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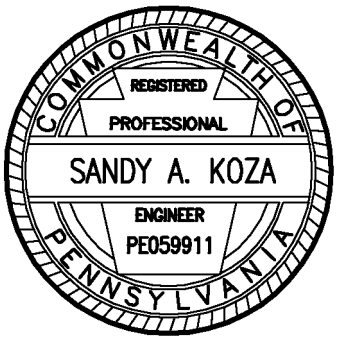
Transportation Impact Study for Jenkins Court Pad Sites

Jenkintown Borough, Montgomery County, PA



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Executive Summary

Jenkins Court Realty Co, LP proposes to develop the Jenkins Court parcel located in the southeast quadrant at the intersection of Old York Road (SR 0611) and Rodman Avenue in Jenkintown Borough, Montgomery County, PA (see **Figures 1A and 1B**). According to the lates site plan, the parcel will be developed to provide a 2,522 square-foot coffee shop with a drive-through and a 1,000 square-foot frozen dessert store. Access to the parcel is currently provided via a full-movement driveway along Spring Avenue, which is limited to left-in and left-out movements since Spring Avenue is restricted to one-way northbound travel. Another full-movement signalized access is provided along Old York Road (SR 0611) opposite Madeira Avenue.

As part of the development of the project, the applicant is requesting that the section of Spring Avenue between Rodman Avenue and the site access be restored/reconfigured to allow for right-in, left-in, and left-out movements. To prevent traffic from inadvertently entering Spring Avenue to access the residential homes to the south, the curbing, sidewalk, and verge area on the west side of Spring Avenue along the site frontage will be bumped out so that vehicles entering Spring Avenue from the north can only turn right into the site access. A schematic of the latest site plan, prepared by Carroll Engineering Corporation is illustrated in **Figure 2**.

The scope of this traffic impact study is based on PennDOT's guidelines, per the Department's *Publication 282*, Appendix A *Policies and Procedures for Transportation Impact Studies Related to Highway Occupancy Permits*, dated September 2022, since the Borough of Jenkintown does not have specific requirements for traffic impact studies. The purpose of this traffic impact study is to evaluate the traffic impacts of the proposed development of the parcel based on the current access configuration along Spring Avenue and with the proposed modification to also allow for right-in movements. The scope of this study includes an evaluation of the existing weekday morning, weekday afternoon, and Saturday midday peak hours, as well as the future 2026 build-out year, both without- and with-development of the site at the following study intersections:

- Old York Road (SR 0611) and Rodman Avenue
- Old York Road (SR 0611) and Madeira Avenue/Jenkins Court Access
- Rodman Avenue and Spring Avenue
- Spring Avenue and Jenkins Court Access

It is noted that although a build-out year of 2026 was utilized to be conservative, the site could be constructed and operational by the end of 2024, pending land development approvals by Jenkintown Borough along with other outside agency approvals.

Trip Generation Characteristics

The trip generation characteristics for the proposed Starbucks was based upon trip generation data contained in the Institute of Transportation Engineers (ITE) publication entitled, *Trip Generation Manual, 11th Edition,* for Land Use Codes: 937 for Coffee/Donut Shop with Drive-Through Window. As no data is provided in the manual for the frozen dessert store, it was based upon local trip generation counts. The two restaurants are then anticipated to generate a total of approximately 108 and 90 total new trips (entering and exiting) during the weekday morning and afternoon peak hours, respectively, and approximately 138 total new trips (entering and exiting) during the Saturday midday peak hour.

Site Access

Access to the parcel is currently provided via a full-movement driveway along Spring Avenue, which is limited to left-in and left-out movements since Spring Avenue is restricted to one-way northbound travel. Another full-movement signalized access is provided along Old York Road (SR 0611) opposite Madeira Avenue, where no modifications are planned. As part of the development of the project, **the applicant is requesting that the section**

of Spring Avenue between Rodman Avenue and the site access be restored/reconfigured to allow for right-in, left-in, and left-out movements. To prevent traffic from inadvertently entering Spring Avenue to access the residential homes to the south, the curbing, sidewalk, and verge area on the west side of Spring Avenue along the site frontage will be bumped out so that vehicles entering Spring Avenue from the north can only turn right into the site access.

Based on the results of this evaluation, the following access configurations and traffic controls are recommended, subject to the detailed engineering of the Spring Avenue Access:

Restore/Reconfigure Spring Avenue to Two-Way Operations from Rodman Avenue to Site Access

- Provided a curbed cartway width of at least 24 feet with a single ingress lane and a single egress lane.
- Provide a "Stop" sign (R1-1) for the access approach to Spring Avenue along with a "No Right-Turn" (R3-1) sign.
- Install a "One-Way" sign (R6-2) or "No Right-Turn Sign" directly across from the egress lane on the east side of Spring Avenue.
- Install a curb bump-out on the south side of the access to prevent vehicles from turning to the right when exiting the site.
- Provide an ADA-compliant driveway apron or curb ramps for the sidewalk crossing the site access.

The applicant is requesting Spring Avenue be restored/reconfigured between Rodman Avenue and the site access to allow for right-turn ingress movements from Rodman Avenue, as well as to continue to allow for the existing left-turn ingress and egress movements along Spring Avenue consistent with the recommendations above. Although a scenario was evaluated that maintained the existing left-turn ingress and egress only movements for the Spring Avenue intersection, it is not recommended.

Off-Site Intersection Operations

A review of the without- to with-development operations at the intersections of Old York Road (SR 0611) with Rodman Avenue and Rodman Avenue with Spring Avenue indicates that the levels-of-service do not warrant any additional improvements.

The traffic analyses contained herein reveal that efficient access to and from the proposed development can be provided, and furthermore, site-generated traffic can be accommodated at the study area intersections.

Existing Transportation Settings and Conditions

The Jenkins Court parcel is located in the southeast quadrant at the intersection of Old York Road (SR 0611) and Rodman Avenue in Jenkintown Borough, Montgomery County, PA (see **Figures 1A and 1B**). The existing roadways and intersections in the vicinity of the site, which comprise the study area roadway network, are described in this section.

Roadway Characteristics

The study area roadway network and characteristics are summarized below in **Table 1**.

Table 1. Existing Roadway Characteristics

Roadway Name	Average Daily Traffic Volumes (vehicles per day)	Roadway Classification		Travel Lanes (per direction)	Posted Speed Limit (mph)
		PennDOT Roadway Typologies (1)	PennDOT/ Borough (2,3)		
Old York Road (SR 0611)	36,075 (4)	Regional Arterial	Urban – Principal Arterial	2	25
Rodman Avenue	n/a	Local	Local	1	25
Spring Avenue	n/a	Local	Local	1	25
Madeira Avenue	n/a	Local	Local	1	25

(1) Based on Table 1.2 – Roadway Typologies in the PennDOT *Publication 13M, Design Manual Part 2*.
(2) Based on the roadway classifications provided on PennDOT's Traffic Information Repository (TIRe) website.
(3) Based on the roadway classifications provided on Map 26 of the Borough's comprehensive plan.
(4) Based on traffic data from PennDOT's Traffic Information Repository (TIRe) website from 2019.

The following key intersections in the vicinity of the site comprise the study area:

- Old York Road (SR 0611) and Rodman Avenue
- Old York Road (SR 0611) and Madeira Avenue/Jenkins Court Access
- Rodman Avenue and Spring Avenue
- Spring Avenue and Jenkins Court Access

The existing characteristics of the study intersections, including photographs, field sketches, and signal permit plans are provided in **Appendix A**.

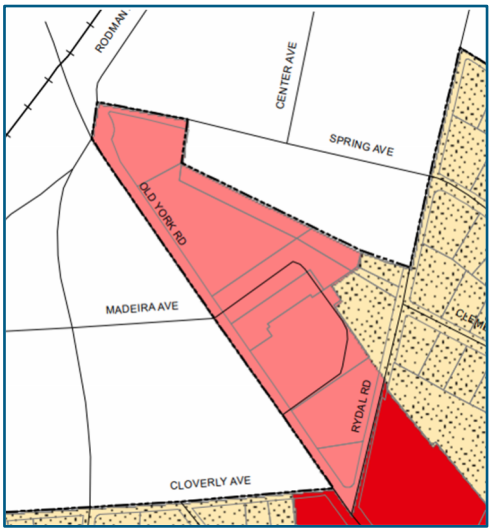


Exhibit A: Jenkintown Borough Zoning Map, last dated September 13, 2010.

Land Use Context

The proposed development is located in Jenkintown Borough within the Gateway Commercial Zoning S (see **Exhibit A**). While the restaurant uses are permitted by-right, the drive-through component of the proposed Starbucks is only permitted via the Borough's Class One Conditional Use. The drive-through facility would need to

comply with the following criteria in *Section 181-57.B.(1)(a)* of the Borough's *Zoning Ordinance:*

- Sufficient on-site stacking is provided to accommodate at least six (6) vehicles.
- Stacking lanes do not interfere with parking spaces or the internal and external circulation of the site.
- Drive-through faces the rear or side yard of the site and does not face a public street.

Based upon the provided site plan, there is space for thirteen (13) vehicles to queue within the drive-through from the pick-up window to the vehicle entry point in the parking lot as illustrated in **Figure 2A**. The stacking lanes do not conflict with parking spaces, internal, or external circulation as drive through observations at three other Starbuck's facilities indicated a maximum queue of ten (10) vehicles during the weekday morning peak period, which can be fully accommodated within the proposed drive-through. The subject parcel is fully located within the boundary of Jenkintown Borough and the drive through has been designed to face the rear or side yard of the site. As a result, the proposed site development does comply with the land development aspects of Jenkintown Borough.

Area Transit Services

SEPTA Bus Route 55, which provides services between Willow Grove and Doylestown to Olney Transportation Center, has bus stops located within the northwest and southeast quadrants of the signalized intersection of Old York Road (SR 0611) with Rodman Avenue. Regional Rail service is provided via the Noble Station located on the north side of Rodman Avenue across from the site. The Noble Station is along the West Trenton Line, which provides services between Center City Philadelphia (Gray 30th Street Station) and West Trenton, New Jersey.

Pedestrian-Bicycle Facilities

Sidewalk is provided along the entire site frontage of Old York Road (SR 0611), Rodman Avenue, and Spring Avenue under current conditions. With the development of the site, new ADA compliant curb ramps will be provided for the Spring Avenue access and a pedestrian connection will be provided to link the new site features to the sidewalk along Old York Road (SR 0611). There are no dedicated bicycle facilities within the study area.

Traffic Count Data

Daily traffic counts for Old York Road (SR 0611) were obtained from PennDOT's Traffic Information Repository (TIRe) website, which are referenced in Table 1. A copy of this data is provided in **Appendix B**.

Turning movement traffic counts, were conducted in June 2023 during the weekday morning (7:00 AM – 9:00 AM), weekday afternoon (4:00 PM – 6:00 PM), and Saturday midday (11:00 AM – 1:00 PM) peak periods. These time periods typically have the highest adjacent street traffic. The results of these traffic counts are tabulated by 15-minute intervals in **Appendix C**. The four highest consecutive 15-minute peak intervals during these traffic count periods constitute the peak hours that are the basis of this traffic analysis.

The traffic volumes were balanced upwardly (i.e. more conservatively) along Old York Road (SR 0611) between Rodman Avenue and Madeira Avenue. The resultant peak hour traffic volumes are depicted in **Figure 3A** for the weekday morning, weekday afternoon, and Saturday midday peak hours. These traffic volumes were then analyzed to determine the existing operating conditions, and the results of this analysis are shown in **Figure 3B.** Specific details regarding the analysis results and traffic operations are provided later in this report.

It is also noted that even though Spring Avenue is signed one-way northbound only with Do Not Enter signs on both corners at its intersection with Rodman Avenue, vehicles were documented entering the Spring Avenue in the wrong direction of travel, as well as exiting from the Jenkins Court access in order to provide services to area

residents located to the south along Spring Avenue. A review of the Miovision videos noted the following illegal entry traveling South along Spring Avenue during the three count periods:

- Saturday, July 8, 2023 between 12:41 to 12:43 PM: Small postal delivery vehicle turned left from Rodman Avenue onto Spring Avenue south.
- Tuesday, July 11, 2023 between 8:30 AM to 8:32 AM: Two construction vehicles exit the Jenkins Court parking lot to access Spring Avenue traveling south.
- Tuesday, July 11. 2023 between 8:50 AM to 8:52 AM: SUV, which was being followed by a police vehicle, turned right onto Rodman Avenue, then right onto Spring Avenue to enter the Jenkins Court access. Another police vehicle followed during the same time period.
- Tuesday, July 11, 2023 between 4:45 PM to 5:00 PM: Passenger car turned left from Rodman Avenue onto Spring Avenue and into Jenkins Court access.

Site Characteristics

This section presents the details regarding the proposed site, including the incremental increase in traffic volumes generated by the development during the peak hours and the distribution of site traffic to the study area roadways, as well as the proposed site access configuration, traffic control, and sight distance requirements.

Trip Generation

Traffic volumes generated by the proposed Starbucks were prepared based on trip generation data compiled from numerous studies contained in the Institute of Transportation Engineers (ITE) publication, *Trip Generation Manual, 11th Edition*. A copy of this data is provided in **Appendix D.** As the manual does not include any information for the proposed frozen dessert store, local trip generation counts were conducted during the weekday afternoon peak period (4:00 PM to 6:00 PM) and Saturday midday (11:00 AM to 1:00 PM) at three similar sites within Montgomery County, which are included observations of pedestrian activity. Copies of this data are also provided in Appendix D.

Table 2 presents the anticipated vehicular trip generation equations and methodology utilized for the proposed Starbucks and frozen dessert store. The trip generation equations are for a single peak hour during the noted time-periods. Traffic associated with the proposed Starbucks will include a combination of pass-by trips or trips that are already on the roadway network (i.e., Old York Road) that stop at the site intermediate to other trips, such as work-to-restaurant-to-home trips; and new trips or trips that are not currently on the roadway network and are generated because of the proposed new Starbucks.

Table 2. Vehicular Trip Generation Methodology (1)

Land Use	Weekday Morning (7:00 AM to 9:00 AM)		Weekday Afternoon (4:00 PM to 6:00 PM)		Saturday Midday (11:00 AM to 1:00 PM)	
	Method	Enter/Exit	Method	Enter/Exit	Method	Enter/Exit
Coffee Shop with Drive-Thru (2)	T = 85.88 (X)	51% / 49%	T = 38.99 (X)	50% / 50%	T = 87.91 (X)	50% / 50%
Frozen Dessert Store (3)	(4)	(4)	T = 46.0 (X)	42% / 58%	T = 15.6 (X)	62% / 38%

(1) X = Independent Variable (ksf), T = Trips
(2) ITE Land Use Code 937 for Coffee/Donut Shop with Drive-Through Window, from the *Trip Generation Manual, 11th Edition.*
(3) Based on trip generation counts conducted for similar uses within Montgomery County, since no data is provided in the *Trip Generation Manual* for this land use.
(4) The store is not operational during this time period.

Pass-by trips or trips that are already on the roadway network and stop at the site as part of another trip (i.e., Starbucks to work) are based on the percentage contained in ITE's *Trip Generation Manual* for similar fast-food restaurants with drive-through windows, since specific data is not available for Land Use Code 937: Coffee/Donut Shop with Drive-Through Window. As there is no information provided during the Saturday midday in the manual, the pass-by rate proposed for the Saturday midday is 45%, which is 10% less than the weekday afternoon pass-by rate from ITE. It is noted that the pass-by rate could potentially be much higher as ITE does have pass-by data for Land Use Code 98: Coffee/Donut Shop with Drive-Through Window and No Indoor Seating, which indicates that 90% and 98% of the weekday morning and weekday afternoon peak hour traffic is classified as pass-by trips for this similar land use code.

Table 3 then provides a summary of the vehicular trip generation characteristics for the proposed Starbucks and frozen dessert store for the single peak hour with the highest trip generation during the noted time-periods. In addition to the vehicular trips, it is anticipated that there will be pedestrian trips generated by the proposed Starbucks and Frozen Dessert Store given the proximity to the residential neighborhood to the east and Noble Regional Rail Station to the north. For the Frozen Dessert Store, the Lansdale site that was included in the local trip generation count data set has a pedestrian trip generation rate of 5.00 and 2.50 pedestrian trips per 1,000 square feet of store size during the weekday afternoon and Saturday midday. Based upon this, the frozen dessert store could then generate a total of 5 and 3 pedestrian trips during the weekday afternoon and Saturday midday peak hours.

Table 3. Vehicular Trip Generation

Land Use	Size	Weekday Morning (7:00 AM to 9:00 AM)			Weekday Afternoon (4:00 PM to 6:00 PM)			Saturday Midday (11:00 AM to 1:00 PM)		
		In	Out	Total	In	Out	Total	In	Out	Total
Coffee Shop with Drive-Thru	2,522 sf	110	107	217	49	49	98	111	111	222
Pass-By Trips (1)		-54	-54	-108	-27	-27	-54	-50	-50	-100
New Trips		56	52	108	22	22	44	61	61	122
Frozen Dessert Store	1,000 sf	(2)	(2)	(2)	19	27	46	10	6	16
Total Trips		**110**	**107**	**217**	**68**	**76**	**144**	**121**	**117**	**238**
Pass-By Trips		**-54**	**-54**	**-108**	**-27**	**-27**	**-54**	**-50**	**-50**	**-100**
New Trips		**56**	**52**	**108**	**41**	**49**	**90**	**71**	**67**	**138**

(1) Pass-by rate based on ITE Land Use Code 934 Fast-Food Restaurant with Drive-Through, which has a pass-by rate of 50% and 55% during the weekday morning and afternoon, respectively. A pass-by rate of 45% or 10% less than the weekday afternoon has been utilized for the Saturday midday, since there is no data in the manual for this time period.
(2) The store is not operational during this period.

Starbucks Drive-Through Operations

Drive-through trip generation counts, and queue observations were also conducted at three similar locations within Montgomery County during the weekday morning peak hour. The three sites offered drive-through services as well as inside seating, similar to the proposed Jenkins Court site. Based on these observations, which are provided in Appendix D, the drive-through component of the stores generated an average of 79.96 trips per 1,000 square feet of building space during the weekday morning peak hour. This rate is slightly lower than the total vehicular trip generation rate noted by ITE for Land Use Code 937 during the weekday morning peak hour of 85.88 trips per 1,000 square feet. The drive-through would then represent approximately 93% of the total trips during the weekday morning peak hour. Additionally, the maximum observed queue at the three sites during the weekday morning peak hour was ten (10) vehicles, which was measured from the pick-up window back to the last vehicle in the queue. This queue could be accommodated on the proposed Jenkins Court site, which has the capability of accommodating thirteen (13) vehicles within the drive-through from pick-up window to entry to the drive-through.

Trip Distribution and Assignment

Site-generated traffic will approach and depart the site via different routes depending on factors such as the existing traffic patterns, location of major roadways, and the location of the development's site access. Two access scenarios were evaluated. For Scenario 1, Spring Avenue would remain as a one-way northbound only roadway, which would then only permit left-in and left-out movements from the site access. For Scenario 2, **which is preferred**, the section

of Spring Avenue between Rodman Avenue and the site access would be restored/reconfigured to allow for right-turn ingress movements into the site access in addition to the existing left-turn ingress and egress movements.

The new and pass-by trip distribution trips and assignment of the trips from Table 3 are then illustrated in **Figures 4A to 4E** for the existing Spring Avenue travel pattern and in **Figures 4G to 4K** for the restoration/reconfiguration of Spring Avenue to allow for the right-turn ingress movement to the site access **Figures 4F and 4L** then illustrate the net combined new and pass-by trips for the Jenkins Court outparcels.

Site Access Configuration and Traffic Control

Access to the parcel is currently provided via a full-movement driveway along Spring Avenue, which is limited to left-in and left-out movements since Spring Avenue is restricted to one-way northbound travel. Another full-movement signalized access is provided along Old York Road (SR 0611) opposite Madeira Avenue. As part of the development of the project, the applicant is requesting that the section of Spring Avenue between Rodman Avenue and the site access be restored/reconfigured to allow for right-in, left-in, and left-out movements. To prevent traffic from inadvertently entering Spring Avenue to access the residential homes to the south, the curbing, sidewalk, and verge area on the west side of Spring Avenue along the site frontage will be bumped out so that vehicles entering Spring Avenue from the north can only turn right into the site access.

The recommendations for the proposed access designs, including auxiliary turn lanes, traffic control, and geometric design, were based on industry accepted criteria and guidelines. Additionally, the geometric design of the proposed site accesses was preliminarily evaluated based on guidelines contained in the *Pennsylvania Code, Chapter 441, Access to and Occupancy of Highways by Driveways and Local Roads*, as well as local PennDOT District policies.

Based on the results of this evaluation, the following access configurations and traffic controls are recommended, subject to the detailed engineering of the Spring Avenue access for each scenario option, although it is noted that Scenario 2 is preferred:

Scenario 1: Spring Avenue Remains One-Way Northbound

- Provided a curbed cartway width of at least 24 feet with a single ingress lane and a single egress lane.
- Provide a "Stop" sign (R1-1) for the access approach to Spring Avenue along with a "No Right-Turn" (R3-1) sign.
- Install a "One-Way" sign (R6-2) or "No Right-Turn Sign" directly across from the egress lane on the east side of Spring Avenue.
- Install a curb bump-out on the north and south side of the access to prevent vehicles from turning to the right when exiting the site.
- Provide an ADA-compliant driveway apron or curb ramps for the sidewalk crossing the site access.

PREFERRED Scenario 2: Spring Avenue Two-Way from Rodman Avenue to Site Access

- Provided a curbed cartway width of at least 24 feet with a single ingress lane and a single egress lane.
- Provide a "Stop" sign (R1-1) for the access approach to Spring Avenue along with a "No Right-Turn" (R3-1) sign.
- Install a "One-Way" sign (R6-2) or "No Right-Turn Sign" directly across from the egress lane on the east side of Spring Avenue.
- Install a curb bump-out on the south side of the access to prevent vehicles from turning to the right when exiting the site.
- Provide an ADA-compliant driveway apron or curb ramps for the sidewalk crossing the site access.

Schematics of the Spring Avenue access configurations for both scenarios are provided in **Figures 6A and 6B.**

Future Traffic Conditions

This section presents the 2026 future build-out year traffic conditions, both without and with the proposed development, which is anticipated to be completed and occupied by 2026. The future 2026 build-out year without-development traffic volumes were estimated by increasing the existing 2023 traffic volumes to account for regional growth, as described below. The incremental increase due to the anticipated trip generation for the site was then added, resulting in the future 2026 build-out year with-development traffic volumes.

It is noted that although a build-out year of 2026 was utilized to be conservative, the site could be constructed and operational by the end of 2024, pending land development approvals by Jenkintown Borough along with other outside agency approvals.

Regional Traffic Growth

To account for regional traffic growth, the existing traffic volumes were increased by an annual traffic growth rate of 0.27 percent per year compounded for three years to 2026, or 0.81 percent total to 2026. This growth rate is consistent with the traffic growth rate recommended by the PennDOT Bureau of Planning and Research *Growth Factors for August 2022 and July 2023* for similar, Urban Non-Interstate roadways in Montgomery County.

Local Traffic Growth

To account for local traffic growth, active land development projects were identified by Jenkintown Borough and therefore, the existing traffic volumes were also increased to include the traffic to be generated by nearby approved developments in the vicinity of Jenkins Court. Specifically, the following developments were included located in Jenkintown Borough:

- **415/425 Johnson Street:** 26 apartments and 1,625 square feet of office/retail space located in the Borough of Jenkintown. For the purposes of this TIS, the commercial space is assumed to be an office.
- **459-471 Old York Road** – 51 apartments located in the Borough of Jenkintown.
- **Jenkintown Grocery** – 49,940 square foot grocery store to be located on the northwest corner of the intersection of Old York Road (SR 0611) and Wyncote Road in the Borough of Jenkintown.

At the time of this study no significant land developments were identified in Abington Township which would add traffic to the study area. Information regarding the nearby approved developments, obtained from Jenkintown Borough, is provided in **Appendix E** related to the trip generation and assignment details.

Planned Roadway Improvements

There are no known roadway improvements which would affect operations within the study area.

Future Traffic Volumes

The total background growth and nearby approved development traffic volumes were then added to the existing 2023 traffic volumes, resulting in the future 2026 without-development traffic volumes. Next, the site generated traffic volumes, as shown in Figure 4F and 4L, were added to the future 2026 without-development traffic volumes, resulting in the future 2026 with-development traffic volumes.

The resultant future 2026 peak hour traffic volumes without development are illustrated in **Figure 5A,** and the future 2026 with-development peak hour traffic volumes for the two access scenarios are illustrated in **Figures 5B and 5C**

for the weekday morning, weekday afternoon, and Saturday midday peak hours. These traffic volumes were then analyzed to determine the future 2026 without and with development traffic operating conditions, and the results of this analysis are shown in **Figures 5D, 5E and 5F.** Detailed traffic volume projection worksheets are provided in **Appendix F.**

Capacity/Level-of-Service Results

The peak hour traffic volumes were analyzed to determine the existing and future traffic operating conditions, both without and with the proposed development, in accordance with the standard techniques contained in the current *Highway Capacity Manual (6th Edition)* for both signalized and unsignalized intersections. The HCM 6th Edition Methodology within Synchro 11.1 (build 2, rev. 9) traffic analysis software was utilized in the traffic analyses.

These standard capacity/level-of-service analysis techniques, which calculate total control delay, are described in **Appendix G** for both signalized and unsignalized intersections, as well as the correlation between average total control delay and the respective level-of-service (LOS) criteria for each intersection type.

According to PennDOT's Policies and Procedures for Transportation Impact Studies Related to Highway Occupancy Permit Plans, the following procedures and assumptions were utilized:

- For signalized intersections, the Pennsylvania base saturation flow rate (Exhibit 10-9) and Pennsylvania traffic signal control calibration parameters (Exhibit 10-10) outlined in PennDOT's Publication 46, Traffic Engineering Manual, were used.

- For unsignalized intersections, the base critical headways at TWSC intersections (Exhibit 10-11) and base follow-up headways at TWSC intersections (Exhibit 10-12) outlined in PennDOT's Publication 46, Traffic Engineering Manual, were used.

- All traffic signal timings at signalized intersections were optimized in without-development conditions.

- If the evaluation of without-development to with-development conditions indicates that the overall intersection level-of-service has dropped, mitigation will be required if the increase in delay is greater than 10 seconds. If the overall intersection delay increase is less than or equal to 10 seconds, mitigation of the intersection will not be required.

The existing, future 2026 build-out year traffic conditions, both without and with the proposed development, are summarized in **Figures 3B, 5D, 5E, and 5F**, respectively while the detailed capacity/level-of-service analysis worksheets are provided in **Appendices H, I, and J.** It is noted that although a build-out year of 2026 was utilized to be conservative, the site could be constructed and operational by the end of 2024, pending land development approvals by Jenkintown Borough along with other outside agency approvals.

As illustrated in **Figures 5E and 5F** with the proposed site and with the site related improvement recommendations, all study intersections will satisfy PennDOT's level-of-service criteria, and therefore, mitigation improvements are not required. **Table 4** below summarizes the overall levels of service for the study intersections. Detailed capacity/level-of-service matrices are provided in **Table 5**, while 95th percentile queues are summarized in **Table 6**.

No queueing issues are anticipated with the development of the site and the restoration/reconfiguration of Spring Avenue to two-way travel between Rodman Avenue and the Site Access. As a result, Scenario 2 with the restoration/reconfiguration of Spring Avenue to two-way travel between Rodman Avenue and the Site Access is recommended. It is also noted that the Rodman Avenue approaches to Old York Road (SR 0611) are split phased due to the alignment of the two approaches. This then results in traffic being metered as it enters the eastern leg of Rodman Avenue and allows for all vehicles to exit during its phase of the signal.

Table 4. Overall Intersection Levels-of-Service
2026 Future Weekday Morning Peak Hour (7:00 AM to 9:00 AM)

Intersection	Overall Level-of-Service (Delay in Seconds)			Increase in Delay [1] (seconds per vehicle)	Requires Mitigation [2]
	Without Development	With Development Scenario 1	With Development Scenario 2		
Old York Road (SR 0611) and Rodman Avenue	A (8.6)	B (11.2)	B (10.9)	+2.6 (Scenario 1) +2.3 (Scenario 2)	No
Old York Road (SR 0611) and Madeira Avenue/Jenkins Court	A (2.6)	A (4.9)	A (4.6)	n/a	No
Rodman Avenue and Spring Avenue	A (3.2)	A (5.4)	A (3.7)	n/a	No
Spring Avenue and Jenkins Court	A (1.6)	A (5.9)	A (5.9)	n/a	No

Weekday Afternoon Peak Hour (4:00 PM to 6:00 PM)

Intersection	Overall Level-of-Service (Delay in Seconds)			Increase in Delay (seconds per vehicle)	Requires Mitigation [1]
	Without Development	With Development Scenario 1	With Development Scenario 2		
Old York Road (SR 0611) and Rodman Avenue	A (7.8)	B (10.1)	B (10.0)	+2.3 (Scenario 1) +2.2 (Scenario 2)	No
Old York Road (SR 0611) and Madeira Avenue/Jenkins Court	A (7.3)	A (9.4)	A (9.2_	n/a	No
Rodman Avenue and Spring Avenue	A (2.1)	A (3.7)	A (2.9)	n/a	No
Spring Avenue and Jenkins Court	A (0.8)	A (5.2)	A (5.2)	n/a	No

Saturday Midday Peak Hour (11:00 AM to 1:00 PM)

Intersection	Overall Level-of-Service (Delay in Seconds)			Increase in Delay (seconds per vehicle)	Requires Mitigation [1]
	Without Development	With Development Scenario 1	With Development Scenario 2		
Old York Road (SR 0611) and Rodman Avenue	A (7.2)	B (10.1)	A (9.8)	+2.9 (Scenario 1)	No
Old York Road (SR 0611) and Madeira Avenue/Jenkins Court	A (4.7)	A (6.3)	A (5.9)	n/a	No
Rodman Avenue and Spring Avenue	A (3.0)	A (5.8)	A (3.8)	n/a	No
Spring Avenue and Jenkins Court	A (0.4)	A (6.7)	A (6.7)	n/a	No

(1) Increase in delay shown if level of service changes.
(2) Based on the difference in delay from without-development to with-development conditions, in accordance with PennDOT's level of service requirements.

Recommendations

Based upon the analysis completed for the two access scenarios, the following reconfiguration of the Spring Avenue access is recommended based upon the two scenarios for traffic flow along Spring Avenue in conjunction with the development of the site, which is illustrated in Figure 6B:

Restore/Reconfigure Spring Avenue to Two-Way Operations from Rodman Avenue to Site Access

- Provided a curbed cartway width of at least 24 feet with a single ingress lane and a single egress lane.
- Provide a "Stop" sign (R1-1) for the access approach to Spring Avenue along with a "No Right-Turn" (R3-1) sign.
- Install a "One-Way" sign (R6-2) or "No Right-Turn Sign" directly across from the egress lane on the east side of Spring Avenue.
- Install a curb bump-out on the south side of the access to prevent vehicles from turning to the right when exiting the site.
- Provide an ADA-compliant driveway apron or curb ramps for the sidewalk crossing the site access.

The restoration/reconfiguration of Spring Avenue is not anticipated to have any adverse impacts on the adjacent residential communities. The curb bump-outs as proposed on the south side of the Spring Avenue access will ensure that vehicles exiting the site do not enter the residential section of Spring Avenue and will also ensure that the section to the south of the site access along Spring Avenue remains one-way northbound.

The traffic analyses contained herein reveal that efficient access to and from the proposed development can be provided, and furthermore, site-generated traffic can be accommodated at the study area intersections.

Table 6 - Level-of-Service Matrices

1. Old York Road (PA 611) and Rodman Avenue

Time Period			Weekday Morning Peak Hour				Weekday Afternoon Peak Hour				Saturday Midday Peak Hour			
Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year		
Development Condition			Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access
Rodman Avenue	EB	Left	E	E	E	E	E	E	E	E	E	E	E	E
		Thru / Right	59.9	59.9	59.8	59.7	65.2	65.2	65.1	65.1	60.3	60.2	60.1	60.1
	WB	Left	E	E	E	E	E	E	E	E	E	E	E	E
		Thru / Right	64.0	64.0	59.9	59.9	72.5	72.5	67.6	67.6	68.1	68.1	60.9	61.0
Old York Road (PA 611)	NB	Left	A 1.6	A 1.7	A 2.5	A 2.2	A 1.8	A 2.3	A 4.7	A 4.5	A 1.7	A 1.9	A 3.0	A 2.5
		Thru	A 0.8	A 0.9	A 0.9	A 1.0	A 0.8	A 1.0	A 2.0	A 2.1	A 0.8	A 0.8	A 1.0	A 1.0
		Thru/ Right	A 0.8	A 0.8	A 0.9	A 1.0	A 0.8	A 1.0	A 2.0	A 2.0	A 0.8	A 0.8	A 0.9	A 1.0
	SB	Left	A 5.4	A 5.4	A 7.2	A 8.7	A 4.9	A 5.1	A 7.4	A 8.5	A 4.7	A 4.7	A 6.7	A 8.5
		Thru	A 8.1	A 8.2	B 11.0	B 10.7	A 7.4	A 7.6	A 9.7	A 9.5	A 7.1	A 7.2	B 10.4	A 10.0
		Thru/ Right	A 8.1	A 8.2	B 11.0	B 10.7	A 7.4	A 7.6	A 9.7	A 9.5	A 7.1	A 7.2	B 10.4	A 10.0
Overall			A 8.7	A 8.6	B 11.2	B 10.9	A 7.7	A 7.8	B 10.1	B 10.0	A 7.2	A 7.2	B 10.1	A 9.8

Table 6 - Level-of-Service Matrices

2. Old York Road (PA 611) and Madeira Avenue / Jenkin Court Access

Time Period			Weekday Morning Peak Hour				Weekday Afternoon Peak Hour				Saturday Midday Peak Hour			
Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year		
Development Condition			Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access
Madeira Avenue	EB	Left	E	E	D	D	E	E	E	E	E	E	E	E
		Thru / Right	60.1	60.1	54.1	54.1	60.9	60.9	57.0	57.0	57.6	57.6	57.3	57.3
Jenkin Court Access	WB	Left	E	E	E	E	E	E	E	E	D	D	E	E
		Thru / Right	58.8	58.8	57.8	57.8	62.7	62.7	61.2	61.2	52.2	52.2	56.3	56.4
Old York Road (PA 611)	NB	Left	A 1.4	A 1.4	A 2.6	A 2.2	A 3.5	A 3.7	A 4.8	A 4.8	A 2.5	A 2.5	A 2.6	A 2.4
		Thru	A 2.9	A 3.0	A 5.0	A 4.4	A 3.5	A 3.6	A 5.7	A 4.9	A 4.3	A 4.3	A 5.3	A 4.3
		Thru/ Right	A 2.9	A 2.9	A 5.0	A 4.3	A 3.5	A 3.6	A 5.7	A 4.9	A 4.2	A 4.3	A 5.3	A 4.3
	SB	Left	A 1.6	A 1.6	A 3.0	A 2.6	A 2.6	A 2.7	A 3.6	A 3.5	A 3.1	A 3.1	A 3.1	A 3.0
		Thru	A 0.9	A 1.0	A 1.0	A 1.0	A 5.9	A 6.0	A 7.4	A 7.4	A 1.3	A 1.3	A 1.2	A 1.2
		Thru/ Right	A 0.9	A 0.9	A 0.9	A 1.0	A 5.8	A 6.0	A 7.3	A 7.4	A 1.2	A 1.3	A 1.1	A 1.1
Overall			A 2.5	A 2.6	A 4.9	A 4.6	A 7.2	A 7.3	A 9.4	A 9.2	A 4.7	A 4.7	A 6.3	A 5.9

Table 6 - Level-of-Service Matrices

3. Rodman Avenue and Spring Avenue

Time Period			Weekday Morning Peak Hour				Weekday Afternoon Peak Hour				Saturday Midday Peak Hour			
Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year		
Development Condition			Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access
Rodman Avenue	EB	Thru	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
		Right	-	-	-		-	-	-		-	-	-	
	WB	Left	-	-	-	A	-	-	-	A	-	-	-	A
		Thru	(1)	(1)	(1)	7.5	(1)	(1)	(1)	0.0	(1)	(1)	(1)	7.6
Spring Avenue	NB	Left	A	A	A	A	A	A	A	A	A	A	A	A
		Right	8.5	8.5	8.8	9.2	8.7	8.7	8.9	9.1	8.5	8.5	9.0	9.6
Overall			A 3.2	A 3.2	A 5.4	A 3.7	A 2.1	A 2.1	A 3.7	A 2.9	A 3.0	A 3.0	A 5.8	A 3.8

(1) Movement operates at free-flow conditions.

Table 6 - Level-of-Service Matrices

4. Spring Avenue and Jenkin Court Access

Time Period			Weekday Morning Peak Hour				Weekday Afternoon Peak Hour				Saturday Midday Peak Hour			
Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year		
Development Condition			Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access
Jenkin Court Access	EB	Left	A 9.5	A 9.5	A 9.1	A 9.1	A 8.6	A 8.6	A 8.8	A 8.8	A 8.6	A 8.6	A 9.1	A 9.1
Spring Avenue	NB	Left Thru	(1)	(1)	(1)	A 8.0	(1)	(1)	(1)	A 8.0	(1)	(1)	(1)	A 0.0
Spring Avenue	SB	Right	-	-	-	(1)	-	-	-	(1)	-	-	-	(1)
Overall			A 1.6	A 1.6	A 5.9	A 5.9	A 0.8	A 0.8	A 5.2	A 5.2	A 0.4	A 0.4	A 6.7	A 6.7

(1) Movement operates at free-flow conditions.

Table 7 - 95th Percentile Queue Matrices (feet)

1. Old York Road (PA 611) and Rodman Avenue

Time Period			Current Storage [1]	Weekday Morning Peak Hour				Weekday Afternoon Peak Hour				Saturday Midday Peak Hour			
Year				2023	2026 Build-Out Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year		
Development Condition				Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access
Rodman Avenue	EB	Left / Thru / Right	90	160	160	165	165	165	168	170	170	150	150	155	155
Rodman Avenue	WB	Left / Thru / Right	25 [2]	90	90	173	173	63	63	125	125	58	58	150	148
Old York Road (PA 611)	NB	Left	125	25	25	25	25	25	25	25	25	25	25	25	25
Old York Road (PA 611)	NB	Thru	*525*	25	25	25	25	25	25	55	55	25	25	25	25
Old York Road (PA 611)	NB	Thru/ Right	*525*	25	25	25	25	25	25	58	58	25	25	25	25
Old York Road (PA 611)	SB	Left	185	25	25	25	35	25	25	25	35	25	25	25	43
Old York Road (PA 611)	SB	Thru	*375*	233	240	288	270	265	278	323	310	228	235	295	278
Old York Road (PA 611)	SB	Thru/ Right	*375*	240	248	295	278	275	288	333	320	235	240	305	285

(1) Distance to adjacent signalized intersections shown in italics.

(2) Distance from stop bar allows one vehicle to queue before intersects with Spring Avenue.

Table 7 - 95th Percentile Queue Matrices (feet)

2. Old York Road (PA 611) and Madeira Avenue and Jenkin Court Access

Time Period			Current Storage [1]	Weekday Morning Peak Hour				Weekday Afternoon Peak Hour				Saturday Midday Peak Hour			
Year				2023	2026 Build-Out Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year		
Development Condition				Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access
Madeira Avenue	EB	Left / Thru / Right	350	25	25	25	25	70	70	70	70	110	110	113	110
Jenkin Court Access	WB	Left / Thru / Right	25 [2]	25	25	85	85	100	100	155	155	25	25	90	90
Old York Road (PA 611)	NB	Left	120	25	25	25	25	25	25	25	25	25	25	25	25
		Thru	*525*	105	110	183	163	155	160	218	200	155	163	195	165
		Thru/ Right	*525*	110	118	190	168	155	160	225	208	163	170	200	173
	SB	Left	200	25	25	25	25	0	0	25	0	0	0	25	0
		Thru	*525*	25	25	25	25	210	220	250	250	25	25	25	25
		Thru/ Right	*525*	25	25	25	25	220	228	260	260	25	25	25	25

(1) Distance to adjacent signalized intersections shown in italics.

(2) Distance to internal drive aisle before entering parking garage.

Table 7 - 95th Percentile Queue Matrices (feet)

3. Rodman Avenue and Spring Avenue

Time Period				Weekday Morning Peak Hour				Weekday Afternoon Peak Hour				Saturday Midday Peak Hour			
Year			Current Storage [1]	2023	2026 Build-Out Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year		
Development Condition				Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access
Rodman Avenue	EB	Thru	25	-	-	-	-	-	-	-	-	-	-	-	-
		Right		-	-	-		-	-	-		-	-	-	
	WB	Left	215 [2]	-	-	-	0	-	-	-	0	-	-	-	0
		Thru		-	-	-		-	-	-		-	-	-	
Spring Avenue	NB	Left / Right	25	25	25	25	25	25	25	25	25	25	25	25	25

(1) Distance to adjacent signalized intersections shown in italics.

(2) Distance to Noble Train Station Access.

Table 7 - 95th Percentile Queue Matrices (feet)

4. Spring Avenue and Jenkin Court Access

Time Period			Current Storage (1)	Weekday Morning Peak Hour				Weekday Afternoon Peak Hour				Saturday Midday Peak Hour			
Year				2023	2026 Build-Out Year			2023	2026 Build-Out Year			2023	2026 Build-Out Year		
Development Condition				Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access	Existing	w/o Dev	w/Dev Existing Spring Access	w/Dev Modified Spring Access
Jenkin Court Access	EB	Left	25	0	0	25	25	0	0	25	25	0	0	25	25
Spring Avenue	NB	Left Thru	+100	-	-	-	0	-	-	-	0	-	-	-	0
Spring Avenue	SB	Right	25	-	-	-	0	-	-	-	0	-	-	-	0

(1) Distance to adjacent signalized intersections shown in italics.

FIGURE 1A

Site Location Map

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 1.dwg

FIGURE 1B

Site Location Aerial

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 1.dwg

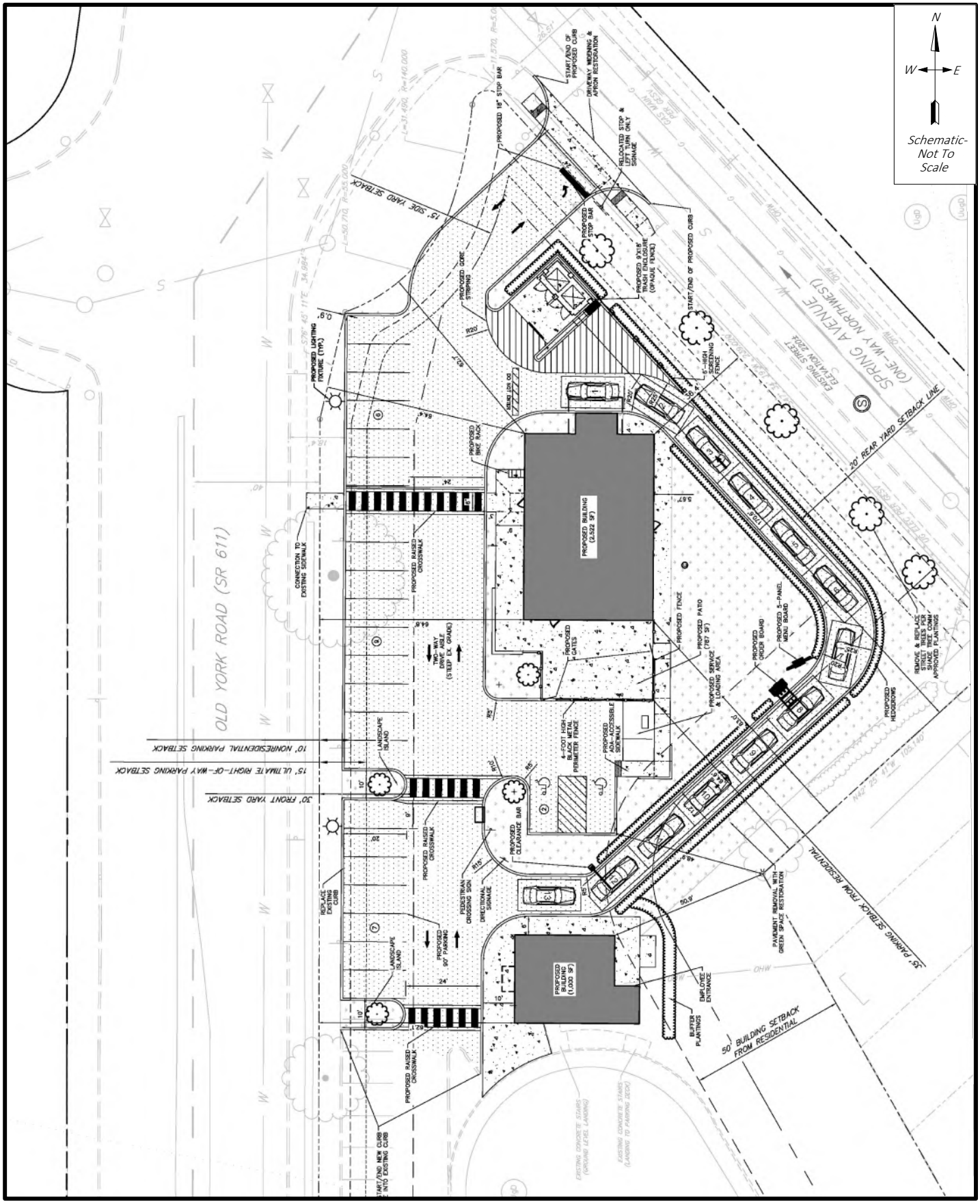


FIGURE 2

Site Plan (prepared by Carroll Engineering Corporation)

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 2A.dwg

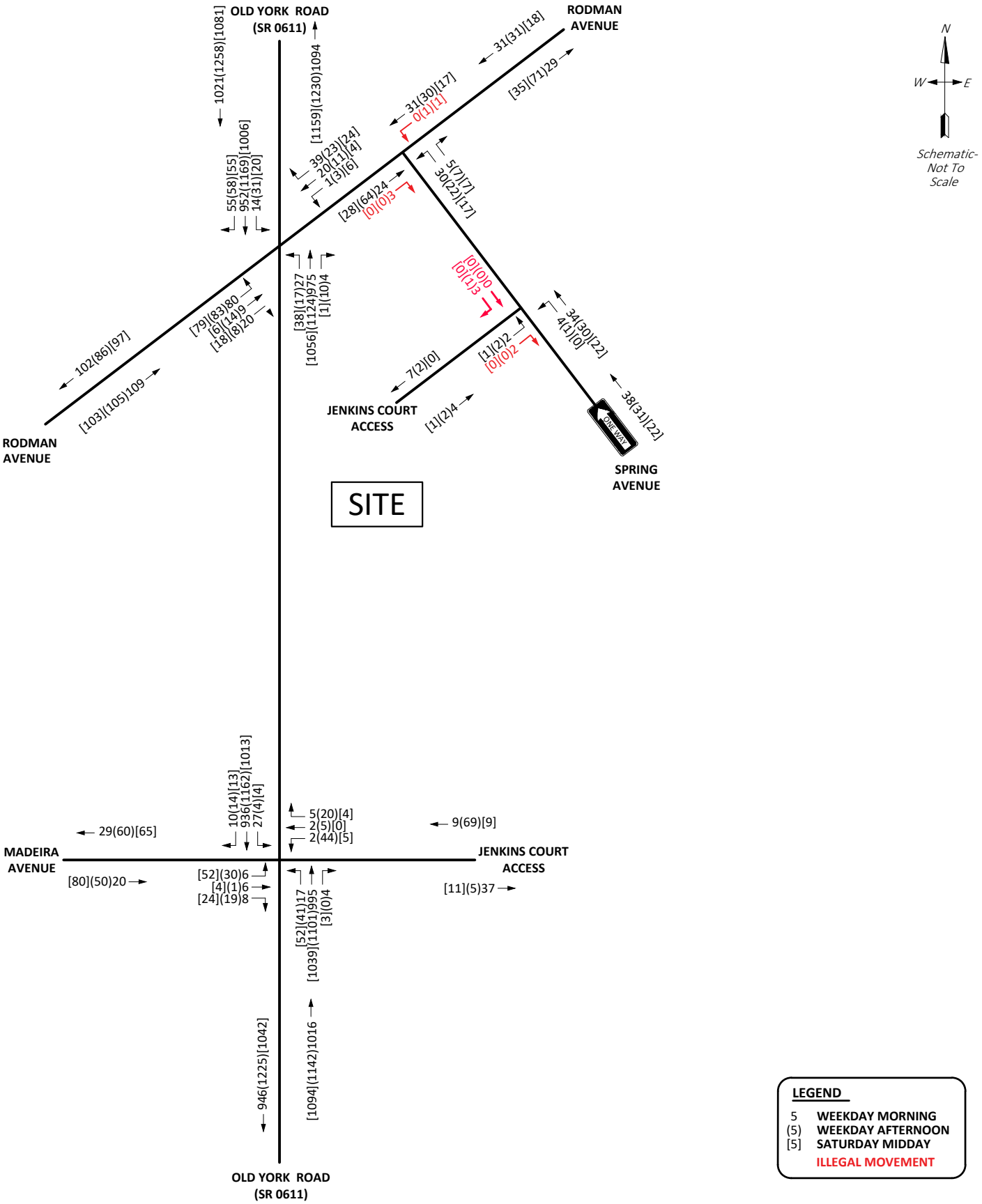


FIGURE 3A

2023 Existing Peak Hour Traffic Volumes

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

SKOZA - 08/20/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 3A.dwg

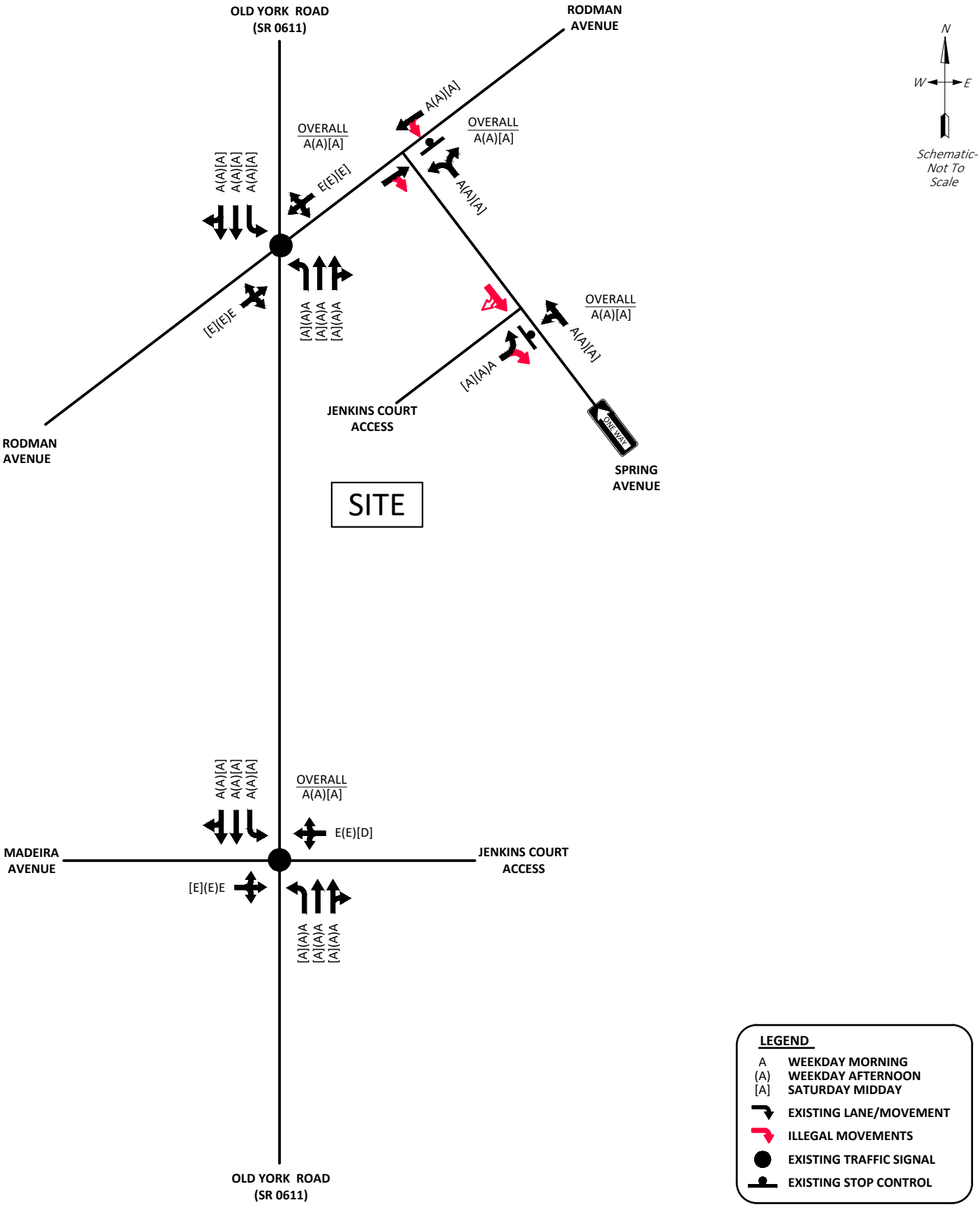


FIGURE 3B

2023 Existing Peak Hour Levels-of-Service

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

SKOZA - 08/21/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 3B.dwg

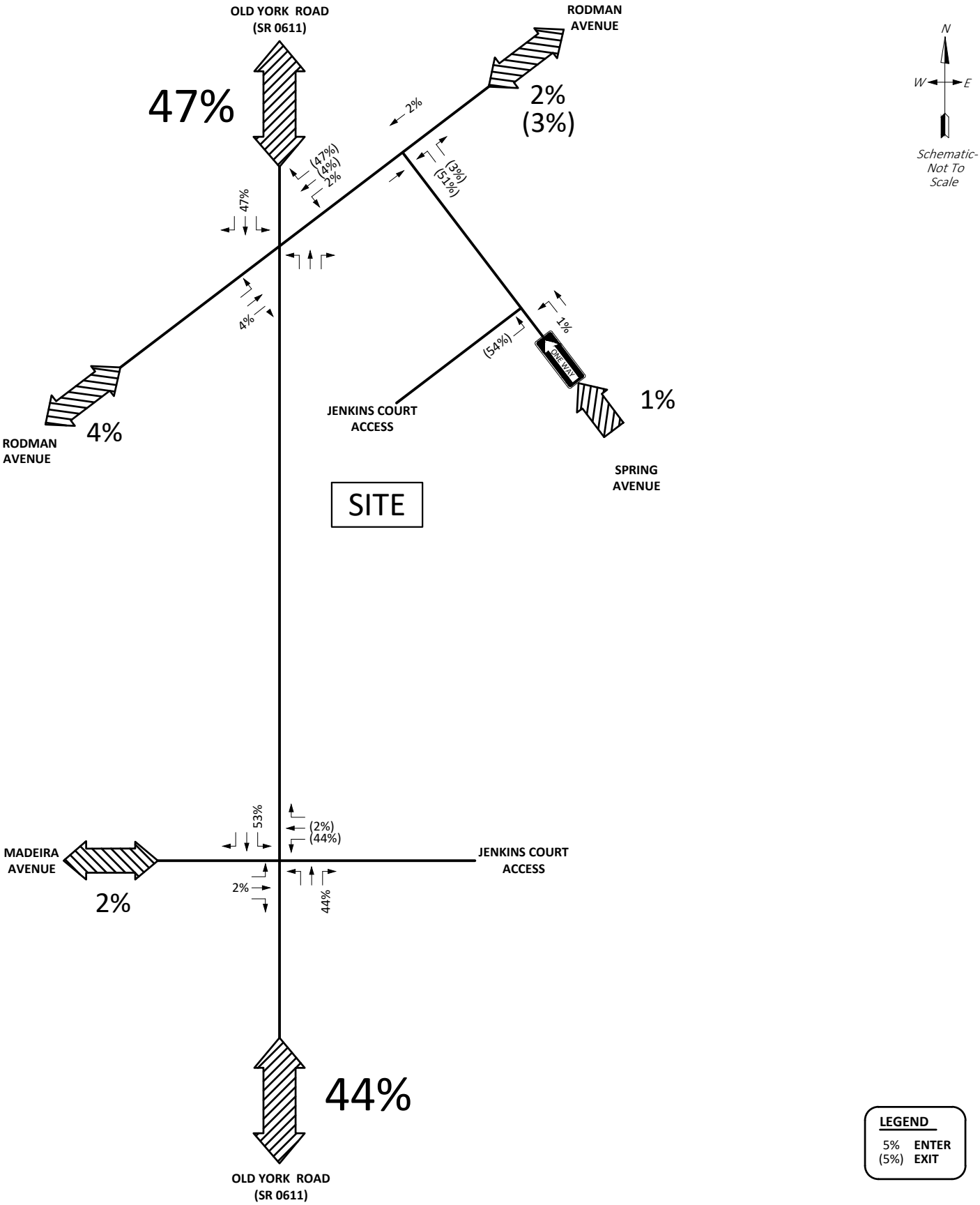


FIGURE 4A

New Site Trip Distribution - Existing Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4A.dwg

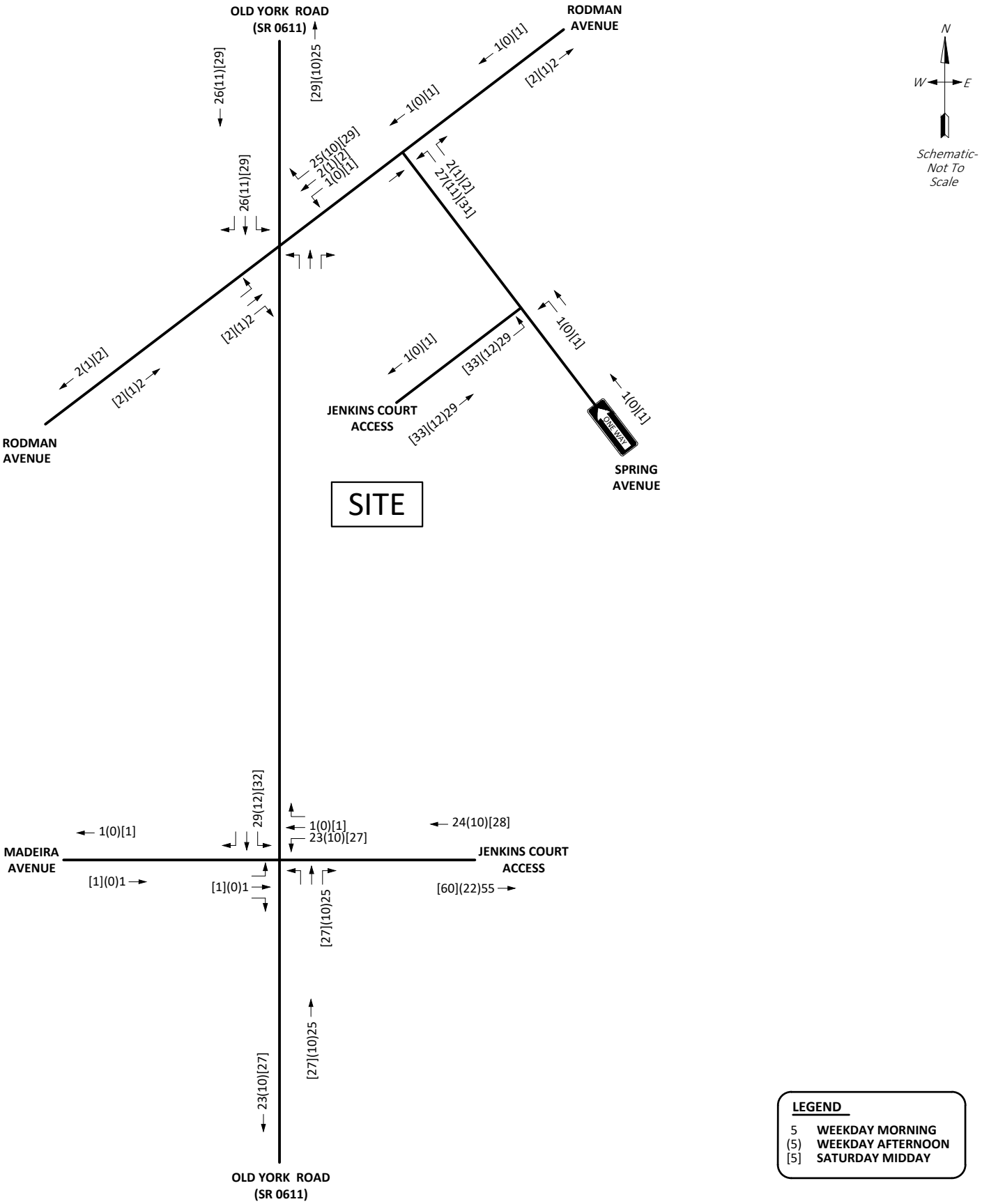


FIGURE 4B

New Site Trip Assignment - Coffee - Existing Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4B.dwg

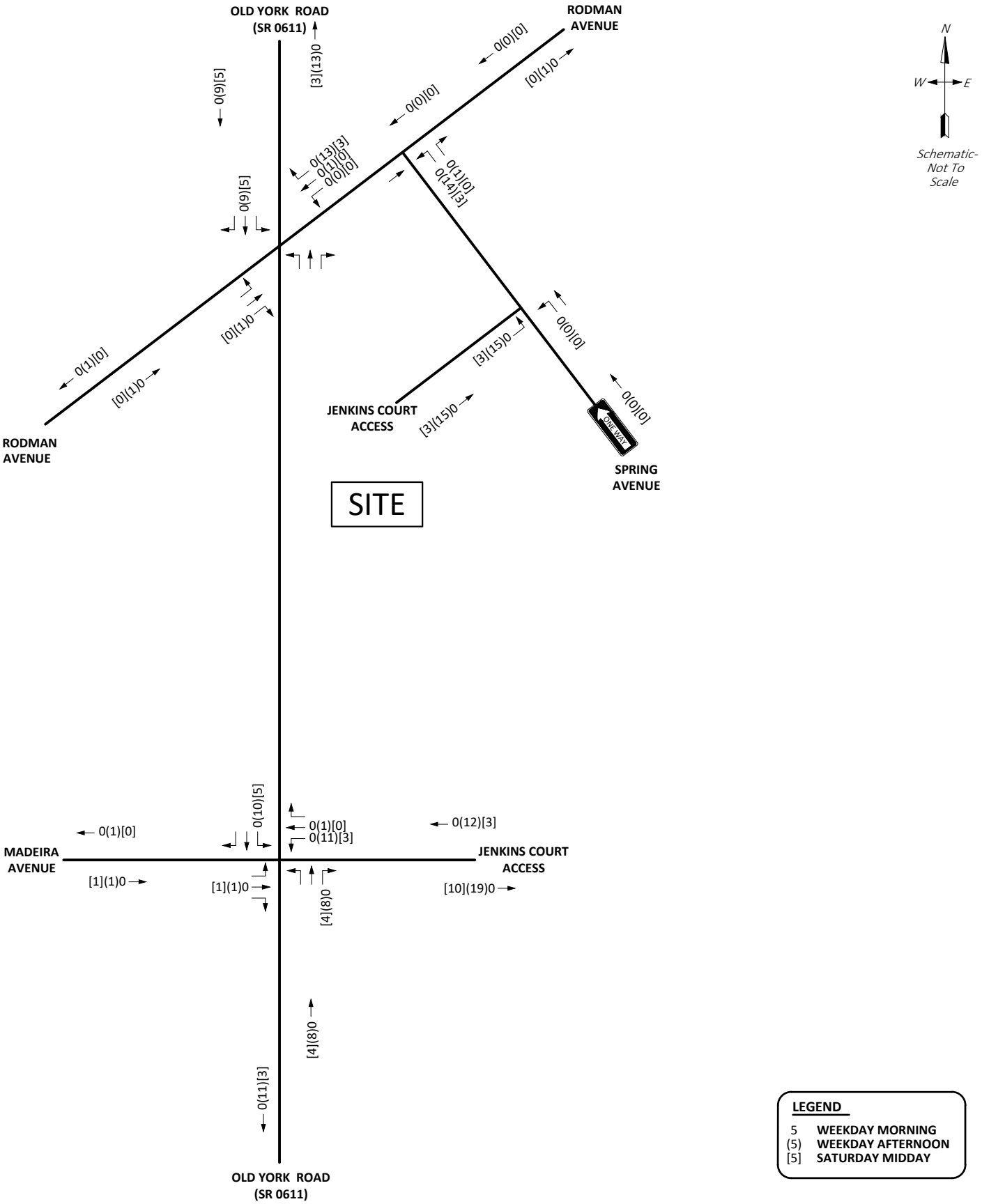


FIGURE 4C

New Site Trip Assignment - Dessert - Existing Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4C.dwg

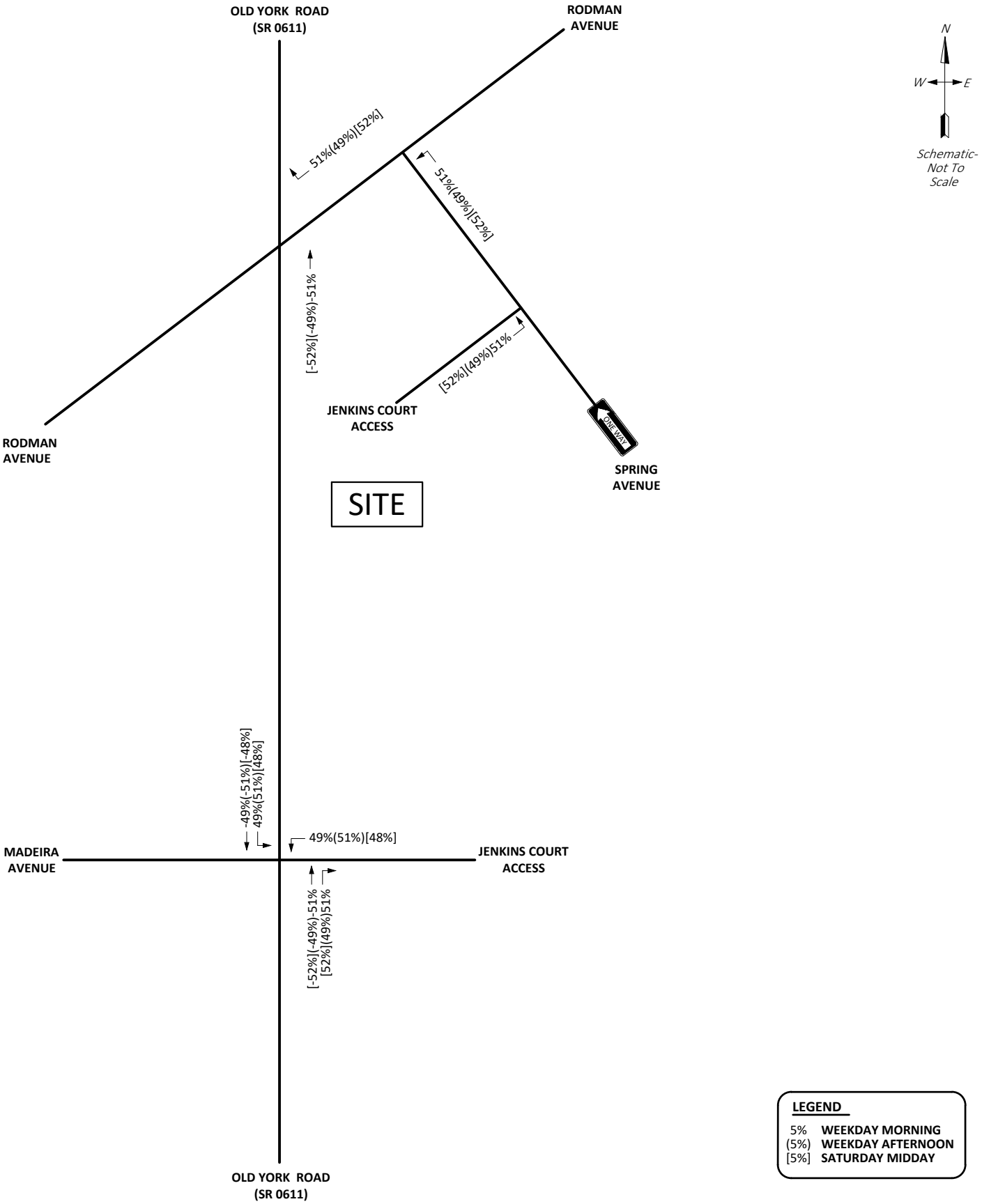


FIGURE 4D

Pass-by Trip Distribution - Existing Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4D.dwg

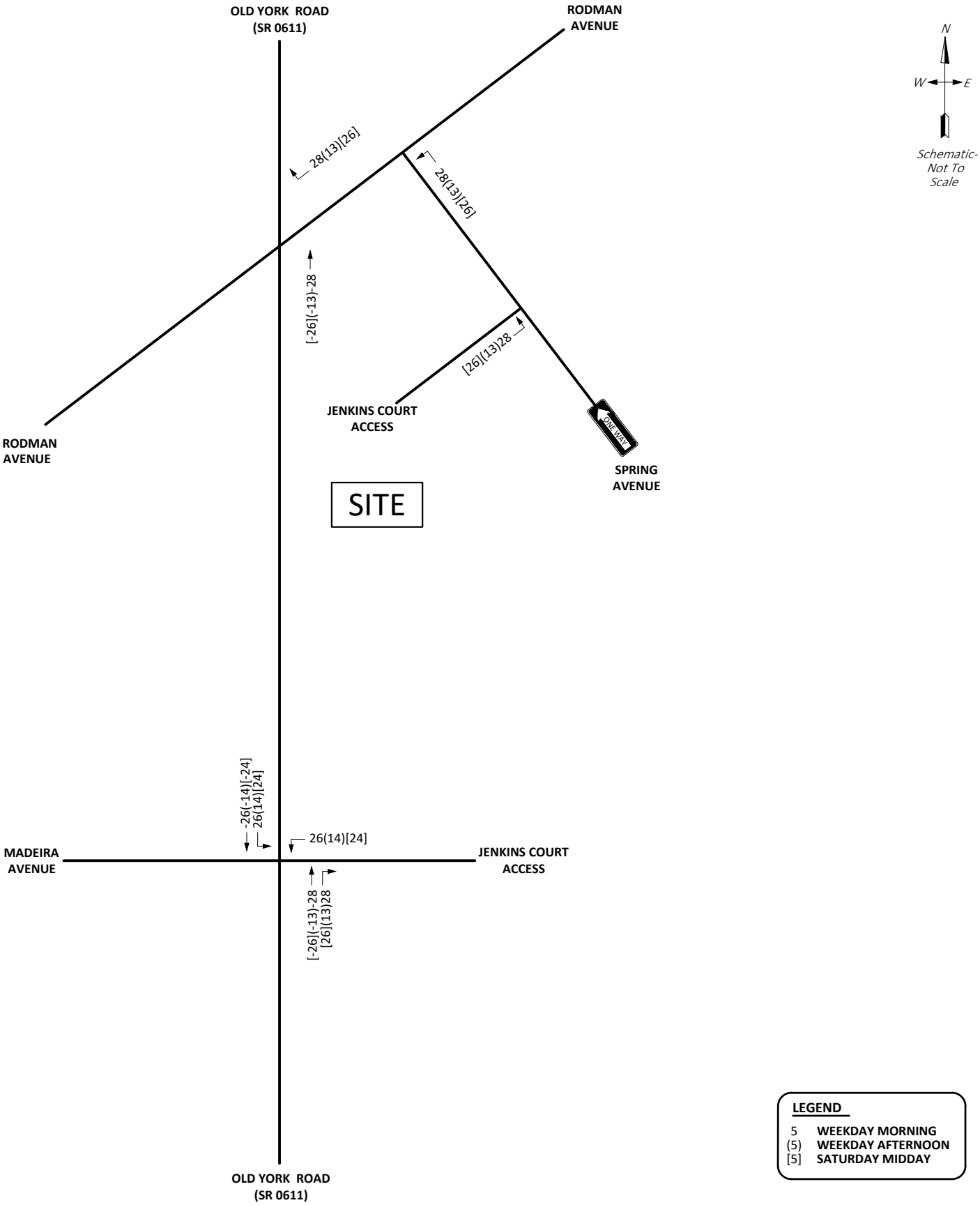


FIGURE 4E

Pass-by Trip Assignment - Existing Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4E.dwg

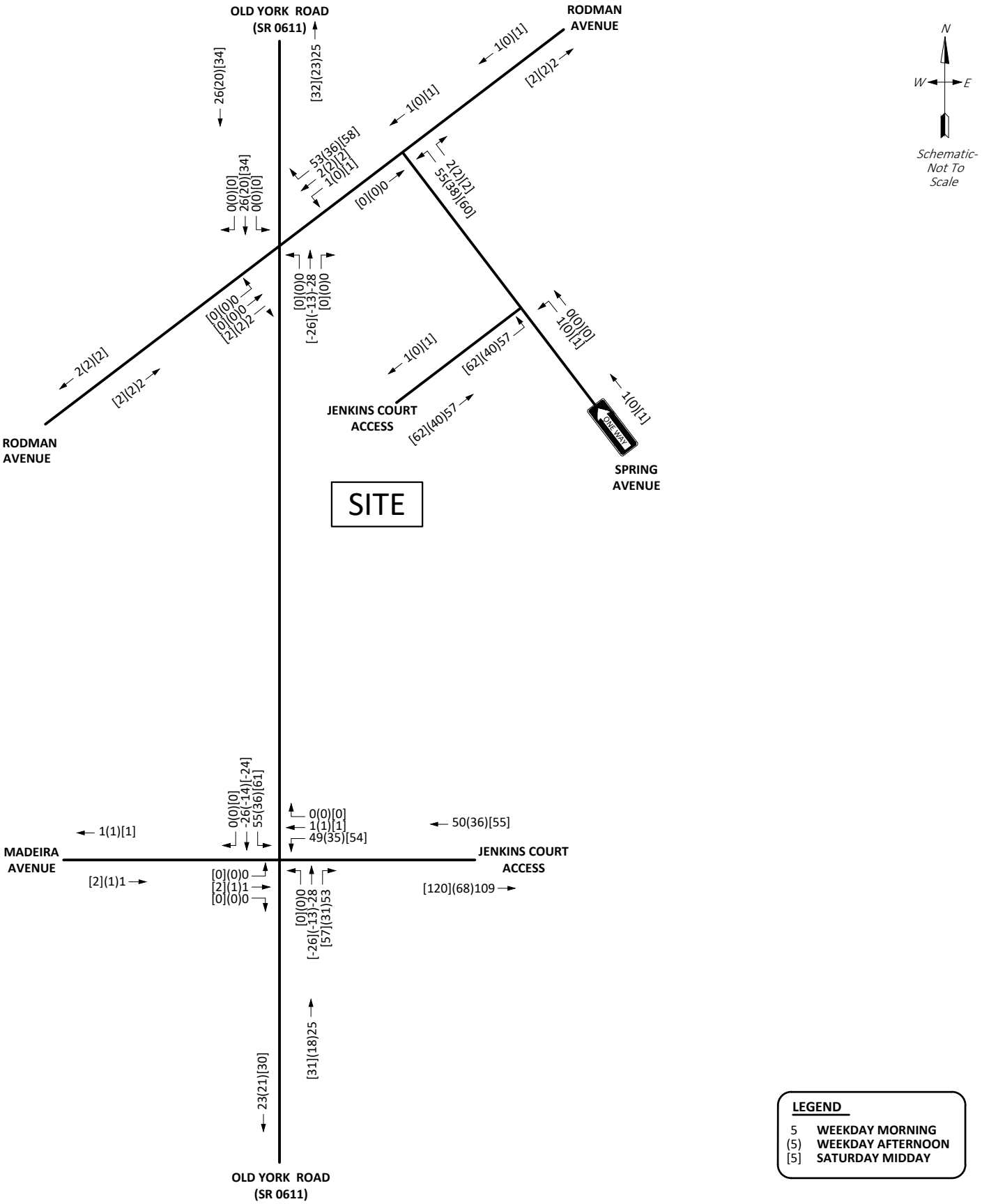


FIGURE 4F

Net Site Trip Assignments - Existing Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

SKOZA - 08/14/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4F.dwg

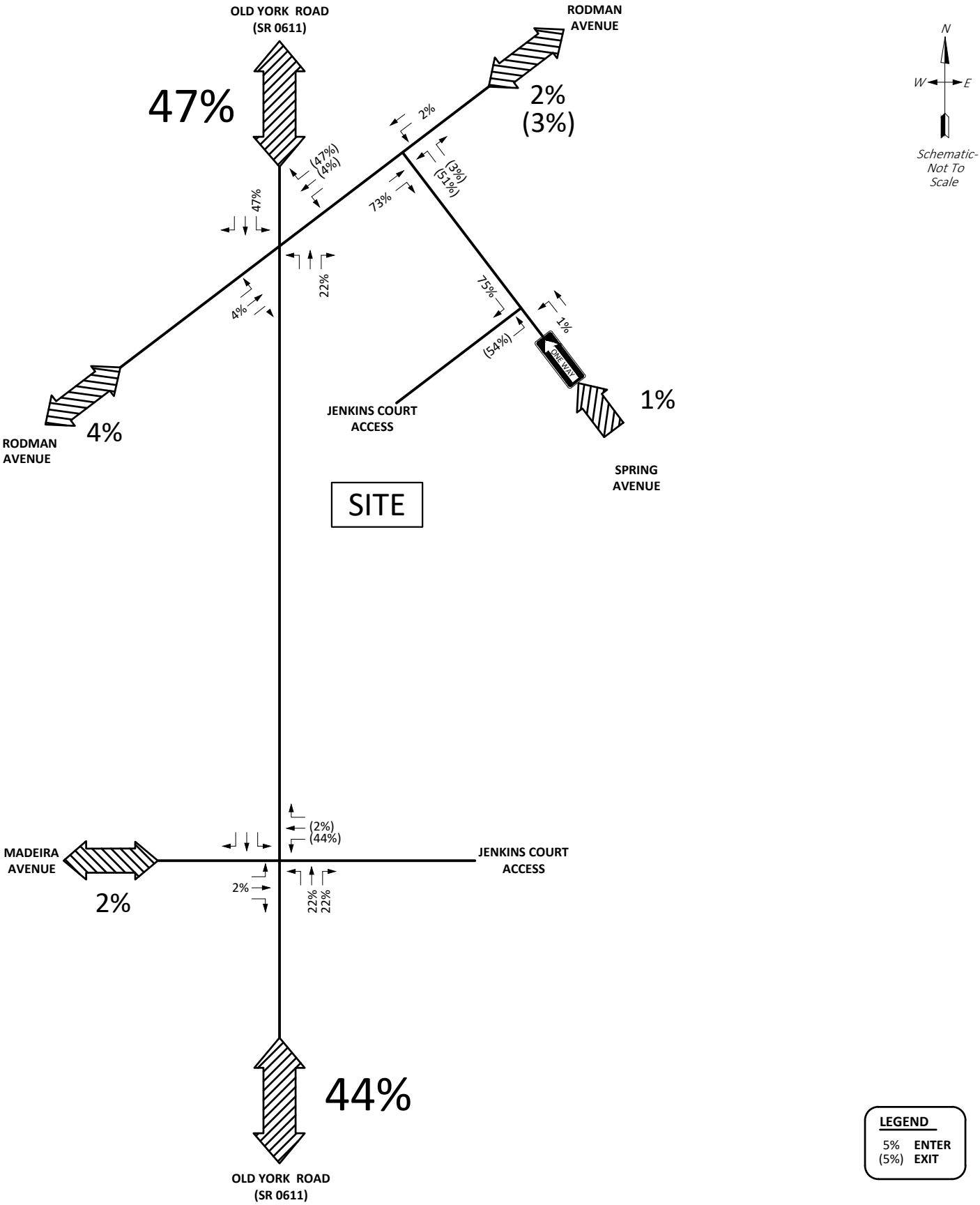


FIGURE 4G

New Site Trip Distribution - Modified Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4G.dwg

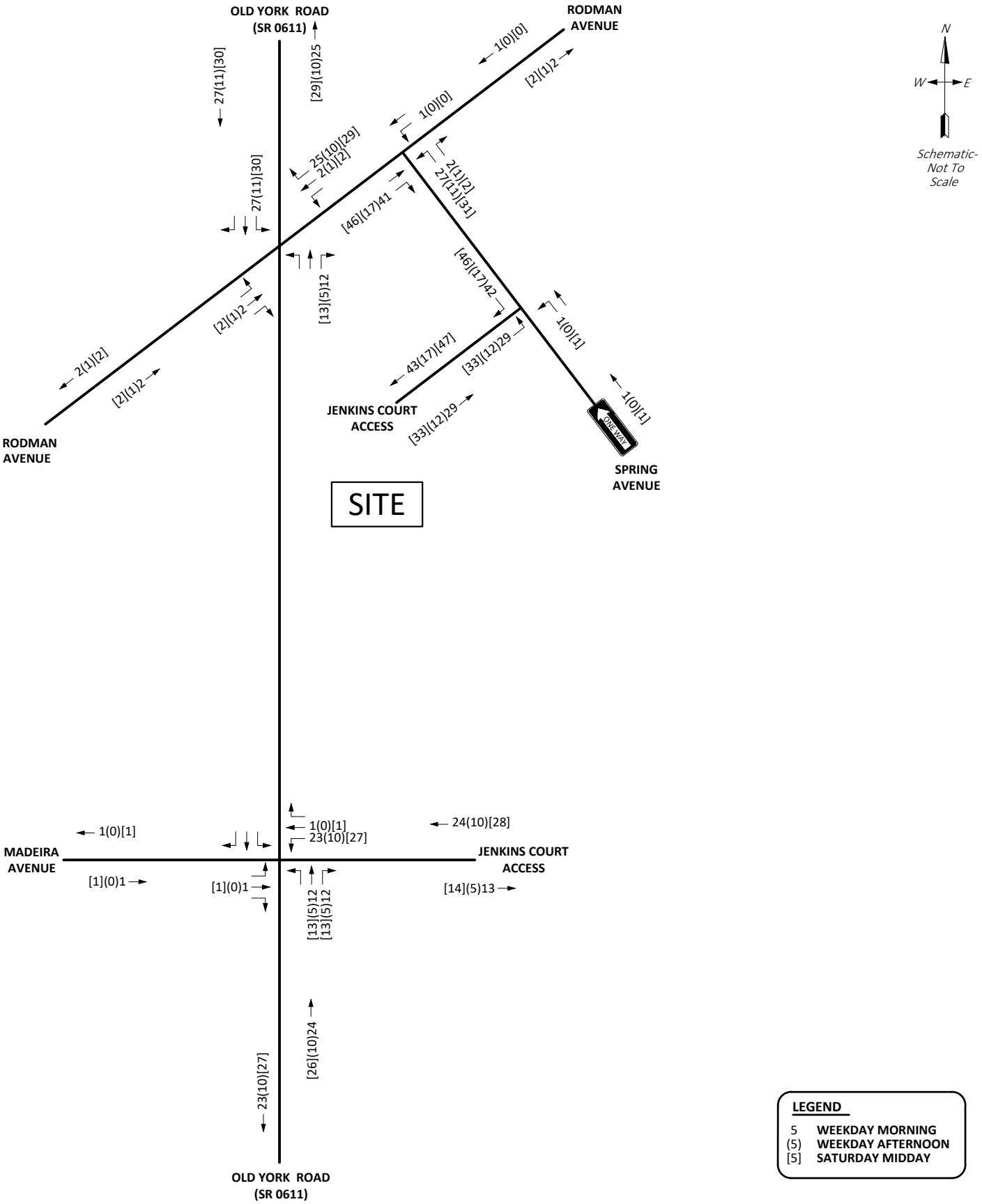


FIGURE 4H

New Site Trip Assignment - Coffee - Modified Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4H.dwg

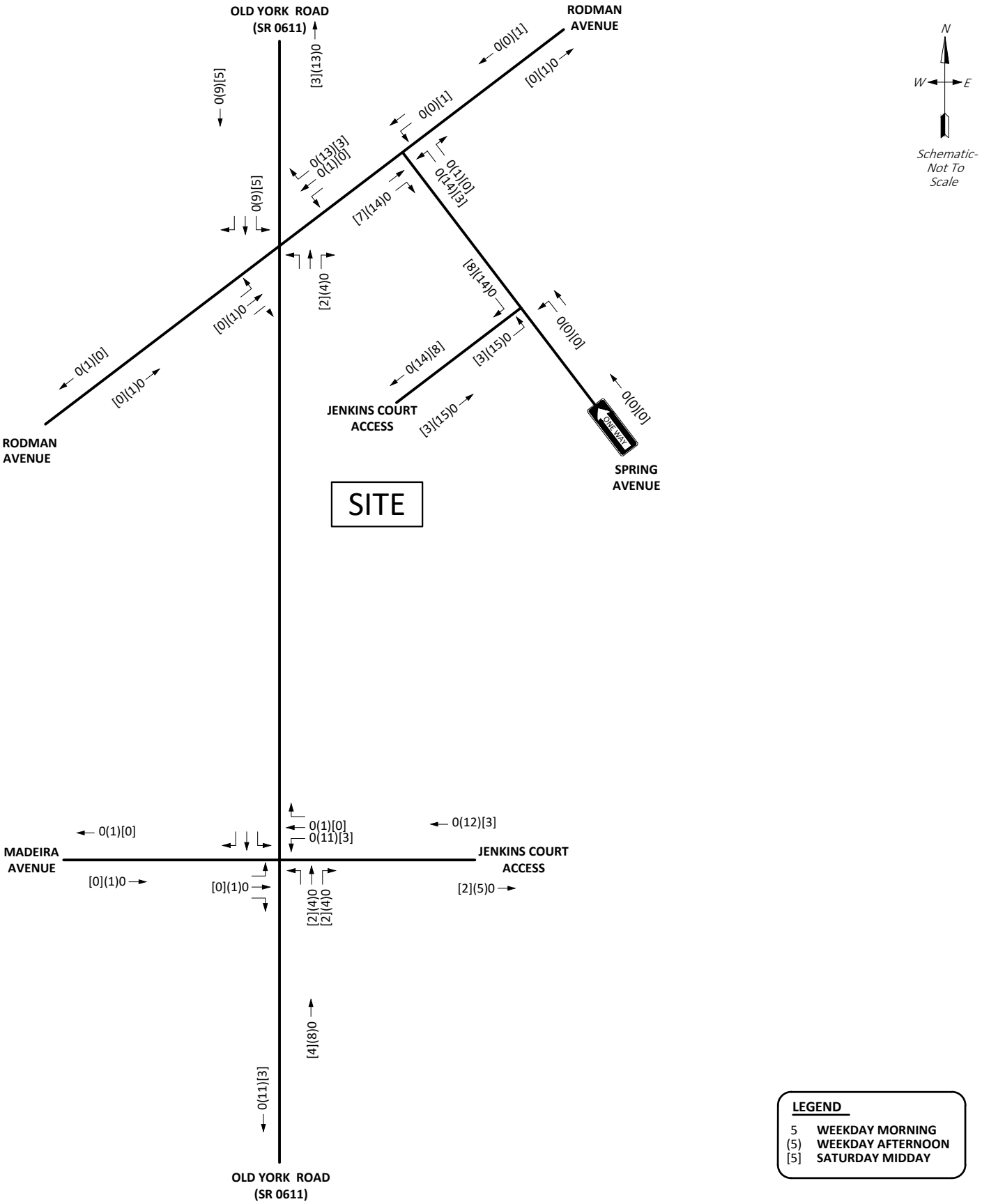


FIGURE 4I

New Site Trip Assignment - Dessert - Modified Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4I.dwg

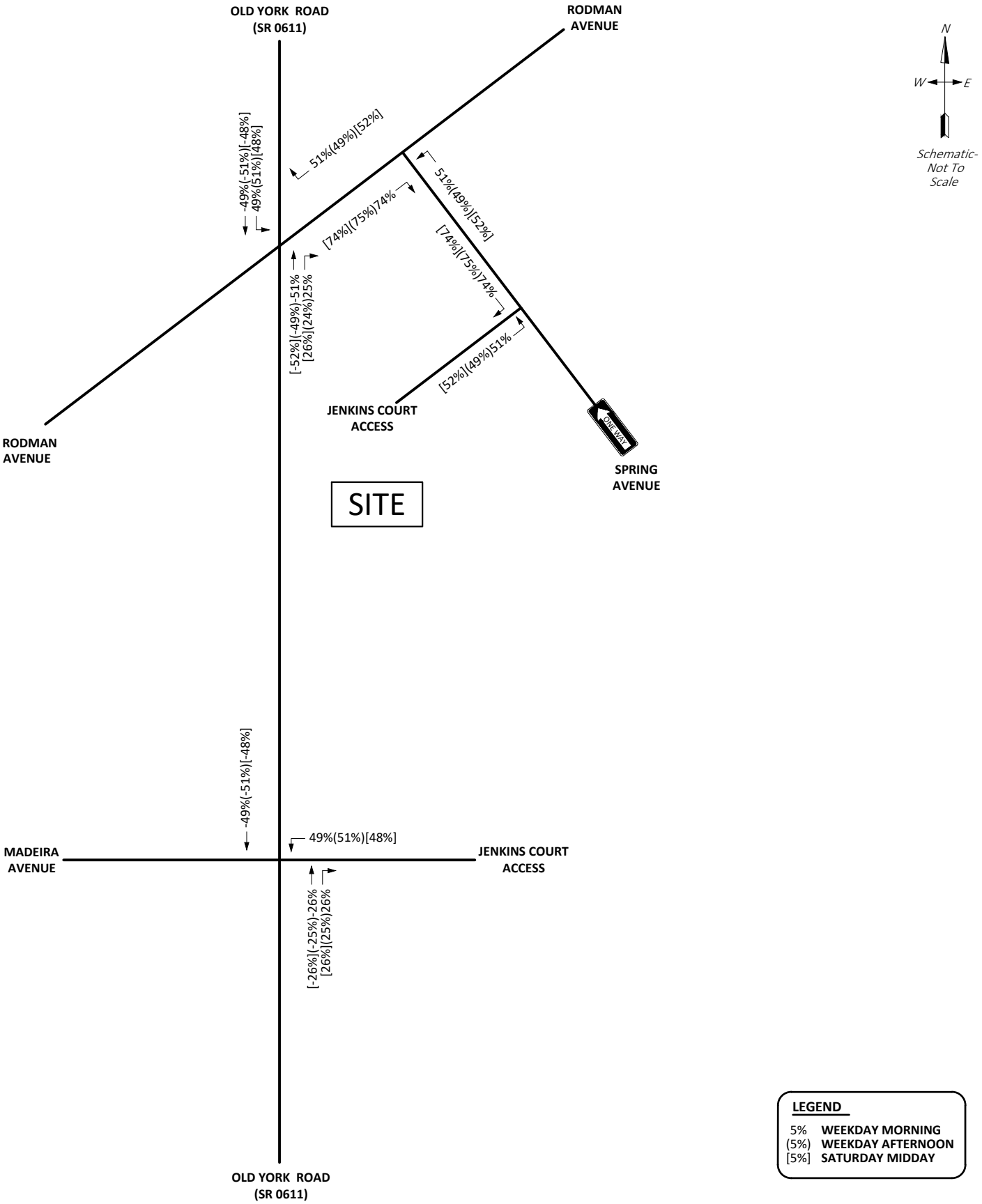


FIGURE 4J

Pass-by Trip Distribution - Modified Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4J.dwg

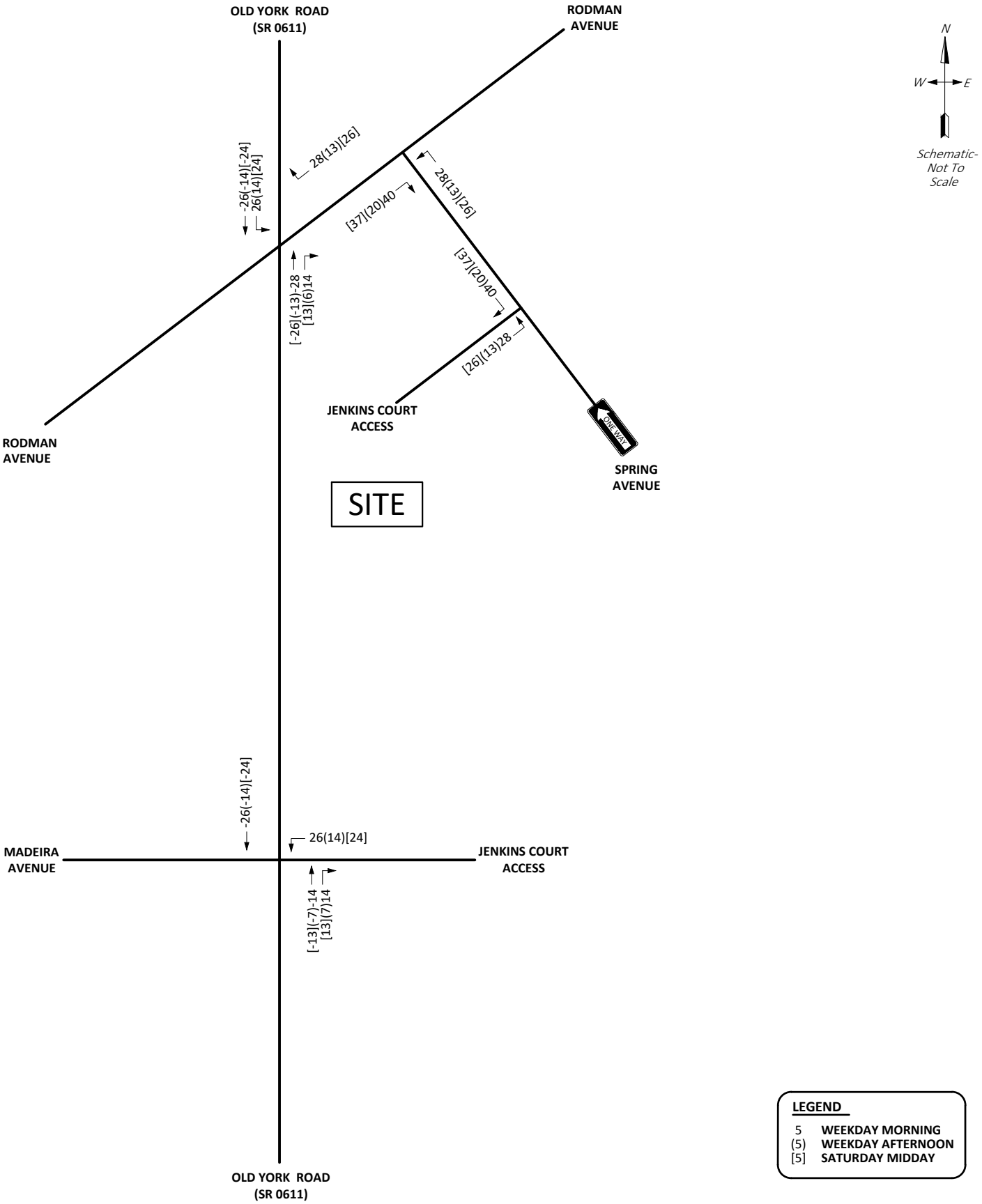


FIGURE 4K

Pass-by Trip Assignment - Modified Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4K.dwg

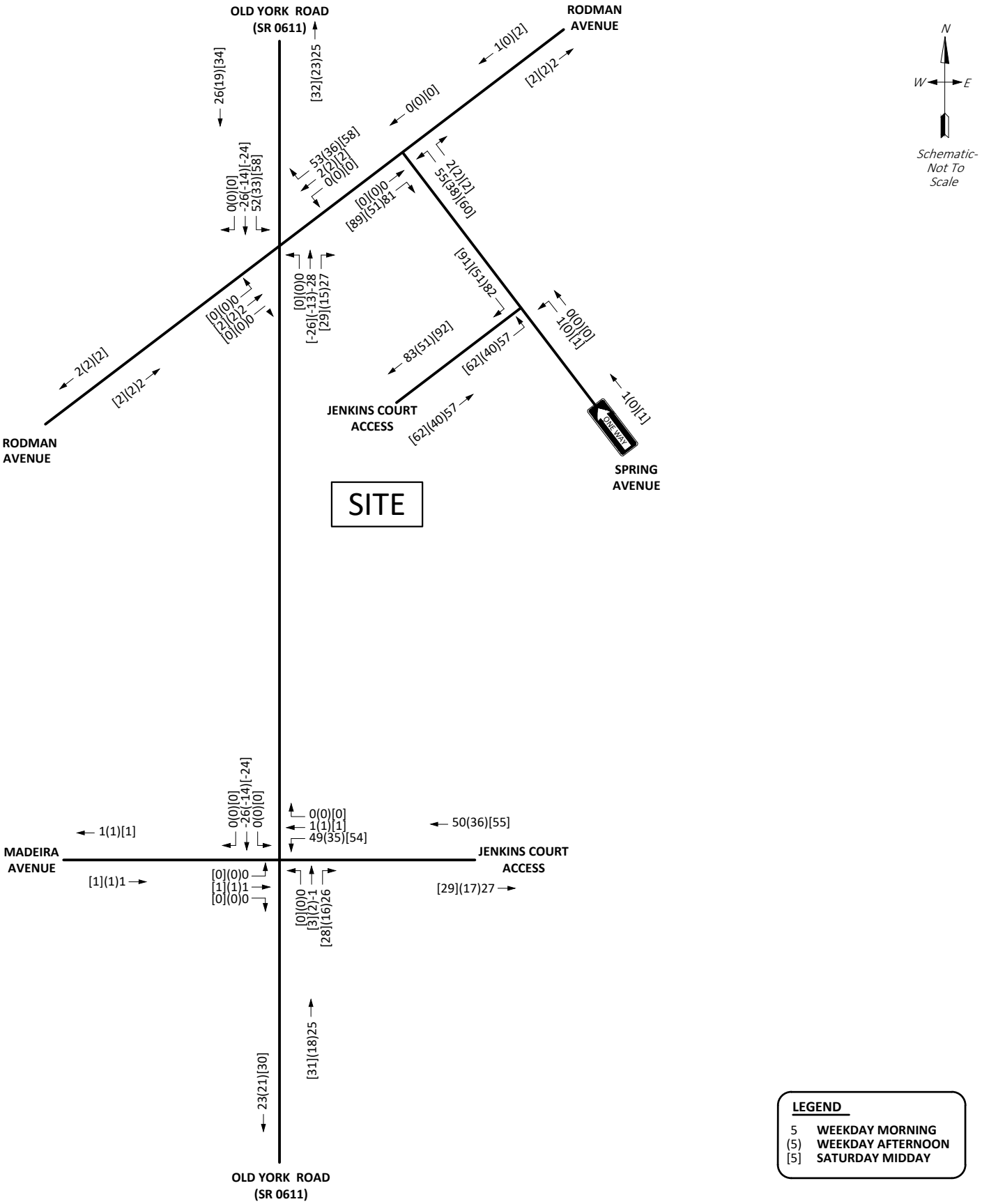


FIGURE 4L

Net Site Trip Assignments - Modified Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

BGARRISON - 08/03/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 4L.dwg

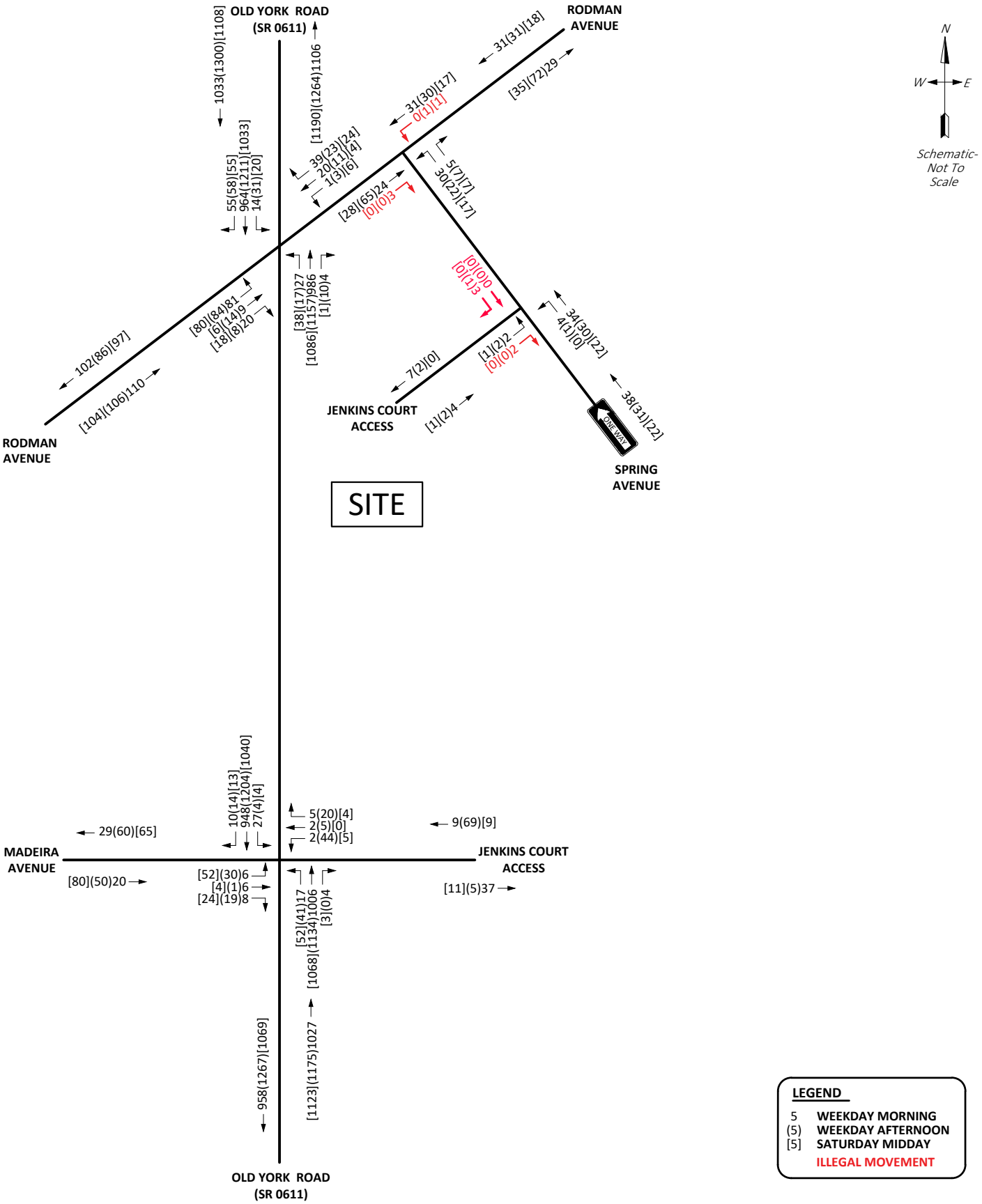


FIGURE 5A

2026 Future without Development Peak Hour Traffic Volumes

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

SKOZA - 08/18/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 5A.dwg

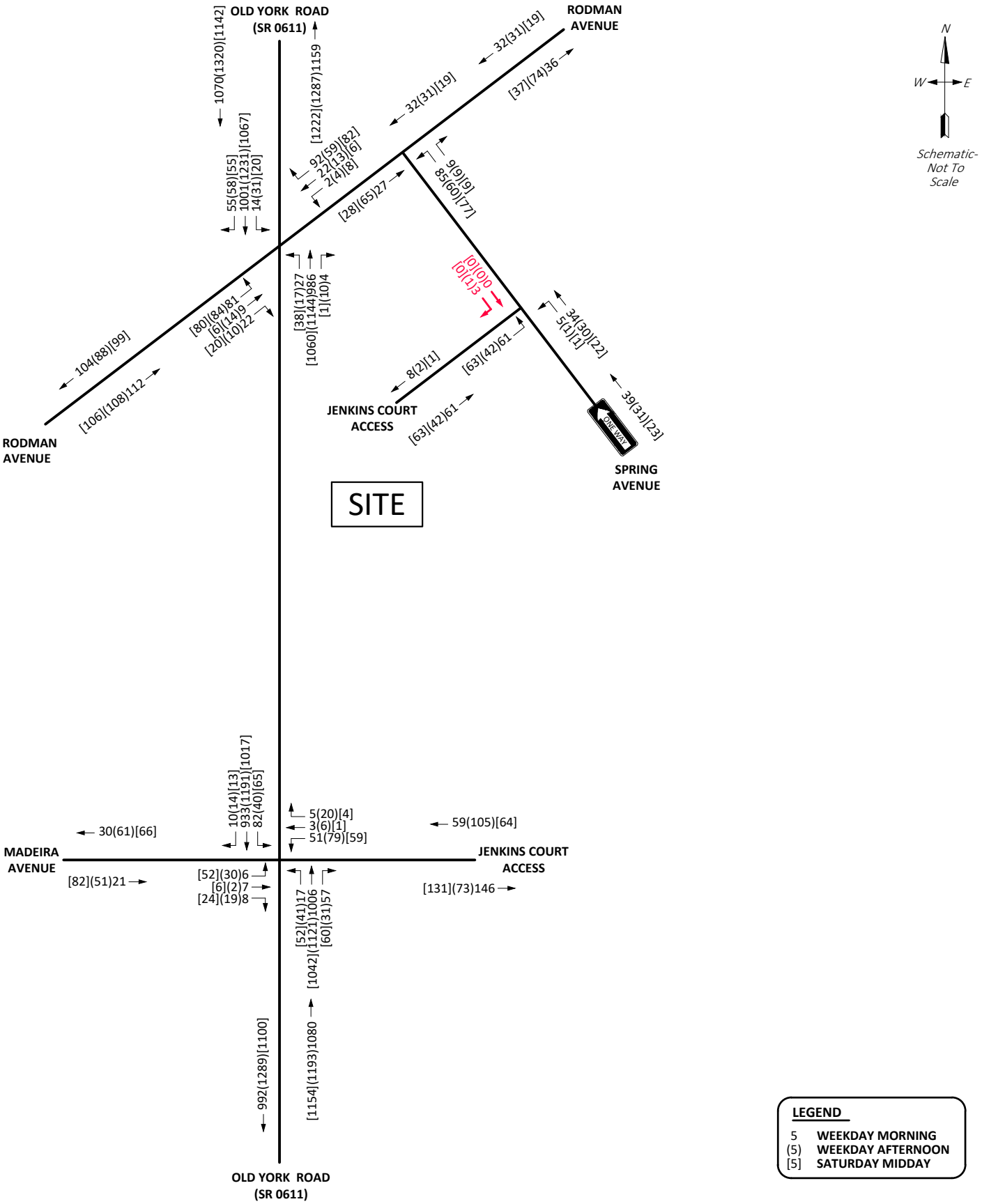


FIGURE 5B

2026 Future with Development Peak Hour Traffic Volumes - Existing Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

SKOZA - 08/18/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 5B.dwg

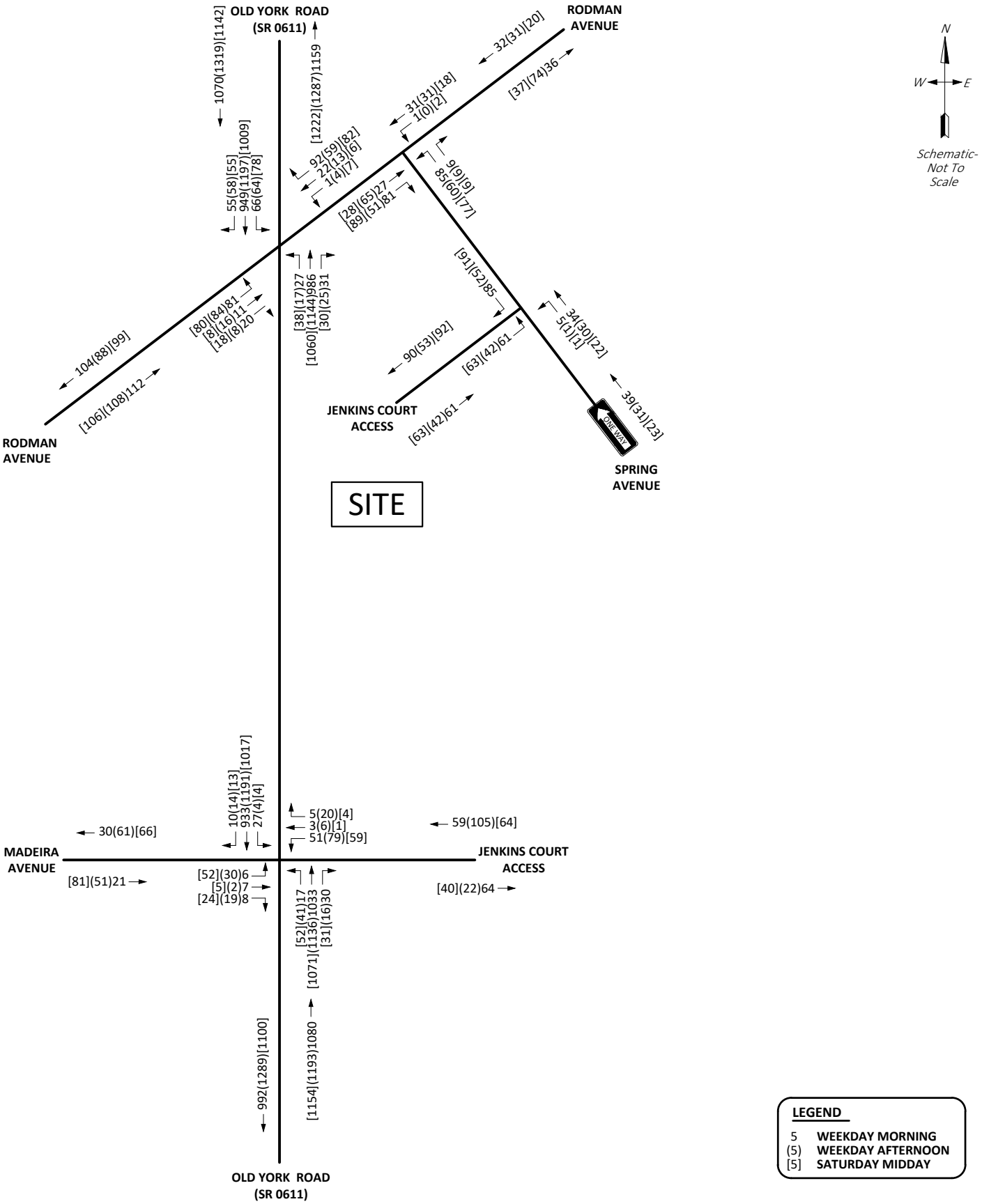


FIGURE 5C

2026 Future with Development Peak Hour Traffic Volumes - Modified Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

BGARRISON - 08/14/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 5C.dwg

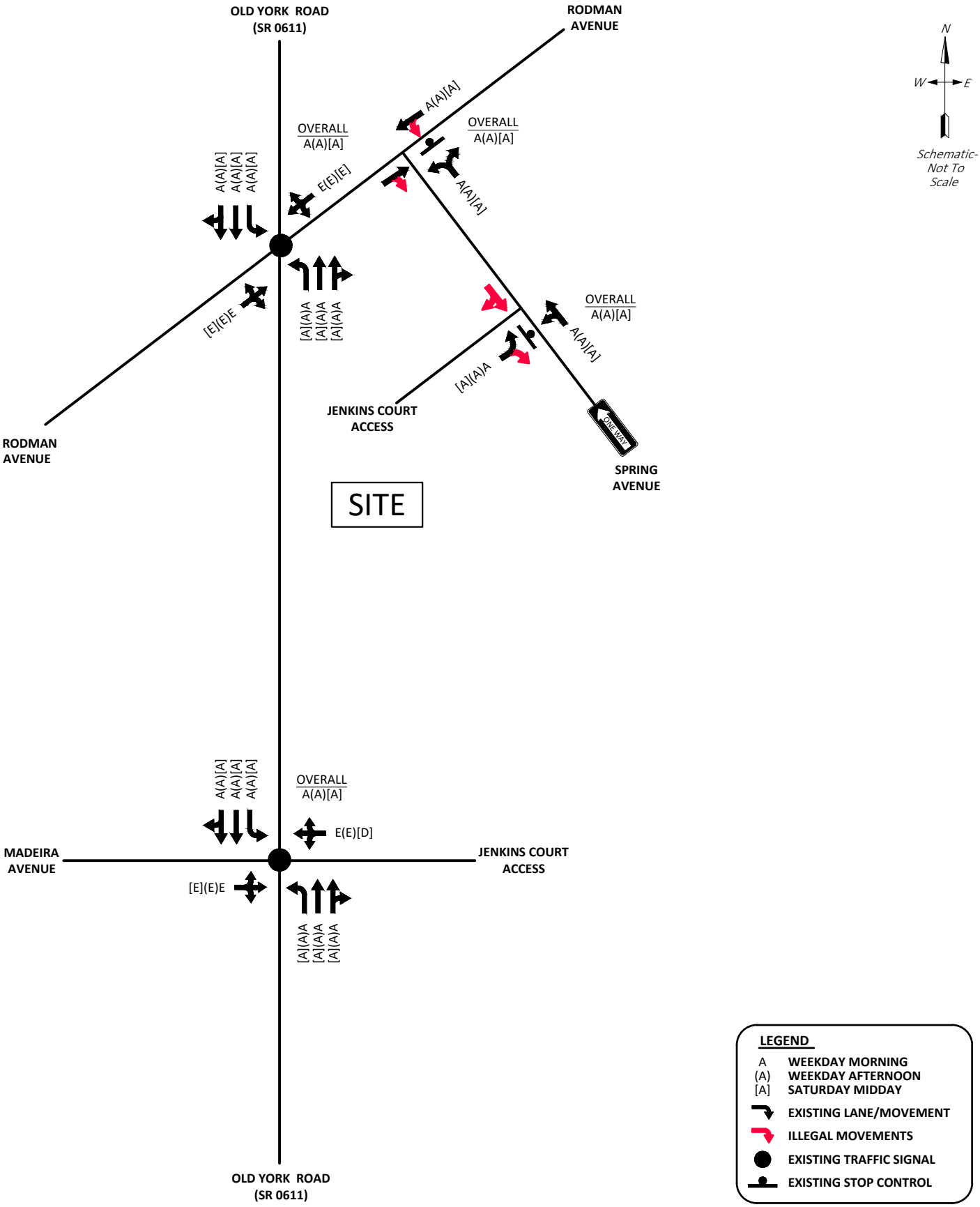


FIGURE 5D

2026 Future without Development Peak Hour Levels-of-Service

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

SKOZA - 08/21/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 5D.dwg

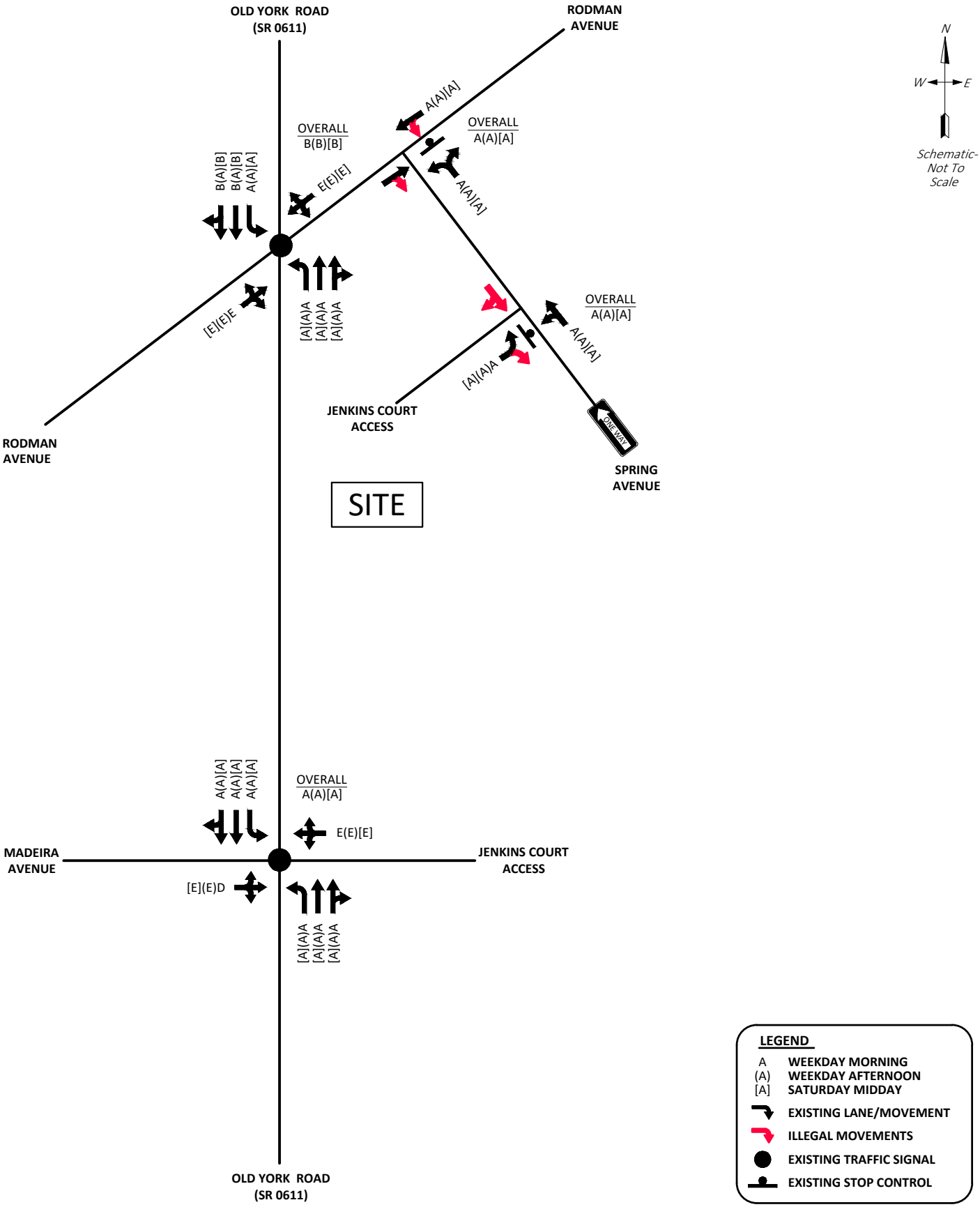


FIGURE 5E

2026 Future with Development Peak Hour Levels-of-Service - Existing Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

SKOZA - 08/21/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 5E.dwg

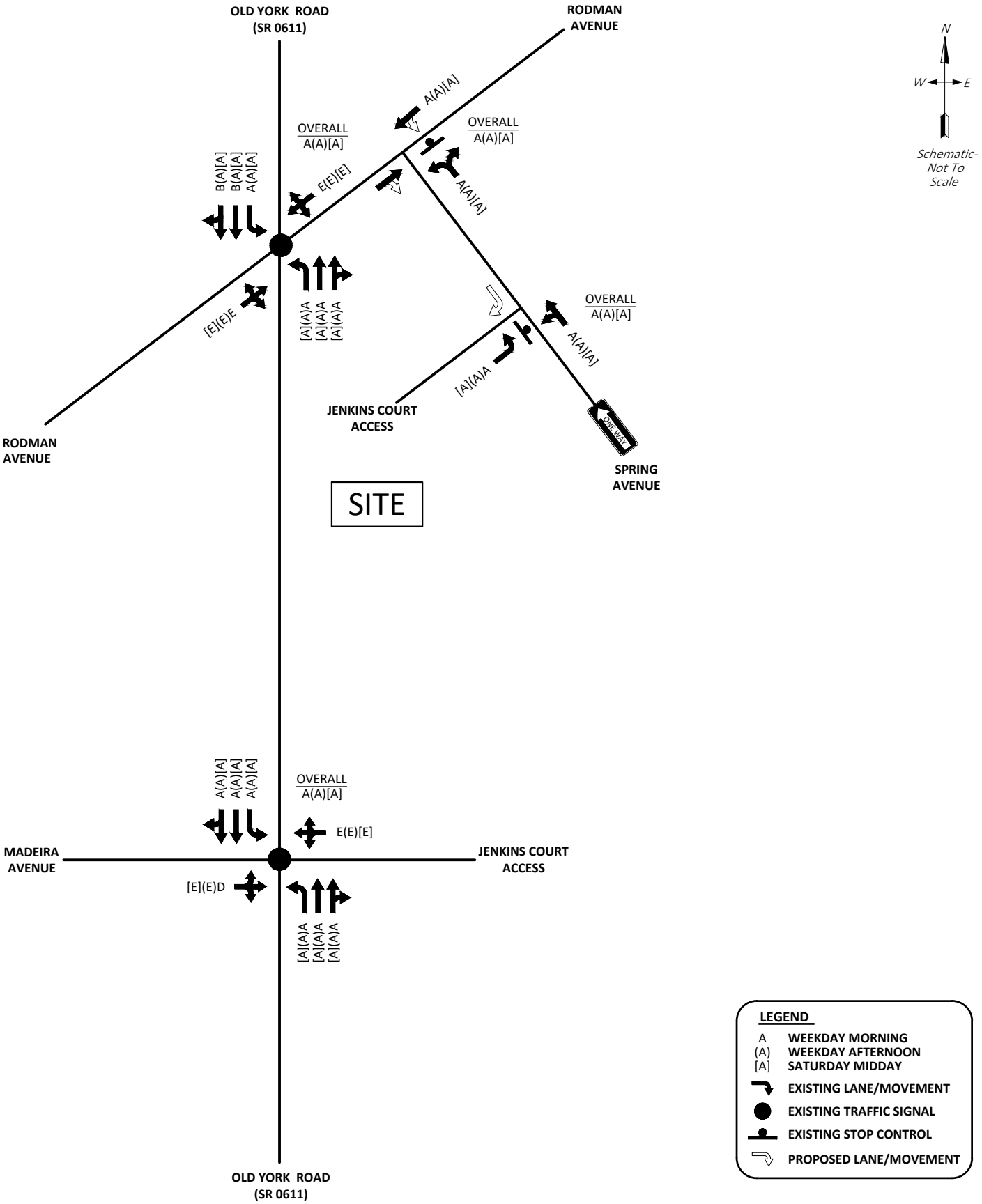


FIGURE 5F

2026 Future with Development Peak Hour Levels-of-Service - Modified Spring Access

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

SKOZA - 08/21/2023 - Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 5F.dwg

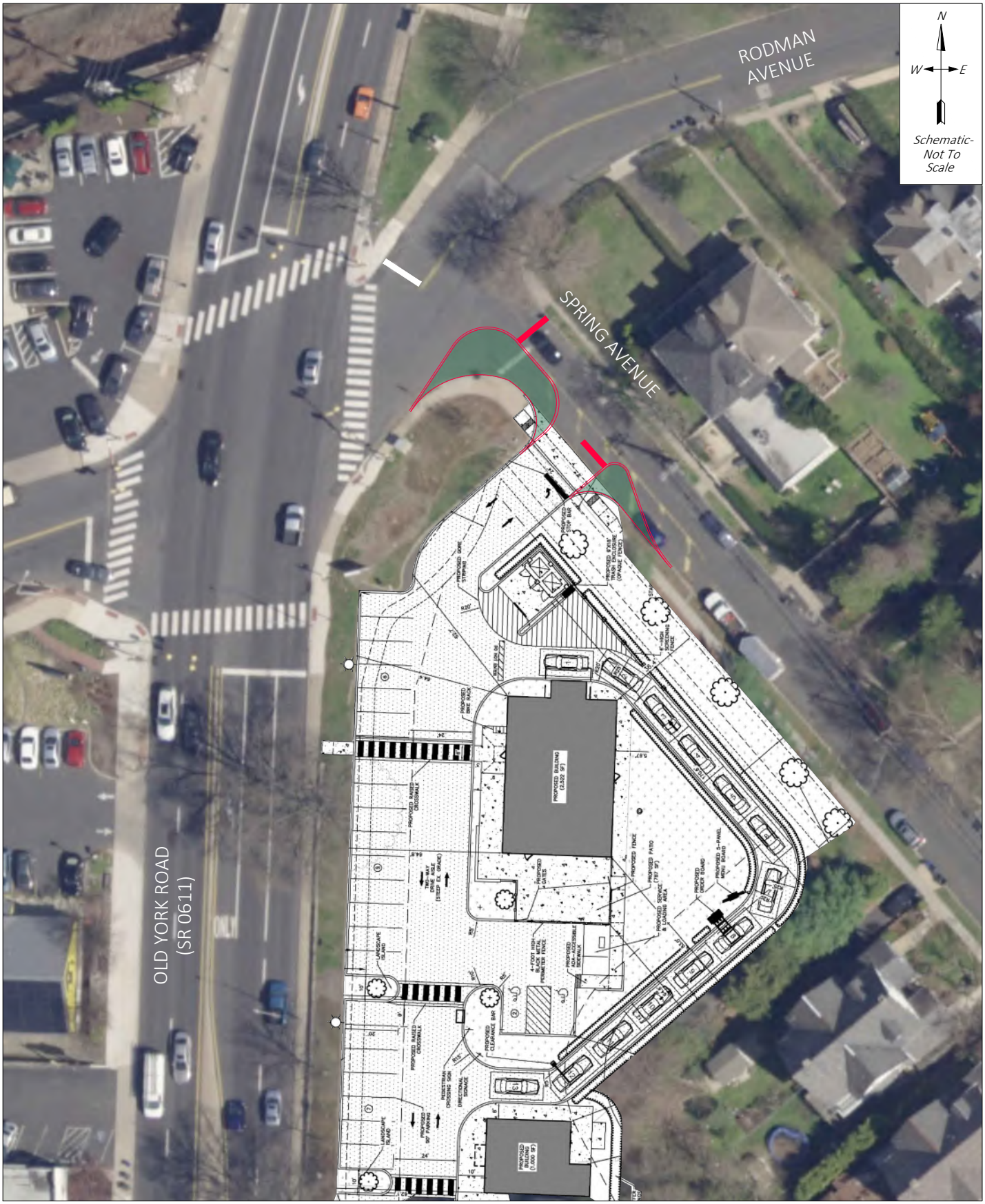


FIGURE 6A

Spring Avenue Access Configuration: One-Way Scenario

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 6AB.dwg

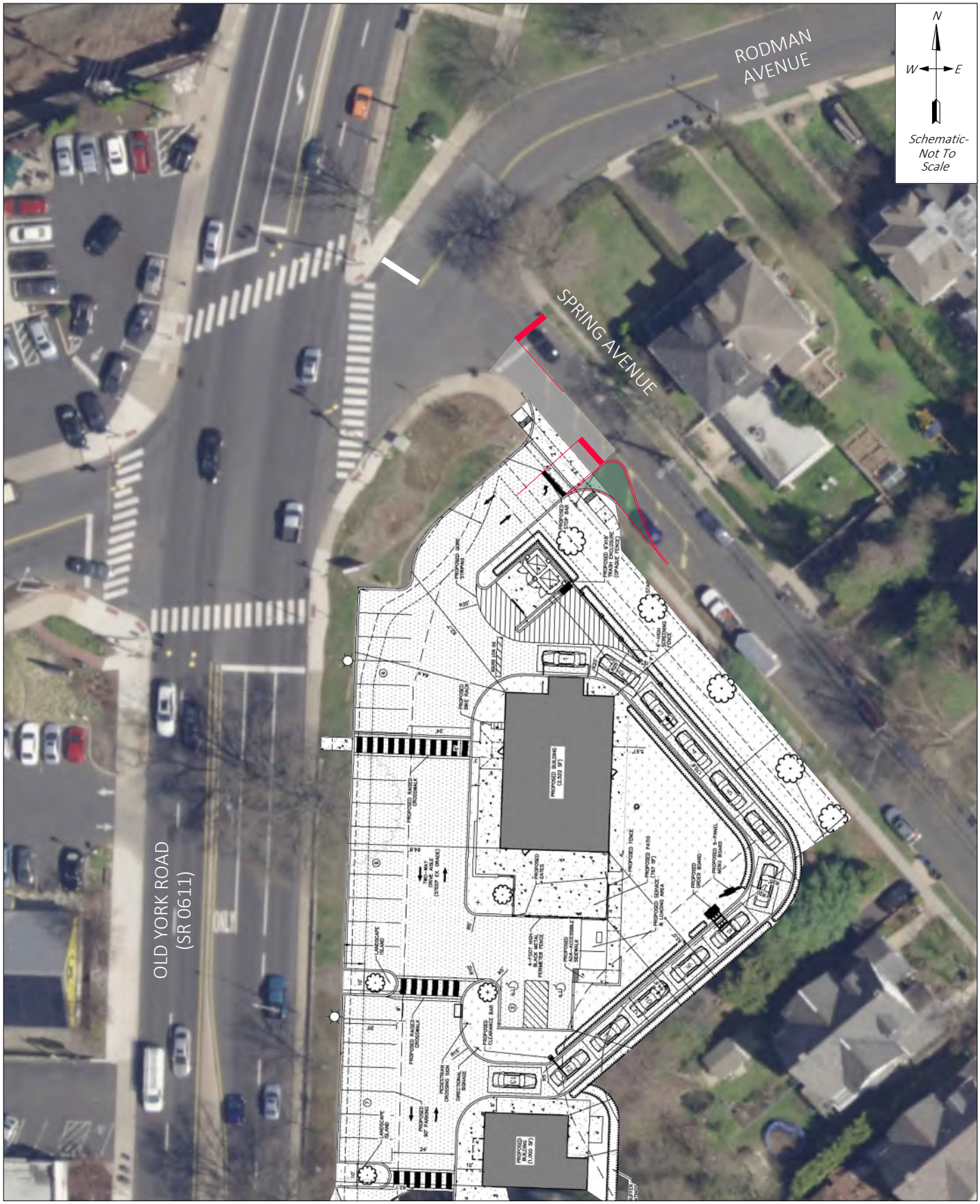


FIGURE 6B

Spring Avenue Access Configuration: Two-Way Scenario

JENKINS COURT PAD SITES

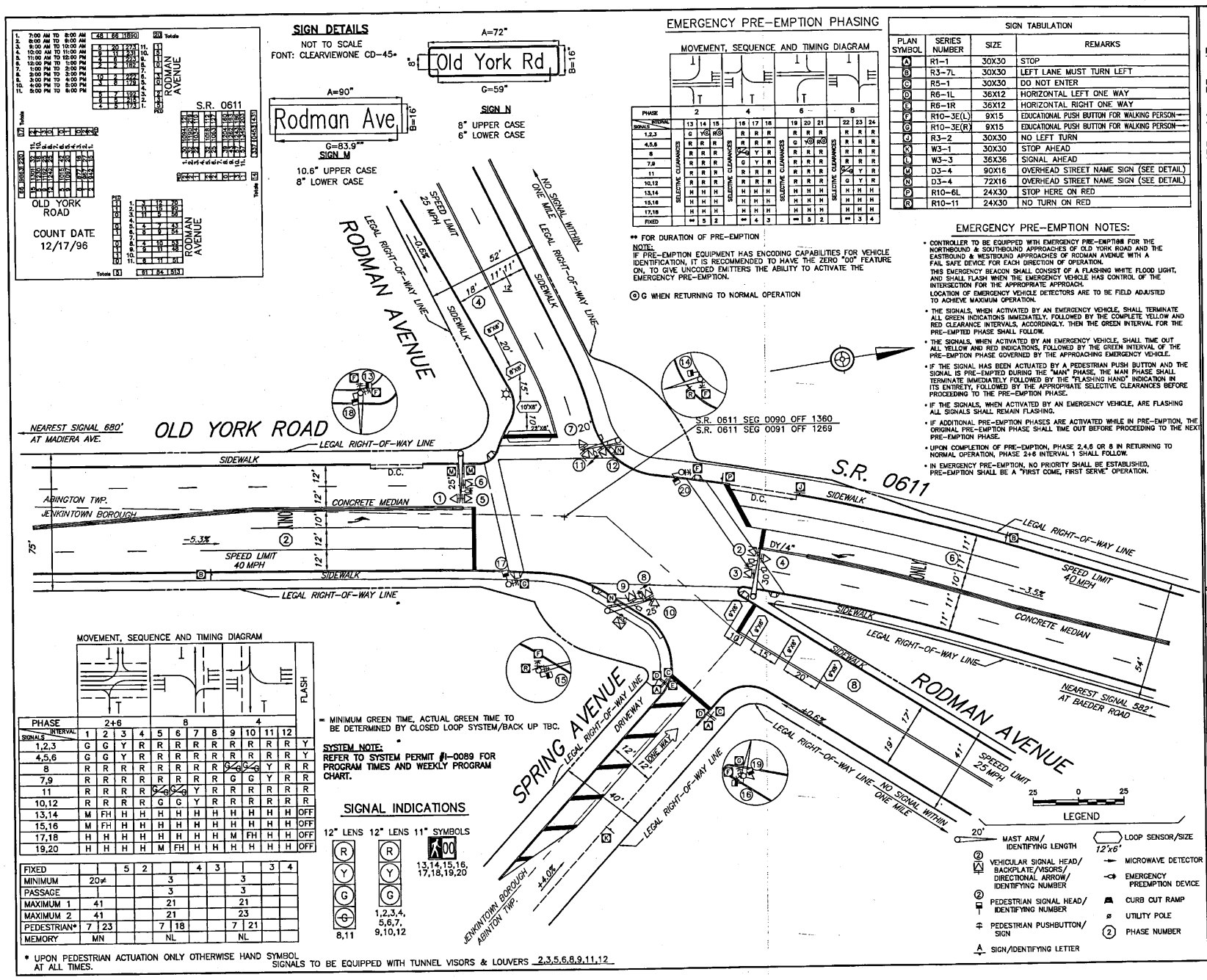
JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a **Bowman** company

SKOZA - 08/14/2023 - \\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figure 6AB.dwg

Appendix A

Intersection Inventory



GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

SYSTEM PERMIT #I-0089

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

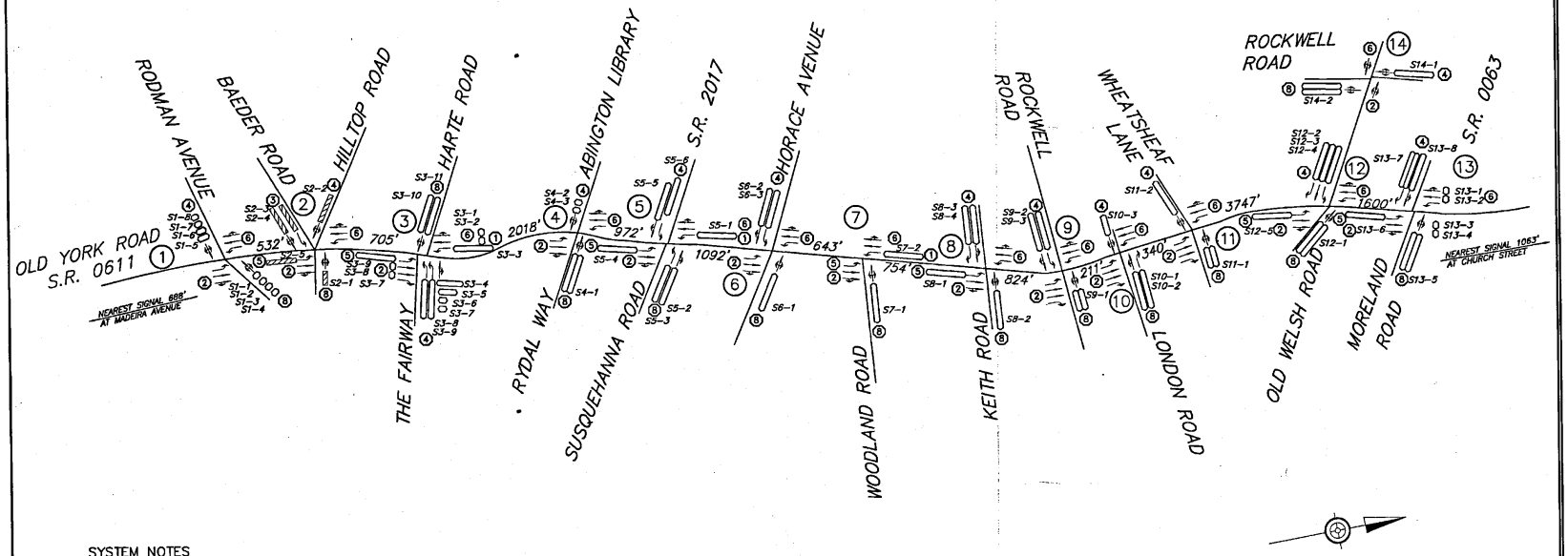
COUNTY: MONTGOMERY
MUNICIPALITY: ABINGTON TWP./JENKINTOWN BORO.
INTERSECTION: OLD YORK ROAD (S.R. 0611) AND RODMAN AVENUE

REVIEWED:
DATE
MUNICIPAL OFFICIAL DATE

RECOMMENDED:
PAUL LUTZ 1/14/04
DATE
LOUIS R. BELMONTE 1/14/04
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	AS-BUILT PLAN	JOO	12/28/09	DLA	4/21/10	ABP	4/29/10
2	ADD DOWNTOWN MAN/HANDS, UPDATE CLEARANCE, REF. VAS LOCATION, PRE-EMPTION SCHM.	KPL	2/16/15	DLA	6/4/15	ABP	6/4/15
3	CHANGE PHASE ORDER IN MST	KPL	8/12/15	DLA	8/14/15	ABP	8/14/15
4							
5							
6							
7							
8							

SHEET 2 OF 2 PERMIT # 64-0533 FILE # 0533



SYSTEM NOTES

1. PROGRAM TO BE SELECTED BY CLOSED LOOP SYSTEM (TIME OF DAY) OR TBC BACKUP.
2. OFFSETS ARE REFERENCED TO THE BEGINNING OF YELLOW PHASE 2 FOR THE FOLLOWING INTERSECTIONS: 1,2,3,4,5,6,7,8,9,10,11,12.

   OFFSETS ARE REFERENCED TO THE BEGINNING OF YELLOW PHASE 6 FOR THE FOLLOWING INTERSECTIONS: 13.

   OFFSETS ARE REFERENCED TO THE BEGINNING OF YELLOW PHASE 2+6 FOR THE FOLLOWING INTERSECTIONS: 14.
3. SYSTEM LIMITS : OLD YORK ROAD (13 INTERSECTIONS) – RODMAN AVENUE TO MORELAND ROAD MASTER: OLD YORK ROAD (S.R. 0611) & HORACE AVENUE
4. PRIMARY COORDINATION: SPREAD SPECTRUM RADIO FOR OLD YORK ROAD. PRIMARY COORDINATION: GPS TIME CLOCK FOR OLD WELSH ROAD & ROCKWELL ROAD. SECONDARY COORDINATION: TBC (DEFAULT TO BACKUP TBC)
5. SYSTEM IS DESIGNED FOR THE SYSTEM SOFTWARE: NAZTEC STREETWISE
6. THE ABINGTON TOWNSHIP CLOSED LOOP COMPUTER COMMUNICATES PERIODICALLY WITH THE MASTER CONTROLLERS IN CHELTENHAM, UPPER MORELAND AND HORSHAM TOWNSHIPS FOR SYSTEM MONITORING.
7. INTERSECTIONS TO BE COORDINATED WITH UPPER MORELAND TOWNSHIP SYSTEM PERMIT #I–0090, ZONE A AND JENKINTOWN BOROUGH SYSTEM PERMIT #I–0188.
8. SYSTEM LOOPS ARE FOR COUNT PURPOSES ONLY.
9. GPS TIME CLOCK LOCATED AT MASTER CONTROLLER.
10. PHONE DROP #215–572–3938.
11. REPEATERS LOCATED AT: OLD YORK ROAD & HARTE ROAD/ THE FAIRWAY, OLD YORK ROAD & RYDAL WAY/ ABINGTON LIBRARY, OLD YORK ROAD & ROCKWELL ROAD, OLD YORK ROAD & WHEATSHEAF LANE, OLD YORK ROAD & OLD WELSH ROAD.
12. INTERSECTIONS TO UTILIZE FLOATING FORCE OFF, EXCEPT FOR THE FOLLOWING WHICH UTILIZE FIXED FORCE OFF: OLD YORK & HARTE/THE FAIRWAY AND OLD YORK & RODMAN.

NOT TO SCALE

LEGEND

- SHORT INDUCTANCE LOOP DETECTOR
- LONG INDUCTANCE LOOP DETECTOR
- VIDEO DETECTION ZONE
- S1–1 SYSTEM INTERSECTION NUMBER/ SYSTEM DETECTOR NUMBER
- (2) INTERSECTION NUMBER
- (4) PHASE NUMBER

NOT TO SCALE

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BE ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.

TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

SET UP PENNDOT DISTRICT 6–0 COMPUTER WITH THE SYSTEM DATABASE AND GRAPHICS. MODIFY THE DATABASE AND GRAPHICS FOR SYSTEMS REVISIONS.

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

OBTAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC–8800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6–0

COUNTY: MONTGOMERY
MUNICIPALITY: ABINGTON TOWNSHIP
INTERSECTION: OLD YORK ROAD (S.R. 0611)
TRAFFIC SIGNAL SYSTEM

REVIEWED:
DATE
MUNICIPAL OFFICIAL DATE

RECOMMENDED:
DAVID ADAMS 4/20/10
ASHWIN PATEL 5/3/10
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVM.	DATE	REVM.	DATE	RECOM.	DATE
1	REVISED TIMINGS	BJD	8/22/12	DLA	10/3/12	ABP	10/5/12
2	ADD 5TH LEG & PHASE CHANGE AT INT 2; REVISE TIMINGS AT INT 1&3	TPD		DLA	4/22/14	ABP	4/23/14
3	ADD PROGRAM 4 & 5, ADD INT 14, REVISE ALL TIMINGS, REVISE NOTES	KPL	6/18/15	DLA	7/9/15	[illegible]	11/13/15
4							
5							
6							
7							
8							

SHEET # 1 OF 2 SYSTEM PERMIT # I–0089

CYCLE/SPLIT/OFFSET

	PROGRAM 1			PHASE									CYCLE	OFFSETS
	INTERSECTIONS	FILE #	MASTER	1	2	3	4	5	6	7	8	9		
1	OLD YORK & RODMAN	0533			53		32(SPLIT)		53		35(SPLIT)		120	60
2	OLD YORK & BAEDER/HILLTOP	0149			71	29(SPLIT)	20	14(LEAD)	57		20		120	60
3	OLD YORK & HARTE/FAIRWAY	0542		14(LEAD)	52		37(SPLIT)	14(LEAD)	52		17(SPLIT)		120	60
4	OLD YORK & RYDAL/LIBRARY	3558			72		38		72		38		110	20
5	OLD YORK & SUSQUEHANNA	0543		16(LEAD)	46		48	14(LEAD)	48		48		110	107
6	OLD YORK & HORACE	0541	*		73		37		73		37		110	17
7	OLD YORK & WOODLAND	0544		23(LEAD)	53		–	13(LEAD)	63		34		110	11
8	OLD YORK & KEITH	1992			79		31	13(LEAD)	66		31		110	64
9	OLD YORK & ROCKWELL	0545			68		42		68		42		110	68
10	OLD YORK & LONDON	0546			71		39		71		39		110	68
11	OLD YORK & WHEATSHEAF	0547			72		38		72		38		110	68
12	OLD YORK & OLD WELSH	0548			71		39	17(LEAD)	54		39		110	41
13	OLD YORK & MORELAND	0536			73		37	31(LEAD)	42		37		110	95
14	ROCKWELL & OLD WELSH	2426			33		22		33		22		60	25

	PROGRAM 2			PHASE									CYCLE	OFFSETS
	INTERSECTIONS	FILE #	MASTER	1	2	3	4	5	6	7	8	9		
1	OLD YORK & RODMAN	0533			53		32(SPLIT)		53		35(SPLIT)		120	44
2	OLD YORK & BAEDER/HILLTOP	0149			71	29(SPLIT)	20	14(LEAD)	57		20		120	53
3	OLD YORK & HARTE/FAIRWAY	0542		18(LEAD)	45		43(SPLIT)	14(LEAD)	49		14(SPLIT)		120	41
4	OLD YORK & RYDAL/LIBRARY	3558			82		38		82		38		120	99
5	OLD YORK & SUSQUEHANNA	0543		18(LEAD)	56		46	17(LEAD)	57		46		120	96
6	OLD YORK & HORACE	0541	*		87		33		87		33		120	33
7	OLD YORK & WOODLAND	0544		19(LEAD)	60			13(LEAD)	66		41		120	23
8	OLD YORK & KEITH	1992			87		33	19(LEAD)	68		33		120	7
9	OLD YORK & ROCKWELL	0545			75		45		75		45		120	24
10	OLD YORK & LONDON	0546			76		44		76		44		120	24
11	OLD YORK & WHEATSHEAF	0547			76		44		76		44		120	24
12	OLD YORK & OLD WELSH	0548			65		35	20(LEAD)	45		35		100	92
13	OLD YORK & MORELAND	0536			63		37	24(LEAD)	39		37		100	85
14	ROCKWELL & OLD WELSH	2426			29		21		29		21		50	30

	PROGRAM 3			PHASE									CYCLE	OFFSETS
	INTERSECTIONS	FILE #	MASTER	1	2	3	4	5	6	7	8	9		
1	OLD YORK & RODMAN	0533			63		32(SPLIT)		63		35(SPLIT)		130	58
2	OLD YORK & BAEDER/HILLTOP	0149			80	30(SPLIT)	20	14(LEAD)	66		20		130	58
3	OLD YORK & HARTE/FAIRWAY	0542		14(LEAD)	61		41(SPLIT)	14(LEAD)	61		14(SPLIT)		130	52
4	OLD YORK & RYDAL/LIBRARY	3558			84		36		84		36		120	18
5	OLD YORK & SUSQUEHANNA	0543		20(LEAD)	52		48	17(LEAD)	55		48		120	102
6	OLD YORK & HORACE	0541	*		76		44		76		44		120	117
7	OLD YORK & WOODLAND	0544		20(LEAD)	67			13(LEAD)	74		33		120	114
8	OLD YORK & KEITH	1992			89		31	13(LEAD)	76		31		120	46
9	OLD YORK & ROCKWELL	0545			79		41		79		41		120	49
10	OLD YORK & LONDON	0546			82		38		82		38		120	54
11	OLD YORK & WHEATSHEAF	0547			79		41		79		41		120	52
12	OLD YORK & OLD WELSH	0548			84		36	14(LEAD)	70		36		120	35
13	OLD YORK & MORELAND	0536			80		40	38(LEAD)	42		40		120	75
14	ROCKWELL & OLD WELSH	2426			38		22		38		22		60	5

	PROGRAM 4			PHASE									CYCLE	OFFSETS
	INTERSECTIONS	FILE #	MASTER	1	2	3	4	5	6	7	8	9		
1	OLD YORK & RODMAN	0533			53		32(SPLIT)		53		35(SPLIT)		120	8
2	OLD YORK & BAEDER/HILLTOP	0149			74	26(SPLIT)	20	14(LEAD)	60		20		120	119
3	OLD YORK & HARTE/FAIRWAY	0542		15(LEAD)	53		38(SPLIT)	14(LEAD)	54		14(SPLIT)		120	8
4	OLD YORK & RYDAL/LIBRARY	3558			84		36		84		36		120	94
5	OLD YORK & SUSQUEHANNA	0543		20(LEAD)	50		50	20(LEAD)	50		50		120	78
6	OLD YORK & HORACE	0541	*		78		42		78		42		120	115
7	OLD YORK & WOODLAND	0544		19(LEAD)	66			13(LEAD)	72		35		120	108
8	OLD YORK & KEITH	1992			87		33	14(LEAD)	73		33		120	41
9	OLD YORK & ROCKWELL	0545			76		44		76		44		120	36
10	OLD YORK & LONDON	0546			78		42		78		42		120	38
11	OLD YORK & WHEATSHEAF	0547			75		45		75		45		120	37
12	OLD YORK & OLD WELSH	0548			70		30	13(LEAD)	57		30		100	6
13	OLD YORK & MORELAND	0536			63		37	27(LEAD)	36		37		100	63
14	ROCKWELL & OLD WELSH	2426			29		21		29		21		50	45

	PROGRAM 5			PHASE									CYCLE	OFFSETS
	INTERSECTIONS	FILE #	MASTER	1	2	3	4	5	6	7	8	9		
1	OLD YORK & RODMAN	0533			53		32(SPLIT)		53		35(SPLIT)		120	4
2	OLD YORK & BAEDER/HILLTOP	0149			69	31(SPLIT)	20	14(LEAD)	55		20		120	0
3	OLD YORK & HARTE/FAIRWAY	0542		14(LEAD)	50		41(SPLIT)	14(LEAD)	50		15(SPLIT)		120	108
4	OLD YORK & RYDAL/LIBRARY	3558			54		36		54		36		90	32
5	OLD YORK & SUSQUEHANNA	0543		14(LEAD)	38		38	13(LEAD)	39		38		90	10
6	OLD YORK & HORACE	0541	*		57		33		57		33		90	39
7	OLD YORK & WOODLAND	0544		13(LEAD)	44			13(LEAD)	44		33		90	40
8	OLD YORK & KEITH	1992			59		31	13(LEAD)	46		31		90	58
9	OLD YORK & ROCKWELL	0545			49		41		49		41		90	67
10	OLD YORK & LONDON	0546			53		37		53		37		90	72
11	OLD YORK & WHEATSHEAF	0547			52		38		52		38		90	66
12	OLD YORK & OLD WELSH	0548			70		40	26(LEAD)	44		40		110	9
13	OLD YORK & MORELAND	0536			73		37	36(LEAD)	37		37		110	65
14	ROCKWELL & OLD WELSH	2426			70		40		70		40		110	12

NOTE:
1. ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
2. REFER TO SIGNAL PERMIT PLAN FOR MAX1, MAX2, CLEARANCE TIMES, AND PED TIMES.

WEEKLY PROGRAM CHART INTERSECTIONS 1–3

EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–7	00:00	–	–	* MAX 1	FREE
2	1–5	06:00	120	–	1	COORD
3	1–5	09:30	120	–	2	COORD
4	1–5	14:30	130	–	3	COORD
5	1–5	19:00	120	–	4	COORD
6	1–5	22:00	–	–	MAX 1	FREE
7	6,7	09:00	120	–	5	COORD
8	6,7	21:00	–	–	MAX 1	FREE

WEEKLY PROGRAM CHART INTERSECTIONS 4–11

EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–7	00:00	–	–	* MAX 1	FREE
2	1–5	06:00	110	–	1	COORD
3	1–5	09:30	120	–	2	COORD
4	1–5	14:30	120	–	3	COORD
5	1–5	19:00	120	–	4	COORD
6	1–5	22:00	–	–	MAX 1	FREE
7	6,7	09:00	90	–	5	COORD
8	6,7	21:00	–	–	MAX 1	FREE

WEEKLY PROGRAM CHART INTERSECTIONS 12–13

EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–7	00:00	–	–	* MAX 1	FREE
2	1–5	06:00	110	–	1	COORD
3	1–5	09:30	100	–	2	COORD
4	1–5	14:30	120	–	3	COORD
5	1–5	19:00	100	–	4	COORD
6	1–5	22:00	–	–	MAX 1	FREE
7	6,7	09:00	110	–	5	COORD
8	6,7	21:00	–	–	MAX 1	FREE

WEEKLY PROGRAM CHART INTERSECTION 14

EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–7	00:00	–	–	* MAX 1	FREE
2	1–5	06:00	60	–	1	COORD
3	1–5	09:30	50	–	2	COORD
4	1–5	14:30	60	–	3	COORD
5	1–5	19:00	50	–	4	COORD
6	1–5	22:00	–	–	MAX 1	FREE
7	6,7	09:00	110	–	5	COORD
8	6,7	21:00	–	–	MAX 1	FREE

MONDAY = DAY 1
OFFSET IN SECONDS

OFFSET REFERENCE TO START OF AMBER ON OLD YORK ROAD (PHASE 2+6)

*VARIOUS INTERSECTIONS OPERATE IN FLASH DURING NIGHT HOURS. SEE INDIVIDUAL SIGNAL PERMIT PLANS FOR DETAILS.

NOT TO SCALE

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BE ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.

TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

SET UP PENNDOT DISTRICT 6–0 COMPUTER WITH THE SYSTEM DATABASE AND GRAPHICS. MODIFY THE DATABASE AND GRAPHICS FOR SYSTEMS REVISIONS.

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

OBTAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC–8800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6–0

COUNTY: MONTGOMERY
MUNICIPALITY: ABINGTON TOWNSHIP
INTERSECTION: OLD YORK ROAD (S.R. 0611)
TRAFFIC SIGNAL SYSTEM

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

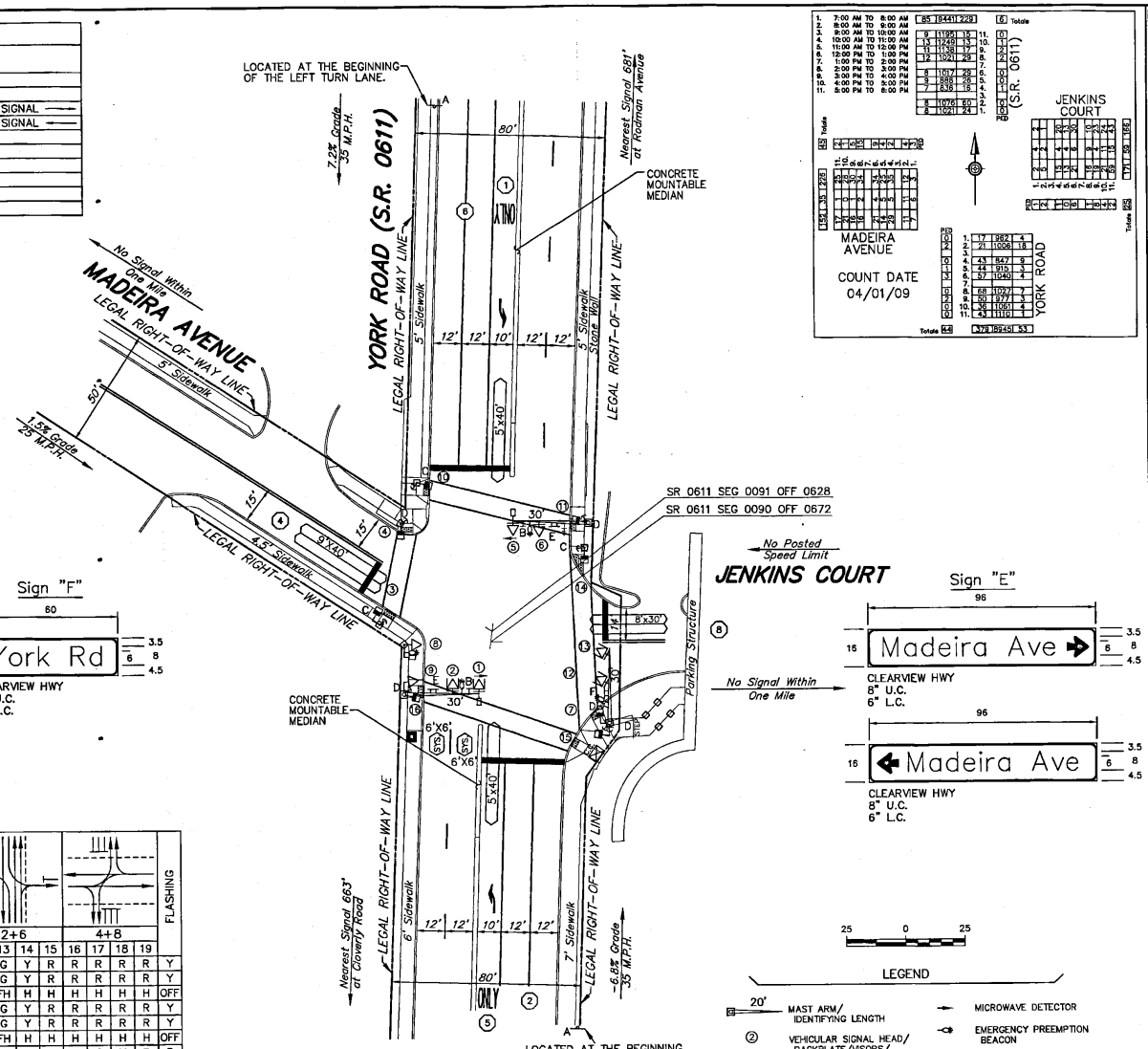
RECOMMENDED:
DAVID ADAMS 4/20/10

ASHWIN PATEL 5/3/10
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	REVISED TIMINGS	BJD	8/22/12	DLA	10/3/12	ABP	10/5/12
2	ADD 5TH LEG & PHASE CHANGE AT INT 2; REVISE TIMINGS AT INT 1&3	TPD		DLA	4/22/14	ABP	4/23/14
3	ADD PROGRAM 4 & 5, ADD INT 14, REVISE ALL TIMINGS	KPL	6/18/15	DLA	9/18/15	[illegible]	9/18/15
4							
5							
6							
7							
8							

SHEET # 2 OF 2 SYSTEM PERMIT # I–0089

SIGN TABULATION			
PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R3-7L	30"x30"	LEFT LANE MUST TURN LEFT
B	R10-12	30"x36"	LEFT TURN YIELD ON GREEN ●
C	R10-3E	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL
D	R10-3E	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL
E	D3-4	60"x16"	OVERHEAD STREET NAME
F	D3-4	96"x16"	OVERHEAD STREET NAME



GENERAL NOTES

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ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

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SYSTEM PERMIT # I-0188

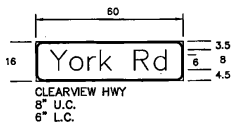
OPERATION NOTES

1. R/G IF FOLLOWED BY PHASE 1+6
2. R/G IF FOLLOWED BY PHASE 2+5
3. G/Y IF FOLLOWED BY PHASE 2+6
4. G IF FOLLOWED BY PHASE 2+6
5. M IF FOLLOWED BY PHASE 2+6
6. TIMING TO BE AS SHOWN IN PHASE 2+6. MAY TIME OUT IN THIS PHASE OR IN PHASE 2+6.

≠ MINIMUM GREEN TIME, ACTUAL GREEN TIME DETERMINED BY CYCLE LENGTH AND CLOSED LOOP SYSTEM.

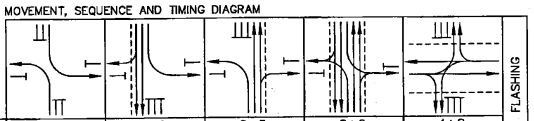
- REFER TO SYSTEM PERMIT #I-0188 FOR PROGRAM TIMES AND WEEKLY PROGRAM CHART.
- SIGNAL TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4+8.
- PEDESTRIAN COUNTDOWN TIMER TO COUNTDOWN DURING FLASHING HAND INTERVAL.

Sign "F"



Sign "E"

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

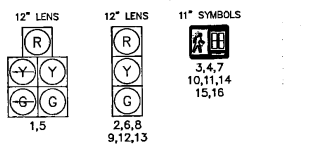


PHASE	1+5			1+6				2+5				2+6				4+8				FLASHING
INTERVAL / SIGNALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1	R/G	R/G	R/G	G/Y	G/Y	Y/G	R/G	R	R	R	R	G	G	Y	R	R	R	R	R	Y
2	R	R	R	G	G	Y/G	R/G	R	R	R	R	G	G	Y	R	R	R	R	R	Y
3,4	H	H	H	M	FH/G	H/G	H/G	H	H	H	H	M	FH	H	H	H	H	H	H	OFF
5	R/G	R/G	R/G	R	R	R	R	G/Y	G/Y	R/G	R/G	G	G	Y	R	R	R	R	R	Y
6	R	R	R	R	R	R	R	G	G	Y/G	R/G	G	G	Y	R	R	R	R	R	Y
7,14	H	H	H	H	H	H	H	M	FH/G	H/G	H/G	M	FH	H	H	H	H	H	H	OFF
8,9	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R
10,11	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	FH	H	H	OFF
12,13	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R
15,16	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	M	FH	H	H	OFF

FIXED		4	2			4	2			4	2			4	2			3	3	
MINIMUM	3				3				3				22≠				3			
PASSAGE	3				3				3								3			
MAXIMUM 1	7				7				7								16			
MAXIMUM 2	7				7				7								22			
PEDESTRIAN*					6				6			7	18			7	19			
MEMORY	NL				NL				NL				MX				NL			

* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE H AT ALL TIMES.

SIGNAL INDICATIONS



SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS 12,13

SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS & LOUVERS 1,2

LEGEND

- 20' MAST ARM/ IDENTIFYING LENGTH
- VEHICULAR SIGNAL HEAD/ BACKPLATE/VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- A SIGN/IDENTIFYING LETTER
- 12'x6' LOOP SENSOR/SIZE
- MICROWAVE DETECTOR
- EMERGENCY PREEMPTION BEACON
- EMERGENCY PREEMPTION DETECTOR
- UTILITY POLE
- PHASE NUMBER
- INLET
- 15' LUMINAIRE/LENGTH
- YAGI WIRELESS INTERCONNECT ANTENNA
- OMNI WIRELESS INTERCONNECT ANTENNA

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: MONTGOMERY

MUNICIPALITY: ABINGTON TWP/JENKINTOWN BOROUGH

INTERSECTION: YORK ROAD (S.R. 0611), MADEIRA AVENUE AND JENKINS COURT

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

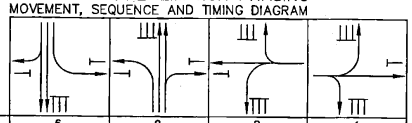
Mark L. Kray 01/08/97
DATE

L.R. Belmonte 01/08/97
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	Updated Timing & Coordination	JJF	1/8/97	MLK	1/8/97	DWM	1/8/97
2	Signal Interconnect, ADA Ramps, New Pedestals, Pre-Emption, New Signal Heads	PAJ	12/22/08	DLA	1/19/10	ABP	1/25/10
3	UPDATE PER EXISTING CONDITIONS. UPDATE NOTES	KPL	5/11/15	DLA	7/31/15	ABP	7/31/15
4							
5							
6							
7							
8							

SHEET 2 OF 3 | PERMIT # 64-0551 | FILE # 0551

EMERGENCY PRE-EMPTION PHASING
MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	6			2			8			4		
SIGNALS \ INTERVAL	20	21	22	23	24	25	26	27	28	29	30	31
1	G/~~G~~	Y	R	R	R	R	R	R	R	R	R	R
2	G	Y	R	R	R	R	R	R	R	R	R	R
3,4	H	H	H	H	H	H	H	H	H	H	H	H
5	R	R	R	G/~~G~~	Y	R	R	R	R	R	R	R
6	R	R	R	G	Y	R	R	R	R	R	R	R
7,14	H	H	H	H	H	H	H	H	H	H	H	H
8,9	R	R	R	R	R	R	G	Y	R	R	R	R
10,11	H	H	H	H	H	H	H	H	H	H	H	H
12,13	R	R	R	R	R	R	R	R	R	G	Y	R
15,16	H	H	H	H	H	H	H	H	H	H	H	H
FIXED TIME	*	4	2	*	4	2	*	3	3	*	3	3

* FOR DURATION OF PRE-EMPTION

NOTE: IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

ⓐ SIGNAL TO INDICATE G WHEN RETURNING TO NORMAL OPERATION.
ⓑ SIGNAL TO INDICATE G/~~G~~ WHEN RETURNING TO NORMAL OPERATION.

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND & SOUTHBOUND APPROACHES OF YORK ROAD (S.R. 0611), AND THE EASTBOUND & WESTBOUND APPROACHES OF MADEIRA AVENUE/JENKINS COURT, WITH A FLASHING FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.

  THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS ACCORDINGLY, FOLLOWED BY THE GREEN INTERVAL FOR THE PREEMPTED PHASE.
- IF THE SIGNALS ARE IN EITHER YELLOW OR RED CLEARANCE, THE CLEARANCE TIMES SHALL BE COMPLETED BEFORE THE GREEN INTERVAL OF THE PRE-EMPTION PHASE OCCURS.
- IF THE SIGNALS ARE FLASHING WHEN ACTIVATED BY AN EMERGENCY VEHICLE ALL SIGNALS SHALL REMAIN FLASHING.
- UPON COMPLETION OF PRE-EMPTION PHASE 2, 4, 6 OR 8, IN RETURNING TO NORMAL OPERATION PHASE 2+6 INTERVAL 12 SHALL FOLLOW.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION.
- THE FIELD LOCATIONS OF THE PRE-EMPTION DETECTORS MAY DIFFER FROM THE LOCATIONS DEPICTED ON THE CONDITION DIAGRAM, AS THE DETECTORS MAY NEED TO BE RELOCATED AND/OR ADJUSTED TO PROVIDE ACCEPTABLE OPERATION AS DEEMED APPROPRIATE BY DEPARTMENT PERSONNEL.
- IF THE SIGNAL HAS BEEN ACTUATED BY A PEDESTRIAN PUSH BUTTON, AND THE SIGNAL IS PRE-EMPTED, THE PED "WALK (MAN)" INTERVAL SHALL TERMINATE IMMEDIATELY AND THE PED "CLEAR (FLASHING HAND AND COUNTDOWN TIMER)" INTERVAL SHALL TIME OUT THIS INTERVAL FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES, BEFORE GOING INTO EMERGENCY PRE-EMPTION PHASE.

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POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

SYSTEM PERMIT # I-0188

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: MONTGOMERY
MUNICIPALITY: JENKINTOWN BOROUGH
INTERSECTION: YORK ROAD (S.R. 0611),
MADEIRA AVENUE AND JENKINS COURT

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

Mark L. Kray 01/08/97
DATE

L.R. Belmonte 01/08/97
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	Updated Timing & Coordination	JJF	1/8/97	MLK	1/8/97	DWM	1/8/97
2	Signal Interconnect, ADA Ramps, New Pedestals, Pre-Emption, New Signal Heads	PAV	12/22/98	DLA	1/19/10	ABP	1/25/10
3	UPDATE PER EXISTING CONDITIONS, UPDATE NOTES	KPL	6/11/15	DLA	7/23/16	[illegible]	7/26/16
4							
5							
6							
7							
8							

SHEET 3 OF 3 | PERMIT # 64-0551 | FILE # 0551

WEEKLY PROGRAM CHART INTERSECTIONS 1–4 & 6–7						
EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–7	00:00	–	–	* MAX 1	FREE
2	1–5	06:00	120	–	1	COORD
3	1–5	09:30	120	–	2	COORD
4	1–5	14:30	130	–	3	COORD
5	1–5	19:00	120	–	4	COORD
6	1–5	22:00	–	–	MAX 1	FREE
7	6,7	09:00	120	–	5	COORD
8	6,7	21:00	–	–	MAX 1	FREE

WEEKLY PROGRAM CHART INTERSECTION 5						
EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–7	00:00	–	–	* MAX 1	FREE
2	1–5	06:00	60	–	1	COORD
3	1–5	09:30	60	–	2	COORD
4	1–5	14:30	65	–	3	COORD
5	1–5	19:00	60	–	4	COORD
6	1–5	22:00	–	–	MAX 1	FREE
7	6,7	09:00	60	–	5	COORD
8	6,7	21:00	–	–	MAX 1	FREE

WEEKLY PROGRAM CHART INTERSECTION 8						
EVENT	DAY	TIME	CYCLE	OFFSET	PROGRAM	REMARKS
1	1–7	00:00	–	–	* MAX 1	FREE
2	1–5	06:00	120	–	1	COORD
3	1–5	09:30	120	–	2	COORD
4	1–5	14:30	130	–	3	COORD
5	1–5	19:00	120	–	4	COORD
6	1–5	22:00	–	–	MAX 1	FREE
7	6,7	09:00	120	–	5	COORD
8	6,7	21:00	–	–	MAX 1	FREE

* DAY 1 = MONDAY

Notes: – ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
– REFER TO SIGNAL PERMIT PLANS FOR MAX TIMINGS.

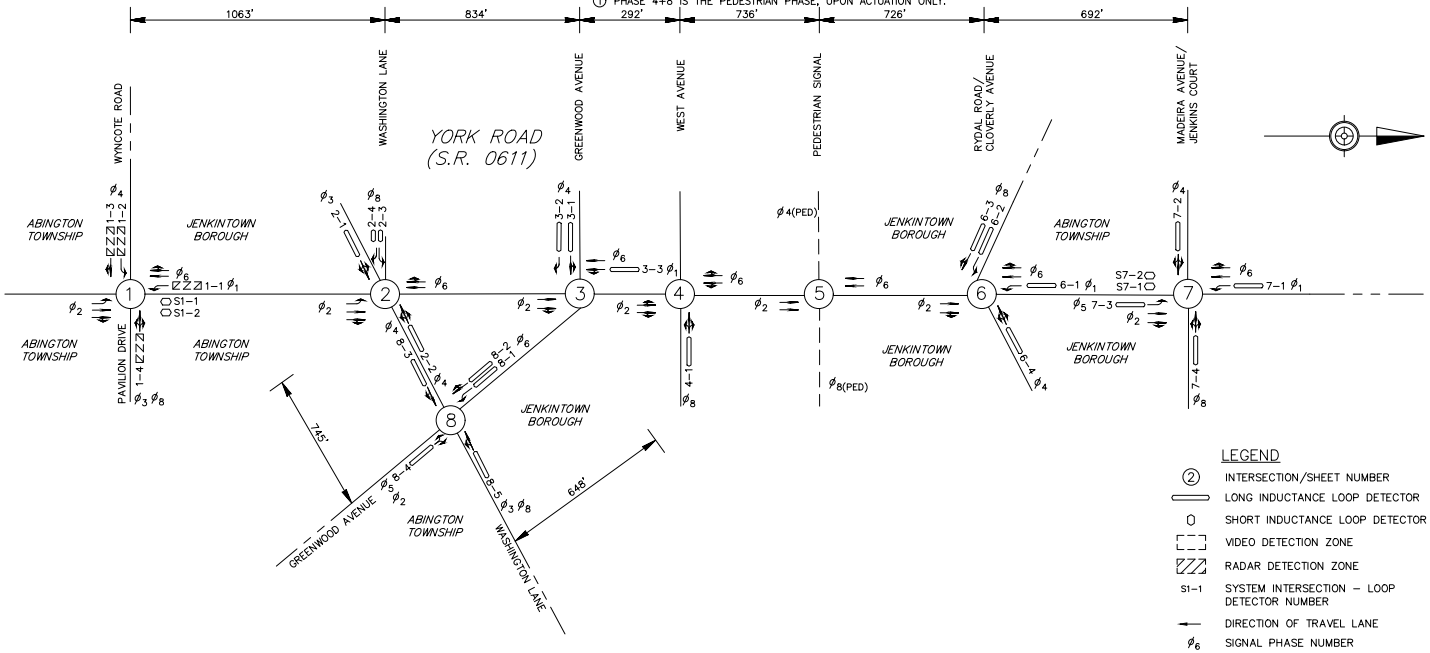
SYSTEM NOTES

1. OFFSETS ARE REFERENCED TO THE BEGINNING OF YELLOW (PHASE 2+6) FOR THE FOLLOWING INTERSECTIONS: 5,6,7. OFFSETS ARE REFERENCED TO THE BEGINNING OF YELLOW (PHASE 2) FOR THE FOLLOWING INTERSECTIONS: 1,2,3,4,8.
2. YORK ROAD (SR 0611) SYSTEM LIMITS FROM WYNCOTE ROAD/ PAVILION DRIVE TO MADEIRA AVENUE/JENKINS COURT. GREENWOOD AVENUE (SR 2021) SYSTEM LIMITS FROM YORK ROAD (SR 0611) TO WASHINGTON LANE.
3. PRIMARY COORDINATION: CLOSED LOOP SYSTEM
4. MEANS OF INTERCONNECTION: SPREAD SPECTRUM RADIO
5. CYCLE OFFSETS AND SPLITS ARE IN SECONDS.
6. INTERSECTION TO UTILIZE FLOATING FORCE OFF, EXCEPT FOR THE FOLLOWING WHICH UTILIZE FIXED: OLD YORK & WASHINGTON AND OLD YORK & RYDAL/CLOVERLY.
7. PHONE DROP #215–690–4065.

Cycle/Split/Offset

PROGRAM 1 = AM PEAK	File #	MASTER	Phase									PED	CYCLE	OFFSETS
Intersections			1	2	3	4	5	6	7	8	10			
1 YORK & WYNCOTE/PAVILION	1482		15(LEAD)	57	13(LEAD)	35	–	72	–	48	–		120	78
2 YORK & WASHINGTON	0371	*	–	47	26(SPLIT)	31(SPLIT)	–	47	–	16	–		120	29
3 YORK & GREENWOOD	0549		13(LEAD)	72	–	35	–	85	–	–	–		120	52
4 YORK & WEST	0550		–	75	–	–	–	75	–	45	–		120	51
5 YORK BETWEEN HOMESTEAD & VISTA	3431		–	36	–	24 ①	–	36	–	24 ①	–		60	0
6 YORK & RYDAL/CLOVERLY	0534		14(LEAD)	38	–	34(SPLIT)	–	52	–	34(SPLIT)	–		120	100
7 YORK & MADEIRA/JENKINS	0551		17(LEAD)	70	–	33	13(LEAD)	74	–	33	–		120	108
8 WASHINGTON & GREENWOOD	1089		–	75	13(LEAD)	32	13(LEAD)	62	–	45	–		120	54
PROGRAM 2 = MID-DAY PEAK	File #		Phase									PED	Cycle	Offset
Intersections			1	2	3	4	5	6	7	8	10			
1 YORK & WYNCOTE/PAVILION	1482		17(LEAD)	49	13(LEAD)	41	–	66	–	54	–		120	97
2 YORK & WASHINGTON	0371	*	–	37	25(SPLIT)	30(SPLIT)	–	37	–	28	–		120	36
3 YORK & GREENWOOD	0549		13(LEAD)	76	–	31	–	89	–	–	–		120	61
4 YORK & WEST	0550		–	76	–	–	–	76	–	44	–		120	58
5 YORK BETWEEN HOMESTEAD & VISTA	3431		–	36	–	24 ①	–	36	–	24 ①	–		60	38
6 YORK & RYDAL/CLOVERLY	0534		14(LEAD)	38	–	34(SPLIT)	–	52	–	34(SPLIT)	–		120	101
7 YORK & MADEIRA/JENKINS	0551		14(LEAD)	71	–	35	14(LEAD)	71	–	35	–		120	110
8 WASHINGTON & GREENWOOD	1089		–	70	8(LEAD)	42	9(LEAD)	61	–	50	–		120	89
PROGRAM 3 = PM PEAK	File #		Phase									PED	Cycle	Offset
Intersections			1	2	3	4	5	6	7	8	10			
1 YORK & WYNCOTE/PAVILION	1482		14(LEAD)	50	13(LEAD)	53	–	64	–	66	–		130	115
2 YORK & WASHINGTON	0371	*	–	50	22(SPLIT)	30(SPLIT)	–	50	–	28	–		130	45
3 YORK & GREENWOOD	0549		24(LEAD)	71	–	35	–	95	–	–	–		130	69
4 YORK & WEST	0550		–	88	–	–	–	88	–	42	–		130	69
5 YORK BETWEEN HOMESTEAD & VISTA	3431		–	41	–	24 ①	–	41	–	24 ①	–		65	13
6 YORK & RYDAL/CLOVERLY	0534		14(LEAD)	48	–	34(SPLIT)	–	62	–	34(SPLIT)	–		130	118
7 YORK & MADEIRA/JENKINS	0551		13(LEAD)	81	–	36	13(LEAD)	81	–	36	–		130	2
8 WASHINGTON & GREENWOOD	1089		–	35	13(LEAD)	17	13(LEAD)	22	–	30	–		65	56
PROGRAM 4 = PM OFF-PEAK	File #		Phase									PED	Cycle	Offset
Intersections			1	2	3	4	5	6	7	8	10			
1 YORK & WYNCOTE/PAVILION	1482		13(LEAD)	47	13(LEAD)	47	–	60	–	60	–		120	42
2 YORK & WASHINGTON	0371	*	–	41	21(SPLIT)	30(SPLIT)	–	41	–	28	–		120	118
3 YORK & GREENWOOD	0549		13(LEAD)	75	–	32	–	88	–	–	–		120	0
4 YORK & WEST	0550		–	81	–	–	–	81	–	39	–		120	115
5 YORK BETWEEN HOMESTEAD & VISTA	3431		–	36	–	24 ①	–	36	–	24 ①	–		60	25
6 YORK & RYDAL/CLOVERLY	0534		14(LEAD)	38	–	34(SPLIT)	–	52	–	34(SPLIT)	–		120	39
7 YORK & MADEIRA/JENKINS	0551		13(LEAD)	71	–	36	15(LEAD)	69	–	36	–		120	10
8 WASHINGTON & GREENWOOD	1089		–	31	11(LEAD)	18	11(LEAD)	20	–	29	–		60	30
PROGRAM 5 = WEEKEND PEAK	File #		Phase									PED	Cycle	Offset
Intersections			1	2	3	4	5	6	7	8	10			
1 YORK & WYNCOTE/PAVILION	1482		17(LEAD)	57	13(LEAD)	33	–	74	–	46	–		120	106
2 YORK & WASHINGTON	0371	*	–	36	26(SPLIT)	30(SPLIT)	–	36	–	28	–		120	109
3 YORK & GREENWOOD	0549		13(LEAD)	76	–	31	–	89	–	–	–		120	81
4 YORK & WEST	0550		–	80	–	–	–	80	–	40	–		120	77
5 YORK BETWEEN HOMESTEAD & VISTA	3431		–	36	–	24 ①	–	36	–	24 ①	–		60	54
6 YORK & RYDAL/CLOVERLY	0534		14(LEAD)	38	–	34(SPLIT)	–	52	–	34(SPLIT)	–		120	63
7 YORK & MADEIRA/JENKINS	0551		14(LEAD)	71	–	35	14(LEAD)	71	–	35	–		120	9
8 WASHINGTON & GREENWOOD	1089		–	30	11(LEAD)	19	11(LEAD)	19	–	30	–		60	3

① PHASE 4+8 IS THE PEDESTRIAN PHASE, UPON ACTUATION ONLY.



LEGEND

- ② INTERSECTION/SHEET NUMBER
- LONG INDUCTANCE LOOP DETECTOR
- SHORT INDUCTANCE LOOP DETECTOR
- VIDEO DETECTION ZONE
- RADAR DETECTION ZONE
- S1–1 SYSTEM INTERSECTION – LOOP DETECTOR NUMBER
- DIRECTION OF TRAVEL LANE
- ϕ_6 SIGNAL PHASE NUMBER

N.T.S

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BE ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.

TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

SET UP PENNDOT DISTRICT 6–0 COMPUTER WITH THE SYSTEM DATABASE AND GRAPHICS. MODIFY THE DATABASE AND GRAPHICS FOR SYSTEMS REVISIONS.

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

OBTAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC–8800 SERIES.

SYSTEM PERMIT PLAN

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6–0

COUNTY: MONTGOMERY
MUNICIPALITY: JENKINTOWN BOROUGH/ABINGTON TWP
INTERSECTION: YORK ROAD (SR 0611)
FROM WYNCOTE ROAD TO MADEIRA ROAD

REVIEWED: 1/30/2020 DATE
George Locke, Borough Manager
MUNICIPAL OFFICIAL DATE

RECOMMENDED:
DAVID L. ADAMS 1/19/10
ASHWIN B. PATEL 1/25/10
DISTRICT TRAFFIC ENGINEER DATE

NO.	REVISION	DES./ REVIK.	DATE	REVIK.	DATE	RECOM.	DATE
1	REVISED GREENWOOD AVE SEQUENCE	PAI	4/14/14	DLA	6/9/14	ABP	6/16/14
2	ADD PROGRAMS 4 & 5, REVISE TIMINGS, REVISE NOTES	KPL	6/16/15	DLA	9/4/15	ABP	9/4/15
3	REVISED INTERSECTION 1 DETECTION	MCM					
4							
5							
6							
7							
8							

SHEET 1 OF 1 PERMIT # I–0188

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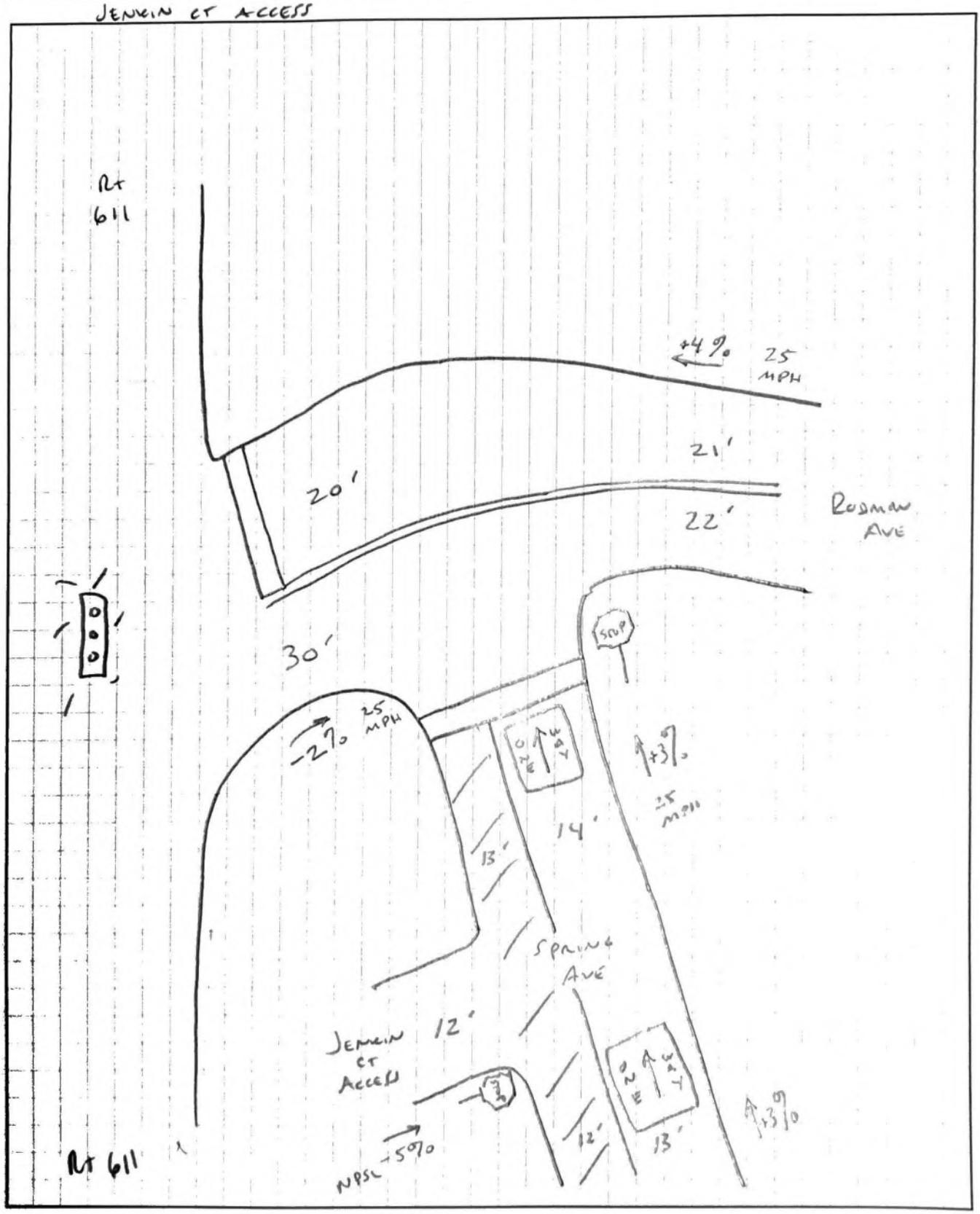
McMAHON
a Bowman company

Job _____ McMahon Project No. _____ Sheet _____ of _____

Description SPRING AVE + ROSMAN AVE + JENKIN CT ACCESS

Designed By NDB Date _____

Checked By _____ Date _____



Intersection of SR 0611 and Rodman Avenue

Photo 1 –NB Approach

Photo 2 –NB Approach

Intersection of SR 0611 and Rodman Avenue

Photo 3 –SB Approach

Photo 4 –SB Approach

Intersection of SR 0611 and Rodman Avenue

Photo 5 –EB Approach

Photo 6 –EB Approach

Intersection of SR 0611 and Rodman Avenue

Photo 7 –WB Approach

Photo 8 –WB Approach

Intersection of SR 0611 and Madeira Avenue/Jenkins Court Access

Photo 1 –NB Approach

Photo 2 –NB Approach

Intersection of SR 0611 and Madeira Avenue/Jenkins Court Access

Photo 3 –SB Approach

Photo 4 –SB Approach

Intersection of SR 0611 and Madeira Avenue/Jenkins Court Access

Photo 5 –EB Approach

Photo 6 –EB Approach

Intersection of SR 0611 and Madeira Avenue/Jenkins Court Access

Photo 7 –WB Approach

Photo 8 –WB Approach

Rodman Avenue and Spring Avenue/Jenkins Court Access

Photo 1 –NB Approach (Spring Avenue with Access on Left)

Photo 2 –NB Approach (Spring Avenue with Access on Left)

Rodman Avenue and Spring Avenue/Jenkins Court Access

Photo 3 –Site Access

Rodman Avenue and Spring Avenue/Jenkins Court Access

Photo 4 –WB Approach (Rodman toward 611 Signal)

Photo 6 – WB Approach (Rodman toward 611 Signal)

Appendix B

PennDOT TIRe Data

TMS Site 3859: Traffic Monitoring Report

Location Description: Please provide segment/offset or coordinates.

Details

Type of Count	MACHINE CLASS
Type of Site	Portable
Schedule	1 TIME/YR
Duration	24 HRS
Frequency Cycle	03
Cycle Year	03

Location

County	MONTGOMERY (46)
Route	0611
Segment	0080
Offset	1182
Latitude	40.09599
Longitude	-75.12576

Map

Traffic Data

Timeframe: **All Years**

Traffic Report Summary

Date	Volume	Truck Volume	Truck %	Volume Graph
Sep 29, 2020*	23,012	1,930	8.4	
Nov 13, 2019	36,075	705	2	
July 17, 2012	33,960			
July 16, 2009	34,308			
July 26, 2006	32,575			
July 09, 2003	35,825			
July 25, 2000	33,783			
Nov 17, 1998	32,876			
Jun 04, 1996	35,530			
Nov 10, 1992	43,185			

⚠ **Note: Traffic volumes and classification breakdowns may be lower than normal due to the COVID-19 pandemic.**

Both Directions of Travel: November 13, 2019

TMS Site 3859: Traffic Monitoring Report

Location Description: Please provide segment/offset or coordinates.

Details	
Type of Count	MACHINE CLASS
Type of Site	Portable
Schedule	1 TIME/YR
Duration	24 HRS
Frequency Cycle	03
Cycle Year	03

Location	
County	MONTGOMERY (46)
Route	0611
Segment	0080
Offset	1182
Latitude	40.09599
Longitude	-75.12576

Map

Traffic Data

Timeframe: All Years / Nov 13, 2019

Hourly Traffic for Nov 13, 2019

Direction: Both Directions / North , South

Show All Classes: ☐

Hour	Volume	Trucks	Truck %	Volume Graph
12:00 AM	226	4	1.8	
01:00 AM	139	4	2.9	
02:00 AM	137	1	0.7	
03:00 AM	155	6	3.9	
04:00 AM	251	11	4.4	
05:00 AM	771	23	3	
06:00 AM	1,816	43	2.4	
07:00 AM	2,338	52	2.2	
08:00 AM	2,342	53	2.3	
09:00 AM	2,133	59	2.8	
10:00 AM	1,979	55	2.8	
11:00 AM	2,072	40	1.9	
12:00 PM	1,997	45	2.3	
01:00 PM	2,116	57	2.7	
02:00 PM	2,233	46	2.1	
03:00 PM	2,380	43	1.8	
04:00 PM	2,555	38	1.5	
05:00 PM	2,584	36	1.4	
06:00 PM	2,374	32	1.3	
07:00 PM	1,664	16	1	
08:00 PM	1,432	12	0.8	
09:00 PM	1,072	12	1.1	
10:00 PM	786	10	1.3	
11:00 PM	523	7	1.3	
	36,075			

Northbound Only: : November 13, 2019

Traffic Data

Timeframe: All Years / Nov 13, 2019

Northbound Hourly Traffic for Nov 13, 2019

Direction: Both Directions / North , South

Lane: All Lanes / 1 , 2

Show All Classes: ☐

Hour	Volume	Trucks	Truck %	Volume Graph
12:00 AM	81	1	1.2	
01:00 AM	68	1	1.5	
02:00 AM	48	1	2.1	
03:00 AM	79	4	5.1	
04:00 AM	158	5	3.2	
05:00 AM	416	12	2.9	
06:00 AM	866	15	1.7	
07:00 AM	1,062	16	1.5	
08:00 AM	1,059	27	2.5	
09:00 AM	1,022	28	2.7	
10:00 AM	1,004	21	2.1	
11:00 AM	1,038	19	1.8	
12:00 PM	961	18	1.9	
01:00 PM	1,003	23	2.3	
02:00 PM	1,036	24	2.3	
03:00 PM	1,086	14	1.3	
04:00 PM	1,121	16	1.4	
05:00 PM	1,167	12	1	
06:00 PM	1,003	11	1.1	
07:00 PM	639	3	0.5	
08:00 PM	520	4	0.8	
09:00 PM	370	5	1.4	
10:00 PM	333	7	2.1	
11:00 PM	170	2	1.2	

16316

Southbound Only: : November 13, 2019

Traffic Data

Timeframe: All Years / Nov 13, 2019

Southbound Hourly Traffic for Nov 13, 2019

Direction: Both Directions / North , South

Lane: All Lanes / 1 , 2

Show All Classes: ☐

Hour	Volume	Trucks	Truck %	Volume Graph
12:00 AM	145	3	2.1	
01:00 AM	71	3	4.2	
02:00 AM	89	0	0	
03:00 AM	76	2	2.6	
04:00 AM	93	6	6.5	
05:00 AM	355	11	3.1	
06:00 AM	950	28	2.9	
07:00 AM	1,276	36	2.8	
08:00 AM	1,283	26	2	
09:00 AM	1,111	31	2.8	
10:00 AM	975	34	3.5	
11:00 AM	1,034	21	2	
12:00 PM	1,036	27	2.6	
01:00 PM	1,113	34	3.1	
02:00 PM	1,197	22	1.8	
03:00 PM	1,294	29	2.2	
04:00 PM	1,434	22	1.5	
05:00 PM	1,417	24	1.7	
06:00 PM	1,371	21	1.5	
07:00 PM	1,025	13	1.3	
08:00 PM	912	8	0.9	
09:00 PM	702	7	1	
10:00 PM	453	3	0.7	
11:00 PM	353	5	1.4	

19759

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Appendix C

Turning Movement Counts and Volume Balancing

Count Data

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/11/2023

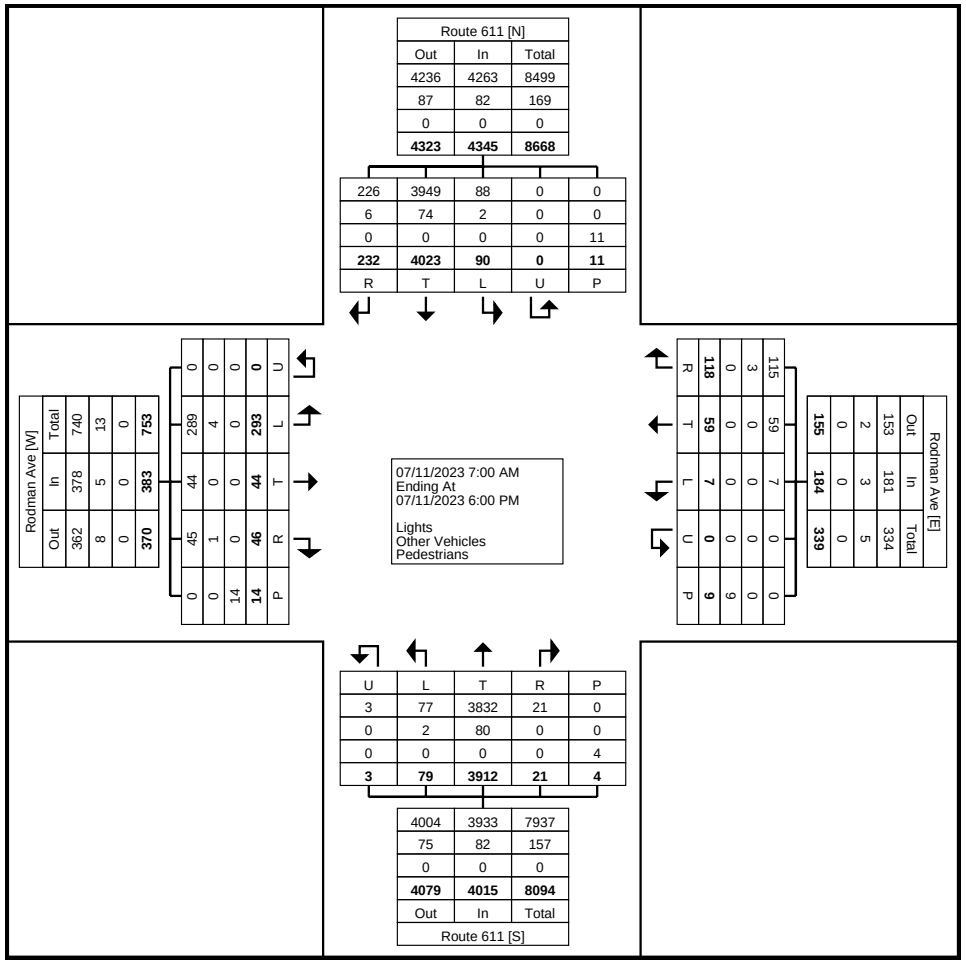
Turning Movement Data

Start Time	Route 611 Southbound							Rodman Ave Westbound							Route 611 Northbound							Rodman Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	193	9	0	0	1	203	0	1	2	2	0	1	5	5	191	0	0	0	0	196	12	1	0	2	0	0	15	419
7:15 AM	0	197	11	0	0	1	208	0	4	6	1	0	0	11	2	185	0	0	0	2	187	14	1	2	3	0	2	20	426
7:30 AM	0	200	12	0	0	0	212	0	3	8	0	0	0	11	6	224	0	0	0	0	230	18	4	2	2	0	0	26	479
7:45 AM	0	215	11	0	0	0	226	0	1	7	1	0	0	9	4	295	0	0	0	0	299	7	2	0	2	0	0	11	545
Hourly Total	1	805	43	0	0	2	849	0	9	23	4	0	1	36	17	895	0	0	0	2	912	51	8	4	9	0	2	72	1869
8:00 AM	3	241	12	0	0	1	256	0	3	8	0	0	0	11	8	231	0	0	0	0	239	23	1	2	4	0	0	30	536
8:15 AM	4	239	13	0	0	2	256	0	4	8	2	0	0	14	6	242	1	0	0	0	249	14	0	0	2	0	0	16	535
8:30 AM	4	231	13	0	0	1	248	1	8	7	0	0	3	16	4	204	1	0	0	1	209	23	3	4	0	0	1	30	503
8:45 AM	3	241	17	0	0	1	261	0	5	13	1	0	0	19	8	236	2	0	1	0	247	20	5	4	4	0	1	33	560
Hourly Total	14	952	55	0	0	5	1021	1	20	36	3	0	3	60	26	913	4	0	1	1	944	80	9	10	10	0	2	109	2134
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	10	288	9	0	0	1	307	2	2	4	0	0	1	8	2	279	1	0	1	1	283	20	7	5	0	0	1	32	630
4:15 PM	5	301	15	0	0	0	321	0	2	4	0	0	0	6	4	278	0	0	0	0	282	20	2	1	0	0	0	23	632
4:30 PM	10	270	17	0	0	1	297	0	3	10	0	0	2	13	3	266	6	0	0	0	275	17	2	0	0	0	0	19	604
4:45 PM	6	290	17	0	0	0	313	1	4	5	0	0	0	10	6	258	3	0	1	0	268	26	3	0	2	0	1	31	622
Hourly Total	31	1149	58	0	0	2	1238	3	11	23	0	0	3	37	15	1081	10	0	2	1	1108	83	14	6	2	0	2	105	2488
5:00 PM	9	259	23	1	0	1	292	0	9	8	1	0	0	18	3	269	1	0	0	0	273	18	7	0	1	0	0	26	609
5:15 PM	12	291	23	0	0	1	326	0	2	10	0	0	1	12	6	241	1	0	0	0	248	31	3	0	0	0	3	34	620
5:30 PM	12	296	18	1	0	0	327	3	4	3	1	0	0	11	8	261	4	0	0	0	273	18	1	1	0	0	0	20	631
5:45 PM	11	271	10	0	0	0	292	0	4	5	1	0	1	10	4	252	1	0	0	0	257	12	2	2	1	0	5	17	576
Hourly Total	44	1117	74	2	0	2	1237	3	19	26	3	0	2	51	21	1023	7	0	0	0	1051	79	13	3	2	0	8	97	2436
Grand Total	90	4023	230	2	0	11	4345	7	59	108	10	0	9	184	79	3912	21	0	3	4	4015	293	44	23	23	0	14	383	8927
Approach %	2.1	92.6	5.3	0.0	0.0	-	-	3.8	32.1	58.7	5.4	0.0	-	-	2.0	97.4	0.5	0.0	0.1	-	-	76.5	11.5	6.0	6.0	0.0	-	-	-
Total %	1.0	45.1	2.6	0.0	0.0	-	48.7	0.1	0.7	1.2	0.1	0.0	-	2.1	0.9	43.8	0.2	0.0	0.0	-	45.0	3.3	0.5	0.3	0.3	0.0	-	4.3	-
Lights	88	3949	224	2	0	-	4263	7	59	105	10	0	-	181	77	3832	21	0	3	-	3933	289	44	22	23	0	-	378	8755
% Lights	97.8	98.2	97.4	100.0	-	-	98.1	100.0	100.0	97.2	100.0	-	-	98.4	97.5	98.0	100.0	-	100.0	-	98.0	98.6	100.0	95.7	100.0	-	-	98.7	98.1
Other Vehicles	2	74	6	0	0	-	82	0	0	3	0	0	-	3	2	80	0	0	0	-	82	4	0	1	0	0	-	5	172
% Other Vehicles	2.2	1.8	2.6	0.0	-	-	1.9	0.0	0.0	2.8	0.0	-	-	1.6	2.5	2.0	0.0	-	0.0	-	2.0	1.4	0.0	4.3	0.0	-	-	1.3	1.9
Pedestrians	-	-	-	-	-	11	-	-	-	-	-	-	9	-	-	-	-	-	-	4	-	-	-	-	-	-	14	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/11/2023
Page No: 2



Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/11/2023

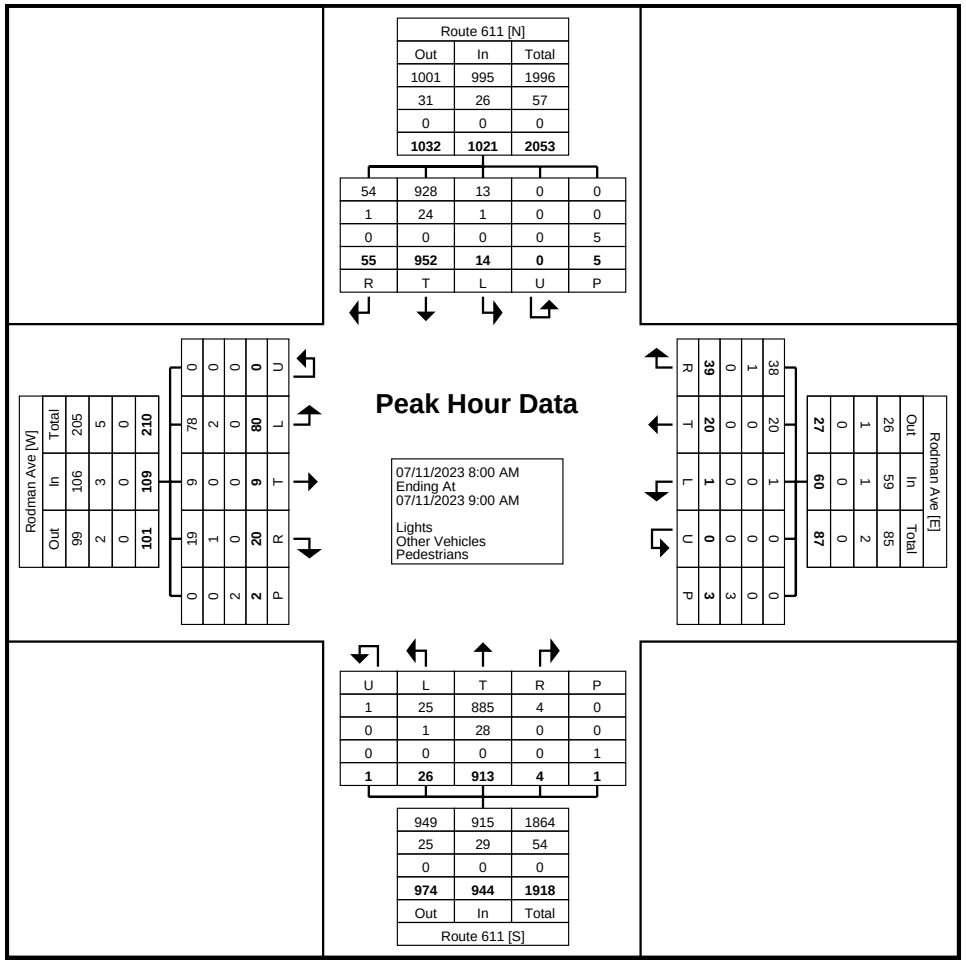
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Route 611 Southbound							Rodman Ave Westbound							Route 611 Northbound							Rodman Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
8:00 AM	3	241	12	0	0	1	256	0	3	8	0	0	0	11	8	231	0	0	0	0	239	23	1	2	4	0	0	30	536
8:15 AM	4	239	13	0	0	2	256	0	4	8	2	0	0	14	6	242	1	0	0	0	249	14	0	0	2	0	0	16	535
8:30 AM	4	231	13	0	0	1	248	1	8	7	0	0	3	16	4	204	1	0	0	1	209	23	3	4	0	0	1	30	503
8:45 AM	3	241	17	0	0	1	261	0	5	13	1	0	0	19	8	236	2	0	1	0	247	20	5	4	4	0	1	33	560
Total	14	952	55	0	0	5	1021	1	20	36	3	0	3	60	26	913	4	0	1	1	944	80	9	10	10	0	2	109	2134
Approach %	1.4	93.2	5.4	0.0	0.0	-	-	1.7	33.3	60.0	5.0	0.0	-	-	2.8	96.7	0.4	0.0	0.1	-	-	73.4	8.3	9.2	9.2	0.0	-	-	-
Total %	0.7	44.6	2.6	0.0	0.0	-	47.8	0.0	0.9	1.7	0.1	0.0	-	2.8	1.2	42.8	0.2	0.0	0.0	-	44.2	3.7	0.4	0.5	0.5	0.0	-	5.1	-
PHF	0.875	0.988	0.809	0.000	0.000	-	0.978	0.250	0.625	0.692	0.375	0.000	-	0.789	0.813	0.943	0.500	0.000	0.250	-	0.948	0.870	0.450	0.625	0.625	0.000	-	0.826	0.953
Lights	13	928	54	0	0	-	995	1	20	35	3	0	-	59	25	885	4	0	1	-	915	78	9	9	10	0	-	106	2075
% Lights	92.9	97.5	98.2	-	-	-	97.5	100.0	100.0	97.2	100.0	-	-	98.3	96.2	96.9	100.0	-	100.0	-	96.9	97.5	100.0	90.0	100.0	-	-	97.2	97.2
Other Vehicles	1	24	1	0	0	-	26	0	0	1	0	0	-	1	1	28	0	0	0	-	29	2	0	1	0	0	-	3	59
% Other Vehicles	7.1	2.5	1.8	-	-	-	2.5	0.0	0.0	2.8	0.0	-	-	1.7	3.8	3.1	0.0	-	0.0	-	3.1	2.5	0.0	10.0	0.0	-	-	2.8	2.8
Pedestrians	-	-	-	-	-	5	-	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/11/2023



Turning Movement Peak Hour Data Plot (8:00 AM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/11/2023

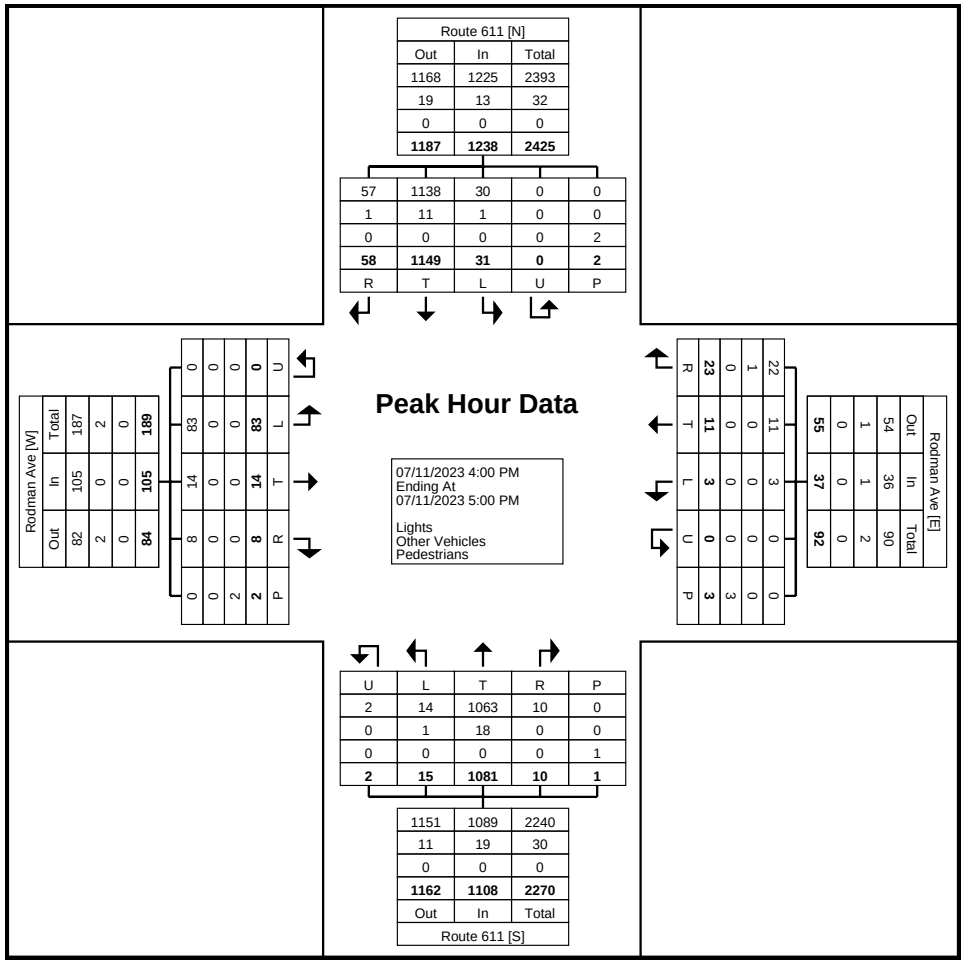
Turning Movement Peak Hour Data (4:00 PM)

Start Time	Route 611 Southbound							Rodman Ave Westbound							Route 611 Northbound							Rodman Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
4:00 PM	10	288	9	0	0	1	307	2	2	4	0	0	1	8	2	279	1	0	1	1	283	20	7	5	0	0	1	32	630
4:15 PM	5	301	15	0	0	0	321	0	2	4	0	0	0	6	4	278	0	0	0	0	282	20	2	1	0	0	0	23	632
4:30 PM	10	270	17	0	0	1	297	0	3	10	0	0	2	13	3	266	6	0	0	0	275	17	2	0	0	0	0	19	604
4:45 PM	6	290	17	0	0	0	313	1	4	5	0	0	0	10	6	258	3	0	1	0	268	26	3	0	2	0	1	31	622
Total	31	1149	58	0	0	2	1238	3	11	23	0	0	3	37	15	1081	10	0	2	1	1108	83	14	6	2	0	2	105	2488
Approach %	2.5	92.8	4.7	0.0	0.0	-	-	8.1	29.7	62.2	0.0	0.0	-	-	1.4	97.6	0.9	0.0	0.2	-	-	79.0	13.3	5.7	1.9	0.0	-	-	-
Total %	1.2	46.2	2.3	0.0	0.0	-	49.8	0.1	0.4	0.9	0.0	0.0	-	1.5	0.6	43.4	0.4	0.0	0.1	-	44.5	3.3	0.6	0.2	0.1	0.0	-	4.2	-
PHF	0.775	0.954	0.853	0.000	0.000	-	0.964	0.375	0.688	0.575	0.000	0.000	-	0.712	0.625	0.969	0.417	0.000	0.500	-	0.979	0.798	0.500	0.300	0.250	0.000	-	0.820	0.984
Lights	30	1138	57	0	0	-	1225	3	11	22	0	0	-	36	14	1063	10	0	2	-	1089	83	14	6	2	0	-	105	2455
% Lights	96.8	99.0	98.3	-	-	-	98.9	100.0	100.0	95.7	-	-	-	97.3	93.3	98.3	100.0	-	100.0	-	98.3	100.0	100.0	100.0	100.0	-	-	100.0	98.7
Other Vehicles	1	11	1	0	0	-	13	0	0	1	0	0	-	1	1	18	0	0	0	-	19	0	0	0	0	0	-	0	33
% Other Vehicles	3.2	1.0	1.7	-	-	-	1.1	0.0	0.0	4.3	-	-	-	2.7	6.7	1.7	0.0	-	0.0	-	1.7	0.0	0.0	0.0	0.0	-	-	0.0	1.3
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/11/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/08/2023

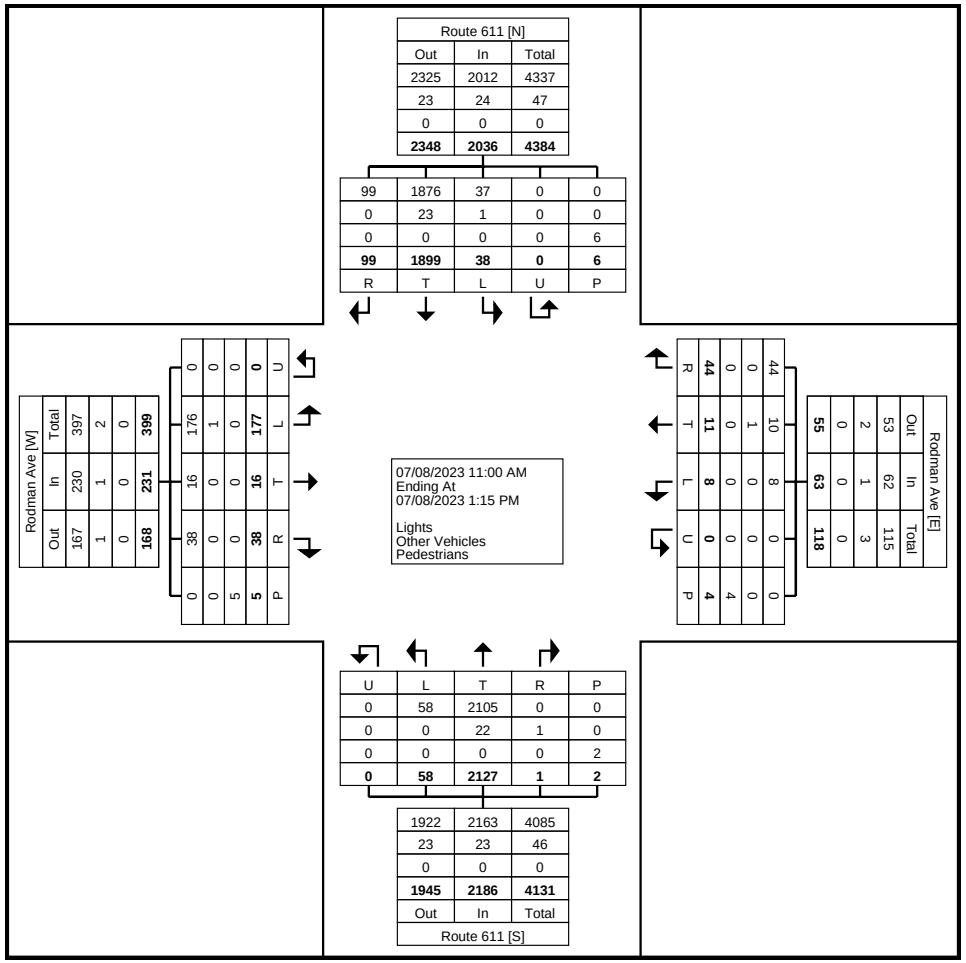
Turning Movement Data

Start Time	Route 611 Southbound							Rodman Ave Westbound							Route 611 Northbound							Rodman Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
11:00 AM	6	233	8	0	0	1	247	0	3	4	1	0	1	8	5	298	0	0	0	0	303	38	1	5	3	0	0	47	605
11:15 AM	7	198	16	0	0	0	221	1	1	2	0	0	1	4	7	254	0	0	0	0	261	24	3	4	0	0	0	31	517
11:30 AM	2	240	8	0	0	0	250	0	1	2	2	0	0	5	4	263	0	0	0	0	267	17	1	4	1	0	0	23	545
11:45 AM	3	227	12	0	0	1	242	1	2	8	1	0	1	12	4	256	0	0	0	0	260	19	5	2	1	0	0	27	541
Hourly Total	18	898	44	0	0	2	960	2	7	16	4	0	3	29	20	1071	0	0	0	0	1091	98	10	15	5	0	0	128	2208
12:00 PM	4	232	16	0	0	0	252	3	0	5	0	0	1	8	8	244	0	0	0	1	252	13	1	3	2	0	1	19	531
12:15 PM	3	257	20	1	0	1	281	2	1	4	0	0	0	7	11	280	0	0	0	0	291	30	1	4	2	0	0	37	616
12:30 PM	6	263	9	0	0	2	278	1	1	3	0	0	0	5	11	240	1	0	0	0	252	12	1	3	1	0	1	17	552
12:45 PM	7	249	9	0	0	1	265	0	2	12	0	0	0	14	8	292	0	0	0	1	300	24	3	2	1	0	3	30	609
Hourly Total	20	1001	54	1	0	4	1076	6	4	24	0	0	1	34	38	1056	1	0	0	2	1095	79	6	12	6	0	5	103	2308
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	38	1899	98	1	0	6	2036	8	11	40	4	0	4	63	58	2127	1	0	0	2	2186	177	16	27	11	0	5	231	4516
Approach %	1.9	93.3	4.8	0.0	0.0	-	-	12.7	17.5	63.5	6.3	0.0	-	-	2.7	97.3	0.0	0.0	0.0	-	-	76.6	6.9	11.7	4.8	0.0	-	-	-
Total %	0.8	42.1	2.2	0.0	0.0	-	45.1	0.2	0.2	0.9	0.1	0.0	-	1.4	1.3	47.1	0.0	0.0	0.0	-	48.4	3.9	0.4	0.6	0.2	0.0	-	5.1	-
Lights	37	1876	98	1	0	-	2012	8	10	40	4	0	-	62	58	2105	0	0	0	-	2163	176	16	27	11	0	-	230	4467
% Lights	97.4	98.8	100.0	100.0	-	-	98.8	100.0	90.9	100.0	100.0	-	-	98.4	100.0	99.0	0.0	-	-	-	98.9	99.4	100.0	100.0	100.0	-	-	99.6	98.9
Other Vehicles	1	23	0	0	0	-	24	0	1	0	0	0	-	1	0	22	1	0	0	-	23	1	0	0	0	0	-	1	49
% Other Vehicles	2.6	1.2	0.0	0.0	-	-	1.2	0.0	9.1	0.0	0.0	-	-	1.6	0.0	1.0	100.0	-	-	-	1.1	0.6	0.0	0.0	0.0	-	-	0.4	1.1
Pedestrians	-	-	-	-	-	6	-	-	-	-	-	-	4	-	-	-	-	-	-	2	-	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/08/2023



Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/08/2023

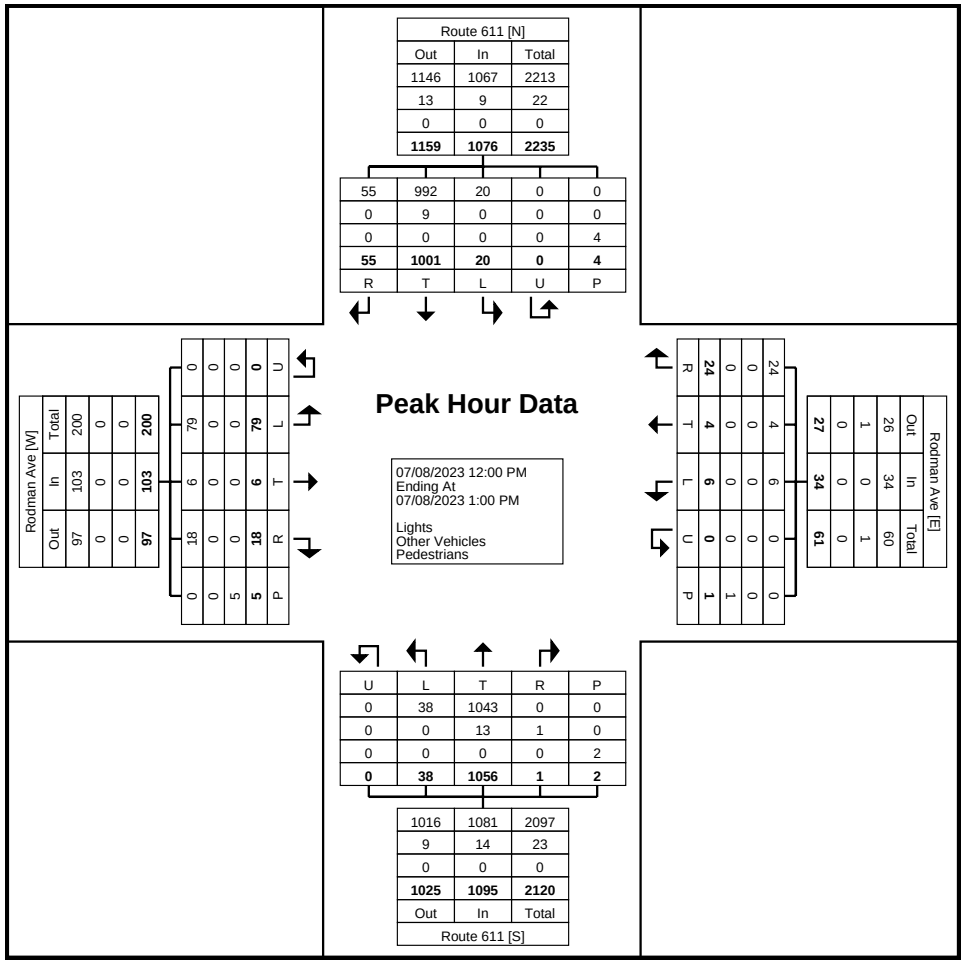
Turning Movement Peak Hour Data (12:00 PM)

Start Time	Route 611 Southbound							Rodman Ave Westbound							Route 611 Northbound							Rodman Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
12:00 PM	4	232	16	0	0	0	252	3	0	5	0	0	1	8	8	244	0	0	0	1	252	13	1	3	2	0	1	19	531
12:15 PM	3	257	20	1	0	1	281	2	1	4	0	0	0	7	11	280	0	0	0	0	291	30	1	4	2	0	0	37	616
12:30 PM	6	263	9	0	0	2	278	1	1	3	0	0	0	5	11	240	1	0	0	0	252	12	1	3	1	0	1	17	552
12:45 PM	7	249	9	0	0	1	265	0	2	12	0	0	0	14	8	292	0	0	0	1	300	24	3	2	1	0	3	30	609
Total	20	1001	54	1	0	4	1076	6	4	24	0	0	1	34	38	1056	1	0	0	2	1095	79	6	12	6	0	5	103	2308
Approach %	1.9	93.0	5.0	0.1	0.0	-	-	17.6	11.8	70.6	0.0	0.0	-	-	3.5	96.4	0.1	0.0	0.0	-	-	76.7	5.8	11.7	5.8	0.0	-	-	-
Total %	0.9	43.4	2.3	0.0	0.0	-	46.6	0.3	0.2	1.0	0.0	0.0	-	1.5	1.6	45.8	0.0	0.0	0.0	-	47.4	3.4	0.3	0.5	0.3	0.0	-	4.5	-
PHF	0.714	0.952	0.675	0.250	0.000	-	0.957	0.500	0.500	0.500	0.000	0.000	-	0.607	0.864	0.904	0.250	0.000	0.000	-	0.913	0.658	0.500	0.750	0.750	0.000	-	0.696	0.937
Lights	20	992	54	1	0	-	1067	6	4	24	0	0	-	34	38	1043	0	0	0	-	1081	79	6	12	6	0	-	103	2285
% Lights	100.0	99.1	100.0	100.0	-	-	99.2	100.0	100.0	100.0	-	-	-	100.0	100.0	98.8	0.0	-	-	-	98.7	100.0	100.0	100.0	100.0	-	-	100.0	99.0
Other Vehicles	0	9	0	0	0	-	9	0	0	0	0	0	-	0	0	13	1	0	0	-	14	0	0	0	0	0	-	0	23
% Other Vehicles	0.0	0.9	0.0	0.0	-	-	0.8	0.0	0.0	0.0	-	-	-	0.0	0.0	1.2	100.0	-	-	-	1.3	0.0	0.0	0.0	0.0	-	-	0.0	1.0
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Rodman
Site Code:
Start Date: 07/08/2023



Turning Movement Peak Hour Data Plot (12:00 PM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Maderia
Site Code:
Start Date: 07/11/2023

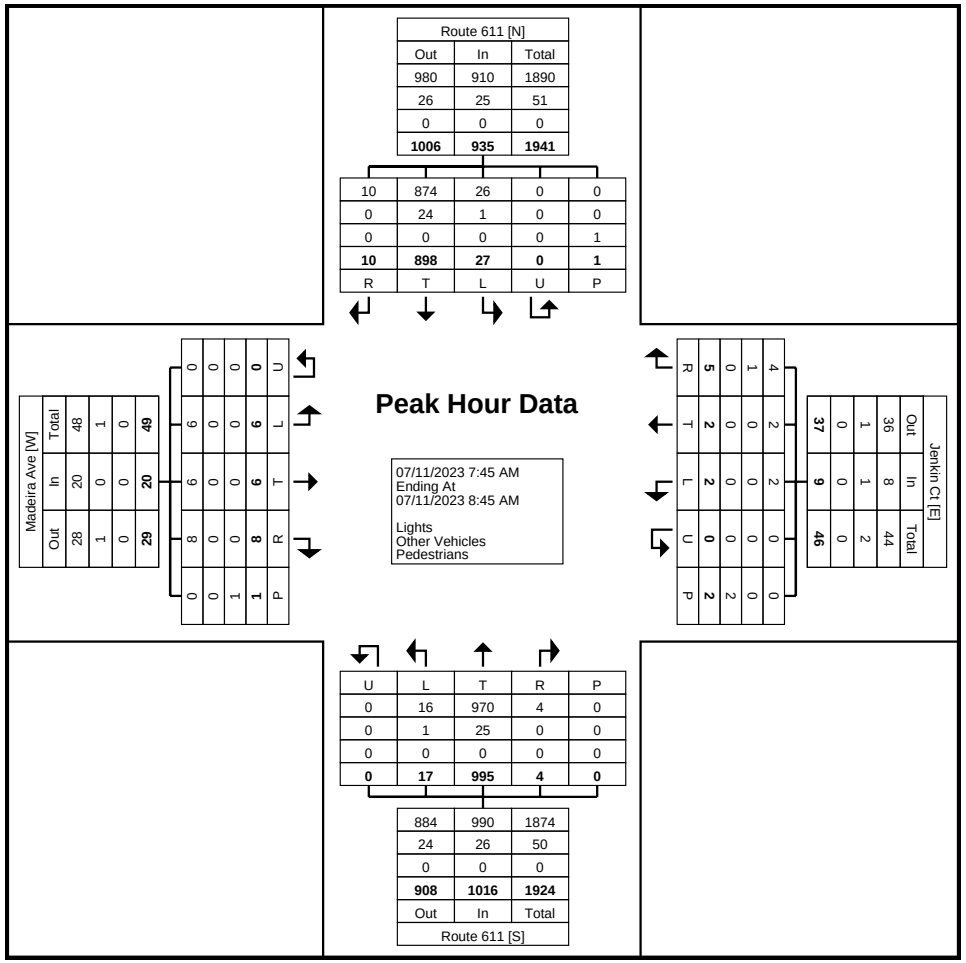
Turning Movement Data

Start Time	Route 611 Southbound							Jenkin Ct Westbound							Route 611 Northbound							Madeira Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	190	0	0	0	0	191	0	0	0	0	0	0	0	0	184	0	0	0	0	184	0	0	0	0	0	0	0	375
7:15 AM	1	192	0	0	0	0	193	0	0	0	0	0	1	0	2	196	0	0	0	0	198	0	0	3	0	0	0	3	394
7:30 AM	7	216	0	0	0	0	223	1	0	0	0	0	0	1	1	239	0	0	0	0	240	0	1	3	0	0	0	4	468
7:45 AM	4	200	1	0	0	0	205	0	2	0	1	0	0	3	6	290	1	0	0	0	297	1	1	2	1	0	0	5	510
Hourly Total	13	798	1	0	0	0	812	1	2	0	1	0	1	4	9	909	1	0	0	0	919	1	2	8	1	0	0	12	1747
8:00 AM	7	253	4	0	0	0	264	1	0	1	0	0	0	2	0	250	0	0	0	0	250	0	1	0	4	0	0	5	521
8:15 AM	13	206	4	0	0	0	223	0	0	0	0	0	0	0	4	232	2	0	0	0	238	4	4	0	0	0	0	8	469
8:30 AM	3	239	1	0	0	1	243	1	0	2	1	0	2	4	7	223	1	0	0	0	231	1	0	1	0	0	1	2	480
8:45 AM	1	244	0	0	0	0	245	1	0	1	1	0	1	3	4	234	2	0	0	0	240	2	2	2	1	0	0	7	495
Hourly Total	24	942	9	0	0	1	975	3	0	4	2	0	3	9	15	939	5	0	0	0	959	7	7	3	5	0	1	22	1965
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	291	5	0	1	0	298	12	2	3	2	0	2	19	17	277	0	0	0	0	294	9	0	6	3	0	0	18	629
4:15 PM	1	311	3	0	0	0	315	7	2	0	1	0	0	10	9	280	0	0	0	0	289	8	0	2	0	0	0	10	624
4:30 PM	1	267	2	0	0	0	270	18	0	8	2	0	1	28	9	282	0	0	0	0	291	4	1	3	2	0	0	10	599
4:45 PM	0	293	2	2	0	1	297	7	1	2	2	0	0	12	4	262	0	0	2	0	268	9	0	2	1	0	1	12	589
Hourly Total	3	1162	12	2	1	1	1180	44	5	13	7	0	3	69	39	1101	0	0	2	0	1142	30	1	13	6	0	1	50	2441
5:00 PM	2	251	1	0	0	0	254	29	1	9	1	0	1	40	10	260	2	0	1	0	273	12	1	2	1	0	0	16	583
5:15 PM	1	306	2	0	0	0	309	5	1	5	0	0	0	11	11	277	1	0	0	0	289	2	1	2	0	0	0	5	614
5:30 PM	2	305	4	0	0	0	311	0	2	2	2	0	0	6	11	265	0	0	0	0	276	8	0	4	1	0	0	13	606
5:45 PM	2	267	6	0	1	0	276	9	0	4	2	0	0	15	6	269	0	0	0	0	275	3	0	3	2	0	0	8	574
Hourly Total	7	1129	13	0	1	0	1150	43	4	20	5	0	1	72	38	1071	3	0	1	0	1113	25	2	11	4	0	0	42	2377
Grand Total	47	4031	35	2	2	2	4117	91	11	37	15	0	8	154	101	4020	9	0	3	0	4133	63	12	35	16	0	2	126	8530
Approach %	1.1	97.9	0.9	0.0	0.0	-	-	59.1	7.1	24.0	9.7	0.0	-	-	2.4	97.3	0.2	0.0	0.1	-	-	50.0	9.5	27.8	12.7	0.0	-	-	-
Total %	0.6	47.3	0.4	0.0	0.0	-	48.3	1.1	0.1	0.4	0.2	0.0	-	1.8	1.2	47.1	0.1	0.0	0.0	-	48.5	0.7	0.1	0.4	0.2	0.0	-	1.5	-
Lights	46	3953	35	2	2	-	4038	91	11	36	15	0	-	153	100	3945	9	0	3	-	4057	63	12	34	16	0	-	125	8373
% Lights	97.9	98.1	100.0	100.0	100.0	-	98.1	100.0	100.0	97.3	100.0	-	-	99.4	99.0	98.1	100.0	-	100.0	-	98.2	100.0	100.0	97.1	100.0	-	-	99.2	98.2
Other Vehicles	1	78	0	0	0	-	79	0	0	1	0	0	-	1	1	75	0	0	0	-	76	0	0	1	0	0	-	1	157
% Other Vehicles	2.1	1.9	0.0	0.0	0.0	-	1.9	0.0	0.0	2.7	0.0	-	-	0.6	1.0	1.9	0.0	-	0.0	-	1.8	0.0	0.0	2.9	0.0	-	-	0.8	1.8
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	-	8	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Maderia
Site Code:
Start Date: 07/11/2023



Turning Movement Peak Hour Data Plot (7:45 AM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Maderia
Site Code:
Start Date: 07/11/2023

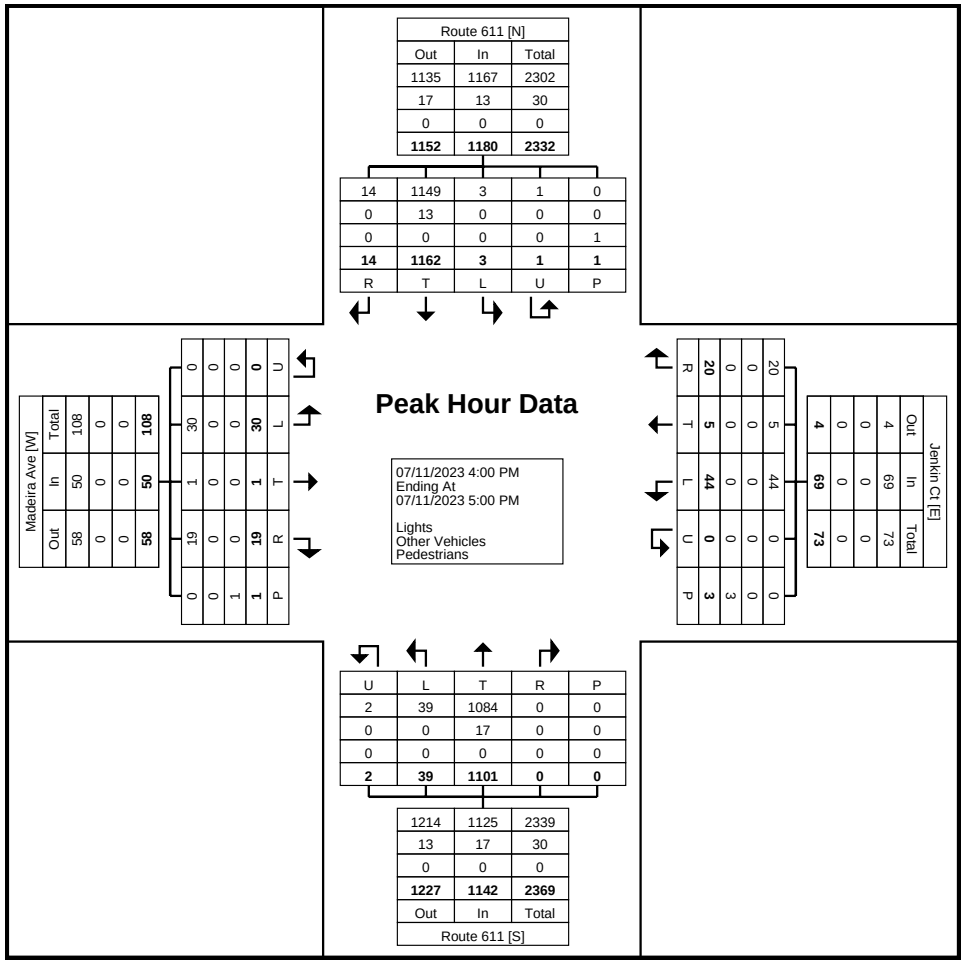
Turning Movement Peak Hour Data (4:00 PM)

Start Time	Route 611 Southbound							Jenkin Ct Westbound							Route 611 Northbound							Madeira Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
4:00 PM	1	291	5	0	1	0	298	12	2	3	2	0	2	19	17	277	0	0	0	0	294	9	0	6	3	0	0	18	629
4:15 PM	1	311	3	0	0	0	315	7	2	0	1	0	0	10	9	280	0	0	0	0	289	8	0	2	0	0	0	10	624
4:30 PM	1	267	2	0	0	0	270	18	0	8	2	0	1	28	9	282	0	0	0	0	291	4	1	3	2	0	0	10	599
4:45 PM	0	293	2	2	0	1	297	7	1	2	2	0	0	12	4	262	0	0	2	0	268	9	0	2	1	0	1	12	589
Total	3	1162	12	2	1	1	1180	44	5	13	7	0	3	69	39	1101	0	0	2	0	1142	30	1	13	6	0	1	50	2441
Approach %	0.3	98.5	1.0	0.2	0.1	-	-	63.8	7.2	18.8	10.1	0.0	-	-	3.4	96.4	0.0	0.0	0.2	-	-	60.0	2.0	26.0	12.0	0.0	-	-	-
Total %	0.1	47.6	0.5	0.1	0.0	-	48.3	1.8	0.2	0.5	0.3	0.0	-	2.8	1.6	45.1	0.0	0.0	0.1	-	46.8	1.2	0.0	0.5	0.2	0.0	-	2.0	-
PHF	0.750	0.934	0.600	0.250	0.250	-	0.937	0.611	0.625	0.406	0.875	0.000	-	0.616	0.574	0.976	0.000	0.000	0.250	-	0.971	0.833	0.250	0.542	0.500	0.000	-	0.694	0.970
Lights	3	1149	12	2	1	-	1167	44	5	13	7	0	-	69	39	1084	0	0	2	-	1125	30	1	13	6	0	-	50	2411
% Lights	100.0	98.9	100.0	100.0	100.0	-	98.9	100.0	100.0	100.0	100.0	-	-	100.0	100.0	98.5	-	-	100.0	-	98.5	100.0	100.0	100.0	100.0	-	-	100.0	98.8
Other Vehicles	0	13	0	0	0	-	13	0	0	0	0	0	-	0	0	17	0	0	0	-	17	0	0	0	0	0	-	0	30
% Other Vehicles	0.0	1.1	0.0	0.0	0.0	-	1.1	0.0	0.0	0.0	0.0	-	-	0.0	0.0	1.5	-	-	0.0	-	1.5	0.0	0.0	0.0	0.0	-	-	0.0	1.2
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	-	3	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Maderia
Site Code:
Start Date: 07/11/2023



Turning Movement Peak Hour Data Plot (4:00 PM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Maderia
Site Code:
Start Date: 07/08/2023
Page No: 1

Turning Movement Data

Start Time	Route 611 Southbound							Jenkin Ct Westbound							Route 611 Northbound							Madeira Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
11:00 AM	1	225	5	0	0	0	231	1	0	1	0	0	1	2	12	266	0	0	0	0	278	9	0	3	0	0	0	12	523
11:15 AM	1	204	2	1	0	0	208	0	0	0	0	0	1	0	10	254	0	0	0	0	264	14	0	4	0	0	0	18	490
11:30 AM	0	234	4	0	0	0	238	0	0	0	0	0	0	0	19	237	1	0	0	0	257	8	0	5	1	0	0	14	509
11:45 AM	3	227	4	0	0	0	234	0	0	0	1	0	0	1	16	282	0	0	0	0	298	8	0	8	2	0	0	18	551
Hourly Total	5	890	15	1	0	0	911	1	0	1	1	0	2	3	57	1039	1	0	0	0	1097	39	0	20	3	0	0	62	2073
12:00 PM	0	232	4	0	1	0	237	1	0	0	2	0	0	3	13	263	0	0	0	0	276	14	0	5	1	0	0	20	536
12:15 PM	2	252	1	0	0	0	255	1	0	0	1	0	0	2	20	242	2	0	0	0	264	16	3	5	0	0	0	24	545
12:30 PM	1	261	4	0	0	0	266	2	0	0	0	0	0	2	10	247	0	0	0	0	257	13	1	1	5	0	0	20	545
12:45 PM	0	268	4	0	0	0	272	1	0	1	0	0	0	2	9	285	0	1	0	0	295	9	0	6	1	0	0	16	585
Hourly Total	3	1013	13	0	1	0	1030	5	0	1	3	0	0	9	52	1037	2	1	0	0	1092	52	4	17	7	0	0	80	2211
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	8	1903	28	1	1	0	1941	6	0	2	4	0	2	12	109	2076	3	1	0	0	2189	91	4	37	10	0	0	142	4284
Approach %	0.4	98.0	1.4	0.1	0.1	-	-	50.0	0.0	16.7	33.3	0.0	-	-	5.0	94.8	0.1	0.0	0.0	-	-	64.1	2.8	26.1	7.0	0.0	-	-	-
Total %	0.2	44.4	0.7	0.0	0.0	-	45.3	0.1	0.0	0.0	0.1	0.0	-	0.3	2.5	48.5	0.1	0.0	0.0	-	51.1	2.1	0.1	0.9	0.2	0.0	-	3.3	-
Lights	8	1881	28	1	1	-	1919	6	0	2	4	0	-	12	109	2055	2	1	0	-	2167	90	4	36	10	0	-	140	4238
% Lights	100.0	98.8	100.0	100.0	100.0	-	98.9	100.0	-	100.0	100.0	-	-	100.0	100.0	99.0	66.7	100.0	-	-	99.0	98.9	100.0	97.3	100.0	-	-	98.6	98.9
Other Vehicles	0	22	0	0	0	-	22	0	0	0	0	0	-	0	0	21	1	0	0	-	22	1	0	1	0	0	-	2	46
% Other Vehicles	0.0	1.2	0.0	0.0	0.0	-	1.1	0.0	-	0.0	0.0	-	-	0.0	0.0	1.0	33.3	0.0	-	-	1.0	1.1	0.0	2.7	0.0	-	-	1.4	1.1
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
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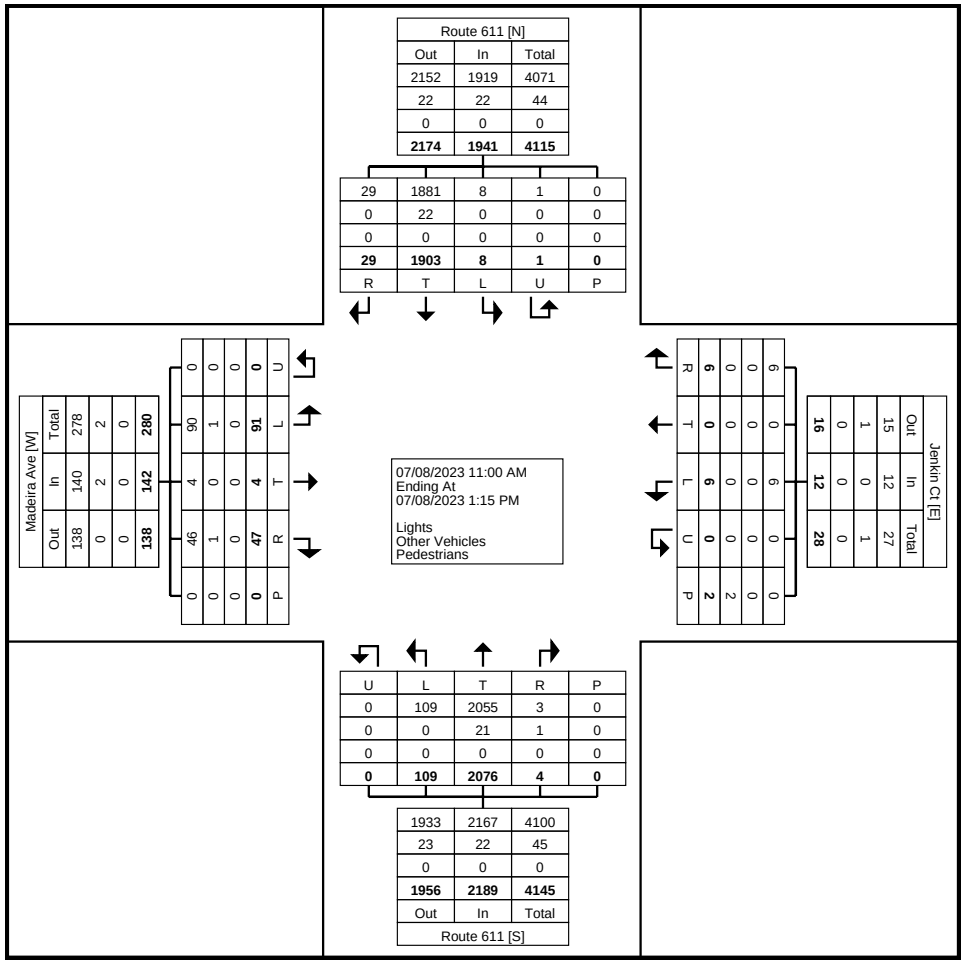
Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Maderia
Site Code:
Start Date: 07/08/2023



Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - 611 & Maderia
Site Code:
Start Date: 07/08/2023

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Route 611 Southbound							Jenkin Ct Westbound							Route 611 Northbound							Madeira Ave Eastbound							
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
12:00 PM	0	232	4	0	1	0	237	1	0	0	2	0	0	3	13	263	0	0	0	0	276	14	0	5	1	0	0	20	536
12:15 PM	2	252	1	0	0	0	255	1	0	0	1	0	0	2	20	242	2	0	0	0	264	16	3	5	0	0	0	24	545
12:30 PM	1	261	4	0	0	0	266	2	0	0	0	0	0	2	10	247	0	0	0	0	257	13	1	1	5	0	0	20	545
12:45 PM	0	268	4	0	0	0	272	1	0	1	0	0	0	2	9	285	0	1	0	0	295	9	0	6	1	0	0	16	585
Total	3	1013	13	0	1	0	1030	5	0	1	3	0	0	9	52	1037	2	1	0	0	1092	52	4	17	7	0	0	80	2211
Approach %	0.3	98.3	1.3	0.0	0.1	-	-	55.6	0.0	11.1	33.3	0.0	-	-	4.8	95.0	0.2	0.1	0.0	-	-	65.0	5.0	21.3	8.8	0.0	-	-	-
Total %	0.1	45.8	0.6	0.0	0.0	-	46.6	0.2	0.0	0.0	0.1	0.0	-	0.4	2.4	46.9	0.1	0.0	0.0	-	49.4	2.4	0.2	0.8	0.3	0.0	-	3.6	-
PHF	0.375	0.945	0.813	0.000	0.250	-	0.947	0.625	0.000	0.250	0.375	0.000	-	0.750	0.650	0.910	0.250	0.250	0.000	-	0.925	0.813	0.333	0.708	0.350	0.000	-	0.833	0.945
Lights	3	1007	13	0	1	-	1024	5	0	1	3	0	-	9	52	1024	1	1	0	-	1078	51	4	17	7	0	-	79	2190
% Lights	100.0	99.4	100.0	-	100.0	-	99.4	100.0	-	100.0	100.0	-	-	100.0	100.0	98.7	50.0	100.0	-	-	98.7	98.1	100.0	100.0	100.0	-	-	98.8	99.1
Other Vehicles	0	6	0	0	0	-	6	0	0	0	0	0	-	0	0	13	1	0	0	-	14	1	0	0	0	0	-	1	21
% Other Vehicles	0.0	0.6	0.0	-	0.0	-	0.6	0.0	-	0.0	0.0	-	-	0.0	0.0	1.3	50.0	0.0	-	-	1.3	1.9	0.0	0.0	0.0	-	-	1.3	0.9
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
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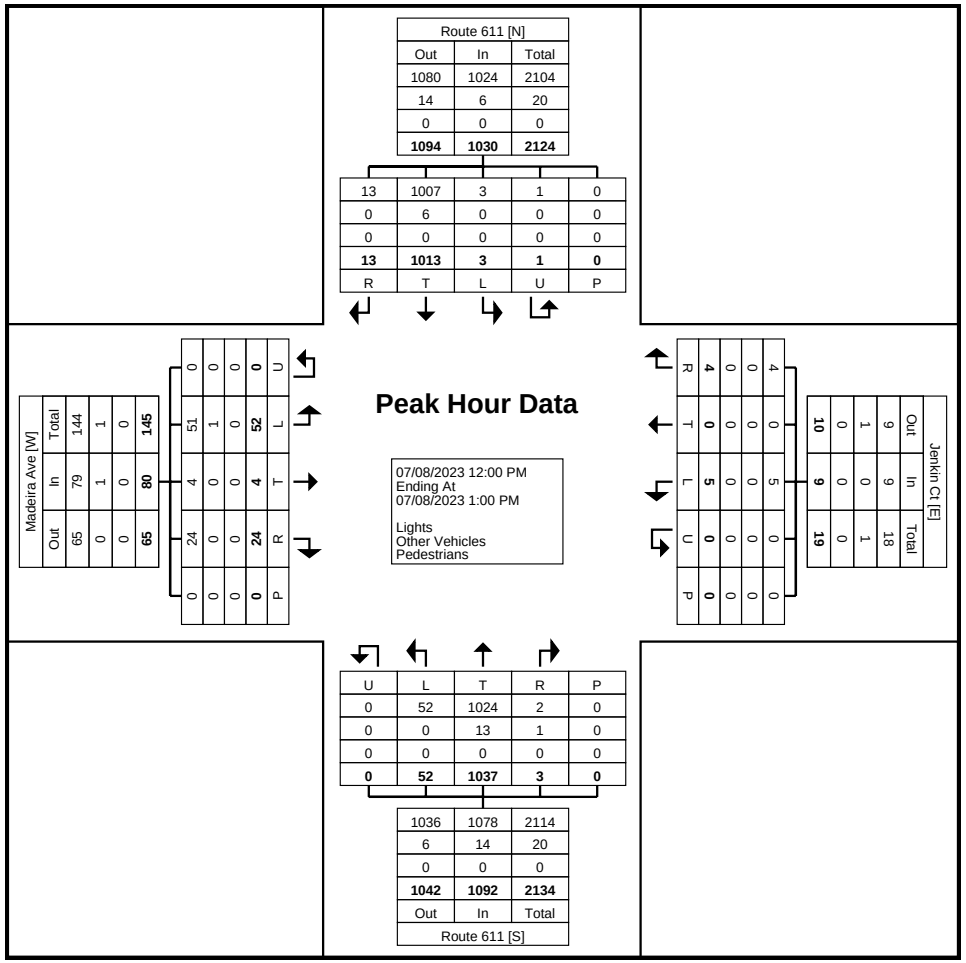
Count Name: 313626-01-001 Jtown - 611 & Maderia
Site Code:
Start Date: 07/08/2023



Turning Movement Peak Hour Data Plot (12:00 PM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/11/2023

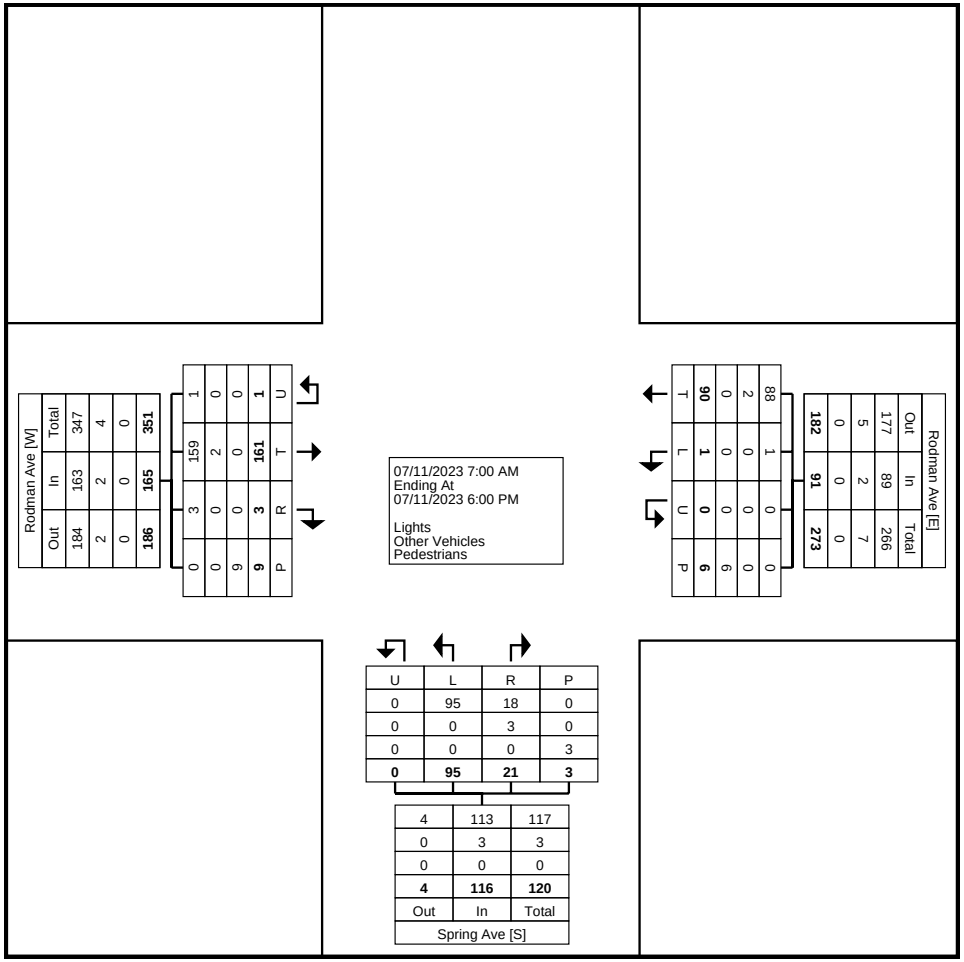
Turning Movement Data

Start Time	Rodman Ave Westbound					Spring Ave Northbound					Rodman Ave Eastbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	2	0	1	2	3	1	0	0	4	2	0	0	0	2	8
7:15 AM	0	5	0	0	5	5	0	0	1	5	2	0	0	1	2	12
7:30 AM	0	6	0	0	6	8	1	0	0	9	5	0	0	1	5	20
7:45 AM	0	3	0	1	3	7	1	0	2	8	7	0	0	0	7	18
Hourly Total	0	16	0	2	16	23	3	0	3	26	16	0	0	2	16	58
8:00 AM	0	5	0	0	5	7	0	0	0	7	4	0	0	0	4	16
8:15 AM	0	7	0	0	7	7	2	0	0	9	6	0	0	0	6	22
8:30 AM	0	7	0	0	7	9	2	0	0	11	7	0	0	1	7	25
8:45 AM	0	12	0	0	12	7	1	0	0	8	7	3	0	0	10	30
Hourly Total	0	31	0	0	31	30	5	0	0	35	24	3	0	1	27	93
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	2	0	0	2	5	2	0	0	7	17	0	1	1	18	27
4:15 PM	0	3	0	0	3	3	0	0	0	3	8	0	0	1	8	14
4:30 PM	0	7	0	1	7	6	1	0	0	7	18	0	0	2	18	32
4:45 PM	1	6	0	1	7	4	2	0	0	6	12	0	0	0	12	25
Hourly Total	1	18	0	2	19	18	5	0	0	23	55	0	1	4	56	98
5:00 PM	0	10	0	0	10	7	2	0	0	9	17	0	0	0	17	36
5:15 PM	0	7	0	0	7	5	2	0	0	7	17	0	0	1	17	31
5:30 PM	0	4	0	1	4	6	1	0	0	7	19	0	0	0	19	30
5:45 PM	0	4	0	1	4	6	3	0	0	9	13	0	0	1	13	26
Hourly Total	0	25	0	2	25	24	8	0	0	32	66	0	0	2	66	123
Grand Total	1	90	0	6	91	95	21	0	3	116	161	3	1	9	165	372
Approach %	1.1	98.9	0.0	-	-	81.9	18.1	0.0	-	-	97.6	1.8	0.6	-	-	-
Total %	0.3	24.2	0.0	-	24.5	25.5	5.6	0.0	-	31.2	43.3	0.8	0.3	-	44.4	-
Lights	1	88	0	-	89	95	18	0	-	113	159	3	1	-	163	365
% Lights	100.0	97.8	-	-	97.8	100.0	85.7	-	-	97.4	98.8	100.0	100.0	-	98.8	98.1
Other Vehicles	0	2	0	-	2	0	3	0	-	3	2	0	0	-	2	7
% Other Vehicles	0.0	2.2	-	-	2.2	0.0	14.3	-	-	2.6	1.2	0.0	0.0	-	1.2	1.9
Pedestrians	-	-	-	6	-	-	-	-	3	-	-	-	-	9	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/11/2023
Page No: 2



Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/11/2023

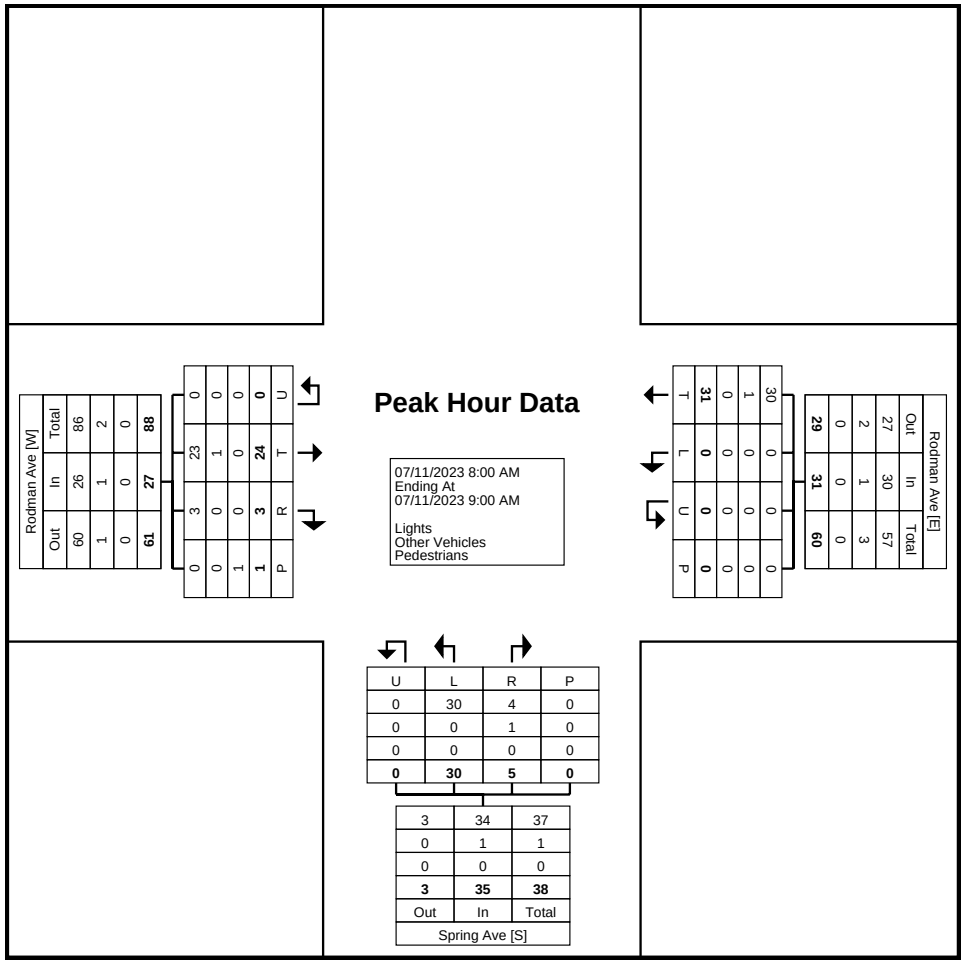
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Rodman Ave Westbound					Spring Ave Northbound					Rodman Ave Eastbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:00 AM	0	5	0	0	5	7	0	0	0	7	4	0	0	0	4	16
8:15 AM	0	7	0	0	7	7	2	0	0	9	6	0	0	0	6	22
8:30 AM	0	7	0	0	7	9	2	0	0	11	7	0	0	1	7	25
8:45 AM	0	12	0	0	12	7	1	0	0	8	7	3	0	0	10	30
Total	0	31	0	0	31	30	5	0	0	35	24	3	0	1	27	93
Approach %	0.0	100.0	0.0	-	-	85.7	14.3	0.0	-	-	88.9	11.1	0.0	-	-	-
Total %	0.0	33.3	0.0	-	33.3	32.3	5.4	0.0	-	37.6	25.8	3.2	0.0	-	29.0	-
PHF	0.000	0.646	0.000	-	0.646	0.833	0.625	0.000	-	0.795	0.857	0.250	0.000	-	0.675	0.775
Lights	0	30	0	-	30	30	4	0	-	34	23	3	0	-	26	90
% Lights	-	96.8	-	-	96.8	100.0	80.0	-	-	97.1	95.8	100.0	-	-	96.3	96.8
Other Vehicles	0	1	0	-	1	0	1	0	-	1	1	0	0	-	1	3
% Other Vehicles	-	3.2	-	-	3.2	0.0	20.0	-	-	2.9	4.2	0.0	-	-	3.7	3.2
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/11/2023



Turning Movement Peak Hour Data Plot (8:00 AM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/11/2023

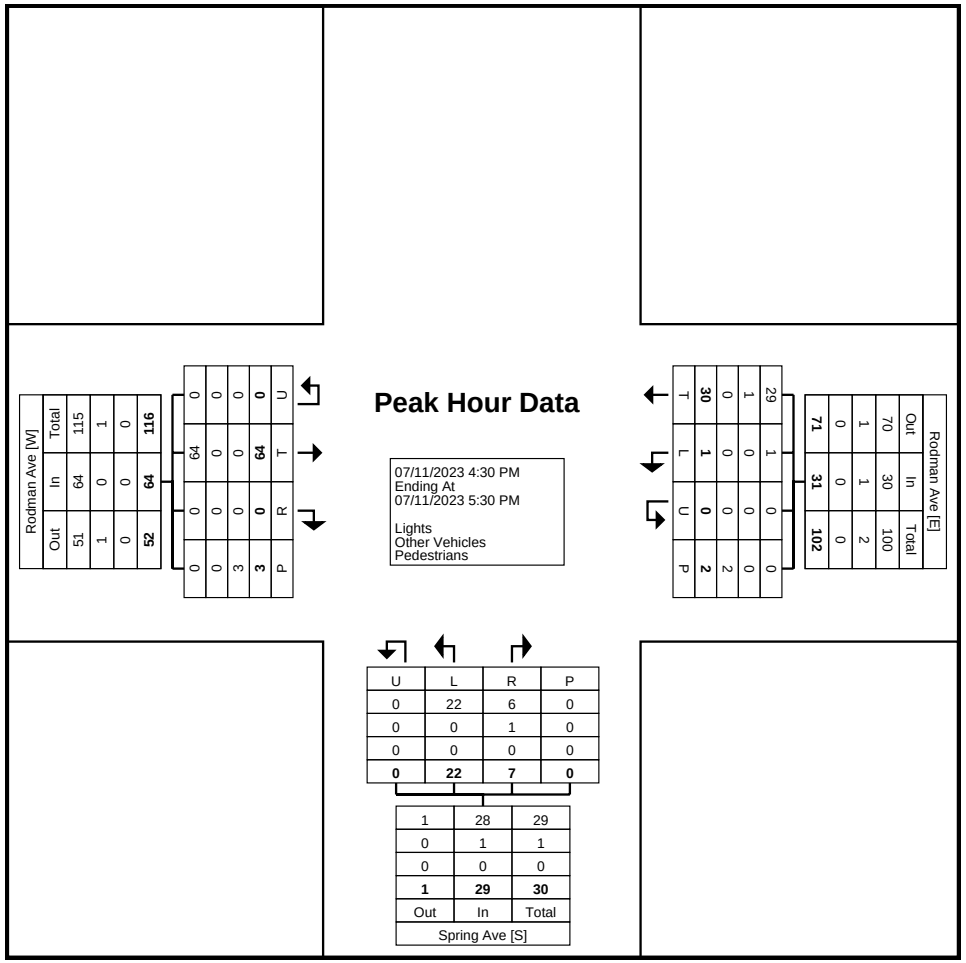
Turning Movement Peak Hour Data (4:30 PM)

Start Time	Rodman Ave Westbound					Spring Ave Northbound					Rodman Ave Eastbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:30 PM	0	7	0	1	7	6	1	0	0	7	18	0	0	2	18	32
4:45 PM	1	6	0	1	7	4	2	0	0	6	12	0	0	0	12	25
5:00 PM	0	10	0	0	10	7	2	0	0	9	17	0	0	0	17	36
5:15 PM	0	7	0	0	7	5	2	0	0	7	17	0	0	1	17	31
Total	1	30	0	2	31	22	7	0	0	29	64	0	0	3	64	124
Approach %	3.2	96.8	0.0	-	-	75.9	24.1	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.8	24.2	0.0	-	25.0	17.7	5.6	0.0	-	23.4	51.6	0.0	0.0	-	51.6	-
PHF	0.250	0.750	0.000	-	0.775	0.786	0.875	0.000	-	0.806	0.889	0.000	0.000	-	0.889	0.861
Lights	1	29	0	-	30	22	6	0	-	28	64	0	0	-	64	122
% Lights	100.0	96.7	-	-	96.8	100.0	85.7	-	-	96.6	100.0	-	-	-	100.0	98.4
Other Vehicles	0	1	0	-	1	0	1	0	-	1	0	0	0	-	0	2
% Other Vehicles	0.0	3.3	-	-	3.2	0.0	14.3	-	-	3.4	0.0	-	-	-	0.0	1.6
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	-	3	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/11/2023



Turning Movement Peak Hour Data Plot (4:30 PM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/08/2023

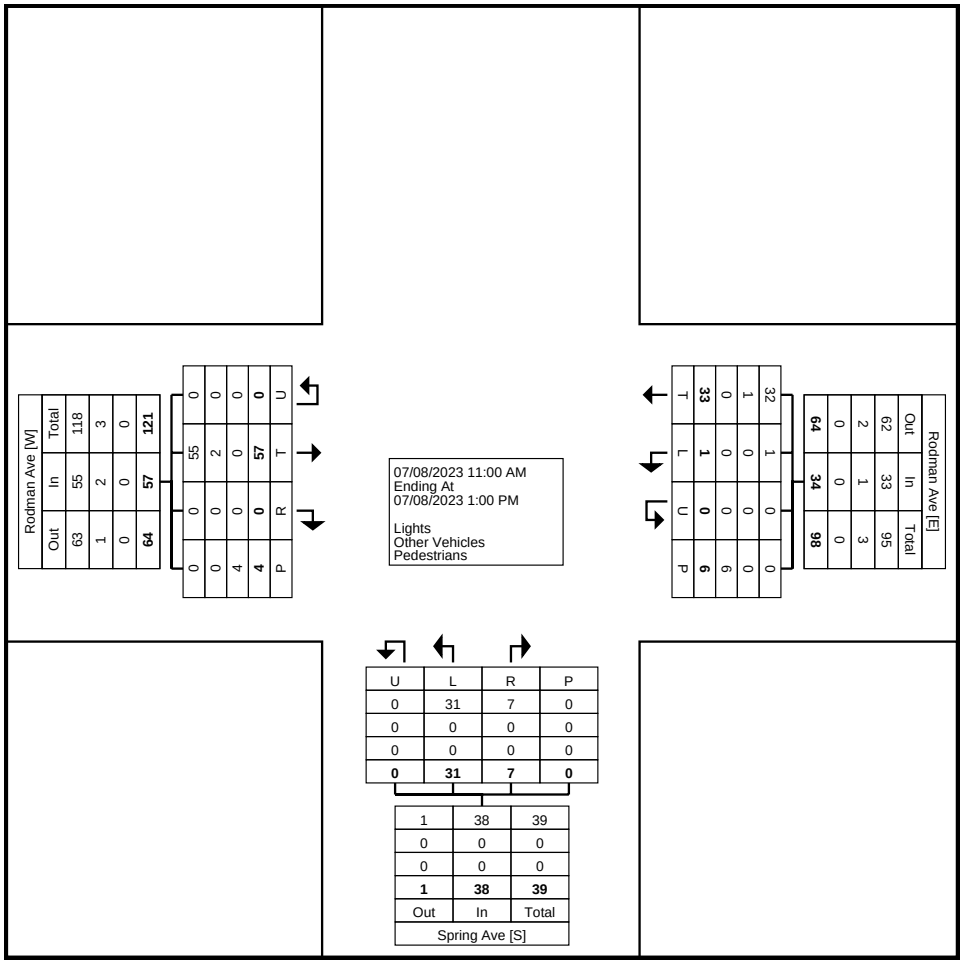
Turning Movement Data

Start Time	Rodman Ave Westbound					Spring Ave Northbound					Rodman Ave Eastbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
11:00 AM	0	6	0	1	6	2	0	0	0	2	8	0	0	1	8	16
11:15 AM	0	2	0	0	2	3	0	0	0	3	9	0	0	1	9	14
11:30 AM	0	3	0	1	3	2	0	0	0	2	4	0	0	0	4	9
11:45 AM	0	5	0	1	5	7	0	0	0	7	8	0	0	1	8	20
Hourly Total	0	16	0	3	16	14	0	0	0	14	29	0	0	3	29	59
12:00 PM	0	4	0	0	4	3	2	0	0	5	5	0	0	1	5	14
12:15 PM	0	2	0	1	2	5	0	0	0	5	5	0	0	0	5	12
12:30 PM	1	3	0	2	4	2	1	0	0	3	7	0	0	0	7	14
12:45 PM	0	8	0	0	8	7	4	0	0	11	11	0	0	0	11	30
Hourly Total	1	17	0	3	18	17	7	0	0	24	28	0	0	1	28	70
Grand Total	1	33	0	6	34	31	7	0	0	38	57	0	0	4	57	129
Approach %	2.9	97.1	0.0	-	-	81.6	18.4	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.8	25.6	0.0	-	26.4	24.0	5.4	0.0	-	29.5	44.2	0.0	0.0	-	44.2	-
Lights	1	32	0	-	33	31	7	0	-	38	55	0	0	-	55	126
% Lights	100.0	97.0	-	-	97.1	100.0	100.0	-	-	100.0	96.5	-	-	-	96.5	97.7
Other Vehicles	0	1	0	-	1	0	0	0	-	0	2	0	0	-	2	3
% Other Vehicles	0.0	3.0	-	-	2.9	0.0	0.0	-	-	0.0	3.5	-	-	-	3.5	2.3
Pedestrians	-	-	-	6	-	-	-	-	0	-	-	-	-	4	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/08/2023
Page No: 2



Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/08/2023

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Rodman Ave Westbound					Spring Ave Northbound					Rodman Ave Eastbound					
	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Int. Total
12:00 PM	0	4	0	0	4	3	2	0	0	5	5	0	0	1	5	14
12:15 PM	0	2	0	1	2	5	0	0	0	5	5	0	0	0	5	12
12:30 PM	1	3	0	2	4	2	1	0	0	3	7	0	0	0	7	14
12:45 PM	0	8	0	0	8	7	4	0	0	11	11	0	0	0	11	30
Total	1	17	0	3	18	17	7	0	0	24	28	0	0	1	28	70
Approach %	5.6	94.4	0.0	-	-	70.8	29.2	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	1.4	24.3	0.0	-	25.7	24.3	10.0	0.0	-	34.3	40.0	0.0	0.0	-	40.0	-
PHF	0.250	0.531	0.000	-	0.563	0.607	0.438	0.000	-	0.545	0.636	0.000	0.000	-	0.636	0.583
Lights	1	17	0	-	18	17	7	0	-	24	27	0	0	-	27	69
% Lights	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	96.4	-	-	-	96.4	98.6
Other Vehicles	0	0	0	-	0	0	0	0	-	0	1	0	0	-	1	1
% Other Vehicles	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	3.6	-	-	-	3.6	1.4
Pedestrians	-	-	-	3	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
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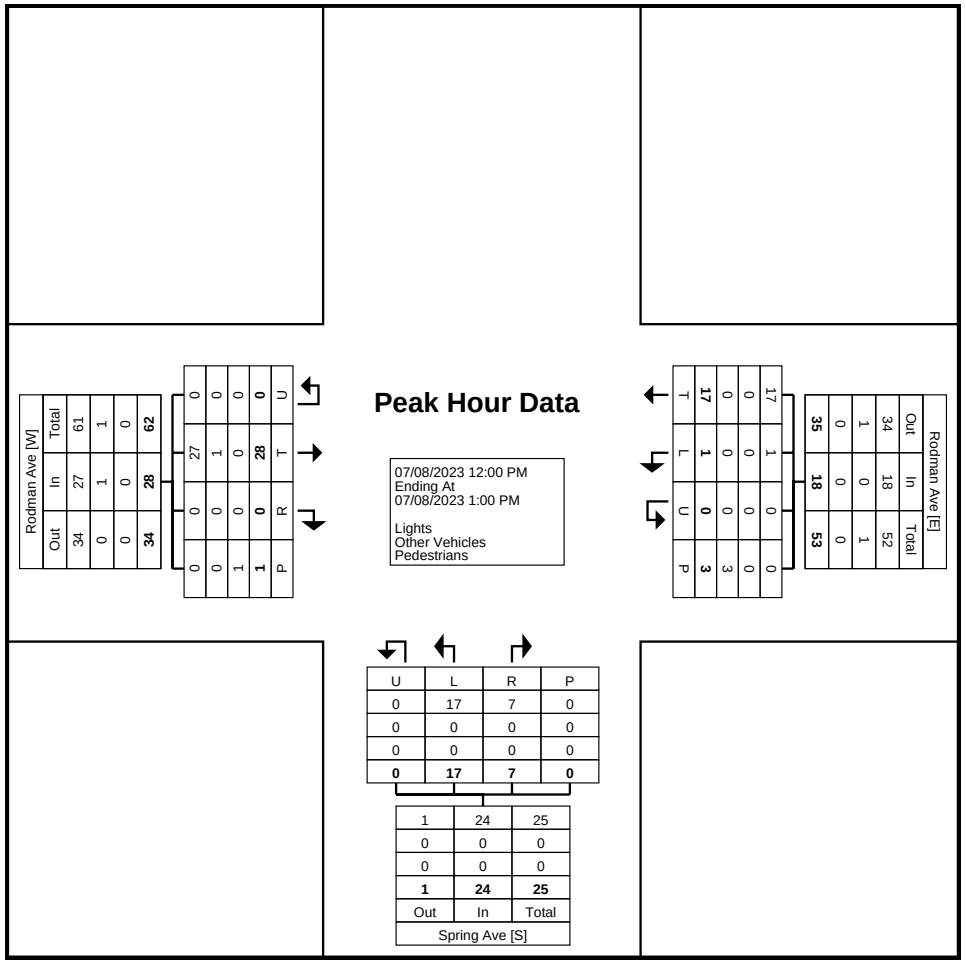
Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Rodman
Site Code:
Start Date: 07/08/2023



Turning Movement Peak Hour Data Plot (12:00 PM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/11/2023

Turning Movement Data

Start Time	Spring Ave Southbound					Spring Ave Northbound					Jenkin Ct Eastbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	5
7:15 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	2	0	6
7:30 AM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	9
7:45 AM	0	0	0	2	0	0	7	0	0	7	0	0	0	1	0	7
Hourly Total	0	0	0	2	0	0	27	0	0	27	0	0	0	3	0	27
8:00 AM	0	0	0	0	0	2	8	0	0	10	0	0	0	1	0	10
8:15 AM	0	0	0	0	0	1	8	0	0	9	1	0	0	0	1	10
8:30 AM	0	0	0	0	0	1	10	0	0	11	0	2	0	3	2	13
8:45 AM	0	3	0	0	3	0	8	0	0	8	1	0	0	0	1	12
Hourly Total	0	3	0	0	3	4	34	0	0	38	2	2	0	4	4	45
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	1	0	0	7	0	0	7	0	0	0	0	0	7
4:15 PM	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	7
4:45 PM	0	1	0	0	1	0	8	0	0	8	0	0	0	0	0	9
Hourly Total	0	1	0	1	1	1	25	0	0	26	0	0	0	0	0	27
5:00 PM	0	0	0	0	0	0	8	0	1	8	1	0	0	0	1	9
5:15 PM	0	0	0	1	0	0	7	0	0	7	0	0	0	1	0	7
5:30 PM	0	0	0	0	0	1	7	0	0	8	1	0	0	0	1	9
5:45 PM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	8
Hourly Total	0	0	0	1	0	1	30	0	1	31	2	0	0	1	2	33
Grand Total	0	4	0	4	4	6	116	0	1	122	4	2	0	8	6	132
Approach %	0.0	100.0	0.0	-	-	4.9	95.1	0.0	-	-	66.7	33.3	0.0	-	-	-
Total %	0.0	3.0	0.0	-	3.0	4.5	87.9	0.0	-	92.4	3.0	1.5	0.0	-	4.5	-
Lights	0	4	0	-	4	5	114	0	-	119	2	0	0	-	2	125
% Lights	-	100.0	-	-	100.0	83.3	98.3	-	-	97.5	50.0	0.0	-	-	33.3	94.7
Other Vehicles	0	0	0	-	0	1	2	0	-	3	2	2	0	-	4	7
% Other Vehicles	-	0.0	-	-	0.0	16.7	1.7	-	-	2.5	50.0	100.0	-	-	66.7	5.3
Pedestrians	-	-	-	4	-	-	-	-	1	-	-	-	-	8	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

McMahon a Bowman Company
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Count Name: 313626-01-001 Jtown - Spring & Jenkin
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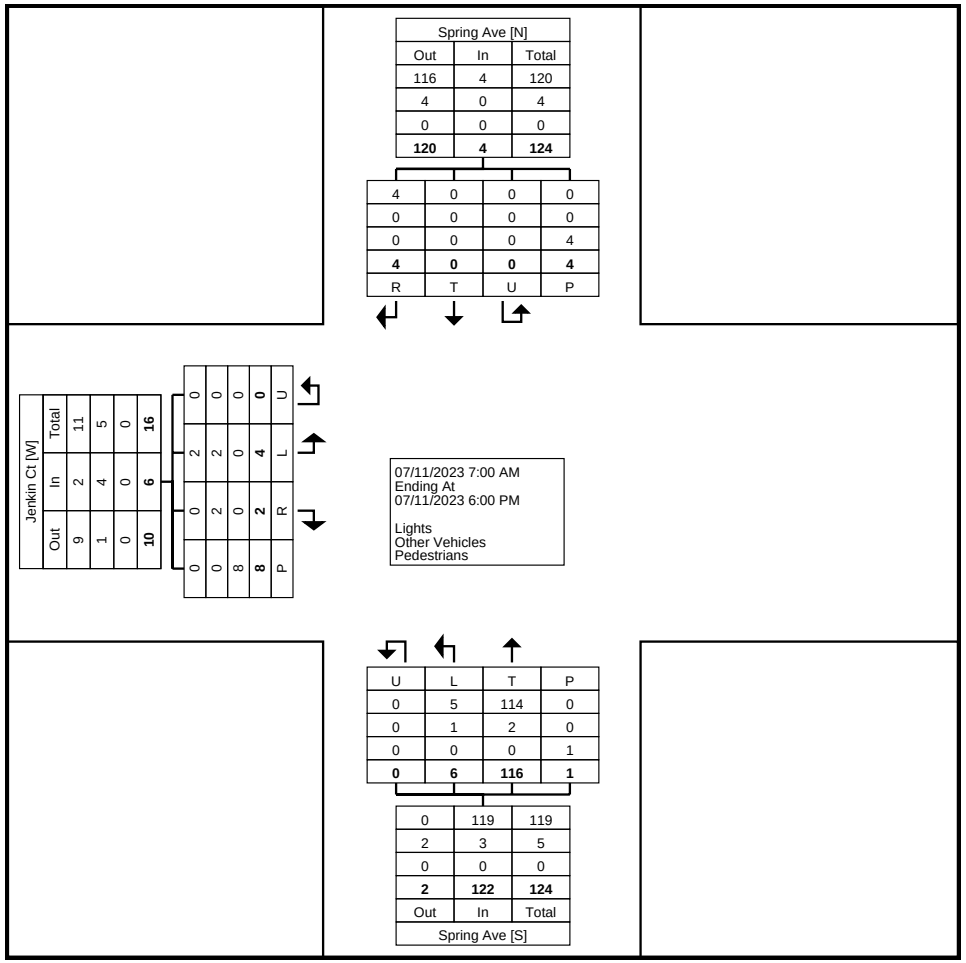
Page No: 2



Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/11/2023

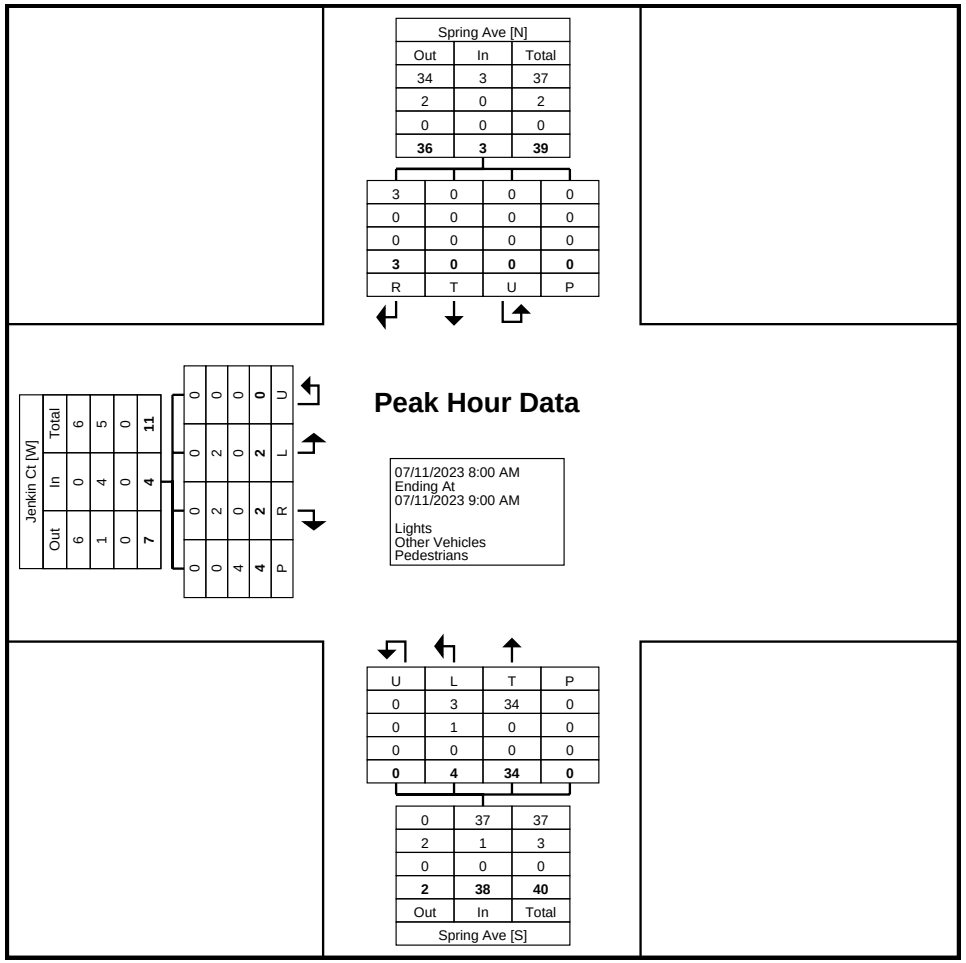
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Spring Ave Southbound					Spring Ave Northbound					Jenkin Ct Eastbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
8:00 AM	0	0	0	0	0	2	8	0	0	10	0	0	0	1	0	10
8:15 AM	0	0	0	0	0	1	8	0	0	9	1	0	0	0	1	10
8:30 AM	0	0	0	0	0	1	10	0	0	11	0	2	0	3	2	13
8:45 AM	0	3	0	0	3	0	8	0	0	8	1	0	0	0	1	12
Total	0	3	0	0	3	4	34	0	0	38	2	2	0	4	4	45
Approach %	0.0	100.0	0.0	-	-	10.5	89.5	0.0	-	-	50.0	50.0	0.0	-	-	-
Total %	0.0	6.7	0.0	-	6.7	8.9	75.6	0.0	-	84.4	4.4	4.4	0.0	-	8.9	-
PHF	0.000	0.250	0.000	-	0.250	0.500	0.850	0.000	-	0.864	0.500	0.250	0.000	-	0.500	0.865
Lights	0	3	0	-	3	3	34	0	-	37	0	0	0	-	0	40
% Lights	-	100.0	-	-	100.0	75.0	100.0	-	-	97.4	0.0	0.0	-	-	0.0	88.9
Other Vehicles	0	0	0	-	0	1	0	0	-	1	2	2	0	-	4	5
% Other Vehicles	-	0.0	-	-	0.0	25.0	0.0	-	-	2.6	100.0	100.0	-	-	100.0	11.1
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/11/2023



Turning Movement Peak Hour Data Plot (8:00 AM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/11/2023

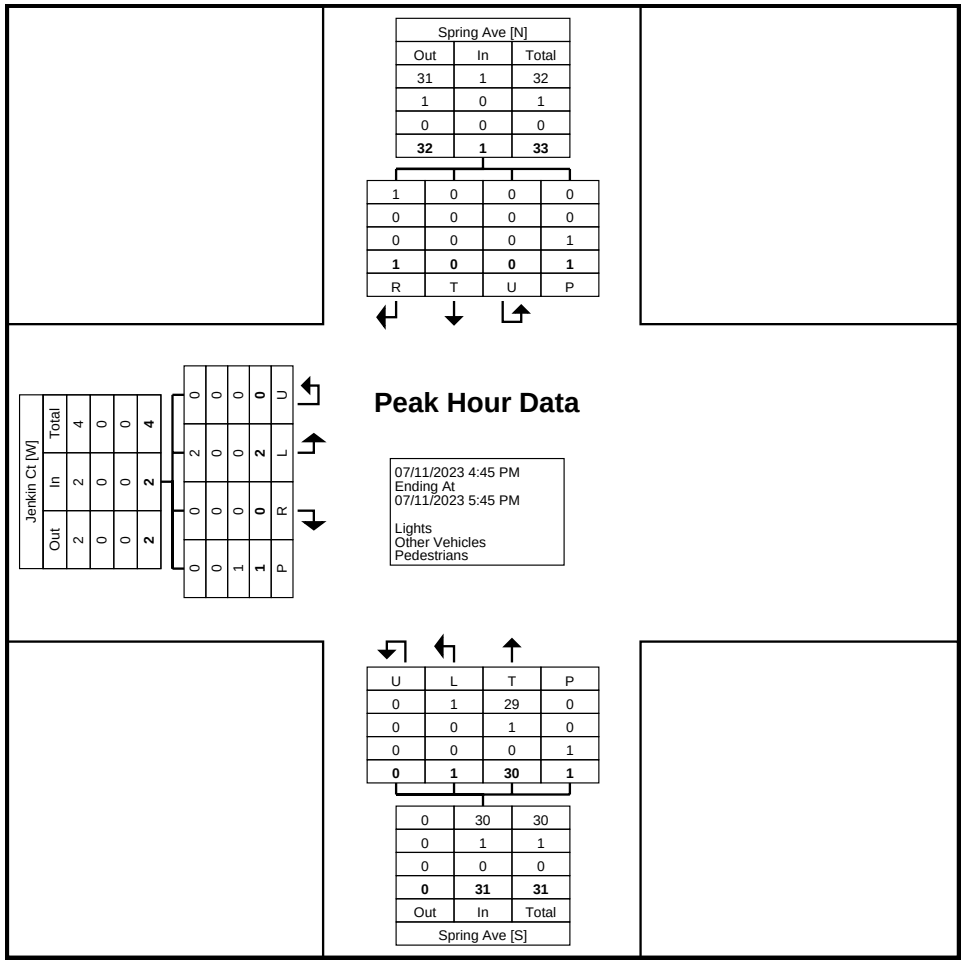
Turning Movement Peak Hour Data (4:45 PM)

Start Time	Spring Ave Southbound					Spring Ave Northbound					Jenkin Ct Eastbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
4:45 PM	0	1	0	0	1	0	8	0	0	8	0	0	0	0	0	9
5:00 PM	0	0	0	0	0	0	8	0	1	8	1	0	0	0	1	9
5:15 PM	0	0	0	1	0	0	7	0	0	7	0	0	0	1	0	7
5:30 PM	0	0	0	0	0	1	7	0	0	8	1	0	0	0	1	9
Total	0	1	0	1	1	1	30	0	1	31	2	0	0	1	2	34
Approach %	0.0	100.0	0.0	-	-	3.2	96.8	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	2.9	0.0	-	2.9	2.9	88.2	0.0	-	91.2	5.9	0.0	0.0	-	5.9	-
PHF	0.000	0.250	0.000	-	0.250	0.250	0.938	0.000	-	0.969	0.500	0.000	0.000	-	0.500	0.944
Lights	0	1	0	-	1	1	29	0	-	30	2	0	0	-	2	33
% Lights	-	100.0	-	-	100.0	100.0	96.7	-	-	96.8	100.0	-	-	-	100.0	97.1
Other Vehicles	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Other Vehicles	-	0.0	-	-	0.0	0.0	3.3	-	-	3.2	0.0	-	-	-	0.0	2.9
Pedestrians	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/11/2023



Turning Movement Peak Hour Data Plot (4:45 PM)

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/08/2023

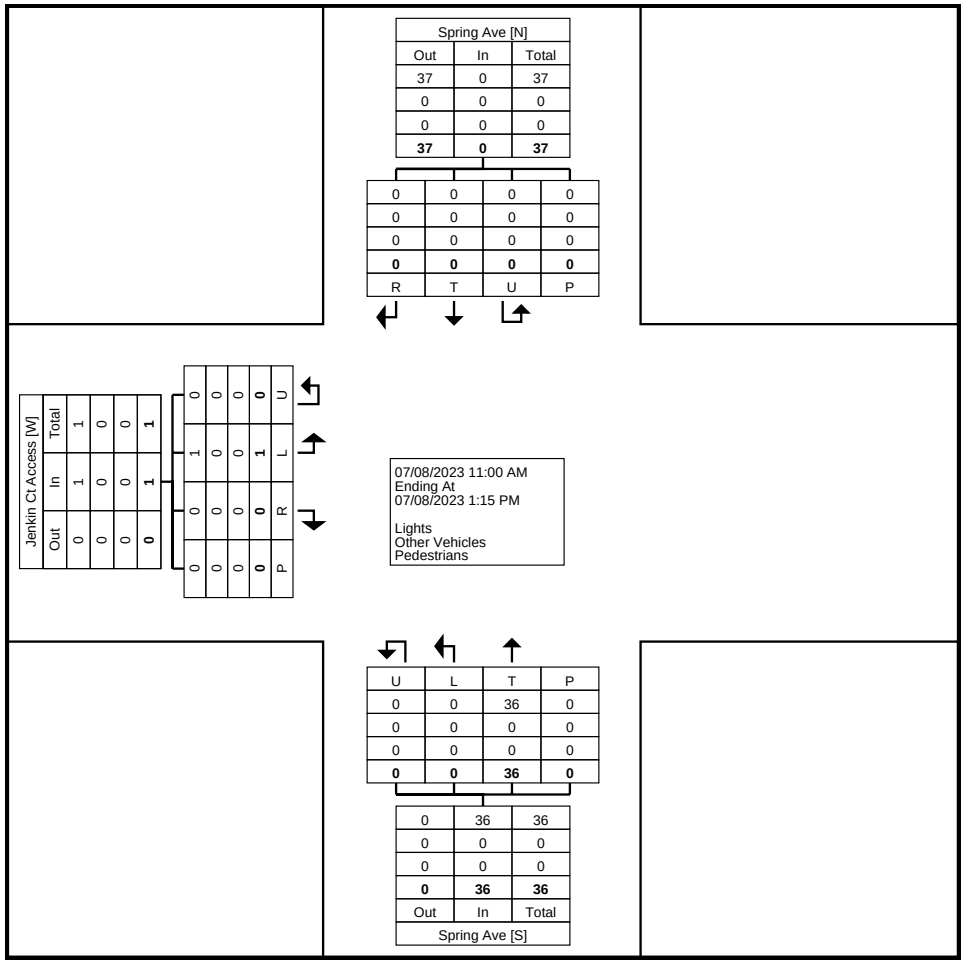
Turning Movement Data

Start Time	Spring Ave Southbound					Spring Ave Northbound					Jenkin Ct Access Eastbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
11:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
11:15 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	7
Hourly Total	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	14
12:00 PM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	5
12:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	5
12:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
12:45 PM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	10
Hourly Total	0	0	0	0	0	0	22	0	0	22	1	0	0	0	1	23
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	36	0	0	36	1	0	0	0	1	37
Approach %	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	97.3	0.0	-	97.3	2.7	0.0	0.0	-	2.7	-
Lights	0	0	0	-	0	0	36	0	-	36	1	0	0	-	1	37
% Lights	-	-	-	-	-	-	100.0	-	-	100.0	100.0	-	-	-	100.0	100.0
Other Vehicles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Other Vehicles	-	-	-	-	-	-	0.0	-	-	0.0	0.0	-	-	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/08/2023
Page No: 2



Turning Movement Data Plot

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/08/2023

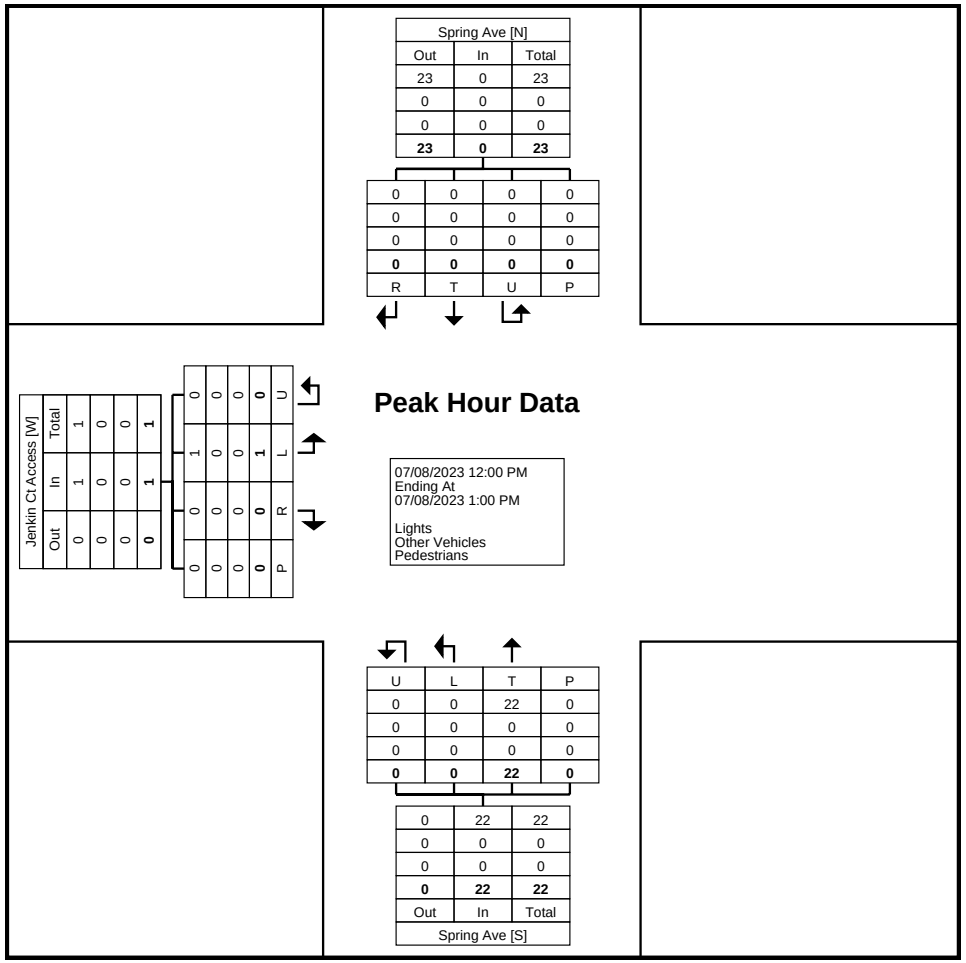
Turning Movement Peak Hour Data (12:00 PM)

Start Time	Spring Ave Southbound					Spring Ave Northbound					Jenkin Ct Access Eastbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
12:00 PM	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	5
12:15 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	5
12:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
12:45 PM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	10
Total	0	0	0	0	0	0	22	0	0	22	1	0	0	0	1	23
Approach %	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	95.7	0.0	-	95.7	4.3	0.0	0.0	-	4.3	-
PHF	0.000	0.000	0.000	-	0.000	0.000	0.550	0.000	-	0.550	0.250	0.000	0.000	-	0.250	0.575
Lights	0	0	0	-	0	0	22	0	-	22	1	0	0	-	1	23
% Lights	-	-	-	-	-	-	100.0	-	-	100.0	100.0	-	-	-	100.0	100.0
Other Vehicles	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Other Vehicles	-	-	-	-	-	-	0.0	-	-	0.0	0.0	-	-	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

McMahon a Bowman Company
425 Commerce Drive, Suite 200

Fort Washington, Pennsylvania, United States 19034
215-283-9444

Count Name: 313626-01-001 Jtown - Spring & Jenkin
Site Code:
Start Date: 07/08/2023



Turning Movement Peak Hour Data Plot (12:00 PM)

Volume Balancing

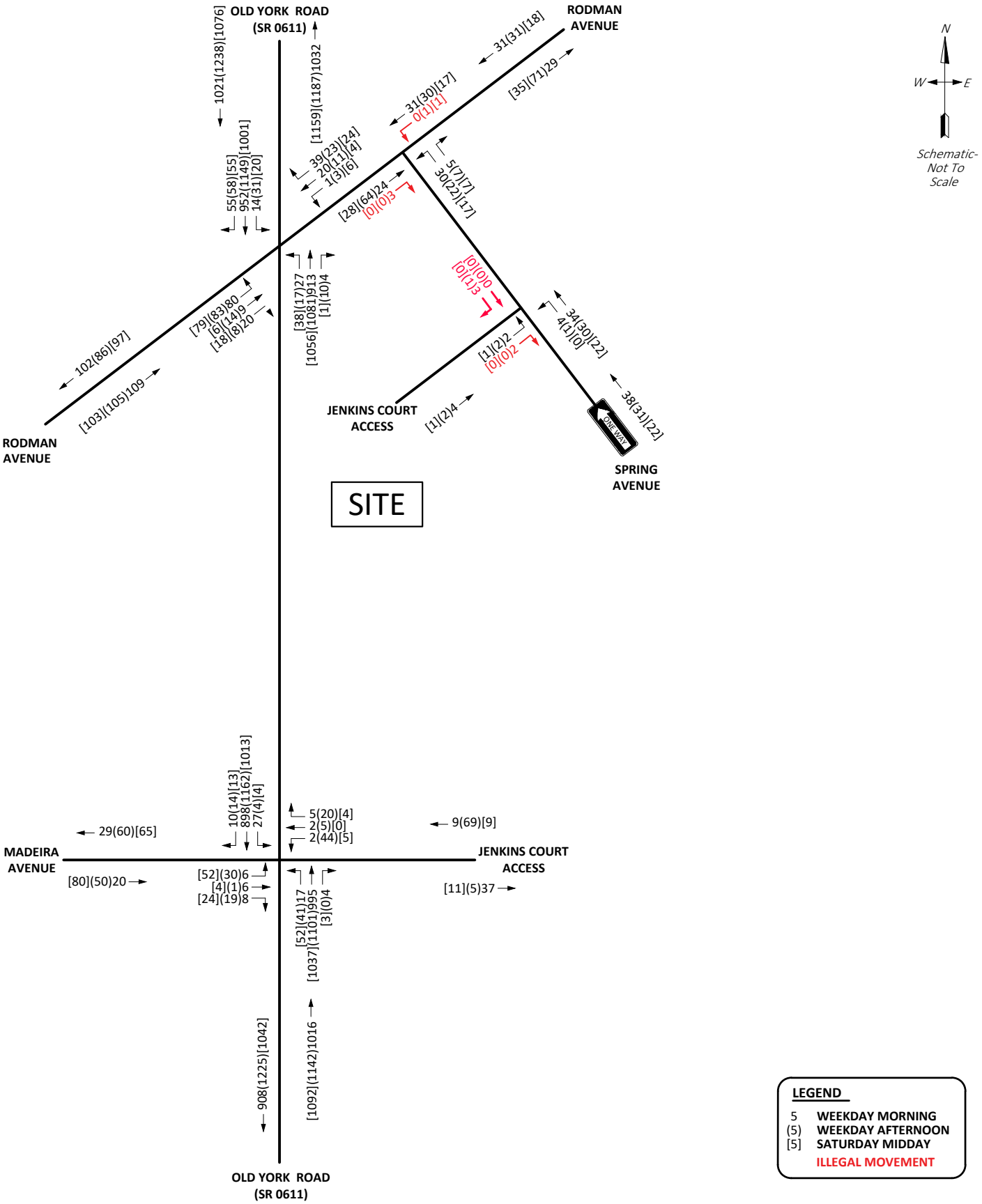


FIGURE A

2023 Existing Peak Hour Volumes - Unbalanced

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figures A to F.dwg

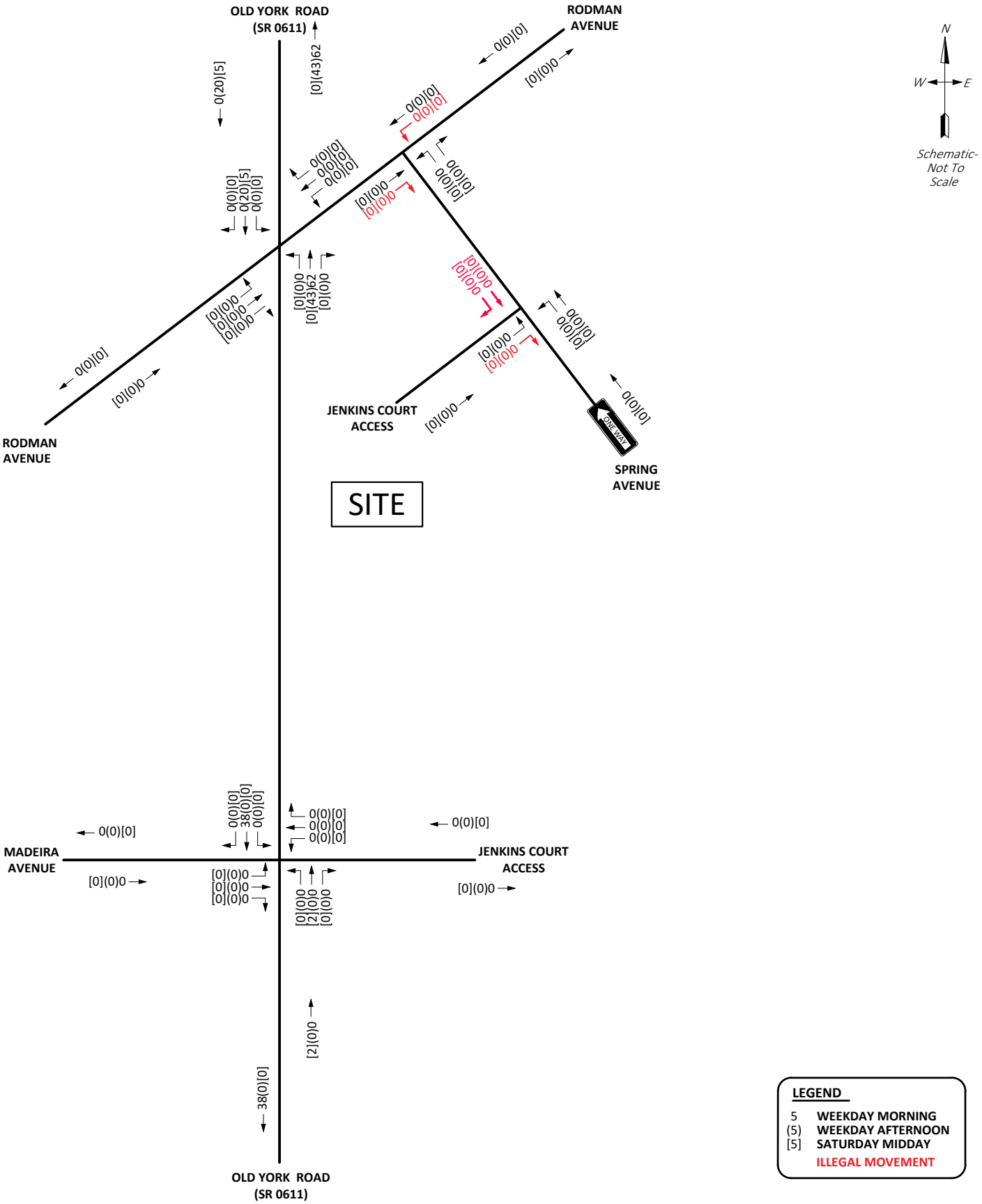


FIGURE B

Balancing Adjustments

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figures A to F.dwg

Appendix D

Trip Generation Details

LAND USE CODE 937

Land Use: 937
Coffee/Donut Shop with Drive-Through Window

Description

This land use includes any coffee and donut restaurant that has a drive-through window as well as a walk-in entrance area at which a patron can purchase and consume items. The restaurant sells freshly brewed coffee (along with coffee-related accessories) and a variety of food/drink products such as donuts, bagels, breads, muffins, cakes, sandwiches, wraps, salads, and other hot and cold beverages. The restaurant marketing and sales may emphasize coffee beverages over food (or vice versa).

A coffee/donut shop typically holds long store hours (more than 15 hours) with an early morning opening. Limited indoor seating is generally provided for patrons, but table service is not provided.

Coffee/donut shop without drive-through window (Land Use 936) and coffee/donut shop with drive-through window and no indoor seating (Land Use 938) are related uses.

Additional Data

The sites were surveyed in the 1990s, the 2000s, and the 2010s in California, Colorado, Connecticut, Illinois, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New York, Ontario (CAN), Pennsylvania, Quebec (CAN), Tennessee, Vermont, Washington, and Wisconsin.

Specialized Land Use Data

One study was conducted during the pandemic in 2020. Twelve sites were counted in Illinois and Missouri during the AM and PM adjacent street peak hours. The data have not been incorporated within the overall ITE trip generation database and are not reflected in the data plots for this land use. Consideration for their inclusion will be given for the 12th Edition of *Trip Generation Manual* after additional post-pandemic data are collected. Overall, the pandemic counts yielded an AM adjacent street peak weighted average rate of 84 vehicle trips per 1,000 square feet GFA, roughly equivalent to the pre-pandemic average. The PM adjacent street peak rate was 56 (roughly 40 percent higher than the pre-pandemic value). The higher PM peak rate for these coffee/donut shops conforms with anecdotal observations that with the temporary or permanent closures of many restaurants during the pandemic, the drive-through restaurants that were open did a brisk business even during their off-peak periods.

Source Numbers

594, 599, 615, 617, 618, 621, 622, 635, 639, 712, 714, 725, 726, 728, 853, 854, 892, 903, 928, 959, 979, 982, 1004, 1042, 1044

Coffee/Donut Shop with Drive-Through Window (937)

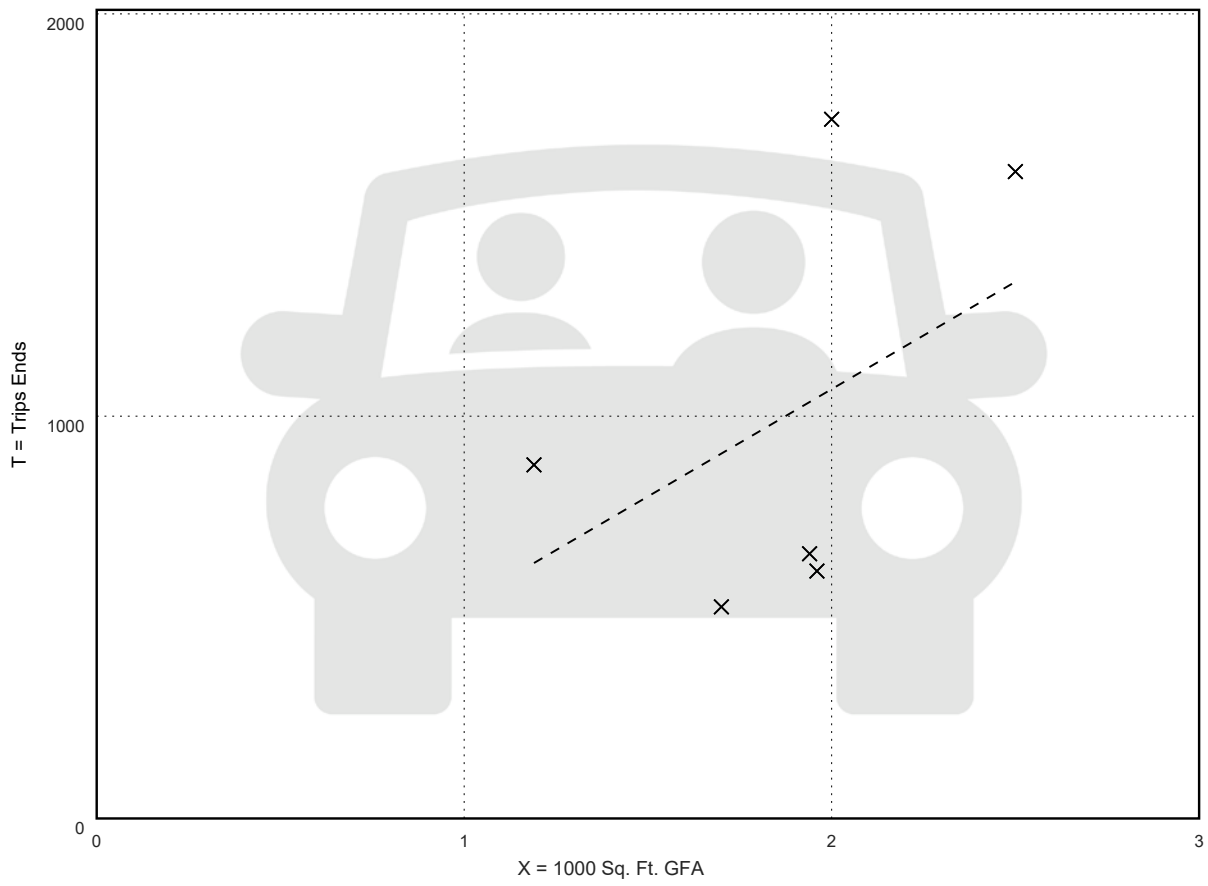
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
533.57	309.41 - 869.00	243.65

Data Plot and Equation



× **Study Site**

– – – – – **Average Rate**

Fitted Curve Equation: Not Given

R^2= ***

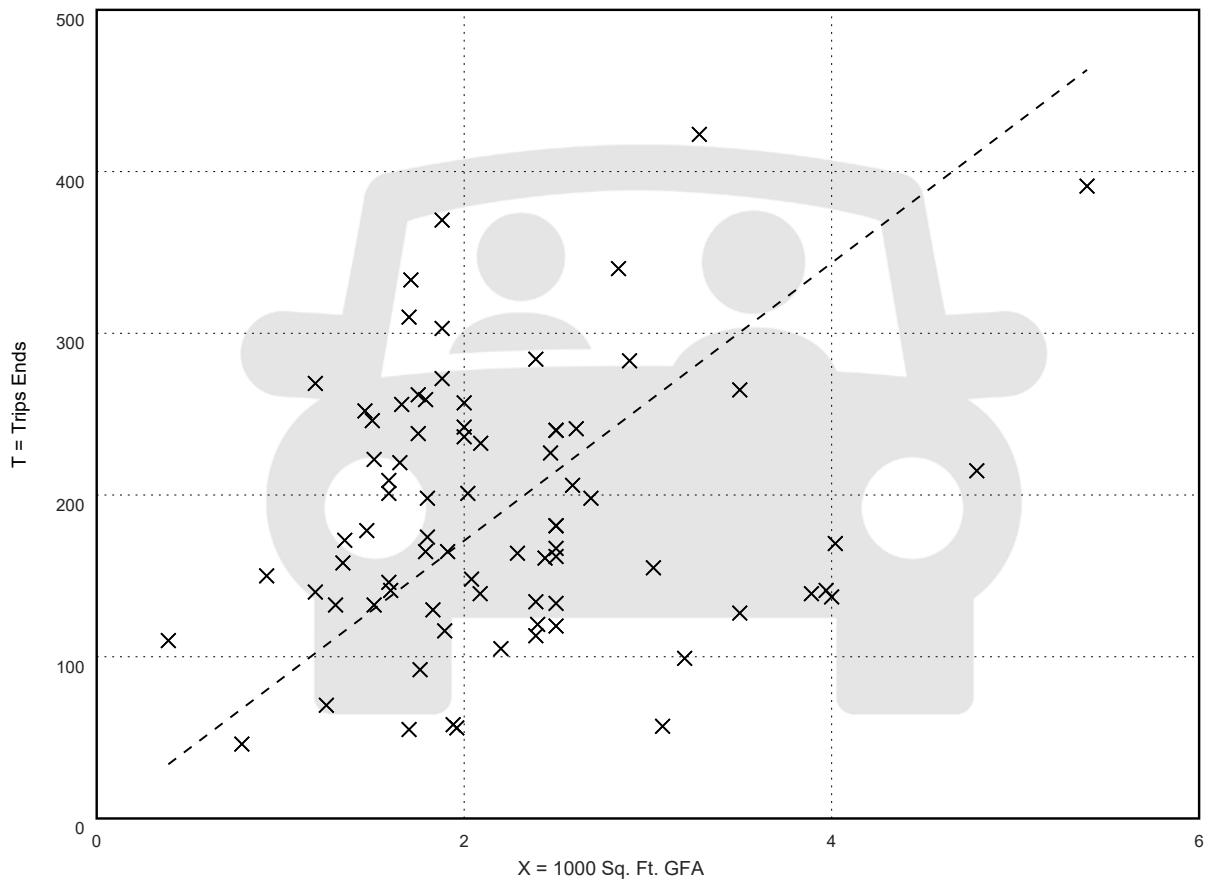
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 78
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
85.88	18.51 - 282.05	44.92

Data Plot and Equation



× **Study Site**

– – – – – **Average Rate**

Fitted Curve Equation: Not Given

R^2= ***

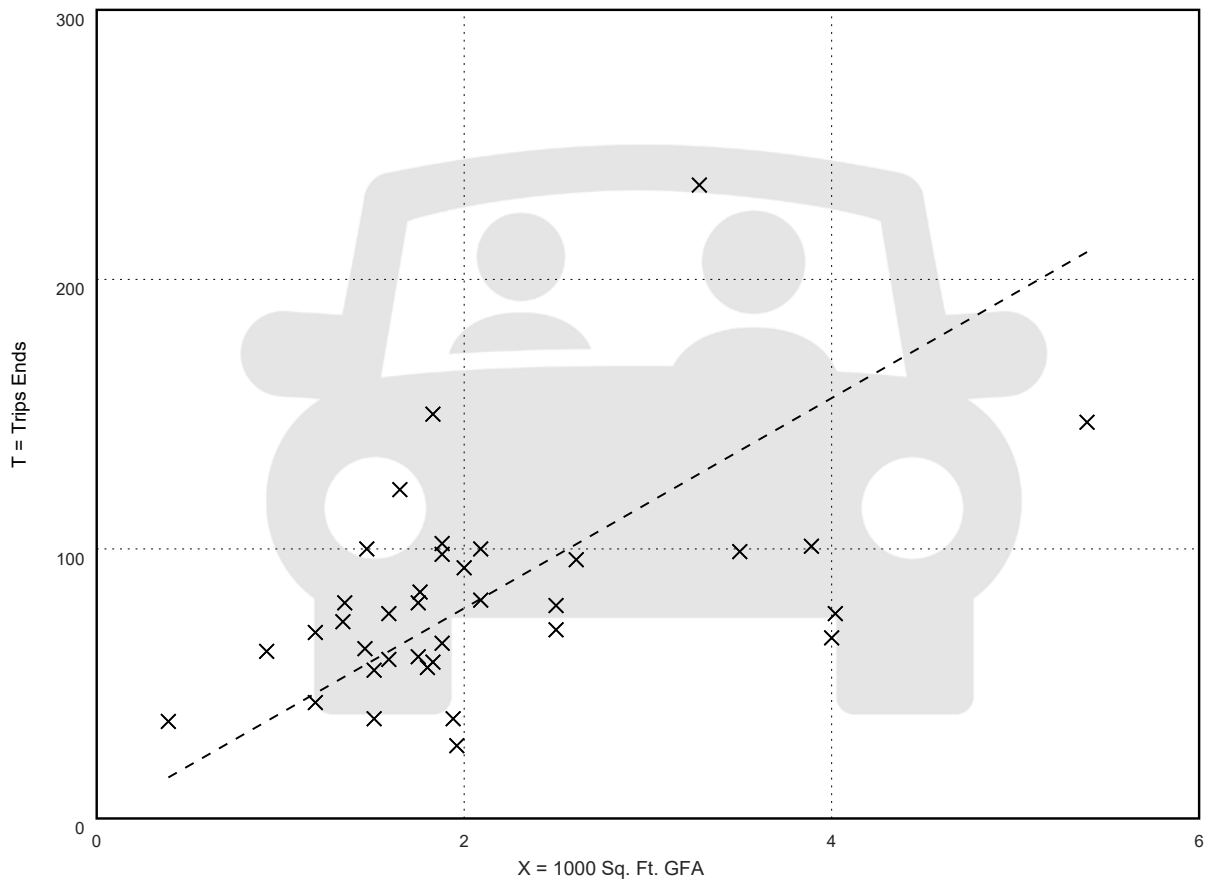
Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 36
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
38.99	13.78 - 92.31	17.79

Data Plot and Equation



× **Study Site**

- - - - - **Average Rate**

Fitted Curve Equation: Not Given

R^2= ***

Coffee/Donut Shop with Drive-Through Window (937)

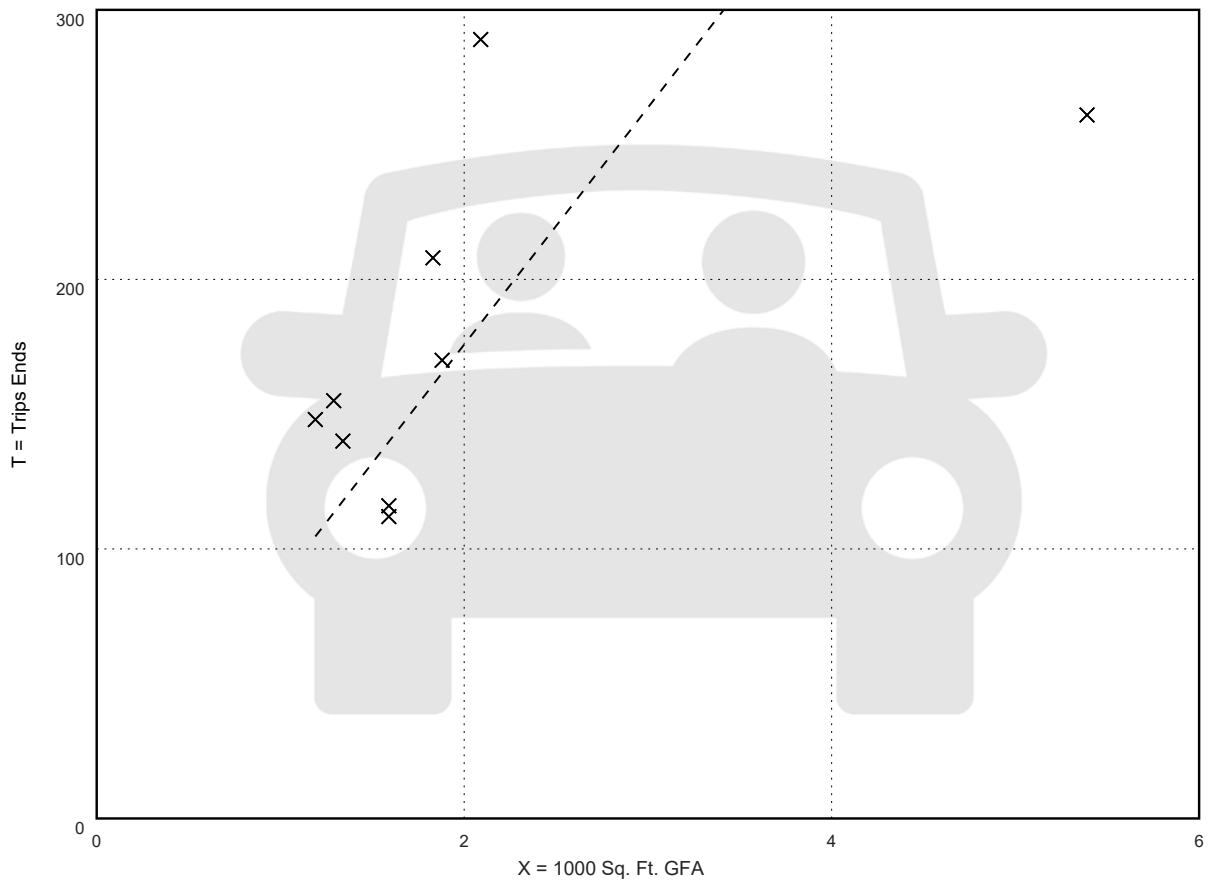
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 9
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
87.91	48.42 - 138.28	34.34

Data Plot and Equation



× **Study Site**

– – – – – **Average Rate**

Fitted Curve Equation: Not Given

R^2= ***

RITA's DATA WITH LOCATION AERIALS

Rita's Water Ice
Weekday Afternoon (4:00 PM to 6:00 PM) Trip Generation Data

Average Trip Generation Details		
Store Size	717	
Rate per 1,000 s.f.		
Vehicles	45.96	
Pedestrians	1.67	
Combined	47.63	
Percent Enter/Exit	Enter	Exit
Vehicles	44%	56%
Pedestrians	50%	50%
Combined	44%	56%

Date: Thursday, July 20, 2023
Location: 427 Pottstown Ave, Pennsburg, PA 18073
Store Size: 702 s.f.

Interval	Vehicles			Peak	Pedestrians			Peak	Combined			Peak
	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour
4:00 PM	4	3	7	- - -	0	0	0	- - -	4	3	7	- - -
4:15 PM	3	4	7	- - -	0	0	0	- - -	3	4	7	- - -
4:30 PM	4	5	9	- - -	0	0	0	- - -	4	5	9	- - -
4:45 PM	2	3	5	28	0	0	0	0	2	3	5	28
5:00 PM	6	4	10	31	0	0	0	0	6	4	10	31
5:15 PM	2	3	5	29	1	0	1	1	3	3	6	30
5:30 PM	1	0	1	21	0	1	1	2	1	1	2	23
5:45 PM	4	3	7	23	0	0	0	2	4	3	7	25
Total	26	25	51		1	1	2		27	26	53	
Peak Hour Volumes	**15**	**16**	**31**		**0**	**0**	**0**		**15**	**16**	**31**	
Rate per 1,000 s.f.	**44.16**			- - -	**0.00**			- - -	**44.16**			- - -
Percent Enter/Exit	**48%**	**52%**	**100%**		**0%**	**0%**	**0%**		**48%**	**52%**	**100%**	

Date: Wednesday, July 19, 2023
Location: 1188 Dekalb Pike, Blue Bell, PA 19422
Store Size: 648 s.f.

Interval	Vehicles			Peak	Pedestrians			Peak	Combined			Peak
	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour
4:00 PM	6	3	9	- - -	0	0	0	- - -	6	3	9	- - -
4:15 PM	3	7	10	- - -	0	0	0	- - -	3	7	10	- - -
4:30 PM	3	4	7	- - -	0	0	0	- - -	3	4	7	- - -
4:45 PM	4	1	5	31	0	0	0	0	4	1	5	31
5:00 PM	4	8	12	34	0	0	0	0	4	8	12	34
5:15 PM	0	2	2	26	0	0	0	0	0	2	2	26
5:30 PM	5	5	10	29	0	0	0	0	5	5	10	29
5:45 PM	3	3	6	30	0	0	0	0	3	3	6	30
Total	28	33	61		0	0	0		28	33	61	
Peak Hour Volumes	**14**	**20**	**34**		**0**	**0**	**0**		**14**	**20**	**34**	
Rate per 1,000 s.f.	**52.47**			- - -	**0.00**			- - -	**52.47**			- - -
Percent Enter/Exit	**41%**	**59%**	**100%**		**0%**	**0%**	**0%**		**41%**	**59%**	**100%**	

Date: Thursday, July 20, 2023
Location: 214 N Broad St, Lansdale, PA 19446
Store Size: 800 s.f.

Interval	Vehicles			Peak	Pedestrians			Peak	Combined			Peak
	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour
4:00 PM	4	2	6	- - -	0	0	0	- - -	4	2	6	- - -
4:15 PM	4	5	9	- - -	0	0	0	- - -	4	5	9	- - -
4:30 PM	3	6	9	- - -	1	1	2	- - -	4	7	11	- - -
4:45 PM	4	4	8	32	1	0	1	3	5	4	9	35
5:00 PM	3	4	7	33	0	1	1	4	3	5	8	37
5:15 PM	1	2	3	27	1	0	1	5	2	2	4	32
5:30 PM	4	4	8	26	1	1	2	5	5	5	10	31
5:45 PM	6	3	9	27	2	2	4	8	8	5	13	35
Total	29	30	59		6	5	11		35	35	70	
Peak Hour Volumes	**14**	**19**	**33**		**2**	**2**	**4**		**16**	**21**	**37**	
Rate per 1,000 s.f.	**41.25**			- - -	**5.00**			- - -	**46.25**			- - -
Percent Enter/Exit	**42%**	**58%**	**100%**		**50%**	**50%**	**100%**		**43%**	**57%**	**100%**	

Rita's Water Ice
Saturday Midday (11:00 AM to 1:00 PM) Trip Generation Data

Average Trip Generation Details		
Store Size	717	
Rate per 1,000 s.f.		
Vehicles	15.56	
Pedestrians	0.83	
Combined	16.39	
Percent Enter/Exit	Enter	Exit
Vehicles	62%	38%
Pedestrians	50%	50%
Combined	61%	39%

Date: Saturday, July 22, 2023
Location: 427 Pottstown Ave, Pennsburg, PA 18073
Store Size: 702 s.f.

Interval	Vehicles			Peak	Pedestrians			Peak	Combined			Peak
	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour
11:00 AM	1	1	2	- - -	0	0	0	- - -	1	1	2	- - -
11:15 AM	1	3	4	- - -	0	0	0	- - -	1	3	4	- - -
11:30 AM	2	0	2	- - -	0	0	0	- - -	2	0	2	- - -
11:45 AM	1	1	2	10	0	0	0	0	1	1	2	10
12:00 PM	1	1	2	10	0	0	0	0	1	1	2	10
12:15 PM	4	0	4	10	0	0	0	0	4	0	4	10
12:30 PM	2	1	3	11	0	0	0	0	2	1	3	11
12:45 PM	2	5	7	16	0	0	0	0	2	5	7	16
Total	14	12	26		0	0	0		14	12	26	
Peak Hour Volumes	**9**	**7**	**16**		**0**	**0**	**0**		**9**	**7**	**16**	
Rate per 1,000 s.f.	**22.79**			- - -	**0.00**			- - -	**22.79**			- - -
Percent Enter/Exit	**56%**	**44%**	**100%**		**0%**	**0%**	**0%**		**56%**	**44%**	**100%**	

Date: Saturday, July 22, 2023
Location: 1188 Dekalb Pike, Blue Bell, PA 19422
Store Size: 648 s.f.

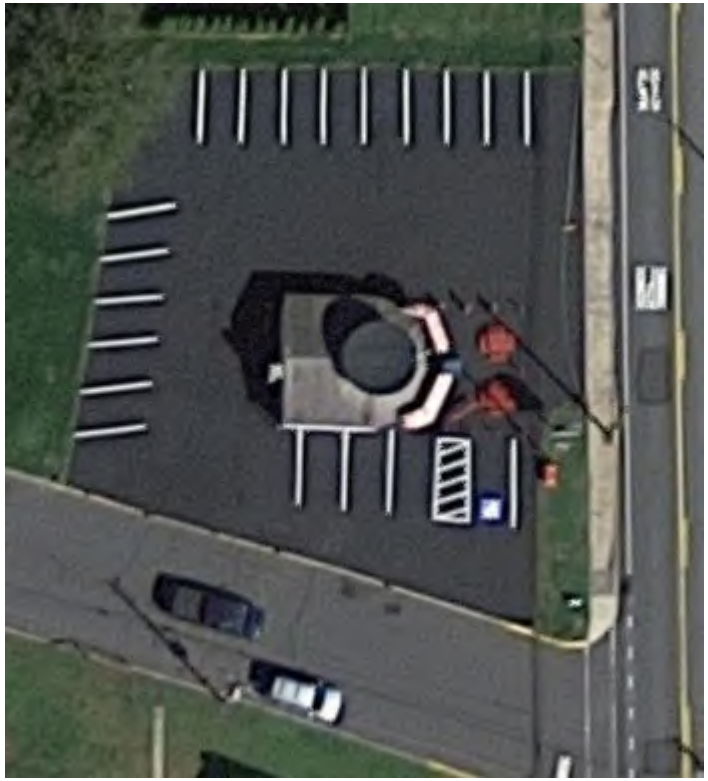
Interval	Vehicles			Peak	Pedestrians			Peak	Combined			Peak
	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour
11:00 AM	0	0	0	- - -	0	0	0	- - -	0	0	0	- - -
11:15 AM	0	0	0	- - -	0	0	0	- - -	0	0	0	- - -
11:30 AM	0	0	0	- - -	0	0	0	- - -	0	0	0	- - -
11:45 AM	1	1	2	2	0	0	0	0	1	1	2	2
12:00 PM	0	0	0	2	0	0	0	0	0	0	0	2
12:15 PM	0	0	0	2	0	0	0	0	0	0	0	2
12:30 PM	4	1	5	7	0	0	0	0	4	1	5	7
12:45 PM	2	2	4	9	0	0	0	0	2	2	4	9
Total	7	4	11		0	0	0		7	4	11	
Peak Hour Volumes	**6**	**3**	**9**		**0**	**0**	**0**		**6**	**3**	**9**	
Rate per 1,000 s.f.	**13.89**			- - -	**0.00**			- - -	**13.89**			- - -
Percent Enter/Exit	**67%**	**33%**	**100%**		**0%**	**0%**	**0%**		**67%**	**33%**	**100%**	

Date: Saturday, July 22, 2023
Location: 214 N Broad St, Lansdale, PA 19446
Store Size: 800 s.f.

Interval	Vehicles			Peak	Pedestrians			Peak	Combined			Peak
	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour	Enter	Exit	Total	Hour
11:00 AM	Closed	Closed	Closed	- - -	Closed	Closed	Closed	- - -	Closed	Closed	Closed	- - -
11:15 AM	Closed	Closed	Closed	- - -	Closed	Closed	Closed	- - -	Closed	Closed	Closed	- - -
11:30 AM	Closed	Closed	Closed	- - -	Closed	Closed	Closed	- - -	Closed	Closed	Closed	- - -
11:45 AM	Closed	Closed	Closed	- - -	Closed	Closed	Closed	- - -	Closed	Closed	Closed	- - -
12:00 PM	0	0	0	- - -	1	1	2	- - -	1	1	2	- - -
12:15 PM	0	0	0	- - -	0	0	0	- - -	0	0	0	- - -
12:30 PM	2	2	4	- - -	0	0	0	- - -	2	2	4	- - -
12:45 PM	3	1	4	8	0	0	0	2	3	1	4	10
Total	5	3	8		1	1	2		6	4	10	
Peak Hour Volumes	**5**	**3**	**8**		**1**	**1**	**2**		**6**	**4**	**10**	
Rate per 1,000 s.f.	**10.00**			- - -	**2.50**			- - -	**12.50**			- - -
Percent Enter/Exit	**63%**	**38%**	**100%**		**50%**	**50%**	**100%**		**60%**	**40%**	**100%**	

427 Pottstown Ave, Pennsburg, PA 18073

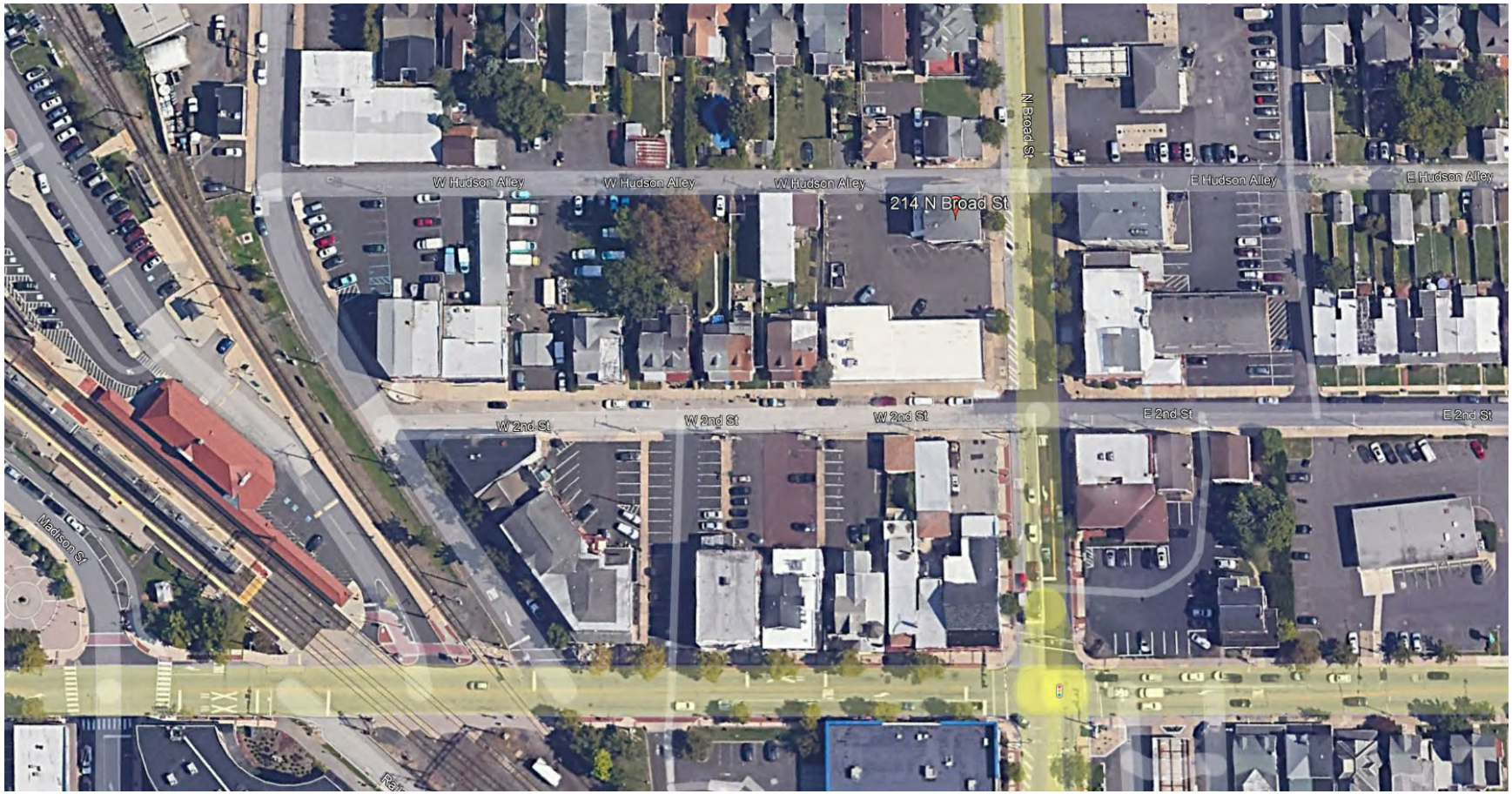
427 Pottstown Ave, Pennsburg, PA 18073



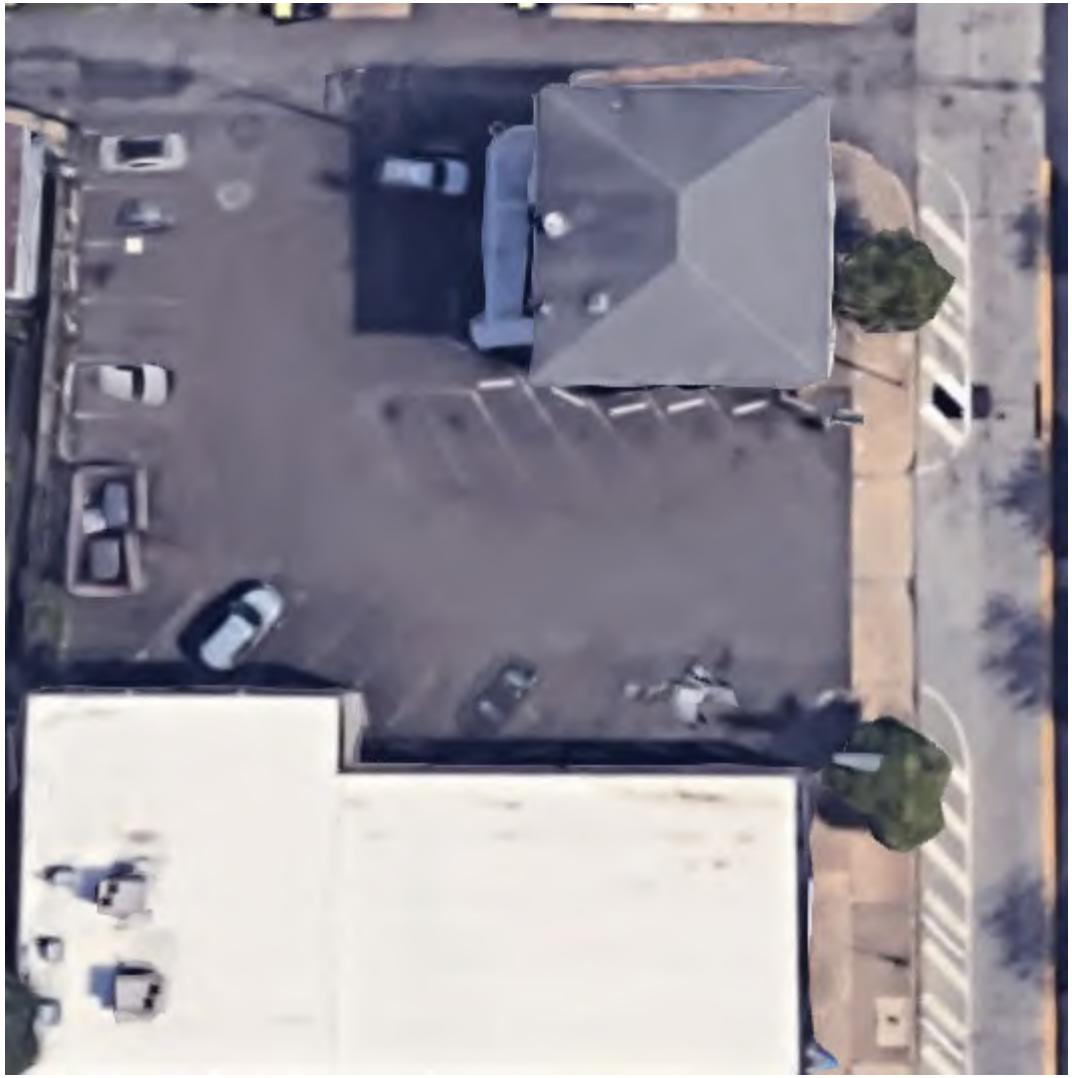
1188 Dekalb Pike, Blue Bell, PA 19422

1188 Dekalb Pike, Blue Bell, PA 19422

214 N Broad St, Lansdale, PA 19446



214 N Broad St, Lansdale, PA 19446



STARBUCKS's DATA WITH LOCATION AERIALS

Starbuck's
Weekday Morning (7:00 AM to 9:00 AM)
Drive Through Operational Data

Average Drive-Thru Trip Generation Details		
Store Size	1842	
Rate per 1,000 s.f.	79.96	
Percent Enter/Exit	Enter	Exit
Queue Summary (1,2)		
Minimum Queue	0	
Average Queue	4	
95th Percentile Queue	8	
Maximum Queue	10	

(1) Queue measured in number of vehicles starting at the pick-up window.

(2) Based on entire count period for all three sites (not averaged).

Starbuck's
Weekday Morning (7:00 AM to 9:00 AM)
Drive Through Operational Data

Date: Tuesday, July 25, 2023
Location: 180 West Dekalb Pike Valley Forge, King of Prussia, PA 19406
Store Size: 1842 s.f.

Interval			Drive-Thru				PEAK HOUR
			Enter	Exit	Total	Queue (1)	
7:00 AM	to	7:00 AM	10	10	20	2	- - -
7:05 AM	to	7:05 AM				4	
7:10 AM	to	7:10 AM				1	
7:15 AM	to	7:15 AM	19	15	34	2	- - -
7:20 AM	to	7:20 AM				5	
7:25 AM	to	7:25 AM				3	
7:30 AM	to	7:30 AM	17	19	36	4	- - -
7:35 AM	to	7:35 AM				2	
7:40 AM	to	7:40 AM				1	
7:45 AM	to	7:45 AM	19	19	38	3	128
7:50 AM	to	7:50 AM				4	
7:55 AM	to	7:55 AM				6	
8:00 AM	to	8:00 AM	23	26	49	3	157
8:05 AM	to	8:05 AM				3	
8:10 AM	to	8:10 AM				4	
8:15 AM	to	8:15 AM	21	20	41	4	164
8:20 AM	to	8:20 AM				6	
8:25 AM	to	8:25 AM				2	
8:30 AM	to	8:30 AM	28	31	59	4	187
8:35 AM	to	8:35 AM				5	
8:40 AM	to	8:40 AM				6	
8:45 AM	to	8:45 AM	25	30	55	7	204
8:50 AM	to	8:50 AM				10	
8:55 AM	to	8:55 AM				4	
Total			162	170	332		
Peak Hour Volumes			**97**	**107**	**204**		
Rate per 1,000 s.f.			**110.75**				
Percent Enter/Exit			**48%**	**52%**	**100%**		
Queue Summary (1,2)							
Minimum Queue			1				
Average Queue			4				
95th Percentile Queue			7				
Maximum Queue			10				

(1) Queue measured in number of vehicles starting at the pick-up window.

(2) Based on entire count period.

Starbuck's
Weekday Morning (7:00 AM to 9:00 AM)
Drive Through Operational Data

Date: Tuesday, July 25, 2023
Location: 1601 Egypt Rd, Phoenixville, PA 19460
Store Size: 2386 s.f.

Interval			Drive-Thru				PEAK HOUR
			Enter	Exit	Total	Queue [1]	
7:00 AM	to	7:00 AM	8	7	15	1	- - -
7:05 AM	to	7:05 AM				2	
7:10 AM	to	7:10 AM				3	
7:15 AM	to	7:15 AM	11	12	23	3	- - -
7:20 AM	to	7:20 AM				5	
7:25 AM	to	7:25 AM				2	
7:30 AM	to	7:30 AM	12	15	27	2	- - -
7:35 AM	to	7:35 AM				4	
7:40 AM	to	7:40 AM				5	
7:45 AM	to	7:45 AM	21	19	40	4	105
7:50 AM	to	7:50 AM				5	
7:55 AM	to	7:55 AM				6	
8:00 AM	to	8:00 AM	24	18	42	8	132
8:05 AM	to	8:05 AM				8	
8:10 AM	to	8:10 AM				7	
8:15 AM	to	8:15 AM	22	21	43	7	152
8:20 AM	to	8:20 AM				5	
8:25 AM	to	8:25 AM				5	
8:30 AM	to	8:30 AM	24	20	44	8	169
8:35 AM	to	8:35 AM				6	
8:40 AM	to	8:40 AM				7	
8:45 AM	to	8:45 AM	26	21	47	5	176
8:50 AM	to	8:50 AM				6	
8:55 AM	to	8:55 AM				9	
Total			148	133	281		
Peak Hour Volumes			**96**	**80**	**176**		
Rate per 1,000 s.f.			**73.76**				
Percent Enter/Exit			**55%**	**45%**	**100%**		
Queue Summary [1,2]							
Minimum Queue			1				
Average Queue			5				
95th Percentile Queue			8				
Maximum Queue			9				

(1) Queue measured in number of vehicles starting at the pick-up window.

(2) Based on entire count period.

Starbuck's
Weekday Morning (7:00 AM to 9:00 AM)
Drive Through Operational Data

Date: Tuesday, July 25, 2023
Location: 205 Concourse Blvd, Dresher, PA 19025
Store Size: 2800 s.f.

Interval			Drive-Thru				PEAK HOUR
			Enter	Exit	Total	Queue [1]	
7:00 AM	to	7:00 AM	14	11	25	1	- - -
7:05 AM	to	7:05 AM				3	
7:10 AM	to	7:10 AM				1	
7:15 AM	to	7:15 AM	12	12	24	2	- - -
7:20 AM	to	7:20 AM				3	
7:25 AM	to	7:25 AM				4	
7:30 AM	to	7:30 AM	22	17	39	5	- - -
7:35 AM	to	7:35 AM				5	
7:40 AM	to	7:40 AM				5	
7:45 AM	to	7:45 AM	24	20	44	1	132
7:50 AM	to	7:50 AM				4	
7:55 AM	to	7:55 AM				4	
8:00 AM	to	8:00 AM	21	16	37	7	144
8:05 AM	to	8:05 AM				3	
8:10 AM	to	8:10 AM				2	
8:15 AM	to	8:15 AM	15	20	35	1	155
8:20 AM	to	8:20 AM				0	
8:25 AM	to	8:25 AM				5	
8:30 AM	to	8:30 AM	18	17	35	3	151
8:35 AM	to	8:35 AM				1	
8:40 AM	to	8:40 AM				4	
8:45 AM	to	8:45 AM	19	18	37	1	144
8:50 AM	to	8:50 AM				1	
8:55 AM	to	8:55 AM				3	
Total			145	15	276		
Peak Hour Volumes			**82**	**73**	**155**		
Rate per 1,000 s.f.			**55.36**				
Percent Enter/Exit			**53%**	**47%**	**100%**		
Queue Summary [1,2]							
Minimum Queue			0				
Average Queue			3				
95th Percentile Queue			5				
Maximum Queue			7				

(1) Queue measured in number of vehicles starting at the pick-up window.

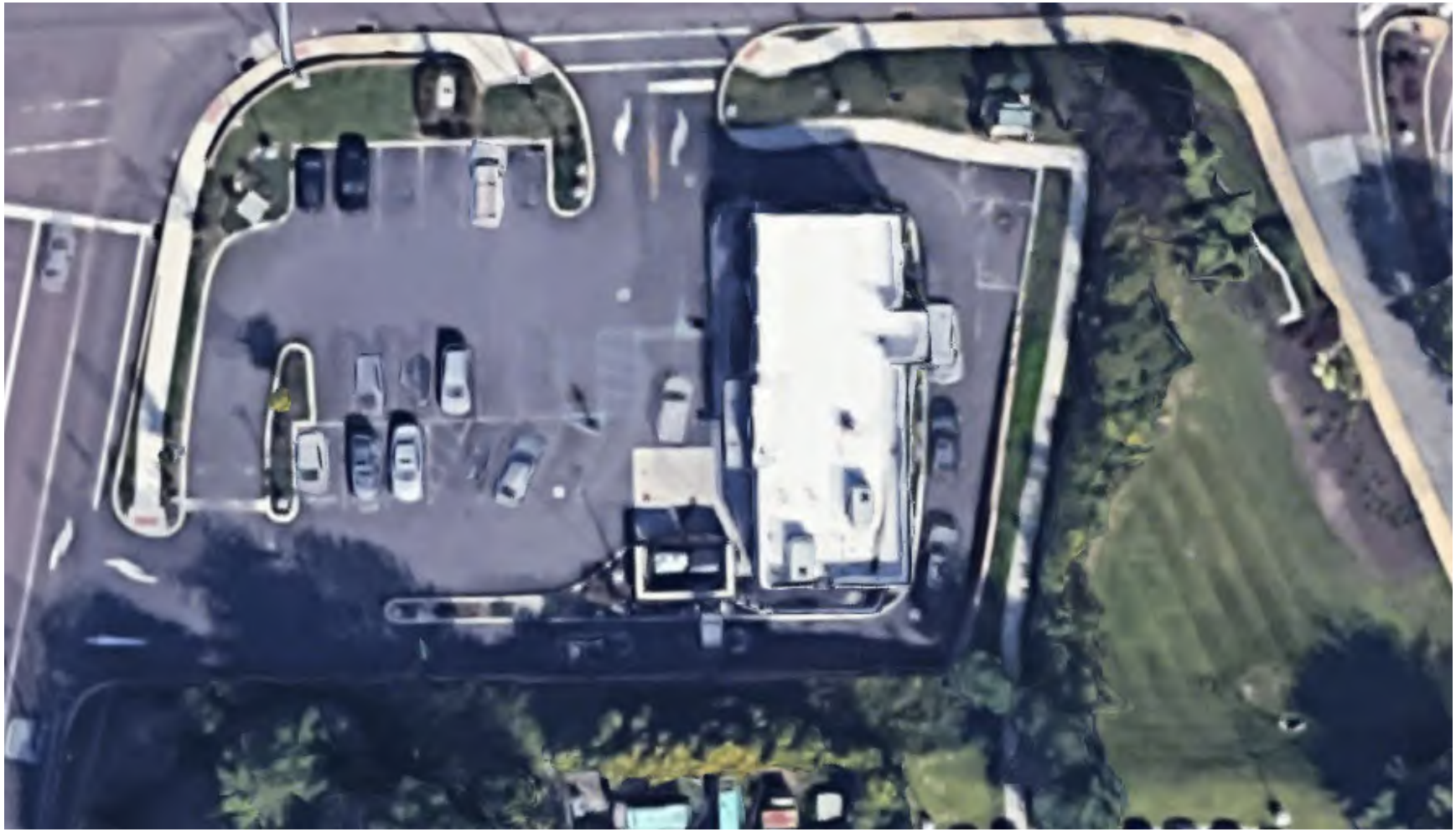
(2) Based on entire count period.

180 West Dekalb Pike Valley Forge, King of Prussia, PA 19406

180 West Dekalb Pike Valley Forge, King of Prussia, PA 19406

1601 Egypt Rd, Phoenixville, PA 19460

1601 Egypt Rd, Phoenixville, PA 19460



205 Concourse Blvd, Dresher, PA 19025

205 Concourse Blvd, Dresher, PA 19025

Appendix E

Other Development Information

OTHER DEVELOPMENT TRIP GENERATION

ITE LAND USE CODE		LAND USE NAME				SIZE	TRIP TYPE	DAILY TOTAL	Weekday 7 AM - 9 AM IN	OUT	TOTAL	Weekday 4 PM - 6 PM IN	OUT	TOTAL	Saturday Midday 11 AM - 2 PM IN	OUT	TOTAL	INCLUDE PASS-BY?
220		459-471 Old York Road				51	Total	402	9	30	39	27	15	42	10	11	21	
	Daily	AM	PM	SAT	TP4	apts	Pass-by	0	0	0	0	0	0	0	0	0	0	NO
Pass-by %	0%	0%	0%	0%	0%		New	402	9	30	39	27	15	42	10	11	21	
220		415-425 Johnson Street				26 apts	Total	274	11	25	36	21	16	37	5	7	12	
	Daily	AM	PM	SAT	TP4	1625 sf	Pass-by	0	0	0	0	0	0	0	0	0	0	NO
Pass-by %	0%	0%	0%	0%	0%		New	274	11	25	36	21	16	37	5	7	12	
850		Jenkintown Grocery				49,940	Total	4704	84	59	143	220	220	440	273	274	547	
	Daily	AM	PM	SAT	TP4	sf	Pass-by	659	12	8	20	53	53	106	52	52	104	NO
Pass-by %	14%	14%	24%	19%	0%		New	4045	72	51	123	167	167	334	221	222	443	

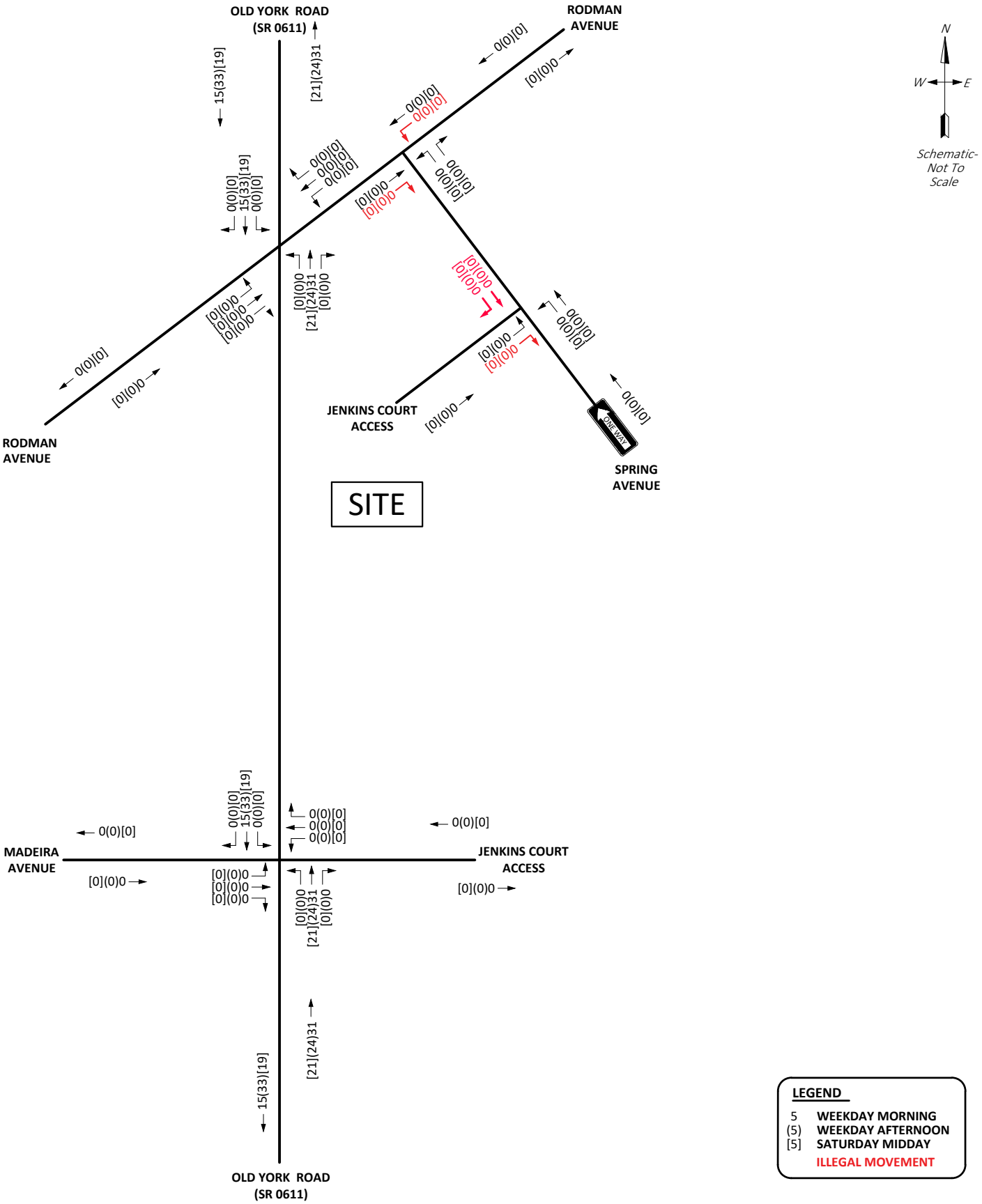


FIGURE C

Other Developments - Net Trip Assignment Details

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figures A to F.dwg

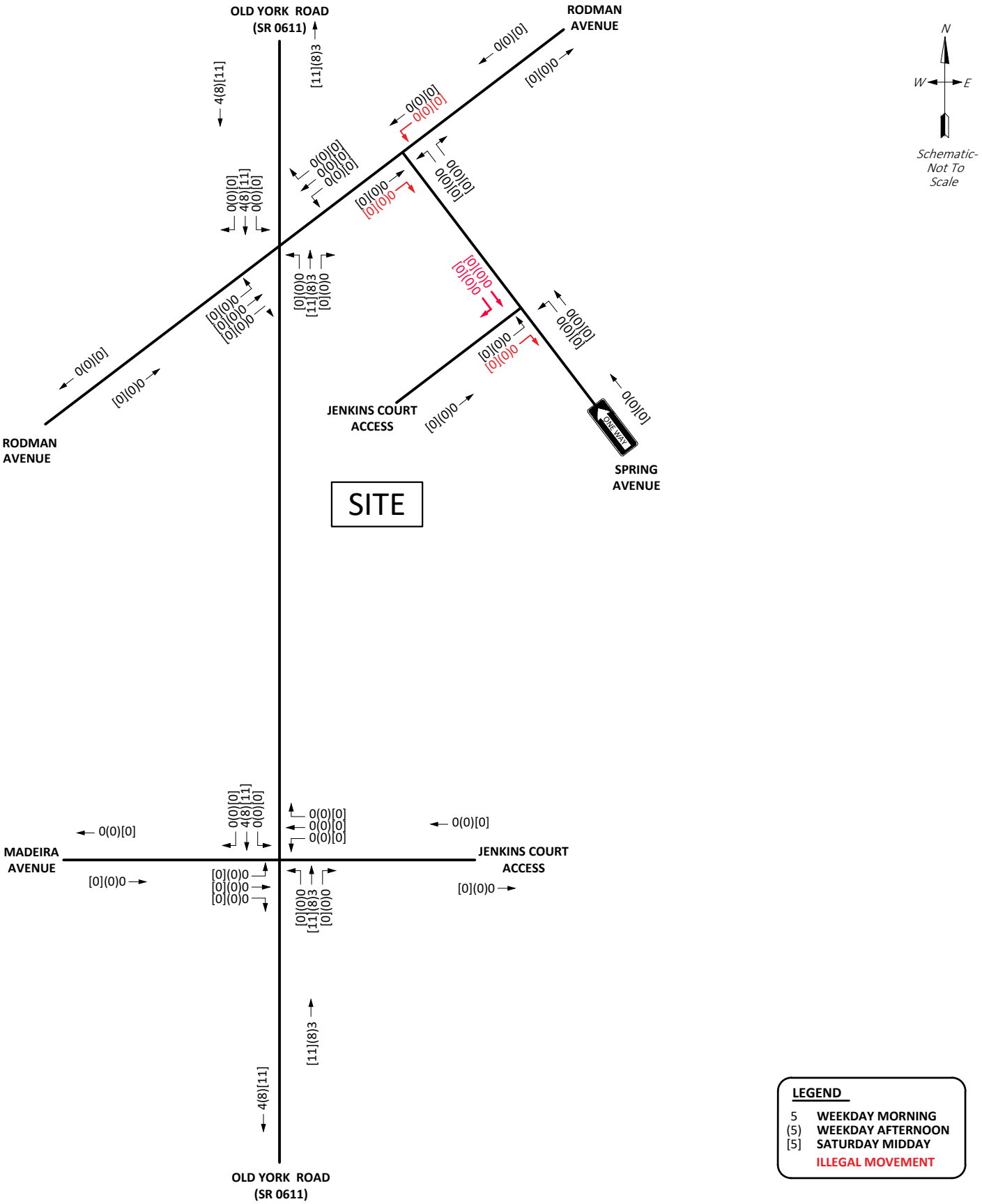


FIGURE D

Other Developments - Trip Assignment 459-471 Old York Road

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

Q:\PA-FTWA-MC\MCM\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\GRAPHICS\Figures A to F.dwg

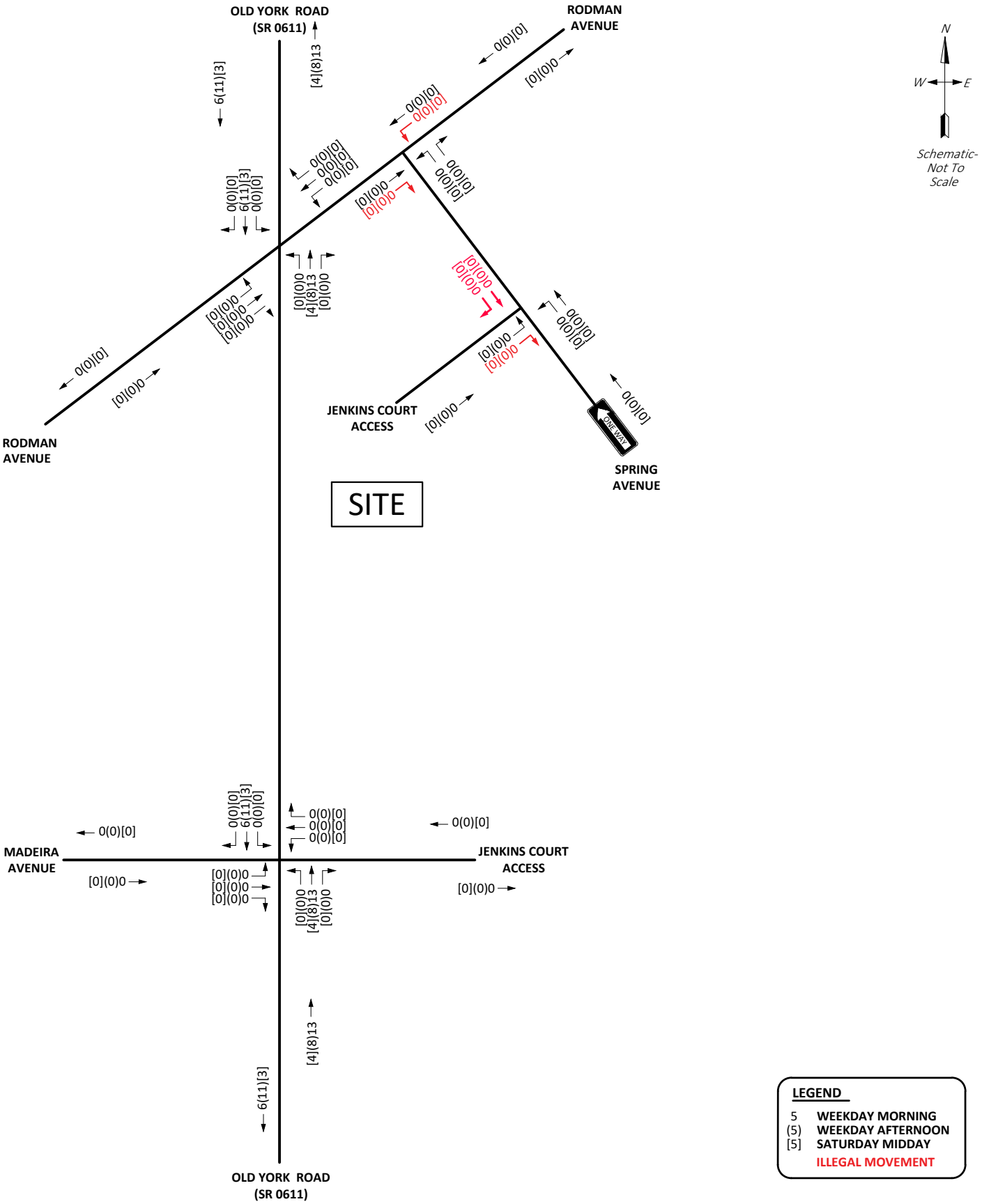


FIGURE E

Other Developments - Trip Assignment 415-425 Johnson Street

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

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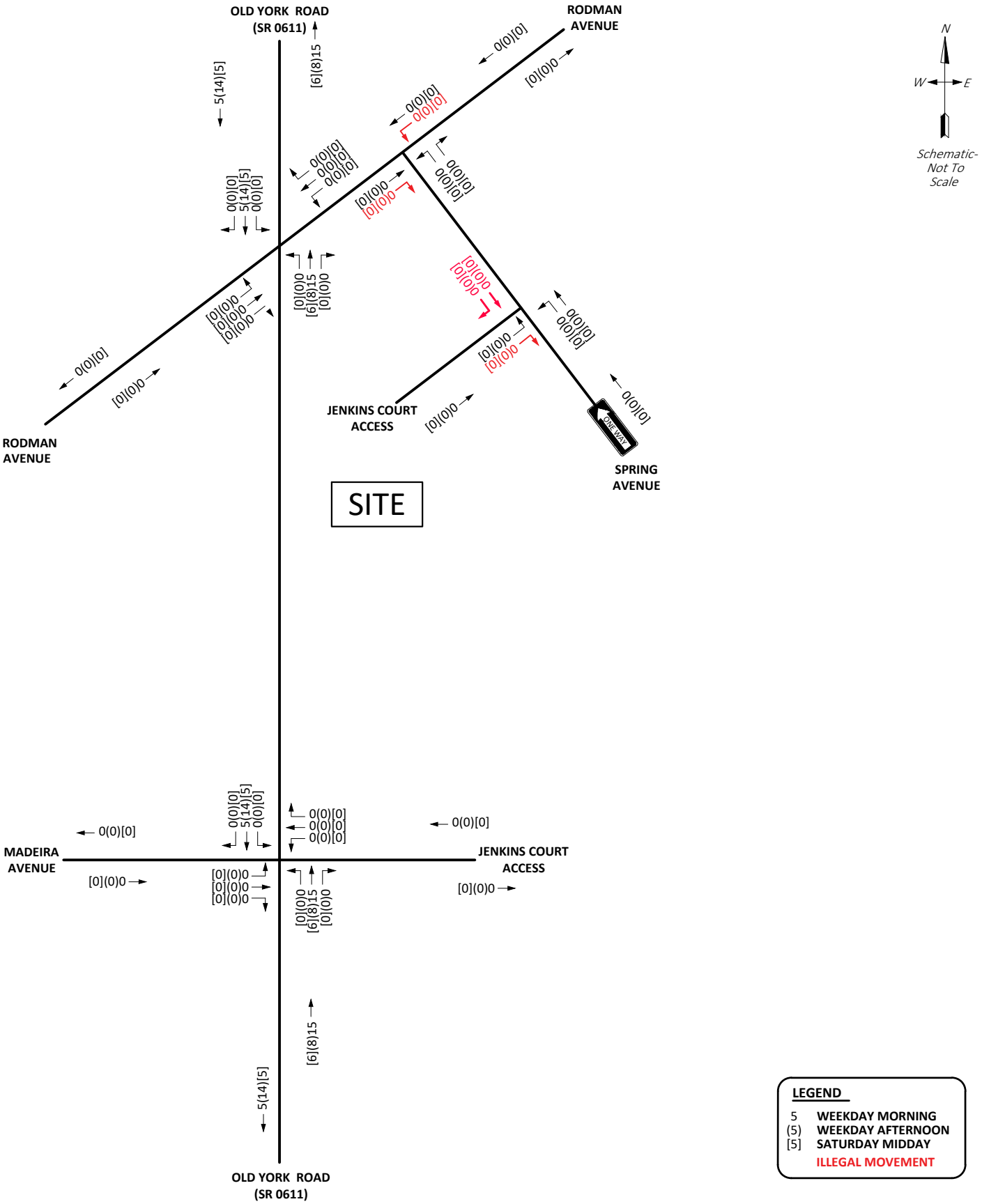

FIGURE F

Other Developments - Trip Assignment Jenkintown Grocery

JENKINS COURT PAD SITES

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON
a Bowman company

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Braden Garrison

From: Mark E. Bickerton <MBickerton@Pennoni.com>
Sent: Thursday, July 13, 2023 4:02 PM
To: Braden Garrison
Subject: [EXTERNAL] RE: Active Land Developments - Jenkintown Borough

Braden,
This list looks complete.
Thanks,
Mark

Mark E. Bickerton, PE

Pennoni
1501 Main Street, Suite 220 | Warrington, PA 18976
Direct: +1 (215) 589-6025
www.pennoni.com | MBickerton@Pennoni.com

From: Braden Garrison <bgarrison@bowman.com>
Sent: Thursday, July 13, 2023 9:26 AM
To: Mark E. Bickerton <MBickerton@Pennoni.com>
Subject: Active Land Developments - Jenkintown Borough

Mark,

We are working on the traffic study for the Jenkin Court development and wanted to check in to confirm we are including all relevant background developments. Based on my review, we would include the following:

- 415/425 Johnson Street – 26 apts and 1,625 of office/retail space.
- Jenkintown Grocery – we worked on this one so we will just keep with the TIS
- 459-471 Old York Road – 51 apts

If any of these are incorrect or should be excluded or if there are any additional, please let me know so our traffic projections are as accurate as possible.

Thanks,

Braden Garrison , P.E.
Senior Project Engineer III
McMahon, a **BOWMAN** company
835 Springdale Drive, Suite 200, Exton, PA, 19341
O: (610) 594-9995 | D: (267) 291-0425
mcmahonassociates.com | bowman.com

In May 2022, McMahon officially joined Bowman.

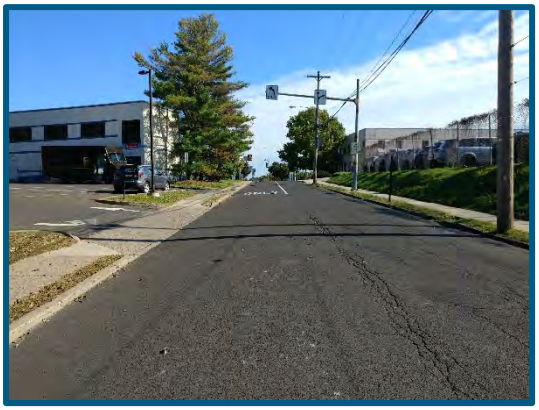
Bowman is a national professional services firm offering multi-disciplinary engineering, planning, surveying, geomatics, construction management, environmental consulting, landscape architecture, and right-of-way acquisition. Joining Bowman with our multimodal transportation engineering, design & planning expertise provides a strong foundation for us to merge our comprehensive skillsets while offering the same level of commitment to our clients and employees.

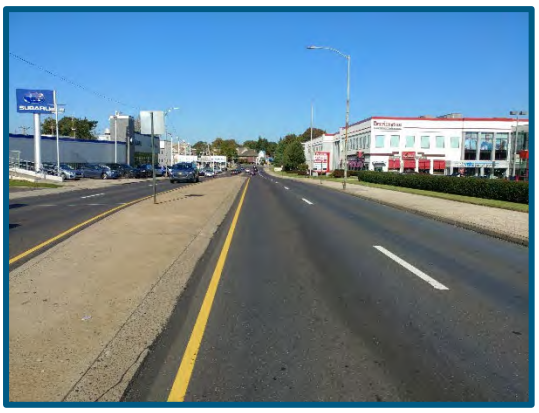
To learn more, visit bowman.com.

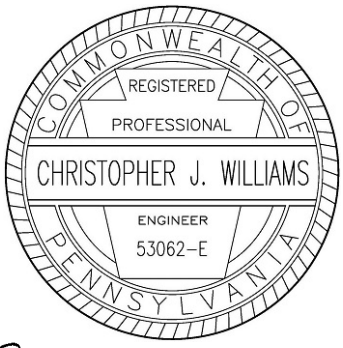
McMAHON
a Bowman company

Transportation Impact Study for the Jenkintown Grocery

Jenkintown Borough, Montgomery County, PA







Christopher J. Williams, P.E.
Pennsylvania PE License Number 53062-E

Prepared for
Jenkintown Commons Limited Partnership #3 and BAP Jenkintown, LLC

Prepared by
McMahon, a Bowman company
835 Springdale Drive, Suite 200
Exton, PA 19341
610.594.9995

Revised April 6, 2023
Revised November 23, 2022
April 15, 2022
McMahon Project Number: 821414.11

Site Characteristics

This section presents the details regarding the proposed site, including the incremental increase in traffic volumes generated by the redevelopment during the peak hours and the distribution of site traffic to the study area roadways, as well as the proposed site access configuration, traffic control, and sight distance requirements.

Trip Generation

Traffic volumes generated by the proposed redevelopment were prepared based on trip generation data compiled from numerous studies contained in the Institute of Transportation Engineers (ITE) publication, *Trip Generation, 11th Edition*. **Tables 3A and 3B** present the anticipated vehicular trip generation formulas and traffic volumes for the proposed grocery store, and **Table 3C** shows the trip generation of the current site if fully occupied by their existing/former uses. **Table 3D** provides a comparison between the trip generation of the proposed grocery store and the existing/former uses on the site. As shown in Table 3D, the proposed grocery store generates 34 less "new" trips during the weekday morning peak hour, 89 additional "new" trips during the weekday afternoon peak hour, and 255 additional "new" trips during the Saturday midday peak hour as compared to the existing/former uses on the site when fully occupied. This comparison is offered for informational purposes only, and in fact no credit is taken for the counted traffic generated by the existing development on the site today.

Table 3A. Trip Generation Methodology

Land Use	Land Use Code	Daily	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Saturday Midday Peak Hour	
			Method	Enter/Exit	Method	Enter/Exit	Method	Enter/Exit
Supermarket	850	T = 83.39(X) + 539.33	T = 2.86 (X)	59%/41%	Ln(T) = 0.81 Ln(X) + 2.92	50%/50%	Ln(T) = 0.74 Ln(X) + 3.41	50%/50%

X = Independent Variable (units) | T = Trips

Table 3B. Vehicular Trip Generation

Land Use	Size	Trip Type	Daily	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Saturday Midday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
Supermarket (1)	49,940 square feet	Total	4,704	84	59	143	220	220	440	273	274	547
		- Pass-by	-659	-12	-8	-20	-53	-53	-106	-52	-52	-104
		New	**4,045**	**72**	**51**	**123**	**167**	**167**	**334**	**221**	**222**	**443**

(1) ITE Land Use Code 850 for Supermarket.

(2) Based on pass-by data contained in the ITE publication *Trip Generation, Eleventh Edition*. For time periods without pass-by data, pass-by is assumed to be ten percent less than the weekday afternoon peak hour, which is consistent with PennDOT policy.

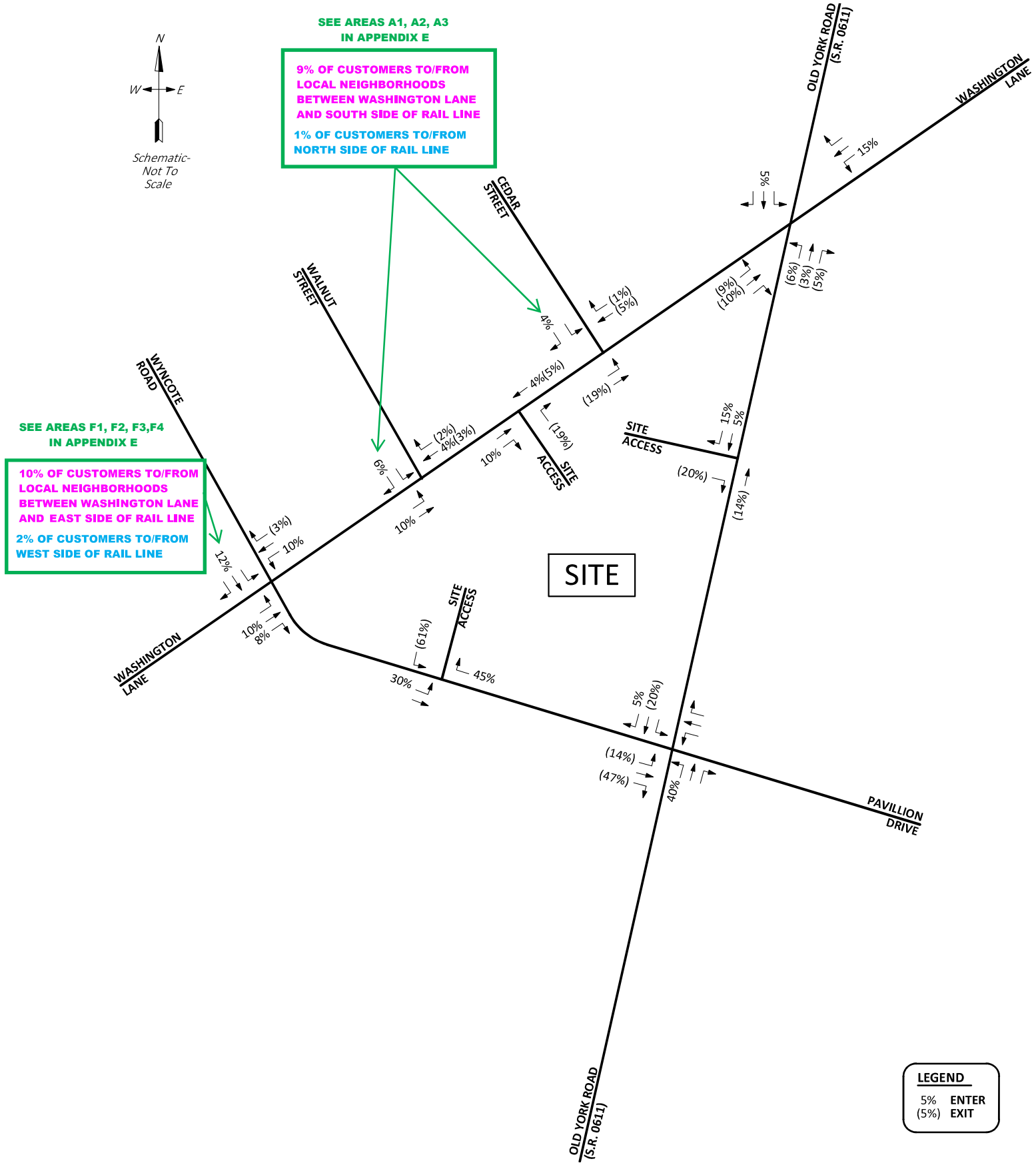


FIGURE 4A

New Site Trip Distribution

JENKINTOWN GROCERY

JENKINTOWN BOROUGH, MONTGOMERY COUNTY, PA

McMAHON

I:\eng\BLANKAS1\821414 - Jenkintown Grocery\Traffic\Graphics\2022-03 TIS\Figure 4A.dwg

ADDENDUM TO CONDITIONAL USE APPLICATION

Pursuant to Section 181-41 B(1), the Apartment Building Use is permitted by Conditional Use in the Town Center District. Applicant proposes a total of 26 apartment units which is in excess of the permitted density under Sections 181-42 I and J.

Furthermore, Applicant proposes to utilize the existing twenty (20) parking spaces at 429 York Road and fifteen (15) parking spaces at 415-425 Johnson Street for the residential and commercial tenants of the building. The Applicant shall have a cross easement agreement for parking at 429 York Road to benefit the commercial and residential tenants. Section 181-43 B requires thirty-six (36) off-street parking spaces for the twenty-six (26) apartments and three (3) parking spaces for the 1625 square feet of retail/office space less reductions for a total number of required off-street parking spaces of thirty-eight (38).

Applicant plans to continue the existing non-conformities at the subject premises.

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Appendix F

Traffic Volume Projection Worksheets

1 - EXISTING SPRING AVENUE ACCESS

PA 611 & Rodman Avenue

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		80	9	20	1	20	39	27	913	4	14	952	55
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	62	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**80**	**9**	**20**	**1**	**20**	**39**	**27**	**975**	**4**	**14**	**952**	**55**
Background Growth to 2026	0.81%	1	0	0	0	0	0	0	8	0	0	8	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	15	0	0	5	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	13	0	0	6	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	3	0	0	4	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*31*	*0*	*0*	*15*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**81**	**9**	**20**	**1**	**20**	**39**	**27**	**1014**	**4**	**14**	**975**	**55**
Coffee/Donut Shop with Drive-Through Window	DIST IN			4%	2%							47%	
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	0	2	1	2	25	0	0	0	0	26	0
	PB IN								-51%				
	PB OUT						(51%)						
	PB ASSIGN	0	0	0	0	0	28	0	-28	0	0	0	0
Ritas	DIST IN			4%	2%							47%	
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*2*	*1*	*2*	*25*	*0*	*0*	*0*	*0*	*26*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*28*	*0*	*-28*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**81**	**9**	**22**	**2**	**22**	**92**	**27**	**986**	**4**	**14**	**1001**	**55**

PA 611 & Rodman Avenue

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		83	14	8	3	11	23	17	1081	10	31	1149	58
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	43	0	0	20	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**83**	**14**	**8**	**3**	**11**	**23**	**17**	**1124**	**10**	**31**	**1169**	**58**
Background Growth to 2026	0.81%	1	0	0	0	0	0	0	9	0	0	9	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	14	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	11	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	8	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*24*	*0*	*0*	*33*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**84**	**14**	**8**	**3**	**11**	**23**	**17**	**1157**	**10**	**31**	**1211**	**58**
Coffee/Donut Shop with Drive-Through Window	DIST IN			4%	2%							47%	
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	0	1	0	1	10	0	0	0	0	11	0
	PB IN								-49%				
	PB OUT						(49%)						
	PB ASSIGN	0	0	0	0	0	13	0	-13	0	0	0	0
Ritas	DIST IN			4%	2%							47%	
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	0	1	0	1	13	0	0	0	0	9	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	1	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*2*	*1*	*2*	*23*	*0*	*0*	*0*	*0*	*20*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*13*	*0*	*-13*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**84**	**14**	**10**	**4**	**13**	**59**	**17**	**1144**	**10**	**31**	**1231**	**58**

PA 611 & Rodman Avenue

INTERSECTION VOLUME PROJECTION SUMMARY

Saturday Midday 11 AM - 2 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		79	6	18	6	4	24	38	1056	1	20	1001	55
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	5	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**79**	**6**	**18**	**6**	**4**	**24**	**38**	**1056**	**1**	**20**	**1006**	**55**
Background Growth to 2026	0.81%	1	0	0	0	0	0	0	9	0	0	8	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	6	0	0	5	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	4	0	0	3	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	11	0	0	11	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*21*	*0*	*0*	*19*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**80**	**6**	**18**	**6**	**4**	**24**	**38**	**1086**	**1**	**20**	**1033**	**55**
Coffee/Donut Shop with Drive-Through Window	DIST IN			4%	2%							47%	
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	0	2	1	2	29	0	0	0	0	29	0
	PB IN								-52%				
	PB OUT						(52%)						
	PB ASSIGN	0	0	0	0	0	26	0	-26	0	0	0	0
Ritas	DIST IN			4%	2%							47%	
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	0	0	0	0	3	0	0	0	0	5	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	1	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*2*	*2*	*2*	*32*	*0*	*0*	*0*	*0*	*34*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*26*	*0*	*-26*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**80**	**6**	**20**	**8**	**6**	**82**	**38**	**1060**	**1**	**20**	**1067**	**55**

PA 611 & Madeira Avenue / Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Madeira Avenue			Jenkin Court Access			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		6	6	8	2	2	5	17	995	4	27	898	10
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	38	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**6**	**6**	**8**	**2**	**2**	**5**	**17**	**995**	**4**	**27**	**936**	**10**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	8	0	0	8	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	15	0	0	5	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	13	0	0	6	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	3	0	0	4	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*31*	*0*	*0*	*15*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**6**	**6**	**8**	**2**	**2**	**5**	**17**	**1034**	**4**	**27**	**959**	**10**
Coffee/Donut Shop with Drive-Through Window	DIST IN		2%							44%	53%		
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	1	0	23	1	0	0	0	25	29	0	0
	PB IN								-51%	51%	49%	-49%	
	PB OUT				(49%)								
	PB ASSIGN	0	0	0	26	0	0	0	-28	28	26	-26	0
Ritas	DIST IN		2%							44%	53%		
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*1*	*0*	*23*	*1*	*0*	*0*	*0*	*25*	*29*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*26*	*0*	*0*	*0*	*-28*	*28*	*26*	*-26*	*0*
2026 WITH DEVELOPMENT VOLUMES		**6**	**7**	**8**	**51**	**3**	**5**	**17**	**1006**	**57**	**82**	**933**	**10**

PA 611 & Madeira Avenue / Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Madeira Avenue			Jenkin Court Access			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		30	1	19	44	5	20	41	1101	0	4	1162	14
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**30**	**1**	**19**	**44**	**5**	**20**	**41**	**1101**	**0**	**4**	**1162**	**14**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	9	0	0	9	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	14	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	11	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	8	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*24*	*0*	*0*	*33*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**30**	**1**	**19**	**44**	**5**	**20**	**41**	**1134**	**0**	**4**	**1204**	**14**
Coffee/Donut Shop with Drive-Through Window	DIST IN		2%							44%	53%		
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	0	0	10	0	0	0	0	10	12	0	0
	PB IN								-49%	49%	51%	-51%	
	PB OUT				(51%)								
	PB ASSIGN	0	0	0	14	0	0	0	-13	13	14	-14	0
Ritas	DIST IN		2%							44%	53%		
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	1	0	11	1	0	0	0	8	10	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Total New Site Trip Assignment		*0*	*1*	*0*	*21*	*1*	*0*	*0*	*0*	*18*	*22*	*1*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*14*	*0*	*0*	*0*	*-13*	*13*	*14*	*-14*	*0*
2026 WITH DEVELOPMENT VOLUMES		**30**	**2**	**19**	**79**	**6**	**20**	**41**	**1121**	**31**	**40**	**1191**	**14**

PA 611 & Madeira Avenue / Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Saturday Midday 11 AM - 2 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Madeira Avenue			Jenkin Court Access			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		52	4	24	5	0	4	52	1037	3	4	1013	13
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	2	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**52**	**4**	**24**	**5**	**0**	**4**	**52**	**1039**	**3**	**4**	**1013**	**13**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	8	0	0	8	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	6	0	0	5	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	4	0	0	3	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	11	0	0	11	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*21*	*0*	*0*	*19*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**52**	**4**	**24**	**5**	**0**	**4**	**52**	**1068**	**3**	**4**	**1040**	**13**
Coffee/Donut Shop with Drive-Through Window	DIST IN		2%							44%	53%		
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	1	0	27	1	0	0	0	27	32	0	0
	PB IN								-52%	52%	48%	-48%	
	PB OUT				(48%)								
	PB ASSIGN	0	0	0	24	0	0	0	-26	26	24	-24	0
Ritas	DIST IN		2%							44%	53%		
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	1	0	3	0	0	0	0	4	5	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Total New Site Trip Assignment		*0*	*2*	*0*	*30*	*1*	*0*	*0*	*0*	*31*	*37*	*1*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*24*	*0*	*0*	*0*	*-26*	*26*	*24*	*-24*	*0*
2026 WITH DEVELOPMENT VOLUMES		**52**	**6**	**24**	**59**	**1**	**4**	**52**	**1042**	**60**	**65**	**1017**	**13**

Spring Avenue & Rodman Avenue
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			Spring Avenue					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	24	3	0	31	0	30	0	5	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**24**	**3**	**0**	**31**	**0**	**30**	**0**	**5**	**0**	**0**	**0**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**0**	**24**	**3**	**0**	**31**	**0**	**30**	**0**	**5**	**0**	**0**	**0**
Coffee/Donut Shop with Drive-Through Window	DIST IN					2%							
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	0	0	1	0	27	0	2	0	0	0
	PB IN												
	PB OUT							(51%)					
	PB ASSIGN	0	0	0	0	0	0	28	0	0	0	0	0
Ritas	DIST IN					2%							
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	3	-3	0	0	0	0	0	2	0	0	0
Total New Site Trip Assignment		*0*	*3*	*-3*	*0*	*1*	*0*	*27*	*0*	*4*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*28*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**0**	**27**	**0**	**0**	**32**	**0**	**85**	**0**	**9**	**0**	**0**	**0**

Spring Avenue & Rodman Avenue
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			Spring Avenue					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	64	0	1	30	0	22	0	7	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**64**	**0**	**1**	**30**	**0**	**22**	**0**	**7**	**0**	**0**	**0**
Background Growth to 2026	0.81%	0	1	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**0**	**65**	**0**	**1**	**30**	**0**	**22**	**0**	**7**	**0**	**0**	**0**
Coffee/Donut Shop with Drive-Through Window	DIST IN					2%							
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	0	0	0	0	11	0	1	0	0	0
	PB IN												
	PB OUT							(49%)					
	PB ASSIGN	0	0	0	0	0	0	13	0	0	0	0	0
Ritas	DIST IN					2%							
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	0	0	0	0	14	0	1	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	-1	1	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*0*	*-1*	*1*	*0*	*25*	*0*	*2*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*13*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**0**	**65**	**0**	**0**	**31**	**0**	**60**	**0**	**9**	**0**	**0**	**0**

Spring Avenue & Rodman Avenue
INTERSECTION VOLUME PROJECTION SUMMARY
Saturday Midday 11 AM - 2 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			Spring Avenue					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	28	0	1	17	0	17	0	7	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**28**	**0**	**1**	**17**	**0**	**17**	**0**	**7**	**0**	**0**	**0**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**0**	**28**	**0**	**1**	**17**	**0**	**17**	**0**	**7**	**0**	**0**	**0**
Coffee/Donut Shop with Drive-Through Window	DIST IN					2%							
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	0	0	1	0	31	0	2	0	0	0
	PB IN												
	PB OUT							(52%)					
	PB ASSIGN	0	0	0	0	0	0	26	0	0	0	0	0
Ritas	DIST IN					2%							
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	0	0	0	0	3	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	-1	1	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*0*	*-1*	*2*	*0*	*34*	*0*	*2*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*0*	*26*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**0**	**28**	**0**	**0**	**19**	**0**	**77**	**0**	**9**	**0**	**0**	**0**

Spring Avenue & Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Jenkin Court Access						Spring Avenue			Spring Avenue		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		2	0	2	0	0	0	4	34	0	0	0	3
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**2**	**0**	**2**	**0**	**0**	**0**	**4**	**34**	**0**	**0**	**0**	**3**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**2**	**0**	**2**	**0**	**0**	**0**	**4**	**34**	**0**	**0**	**0**	**3**
Coffee/Donut Shop with Drive-Through Window	DIST IN							1%					
	DIST OUT	(54%)											
	ASSIGN	29	0	0	0	0	0	1	0	0	0	0	0
	PB IN												
	PB OUT	(51%)											
	PB ASSIGN	28	0	0	0	0	0	0	0	0	0	0	0
Ritas	DIST IN							1%					
	DIST OUT	(54%)											
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	2	0	-2	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*31*	*0*	*-2*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*28*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**61**	**0**	**0**	**0**	**0**	**0**	**5**	**34**	**0**	**0**	**0**	**3**

Spring Avenue & Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Jenkin Court Access						Spring Avenue			Spring Avenue		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		2	0	0	0	0	0	1	30	0	0	0	1
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**2**	**0**	**0**	**0**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**1**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**2**	**0**	**0**	**0**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**1**
Coffee/Donut Shop with Drive-Through Window	DIST IN							1%					
	DIST OUT	(54%)											
	ASSIGN	12	0	0	0	0	0	0	0	0	0	0	0
	PB IN												
	PB OUT	(49%)											
	PB ASSIGN	13	0	0	0	0	0	0	0	0	0	0	0
Ritas	DIST IN							1%					
	DIST OUT	(54%)											
	ASSIGN	15	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*27*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*13*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**42**	**0**	**0**	**0**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**1**

Spring Avenue & Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Saturday Midday 11 AM - 2 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Jenkin Court Access						Spring Avenue			Spring Avenue		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		1	0	0	0	0	0	0	22	0	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**1**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**0**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**1**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**0**
Coffee/Donut Shop with Drive-Through Window	DIST IN							1%					
	DIST OUT	(54%)											
	ASSIGN	33	0	0	0	0	0	1	0	0	0	0	0
	PB IN												
	PB OUT	(52%)											
	PB ASSIGN	26	0	0	0	0	0	0	0	0	0	0	0
Ritas	DIST IN							1%					
	DIST OUT	(54%)											
	ASSIGN	3	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*36*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*26*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**63**	**0**	**0**	**0**	**0**	**0**	**1**	**22**	**0**	**0**	**0**	**0**

2 - MODIFIED SPRING AVENUE ACCESS

PA 611 & Rodman Avenue

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		80	9	20	1	20	39	27	913	4	14	952	55
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	62	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**80**	**9**	**20**	**1**	**20**	**39**	**27**	**975**	**4**	**14**	**952**	**55**
Background Growth to 2026	0.81%	1	0	0	0	0	0	0	8	0	0	8	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	15	0	0	5	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	13	0	0	6	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	3	0	0	4	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*31*	*0*	*0*	*15*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**81**	**9**	**20**	**1**	**20**	**39**	**27**	**1014**	**4**	**14**	**975**	**55**
Coffee/Donut Shop with Drive-Through Window	DIST IN		4%							22%	47%		
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	2	0	0	2	25	0	0	13	26	0	0
	PB IN								-51%	25%	49%	-49%	
	PB OUT						(51%)						
	PB ASSIGN	0	0	0	0	0	28	0	-28	14	26	-26	0
Ritas	DIST IN		4%							22%	47%		
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*2*	*0*	*0*	*2*	*25*	*0*	*0*	*13*	*26*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*28*	*0*	*-28*	*14*	*26*	*-26*	*0*
2026 WITH DEVELOPMENT VOLUMES		**81**	**11**	**20**	**1**	**22**	**92**	**27**	**986**	**31**	**66**	**949**	**55**

PA 611 & Rodman Avenue

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		83	14	8	3	11	23	17	1081	10	31	1149	58
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	43	0	0	20	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**83**	**14**	**8**	**3**	**11**	**23**	**17**	**1124**	**10**	**31**	**1169**	**58**
Background Growth to 2026	0.81%	1	0	0	0	0	0	0	9	0	0	9	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	14	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	11	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	8	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*24*	*0*	*0*	*33*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**84**	**14**	**8**	**3**	**11**	**23**	**17**	**1157**	**10**	**31**	**1211**	**58**
Coffee/Donut Shop with Drive-Through Window	DIST IN		4%							22%	47%		
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	1	0	0	1	10	0	0	5	10	0	0
	PB IN								-49%	24%	51%	-51%	
	PB OUT						(49%)						
	PB ASSIGN	0	0	0	0	0	13	0	-13	6	14	-14	0
Ritas	DIST IN		4%							22%	47%		
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	1	0	0	1	13	0	0	4	9	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	1	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*2*	*0*	*1*	*2*	*23*	*0*	*0*	*9*	*19*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*13*	*0*	*-13*	*6*	*14*	*-14*	*0*
2026 WITH DEVELOPMENT VOLUMES		**84**	**16**	**8**	**4**	**13**	**59**	**17**	**1144**	**25**	**64**	**1197**	**58**

PA 611 & Rodman Avenue

INTERSECTION VOLUME PROJECTION SUMMARY

Saturday Midday 11 AM - 2 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		79	6	18	6	4	24	38	1056	1	20	1001	55
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	5	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**79**	**6**	**18**	**6**	**4**	**24**	**38**	**1056**	**1**	**20**	**1006**	**55**
Background Growth to 2026	0.81%	1	0	0	0	0	0	0	9	0	0	8	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	6	0	0	5	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	4	0	0	3	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	11	0	0	11	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*21*	*0*	*0*	*19*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**80**	**6**	**18**	**6**	**4**	**24**	**38**	**1086**	**1**	**20**	**1033**	**55**
Coffee/Donut Shop with Drive-Through Window	DIST IN		4%							22%	47%		
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	2	0	0	2	29	0	0	14	29	0	0
	PB IN								-52%	26%	48%	-48%	
	PB OUT						(52%)						
	PB ASSIGN	0	0	0	0	0	26	0	-26	13	24	-24	0
Ritas	DIST IN		4%							22%	47%		
	DIST OUT					(4%)	(47%)						
	ASSIGN	0	0	0	0	0	3	0	0	2	5	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	1	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*2*	*0*	*1*	*2*	*32*	*0*	*0*	*16*	*34*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*0*	*0*	*26*	*0*	*-26*	*13*	*24*	*-24*	*0*
2026 WITH DEVELOPMENT VOLUMES		**80**	**8**	**18**	**7**	**6**	**82**	**38**	**1060**	**30**	**78**	**1009**	**55**

PA 611 & Madeira Avenue / Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Madeira Avenue			Jenkin Court Access			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		6	6	8	2	2	5	17	995	4	27	898	10
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	38	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**6**	**6**	**8**	**2**	**2**	**5**	**17**	**995**	**4**	**27**	**936**	**10**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	8	0	0	8	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	15	0	0	5	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	13	0	0	6	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	3	0	0	4	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*31*	*0*	*0*	*15*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**6**	**6**	**8**	**2**	**2**	**5**	**17**	**1034**	**4**	**27**	**959**	**10**
Coffee/Donut Shop with Drive-Through Window	DIST IN		2%						22%	22%			
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	1	0	23	1	0	0	13	12	0	0	0
	PB IN								-26%	26%		-49%	
	PB OUT				(49%)								
	PB ASSIGN	0	0	0	26	0	0	0	-14	14	0	-26	0
Ritas	DIST IN		2%						22%	22%			
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*1*	*0*	*23*	*1*	*0*	*0*	*13*	*12*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*26*	*0*	*0*	*0*	*-14*	*14*	*0*	*-26*	*0*
2026 WITH DEVELOPMENT VOLUMES		**6**	**7**	**8**	**51**	**3**	**5**	**17**	**1033**	**30**	**27**	**933**	**10**

PA 611 & Madeira Avenue / Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Madeira Avenue			Jenkin Court Access			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		30	1	19	44	5	20	41	1101	0	4	1162	14
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**30**	**1**	**19**	**44**	**5**	**20**	**41**	**1101**	**0**	**4**	**1162**	**14**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	9	0	0	9	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	14	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	11	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	8	0	0	8	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*24*	*0*	*0*	*33*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**30**	**1**	**19**	**44**	**5**	**20**	**41**	**1134**	**0**	**4**	**1204**	**14**
Coffee/Donut Shop with Drive-Through Window	DIST IN		2%						22%	22%			
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	0	0	10	0	0	0	5	5	0	0	0
	PB IN								-25%	25%		-51%	
	PB OUT				(51%)								
	PB ASSIGN	0	0	0	14	0	0	0	-7	7	0	-14	0
Ritas	DIST IN		2%						22%	22%			
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	1	0	11	1	0	0	4	4	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Total New Site Trip Assignment		*0*	*1*	*0*	*21*	*1*	*0*	*0*	*9*	*9*	*0*	*1*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*14*	*0*	*0*	*0*	*-7*	*7*	*0*	*-14*	*0*
2026 WITH DEVELOPMENT VOLUMES		**30**	**2**	**19**	**79**	**6**	**20**	**41**	**1136**	**16**	**4**	**1191**	**14**

PA 611 & Madeira Avenue / Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Saturday Midday 11 AM - 2 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Madeira Avenue			Jenkin Court Access			PA 611			PA 611		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		52	4	24	5	0	4	52	1037	3	4	1013	13
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	2	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**52**	**4**	**24**	**5**	**0**	**4**	**52**	**1039**	**3**	**4**	**1013**	**13**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	8	0	0	8	0
459-471 Old York Road	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	6	0	0	5	0
415-425 Johnson Street	DIST IN											50%	
	DIST OUT								(50%)				
	ASSIGN	0	0	0	0	0	0	0	4	0	0	3	0
Jenkintown Grocery	DIST IN											5%	
	DIST OUT								(5%)				
	ASSIGN	0	0	0	0	0	0	0	11	0	0	11	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*21*	*0*	*0*	*19*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**52**	**4**	**24**	**5**	**0**	**4**	**52**	**1068**	**3**	**4**	**1040**	**13**
Coffee/Donut Shop with Drive-Through Window	DIST IN		2%						22%	22%			
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	1	0	27	1	0	0	14	13	0	0	0
	PB IN								-26%	26%		-48%	
	PB OUT				(48%)								
	PB ASSIGN	0	0	0	24	0	0	0	-13	13	0	-24	0
Ritas	DIST IN		2%						22%	22%			
	DIST OUT				(44%)	(2%)							
	ASSIGN	0	0	0	3	0	0	0	2	2	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	1	0
Total New Site Trip Assignment		*0*	*1*	*0*	*30*	*1*	*0*	*0*	*16*	*15*	*0*	*1*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*0*	*24*	*0*	*0*	*0*	*-13*	*13*	*0*	*-24*	*0*
2026 WITH DEVELOPMENT VOLUMES		**52**	**5**	**24**	**59**	**1**	**4**	**52**	**1071**	**31**	**4**	**1017**	**13**

Spring Avenue & Rodman Avenue
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			Spring Avenue					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	24	3	0	31	0	30	0	5	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**24**	**3**	**0**	**31**	**0**	**30**	**0**	**5**	**0**	**0**	**0**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**0**	**24**	**3**	**0**	**31**	**0**	**30**	**0**	**5**	**0**	**0**	**0**
Coffee/Donut Shop with Drive-Through Window	DIST IN			73%	2%								
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	41	1	0	0	27	0	2	0	0	0
	PB IN			74%									
	PB OUT							(51%)					
	PB ASSIGN	0	0	40	0	0	0	28	0	0	0	0	0
Ritas	DIST IN			73%	2%								
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	3	-3	0	0	0	0	0	2	0	0	0
Total New Site Trip Assignment		*0*	*3*	*38*	*1*	*0*	*0*	*27*	*0*	*4*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*40*	*0*	*0*	*0*	*28*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**0**	**27**	**81**	**1**	**31**	**0**	**85**	**0**	**9**	**0**	**0**	**0**

Spring Avenue & Rodman Avenue
INTERSECTION VOLUME PROJECTION SUMMARY
Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			Spring Avenue					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	64	0	1	30	0	22	0	7	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**64**	**0**	**1**	**30**	**0**	**22**	**0**	**7**	**0**	**0**	**0**
Background Growth to 2026	0.81%	0	1	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**0**	**65**	**0**	**1**	**30**	**0**	**22**	**0**	**7**	**0**	**0**	**0**
Coffee/Donut Shop with Drive-Through Window	DIST IN			73%	2%								
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	17	0	0	0	11	0	1	0	0	0
	PB IN			75%									
	PB OUT							(49%)					
	PB ASSIGN	0	0	20	0	0	0	13	0	0	0	0	0
Ritas	DIST IN			73%									
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	14	0	0	0	14	0	1	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	-1	1	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*31*	*-1*	*1*	*0*	*25*	*0*	*2*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*20*	*0*	*0*	*0*	*13*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**0**	**65**	**51**	**0**	**31**	**0**	**60**	**0**	**9**	**0**	**0**	**0**

Spring Avenue & Rodman Avenue
INTERSECTION VOLUME PROJECTION SUMMARY
Saturday Midday 11 AM - 2 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Rodman Avenue			Rodman Avenue			Spring Avenue					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		0	28	0	1	17	0	17	0	7	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**0**	**28**	**0**	**1**	**17**	**0**	**17**	**0**	**7**	**0**	**0**	**0**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**0**	**28**	**0**	**1**	**17**	**0**	**17**	**0**	**7**	**0**	**0**	**0**
Coffee/Donut Shop with Drive-Through Window	DIST IN			73%	2%								
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	45	1	0	0	31	0	2	0	0	0
	PB IN			74%									
	PB OUT							(52%)					
	PB ASSIGN	0	0	37	0	0	0	26	0	0	0	0	0
Ritas	DIST IN			73%									
	DIST OUT							(51%)		(3%)			
	ASSIGN	0	0	7	1	0	0	3	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	-1	1	0	0	0	0	0	0	0
Total New Site Trip Assignment		*0*	*0*	*52*	*1*	*1*	*0*	*34*	*0*	*2*	*0*	*0*	*0*
Total Pass-by Site Trip Assignment		*0*	*0*	*37*	*0*	*0*	*0*	*26*	*0*	*0*	*0*	*0*	*0*
2026 WITH DEVELOPMENT VOLUMES		**0**	**28**	**89**	**2**	**18**	**0**	**77**	**0**	**9**	**0**	**0**	**0**

Spring Avenue & Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 7 AM - 9 AM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Jenkin Court Access						Spring Avenue			Spring Avenue		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		2	0	2	0	0	0	4	34	0	0	0	3
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**2**	**0**	**2**	**0**	**0**	**0**	**4**	**34**	**0**	**0**	**0**	**3**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**2**	**0**	**2**	**0**	**0**	**0**	**4**	**34**	**0**	**0**	**0**	**3**
Coffee/Donut Shop with Drive-Through Window	DIST IN							1%					75%
	DIST OUT	(54%)											
	ASSIGN	29	0	0	0	0	0	1	0	0	0	0	42
	PB IN												74%
	PB OUT	(51%)											
	PB ASSIGN	28	0	0	0	0	0	0	0	0	0	0	40
Ritas	DIST IN							1%					75%
	DIST OUT	(54%)											
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	2	0	-2	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*31*	*0*	*-2*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*42*
Total Pass-by Site Trip Assignment		*28*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*40*
2026 WITH DEVELOPMENT VOLUMES		**61**	**0**	**0**	**0**	**0**	**0**	**5**	**34**	**0**	**0**	**0**	**85**

Spring Avenue & Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Weekday 4 PM - 6 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Jenkin Court Access						Spring Avenue			Spring Avenue		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		2	0	0	0	0	0	1	30	0	0	0	1
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**2**	**0**	**0**	**0**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**1**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**2**	**0**	**0**	**0**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**1**
Coffee/Donut Shop with Drive-Through Window	DIST IN							1%					75%
	DIST OUT	(54%)											
	ASSIGN	12	0	0	0	0	0	0	0	0	0	0	17
	PB IN												75%
	PB OUT	(49%)											
	PB ASSIGN	13	0	0	0	0	0	0	0	0	0	0	20
Ritas	DIST IN							1%					75%
	DIST OUT	(54%)											
	ASSIGN	15	0	0	0	0	0	0	0	0	0	0	14
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*27*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*31*
Total Pass-by Site Trip Assignment		*13*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*20*
2026 WITH DEVELOPMENT VOLUMES		**42**	**0**	**0**	**0**	**0**	**0**	**1**	**30**	**0**	**0**	**0**	**52**

Spring Avenue & Jenkin Court Access

INTERSECTION VOLUME PROJECTION SUMMARY

Saturday Midday 11 AM - 2 PM

		EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
		Jenkin Court Access						Spring Avenue			Spring Avenue		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
EXISTING VOLUMES		1	0	0	0	0	0	0	22	0	0	0	0
Seasonal Adjustment Factor	1.000	0	0	0	0	0	0	0	0	0	0	0	0
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
Additional Adjustment		0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED EXISTING VOLUMES		**1**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**0**
Background Growth to 2026	0.81%	0	0	0	0	0	0	0	0	0	0	0	0
459-471 Old York Road	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
415-425 Johnson Street	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Jenkintown Grocery	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Development New Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total Other Development Pass-by Trip Assignments		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2026 WITHOUT DEVELOPMENT VOLUMES		**1**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**0**	**0**	**0**
Coffee/Donut Shop with Drive-Through Window	DIST IN							1%					75%
	DIST OUT	(54%)											
	ASSIGN	33	0	0	0	0	0	1	0	0	0	0	46
	PB IN												74%
	PB OUT	(52%)											
	PB ASSIGN	26	0	0	0	0	0	0	0	0	0	0	37
Ritas	DIST IN							1%					75%
	DIST OUT	(54%)											
	ASSIGN	3	0	0	0	0	0	0	0	0	0	0	8
Illegal Movemnent Redistribution	DIST IN												
	DIST OUT												
	ASSIGN	0	0	0	0	0	0	0	0	0	0	0	0
Total New Site Trip Assignment		*36*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*54*
Total Pass-by Site Trip Assignment		*26*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*37*
2026 WITH DEVELOPMENT VOLUMES		**63**	**0**	**0**	**0**	**0**	**0**	**1**	**22**	**0**	**0**	**0**	**91**

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Appendix G

Capacity / Level-of-Service Methodology

CAPACITY/LEVEL-OF-SERVICE ANALYSIS METHODOLOGY

The detailed capacity/level-of-service analysis contained in this transportation impact study was performed in accordance with the standard techniques contained in the *Highway Capacity Manual 6th Edition.* By definition, capacity represents "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions." The level at which an intersection or a uniform section of a lane or roadway function can be expressed in terms of a level of service. Level of service (LOS) is defined as "a quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst."

Stop-Controlled Intersections

At unsignalized stop-controlled intersections, such as two-way stop-controlled (TWSC) or all-way stop-controlled (AWSC), a methodology for evaluating the relative functioning of these intersections is based upon the control delay. For these types of unsignalized intersections, the analysis of the control delay is based upon the following data:

- Number and configuration of lanes on each approach;
- Percentage of heavy vehicles on each approach;
- Demand flow rate for each entering vehicular movement and pedestrian crossing movement;
- Unique geometric factors such as, channelization aspects; two-way left-turn lanes, raised or striped median storage; approach grades, flared approaches on the minor street; and upstream signals within 0.25 miles.

At TWSC intersections, only drivers on the minor street approaches are required to stop before proceeding into the intersection and left-turning drivers from the major street may have to yield to on-coming major street through or right-turning traffic, but are not required to stop in the absence of on-coming traffic. The capacity at stop-controlled legs is based primarily on three factors: the distribution of gaps in the major stream, driver judgment in selecting the gaps, and the follow-up headways required by each driver in a queue.

At AWSC intersections, every vehicle is required to stop at the intersection before proceeding, and as a result, the decision to proceed is a function of the traffic conditions on the other approaches. Each driver proceeds only after determining that no vehicles are currently in the intersection and that it is the driver's turn to proceed. Capacity at an AWSC intersection is described by the saturation headway or time between departures of successive vehicles on a given approach for a particular case assuming a continuous queue; departure headway or the average time between departures of successive vehicles on a given approach accounting for the probability of each possible case; and service time or the average time sent by a vehicle in first position waiting to depart.

At both TWSC and AWSC intersections, the level of service is based upon the control delay, as well as the corresponding volume-to-capacity ratio for each movement/lane group. For TWSC intersections, the level of service is not calculated for major-street approaches or for the intersection as a whole; however, the intersection-wide level of service is calculated for AWSC intersections. The following table provides a summary of the relationship between the level of service, control delay, and volume-to-capacity ratio for TWSC and AWSC intersections.

Control Delay (Sec/Veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 – 15	B	F
> 15 – 25	C	F
> 25 – 35	D	F
> 35 – 50	E	F
> 50	F	F

Signalized Intersections

At three or four-legged signalized intersections, a methodology for evaluating the capacity and quality of service provided to road users traveling through the signalized intersection. For signalized intersections, the level of service can be characterized for the entire intersection, each approach, and each lane group. The level of service is based upon the control delay and volume-to-capacity ratio. The delay quantifies the increase in travel time due to the traffic signal control and is a surrogate measure of driver discomfort and fuel consumption, while the volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. Input data in determining the delay and volume-to-capacity ratio include:

- Demand flow rate for each entering vehicular movement and pedestrian crossing movement, including right-turn on red volumes and percent of heavy vehicles;
- Initial queue for each lane group;
- Number and configuration of lanes on each approach;
- Type of signal control and phase sequence;
- Allocation of minimum/maximum green times and clearance intervals (Yellow plus All Red phases); and
- Phase recall.

At signalized intersections, the level of service is based upon the control delay, as well as the corresponding volume-to-capacity ratio for each movement/lane group. The following table provides a summary of the relationship between the level of service, control delay, and volume-to-capacity ratio for signalized intersections.

Control Delay (Sec/Veh)	LOS by Volume-to-Capacity Ratio	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

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Appendix H

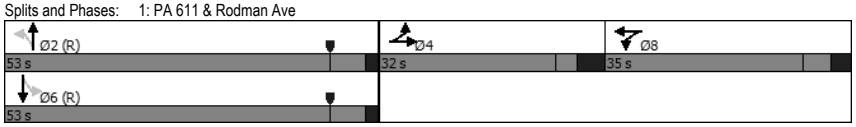
2023 Existing Capacity/Level-of-Service Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	9	20	1	20	39	27	975	4	14	952	55
Future Volume (vph)	80	9	20	1	20	39	27	975	4	14	952	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00		1.00	1.00	
Frt		0.975			0.912			0.999			0.992	
Flt Protected		0.964			0.999		0.950			0.950		
Satd. Flow (prot)	0	1847	0	0	1793	0	1573	3400	0	1521	3245	0
Flt Permitted		0.964			0.999		0.228			0.237		
Satd. Flow (perm)	0	1839	0	0	1793	0	377	3400	0	379	3245	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		9									6	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	5		1	1		5	2		3	3		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	10%	0%	0%	3%	4%	3%	0%	7%	3%	2%
Adj. Flow (vph)	84	9	21	1	21	41	28	1026	4	15	1002	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	0	63	0	28	1030	0	15	1060	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		53.0	53.0		53.0	53.0	
Total Split (%)	26.7%	26.7%		29.2%	29.2%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	25.0	25.0		28.0	28.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	9	20	1	20	39	27	975	4	14	952	55
Future Volume (veh/h)	80	9	20	1	20	39	27	975	4	14	952	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1866	1911	1763	1866	1866	1822	1929	1944	1986	1850	1906	1921
Adj Flow Rate, veh/h	84	9	17	1	21	38	28	1026	4	15	1002	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	10	0	0	3	4	3	0	7	3	2
Cap, veh/h	117	13	24	2	32	57	384	2674	10	444	2466	143
Arrive On Green	0.08	0.09	0.08	0.05	0.06	0.05	1.00	1.00	1.00	0.71	0.71	0.70
Sat Flow, veh/h	1364	146	276	27	573	1037	549	3773	15	541	3479	201
Grp Volume(v), veh/h	110	0	0	60	0	0	28	502	528	15	522	538
Grp Sat Flow(s),veh/h/ln	1786	0	0	1638	0	0	549	1846	1941	541	1811	1870
Q Serve(g_s), s	7.2	0.0	0.0	4.3	0.0	0.0	1.1	0.0	0.0	1.0	14.1	14.2
Cycle Q Clear(g_c), s	7.2	0.0	0.0	4.3	0.0	0.0	15.2	0.0	0.0	1.0	14.1	14.2
Prop In Lane	0.76		0.15	0.02		0.63	1.00		0.01	1.00		0.11
Lane Grp Cap(c), veh/h	154	0	0	90	0	0	384	1309	1376	444	1284	1325
V/C Ratio(X)	0.72	0.00	0.00	0.66	0.00	0.00	0.07	0.38	0.38	0.03	0.41	0.41
Avail Cap(c_a), veh/h	387	0	0	396	0	0	384	1309	1376	444	1284	1325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	0.0	0.0	55.9	0.0	0.0	1.3	0.0	0.0	5.2	7.1	7.2
Incr Delay (d2), s/veh	6.1	0.0	0.0	8.1	0.0	0.0	0.3	0.8	0.8	0.1	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.4	0.0	0.0	3.6	0.0	0.0	0.2	0.5	0.5	0.2	9.3	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	0.0	0.0	64.0	0.0	0.0	1.6	0.8	0.8	5.4	8.1	8.1
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		110			60			1058			1075	
Approach Delay, s/veh		59.9			64.0			0.8			8.1	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		91.0		16.3		91.0		12.6				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		46.0		25.0		46.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.2		0.0		6.3				
Green Ext Time (p_c), s		0.0		0.4		0.0		0.2				

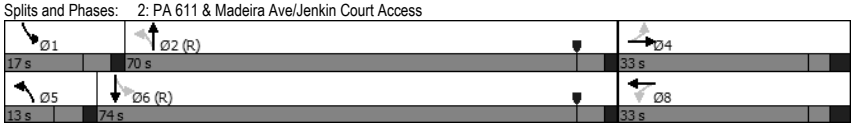
Intersection Summary		
HCM 6th Ctrl Delay		8.7
HCM 6th LOS		A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	6	8	2	2	5	17	995	4	27	936	10
Future Volume (vph)	6	6	8	2	2	5	17	995	4	27	936	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.946			0.925			0.999			0.998	
Flt Protected		0.985			0.989		0.950			0.950		
Satd. Flow (prot)	0	1827	0	0	1473	0	1558	3433	0	1481	3198	0
Flt Permitted		0.896			0.917		0.279			0.254		
Satd. Flow (perm)	0	1661	0	0	1366	0	458	3433	0	396	3198	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			5						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Confl. Peds. (#/hr)	1					1	1		2	2		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	33%	6%	3%	0%	4%	3%	0%
Adj. Flow (vph)	6	6	8	2	2	5	18	1047	4	28	985	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	9	0	18	1051	0	28	996	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	33.0	33.0		33.0	33.0		13.0	70.0		17.0	74.0	
Total Split (%)	27.5%	27.5%		27.5%	27.5%		10.8%	58.3%		14.2%	61.7%	
Maximum Green (s)	27.0	27.0		27.0	27.0		7.0	64.0		11.0	68.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 108 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	6	8	2	2	5	17	995	4	27	936	10
Future Volume (veh/h)	6	6	8	2	2	5	17	995	4	27	936	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		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	
Adj Sat Flow, veh/h/ln	1849	1849	1849	1872	1872	1390	1976	2018	2061	1470	1484	1527
Adj Flow Rate, veh/h	6	6	3	2	2	3	18	1047	4	28	985	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	33	6	3	0	4	3	0
Cap, veh/h	56	14	7	49	11	16	592	3251	12	417	2382	27
Arrive On Green	0.01	0.02	0.01	0.01	0.02	0.01	0.02	0.83	0.82	0.05	1.00	1.00
Sat Flow, veh/h	656	656	328	501	501	751	1881	3918	15	1400	2857	32
Grp Volume(v), veh/h	15	0	0	7	0	0	18	512	539	28	486	510
Grp Sat Flow(s),veh/h/ln	1640	0	0	1752	0	0	1881	1917	2015	1400	1410	1479
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	0.2	7.4	7.5	0.4	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0	0.5	0.0	0.0	0.2	7.4	7.5	0.4	0.0	0.0
Prop In Lane	0.40		0.20	0.29		0.43	1.00		0.01	1.00		0.02
Lane Grp Cap(c), veh/h	64	0	0	62	0	0	592	1591	1672	417	1176	1233
V/C Ratio(X)	0.23	0.00	0.00	0.11	0.00	0.00	0.03	0.32	0.32	0.07	0.41	0.41
Avail Cap(c_a), veh/h	396	0	0	397	0	0	681	1591	1672	524	1176	1233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	58.2	0.0	0.0	58.0	0.0	0.0	1.4	2.4	2.4	1.5	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.8	0.0	0.0	0.0	0.5	0.5	0.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	0.4	0.0	0.0	0.1	4.2	4.4	0.1	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	0.0	0.0	58.8	0.0	0.0	1.4	2.9	2.9	1.6	0.9	0.9
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		15			7			1069			1024	
Approach Delay, s/veh		60.1			58.8			2.9			0.9	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	104.6		7.6	7.4	105.0		7.6
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	11.0	64.0		27.0	7.0	68.0		27.0
Max Q Clear Time (g_c+I1), s	2.9	0.0		3.1	2.7	0.0		2.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	2.5
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	24	3	0	31	30	5
Future Volume (vph)	24	3	0	31	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985				0.982	
Flt Protected					0.959	
Satd. Flow (prot)	2069	0	0	2049	1830	0
Flt Permitted					0.959	
Satd. Flow (perm)	2069	0	0	2049	1830	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	4%	0%	0%	3%	0%	20%
Adj. Flow (vph)	31	4	0	40	38	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	0	40	44	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
EX AM

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	3	0	31	30	5
Future Vol, veh/h	24	3	0	31	30	5
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	4	0	0	3	0	20
Mvmt Flow	31	4	0	40	38	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	74	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	-	-	7	6.7
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	-	-	3	3.1
Pot Cap-1 Maneuver	-	-	0	-	1072	1108
Stage 1	-	-	0	-	1151	-
Stage 2	-	-	0	-	1140	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	1071	1108
Mov Cap-2 Maneuver	-	-	-	-	1071	-
Stage 1	-	-	-	-	1151	-
Stage 2	-	-	-	-	1139	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	1076	-	-	-
HCM Lane V/C Ratio	0.042	-	-	-
HCM Control Delay (s)	8.5	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	2	4	34	0	3
Future Volume (vph)	2	2	4	34	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932				0.850	
Flt Protected	0.976			0.994		
Satd. Flow (prot)	886	0	0	1869	0	0
Flt Permitted	0.976			0.994		
Satd. Flow (perm)	886	0	0	1869	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Confl. Peds. (#/hr)			4			4
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	100%	100%	25%	0%	0%	0%
Adj. Flow (vph)	2	2	5	39	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	44	3	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	4	34	0	3
Future Vol, veh/h	2	2	4	34	0	3
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	100	100	25	0	0	0
Mvmt Flow	2	2	5	39	0	3

Major/Minor	Minor2		Major1	
Conflicting Flow All	53	4	4	0
Stage 1	4	-	-	-
Stage 2	49	-	-	-
Critical Hdwy	6.4	6.7	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-
Follow-up Hdwy	4.4	4.2	3	-
Pot Cap-1 Maneuver	769	853	1196	-
Stage 1	-	-	-	-
Stage 2	783	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	760	850	1191	-
Mov Cap-2 Maneuver	760	-	-	-
Stage 1	-	-	-	-
Stage 2	780	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.5	0.8
HCM LOS	A	

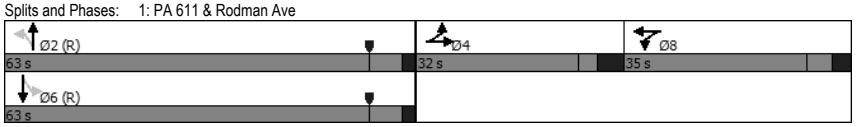
Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	1191	-	802
HCM Lane V/C Ratio	0.004	-	0.006
HCM Control Delay (s)	8	-	9.5
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	0	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	14	8	3	11	23	17	1124	10	31	1169	58
Future Volume (vph)	83	14	8	3	11	23	17	1124	10	31	1169	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.990			0.916			0.999			0.993	
Flt Protected		0.962			0.996		0.950			0.950		
Satd. Flow (prot)	0	1951	0	0	1790	0	1529	3433	0	1581	3310	0
Flt Permitted		0.962			0.996		0.181			0.206		
Satd. Flow (perm)	0	1946	0	0	1790	0	291	3433	0	343	3310	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		3						1			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	2		1	1		2	2		3	3		2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	7%	2%	0%	3%	1%	2%
Adj. Flow (vph)	85	14	8	3	11	23	17	1147	10	32	1193	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	37	0	17	1157	0	32	1252	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		63.0	63.0		63.0	63.0	
Total Split (%)	24.6%	24.6%		26.9%	26.9%		48.5%	48.5%		48.5%	48.5%	
Maximum Green (s)	25.0	25.0		28.0	28.0		56.0	56.0		56.0	56.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 58 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



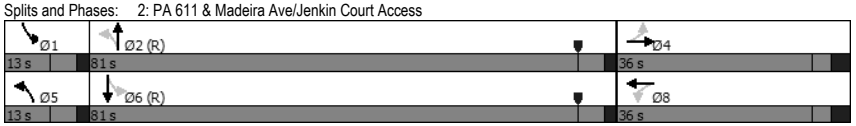
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	14	8	3	11	23	17	1124	10	31	1169	58
Future Volume (veh/h)	83	14	8	3	11	23	17	1124	10	31	1169	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1911	1911	1911	1866	1866	1808	1887	1958	1986	1906	1935	1921
Adj Flow Rate, veh/h	85	14	6	3	11	23	17	1147	10	32	1193	59
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	4	7	2	0	3	1	2
Cap, veh/h	118	19	8	5	18	37	332	2816	25	424	2656	131
Arrive On Green	0.07	0.08	0.07	0.03	0.04	0.03	1.00	1.00	1.00	0.75	0.75	0.74
Sat Flow, veh/h	1471	242	104	134	490	1025	447	3779	33	495	3565	176
Grp Volume(v), veh/h	105	0	0	37	0	0	17	565	592	32	615	637
Grp Sat Flow(s),veh/h/ln	1817	0	0	1649	0	0	447	1860	1952	495	1838	1903
Q Serve(g_s), s	7.3	0.0	0.0	2.9	0.0	0.0	0.9	0.0	0.0	2.3	16.6	16.7
Cycle Q Clear(g_c), s	7.3	0.0	0.0	2.9	0.0	0.0	17.5	0.0	0.0	2.3	16.6	16.7
Prop In Lane	0.81		0.06	0.08		0.62	1.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	146	0	0	59	0	0	332	1386	1454	424	1370	1418
V/C Ratio(X)	0.72	0.00	0.00	0.62	0.00	0.00	0.05	0.41	0.41	0.08	0.45	0.45
Avail Cap(c_a), veh/h	363	0	0	368	0	0	332	1386	1454	424	1370	1418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.8	0.0	0.0	62.2	0.0	0.0	1.5	0.0	0.0	4.5	6.3	6.4
Incr Delay (d2), s/veh	6.5	0.0	0.0	10.3	0.0	0.0	0.3	0.8	0.8	0.3	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.0	0.0	2.5	0.0	0.0	0.1	0.6	0.6	0.5	10.6	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.2	0.0	0.0	72.5	0.0	0.0	1.8	0.8	0.8	4.9	7.4	7.4
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		105			37			1174			1284	
Approach Delay, s/veh		65.2			72.5			0.8			7.3	
Approach LOS		E			E			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		102.9		16.5		102.9		10.7				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		56.0		25.0		56.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.3		0.0		4.9				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			7.7									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1	19	44	5	20	41	1101	0	4	1162	14
Future Volume (vph)	30	1	19	44	5	20	41	1101	0	4	1162	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00		1.00			1.00	1.00	
Frt		0.948			0.960						0.998	
Flt Protected		0.971			0.969		0.950			0.950		
Satd. Flow (prot)	0	1804	0	0	1779	0	1652	3470	0	1540	3261	0
Flt Permitted		0.790			0.815		0.195			0.238		
Satd. Flow (perm)	0	1467	0	0	1496	0	339	3470	0	386	3261	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			15						1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Confl. Peds. (#/hr)	1					1	1		3	3		1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	31	1	20	45	5	21	42	1135	0	4	1198	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	71	0	42	1135	0	4	1212	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	36.0	36.0		36.0	36.0		13.0	81.0		13.0	81.0	
Total Split (%)	27.7%	27.7%		27.7%	27.7%		10.0%	62.3%		10.0%	62.3%	
Maximum Green (s)	30.0	30.0		30.0	30.0		7.0	75.0		7.0	75.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1	19	44	5	20	41	1101	0	4	1162	14
Future Volume (veh/h)	30	1	19	44	5	20	41	1101	0	4	1162	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	
Adj Sat Flow, veh/h/ln	1849	1849	1849	1872	1872	1872	2061	2032	2061	1527	1513	1527
Adj Flow Rate, veh/h	31	1	14	45	5	14	42	1135	0	4	1198	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	107	10	31	115	9	21	441	3141	0	369	2327	23
Arrive On Green	0.05	0.06	0.05	0.05	0.06	0.05	0.03	0.81	0.00	0.01	0.80	0.79
Sat Flow, veh/h	998	160	507	1119	151	356	1963	3963	0	1454	2915	29
Grp Volume(v), veh/h	46	0	0	64	0	0	42	1135	0	4	590	620
Grp Sat Flow(s),veh/h/ln	1665	0	0	1625	0	0	1963	1931	0	1454	1437	1507
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	0.5	10.1	0.0	0.1	18.3	18.3
Cycle Q Clear(g_c), s	3.3	0.0	0.0	4.8	0.0	0.0	0.5	10.1	0.0	0.1	18.3	18.3
Prop In Lane	0.67		0.30	0.70		0.22	1.00		0.00	1.00		0.02
Lane Grp Cap(c), veh/h	134	0	0	133	0	0	441	3141	0	369	1147	1203
V/C Ratio(X)	0.34	0.00	0.00	0.48	0.00	0.00	0.10	0.36	0.00	0.01	0.51	0.51
Avail Cap(c_a), veh/h	389	0	0	393	0	0	511	3141	0	443	1147	1203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	59.4	0.0	0.0	60.0	0.0	0.0	3.5	3.2	0.0	2.6	4.5	4.5
Incr Delay (d2), s/veh	1.5	0.0	0.0	2.7	0.0	0.0	0.1	0.3	0.0	0.0	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	0.0	4.0	0.0	0.0	0.3	6.2	0.0	0.0	8.4	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.9	0.0	0.0	62.7	0.0	0.0	3.5	3.5	0.0	2.6	5.9	5.8
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		46			64			1177			1214	
Approach Delay, s/veh		60.9			62.7			3.5			5.8	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	110.8		12.8	8.4	108.8		12.8				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	75.0		30.0	7.0	75.0		30.0				
Max Q Clear Time (g_c+I1), s	2.6	0.0		5.3	3.0	0.0		6.8				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	64	0	1	30	22	7
Future Volume (vph)	64	0	1	30	22	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.968	
Flt Protected				0.999	0.963	
Satd. Flow (prot)	2175	0	0	2048	1802	0
Flt Permitted				0.999	0.963	
Satd. Flow (perm)	2175	0	0	2048	1802	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					3	2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	3%	0%	14%
Adj. Flow (vph)	74	0	1	35	26	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	0	0	36	34	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
EX PM

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	64	0	1	30	22	7
Future Vol, veh/h	64	0	1	30	22	7
Conflicting Peds, #/hr	0	0	0	0	3	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	3	0	14
Mvmt Flow	74	0	1	35	26	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	74	0	114	76
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	-	-	4.1	-	7	6.64
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.2	-	3	3.1
Pot Cap-1 Maneuver	-	0	1538	-	1008	1043
Stage 1	-	0	-	-	1094	-
Stage 2	-	0	-	-	1141	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1538	-	1003	1040
Mov Cap-2 Maneuver	-	-	-	-	1003	-
Stage 1	-	-	-	-	1094	-
Stage 2	-	-	-	-	1135	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	1012	-	1538	-
HCM Lane V/C Ratio	0.033	-	0.001	-
HCM Control Delay (s)	8.7	-	7.3	-
HCM Lane LOS	A	-	A	-
HCM 95th %tile Q(veh)	0.1	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	0	1	30	0	1
Future Volume (vph)	2	0	1	30	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.850	
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1850	0	0	1875	0	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1850	0	0	1875	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	2	0	1	32	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	33	1	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	0	1	30	0	1
Future Vol, veh/h	2	0	1	30	0	1
Conflicting Peds, #/hr	1	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	3	0	0
Mvmt Flow	2	0	1	32	0	1

Major/Minor	Minor2		Major1	
Conflicting Flow All	36	-	1	0
Stage 1	1	-	-	-
Stage 2	35	-	-	-
Critical Hdwy	5.4	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-
Follow-up Hdwy	3.5	-	3	-
Pot Cap-1 Maneuver	992	0	1199	-
Stage 1	-	0	-	-
Stage 2	1002	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	989	-	1198	-
Mov Cap-2 Maneuver	989	-	-	-
Stage 1	-	-	-	-
Stage 2	1001	-	-	-

Approach	EB	NB
HCM Control Delay, s	8.6	0.3
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	1198	-	989
HCM Lane V/C Ratio	0.001	-	0.002
HCM Control Delay (s)	8	-	8.6
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	0	-	0

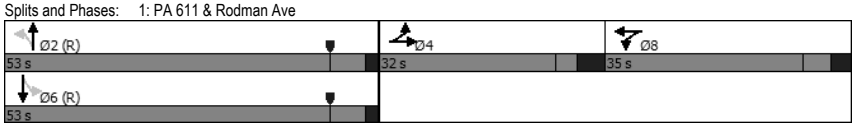
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	6	18	6	4	24	38	1056	1	20	1006	55
Future Volume (vph)	79	6	18	6	4	24	38	1056	1	20	1006	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00		1.00	1.00	
Frt		0.976			0.902						0.992	
Flt Protected		0.963			0.992		0.950			0.950		
Satd. Flow (prot)	0	1922	0	0	1794	0	1636	3468	0	1628	3309	0
Flt Permitted		0.963			0.992		0.214			0.216		
Satd. Flow (perm)	0	1914	0	0	1793	0	368	3468	0	370	3309	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		8									5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	4		2	2		4	5		1	1		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	100%	0%	1%	0%
Adj. Flow (vph)	84	6	19	6	4	26	40	1123	1	21	1070	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	109	0	0	36	0	40	1124	0	21	1129	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

McMahon
1: PA 611 & Rodman Ave
Jenkin Court Pad Sites
EX SAT

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		53.0	53.0		53.0	53.0	
Total Split (%)	26.7%	26.7%		29.2%	29.2%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	25.0	25.0		28.0	28.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Lanes, Volumes, Timings
1: PA 611 & Rodman Ave
\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\2023-07 TIS\SYNCHRO\1 - EX WO W.syn
Synchro 11 (11.1.2.9)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	6	18	6	4	24	38	1056	1	20	1006	55
Future Volume (veh/h)	79	6	18	6	4	24	38	1056	1	20	1006	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1911	1911	1911	1866	1866	1866	1986	1972	564	1949	1935	1949
Adj Flow Rate, veh/h	84	6	13	6	4	26	40	1123	1	21	1070	58
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	100	0	1	0
Cap, veh/h	119	9	18	10	6	41	387	2813	3	442	2596	141
Arrive On Green	0.07	0.08	0.07	0.03	0.04	0.03	1.00	1.00	1.00	0.73	0.73	0.72
Sat Flow, veh/h	1462	104	226	264	176	1145	530	3842	3	522	3545	192
Grp Volume(v), veh/h	103	0	0	36	0	0	40	548	576	21	555	573
Grp Sat Flow(s),veh/h/ln	1792	0	0	1586	0	0	530	1873	1971	522	1838	1899
Q Serve(g_s), s	6.7	0.0	0.0	2.7	0.0	0.0	1.6	0.0	0.0	1.3	13.9	13.9
Cycle Q Clear(g_c), s	6.7	0.0	0.0	2.7	0.0	0.0	15.5	0.0	0.0	1.3	13.9	13.9
Prop In Lane	0.82		0.13	0.17		0.72	1.00		0.00	1.00		0.10
Lane Grp Cap(c), veh/h	146	0	0	57	0	0	387	1372	1444	442	1346	1391
V/C Ratio(X)	0.71	0.00	0.00	0.63	0.00	0.00	0.10	0.40	0.40	0.05	0.41	0.41
Avail Cap(c_a), veh/h	388	0	0	383	0	0	387	1372	1444	442	1346	1391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	0.0	0.0	57.5	0.0	0.0	1.2	0.0	0.0	4.5	6.2	6.2
Incr Delay (d2), s/veh	6.1	0.0	0.0	10.7	0.0	0.0	0.5	0.8	0.8	0.2	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	0.0	0.0	2.3	0.0	0.0	0.2	0.6	0.6	0.3	9.1	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	0.0	0.0	68.1	0.0	0.0	1.7	0.8	0.8	4.7	7.1	7.1
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		103			36			1164			1149	
Approach Delay, s/veh		60.3			68.1			0.8			7.0	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		93.9		15.8		93.9		10.3				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		46.0		25.0		46.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		8.7		0.0		4.7				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.1				

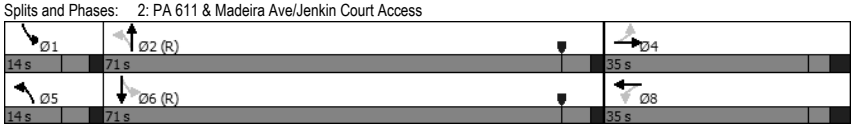
Intersection Summary			
HCM 6th Ctrl Delay			7.2
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	4	24	5	0	4	52	1039	3	4	1013	13
Future Volume (vph)	52	4	24	5	0	4	52	1039	3	4	1013	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.960			0.940						0.998	
Flt Protected		0.968			0.973		0.950			0.950		
Satd. Flow (prot)	0	1798	0	0	1756	0	1652	3500	0	1540	3262	0
Flt Permitted		0.797			0.866		0.225			0.248		
Satd. Flow (perm)	0	1480	0	0	1563	0	391	3500	0	402	3262	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			82						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	1%	50%	0%	1%	0%
Adj. Flow (vph)	55	4	25	5	0	4	55	1094	3	4	1066	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	9	0	55	1097	0	4	1080	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	35.0	35.0		35.0	35.0		14.0	71.0		14.0	71.0	
Total Split (%)	29.2%	29.2%		29.2%	29.2%		11.7%	59.2%		11.7%	59.2%	
Maximum Green (s)	29.0	29.0		29.0	29.0		8.0	65.0		8.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 9 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



McMahon Jenkin Court Pad Sites
2: PA 611 & Madeira Ave/Jenkin Court Access EX SAT

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	4	24	5	0	4	52	1039	3	4	1013	13
Future Volume (veh/h)	52	4	24	5	0	4	52	1039	3	4	1013	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1820	1849	1849	1872	1872	1872	2061	2047	1350	1527	1513	1527
Adj Flow Rate, veh/h	55	4	18	5	0	1	55	1094	2	4	1066	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	0	0	0	0	1	50	0	1	0
Cap, veh/h	126	8	25	145	6	19	564	3146	6	375	2238	29
Arrive On Green	0.07	0.07	0.07	0.07	0.00	0.07	0.03	0.79	0.78	0.02	1.00	1.00
Sat Flow, veh/h	1018	112	345	1228	77	261	1963	3982	7	1454	2904	38
Grp Volume(v), veh/h	77	0	0	6	0	0	55	534	562	4	527	553
Grp Sat Flow(s),veh/h/ln	1475	0	0	1567	0	0	1963	1944	2045	1454	1437	1506
Q Serve(g_s), s	5.7	0.0	0.0	0.0	0.0	0.0	0.7	9.5	9.5	0.1	0.0	0.0
Cycle Q Clear(g_c), s	6.2	0.0	0.0	0.4	0.0	0.0	0.7	9.5	9.5	0.1	0.0	0.0
Prop In Lane	0.71		0.23	0.83		0.17	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	148	0	0	157	0	0	564	1536	1616	375	1107	1160
V/C Ratio(X)	0.52	0.00	0.00	0.04	0.00	0.00	0.10	0.35	0.35	0.01	0.48	0.48
Avail Cap(c_a), veh/h	404	0	0	408	0	0	651	1536	1616	467	1107	1160
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	54.8	0.0	0.0	52.1	0.0	0.0	2.4	3.6	3.6	3.0	0.0	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.1	0.0	0.0	0.1	0.6	0.6	0.0	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	0.0	0.0	0.3	0.0	0.0	0.4	6.2	6.5	0.0	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	0.0	0.0	52.2	0.0	0.0	2.5	4.3	4.2	3.1	1.3	1.2
LnGrp LOS	E	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		77			6			1151			1084	
Approach Delay, s/veh		57.6			52.2			4.2			1.3	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	99.8		13.8	8.7	97.5		13.8
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	8.0	65.0		29.0	8.0	65.0		29.0
Max Q Clear Time (g_c+I1), s	2.6	0.0		8.2	3.2	0.0		2.5
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.7
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	28	0	1	17	17	7
Future Volume (vph)	28	0	1	17	17	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.960	
Flt Protected				0.997	0.966	
Satd. Flow (prot)	2091	0	0	2104	1851	0
Flt Permitted				0.997	0.966	
Satd. Flow (perm)	2091	0	0	2104	1851	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					1	3
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	48	0	2	29	29	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	0	31	41	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	28	0	1	17	17	7
Future Vol, veh/h	28	0	1	17	17	7
Conflicting Peds, #/hr	0	0	0	0	1	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	4	0	0	0	0	0
Mvmt Flow	48	0	2	29	29	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	48	0	82	51
Stage 1	-	-	-	-	48	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	-	-	4.1	-	7	6.5
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.2	-	3	3.1
Pot Cap-1 Maneuver	-	0	1572	-	1058	1083
Stage 1	-	0	-	-	1130	-
Stage 2	-	0	-	-	1150	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1572	-	1056	1079
Mov Cap-2 Maneuver	-	-	-	-	1056	-
Stage 1	-	-	-	-	1130	-
Stage 2	-	-	-	-	1148	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	1063	-	1572	-
HCM Lane V/C Ratio	0.039	-	0.001	-
HCM Control Delay (s)	8.5	-	7.3	-
HCM Lane LOS	A	-	A	-
HCM 95th %tile Q(veh)	0.1	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	0	0	22	0	0
Future Volume (vph)	1	0	0	22	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1850	0	0	1934	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1850	0	0	1934	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	0	0	38	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	38	0	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	22	0	0
Future Vol, veh/h	1	0	0	22	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	0	0	38	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	38	-	-	0
Stage 1	0	-	-	-
Stage 2	38	-	-	-
Critical Hdwy	5.4	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-
Follow-up Hdwy	3.5	-	-	-
Pot Cap-1 Maneuver	990	0	0	-
Stage 1	-	0	0	-
Stage 2	1000	0	0	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	990	-	-	-
Mov Cap-2 Maneuver	990	-	-	-
Stage 1	-	-	-	-
Stage 2	1000	-	-	-

Approach	EB	NB
HCM Control Delay, s	8.6	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	EBLn1
Capacity (veh/h)	-	990
HCM Lane V/C Ratio	-	0.002
HCM Control Delay (s)	-	8.6
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0

Appendix I

2026 Future without Development Capacity/Level-of-Service Analysis Worksheets

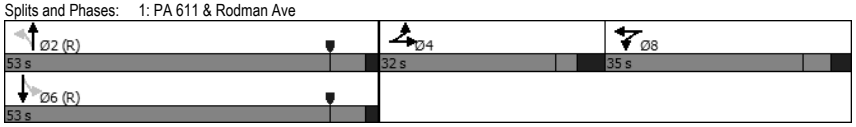
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	9	20	1	20	39	27	1014	4	14	975	55
Future Volume (vph)	81	9	20	1	20	39	27	1014	4	14	975	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00		1.00	1.00	
Frt		0.975			0.912			0.999			0.992	
Flt Protected		0.964			0.999		0.950			0.950		
Satd. Flow (prot)	0	1848	0	0	1793	0	1573	3400	0	1521	3245	0
Flt Permitted		0.964			0.999		0.220			0.224		
Satd. Flow (perm)	0	1839	0	0	1793	0	364	3400	0	359	3245	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		9									6	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	5		1	1		5	2		3	3		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	10%	0%	0%	3%	4%	3%	0%	7%	3%	2%
Adj. Flow (vph)	85	9	21	1	21	41	28	1067	4	15	1026	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	0	0	63	0	28	1071	0	15	1084	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

McMahon
Jenkin Court Pad Sites
1: PA 611 & Rodman Ave
26 WO AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		53.0	53.0		53.0	53.0	
Total Split (%)	26.7%	26.7%		29.2%	29.2%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	25.0	25.0		28.0	28.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Lanes, Volumes, Timings
1: PA 611 & Rodman Ave
\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\SYNCHRO\1 - EX WO W.syn
Synchro 11 (11.1.2.9)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	9	20	1	20	39	27	1014	4	14	975	55
Future Volume (veh/h)	81	9	20	1	20	39	27	1014	4	14	975	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1866	1911	1763	1866	1866	1822	1929	1944	1986	1850	1906	1921
Adj Flow Rate, veh/h	85	9	17	1	21	38	28	1067	4	15	1026	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	10	0	0	3	4	3	0	7	3	2
Cap, veh/h	119	13	24	2	32	57	375	2672	10	429	2467	139
Arrive On Green	0.08	0.09	0.08	0.05	0.06	0.05	1.00	1.00	1.00	0.71	0.71	0.70
Sat Flow, veh/h	1368	145	274	27	573	1037	537	3773	14	521	3485	197
Grp Volume(v), veh/h	111	0	0	60	0	0	28	522	549	15	533	551
Grp Sat Flow(s),veh/h/ln	1787	0	0	1638	0	0	537	1846	1941	521	1811	1870
Q Serve(g_s), s	7.3	0.0	0.0	4.3	0.0	0.0	1.2	0.0	0.0	1.0	14.6	14.7
Cycle Q Clear(g_c), s	7.3	0.0	0.0	4.3	0.0	0.0	15.8	0.0	0.0	1.0	14.6	14.7
Prop In Lane	0.77		0.15	0.02		0.63	1.00		0.01	1.00		0.11
Lane Grp Cap(c), veh/h	155	0	0	90	0	0	375	1308	1375	429	1282	1325
V/C Ratio(X)	0.72	0.00	0.00	0.66	0.00	0.00	0.07	0.40	0.40	0.03	0.42	0.42
Avail Cap(c_a), veh/h	387	0	0	396	0	0	375	1308	1375	429	1282	1325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	0.0	0.0	55.9	0.0	0.0	1.4	0.0	0.0	5.3	7.2	7.3
Incr Delay (d2), s/veh	6.1	0.0	0.0	8.1	0.0	0.0	0.4	0.9	0.8	0.2	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.4	0.0	0.0	3.6	0.0	0.0	0.2	0.6	0.6	0.2	9.6	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	0.0	0.0	64.0	0.0	0.0	1.7	0.9	0.8	5.4	8.2	8.2
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		111			60			1099			1099	
Approach Delay, s/veh		59.9			64.0			0.9			8.2	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		91.0		16.4		91.0		12.6				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		46.0		25.0		46.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.3		0.0		6.3				
Green Ext Time (p_c), s		0.0		0.4		0.0		0.2				

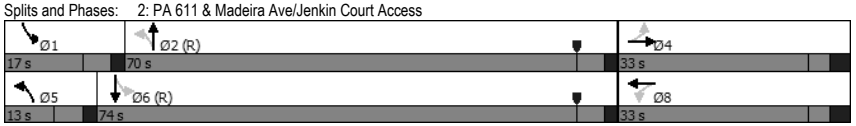
Intersection Summary			
HCM 6th Ctrl Delay			8.6
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	6	8	2	2	5	17	1034	4	27	959	10
Future Volume (vph)	6	6	8	2	2	5	17	1034	4	27	959	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.946			0.925			0.999			0.998	
Flt Protected		0.985			0.989		0.950			0.950		
Satd. Flow (prot)	0	1827	0	0	1473	0	1558	3433	0	1481	3198	0
Flt Permitted		0.896			0.917		0.271			0.242		
Satd. Flow (perm)	0	1661	0	0	1366	0	444	3433	0	377	3198	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			5						1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Confl. Peds. (#/hr)	1					1	1		2	2		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	33%	6%	3%	0%	4%	3%	0%
Adj. Flow (vph)	6	6	8	2	2	5	18	1088	4	28	1009	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	20	0	0	9	0	18	1092	0	28	1020	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	33.0	33.0		33.0	33.0		13.0	70.0		17.0	74.0	
Total Split (%)	27.5%	27.5%		27.5%	27.5%		10.8%	58.3%		14.2%	61.7%	
Maximum Green (s)	27.0	27.0		27.0	27.0		7.0	64.0		11.0	68.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 108 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	6	8	2	2	5	17	1034	4	27	959	10
Future Volume (veh/h)	6	6	8	2	2	5	17	1034	4	27	959	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		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	
Adj Sat Flow, veh/h/ln	1849	1849	1849	1872	1872	1390	1976	2018	2061	1470	1484	1527
Adj Flow Rate, veh/h	6	6	3	2	2	3	18	1088	4	28	1009	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	33	6	3	0	4	3	0
Cap, veh/h	56	14	7	49	11	16	581	3251	12	403	2383	26
Arrive On Green	0.01	0.02	0.01	0.01	0.02	0.01	0.02	0.83	0.82	0.05	1.00	1.00
Sat Flow, veh/h	656	656	328	501	501	751	1881	3918	14	1400	2858	31
Grp Volume(v), veh/h	15	0	0	7	0	0	18	532	560	28	498	522
Grp Sat Flow(s),veh/h/ln	1640	0	0	1752	0	0	1881	1917	2016	1400	1410	1479
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	0.2	7.9	7.9	0.4	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0	0.5	0.0	0.0	0.2	7.9	7.9	0.4	0.0	0.0
Prop In Lane	0.40		0.20	0.29		0.43	1.00		0.01	1.00		0.02
Lane Grp Cap(c), veh/h	64	0	0	62	0	0	581	1591	1672	403	1176	1233
V/C Ratio(X)	0.23	0.00	0.00	0.11	0.00	0.00	0.03	0.33	0.33	0.07	0.42	0.42
Avail Cap(c_a), veh/h	396	0	0	397	0	0	670	1591	1672	510	1176	1233
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	58.2	0.0	0.0	58.0	0.0	0.0	1.4	2.4	2.4	1.6	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.8	0.0	0.0	0.0	0.6	0.5	0.1	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	0.4	0.0	0.0	0.1	4.4	4.7	0.1	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	0.0	0.0	58.8	0.0	0.0	1.4	3.0	2.9	1.6	1.0	0.9
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		15			7			1110			1048	
Approach Delay, s/veh		60.1			58.8			2.9			1.0	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	104.6		7.6	7.4	105.0		7.6
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	11.0	64.0		27.0	7.0	68.0		27.0
Max Q Clear Time (g_c+I1), s	2.9	0.0		3.1	2.7	0.0		2.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	2.6
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	24	3	0	31	30	5
Future Volume (vph)	24	3	0	31	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985				0.982	
Flt Protected					0.959	
Satd. Flow (prot)	2069	0	0	2049	1830	0
Flt Permitted					0.959	
Satd. Flow (perm)	2069	0	0	2049	1830	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	4%	0%	0%	3%	0%	20%
Adj. Flow (vph)	31	4	0	40	38	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	0	40	44	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
26 WO AM

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	3	0	31	30	5
Future Vol, veh/h	24	3	0	31	30	5
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	4	0	0	3	0	20
Mvmt Flow	31	4	0	40	38	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	74	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	-	-	7	6.7
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	-	-	3	3.1
Pot Cap-1 Maneuver	-	-	0	-	1072	1108
Stage 1	-	-	0	-	1151	-
Stage 2	-	-	0	-	1140	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	1071	1108
Mov Cap-2 Maneuver	-	-	-	-	1071	-
Stage 1	-	-	-	-	1151	-
Stage 2	-	-	-	-	1139	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	1076	-	-	-
HCM Lane V/C Ratio	0.042	-	-	-
HCM Control Delay (s)	8.5	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	2	4	34	0	3
Future Volume (vph)	2	2	4	34	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932				0.850	
Flt Protected	0.976			0.994		
Satd. Flow (prot)	886	0	0	1869	0	0
Flt Permitted	0.976			0.994		
Satd. Flow (perm)	886	0	0	1869	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Confl. Peds. (#/hr)			4			4
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	100%	100%	25%	0%	0%	0%
Adj. Flow (vph)	2	2	5	39	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	44	3	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
4: Spring Ave & Jenkin Court
Jenkin Court Pad Sites
26 WO AM

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	4	34	0	3
Future Vol, veh/h	2	2	4	34	0	3
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	100	100	25	0	0	0
Mvmt Flow	2	2	5	39	0	3

Major/Minor	Minor2		Major1	
Conflicting Flow All	53	4	4	0
Stage 1	4	-	-	-
Stage 2	49	-	-	-
Critical Hdwy	6.4	6.7	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-
Follow-up Hdwy	4.4	4.2	3	-
Pot Cap-1 Maneuver	769	853	1196	-
Stage 1	-	-	-	-
Stage 2	783	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	760	850	1191	-
Mov Cap-2 Maneuver	760	-	-	-
Stage 1	-	-	-	-
Stage 2	780	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.5	0.8
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	1191	-	802
HCM Lane V/C Ratio	0.004	-	0.006
HCM Control Delay (s)	8	-	9.5
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	0	-	0

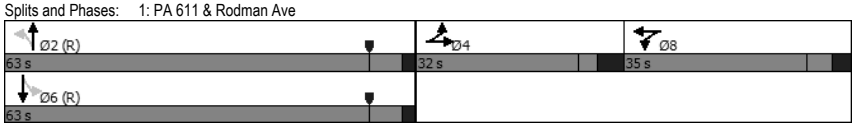
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	14	8	3	11	23	17	1157	10	31	1211	58
Future Volume (vph)	84	14	8	3	11	23	17	1157	10	31	1211	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.990			0.916			0.999			0.993	
Flt Protected		0.962			0.996		0.950			0.950		
Satd. Flow (prot)	0	1951	0	0	1790	0	1529	3433	0	1581	3311	0
Flt Permitted		0.962			0.996		0.170			0.197		
Satd. Flow (perm)	0	1946	0	0	1790	0	274	3433	0	328	3311	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		3						1			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	2		1	1		2	2		3	3		2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	7%	2%	0%	3%	1%	2%
Adj. Flow (vph)	86	14	8	3	11	23	17	1181	10	32	1236	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	37	0	17	1191	0	32	1295	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

McMahon
Jenkin Court Pad Sites
1: PA 611 & Rodman Ave
26 WO PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		63.0	63.0		63.0	63.0	
Total Split (%)	24.6%	24.6%		26.9%	26.9%		48.5%	48.5%		48.5%	48.5%	
Maximum Green (s)	25.0	25.0		28.0	28.0		56.0	56.0		56.0	56.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 58 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Lanes, Volumes, Timings
1: PA 611 & Rodman Ave
\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\SYNCHRO\1 - EX WO W.syn
Synchro 11 (11.1.2.9)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	14	8	3	11	23	17	1157	10	31	1211	58
Future Volume (veh/h)	84	14	8	3	11	23	17	1157	10	31	1211	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1911	1911	1911	1866	1866	1808	1887	1958	1986	1906	1935	1921
Adj Flow Rate, veh/h	86	14	6	3	11	23	17	1181	10	32	1236	59
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	4	7	2	0	3	1	2
Cap, veh/h	119	19	8	5	18	37	317	2814	24	410	2659	127
Arrive On Green	0.07	0.08	0.07	0.03	0.04	0.03	0.99	0.99	0.98	0.74	0.74	0.74
Sat Flow, veh/h	1475	240	103	134	490	1025	429	3780	32	479	3571	170
Grp Volume(v), veh/h	106	0	0	37	0	0	17	581	610	32	636	659
Grp Sat Flow(s),veh/h/ln	1818	0	0	1649	0	0	429	1860	1952	479	1838	1904
Q Serve(g_s), s	7.4	0.0	0.0	2.9	0.0	0.0	1.0	0.7	0.7	2.4	17.5	17.6
Cycle Q Clear(g_c), s	7.4	0.0	0.0	2.9	0.0	0.0	18.6	0.7	0.7	3.1	17.5	17.6
Prop In Lane	0.81		0.06	0.08		0.62	1.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	147	0	0	59	0	0	317	1385	1453	410	1369	1417
V/C Ratio(X)	0.72	0.00	0.00	0.62	0.00	0.00	0.05	0.42	0.42	0.08	0.46	0.47
Avail Cap(c_a), veh/h	364	0	0	368	0	0	317	1385	1453	410	1369	1417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.7	0.0	0.0	62.2	0.0	0.0	2.0	0.2	0.2	4.7	6.5	6.5
Incr Delay (d2), s/veh	6.4	0.0	0.0	10.3	0.0	0.0	0.3	0.9	0.8	0.4	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	0.0	0.0	2.5	0.0	0.0	0.2	0.9	0.9	0.5	11.1	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.2	0.0	0.0	72.5	0.0	0.0	2.3	1.0	1.0	5.1	7.6	7.6
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		106			37			1208			1327	
Approach Delay, s/veh		65.2			72.5			1.0			7.6	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		102.8		16.5		102.8		10.7				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		56.0		25.0		56.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.4		0.0		4.9				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.1				

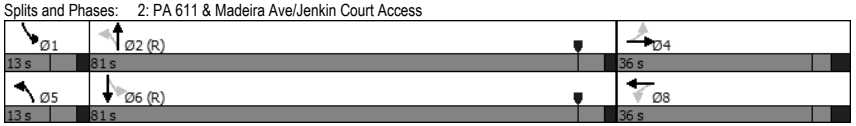
Intersection Summary			
HCM 6th Ctrl Delay			7.8
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1	19	44	5	20	41	1134	0	4	1204	14
Future Volume (vph)	30	1	19	44	5	20	41	1134	0	4	1204	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00		1.00			1.00	1.00	
Frt		0.948			0.960						0.998	
Flt Protected		0.971			0.969		0.950			0.950		
Satd. Flow (prot)	0	1804	0	0	1779	0	1652	3470	0	1540	3261	0
Flt Permitted		0.790			0.815		0.185			0.229		
Satd. Flow (perm)	0	1467	0	0	1496	0	322	3470	0	371	3261	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			15						1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Confl. Peds. (#/hr)	1					1	1		3	3		1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	31	1	20	45	5	21	42	1169	0	4	1241	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	71	0	42	1169	0	4	1255	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	36.0	36.0		36.0	36.0		13.0	81.0		13.0	81.0	
Total Split (%)	27.7%	27.7%		27.7%	27.7%		10.0%	62.3%		10.0%	62.3%	
Maximum Green (s)	30.0	30.0		30.0	30.0		7.0	75.0		7.0	75.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1	19	44	5	20	41	1134	0	4	1204	14
Future Volume (veh/h)	30	1	19	44	5	20	41	1134	0	4	1204	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	
Adj Sat Flow, veh/h/ln	1849	1849	1849	1872	1872	1872	2061	2032	2061	1527	1513	1527
Adj Flow Rate, veh/h	31	1	14	45	5	14	42	1169	0	4	1241	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	107	10	31	115	9	21	423	3141	0	358	2328	23
Arrive On Green	0.05	0.06	0.05	0.05	0.06	0.05	0.03	0.81	0.00	0.01	0.80	0.79
Sat Flow, veh/h	998	160	507	1119	151	356	1963	3963	0	1454	2916	28
Grp Volume(v), veh/h	46	0	0	64	0	0	42	1169	0	4	611	642
Grp Sat Flow(s),veh/h/ln	1665	0	0	1625	0	0	1963	1931	0	1454	1437	1507
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	0.5	10.5	0.0	0.1	19.4	19.4
Cycle Q Clear(g_c), s	3.3	0.0	0.0	4.8	0.0	0.0	0.5	10.5	0.0	0.1	19.4	19.4
Prop In Lane	0.67		0.30	0.70		0.22	1.00		0.00	1.00		0.02
Lane Grp Cap(c), veh/h	134	0	0	133	0	0	423	3141	0	358	1147	1204
V/C Ratio(X)	0.34	0.00	0.00	0.48	0.00	0.00	0.10	0.37	0.00	0.01	0.53	0.53
Avail Cap(c_a), veh/h	389	0	0	393	0	0	493	3141	0	432	1147	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	59.4	0.0	0.0	60.0	0.0	0.0	3.6	3.2	0.0	2.7	4.6	4.6
Incr Delay (d2), s/veh	1.5	0.0	0.0	2.7	0.0	0.0	0.1	0.3	0.0	0.0	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	0.0	4.0	0.0	0.0	0.3	6.4	0.0	0.0	8.8	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.9	0.0	0.0	62.7	0.0	0.0	3.7	3.6	0.0	2.7	6.0	6.0
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		46			64			1211			1257	
Approach Delay, s/veh		60.9			62.7			3.6			6.0	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	110.8		12.8	8.4	108.8		12.8				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	7.0	75.0		30.0	7.0	75.0		30.0				
Max Q Clear Time (g_c+I1), s	2.6	0.0		5.3	3.0	0.0		6.8				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	65	0	1	30	22	7
Future Volume (vph)	65	0	1	30	22	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.968	
Flt Protected				0.999	0.963	
Satd. Flow (prot)	2175	0	0	2048	1802	0
Flt Permitted				0.999	0.963	
Satd. Flow (perm)	2175	0	0	2048	1802	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					3	2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	3%	0%	14%
Adj. Flow (vph)	76	0	1	35	26	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	0	36	34	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	65	0	1	30	22	7
Future Vol, veh/h	65	0	1	30	22	7
Conflicting Peds, #/hr	0	0	0	0	3	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	3	0	14
Mvmt Flow	76	0	1	35	26	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	76	0	116	78
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	-	-	4.1	-	7	6.64
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.2	-	3	3.1
Pot Cap-1 Maneuver	-	0	1536	-	1005	1040
Stage 1	-	0	-	-	1091	-
Stage 2	-	0	-	-	1141	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1536	-	1000	1037
Mov Cap-2 Maneuver	-	-	-	-	1000	-
Stage 1	-	-	-	-	1091	-
Stage 2	-	-	-	-	1135	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	1009	-	1536	-
HCM Lane V/C Ratio	0.033	-	0.001	-
HCM Control Delay (s)	8.7	-	7.3	-
HCM Lane LOS	A	-	A	-
HCM 95th %tile Q(veh)	0.1	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	0	1	30	0	1
Future Volume (vph)	2	0	1	30	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.850	
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1850	0	0	1875	0	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1850	0	0	1875	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	2	0	1	32	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	33	1	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	0	1	30	0	1
Future Vol, veh/h	2	0	1	30	0	1
Conflicting Peds, #/hr	1	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	3	0	0
Mvmt Flow	2	0	1	32	0	1

Major/Minor	Minor2		Major1	
Conflicting Flow All	36	-	1	0
Stage 1	1	-	-	-
Stage 2	35	-	-	-
Critical Hdwy	5.4	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-
Follow-up Hdwy	3.5	-	3	-
Pot Cap-1 Maneuver	992	0	1199	-
Stage 1	-	0	-	-
Stage 2	1002	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	989	-	1198	-
Mov Cap-2 Maneuver	989	-	-	-
Stage 1	-	-	-	-
Stage 2	1001	-	-	-

Approach	EB	NB
HCM Control Delay, s	8.6	0.3
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	1198	-	989
HCM Lane V/C Ratio	0.001	-	0.002
HCM Control Delay (s)	8	-	8.6
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	0	-	0

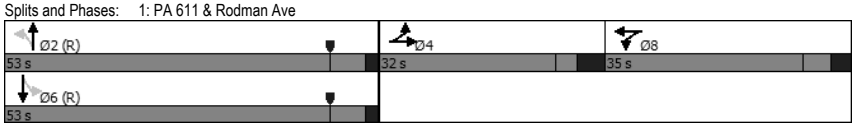
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	6	18	6	4	24	38	1086	1	20	1033	55
Future Volume (vph)	80	6	18	6	4	24	38	1086	1	20	1033	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00		1.00	1.00	
Frt		0.977			0.902						0.992	
Flt Protected		0.963			0.992		0.950			0.950		
Satd. Flow (prot)	0	1924	0	0	1794	0	1636	3468	0	1628	3309	0
Flt Permitted		0.963			0.992		0.206			0.206		
Satd. Flow (perm)	0	1916	0	0	1793	0	354	3468	0	353	3309	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		8									5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	4		2	2		4	5		1	1		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	100%	0%	1%	0%
Adj. Flow (vph)	85	6	19	6	4	26	40	1155	1	21	1099	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	36	0	40	1156	0	21	1158	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

McMahon
Jenkin Court Pad Sites
1: PA 611 & Rodman Ave
26 WO SAT

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		53.0	53.0		53.0	53.0	
Total Split (%)	26.7%	26.7%		29.2%	29.2%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	25.0	25.0		28.0	28.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Lanes, Volumes, Timings
1: PA 611 & Rodman Ave
\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\SYNCHRO\1 - EX WO W.syn
Synchro 11 (11.1.2.9)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	6	18	6	4	24	38	1086	1	20	1033	55
Future Volume (veh/h)	80	6	18	6	4	24	38	1086	1	20	1033	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1911	1911	1911	1866	1866	1866	1986	1972	564	1949	1935	1949
Adj Flow Rate, veh/h	85	6	13	6	4	26	40	1155	1	21	1099	58
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	100	0	1	0
Cap, veh/h	120	8	18	10	6	41	375	2811	2	430	2598	137
Arrive On Green	0.07	0.08	0.07	0.03	0.04	0.03	1.00	1.00	1.00	0.73	0.73	0.72
Sat Flow, veh/h	1465	103	224	264	176	1145	515	3842	3	506	3551	187
Grp Volume(v), veh/h	104	0	0	36	0	0	40	563	593	21	569	588
Grp Sat Flow(s),veh/h/ln	1793	0	0	1586	0	0	515	1873	1971	506	1838	1900
Q Serve(g_s), s	6.8	0.0	0.0	2.7	0.0	0.0	1.7	0.0	0.0	1.4	14.4	14.5
Cycle Q Clear(g_c), s	6.8	0.0	0.0	2.7	0.0	0.0	16.1	0.0	0.0	1.4	14.4	14.5
Prop In Lane	0.82		0.12	0.17		0.72	1.00		0.00	1.00		0.10
Lane Grp Cap(c), veh/h	147	0	0	57	0	0	375	1371	1442	430	1345	1390
V/C Ratio(X)	0.71	0.00	0.00	0.63	0.00	0.00	0.11	0.41	0.41	0.05	0.42	0.42
Avail Cap(c_a), veh/h	388	0	0	383	0	0	375	1371	1442	430	1345	1390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	0.0	0.0	57.5	0.0	0.0	1.3	0.0	0.0	4.5	6.3	6.3
Incr Delay (d2), s/veh	6.1	0.0	0.0	10.7	0.0	0.0	0.5	0.8	0.8	0.2	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	0.0	0.0	2.3	0.0	0.0	0.2	0.6	0.6	0.3	9.4	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	0.0	0.0	68.1	0.0	0.0	1.9	0.8	0.8	4.7	7.2	7.2
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		104			36			1196			1178	
Approach Delay, s/veh		60.2			68.1			0.9			7.2	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		93.8		15.9		93.8		10.3				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		46.0		25.0		46.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		8.8		0.0		4.7				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.1				

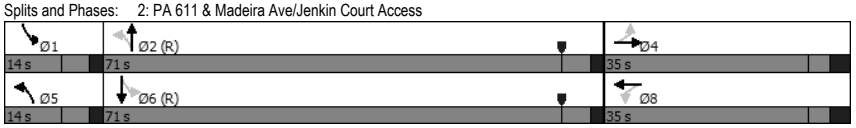
Intersection Summary			
HCM 6th Ctrl Delay			7.2
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	4	24	5	0	4	52	1068	3	4	1040	13
Future Volume (vph)	52	4	24	5	0	4	52	1068	3	4	1040	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.960			0.940						0.998	
Flt Protected		0.968			0.973		0.950			0.950		
Satd. Flow (prot)	0	1798	0	0	1756	0	1652	3500	0	1540	3261	0
Flt Permitted		0.797			0.866		0.217			0.239		
Satd. Flow (perm)	0	1480	0	0	1563	0	377	3500	0	387	3261	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			82						2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	1%	50%	0%	1%	0%
Adj. Flow (vph)	55	4	25	5	0	4	55	1124	3	4	1095	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	9	0	55	1127	0	4	1109	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	35.0	35.0		35.0	35.0		14.0	71.0		14.0	71.0	
Total Split (%)	29.2%	29.2%		29.2%	29.2%		11.7%	59.2%		11.7%	59.2%	
Maximum Green (s)	29.0	29.0		29.0	29.0		8.0	65.0		8.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 9 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	4	24	5	0	4	52	1068	3	4	1040	13
Future Volume (veh/h)	52	4	24	5	0	4	52	1068	3	4	1040	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1820	1849	1849	1872	1872	1872	2061	2047	1350	1527	1513	1527
Adj Flow Rate, veh/h	55	4	18	5	0	1	55	1124	2	4	1095	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	0	0	0	0	1	50	0	1	0
Cap, veh/h	126	8	25	145	6	19	552	3146	6	365	2239	29
Arrive On Green	0.07	0.07	0.07	0.07	0.00	0.07	0.03	0.79	0.78	0.02	1.00	1.00
Sat Flow, veh/h	1018	112	345	1228	77	261	1963	3983	7	1454	2906	37
Grp Volume(v), veh/h	77	0	0	6	0	0	55	549	577	4	541	568
Grp Sat Flow(s),veh/h/ln	1475	0	0	1567	0	0	1963	1944	2045	1454	1437	1506
Q Serve(g_s), s	5.7	0.0	0.0	0.0	0.0	0.0	0.7	9.9	9.9	0.1	0.0	0.0
Cycle Q Clear(g_c), s	6.2	0.0	0.0	0.4	0.0	0.0	0.7	9.9	9.9	0.1	0.0	0.0
Prop In Lane	0.71		0.23	0.83		0.17	1.00		0.00	1.00		0.02
Lane Grp Cap(c), veh/h	148	0	0	157	0	0	552	1536	1616	365	1107	1160
V/C Ratio(X)	0.52	0.00	0.00	0.04	0.00	0.00	0.10	0.36	0.36	0.01	0.49	0.49
Avail Cap(c_a), veh/h	404	0	0	408	0	0	639	1536	1616	458	1107	1160
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	54.8	0.0	0.0	52.1	0.0	0.0	2.4	3.7	3.7	3.1	0.0	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.1	0.0	0.0	0.1	0.6	0.6	0.0	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	0.0	0.0	0.3	0.0	0.0	0.4	6.5	6.8	0.0	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	0.0	0.0	52.2	0.0	0.0	2.5	4.3	4.3	3.1	1.3	1.3
LnGrp LOS	E	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		77			6			1181			1113	
Approach Delay, s/veh		57.6			52.2			4.2			1.3	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	99.8		13.8	8.7	97.5		13.8
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	8.0	65.0		29.0	8.0	65.0		29.0
Max Q Clear Time (g_c+I1), s	2.6	0.0		8.2	3.2	0.0		2.5
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.7
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	28	0	1	17	17	7
Future Volume (vph)	28	0	1	17	17	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.960	
Flt Protected				0.997	0.966	
Satd. Flow (prot)	2091	0	0	2104	1851	0
Flt Permitted				0.997	0.966	
Satd. Flow (perm)	2091	0	0	2104	1851	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					1	3
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	48	0	2	29	29	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	0	31	41	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	28	0	1	17	17	7
Future Vol, veh/h	28	0	1	17	17	7
Conflicting Peds, #/hr	0	0	0	0	1	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	4	0	0	0	0	0
Mvmt Flow	48	0	2	29	29	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	48	0	82	51
Stage 1	-	-	-	-	48	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	-	-	4.1	-	7	6.5
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.2	-	3	3.1
Pot Cap-1 Maneuver	-	0	1572	-	1058	1083
Stage 1	-	0	-	-	1130	-
Stage 2	-	0	-	-	1150	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1572	-	1056	1079
Mov Cap-2 Maneuver	-	-	-	-	1056	-
Stage 1	-	-	-	-	1130	-
Stage 2	-	-	-	-	1148	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	1063	-	1572	-
HCM Lane V/C Ratio	0.039	-	0.001	-
HCM Control Delay (s)	8.5	-	7.3	-
HCM Lane LOS	A	-	A	-
HCM 95th %tile Q(veh)	0.1	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	0	0	22	0	0
Future Volume (vph)	1	0	0	22	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1850	0	0	1934	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1850	0	0	1934	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	0	0	38	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	0	0	38	0	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	22	0	0
Future Vol, veh/h	1	0	0	22	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	0	0	38	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	38	-	-	0
Stage 1	0	-	-	-
Stage 2	38	-	-	-
Critical Hdwy	5.4	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.4	-	-	-
Follow-up Hdwy	3.5	-	-	-
Pot Cap-1 Maneuver	990	0	0	-
Stage 1	-	0	0	-
Stage 2	1000	0	0	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	990	-	-	-
Mov Cap-2 Maneuver	990	-	-	-
Stage 1	-	-	-	-
Stage 2	1000	-	-	-

Approach	EB	NB
HCM Control Delay, s	8.6	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	EBLn1
Capacity (veh/h)	-	990
HCM Lane V/C Ratio	-	0.002
HCM Control Delay (s)	-	8.6
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0

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Appendix J

2026 Future with Development Capacity/Level-of-Service Analysis Worksheets

1 - EXISTING SPRING AVENUE ACCESS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	9	22	2	22	92	27	986	4	14	1001	55
Future Volume (vph)	81	9	22	2	22	92	27	986	4	14	1001	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00		1.00	1.00	
Frt		0.973			0.893			0.999			0.992	
Flt Protected		0.965			0.999		0.950			0.950		
Satd. Flow (prot)	0	1844	0	0	1743	0	1573	3400	0	1521	3246	0
Flt Permitted		0.965			0.999		0.199			0.221		
Satd. Flow (perm)	0	1836	0	0	1743	0	329	3400	0	354	3246	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		9									5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	5		1	1		5	2		3	3		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	10%	0%	0%	3%	4%	3%	0%	7%	3%	2%
Adj. Flow (vph)	85	9	23	2	23	97	28	1038	4	15	1054	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	0	0	122	0	28	1042	0	15	1112	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

McMahon
1: PA 611 & Rodman Ave
Jenkin Court Pad Sites
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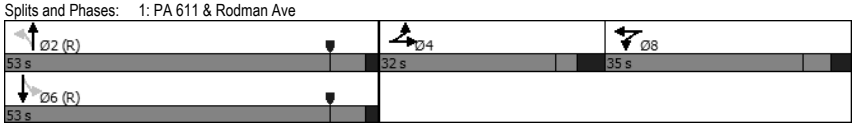
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		53.0	53.0		53.0	53.0	
Total Split (%)	26.7%	26.7%		29.2%	29.2%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	25.0	25.0		28.0	28.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	9	22	2	22	92	27	986	4	14	1001	55
Future Volume (veh/h)	81	9	22	2	22	92	27	986	4	14	1001	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1866	1911	1763	1866	1866	1822	1929	1944	1986	1850	1906	1921
Adj Flow Rate, veh/h	85	9	19	2	23	94	28	1038	4	15	1054	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	10	0	0	3	4	3	0	7	3	2
Cap, veh/h	118	13	26	3	31	126	330	2502	10	415	2315	127
Arrive On Green	0.08	0.09	0.08	0.09	0.10	0.09	1.00	1.00	1.00	0.66	0.66	0.65
Sat Flow, veh/h	1341	142	300	27	311	1272	523	3773	15	535	3490	192
Grp Volume(v), veh/h	113	0	0	119	0	0	28	508	534	15	547	565
Grp Sat Flow(s),veh/h/ln	1783	0	0	1611	0	0	523	1846	1941	535	1811	1871
Q Serve(g_s), s	7.4	0.0	0.0	8.6	0.0	0.0	1.5	0.0	0.0	1.2	17.5	17.5
Cycle Q Clear(g_c), s	7.4	0.0	0.0	8.6	0.0	0.0	19.0	0.0	0.0	1.2	17.5	17.5
Prop In Lane	0.75		0.17	0.02		0.79	1.00		0.01	1.00		0.10
Lane Grp Cap(c), veh/h	157	0	0	159	0	0	330	1225	1287	415	1201	1241
V/C Ratio(X)	0.72	0.00	0.00	0.75	0.00	0.00	0.08	0.41	0.41	0.04	0.46	0.46
Avail Cap(c_a), veh/h	386	0	0	389	0	0	330	1225	1287	415	1201	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	0.0	0.0	53.0	0.0	0.0	2.1	0.0	0.0	7.0	9.8	9.8
Incr Delay (d2), s/veh	6.1	0.0	0.0	6.8	0.0	0.0	0.5	0.9	0.9	0.2	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.0	0.0	6.9	0.0	0.0	0.3	0.6	0.6	0.3	11.5	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	0.0	59.9	0.0	0.0	2.5	0.9	0.9	7.2	11.0	11.0
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	B	B
Approach Vol, veh/h		113			119			1070			1127	
Approach Delay, s/veh		59.8			59.9			1.0			10.9	
Approach LOS		E			E			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.6		16.6		85.6		17.9				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		46.0		25.0		46.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.4		0.0		10.6				
Green Ext Time (p_c), s		0.0		0.4		0.0		0.4				

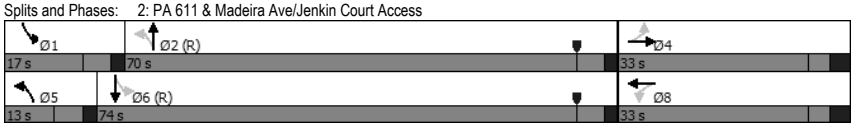
Intersection Summary			
HCM 6th Ctrl Delay			11.2
HCM 6th LOS			B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	7	8	51	3	5	17	1006	57	82	933	10
Future Volume (vph)	6	7	8	51	3	5	17	1006	57	82	933	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.949			0.989			0.992			0.998	
Flt Protected		0.986			0.958		0.950			0.950		
Satd. Flow (prot)	0	1834	0	0	1770	0	1558	3410	0	1481	3198	0
Flt Permitted		0.922			0.739		0.277			0.215		
Satd. Flow (perm)	0	1715	0	0	1365	0	454	3410	0	335	3198	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			3			7			2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Confl. Peds. (#/hr)	1					1	1		2	2		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	33%	6%	3%	0%	4%	3%	0%
Adj. Flow (vph)	6	7	8	54	3	5	18	1059	60	86	982	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	62	0	18	1119	0	86	993	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	33.0	33.0		33.0	33.0		13.0	70.0		17.0	74.0	
Total Split (%)	27.5%	27.5%		27.5%	27.5%		10.8%	58.3%		14.2%	61.7%	
Maximum Green (s)	27.0	27.0		27.0	27.0		7.0	64.0		11.0	68.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 108 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	7	8	51	3	5	17	1006	57	82	933	10
Future Volume (veh/h)	6	7	8	51	3	5	17	1006	57	82	933	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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	
Adj Sat Flow, veh/h/ln	1849	1849	1849	1872	1872	1390	1976	2018	2061	1470	1484	1527
Adj Flow Rate, veh/h	6	7	3	54	3	3	18	1059	60	86	982	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	33	6	3	0	4	3	0
Cap, veh/h	64	63	20	138	5	5	560	2853	162	387	2270	25
Arrive On Green	0.05	0.06	0.05	0.05	0.06	0.05	0.02	0.77	0.77	0.08	1.00	1.00
Sat Flow, veh/h	382	1038	328	1335	74	74	1881	3689	209	1400	2857	32
Grp Volume(v), veh/h	16	0	0	60	0	0	18	550	569	86	485	508
Grp Sat Flow(s),veh/h/ln	1747	0	0	1483	0	0	1881	1917	1980	1400	1410	1479
Q Serve(g_s), s	0.0	0.0	0.0	3.7	0.0	0.0	0.2	10.9	11.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	1.0	0.0	0.0	4.7	0.0	0.0	0.2	10.9	11.0	1.5	0.0	0.0
Prop In Lane	0.37		0.19	0.90		0.05	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	133	0	0	135	0	0	560	1483	1532	387	1120	1175
V/C Ratio(X)	0.12	0.00	0.00	0.44	0.00	0.00	0.03	0.37	0.37	0.22	0.43	0.43
Avail Cap(c_a), veh/h	408	0	0	381	0	0	649	1483	1532	470	1120	1175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	53.7	0.0	0.0	55.5	0.0	0.0	2.6	4.3	4.3	2.7	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	2.3	0.0	0.0	0.0	0.7	0.7	0.2	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	3.4	0.0	0.0	0.1	7.3	7.6	0.6	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	0.0	0.0	57.8	0.0	0.0	2.6	5.0	5.0	3.0	1.0	0.9
LnGrp LOS	D	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		16			60			1137			1079	
Approach Delay, s/veh		54.1			57.8			5.0			1.1	
Approach LOS		D			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	97.8		12.3	7.4	100.3		12.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	11.0	64.0		27.0	7.0	68.0		27.0				
Max Q Clear Time (g_c+I1), s	4.0	0.0		3.0	2.7	0.0		6.7				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	0.0		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	4.9
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	27	0	0	32	85	9
Future Volume (vph)	27	0	0	32	85	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.987	
Flt Protected					0.957	
Satd. Flow (prot)	2091	0	0	2049	1849	0
Flt Permitted					0.957	
Satd. Flow (perm)	2091	0	0	2049	1849	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	4%	0%	0%	3%	0%	20%
Adj. Flow (vph)	35	0	0	41	109	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	0	41	121	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
26 W AM AS1

Intersection	
Int Delay, s/veh	5.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	27	0	0	32	85	9
Future Vol, veh/h	27	0	0	32	85	9
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	4	0	0	3	0	20
Mvmt Flow	35	0	0	41	109	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	77	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	-	-	-	-	7	6.7
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	-	-	3	3.1
Pot Cap-1 Maneuver	-	0	0	-	1067	1105
Stage 1	-	0	0	-	1149	-
Stage 2	-	0	0	-	1139	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1066	1105
Mov Cap-2 Maneuver	-	-	-	-	1066	-
Stage 1	-	-	-	-	1149	-
Stage 2	-	-	-	-	1138	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1070	-	-
HCM Lane V/C Ratio	0.113	-	-
HCM Control Delay (s)	8.8	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	61	0	5	34	0	3
Future Volume (vph)	61	0	5	34	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.850	
Flt Protected	0.950			0.993		
Satd. Flow (prot)	1814	0	0	1915	0	0
Flt Permitted	0.950			0.993		
Satd. Flow (perm)	1814	0	0	1915	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Confl. Peds. (#/hr)			4			4
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%
Adj. Flow (vph)	70	0	6	39	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	0	45	3	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	61	0	5	34	0	3
Future Vol, veh/h	61	0	5	34	0	3
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	0	2	0	0	0
Mvmt Flow	70	0	6	39	0	3

Major/Minor	Minor2		Major1	
Conflicting Flow All	55	-	4	0
Stage 1	4	-	-	-
Stage 2	51	-	-	-
Critical Hdwy	5.42	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-
Follow-up Hdwy	3.518	-	3	-
Pot Cap-1 Maneuver	968	0	1196	-
Stage 1	-	0	-	-
Stage 2	985	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	955	-	1191	-
Mov Cap-2 Maneuver	955	-	-	-
Stage 1	-	-	-	-
Stage 2	981	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.1	1
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	1191	-	955
HCM Lane V/C Ratio	0.005	-	0.073
HCM Control Delay (s)	8	-	9.1
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	0	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	14	10	4	13	59	17	1144	10	31	1231	58
Future Volume (vph)	84	14	10	4	13	59	17	1144	10	31	1231	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.988			0.895			0.999			0.993	
Flt Protected		0.962			0.997		0.950			0.950		
Satd. Flow (prot)	0	1946	0	0	1736	0	1529	3433	0	1581	3311	0
Flt Permitted		0.962			0.997		0.160			0.195		
Satd. Flow (perm)	0	1942	0	0	1736	0	257	3433	0	324	3311	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		3						1			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	2		1	1		2	2		3	3		2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	7%	2%	0%	3%	1%	2%
Adj. Flow (vph)	86	14	10	4	13	60	17	1167	10	32	1256	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	77	0	17	1177	0	32	1315	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

McMahon
1: PA 611 & Rodman Ave
Jenkin Court Pad Sites
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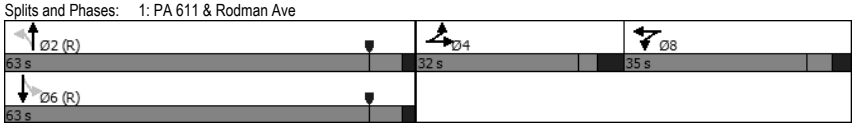
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		63.0	63.0		63.0	63.0	
Total Split (%)	24.6%	24.6%		26.9%	26.9%		48.5%	48.5%		48.5%	48.5%	
Maximum Green (s)	25.0	25.0		28.0	28.0		56.0	56.0		56.0	56.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 58 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	14	10	4	13	59	17	1144	10	31	1231	58
Future Volume (veh/h)	84	14	10	4	13	59	17	1144	10	31	1231	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	
Adj Sat Flow, veh/h/ln	1911	1911	1911	1866	1866	1808	1887	1958	1986	1906	1935	1921
Adj Flow Rate, veh/h	86	14	8	4	13	60	17	1167	10	32	1256	59
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	4	7	2	0	3	1	2
Cap, veh/h	119	19	11	6	19	85	289	2689	23	387	2543	119
Arrive On Green	0.07	0.08	0.07	0.06	0.07	0.06	0.95	0.95	0.94	0.71	0.71	0.70
Sat Flow, veh/h	1444	235	134	84	273	1262	421	3780	32	485	3575	168
Grp Volume(v), veh/h	108	0	0	77	0	0	17	574	603	32	645	670
Grp Sat Flow(s),veh/h/ln	1813	0	0	1620	0	0	421	1860	1952	485	1838	1904
Q Serve(g_s), s	7.6	0.0	0.0	6.1	0.0	0.0	1.4	3.7	3.7	2.9	20.3	20.4
Cycle Q Clear(g_c), s	7.6	0.0	0.0	6.1	0.0	0.0	21.7	3.7	3.7	6.6	20.3	20.4
Prop In Lane	0.80		0.07	0.05		0.78	1.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	149	0	0	110	0	0	289	1323	1389	387	1308	1355
V/C Ratio(X)	0.72	0.00	0.00	0.70	0.00	0.00	0.06	0.43	0.43	0.08	0.49	0.49
Avail Cap(c_a), veh/h	363	0	0	361	0	0	289	1323	1389	387	1308	1355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	0.0	0.0	59.7	0.0	0.0	4.4	1.1	1.1	7.0	8.3	8.4
Incr Delay (d2), s/veh	6.5	0.0	0.0	7.9	0.0	0.0	0.3	0.9	0.9	0.4	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.8	0.0	0.0	5.0	0.0	0.0	0.2	2.2	2.3	0.6	12.9	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	0.0	0.0	67.6	0.0	0.0	4.7	2.0	2.0	7.4	9.7	9.7
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		108			77			1194			1347	
Approach Delay, s/veh		65.1			67.6			2.0			9.6	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		98.5		16.7		98.5		14.8				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		56.0		25.0		56.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.6		0.0		8.1				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.3				

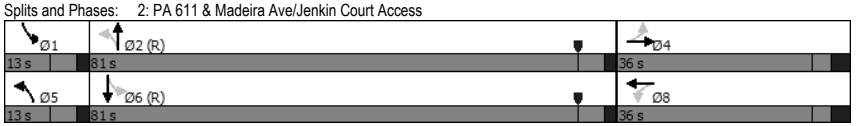
Intersection Summary			
HCM 6th Ctrl Delay			10.1
HCM 6th LOS			B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	2	19	79	6	20	41	1121	31	40	1191	14
Future Volume (vph)	30	2	19	79	6	20	41	1121	31	40	1191	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.949			0.974			0.996			0.998	
Flt Protected		0.972			0.964		0.950			0.950		
Satd. Flow (prot)	0	1808	0	0	1798	0	1652	3456	0	1540	3261	0
Flt Permitted		0.806			0.777		0.187			0.201		
Satd. Flow (perm)	0	1498	0	0	1449	0	325	3456	0	326	3261	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			9			4			1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Confl. Peds. (#/hr)	1					1	1		3	3		1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	31	2	20	81	6	21	42	1156	32	41	1228	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	108	0	42	1188	0	41	1242	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	36.0	36.0		36.0	36.0		13.0	81.0		13.0	81.0	
Total Split (%)	27.7%	27.7%		27.7%	27.7%		10.0%	62.3%		10.0%	62.3%	
Maximum Green (s)	30.0	30.0		30.0	30.0		7.0	75.0		7.0	75.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2	19	79	6	20	41	1121	31	40	1191	14
Future Volume (veh/h)	30	2	19	79	6	20	41	1121	31	40	1191	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1849	1849	1849	1872	1872	1872	2061	2032	2061	1527	1513	1527
Adj Flow Rate, veh/h	31	2	14	81	6	14	42	1156	32	41	1228	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	128	16	42	159	8	19	406	2957	82	353	2249	22
Arrive On Green	0.08	0.09	0.08	0.08	0.09	0.08	0.03	0.77	0.76	0.03	0.77	0.76
Sat Flow, veh/h	944	184	478	1250	93	216	1963	3838	106	1454	2916	28
Grp Volume(v), veh/h	47	0	0	101	0	0	42	581	607	41	605	635
Grp Sat Flow(s),veh/h/ln	1605	0	0	1559	0	0	1963	1931	2013	1454	1437	1507
Q Serve(g_s), s	0.0	0.0	0.0	4.6	0.0	0.0	0.6	12.9	12.9	0.8	21.6	21.6
Cycle Q Clear(g_c), s	3.5	0.0	0.0	8.1	0.0	0.0	0.6	12.9	12.9	0.8	21.6	21.6
Prop In Lane	0.66		0.30	0.80		0.14	1.00		0.05	1.00		0.02
Lane Grp Cap(c), veh/h	173	0	0	173	0	0	406	1488	1551	353	1108	1163
V/C Ratio(X)	0.27	0.00	0.00	0.58	0.00	0.00	0.10	0.39	0.39	0.12	0.55	0.55
Avail Cap(c_a), veh/h	391	0	0	392	0	0	475	1488	1551	403	1108	1163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	56.2	0.0	0.0	58.1	0.0	0.0	4.7	4.9	4.9	3.4	5.9	5.9
Incr Delay (d2), s/veh	0.8	0.0	0.0	3.1	0.0	0.0	0.1	0.8	0.7	0.1	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	0.0	6.2	0.0	0.0	0.4	8.7	9.0	0.4	10.0	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	0.0	0.0	61.2	0.0	0.0	4.8	5.7	5.7	3.6	7.4	7.3
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		47			101			1230			1281	
Approach Delay, s/veh		57.0			61.2			5.6			7.2	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	105.2		16.3	8.4	105.3		16.3
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	7.0	75.0		30.0	7.0	75.0		30.0
Max Q Clear Time (g_c+I1), s	3.3	0.0		5.5	3.1	0.0		10.1
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.2

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	65	0	0	31	60	9
Future Volume (vph)	65	0	0	31	60	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.983	
Flt Protected					0.958	
Satd. Flow (prot)	2175	0	0	2049	1848	0
Flt Permitted					0.958	
Satd. Flow (perm)	2175	0	0	2049	1848	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					3	2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	3%	0%	14%
Adj. Flow (vph)	76	0	0	36	70	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	0	36	80	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
26 W PM AS1

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	65	0	0	31	60	9
Future Vol, veh/h	65	0	0	31	60	9
Conflicting Peds, #/hr	0	0	0	0	3	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	3	0	14
Mvmt Flow	76	0	0	36	70	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	115	78
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	39	-
Critical Hdwy	-	-	-	-	7	6.64
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	-	-	3	3.1
Pot Cap-1 Maneuver	-	0	0	-	1006	1040
Stage 1	-	0	0	-	1091	-
Stage 2	-	0	0	-	1143	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1002	1037
Mov Cap-2 Maneuver	-	-	-	-	1002	-
Stage 1	-	-	-	-	1091	-
Stage 2	-	-	-	-	1138	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1006	-	-
HCM Lane V/C Ratio	0.08	-	-
HCM Control Delay (s)	8.9	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	42	0	1	30	0	1
Future Volume (vph)	42	0	1	30	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.850	
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1814	0	0	1874	0	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1814	0	0	1874	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	2%	3%	0%	0%
Adj. Flow (vph)	45	0	1	32	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	33	1	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	0	1	30	0	1
Future Vol, veh/h	42	0	1	30	0	1
Conflicting Peds, #/hr	1	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	0	2	3	0	0
Mvmt Flow	45	0	1	32	0	1

Major/Minor	Minor2		Major1	
Conflicting Flow All	36	-	1	0
Stage 1	1	-	-	-
Stage 2	35	-	-	-
Critical Hdwy	5.42	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-
Follow-up Hdwy	3.518	-	3	-
Pot Cap-1 Maneuver	986	0	1199	-
Stage 1	-	0	-	-
Stage 2	997	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	983	-	1198	-
Mov Cap-2 Maneuver	983	-	-	-
Stage 1	-	-	-	-
Stage 2	996	-	-	-

Approach	EB	NB
HCM Control Delay, s	8.8	0.3
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	1198	-	983
HCM Lane V/C Ratio	0.001	-	0.045
HCM Control Delay (s)	8	-	8.8
HCM Lane LOS	A	-	A
HCM 95th %tile Q(veh)	0	-	0.1

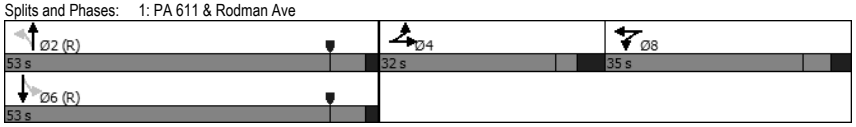
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	6	20	8	6	82	38	1060	1	20	1067	55
Future Volume (vph)	80	6	20	8	6	82	38	1060	1	20	1067	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00		1.00	1.00	
Frt		0.975			0.885						0.993	
Flt Protected		0.963			0.996		0.950			0.950		
Satd. Flow (prot)	0	1920	0	0	1763	0	1636	3468	0	1628	3313	0
Flt Permitted		0.963			0.996		0.180			0.199		
Satd. Flow (perm)	0	1913	0	0	1763	0	310	3468	0	341	3313	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		9									5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	4		2	2		4	5		1	1		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	100%	0%	1%	0%
Adj. Flow (vph)	85	6	21	9	6	87	40	1128	1	21	1135	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	0	0	102	0	40	1129	0	21	1194	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

McMahon
1: PA 611 & Rodman Ave
Jenkin Court Pad Sites
26 W SAT AS1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		53.0	53.0		53.0	53.0	
Total Split (%)	26.7%	26.7%		29.2%	29.2%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	25.0	25.0		28.0	28.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Lanes, Volumes, Timings
1: PA 611 & Rodman Ave
\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\SYNCHRO\1 - EX WO W.syn
Synchro 11 (11.1.2.9)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	6	20	8	6	82	38	1060	1	20	1067	55
Future Volume (veh/h)	80	6	20	8	6	82	38	1060	1	20	1067	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1911	1911	1911	1866	1866	1866	1986	1972	564	1949	1935	1949
Adj Flow Rate, veh/h	85	6	15	9	6	87	40	1128	1	21	1135	58
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	100	0	1	0
Cap, veh/h	120	8	21	12	8	119	323	2607	2	412	2414	123
Arrive On Green	0.08	0.08	0.08	0.08	0.09	0.08	1.00	1.00	1.00	0.68	0.68	0.67
Sat Flow, veh/h	1434	101	253	140	94	1357	498	3842	3	519	3558	182
Grp Volume(v), veh/h	106	0	0	102	0	0	40	550	579	21	586	607
Grp Sat Flow(s),veh/h/ln	1789	0	0	1590	0	0	498	1873	1971	519	1838	1901
Q Serve(g_s), s	6.9	0.0	0.0	7.5	0.0	0.0	2.4	0.0	0.0	1.6	18.1	18.1
Cycle Q Clear(g_c), s	6.9	0.0	0.0	7.5	0.0	0.0	20.5	0.0	0.0	1.6	18.1	18.1
Prop In Lane	0.80		0.14	0.09		0.85	1.00		0.00	1.00		0.10
Lane Grp Cap(c), veh/h	149	0	0	140	0	0	323	1271	1338	412	1247	1290
V/C Ratio(X)	0.71	0.00	0.00	0.73	0.00	0.00	0.12	0.43	0.43	0.05	0.47	0.47
Avail Cap(c_a), veh/h	388	0	0	384	0	0	323	1271	1338	412	1247	1290
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	0.0	0.0	53.8	0.0	0.0	2.3	0.0	0.0	6.5	9.1	9.1
Incr Delay (d2), s/veh	6.1	0.0	0.0	7.1	0.0	0.0	0.7	1.0	0.9	0.2	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.2	0.0	0.0	6.0	0.0	0.0	0.4	0.6	0.6	0.4	11.8	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	0.0	0.0	60.9	0.0	0.0	3.0	1.0	0.9	6.7	10.4	10.4
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	B	B
Approach Vol, veh/h		106			102			1169			1214	
Approach Delay, s/veh		60.1			60.9			1.0			10.3	
Approach LOS		E			E			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		87.4		16.0		87.4		16.5				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		46.0		25.0		46.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		8.9		0.0		9.5				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.4				

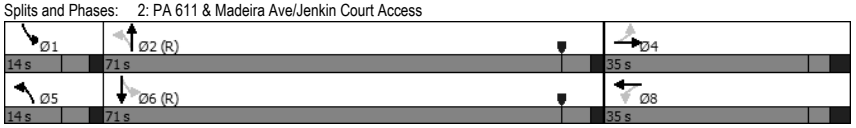
Intersection Summary			
HCM 6th Ctrl Delay			10.1
HCM 6th LOS			B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	6	24	59	1	4	52	1042	60	65	1017	13
Future Volume (vph)	52	6	24	59	1	4	52	1042	60	65	1017	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.961			0.992			0.992			0.998	
Flt Protected		0.969			0.956		0.950			0.950		
Satd. Flow (prot)	0	1802	0	0	1821	0	1652	3387	0	1540	3262	0
Flt Permitted		0.823			0.694		0.234			0.211		
Satd. Flow (perm)	0	1531	0	0	1322	0	407	3387	0	342	3262	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			3			8			2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	1%	50%	0%	1%	0%
Adj. Flow (vph)	55	6	25	62	1	4	55	1097	63	68	1071	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	67	0	55	1160	0	68	1085	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	35.0	35.0		35.0	35.0		14.0	71.0		14.0	71.0	
Total Split (%)	29.2%	29.2%		29.2%	29.2%		11.7%	59.2%		11.7%	59.2%	
Maximum Green (s)	29.0	29.0		29.0	29.0		8.0	65.0		8.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 9 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	6	24	59	1	4	52	1042	60	65	1017	13
Future Volume (veh/h)	52	6	24	59	1	4	52	1042	60	65	1017	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1820	1849	1849	1872	1872	1872	2061	2047	1350	1527	1513	1527
Adj Flow Rate, veh/h	55	6	18	62	1	1	55	1097	62	68	1071	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	0	0	0	0	1	50	0	1	0
Cap, veh/h	131	10	27	163	2	2	561	2875	162	378	2247	29
Arrive On Green	0.06	0.07	0.06	0.06	0.07	0.06	0.03	0.77	0.76	0.07	1.00	1.00
Sat Flow, veh/h	1142	146	380	1481	24	24	1963	3741	211	1454	2905	38
Grp Volume(v), veh/h	79	0	0	64	0	0	55	570	589	68	530	555
Grp Sat Flow(s),veh/h/ln	1668	0	0	1529	0	0	1963	1944	2009	1454	1437	1506
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	0.7	11.5	11.6	1.2	0.0	0.0
Cycle Q Clear(g_c), s	5.3	0.0	0.0	4.7	0.0	0.0	0.7	11.5	11.6	1.2	0.0	0.0
Prop In Lane	0.70		0.23	0.97		0.02	1.00		0.11	1.00		0.03
Lane Grp Cap(c), veh/h	155	0	0	154	0	0	561	1494	1544	378	1112	1165
V/C Ratio(X)	0.51	0.00	0.00	0.42	0.00	0.00	0.10	0.38	0.38	0.18	0.48	0.48
Avail Cap(c_a), veh/h	417	0	0	405	0	0	647	1494	1544	435	1112	1165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	54.7	0.0	0.0	54.5	0.0	0.0	2.5	4.5	4.6	3.0	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0	1.8	0.0	0.0	0.1	0.7	0.7	0.2	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	0.0	0.0	3.6	0.0	0.0	0.4	7.8	8.0	0.5	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	0.0	0.0	56.3	0.0	0.0	2.6	5.3	5.3	3.1	1.2	1.1
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		79			64			1214			1153	
Approach Delay, s/veh		57.3			56.3			5.2			1.3	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	97.2		13.5	8.7	97.8		13.5
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	8.0	65.0		29.0	8.0	65.0		29.0
Max Q Clear Time (g_c+I1), s	3.7	0.0		7.3	3.2	0.0		6.7
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	0.0		0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	28	0	0	19	77	9
Future Volume (vph)	28	0	0	19	77	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt					0.986	
Flt Protected					0.957	
Satd. Flow (prot)	2091	0	0	2110	1884	0
Flt Permitted					0.957	
Satd. Flow (perm)	2091	0	0	2110	1884	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					1	3
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	48	0	0	33	133	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	0	33	149	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
26 W SAT AS1

Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	28	0	0	19	77	9
Future Vol, veh/h	28	0	0	19	77	9
Conflicting Peds, #/hr	0	0	0	0	1	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	4	0	0	0	0	0
Mvmt Flow	48	0	0	33	133	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	82	51
Stage 1	-	-	-	-	48	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	-	-	-	-	7	6.5
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	-	-	3	3.1
Pot Cap-1 Maneuver	-	0	0	-	1058	1083
Stage 1	-	0	0	-	1130	-
Stage 2	-	0	0	-	1150	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	1057	1079
Mov Cap-2 Maneuver	-	-	-	-	1057	-
Stage 1	-	-	-	-	1130	-
Stage 2	-	-	-	-	1149	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1059	-	-
HCM Lane V/C Ratio	0.14	-	-
HCM Control Delay (s)	9	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	0	1	22	0	0
Future Volume (vph)	63	0	1	22	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1814	0	0	1930	0	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1814	0	0	1930	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	109	0	2	38	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	0	0	40	0	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
4: Spring Ave & Jenkin Court
Jenkin Court Pad Sites
26 W SAT AS1

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	0	1	22	0	0
Future Vol, veh/h	63	0	1	22	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	109	0	2	38	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	42	-	0	0
Stage 1	0	-	-	-
Stage 2	42	-	-	-
Critical Hdwy	5.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-
Follow-up Hdwy	3.518	-	-	-
Pot Cap-1 Maneuver	980	0	-	-
Stage 1	-	0	-	-
Stage 2	992	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	980	-	-	-
Mov Cap-2 Maneuver	980	-	-	-
Stage 1	-	-	-	-
Stage 2	992	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.1	
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	980
HCM Lane V/C Ratio	-	-	0.111
HCM Control Delay (s)	-	-	9.1
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.4

2 - MODIFIED SPRING AVENUE ACCESS

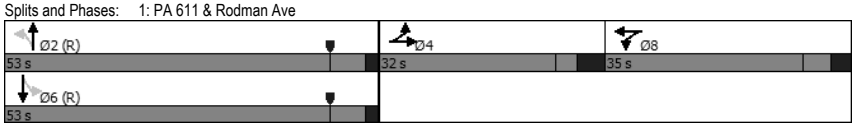
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	11	20	1	22	92	27	986	31	66	949	55
Future Volume (vph)	81	11	20	1	22	92	27	986	31	66	949	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00		1.00	1.00	
Frt		0.976			0.892			0.995			0.992	
Flt Protected		0.965					0.950			0.950		
Satd. Flow (prot)	0	1853	0	0	1742	0	1573	3387	0	1521	3245	0
Flt Permitted		0.965					0.216			0.212		
Satd. Flow (perm)	0	1846	0	0	1742	0	357	3387	0	339	3245	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		8						3			6	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	5		1	1		5	2		3	3		2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	10%	0%	0%	3%	4%	3%	0%	7%	3%	2%
Adj. Flow (vph)	85	12	21	1	23	97	28	1038	33	69	999	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	118	0	0	121	0	28	1071	0	69	1057	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

McMahon
1: PA 611 & Rodman Ave
Jenkin Court Pad Sites
26 W AM AS2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		53.0	53.0		53.0	53.0	
Total Split (%)	26.7%	26.7%		29.2%	29.2%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	25.0	25.0		28.0	28.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Lanes, Volumes, Timings
1: PA 611 & Rodman Ave
\\ftwfs\mcm\eng\SBGMGMT\313626 - Jenkintown Starbucks\Traffic\TIS #1\SYNCHRO\2 - W AS 2.syn
Synchro 11 (11.1.2.9)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	11	20	1	22	92	27	986	31	66	949	55
Future Volume (veh/h)	81	11	20	1	22	92	27	986	31	66	949	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1866	1911	1763	1866	1866	1822	1929	1944	1986	1850	1906	1921
Adj Flow Rate, veh/h	85	12	17	1	23	94	28	1038	33	69	999	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	10	0	0	3	4	3	0	7	3	2
Cap, veh/h	118	17	24	1	31	126	351	2423	77	405	2308	134
Arrive On Green	0.08	0.09	0.08	0.09	0.10	0.09	1.00	1.00	1.00	0.66	0.66	0.66
Sat Flow, veh/h	1335	188	267	14	314	1282	550	3653	116	521	3479	202
Grp Volume(v), veh/h	114	0	0	118	0	0	28	525	546	69	520	537
Grp Sat Flow(s),veh/h/ln	1790	0	0	1609	0	0	550	1846	1922	521	1811	1869
Q Serve(g_s), s	7.5	0.0	0.0	8.6	0.0	0.0	1.4	0.0	0.0	6.2	16.3	16.3
Cycle Q Clear(g_c), s	7.5	0.0	0.0	8.6	0.0	0.0	17.6	0.0	0.0	6.2	16.3	16.3
Prop In Lane	0.75		0.15	0.01		0.80	1.00		0.06	1.00		0.11
Lane Grp Cap(c), veh/h	158	0	0	158	0	0	351	1225	1275	405	1201	1240
V/C Ratio(X)	0.72	0.00	0.00	0.75	0.00	0.00	0.08	0.43	0.43	0.17	0.43	0.43
Avail Cap(c_a), veh/h	388	0	0	389	0	0	351	1225	1275	405	1201	1240
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	0.0	0.0	53.1	0.0	0.0	1.8	0.0	0.0	7.8	9.5	9.6
Incr Delay (d2), s/veh	6.0	0.0	0.0	6.9	0.0	0.0	0.4	1.0	1.0	0.9	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.0	0.0	6.9	0.0	0.0	0.2	0.6	0.6	1.4	10.8	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	0.0	0.0	59.9	0.0	0.0	2.2	1.0	1.0	8.7	10.7	10.7
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	B	B
Approach Vol, veh/h		114			118			1099			1126	
Approach Delay, s/veh		59.7			59.9			1.0			10.6	
Approach LOS		E			E			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.6		16.6		85.6		17.8				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		46.0		25.0		46.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.5		0.0		10.6				
Green Ext Time (p_c), s		0.0		0.4		0.0		0.4				

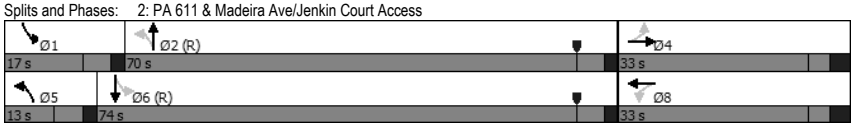
Intersection Summary			
HCM 6th Ctrl Delay			10.9
HCM 6th LOS			B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	7	8	51	3	5	17	1033	30	27	933	10
Future Volume (vph)	6	7	8	51	3	5	17	1033	30	27	933	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.949			0.989			0.996			0.998	
Flt Protected		0.986			0.958		0.950			0.950		
Satd. Flow (prot)	0	1834	0	0	1770	0	1558	3424	0	1481	3198	0
Flt Permitted		0.922			0.739		0.271			0.224		
Satd. Flow (perm)	0	1715	0	0	1365	0	444	3424	0	349	3198	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			3			4			2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Confl. Peds. (#/hr)	1					1	1		2	2		1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	33%	6%	3%	0%	4%	3%	0%
Adj. Flow (vph)	6	7	8	54	3	5	18	1087	32	28	982	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	62	0	18	1119	0	28	993	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	33.0	33.0		33.0	33.0		13.0	70.0		17.0	74.0	
Total Split (%)	27.5%	27.5%		27.5%	27.5%		10.8%	58.3%		14.2%	61.7%	
Maximum Green (s)	27.0	27.0		27.0	27.0		7.0	64.0		11.0	68.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 108 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	7	8	51	3	5	17	1033	30	27	933	10
Future Volume (veh/h)	6	7	8	51	3	5	17	1033	30	27	933	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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	
Adj Sat Flow, veh/h/ln	1849	1849	1849	1872	1872	1390	1976	2018	2061	1470	1484	1527
Adj Flow Rate, veh/h	6	7	3	54	3	3	18	1087	32	28	982	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	33	6	3	0	4	3	0
Cap, veh/h	64	63	20	138	5	5	570	3007	89	373	2270	25
Arrive On Green	0.05	0.06	0.05	0.05	0.06	0.05	0.02	0.79	0.78	0.05	1.00	1.00
Sat Flow, veh/h	382	1038	328	1335	74	74	1881	3803	112	1400	2857	32
Grp Volume(v), veh/h	16	0	0	60	0	0	18	548	571	28	485	508
Grp Sat Flow(s),veh/h/ln	1747	0	0	1483	0	0	1881	1917	1998	1400	1410	1479
Q Serve(g_s), s	0.0	0.0	0.0	3.7	0.0	0.0	0.2	10.1	10.1	0.5	0.0	0.0
Cycle Q Clear(g_c), s	1.0	0.0	0.0	4.7	0.0	0.0	0.2	10.1	10.1	0.5	0.0	0.0
Prop In Lane	0.37		0.19	0.90		0.05	1.00		0.06	1.00		0.02
Lane Grp Cap(c), veh/h	133	0	0	135	0	0	570	1516	1580	373	1120	1175
V/C Ratio(X)	0.12	0.00	0.00	0.44	0.00	0.00	0.03	0.36	0.36	0.08	0.43	0.43
Avail Cap(c_a), veh/h	408	0	0	381	0	0	659	1516	1580	480	1120	1175
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	53.7	0.0	0.0	55.5	0.0	0.0	2.2	3.7	3.7	2.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	2.3	0.0	0.0	0.0	0.7	0.6	0.1	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	0.0	3.4	0.0	0.0	0.1	6.5	6.7	0.2	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	0.0	0.0	57.8	0.0	0.0	2.2	4.4	4.3	2.6	1.0	1.0
LnGrp LOS	D	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		16			60			1137			1021	
Approach Delay, s/veh		54.1			57.8			4.3			1.0	
Approach LOS		D			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	99.9		12.3	7.4	100.3		12.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	11.0	64.0		27.0	7.0	68.0		27.0				
Max Q Clear Time (g_c+I1), s	3.0	0.0		3.0	2.7	0.0		6.7				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	27	81	1	31	85	9
Future Volume (vph)	27	81	1	31	85	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.899				0.987	
Flt Protected				0.999	0.957	
Satd. Flow (prot)	1936	0	0	2048	1849	0
Flt Permitted				0.999	0.957	
Satd. Flow (perm)	1936	0	0	2048	1849	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	4%	0%	0%	3%	0%	20%
Adj. Flow (vph)	35	104	1	40	109	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	139	0	0	41	121	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
26 W AM AS2

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	27	81	1	31	85	9
Future Vol, veh/h	27	81	1	31	85	9
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	4	0	0	3	0	20
Mvmt Flow	35	104	1	40	109	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	139	0	130	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	-	-	4.1	-	7	6.7
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.2	-	3	3.1
Pot Cap-1 Maneuver	-	-	1457	-	983	1025
Stage 1	-	-	-	-	1076	-
Stage 2	-	-	-	-	1137	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1457	-	981	1025
Mov Cap-2 Maneuver	-	-	-	-	981	-
Stage 1	-	-	-	-	1076	-
Stage 2	-	-	-	-	1135	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1457	-
HCM Lane V/C Ratio	0.122	-	-	0.001	-
HCM Control Delay (s)	9.2	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	61	0	5	34	0	85
Future Volume (vph)	61	0	5	34	0	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected	0.950			0.993		
Satd. Flow (prot)	1814	0	0	1915	0	1744
Flt Permitted	0.950			0.993		
Satd. Flow (perm)	1814	0	0	1915	0	1744
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Confl. Peds. (#/hr)			4			4
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	2%	0%	2%	0%	0%	2%
Adj. Flow (vph)	70	0	6	39	0	98
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	0	45	0	98
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	61	0	5	34	0	85
Future Vol, veh/h	61	0	5	34	0	85
Conflicting Peds, #/hr	0	0	4	0	0	4
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	0	2	0	0	2
Mvmt Flow	70	0	6	39	0	98

Major/Minor	Minor2		Major1	
Conflicting Flow All	55	-	4	0
Stage 1	4	-	-	-
Stage 2	51	-	-	-
Critical Hdwy	5.42	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-
Follow-up Hdwy	3.518	-	3	-
Pot Cap-1 Maneuver	968	0	1196	-
Stage 1	-	0	-	-
Stage 2	985	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	955	-	1191	-
Mov Cap-2 Maneuver	955	-	-	-
Stage 1	-	-	-	-
Stage 2	981	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.1	1
HCM LOS	A	

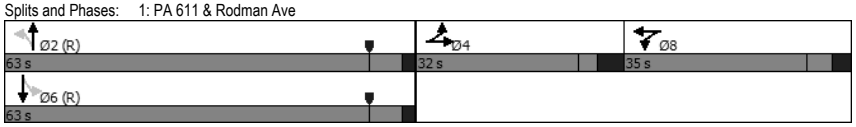
Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	1191	-	955
HCM Lane V/C Ratio	0.005	-	0.073
HCM Control Delay (s)	8	0	9.1
HCM Lane LOS	A	A	A
HCM 95th %tile Q(veh)	0	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	16	8	4	13	59	17	1144	25	64	1197	58
Future Volume (vph)	84	16	8	4	13	59	17	1144	25	64	1197	58
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			0.99		1.00	1.00		1.00	1.00	
Frt		0.990			0.895			0.997			0.993	
Flt Protected		0.962			0.997		0.950			0.950		
Satd. Flow (prot)	0	1951	0	0	1736	0	1529	3426	0	1581	3310	0
Flt Permitted		0.962			0.997		0.168			0.191		
Satd. Flow (perm)	0	1947	0	0	1736	0	270	3426	0	318	3310	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		3						2			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	2		1	1		2	2		3	3		2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	4%	7%	2%	0%	3%	1%	2%
Adj. Flow (vph)	86	16	8	4	13	60	17	1167	26	65	1221	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	77	0	17	1193	0	65	1280	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		63.0	63.0		63.0	63.0	
Total Split (%)	24.6%	24.6%		26.9%	26.9%		48.5%	48.5%		48.5%	48.5%	
Maximum Green (s)	25.0	25.0		28.0	28.0		56.0	56.0		56.0	56.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 58 (45%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	16	8	4	13	59	17	1144	25	64	1197	58
Future Volume (veh/h)	84	16	8	4	13	59	17	1144	25	64	1197	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		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	
Adj Sat Flow, veh/h/ln	1911	1911	1911	1866	1866	1808	1887	1958	1986	1906	1935	1921
Adj Flow Rate, veh/h	86	16	6	4	13	60	17	1167	26	65	1221	59
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	4	7	2	0	3	1	2
Cap, veh/h	119	22	8	6	19	85	300	2647	59	382	2540	123
Arrive On Green	0.07	0.08	0.07	0.06	0.07	0.06	0.95	0.95	0.94	0.71	0.71	0.70
Sat Flow, veh/h	1449	270	101	84	273	1262	436	3720	83	478	3569	172
Grp Volume(v), veh/h	108	0	0	77	0	0	17	583	610	65	628	652
Grp Sat Flow(s),veh/h/ln	1819	0	0	1620	0	0	436	1860	1943	478	1838	1903
Q Serve(g_s), s	7.5	0.0	0.0	6.1	0.0	0.0	1.4	3.7	3.8	6.5	19.5	19.6
Cycle Q Clear(g_c), s	7.5	0.0	0.0	6.1	0.0	0.0	20.8	3.7	3.8	10.2	19.5	19.6
Prop In Lane	0.80		0.06	0.05		0.78	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	150	0	0	110	0	0	300	1324	1383	382	1308	1355
V/C Ratio(X)	0.72	0.00	0.00	0.70	0.00	0.00	0.06	0.44	0.44	0.17	0.48	0.48
Avail Cap(c_a), veh/h	364	0	0	361	0	0	300	1324	1383	382	1308	1355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	0.0	0.0	59.7	0.0	0.0	4.2	1.1	1.1	7.6	8.2	8.2
Incr Delay (d2), s/veh	6.4	0.0	0.0	7.9	0.0	0.0	0.3	1.0	0.9	1.0	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.8	0.0	0.0	5.0	0.0	0.0	0.2	2.2	2.3	1.4	12.4	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	0.0	0.0	67.6	0.0	0.0	4.5	2.1	2.0	8.5	9.5	9.5
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		108			77			1210			1345	
Approach Delay, s/veh		65.1			67.6			2.1			9.4	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		98.5		16.7		98.5		14.8				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		56.0		25.0		56.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.5		0.0		8.1				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.3				

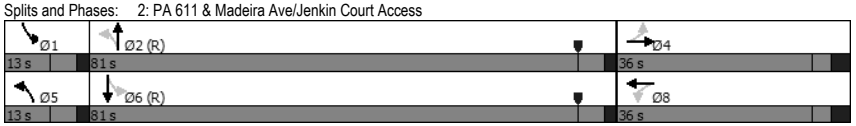
Intersection Summary			
HCM 6th Ctrl Delay			10.0
HCM 6th LOS			B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	2	19	79	6	20	41	1136	16	4	1191	14
Future Volume (vph)	30	2	19	79	6	20	41	1136	16	4	1191	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.949			0.974			0.998			0.998	
Flt Protected		0.972			0.964		0.950			0.950		
Satd. Flow (prot)	0	1808	0	0	1798	0	1652	3463	0	1540	3261	0
Flt Permitted		0.806			0.777		0.179			0.216		
Satd. Flow (perm)	0	1498	0	0	1449	0	311	3463	0	350	3261	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			9			2			1	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Confl. Peds. (#/hr)	1					1	1		3	3		1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	31	2	20	81	6	21	42	1171	16	4	1228	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	108	0	42	1187	0	4	1242	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	36.0	36.0		36.0	36.0		13.0	81.0		13.0	81.0	
Total Split (%)	27.7%	27.7%		27.7%	27.7%		10.0%	62.3%		10.0%	62.3%	
Maximum Green (s)	30.0	30.0		30.0	30.0		7.0	75.0		7.0	75.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2	19	79	6	20	41	1136	16	4	1191	14
Future Volume (veh/h)	30	2	19	79	6	20	41	1136	16	4	1191	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1849	1849	1849	1872	1872	1872	2061	2032	2061	1527	1513	1527
Adj Flow Rate, veh/h	31	2	14	81	6	14	42	1171	16	4	1228	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	0	0	1	0
Cap, veh/h	128	16	42	159	8	19	406	3069	42	339	2249	22
Arrive On Green	0.08	0.09	0.08	0.08	0.09	0.08	0.03	0.79	0.78	0.01	0.77	0.76
Sat Flow, veh/h	944	184	478	1250	93	216	1963	3900	53	1454	2916	28
Grp Volume(v), veh/h	47	0	0	101	0	0	42	580	607	4	605	635
Grp Sat Flow(s),veh/h/ln	1605	0	0	1559	0	0	1963	1931	2023	1454	1437	1507
Q Serve(g_s), s	0.0	0.0	0.0	4.6	0.0	0.0	0.6	11.9	11.9	0.1	21.6	21.6
Cycle Q Clear(g_c), s	3.5	0.0	0.0	8.1	0.0	0.0	0.6	11.9	11.9	0.1	21.6	21.6
Prop In Lane	0.66		0.30	0.80		0.14	1.00		0.03	1.00		0.02
Lane Grp Cap(c), veh/h	173	0	0	173	0	0	406	1519	1592	339	1108	1163
V/C Ratio(X)	0.27	0.00	0.00	0.58	0.00	0.00	0.10	0.38	0.38	0.01	0.55	0.55
Avail Cap(c_a), veh/h	391	0	0	392	0	0	475	1519	1592	413	1108	1163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	56.2	0.0	0.0	58.1	0.0	0.0	4.7	4.2	4.2	3.5	5.9	5.9
Incr Delay (d2), s/veh	0.8	0.0	0.0	3.1	0.0	0.0	0.1	0.7	0.7	0.0	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	0.0	6.2	0.0	0.0	0.4	8.0	8.3	0.0	10.0	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	0.0	0.0	61.2	0.0	0.0	4.8	4.9	4.9	3.5	7.4	7.4
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		47			101			1229			1244	
Approach Delay, s/veh		57.0			61.2			4.9			7.4	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	107.3		16.3	8.4	105.3		16.3
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	7.0	75.0		30.0	7.0	75.0		30.0
Max Q Clear Time (g_c+I1), s	2.6	0.0		5.5	3.1	0.0		10.1
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	0.0		0.2

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	65	51	0	31	60	9
Future Volume (vph)	65	51	0	31	60	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.941				0.983	
Flt Protected					0.958	
Satd. Flow (prot)	2047	0	0	2049	1848	0
Flt Permitted					0.958	
Satd. Flow (perm)	2047	0	0	2049	1848	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					3	2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	3%	0%	14%
Adj. Flow (vph)	76	59	0	36	70	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	0	0	36	80	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
26 W PM AS2

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	65	51	0	31	60	9
Future Vol, veh/h	65	51	0	31	60	9
Conflicting Peds, #/hr	0	0	0	0	3	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	3	0	14
Mvmt Flow	76	59	0	36	70	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	135	0	145	108
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	39	-
Critical Hdwy	-	-	4.1	-	7	6.64
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.2	-	3	3.1
Pot Cap-1 Maneuver	-	-	1462	-	961	996
Stage 1	-	-	-	-	1051	-
Stage 2	-	-	-	-	1143	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1462	-	957	993
Mov Cap-2 Maneuver	-	-	-	-	957	-
Stage 1	-	-	-	-	1051	-
Stage 2	-	-	-	-	1138	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	962	-	-	1462	-
HCM Lane V/C Ratio	0.083	-	-	-	-
HCM Control Delay (s)	9.1	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	42	0	1	30	0	52
Future Volume (vph)	42	0	1	30	0	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1814	0	0	1874	0	1779
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1814	0	0	1874	0	1779
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Confl. Peds. (#/hr)	1	1	1			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	0%	2%	3%	0%	0%
Adj. Flow (vph)	45	0	1	32	0	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	33	0	55
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	0	1	30	0	52
Future Vol, veh/h	42	0	1	30	0	52
Conflicting Peds, #/hr	1	1	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	0	2	3	0	0
Mvmt Flow	45	0	1	32	0	55

Major/Minor	Minor2		Major1	
Conflicting Flow All	36	-	1	0
Stage 1	1	-	-	-
Stage 2	35	-	-	-
Critical Hdwy	5.42	-	4.3	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-
Follow-up Hdwy	3.518	-	3	-
Pot Cap-1 Maneuver	986	0	1199	-
Stage 1	-	0	-	-
Stage 2	997	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	983	-	1198	-
Mov Cap-2 Maneuver	983	-	-	-
Stage 1	-	-	-	-
Stage 2	996	-	-	-

Approach	EB	NB
HCM Control Delay, s	8.8	0.3
HCM LOS	A	

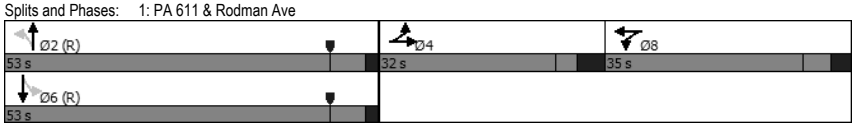
Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	1198	-	983
HCM Lane V/C Ratio	0.001	-	0.045
HCM Control Delay (s)	8	0	8.8
HCM Lane LOS	A	A	A
HCM 95th %tile Q(veh)	0	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	8	18	7	6	82	38	1060	30	78	1009	55
Future Volume (vph)	80	8	18	7	6	82	38	1060	30	78	1009	55
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	16	16	16	10	12	12	10	11	11
Grade (%)		-1%			1%			-5%			-4%	
Storage Length (ft)	0		0	0		0	125		0	185		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			75			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99			0.99		1.00	1.00		1.00	1.00	
Frt		0.977			0.883			0.996			0.992	
Flt Protected		0.964			0.997		0.950			0.950		
Satd. Flow (prot)	0	1926	0	0	1761	0	1636	3364	0	1628	3309	0
Flt Permitted		0.964			0.997		0.198			0.190		
Satd. Flow (perm)	0	1919	0	0	1760	0	341	3364	0	326	3309	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		8						3			5	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		295			157			639			636	
Travel Time (s)		8.0			4.3			17.4			17.3	
Confl. Peds. (#/hr)	4		2	2		4	5		1	1		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	100%	0%	1%	0%
Adj. Flow (vph)	85	9	19	7	6	87	40	1128	32	83	1073	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	113	0	0	100	0	40	1160	0	83	1132	0
Number of Detectors	1	4		1	4		0	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	66		20	58		0	0		0	0	
Trailing Detector (ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Position(ft)	0	-3		0	-10		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		13			5							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Detector 3 Position(ft)		34			26							
Detector 3 Size(ft)		6			6							
Detector 3 Type		Cl+Ex			Cl+Ex							
Detector 3 Channel												
Detector 3 Extend (s)		0.0			0.0							
Detector 4 Position(ft)		60			52							

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Size(ft)		6			6							
Detector 4 Type		Cl+Ex			Cl+Ex							
Detector 4 Channel												
Detector 4 Extend (s)		0.0			0.0							
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		27.0	27.0		27.0	27.0	
Total Split (s)	32.0	32.0		35.0	35.0		53.0	53.0		53.0	53.0	
Total Split (%)	26.7%	26.7%		29.2%	29.2%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	25.0	25.0		28.0	28.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	4.0	4.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 4 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: PA 611 & Rodman Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	8	18	7	6	82	38	1060	30	78	1009	55
Future Volume (veh/h)	80	8	18	7	6	82	38	1060	30	78	1009	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1911	1911	1911	1866	1866	1866	1986	1972	564	1949	1935	1949
Adj Flow Rate, veh/h	85	9	13	7	6	87	40	1128	32	83	1073	58
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	1	100	0	1	0
Cap, veh/h	120	13	18	10	8	120	346	2528	72	403	2410	130
Arrive On Green	0.08	0.08	0.08	0.08	0.09	0.08	1.00	1.00	1.00	0.68	0.68	0.67
Sat Flow, veh/h	1427	151	218	111	95	1381	528	3721	106	504	3546	192
Grp Volume(v), veh/h	107	0	0	100	0	0	40	568	592	83	556	575
Grp Sat Flow(s),veh/h/ln	1796	0	0	1587	0	0	528	1873	1953	504	1838	1899
Q Serve(g_s), s	7.0	0.0	0.0	7.4	0.0	0.0	2.1	0.0	0.0	7.6	16.7	16.7
Cycle Q Clear(g_c), s	7.0	0.0	0.0	7.4	0.0	0.0	18.8	0.0	0.0	7.6	16.7	16.7
Prop In Lane	0.79		0.12	0.07		0.87	1.00		0.05	1.00		0.10
Lane Grp Cap(c), veh/h	151	0	0	137	0	0	346	1273	1327	403	1249	1291
V/C Ratio(X)	0.71	0.00	0.00	0.73	0.00	0.00	0.12	0.45	0.45	0.21	0.45	0.45
Avail Cap(c_a), veh/h	389	0	0	383	0	0	346	1273	1327	403	1249	1291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	0.0	0.0	53.9	0.0	0.0	1.9	0.0	0.0	7.4	8.8	8.9
Incr Delay (d2), s/veh	6.1	0.0	0.0	7.1	0.0	0.0	0.6	1.0	1.0	1.2	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.2	0.0	0.0	5.9	0.0	0.0	0.3	0.7	0.7	1.7	11.1	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	0.0	0.0	61.0	0.0	0.0	2.5	1.0	1.0	8.5	10.0	10.0
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		107			100			1200			1214	
Approach Delay, s/veh		60.1			61.0			1.1			9.9	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		87.5		16.1		87.5		16.4				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		46.0		25.0		46.0		28.0				
Max Q Clear Time (g_c+I1), s		0.0		9.0		0.0		9.4				
Green Ext Time (p_c), s		0.0		0.3		0.0		0.3				

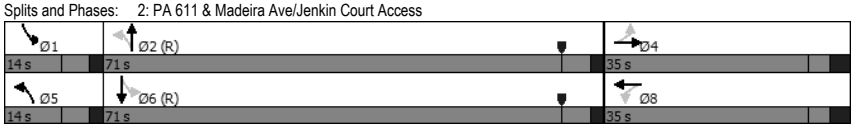
Intersection Summary			
HCM 6th Ctrl Delay			9.8
HCM 6th LOS			A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	5	24	59	1	4	52	1071	31	4	1017	13
Future Volume (vph)	52	5	24	59	1	4	52	1071	31	4	1017	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	14	14	14	10	12	12	10	12	12
Grade (%)		2%			0%			-7%			7%	
Storage Length (ft)	0		0	0		0	120		0	200		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			60			70		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.960			0.992			0.996			0.998	
Flt Protected		0.969			0.956		0.950			0.950		
Satd. Flow (prot)	0	1800	0	0	1821	0	1652	3443	0	1540	3262	0
Flt Permitted		0.822			0.698		0.223			0.229		
Satd. Flow (perm)	0	1527	0	0	1329	0	388	3443	0	371	3262	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			3			4			2	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		286			179			437			639	
Travel Time (s)		7.8			4.9			11.9			17.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	1%	50%	0%	1%	0%
Adj. Flow (vph)	55	5	25	62	1	4	55	1127	33	4	1071	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	67	0	55	1160	0	4	1085	0
Number of Detectors	1	1		1	1		1	0		1	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	37		20	27		37	0		37	0	
Trailing Detector (ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Position(ft)	0	-3		0	-3		-3	0		-3	0	
Detector 1 Size(ft)	20	40		20	30		40	6		40	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0		3.0	22.0		3.0	22.0	
Minimum Split (s)	24.0	24.0		24.0	24.0		9.5	28.0		9.5	28.0	
Total Split (s)	35.0	35.0		35.0	35.0		14.0	71.0		14.0	71.0	
Total Split (%)	29.2%	29.2%		29.2%	29.2%		11.7%	59.2%		11.7%	59.2%	
Maximum Green (s)	29.0	29.0		29.0	29.0		8.0	65.0		8.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0	-1.0		-1.0	-1.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 9 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: PA 611 & Madeira Ave/Jenkin Court Access



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	5	24	59	1	4	52	1071	31	4	1017	13
Future Volume (veh/h)	52	5	24	59	1	4	52	1071	31	4	1017	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1820	1849	1849	1872	1872	1872	2061	2047	1350	1527	1513	1527
Adj Flow Rate, veh/h	55	5	18	62	1	1	55	1127	32	4	1071	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	0	0	0	0	0	1	50	0	1	0
Cap, veh/h	132	9	27	163	2	2	564	3065	87	357	2249	29
Arrive On Green	0.06	0.07	0.06	0.06	0.07	0.06	0.03	0.79	0.79	0.02	1.00	1.00
Sat Flow, veh/h	1159	123	385	1490	24	24	1963	3862	110	1454	2905	38
Grp Volume(v), veh/h	78	0	0	64	0	0	55	567	592	4	530	555
Grp Sat Flow(s),veh/h/ln	1667	0	0	1538	0	0	1963	1944	2027	1454	1437	1506
Q Serve(g_s), s	0.5	0.0	0.0	0.0	0.0	0.0	0.7	10.2	10.2	0.1	0.0	0.0
Cycle Q Clear(g_c), s	5.2	0.0	0.0	4.7	0.0	0.0	0.7	10.2	10.2	0.1	0.0	0.0
Prop In Lane	0.71		0.23	0.97		0.02	1.00		0.05	1.00		0.03
Lane Grp Cap(c), veh/h	154	0	0	154	0	0	564	1543	1609	357	1113	1166
V/C Ratio(X)	0.51	0.00	0.00	0.42	0.00	0.00	0.10	0.37	0.37	0.01	0.48	0.48
Avail Cap(c_a), veh/h	416	0	0	406	0	0	651	1543	1609	449	1113	1166
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	54.8	0.0	0.0	54.6	0.0	0.0	2.3	3.6	3.6	3.0	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0	1.8	0.0	0.0	0.1	0.7	0.6	0.0	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	0.0	0.0	3.6	0.0	0.0	0.4	6.6	6.9	0.0	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	0.0	0.0	56.4	0.0	0.0	2.4	4.3	4.3	3.0	1.2	1.1
LnGrp LOS	E	A	A	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		78			64			1214			1089	
Approach Delay, s/veh		57.3			56.4			4.2			1.2	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	100.2		13.4	8.7	97.9		13.4
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	8.0	65.0		29.0	8.0	65.0		29.0
Max Q Clear Time (g_c+I1), s	2.6	0.0		7.2	3.2	0.0		6.7
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	0.0		0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	28	89	2	18	77	9
Future Volume (vph)	28	89	2	18	77	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	14	14
Grade (%)	-2%			4%	3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.897				0.986	
Flt Protected				0.996	0.957	
Satd. Flow (prot)	1932	0	0	2102	1884	0
Flt Permitted				0.996	0.957	
Satd. Flow (perm)	1932	0	0	2102	1884	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	157			204	81	
Travel Time (s)	4.3			5.6	2.2	
Confl. Peds. (#/hr)					1	3
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	48	153	3	31	133	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	201	0	0	34	149	0
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

McMahon
3: Spring Ave & Rodman Ave
Jenkin Court Pad Sites
26 W SAT AS2

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	28	89	2	18	77	9
Future Vol, veh/h	28	89	2	18	77	9
Conflicting Peds, #/hr	0	0	0	0	1	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-2	-	-	4	3	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	4	0	0	0	0	0
Mvmt Flow	48	153	3	31	133	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	201	0	163	128
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	-	-	4.1	-	7	6.5
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.2	-	3	3.1
Pot Cap-1 Maneuver	-	-	1383	-	935	973
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1144	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1383	-	932	969
Mov Cap-2 Maneuver	-	-	-	-	932	-
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1141	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	936	-	-	1383	-
HCM Lane V/C Ratio	0.158	-	-	0.002	-
HCM Control Delay (s)	9.6	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	0	1	22	0	91
Future Volume (vph)	63	0	1	22	0	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	13	13	14	14
Grade (%)	-5%			3%	-3%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1814	0	0	1928	0	1744
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1814	0	0	1928	0	1744
Link Speed (mph)	25			25	25	
Link Distance (ft)	102			129	81	
Travel Time (s)	2.8			3.5	2.2	
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58
Heavy Vehicles (%)	2%	0%	2%	0%	0%	2%
Adj. Flow (vph)	109	0	2	38	0	157
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	0	0	40	0	157
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	0	1	22	0	91
Future Vol, veh/h	63	0	1	22	0	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-5	-	-	3	-3	-
Peak Hour Factor	58	58	58	58	58	58
Heavy Vehicles, %	2	0	2	0	0	2
Mvmt Flow	109	0	2	38	0	157

Major/Minor	Minor2		Major1	
Conflicting Flow All	42	-	0	0
Stage 1	0	-	-	-
Stage 2	42	-	-	-
Critical Hdwy	5.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	4.42	-	-	-
Follow-up Hdwy	3.518	-	-	-
Pot Cap-1 Maneuver	980	0	-	-
Stage 1	-	0	-	-
Stage 2	992	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	980	-	-	-
Mov Cap-2 Maneuver	980	-	-	-
Stage 1	-	-	-	-
Stage 2	992	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.1	
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	980
HCM Lane V/C Ratio	-	-	0.111
HCM Control Delay (s)	-	-	9.1
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.4