | | 0 | 0 |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | WB | NB | NB |
|---|---|---|---|---|
| Directions Served | R | LT | L | R |
| Maximum Queue (ft) | 51 | 79 | 177 | 68 |
| Average Queue (ft) | 3 | 27 | 71 | 36 |
| 95th Queue (ft) | 21 | 64 | 138 | 62 |
| Link Distance (ft) | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 50 | | 125 | |
| Storage Blk Time (%) | 0 | | 2 | |
| Queuing Penalty (veh) | 0 | | 3 | |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 32 | 71 | 40 | 49 |
| Average Queue (ft) | 1 | 9 | 17 | 23 |
| 95th Queue (ft) | 13 | 40 | 39 | 48 |
| Link Distance (ft) | 692 | 610 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 6: Redbud Road & Toms Creek Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 8 | 34 | 28 | 37 |
| Average Queue (ft) | 0 | 3 | 15 | 13 |
| 95th Queue (ft) | 4 | 18 | 38 | 36 |
| Link Distance (ft) | 940 | 580 | 647 | 786 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 7: Honeysuckle Drive & Toms Creek Road

| Movement | EB | WB | WB | NB |
|---|---|---|---|---|
| Directions Served | TR | L | T | LR |
| Maximum Queue (ft) | 6 | 50 | 10 | 41 |
| Average Queue (ft) | 0 | 10 | 0 | 21 |
| 95th Queue (ft) | 4 | 35 | 8 | 43 |
| Link Distance (ft) | 580 | | 811 | 619 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 40 | | |
| Storage Blk Time (%) | | 0 | 0 | |
| Queuing Penalty (veh) | | 1 | 0 | |

## Network Summary

Network wide Queuing Penalty: 1002

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 240 | 263 | 273 | 201 | 86 | 292 | 246 | 90 | 74 | 88 | 274 | 520 |
| Average Queue (ft) | 168 | 200 | 176 | 26 | 14 | 144 | 102 | 33 | 20 | 21 | 168 | 226 |
| 95th Queue (ft) | 262 | 311 | 298 | 110 | 55 | 271 | 221 | 71 | 57 | 63 | 282 | 408 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 5 | 14 | 3 | 0 | | | | | | | | |
| Queuing Penalty (veh) | 0 | 70 | 13 | 0 | | | | | | | | |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 21 | 23 | 11 | | | 12 | 1 | | | | 13 | 26 |
| Queuing Penalty (veh) | 84 | 30 | 6 | | | 1 | 1 | | | | 21 | 43 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 200 |
| Average Queue (ft) | 60 |
| 95th Queue (ft) | 154 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 274 | 378 | 293 | 58 | 42 | 155 |
| Average Queue (ft) | 75 | 87 | 50 | 3 | 2 | 16 |
| 95th Queue (ft) | 180 | 277 | 202 | 27 | 19 | 87 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | 0 | 3 | | | | |
| Queuing Penalty (veh) | 0 | 9 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 155 | 80 | 171 | 61 | 77 | 15 | 119 | 107 |
| Average Queue (ft) | 82 | 46 | 77 | 14 | 20 | 1 | 51 | 38 |
| 95th Queue (ft) | 134 | 72 | 143 | 43 | 56 | 7 | 103 | 86 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 0 | | | | | | | |
| Queuing Penalty (veh) | 1 | | | | | | | |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | WB | NB | NB |
|---|---|---|---|---|
| Directions Served | R | LT | L | R |
| Maximum Queue (ft) | 48 | 94 | 99 | 81 |
| Average Queue (ft) | 6 | 35 | 43 | 40 |
| 95th Queue (ft) | 29 | 74 | 75 | 70 |
| Link Distance (ft) | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 50 | | 125 | |
| Storage Blk Time (%) | 0 | | 0 | |
| Queuing Penalty (veh) | 0 | | 0 | |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 16 | 47 | 45 | 66 |
| Average Queue (ft) | 1 | 1 | 18 | 37 |
| 95th Queue (ft) | 9 | 10 | 41 | 58 |
| Link Distance (ft) | 692 | 617 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 6: Redbud Road & Toms Creek Road

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 21 | 49 | 38 |
| Average Queue (ft) | 1 | 21 | 17 |
| 95th Queue (ft) | 8 | 47 | 41 |
| Link Distance (ft) | 580 | 647 | 786 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 7: Honeysuckle Drive & Toms Creek Road

| Movement | EB | WB | NB |
|---|---|---|---|
| Directions Served | TR | L | LR |
| Maximum Queue (ft) | 12 | 25 | 53 |
| Average Queue (ft) | 0 | 3 | 27 |
| 95th Queue (ft) | 5 | 18 | 48 |
| Link Distance (ft) | 580 | | 619 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | 40 | |
| Storage Blk Time (%) | | 0 | |
| Queuing Penalty (veh) | | 0 | |

## Intersection: 8: Glade Road & Site Access

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 64 |
| Average Queue (ft) | 32 |
| 95th Queue (ft) | 54 |
| Link Distance (ft) | 1018 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 280

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 240 | 280 | 261 | 82 | 249 | 691 | 700 | 325 | 183 | 226 | 275 | 751 |
| Average Queue (ft) | 193 | 195 | 166 | 7 | 38 | 407 | 393 | 175 | 67 | 89 | 252 | 724 |
| 95th Queue (ft) | 280 | 340 | 312 | 46 | 126 | 800 | 802 | 405 | 142 | 185 | 294 | 844 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 15 | 22 | 4 | 0 | | 4 | 5 | | | | | 70 |
| Queuing Penalty (veh) | 0 | 102 | 18 | 0 | | 0 | 0 | | | | | 0 |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 44 | 26 | 14 | | | 35 | 25 | 0 | 0 | 3 | 81 | 85 |
| Queuing Penalty (veh) | 158 | 52 | 3 | | | 8 | 106 | 1 | 0 | 2 | 190 | 201 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 747 |
| Average Queue (ft) | 658 |
| 95th Queue (ft) | 933 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | 46 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 325 | 590 | 540 | 210 | 165 | 422 |
| Average Queue (ft) | 270 | 351 | 197 | 23 | 19 | 181 |
| 95th Queue (ft) | 402 | 701 | 521 | 112 | 82 | 377 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | 14 | 0 | 0 | 0 | |
| Queuing Penalty (veh) | | 0 | 0 | 0 | 0 | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | 42 | 8 | | | | |
| Queuing Penalty (veh) | 199 | 30 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 184 | 98 | 177 | 125 | 156 | 120 | 149 | 164 |
| Average Queue (ft) | 92 | 48 | 75 | 59 | 71 | 15 | 76 | 70 |
| 95th Queue (ft) | 161 | 80 | 149 | 102 | 134 | 72 | 131 | 136 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 2 | 0 | | | | | 0 | 0 |
| Queuing Penalty (veh) | 4 | 0 | | | | | 0 | 0 |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | EB | WB | NB | NB |
|---|---|---|---|---|---|
| Directions Served | T | R | LT | L | R |
| Maximum Queue (ft) | 6 | 36 | 108 | 225 | 430 |
| Average Queue (ft) | 0 | 4 | 38 | 133 | 92 |
| 95th Queue (ft) | 0 | 21 | 83 | 237 | 309 |
| Link Distance (ft) | 1423 | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | 50 | | 125 | |
| Storage Blk Time (%) | | 0 | | 20 | 0 |
| Queuing Penalty (veh) | | 0 | | 27 | 0 |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 24 | 76 | 40 | 40 |
| Average Queue (ft) | 1 | 14 | 19 | 23 |
| 95th Queue (ft) | 11 | 51 | 41 | 46 |
| Link Distance (ft) | 692 | 617 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 6: Redbud Road & Toms Creek Road

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 22 | 33 | 38 |
| Average Queue (ft) | 2 | 12 | 12 |
| 95th Queue (ft) | 13 | 35 | 36 |
| Link Distance (ft) | 580 | 647 | 786 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 7: Honeysuckle Drive & Toms Creek Road

| Movement | WB | NB |
|---|---|---|
| Directions Served | L | LR |
| Maximum Queue (ft) | 36 | 34 |
| Average Queue (ft) | 7 | 19 |
| 95th Queue (ft) | 28 | 41 |
| Link Distance (ft) | | 619 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 40 | |
| Storage Blk Time (%) | 0 | |
| Queuing Penalty (veh) | 1 | |

## Intersection: 8: Glade Road & Site Access

| Movement | EB | WB | WB | SB |
|---|---|---|---|---|
| Directions Served | LT | T | R | LR |
| Maximum Queue (ft) | 49 | 4 | 4 | 61 |
| Average Queue (ft) | 3 | 0 | 0 | 24 |
| 95th Queue (ft) | 24 | 3 | 3 | 47 |
| Link Distance (ft) | 617 | 1423 | | 1018 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | 100 | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Network Summary

Network wide Queuing Penalty: 1102

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 240 | 276 | 254 | 162 | 82 | 282 | 251 | 78 | 78 | 74 | 274 | 610 |
| Average Queue (ft) | 154 | 189 | 161 | 19 | 11 | 129 | 90 | 32 | 17 | 20 | 178 | 269 |
| 95th Queue (ft) | 253 | 314 | 291 | 80 | 51 | 257 | 212 | 65 | 51 | 56 | 301 | 527 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 8 | 12 | 3 | 0 | | | | | | | | 1 |
| Queuing Penalty (veh) | 0 | 64 | 14 | 0 | | | | | | | | 0 |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 22 | 16 | 11 | | | 10 | 0 | | | | 16 | 29 |
| Queuing Penalty (veh) | 89 | 22 | 6 | | | 1 | 0 | | | | 27 | 50 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 283 |
| Average Queue (ft) | 60 |
| 95th Queue (ft) | 181 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | 0 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 246 | 319 | 260 | 21 | 17 | 137 |
| Average Queue (ft) | 74 | 69 | 44 | 1 | 2 | 10 |
| 95th Queue (ft) | 196 | 263 | 194 | 13 | 11 | 66 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | 0 | 5 | | | | |
| Queuing Penalty (veh) | 1 | 15 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 166 | 77 | 178 | 50 | 91 | 12 | 115 | 84 |
| Average Queue (ft) | 73 | 42 | 69 | 13 | 27 | 0 | 46 | 30 |
| 95th Queue (ft) | 141 | 66 | 136 | 38 | 72 | 4 | 90 | 69 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 1 | | | | | | 0 | |
| Queuing Penalty (veh) | 2 | | | | | | 0 | |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | EB | WB | NB | NB |
|---|---|---|---|---|---|
| Directions Served | T | R | LT | L | R |
| Maximum Queue (ft) | 80 | 96 | 93 | 73 | 74 |
| Average Queue (ft) | 47 | 55 | 46 | 39 | 37 |
| 95th Queue (ft) | 69 | 83 | 73 | 63 | 64 |
| Link Distance (ft) | 1423 | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | 50 | | 125 | |
| Storage Blk Time (%) | 3 | 6 | | | |
| Queuing Penalty (veh) | 8 | 12 | | | |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 22 | 31 | 36 | 65 |
| Average Queue (ft) | 1 | 2 | 17 | 36 |
| 95th Queue (ft) | 11 | 14 | 39 | 58 |
| Link Distance (ft) | 692 | 617 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 6: Redbud Road & Toms Creek Road

| Movement | WB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 18 | 54 | 50 |
| Average Queue (ft) | 1 | 20 | 20 |
| 95th Queue (ft) | 9 | 45 | 45 |
| Link Distance (ft) | 580 | 647 | 786 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 7: Honeysuckle Drive & Toms Creek Road

| Movement | EB | WB | WB | NB |
|---|---|---|---|---|
| Directions Served | TR | L | T | LR |
| Maximum Queue (ft) | 27 | 35 | 6 | 60 |
| Average Queue (ft) | 1 | 4 | 0 | 27 |
| 95th Queue (ft) | 13 | 21 | 5 | 49 |
| Link Distance (ft) | 580 | | 811 | 619 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | 40 | | |
| Storage Blk Time (%) | | 0 | 0 | |
| Queuing Penalty (veh) | | 0 | 0 | |

## Intersection: 8: Glade Road & Site Access

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 75 |
| Average Queue (ft) | 33 |
| 95th Queue (ft) | 57 |
| Link Distance (ft) | 1018 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 311

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | EB | EB | EB | EB | WB | WB | WB | WB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | T | T | R | L | T | T | R | L | TR | L | L |
| Maximum Queue (ft) | 240 | 284 | 281 | 114 | 221 | 695 | 703 | 325 | 227 | 245 | 275 | 766 |
| Average Queue (ft) | 194 | 202 | 171 | 11 | 50 | 382 | 376 | 166 | 67 | 95 | 251 | 704 |
| 95th Queue (ft) | 278 | 346 | 325 | 70 | 150 | 770 | 775 | 390 | 147 | 197 | 299 | 890 |
| Link Distance (ft) | | 241 | 241 | | | 676 | 676 | | 431 | | | 732 |
| Upstream Blk Time (%) | 15 | 24 | 4 | 0 | | 2 | 4 | | | | | 66 |
| Queuing Penalty (veh) | 0 | 111 | 20 | 0 | | 0 | 0 | | | | | 0 |
| Storage Bay Dist (ft) | 175 | | | 150 | 150 | | | 225 | | 200 | 175 | |
| Storage Blk Time (%) | 39 | 27 | 16 | | | 34 | 22 | 0 | 0 | 3 | 79 | 83 |
| Queuing Penalty (veh) | 139 | 52 | 4 | | | 8 | 94 | 0 | 0 | 2 | 186 | 196 |

## Intersection: 1: The Inn at VT/UCB & Prices Fork Road

| Movement | SB |
|---|---|
| Directions Served | TR |
| Maximum Queue (ft) | 750 |
| Average Queue (ft) | 605 |
| 95th Queue (ft) | 981 |
| Link Distance (ft) | 732 |
| Upstream Blk Time (%) | 39 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Intersection: 2: Prices Fork Road & Old Glade Road

| Movement | EB | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | T | T | T | TR | R |
| Maximum Queue (ft) | 325 | 609 | 545 | 173 | 169 | 479 |
| Average Queue (ft) | 259 | 340 | 194 | 22 | 15 | 193 |
| 95th Queue (ft) | 394 | 689 | 524 | 110 | 74 | 444 |
| Link Distance (ft) | | 585 | 585 | 241 | 241 | 1197 |
| Upstream Blk Time (%) | | 11 | 0 | 0 | | |
| Queuing Penalty (veh) | | 0 | 0 | 0 | | |
| Storage Bay Dist (ft) | 225 | | | | | |
| Storage Blk Time (%) | 37 | 8 | | | | |
| Queuing Penalty (veh) | 176 | 30 | | | | |

## Intersection: 3: UCB & Glade Road/Starbucks Driveway

| Movement | EB | EB | WB | NB | NB | NB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | LT | R | LTR | L | T | TR | LT | TR |
| Maximum Queue (ft) | 246 | 111 | 187 | 129 | 146 | 104 | 146 | 163 |
| Average Queue (ft) | 96 | 47 | 83 | 62 | 66 | 11 | 75 | 66 |
| 95th Queue (ft) | 196 | 93 | 151 | 110 | 121 | 55 | 132 | 127 |
| Link Distance (ft) | 507 | | 419 | | 698 | 698 | 310 | |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | | 150 | | 200 | | | | 175 |
| Storage Blk Time (%) | 4 | | | | | | 0 | 0 |
| Queuing Penalty (veh) | 8 | | | | | | 0 | 0 |

## Intersection: 4: Old Glade Road & Glade Road

| Movement | EB | EB | WB | NB | NB |
|---|---|---|---|---|---|
| Directions Served | T | R | LT | L | R |
| Maximum Queue (ft) | 85 | 91 | 152 | 199 | 105 |
| Average Queue (ft) | 45 | 42 | 79 | 81 | 38 |
| 95th Queue (ft) | 72 | 70 | 133 | 157 | 76 |
| Link Distance (ft) | 1423 | | 507 | | 1197 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | | 50 | | 125 | |
| Storage Blk Time (%) | 3 | 2 | | 4 | |
| Queuing Penalty (veh) | 5 | 4 | | 5 | |

## Intersection: 5: Lark Lane/Shadow Lake Road & Glade Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 16 | 71 | 36 | 54 |
| Average Queue (ft) | 1 | 12 | 17 | 22 |
| 95th Queue (ft) | 11 | 46 | 39 | 48 |
| Link Distance (ft) | 692 | 617 | 770 | 992 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 6: Redbud Road & Toms Creek Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 14 | 32 | 33 | 33 |
| Average Queue (ft) | 1 | 4 | 15 | 13 |
| 95th Queue (ft) | 9 | 19 | 38 | 36 |
| Link Distance (ft) | 940 | 580 | 647 | 786 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 7: Honeysuckle Drive & Toms Creek Road

| Movement | WB | NB |
|---|---|---|
| Directions Served | L | LR |
| Maximum Queue (ft) | 36 | 34 |
| Average Queue (ft) | 9 | 18 |
| 95th Queue (ft) | 33 | 41 |
| Link Distance (ft) | | 619 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 40 | |
| Storage Blk Time (%) | 0 | |
| Queuing Penalty (veh) | 1 | |

## Intersection: 8: Glade Road & Site Access

| Movement | EB | SB |
|---|---|---|
| Directions Served | LT | LR |
| Maximum Queue (ft) | 33 | 66 |
| Average Queue (ft) | 2 | 26 |
| 95th Queue (ft) | 15 | 48 |
| Link Distance (ft) | 617 | 1018 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Intersection: 20: Bend

| Movement | NB |
|---|---|
| Directions Served | T |
| Maximum Queue (ft) | 66 |
| Average Queue (ft) | 2 |
| 95th Queue (ft) | 48 |
| Link Distance (ft) | 310 |
| Upstream Blk Time (%) | 0 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 1039