

TRANSPORTATION IMPACT STUDY

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PA

Prepared For:

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Executive Summary

Upper Darby School District is planning to develop the Clifton Heights Middle School in Clifton Heights Borough, Delaware County, Pennsylvania. The proposed Middle School site is bounded by Wyncliffe Ave to the north, Oak Ave to the west, Sycamore Ave to the east, and Springfield Road (SR 2009) to the south. The proposed Middle School is planned to accommodate 950 students. The proposed opening year for the school is 2022.

The following intersections are studied as part of this Transportation Impact Study:

1. Springfield Rd (SR 2009) & Austin Dr
2. Springfield Rd (SR 2009) and Oak Ave
3. Springfield Rd (SR 2009) & Prospect Ave/Church St
4. Springfield Rd (SR 2009) & Sycamore Ave & Fairview Ave
5. Oak Ave & Wyncliffe Ave
6. Sycamore Ave & Arch St
7. Sycamore Ave & Wyncliffe Ave

Turning movement counts were obtained at the study intersections on Wednesday, April 24, 2019 using *Miovision Scout* video collection units. Turning movement counts were collected for the AM Peak Period (6:30 AM – 9:30 AM) and the PM Peak Period (2:30 PM – 6:30 PM) when study area schools were in session. Automatic Traffic Recorder (ATR) counts were conducted for a period of 7-days along Springfield Rd and Sycamore Ave in the study area. Initial and maximum queue data was collected at the study intersections.

In conjunction with the proposed development, the following driveways are proposed to serve student drop-off/pick-up and bus pick-up/drop-off:

- Oak Ave – one (1) enter-only driveway for student pick-up/drop-off
- Sycamore Ave – one (1) exit-only driveway for student pick-up/drop-off
- Springfield Rd – one (1) enter-only and one (1) exit-only driveway for bus pick-up/drop-off

In conjunction with the proposed Middle School development, the following parking and circulation is planned:

- Student pick-up/drop-off will enter through the proposed driveway along Oak Avenue and exit onto Sycamore Ave. Approximately 1000 feet of storage length is provided with this configuration along the “loop road” for student pick-up/drop-offs. This configuration ensures minimizing pedestrian and vehicular conflicts in the drop-off/pick-up zone.
- The School District is anticipating eight (8) school buses to serve the proposed Middle School. Bus pick-up/drop-off is proposed along Springfield Rd with an enter-only driveway approximately 200 feet west of Sycamore Ave and an exit-only driveway approximately 350 feet east of Oak Avenue. This configuration provides approximately 550 feet of storage length for stacking buses.
- Access to the proposed parking lot is planned along the “loop road”.

The proposed site is anticipated to generate **2,052** daily trips, **551** vehicular trips (**298** entering, **253** exiting) during the weekday AM peak hour, and **162** vehicular trips (**79** entering, **83** exiting) during the weekday PM peak hour.

In accordance with PennDOT TIS guidelines, new signalized or unsignalized intersection established to serve as access to the development shall be designed to operate at minimum LOS D for the urban areas. Additionally, overall intersection delay increases due to proposed development generated traffic volumes shall be less than 10 seconds. Under the projected 2022 Build Conditions with the proposed development generated traffic volumes, all study intersections and proposed driveways will satisfy PennDOT Intersection LOS standards with the exception of Sycamore Ave/Fairview Ave/Springfield Road intersection where delay increases by 11 seconds during the AM peak hour. However, the intersection is projected to operate at an acceptable overall LOS B. Based on the results of the Transportation Impact Study, the following improvements are recommended for the proposed Clifton Heights Middle School:

Springfield Rd (SR 2009) and Oak Ave:

- Provide Pedestrian/ADA facilities at this intersection.
- Provide dedicated eastbound and westbound left-turn lanes along Springfield Rd (SR 2009) at Oak Ave with 75 feet of storage length.
- Provide a dedicated westbound right-turn lane along Springfield Rd (SR 2009) at Oak Avenue with 200 feet of storage length.
- Provide a dedicated northbound left-turn lane along Oak Ave at Springfield Rd (SR 2009) with 100 feet of storage length.
- Extend the proposed southbound left-turn lane along Oak Avenue at the proposed entrance driveway to the intersection of Springfield Rd (SR 2009) and Oak Avenue. This turn lane will provide approximately 65 feet of storage length.

Oak Ave and Proposed Student Drop-off/Pick-up Driveway:

- Provide adequate ingress radius to facilitate entrance to the site.
- Provide a northbound dedicated right-turn lane along Oak Avenue at the site entrance with approximately 50 feet of storage length.
- Provide a southbound dedicated left-turn lane along Oak Avenue at the site entrance with 100 feet of storage length.

Sycamore Ave and Proposed Student Drop-off/Pick-up Driveway:

- Provide adequate egress radius to facilitate exit from the site.
- Provide a "STOP" sign on the eastbound egress approach.

Springfield Rd (SR 2009) and Proposed Bus Entrance Driveway

- Provide adequate ingress radii to facilitate bus entrance to the site.

Springfield Rd (SR 2009) and Proposed Bus Exit Driveway

- Provide adequate egress radius to facilitate bus exit from the site.
- Provide a "STOP" sign on the southbound egress approach.

Introduction

Pennoni has completed a Transportation Impact Study (TIS) for the proposed Clifton Heights Middle School development in Clifton Heights Borough, Delaware County, Pennsylvania. The proposed Middle School site is bounded by Wyncliffe Ave to the north, Oak Ave to the west, Sycamore Ave to the east, and Springfield Road to the south. The proposed Middle School is planned to accommodate 950 students. The School District is anticipating eight (8) school buses to serve the proposed Middle School. The proposed opening year for the school is 2022.

Study Area

The study area defined for this analysis includes the following intersections:

1. Springfield Rd (SR 2009) & Austin Dr
2. Springfield Rd (SR 2009) and Oak Ave
3. Springfield Rd (SR 2009) & Prospect Ave/Church St
4. Springfield Rd (SR 2009) & Sycamore Ave & Fairview Ave
5. Oak Ave & Wyncliffe Ave
6. Sycamore Ave & Arch St
7. Sycamore Ave & Wyncliffe Ave

Existing Roadway Network

The existing roadways within the study area are summarized below in **Table 1**.

Table 1: Existing Roadway Characteristics

Roadway	Travel Lanes (per direction)	Parking	Bike Lane	Speed Limit	PennDOT Classification ⁽¹⁾	ADT ⁽¹⁾
Springfield Rd (SR 2009)	1	Yes	No	35	Principal Arterial	10,930 ⁽²⁾
Oak Ave	1	Yes	No	25	Minor Arterial	6762
Wyncliffe Ave	1	Yes	No	25	Local Road	NA
Sycamore Ave	1	Yes	No	20	Local Road	1,490 ⁽²⁾

(1) Based on PennDOT Traffic Information Repository (TIRe)

(2) Based on Pennoni ATR counts

The existing roadways within the study area are listed below:

- **Springfield Rd (SR 2009)** is an east-west oriented two-lane Principal Arterial bordering the southern edge of the site. The eastbound and westbound direction each have an 11-foot travel lane. The posted speed limit on Springfield Rd (SR 2009) is 35 mph in the study area.
- **Oak Ave** is a north-south oriented two-lane minor arterial bordering the western edge of the site. The northbound and southbound direction each have an 11-foot travel lane, and a seven-foot parking lane. The posted speed limit on Oak Ave is 25 mph in the study area.
- **Wyncliffe Ave** is an east-west oriented two-lane local roadway bordering the northern edge of the site. The eastbound and westbound direction each have a 10-foot travel lane. The posted speed limit on Wyncliffe Ave is 25 mph in the study area.

- **Sycamore Ave** is a north-south oriented two-lane local roadway bordering the eastern edge of the site. The northbound and southbound direction each have a 10-foot travel lane. The posted speed limit on Sycamore Ave is 20 mph in the study area.
- **Springfield Rd (SR 2009) and Austin Dr** is a four-way semi-actuated signalized intersection operating with a 60 second background cycle length throughout the day. All approaches to this intersection consist of one lane for all movements. Austin Dr is one-way southbound north of Springfield Rd.
- **Springfield Rd (SR 2009) and Oak Ave** is a four-way pre-timed signalized intersection operating with a 60 second cycle length throughout the day. All approaches to this intersection consist of one lane for all movements.
- **Springfield Rd (SR 2009), Church St and Prospect Ave** is an unsignalized intersection with Prospect Ave and Church St stopping for Springfield Rd (SR 2009). All approaches to this intersection consist of one lane for all movements. Prospect Ave is one-way north-eastbound from 7AM-9AM and 4PM-6PM.
- **Springfield Rd (SR 2009) and Sycamore Ave and Fairview Ave** is a five-leg semi-actuated signalized intersection operating with a 60 second background cycle length throughout the day. All approaches to this intersection consist of one lane for all movements. Fairview Ave is a one-way street heading north. Sycamore Avenue south of Springfield Rd is a one-way street heading north.
- **Oak Ave and Wyncliffe Ave** is a four-leg all-way stop controlled unsignalized intersection. All approaches to this intersection consist of one lane for all movements. Wyncliffe Ave is one-way westbound west of Oak Ave.
- **Sycamore Ave and Arch St** is a three-leg all-way stop controlled unsignalized intersection. All approaches to this intersection consist of one lane for all movements.
- **Sycamore Ave and Wyncliffe Ave** is a four-leg all-way stop controlled unsignalized intersection. All approaches to this intersection consist of one lane for all movements.

Public Transportation

Southeastern Pennsylvania Transportation Authority (SEPTA) operates a variety of transit options within proximity to the subject site. The public transit elements serving the immediate vicinity of the proposed development are the following:

- On Springfield Rd: SEPTA Bus Route 107, SEPTA Trolley 102, SEPTA Clifton-Aldan Regional Rail Station (Media-Elwyn Line)
- On Baltimore Ave: SEPTA Bus Route 109
- On Oak Ave: SEPTA Primos Regional Rail Station (Media-Elwyn Line)

Land Use Context

In accordance with the Smart Transportation Guidebook, the land use context within the study area is classified as Suburban Neighborhood.

Pedestrian and Bicycles Facilities

Sidewalks are present throughout the study area, including Oak Ave, Springfield Rd, Wyncliffe Ave, and Sycamore Ave. Bike lanes are not present in the study area.

Data Collection

Turning movement counts were obtained at the study intersections on Wednesday, April 24, 2019 using *Miovision Scout* video collection units. Turning movement counts were collected for the AM Peak Period (6:30 AM – 9:30 AM) and the PM Peak Period (2:30 PM – 6:30 PM) when study area schools were in session. Automatic Traffic Recorder

(ATR) counts were conducted for a period of 7-days along Springfield Rd and Sycamore Ave in the study area. Traffic Count Data can be found in **Appendix A**. Traffic counts for the peak hours are summarized in **Figure 1**. Based on the traffic count data the system peak hour occurs from 7:00-8:00 AM and 4:45 to 5:45 PM. In order to study worst case scenario peak hour of individual intersections were utilized in the capacity analysis. Initial and maximum queue data were collected at the signalized study intersections based on a 15-min interval. Queue data can be found in **Appendix B**. Photographs at the study area intersections can be found in **Appendix C**. Traffic signal permit plans for the signalized study intersections were obtained from PennDOT's Traffic Signal Asset Management System (TSAMS), the signal permit plans can be found in **Appendix D**.

Capacity Analysis Methodology

The performance of the study intersections under existing conditions were evaluated through a qualitative measure of operating conditions called Levels of Service. Six Levels of Service (LOS) were defined with letter designations from 'A' to 'F', with Level of Service 'A' representing delays up to ten seconds and Level of Service 'F' indicating delays exceeding eighty seconds. Level of Service 'D' or better is considered acceptable in urban areas. Levels of Service are determined through analysis procedures outlined in the Highway Capacity Manual (Transportation Research Board, Washington, D.C.).

Levels of Service for signalized intersections are based on average delay experienced by motorists passing the intersection. The delay is based on the results of the capacity analysis (rate of demand flow capacity) and other important variables such as quality of progression, cycle length and ratio of green time.

Level of service for unsignalized intersection are defined in terms of delay to vehicles entering from the side road and turning left from a major road. Delay is a function of the capacity and the approach and degree of saturation. The capacity is based on the distribution of gaps in the major street traffic stream, driver judgment in selecting a gap through which to execute the desired maneuver, and follow-up time required by each driver in a queue. The Level of Service Criteria for signalized and unsignalized intersections is provided in **Appendix E**.

Intersection operations were assessed according to the methodologies contained in the Highway Capacity Manual 6th Edition using Synchro software (Version 10). Traffic models were calibrated using the procedure developed in PennDOT Publication 46 and the traffic data collected as part of the study. The following calibration parameters were used in the analysis:

- Base saturation flow rate: Based on the Urban Core land use context, a base saturation flow rate of 1,800 passenger cars per hour per lane (pc/hr/ln) was used for all analyses in accordance with Exhibit 10-9 of PennDOT Publication 46.
- Critical & Follow-Up Headways were adjusted based on the guidelines provided in PennDOT Publication 46.

Due to the limitations of *HCM 6th Edition* methodology, *Synchro* software methodologies were utilized to analyze Level of Service (LOS) and delay at certain signalized intersections.

Queuing Analysis Methodology

HCM 6th Edition methodology does not support intersections with more than 4 approaches and intersection with non-NEMA signal phasing. Therefore, HCM 6th Edition was not compatible to obtain queue results at the intersections of Springfield Rd (SR 2009)/Sycamore Ave/Fairview Rd (5 approaches) and Springfield Rd/Austin Dr (non-NEMA signal phasing). Since HCM 6th Edition was not able to generate queuing results at some study intersections, SimTraffic, the simulation component of Synchro software was used for queuing analysis. It should be noted that modifications were made to the lane configuration, turning speed, vehicles and timings setting in SimTraffic to simulate driving behaviors and vehicle types observed in the field. At the intersection of Springfield Rd and Oak Avenue, a 25-foot eastbound left-turn lane was added to simulate through and right-turn vehicles going around a waiting left-turning vehicle. Vehicles are able to perform this maneuver since the eastbound approach is 16-foot wide and parking near the intersection approach is prohibited. Timings and turning speeds were also modified at the intersection of Springfield Rd/Oak Avenue to simulate a waiting left-turning vehicle to proceed on the yellow signal indication. The speed for left-turning and right-turning vehicles were increased to 25 mph and 15 mph respectively. All-red timings

for the left-turns along Springfield Rd were shortened by 1.5-seconds compared to the eastbound and westbound through phase in order to simulate left-turning vehicles proceeding the intersection on yellow signal phase. It should be noted that these modifications were applied to the SimTraffic files for all scenarios in order to have “apples-to-apples” comparison. These modifications were included in separate “SimTraffic” files which were utilized only for 95th percentile queue analysis. Ten (10) random seed simulation runs were completed for each analysis scenarios and were averaged together to determine the 95th percentile queues at each study intersection. Initial and maximum queue data collected in the field was used to calibration the SimTraffic models.

2019 Existing Conditions

Under 2019 existing conditions, all study intersections operate at overall Levels of Service ‘B’ or better, with all movements operating with acceptable Level of Service ‘C’ or better. Based on the SimTraffic queueing analysis, the estimated 95th percentile queues are within the available storage. LOS and queue results for the AM and PM peak hours are summarized in **Table 5** and **Table 6**, respectively. Capacity analysis and queue worksheets can be found in **Appendix F**.

Crash Analysis

Reportable crash data was obtained from PennDOT for the study area intersections. Reportable crashes include crashes in which personal injuries occur or the vehicle must be towed from the scene. The data was obtained from PennDOT for the five-year period from January 1, 2013 to December 31, 2017 throughout the study area. PennDOT considers occurrence of 5 reported correctable crashes over a continuous twelve-month period during the past five years to be a threshold value, above which the intersection design should be reviewed to examine if corrective measures can be taken to improve safety. **Table 2** shows number of reportable crashes at the study area intersection by year.

Table 2: Crash Data

Study Intersection	Number of Reportable Crashes				
	2013	2014	2015	2016	2017
Springfield Rd (SR 2009) and Fairview Ave and Sycamore St	0	1	0	0	0
Springfield Rd (SR 2009) and Prospect Ave	1	0	0	1	0
Springfield Rd and Church St	0	1	0	0	0
Springfield Rd (SR 2009) and Oak Ave	0	2	2	1	1
Springfield Rd (SR 2009) and Austin Dr	0	3	1	0	0

Based on review of the crash data, there was no continuous twelve-month period during the past five years where 5 or more crashes occurred at the study intersections.

Base (No-Build) Conditions

Background Growth

A background growth factor for the roadways in the study area was developed based on growth factors for August 2018 to July 2019 obtained from the PennDOT Bureau of Planning and Research (BPR). The PennDOT BPR indicates that the background growth trend factor in Delaware County for urban non-interstate roadway is 0.0%. Therefore, no growth rate was applied to the existing condition traffic volumes.

Nearby Planned Developments

Base (No-Build) traffic conditions were calculated to include traffic volumes from proposed developments, which, though not operating under existing conditions, may be operating by the opening year (2022) of the proposed development. The following nearby planned development was specifically included in this study:

WAWA/Retail – Baltimore Pike & Oak Ave: BT Baltimore Ave Properties, LLC is proposing a WAWA Convenience Market/Retail space in Upper Darby Township, PA. The project site is located on the southwestern quadrant of the

intersection of West Baltimore Ave (SR 2016) and Oak Ave. The proposed site will consist of a 5,585 sf WAWA convenience market with eight (8) fuel pumps, 9,000 sf of General Retail and the existing Planet Fitness Health/Fitness Club. Trip generation figures from the study are provided in [Appendix G](#).

The additional traffic volume due to background growth and background developments was added to the existing 2019 traffic counts to project 2022 base (no-build) condition traffic volumes as shown on [Figure 2](#).

2022 No Build Level of Service/Queue Analysis

Under the 2022 No Build Conditions, all study intersections operate at the same overall LOS B as the Existing Conditions. All approaches continue to operate at LOS C similar to the existing conditions. Based on the SimTraffic queueing analysis, the estimated 95th percentile queues are within the available storage. LOS and queue results for the AM and PM peak hours are summarized in [Table 5](#) and [Table 6](#), respectively. Capacity analysis and queue worksheets can be found in [Appendix H](#).

Scheduled Roadway Improvements

A review of the PennDOT 12-Year Plan and the DVRPC Transportation Improvement Program (TIP) was conducted. Based on the review, no specific planned roadway improvements were specified in the vicinity of the proposed site.

Site Access

In conjunction with the proposed development, the following driveway locations are proposed to serve student drop-off/pick-up and bus pick-up/drop-off:

- Oak Ave – one (1) enter-only driveway for student pick-up/drop-off
- Sycamore Ave – one (1) exit-only driveway for student pick-up/drop-off
- Springfield Rd – one (1) enter-only and one (1) exit-only driveway for bus pick-up/drop-off

In conjunction with the proposed Middle School development, the following parking and circulation is planned:

- Student pick-up/drop-off will enter through the proposed driveway along Oak Avenue and exit onto Sycamore Ave. Approximately 1000 feet of storage length is provided with this configuration along the “loop road” for student pick-up/drop-offs. This configuration ensures minimizing pedestrian and vehicular conflicts in the drop-off/pick-up zone.
- The School District is anticipating eight (8) school buses to serve the proposed Middle School. Bus pick-up/drop-off is proposed along Springfield Rd with an enter-only driveway approximately 200 feet west of Sycamore Ave and an exit-only driveway approximately 350 feet east of Oak Avenue. This configuration provides approximately 550 feet of storage length for stacking buses.
- Access to the proposed parking lot is planned along the “loop road”.

A sketch plan for the proposed middle school can be found in [Appendix I](#).

Sight Distance

The sight distance at the proposed access locations will be evaluated based on PA Code Chapter 441 sight distance regulations and applicable PennDOT sight distance guidelines. Proper landscaping will be maintained for provision of adequate sight distance. The available sight distance at the accesses will be verified during the detailed engineering of the access designs and noted in the study. The available sight distance will be compared to the required sight distance based on the PA Code Chapter 441.

Trip Generation

The traffic volumes for the proposed site were estimated based on information contained in the Institute of Transportation Engineers (ITE) publication Trip Generation Manual (10th Edition). Based on the traffic data collection at the study area intersections, the peak hour of the study network occurs from 7:00-8:00 AM and 4:45 to 5:45 PM. Since operations of Middle Schools are from 8:30 AM to 3:10 PM, the peak hour of the adjacent street was utilized as

the time period for trip generation. The total amount of trips expected to be generated by the proposed development were calculated based on rates provided in the Trip Generation Manual as shown on **Table 3**. For the purposes of this study, the ITE Land Use Codes “Middle School/Junior High School” (Land Use Code 522) was utilized. The School District is anticipating eight (8) school buses to serve the proposed Middle School.

Table 3: Trip Generation

ITE TRIP GENERATION LAND USE DESCRIPTION	AM PEAK			PM PEAK			WEEKDAY DAILY		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
#522 – Middle School/Junior High School	298	253	551	79	83	162	1026	1026	2052

Trip Distribution

The vehicular trips generated by the proposed development were distributed and assigned to the roadway network based on a combined evaluation of existing traffic patterns, existing middle schools within the served by Upper Darby School District, population density and the proposed development access locations. Upper Darby School District’s school boundary map was used to evaluate the area to be served by the proposed middle school. Upper Darby School District currently includes two (2) middle schools: Drexel Hill and Beverly Hills to the north of the study area. It was assumed that the proposed middle school will serve the area west of Lansdowne Avenue and south of Garrett Road within the School District’s boundary. The population density and the existing roadway network for the area assumed to be served by the proposed middle school were analyzed to estimate trip distribution percentages. Based on the evaluations described above, the following trip distribution percentages were estimated:

- From Northbound Oak Ave = 18%
- From Southbound Oak Ave = 22%
- From Eastbound Springfield Rd = 19%
- From Westbound Springfield Rd = 41%

The trip distribution associated with the student pick-up/drop-off and the bus pick-up/drop-off are shown in **Figure 3A** and **Figure 3B**, respectively. Trips generated by the proposed development shown in Table 3 were distributed to the study area roadway network based on the percentages shown above. The resulting new trips generated by the proposed development associated with student pick-up/drop-off and bus pick-up/drop-off are shown in **Figure 4A** and **Figure 4B**, respectively. The distributed trips for the proposed site were added to the 2022 No Build traffic volumes to estimate the Build Conditions traffic volumes at the study intersections. The volume development worksheets are provided in **Appendix J**.

Turn Lane Warrants

Turn lane warrant analyses were conducted for the study intersections. The warrant analysis is based on recommended guidelines in PennDOT’s Publication 46: *Traffic Engineering Manual*. The results of the turn lane warrant analyses are shown in **Table 4**. Turn Lane Analysis worksheets are provided in **Appendix K**.

Table 4: Summary of Turn Lane Warrant Analysis

Intersection	Movement	Turn Lane Warranted	Required Length	Proposed Length
Oak Ave & Proposed Driveway	Northbound Right-Turn	Yes	250'	50'
	Southbound Left-Turn	Yes	100'	100'
Oak Ave & Springfield Rd	Eastbound Left-Turn	Yes	75'	75'
	Northbound Left-Turn	Yes	100'	100'
	Southbound Left-Turn	No	NA	70'
	Westbound Left-Turn	Yes	75'	75'
	Westbound Right-Turn	Yes	200'	200'

The proposed driveway along Oak Avenue warrants a southbound left-turn lane and a northbound right-turn lane along Oak Avenue. The northbound right-turn lane warrants 250 feet of storage length, however, due to the proximity of the proposed driveway to the signalized intersection of Oak Avenue and Springfield Road only 50 feet of storage length is available and proposed.

Left-turn lanes are proposed along all approaches at the intersection of Oak Ave and Springfield Rd as shown on **Table 4**. The southbound left-turn lane proposed at the site driveway will be extended to the intersection of Oak Ave and Springfield Rd. A westbound right-turn lane is warranted and proposed at the intersection of Oak Ave and Springfield Road.

Build Conditions

The site generated traffic volumes were added to the no-build condition traffic volumes to develop the 2022 Build Conditions (opening year) traffic volumes. The 2022 Build Conditions volumes are shown in **Figure 5**. The build traffic volumes were analyzed using the methodology described above. Under the 2022 Build Conditions, all intersections are projected to continue to operate at No Build service levels, overall LOS B or better except the intersection of Oak Avenue and Springfield Road. With the added site trips, the intersection of Oak Avenue and Springfield Road is projected to operate at overall LOS C, 95th percentile queues along eastbound and westbound Springfield Road are longer during the AM peak hour. Capacity and queue analysis worksheets for the 2022 Build Conditions are provided in **Appendix L**. The following improvements are proposed at the intersection of Oak Ave and Springfield Rd to mitigate impacts associated with site generated traffic volumes:

- Provide dedicated eastbound and westbound left-turn lanes along Springfield Rd (SR 2009) at Oak Ave with 75 feet of storage length.
- Provide a dedicated westbound right-turn lane along Springfield Rd (SR 2009) at Oak Avenue with 200 feet of storage length.
- Provide a dedicated northbound left-turn lane along Oak Ave at Springfield Rd (SR 2009) with 100 feet of storage length.
- Extend the southbound left-turn lane along Oak Avenue at the proposed entrance driveway to the intersection of Springfield Rd (SR 2009) and Oak Avenue. This turn lane will provide approximately 65 feet of storage length.

With the proposed improvements described above, the intersection of Oak Avenue and Springfield Road is projected to operate at overall LOS B, similar to the no-build conditions. With the proposed improvements, the estimated 95th percentile queue at the study intersections are projected to be similar to existing and no-build conditions.

All approaches in the 2022 Build Conditions operate at LOS C or better, similar to the No-Build Conditions, with the exception of the southbound approach at the intersection of Sycamore Avenue/Fairview Avenue/Springfield Road. With the added site trips, the southbound approach at the intersection of Sycamore Ave/Fairview Ave/Springfield Rd is projected to operate at LOS D. Due to right-of-way constraints for the southbound approach, an exclusive turn lane is not feasible for this approach. The estimated 95th percentile queues are within the available storage.

LOS and queue results for the AM and PM peak hours are summarized in **Table 5** and **Table 6**, respectively. Capacity and queue analysis worksheets for the 2022 Build with Improvements scenario are provided in **Appendix M**.

Conclusion

Based on the results of the Transportation Impact Study, the following improvements are recommended for the proposed Clifton Heights Middle School:

Springfield Rd (SR 2009) and Oak Ave:

- Provide Pedestrian/ADA facilities at this intersection.
- Provide dedicated eastbound and westbound left-turn lane along Springfield Rd (SR 2009) at Oak Ave with 75 feet of storage length.
- Provide a dedicated westbound right-turn lane along Springfield Rd (SR 2009) at Oak Avenue with 200 feet

of storage length.

- Provide a dedicated a northbound left-turn lane along Oak Ave at Springfield Rd (SR 2009) with 100 feet of storage length.
- Extend the southbound left-turn lane along Oak Avenue at the proposed entrance driveway to the intersection of Springfield Rd (SR 2009) and Oak Avenue. This turn lane will provide approximately 65 feet of storage length.

Oak Ave and Proposed Student Drop-off/Pick-up Driveway:

- Provide adequate ingress radii to facilitate entrance to the site.
- Provide a northbound dedicated right-turn lane along Oak Avenue at the site entrance with approximately 50 feet of storage length.
- Provide a southbound dedicated left-turn lane along Oak Avenue at the site entrance with 100 feet of storage length.

Sycamore Ave and Proposed Student Drop-off/Pick-up Driveway:

- Provide adequate egress radii to facilitate exit from the site.
- Provide a “STOP” sign on the eastbound egress approach.

Springfield Rd (SR 2009) and Proposed Bus Entrance Driveway

- Provide adequate ingress radii to facilitate bus entrance to the site.

Springfield Rd (SR 2009) and Proposed Bus Exit Driveway

- Provide adequate egress radii to facilitate bus exit from the site.
- Provide a “STOP” sign on the southbound egress approach.

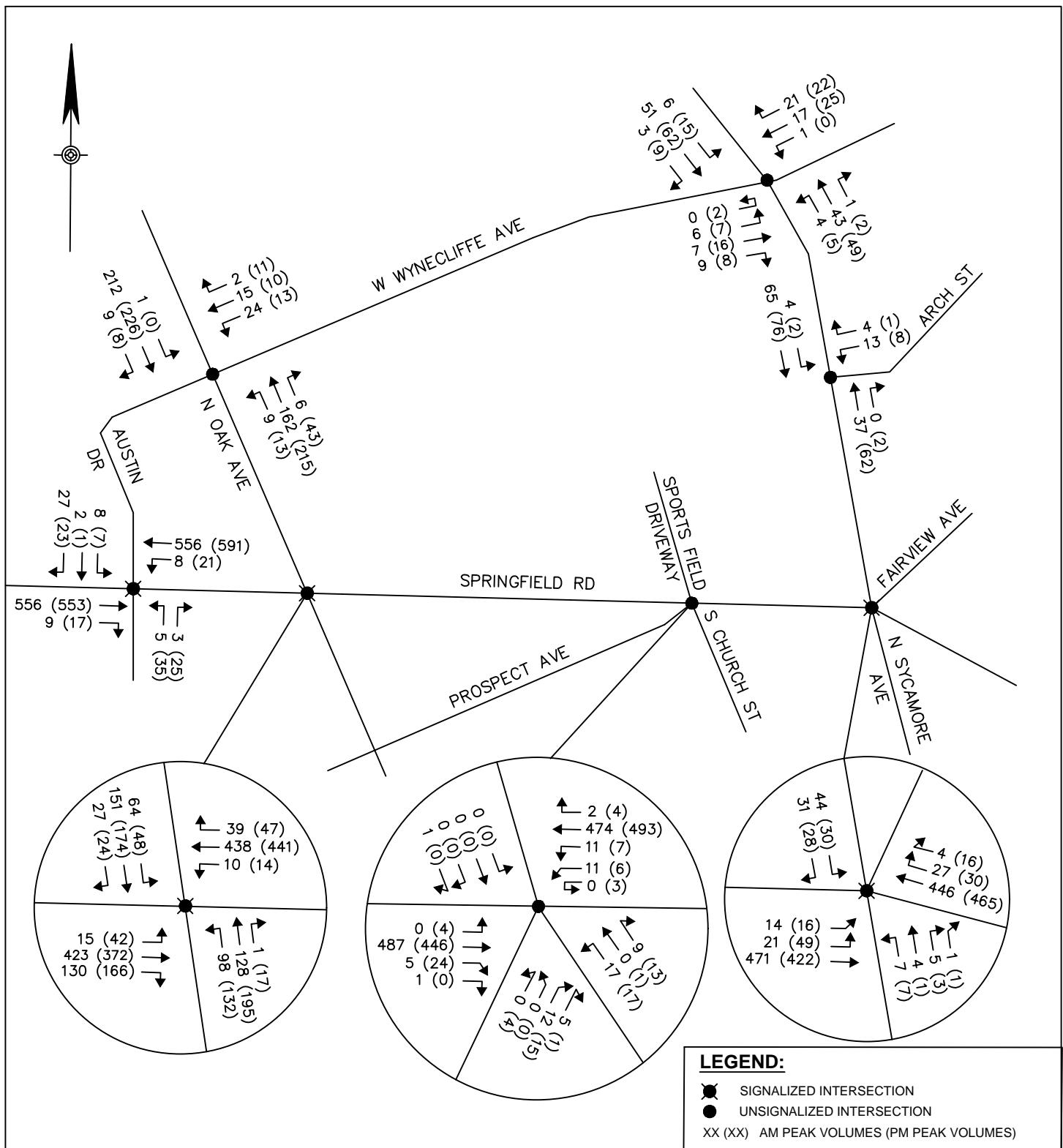


FIGURE 1
EXISTING 2019
PEAK HOUR TRAFFIC VOLUMES

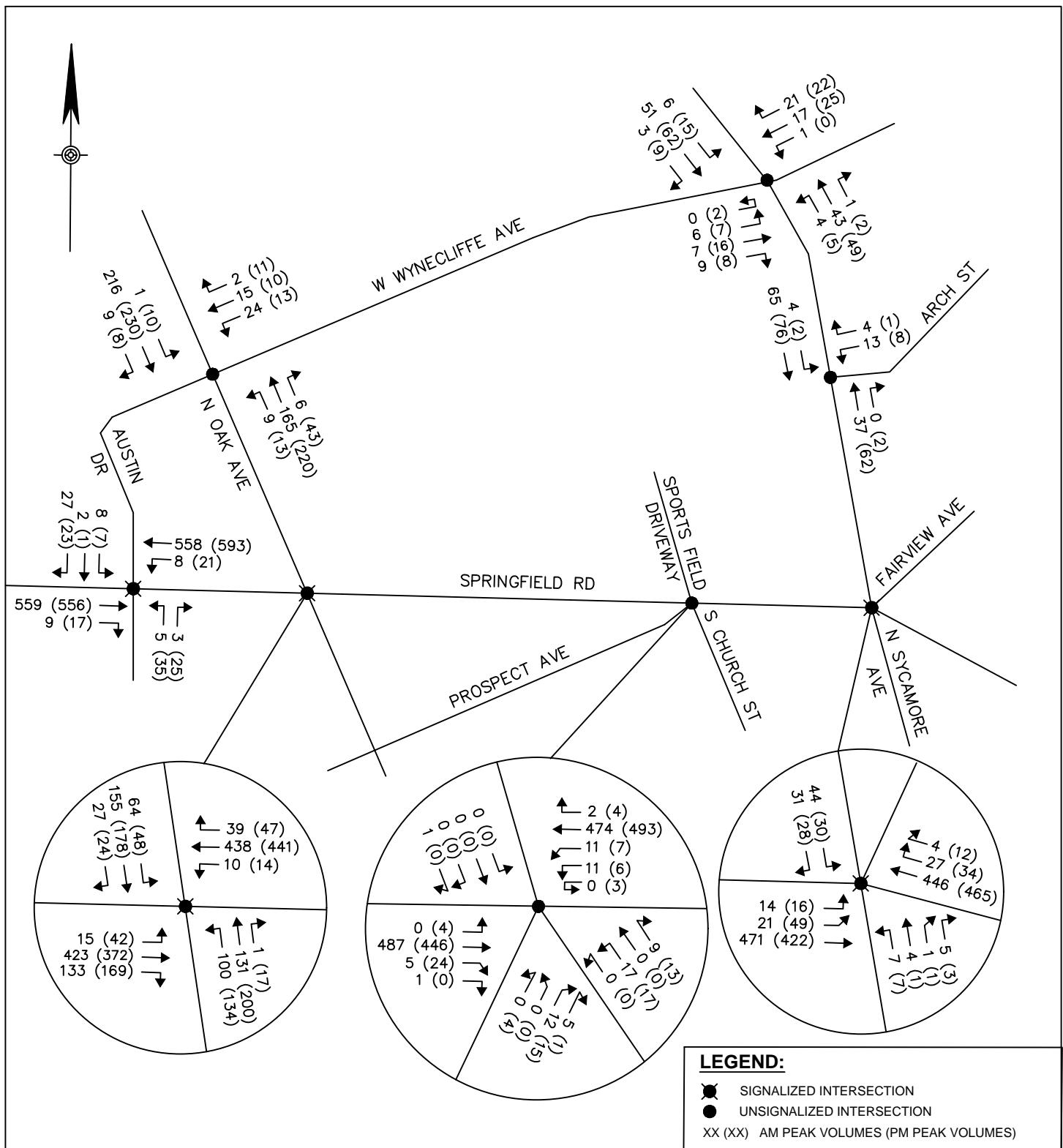
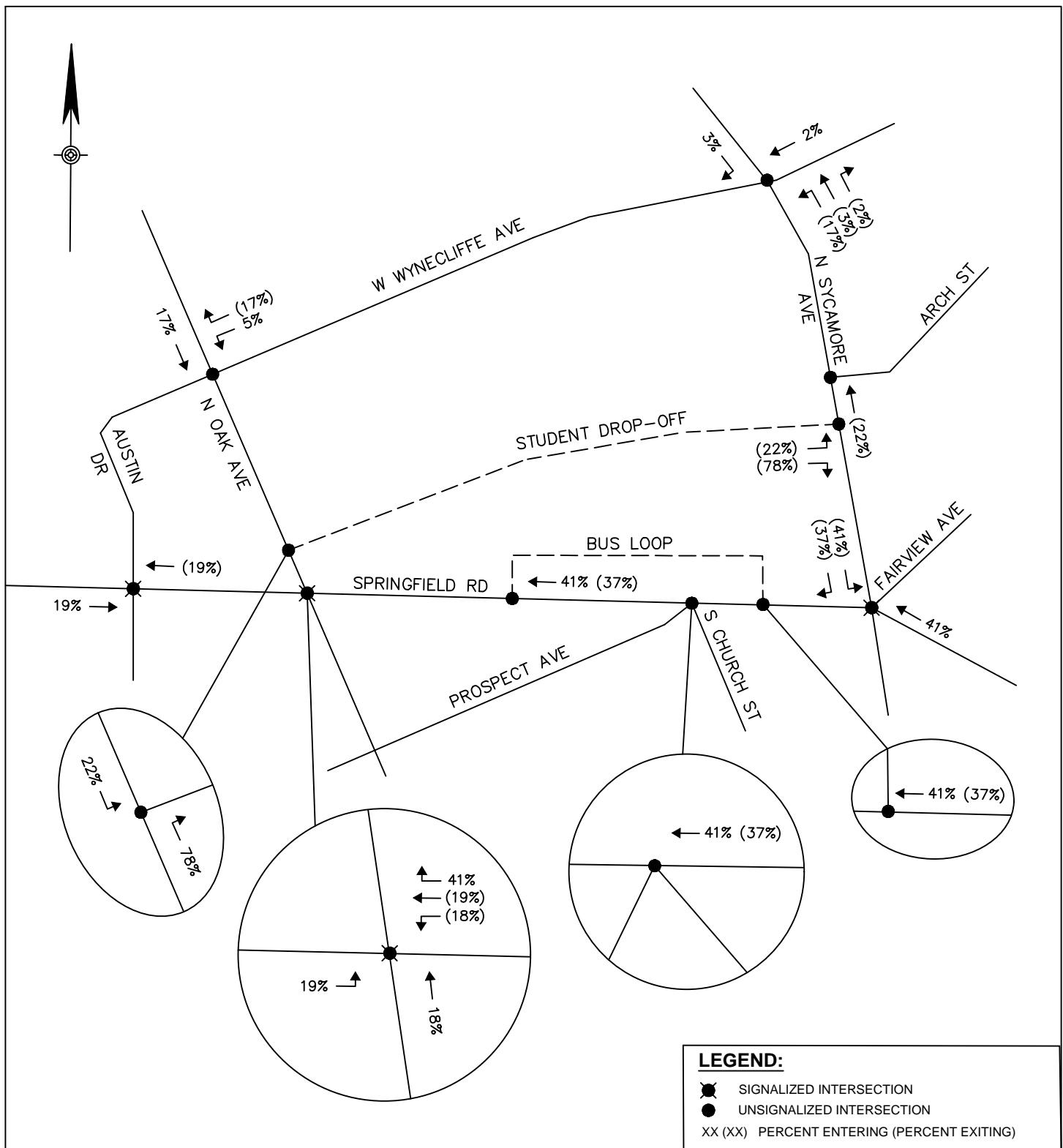
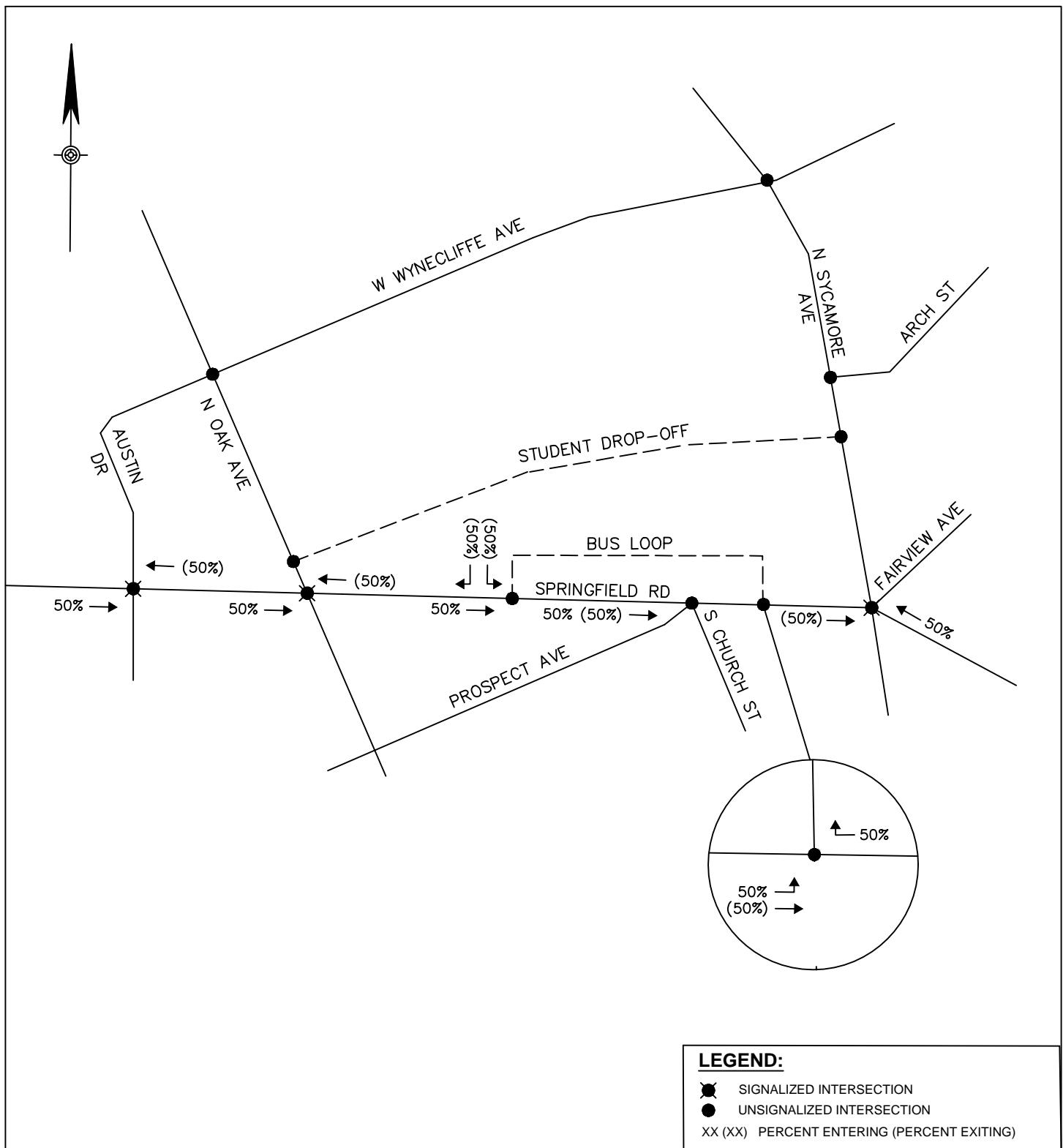
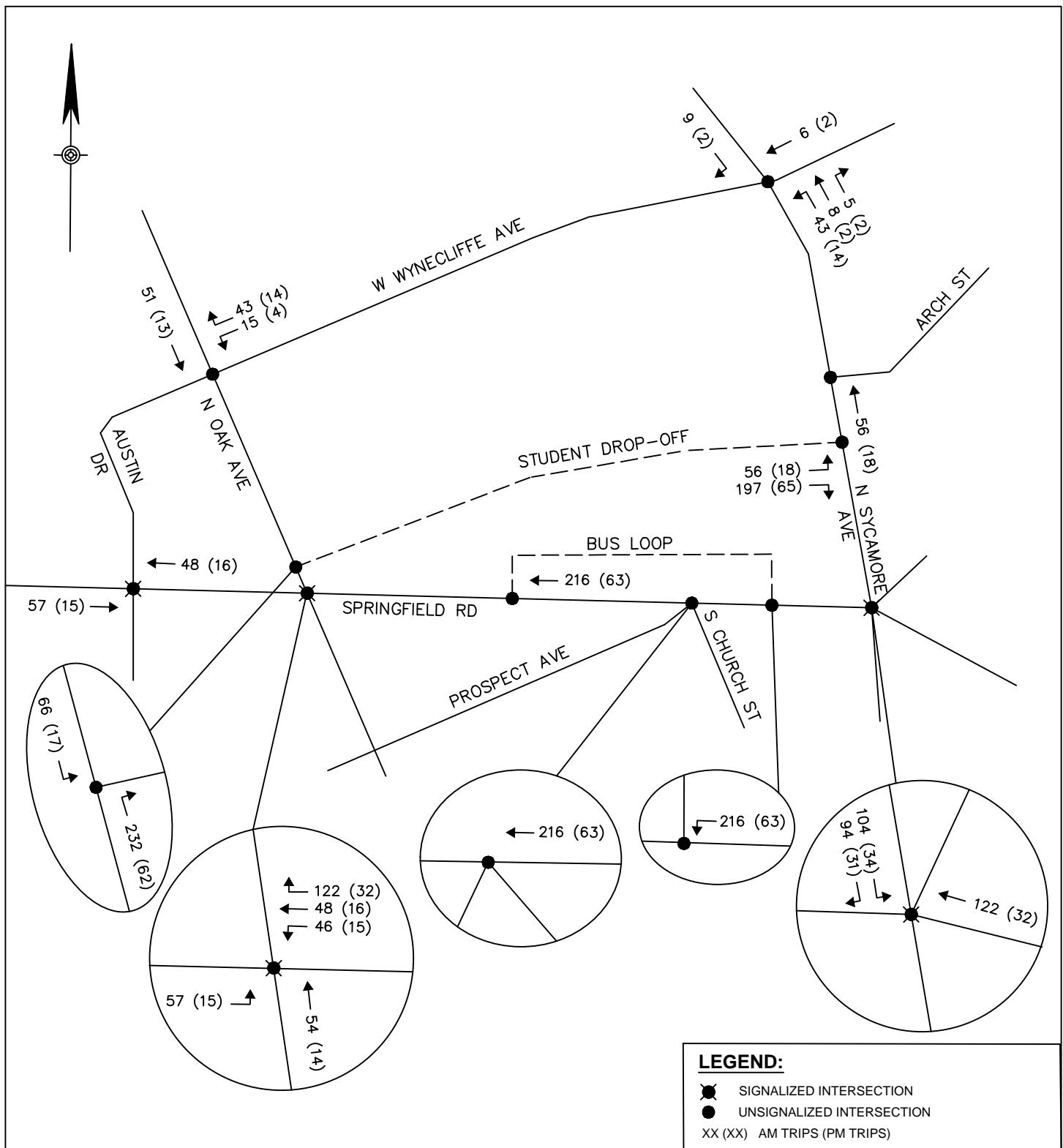
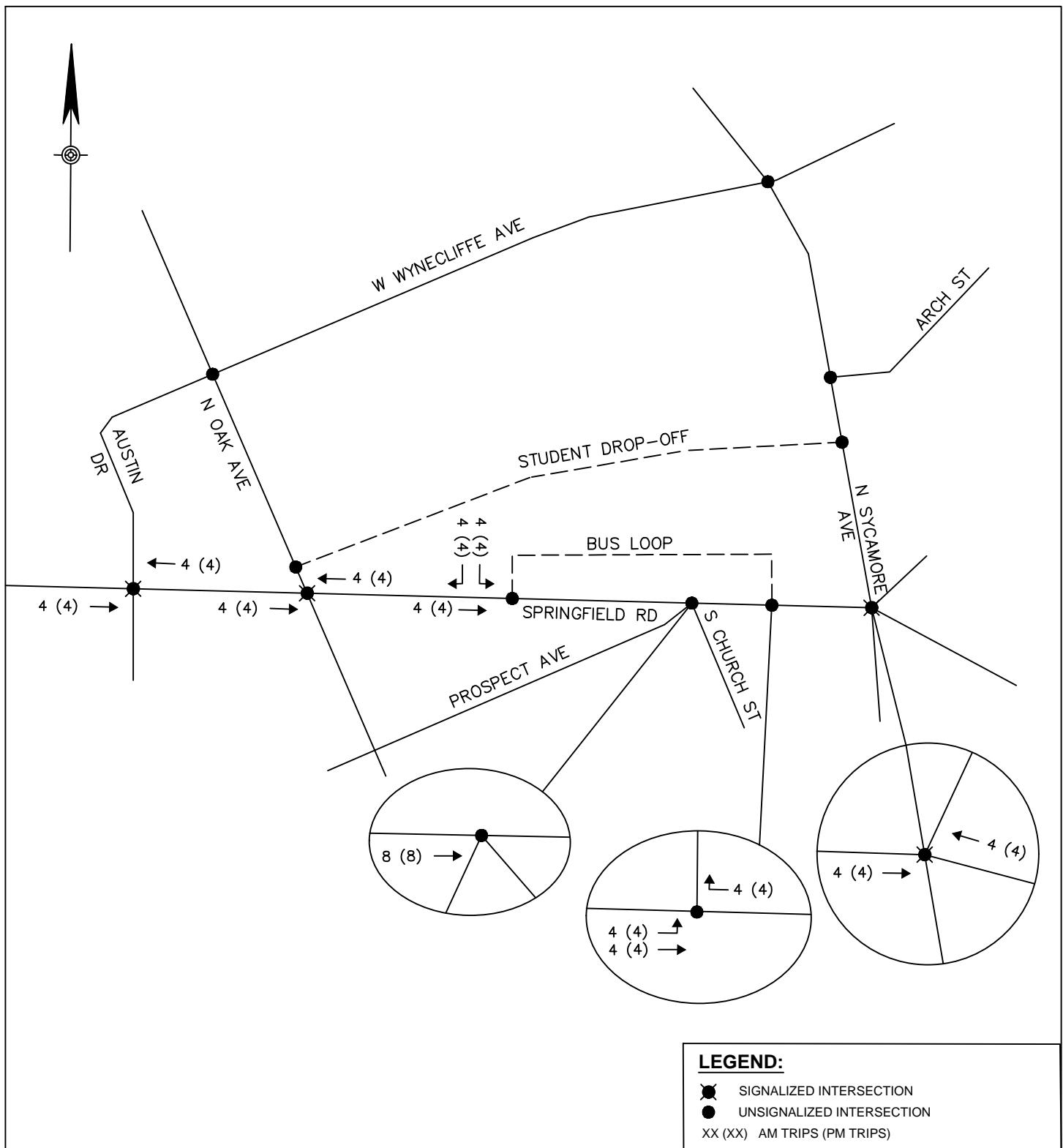


FIGURE 2
NO BUILD 2022
PROJECTED PEAK HOUR TRAFFIC VOLUMES









NOT TO SCALE

FIGURE 4B
TRIP GENERATION - BUS PICK-UP/DROP-OFF

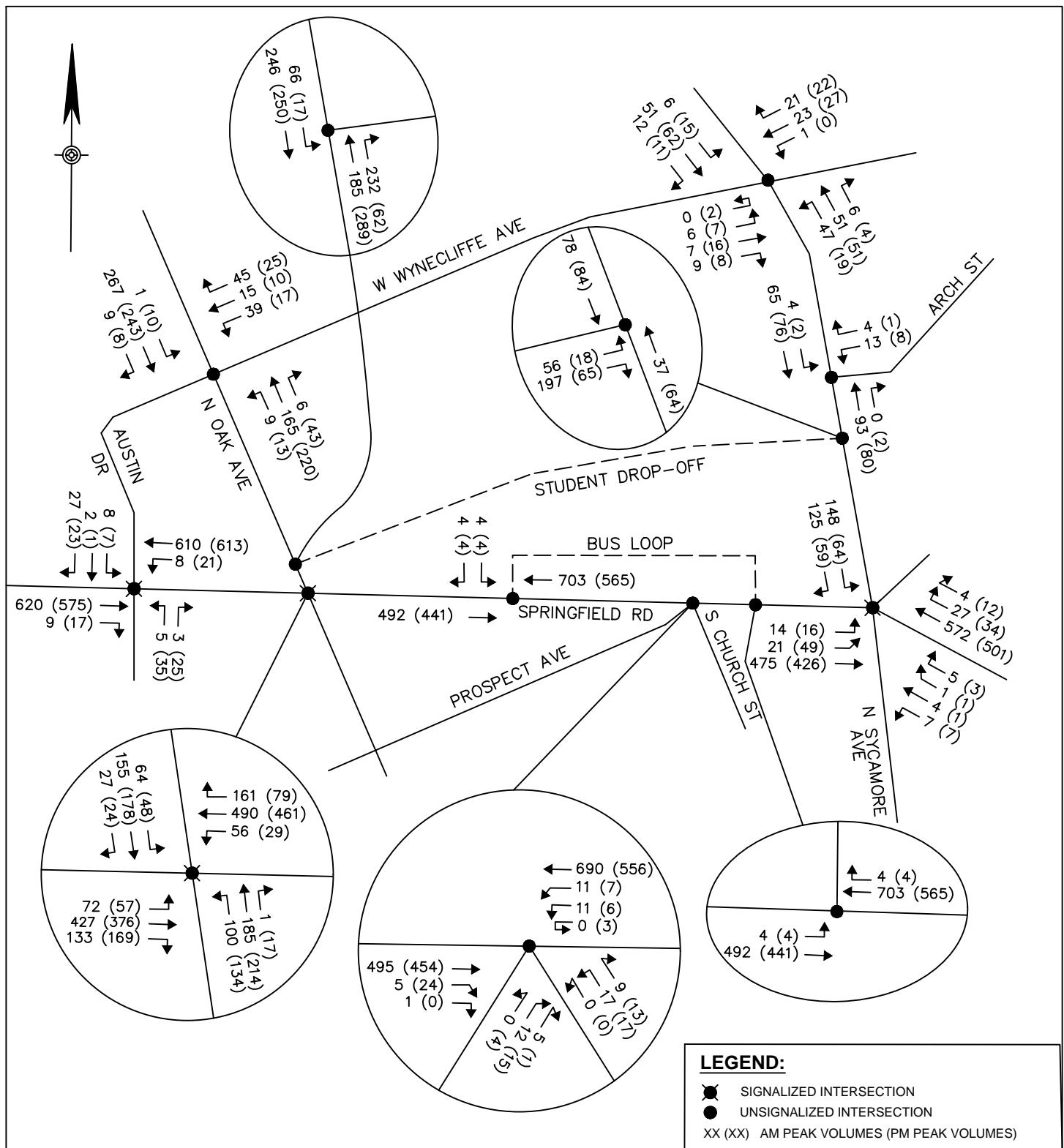


FIGURE 5
BUILD 2022
PROJECTED PEAK HOUR TRAFFIC VOLUMES

TABLE 5: AM PEAK HOUR LOS & QUEUE SUMMARY

Intersection	Approach (Movement)	Storage Length	Proposed Storage Length	2019 EXISTING			2022 NO BUILD			2022 BUILD			2022 BUILD with Improvements		
				LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)
Austin Drive & Springfield Road (Signalized)**	EB	630'*	-	A	3.1	101	A	3.1	108	A	3.4	286	A	3.4	117
	WB	275'*	-	A	3.3	131	A	3.3	130	A	3.6	132	A	3.6	136
	NB	-	-	B	11.5	-	B	11.5	-	A	0	-	B	11.5	-
	(NBL)	-	-	B	18.2	22	B	18.2	24	B	18.2	22	B	18.2	23
	(NBR)	-	-	A	0.3	22	A	0.3	21	A	0.3	29	A	0.3	20
	SB	550'*	-	B	11.9	49	B	11.9	50	B	11.9	51	B	11.9	50
	Overall	-	-	A	3.5	-	A	3.5	-	A	3.8	-	A	3.8	-
Oak Avenue & Springfield Road (Signalized)	EB	275'*	-	B	14.4	242	B	14.5	237	C	24.6	292	B	15.7	-
	(EBL)	-	75'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	18.1	98
	(EBTR)	-	275'*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	15.4	219
	WB	700'*	-	B	13.1	259	B	13.1	272	C	31.4	421	B	12.9	-
	(WBL)	-	75'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	C	20.3	73
	(WBT)	-	335'*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	13.2	176
	(WBR)	-	200'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	9.5	74
	NB	1000'+*	-	B	16.9	186	B	17	186	B	18.4	339	B	17	-
	(NBL)	-	100'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	19.7	109
	(NBTR)	-	1000'+*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	15.6	138
	SB	425'*	-	B	16.9	157	B	17	168	B	17	67	B	16.3	-
	(SBL)	-	75'*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	18.3	72
	(SBTR)	-	75'*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	15.6	103
	Overall	-	-	B	14.8	-	B	14.8	-	C	25.2	-	B	14.9	-
Prospect Avenue/Church Street & Springfield Road (Unsignalized)***	EB	700'*	65'*	N/A		16	N/A		20	N/A		168	N/A		172
	WB	265'*	60'*			99			99			173			100
	NB	-	-			46			51			59			53
	SB	-	N/A			8			9			N/A			N/A
	NE	-	-			32			30			35			29
	Overall	-	-			-			-			-			-
Sycamore Avenue/Fairview Avenue & Springfield Road (Signalized)**	EB	265'*	165'*	A	4.1	190	A	4.1	195	B	10.9	249	B	10.9	244
	WB	875'*	-	A	3.9	87	A	3.9	88	B	12.1	1152	B	12.1	201
	NB	690'*	-	B	15.6	39	B	15.6	39	B	16.2	44	B	16.2	42
	SB	400'*	225'*	C	25.3	43	C	25.3	43	D	37.4	216	D	37.4	155
	Overall	-	-	A	5.7	-	A	5.7	-	B	16.6	-	B	16.6	-
Oak Avenue & Wyncliffe Avenue (Unsignalized)	WB	1000'+*	-	A	8.3	47	A	8.3	46	A	8.8	47	A	8.8	47
	NB	425'*	315'*	A	8.9	72	A	8.9	76	A	9.4	69	A	9.4	67
	SB	425'*	-	A	8.9	69	A	9	68	B	10.1	172	B	10.1	84
	Overall	-	-	A	8.8	-	A	8.9	-	A	9.6	-	A	9.6	-

TABLE 5: AM PEAK HOUR LOS & QUEUE SUMMARY

Intersection	Approach (Movement)	Storage Length	Proposed Storage Length	2019 EXISTING			2022 NO BUILD			2022 BUILD			2022 BUILD with Improvements		
				LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)
Sycamore Avenue & Arch Street (Unsignalized)	WB	-	-	A	7.3	34	A	7.3	34	A	7.4	35	A	7.4	32
	NB	400'*	90'*	A	7.5	57	A	7.5	55	A	7.7	53	A	7.7	51
	SB	-	-	A	7.4	51	A	7.4	50	A	7.4	94	A	7.4	49
	Overall	-	-	A	7.4	-	A	7.4	-	A	7.6	-	A	7.6	-
Sycamore Avenue & Wyncliffe Avenue (Unsignalized)	EB	-	-	A	7.1	21	A	7.1	19	A	7.3	19	A	7.3	19
	WB	-	-	A	7.1	46	A	7.1	46	A	7.3	46	A	7.3	49
	NB	-	-	A	7.4	50	A	7.4	49	A	7.9	49	A	7.9	49
	SB	-	-	A	7.4	53	A	7.4	51	A	7.5	55	A	7.5	54
	Overall	-	-	A	7.3	-	A	7.3	-	A	7.6	-	A	7.6	-
Bus Only Exit Driveway & Springfield Road (Unsignalized)	EB	N/A	-	N/A					A	0	106	A	0	62	
	WB	N/A	305'*						A	0	459	A	0	0	
	SB	N/A	-						D	28.6	45	D	28.6	53	
	Overall	-	-						A	0.2	-	A	0.2	-	
Bus Only Entrance Driveway & Springfield Road (Unsignalized)	EB	N/A	70'*	N/A						71				68	
	WB	N/A	165'*							256				69	
	Overall	-	-							-				-	
	NB	75'*	-							15				-	
Oak Avenue & Enter Only Driveway (Unsignalized)	(NBT)	N/A	75'*	N/A						N/A				7	
	(NBR)	N/A	50'							N/A				22	
	SB	300'*	-							295				-	
	(SBL)	N/A	100'							N/A				49	
	(SBT)	N/A	300'*							N/A				58	
	Overall	-	50'							-				22	
	EB	N/A	-						B	10.3	142	0	0	-	
Sycamore Avenue & Exit Only Driveway (Unsignalized)	NB	N/A	100'	N/A					A	0	0	0	0	49	
	SB	N/A	300'*						A	0	43	0	0	58	
	Overall	-	-						A	7.1	-	0	0	-	

*Distance to the adjacent intersection

**Due to HCM limitations, Synchro Capacity analysis results were utilized .

***Due to HCM limitations at unsignalized intersections, no capacity analysis results are presented.

TABLE 6: PM PEAK HOUR LOS & QUEUE SUMMARY

Intersection	Approach (Movement)	Storage Length	Proposed Storage Length	2019 EXISTING			2022 NO BUILD			2022 BUILD			2022 BUILD with Improvements		
				LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)
Austin Drive & Springfield Road (Signalized)**	EB	630'*	-	A	4.4	132	A	4.4	128	A	4.6	121	A	4.0	115
	WB	275'*	-	A	5.2	196	A	5.2	208	A	5.4	206	A	3.0	154
	NB	-	-	B	15.2	-	B	15.2	-	B	15.2	-	B	18.9	-
	(NBL)	-	-	C	20.7	56	C	20.7	52	C	20.7	54	C	26.4	62
	(NBR)	-	-	A	7.6	44	A	7.6	45	A	7.6	48	A	8.5	47
	SB	550'*	-	B	11.4	47	B	11.4	47	B	11.4	50	B	13.5	50
	Overall	-	-	A	5.5	-	A	5.5	-	A	5.6	-	A	4.5	-
Oak Avenue & Springfield Road (Signalized)	EB	275'*	-	B	15.2	255	B	15.3	251	B	16.0	247	A	3.6	-
	(EBL)	-	75'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	3.1	72
	(EBTR)	-	275'*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	3.7	169
	WB	700'*	-	B	13.0	285	B	13.0	290	B	15.1	330	B	11.4	-
	(WBL)	-	75'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	8.1	43
	(WBT)	-	335'*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	12.1	169
	(WBR)	-	200'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A	8.3	34
	NB	1000'+*	-	C	20.6	467	C	21.0	397	C	21.7	345	B	18.3	-
	(NBL)	-	100'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	C	21.2	166
	(NBTR)	-	1000'+*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	16.6	264
	SB	425'*	-	B	16.9	224	B	17.0	214	B	17.0	85	B	16.6	-
	(SBL)	-	75'*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	19.1	64
	(SBTR)	-	75'*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B	16.0	101
	Overall	-	-	B	15.9	-	B	16.1	-	B	17.0	-	B	10.9	-
Prospect Avenue/Church Street & Springfield Road (Unsignalized)***	EB	700'*	65'*	N/A	51	N/A	57	N/A	81	N/A	64	N/A	61	N/A	50
	WB	265'*	60''*		72		50		65		61		56		50
	NB	-	-		52		60		56		56		N/A		N/A
	SB	-	N/A		0		0		N/A		32		31		N/A
	NE	-	-		43		41		-		-		-		-
	Overall	-	-		-		-		-		-		-		-
	WB	1000'+*	-		-		-		-		-		-		-
Sycamore Avenue/Fairview Avenue & Springfield Road (Signalized)**	EB	265'*	165'*	A	3.9	250	A	3.9	235	A	6.0	227	A	6.0	226
	WB	875'*	-	A	3.5	100	A	3.5	101	A	5.6	126	A	5.6	125
	NB	690'*	-	B	16.0	35	B	16.0	33	B	15.6	35	B	15.6	34
	SB	400'*	225'*	C	23.4	36	C	23.4	38	C	27.6	75	C	27.6	74
	Overall	-	-	A	4.9	-	A	4.9	-	A	8.2	-	A	8.2	-
Oak Avenue & Wyncliffe Avenue	WB	1000'+*	-	A	8.4	49	A	8.5	49	A	8.5	50	A	8.5	43
	NB	425'*	315'*	A	9.4	83	A	9.5	84	A	9.6	81	A	9.6	83

TABLE 6: PM PEAK HOUR LOS & QUEUE SUMMARY

Intersection	Approach (Movement)	Storage Length	Proposed Storage Length	2019 EXISTING			2022 NO BUILD			2022 BUILD			2022 BUILD with Improvements			
				LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	LOS	Delay (s)	95th Percentile Queue (ft)	
(Unsignalized)	SB	425'*	-	A	9.3	67	A	9.3	70	A	9.6	104	A	9.6	70	
	Overall	-	-	A	9.3	-	A	9.4	-	A	9.5	-	A	9.5	-	
Sycamore Avenue & Arch Street (Unsignalized)	WB	-	-	A	7.4	26	A	7.4	26	A	7.5	26	A	7.5	26	
	NB	400'*	90'*	A	7.4	47	A	7.4	50	A	7.5	49	A	7.5	50	
	SB	-	-	A	7.5	44	A	7.5	46	A	7.5	46	A	7.5	45	
	Overall	-	-	A	7.5	-	A	7.5	-	A	7.5	-	A	7.5	-	
Sycamore Avenue & Wyncliffe Avenue (Unsignalized)	EB	-	-	A	7.4	24	A	7.4	24	A	7.5	22	A	7.5	22	
	WB	-	-	A	7.3	45	A	7.3	44	A	7.4	46	A	7.4	43	
	NB	-	-	A	7.9	47	A	7.9	47	A	8.1	51	A	8.1	51	
	SB	-	-	A	7.7	48	A	7.7	48	A	7.7	51	A	7.7	51	
	Overall	-	-	A	7.6	-	A	7.6	-	A	7.7	-	A	7.7	-	
Bus Only Exit Driveway & Springfield Road (Unsignalized)	EB	N/A	-	N/A					A	0.0	9	A	0.0	5		
	WB	N/A	305'*						A	0.0	59	A	0.0	0		
	SB	N/A	-						C	22.3	46	C	22.3	44		
	Overall	-	-						A	0.2	-	A	0.2	-		
Bus Only Entrance Driveway & Springfield Road (Unsignalized)	EB	N/A	70'*	N/A					61		N/A		58			
	WB	N/A	165'*						21				25			
	Overall	-	-						-				-			
Oak Avenue & Enter Only Driveway (Unsignalized)	NB	75'*	-	N/A					11		N/A		4			
	(NBT)	N/A	75'						N/A				6			
	(NBR)	N/A	50'						255				-			
	SB	300'*	-						N/A				25			
	(SBL)	N/A	100'						N/A				82			
	(SBT)	N/A	300'*						N/A				-			
	Overall	-	-						-				-			
Sycamore Avenue & Exit Only Driveway (Unsignalized)	EB	N/A	-	N/A					A	9.2	44	A	9.2	47		
	NB	N/A	-						A	0.0	0	A	0.0	0		
	SB	N/A	-						A	0.0	0	A	0.0	0		
	Overall	-	-						A	3.3	-	A	3.3	-		

*Distance to the adjacent intersection

**Due to HCM limitations, Synchro Capacity analysis results were utilized.

***Due to HCM limitations at unsignalized intersections, no capacity analysis results are presented.

APPENDIX

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



APPENDIX A

TRAFFIC COUNT DATA

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	App	Ped*	
2019-04-24 6:30AM	0	87	0	0	0	87	2	0	128	0	0	128	0	
6:45AM	0	106	2	0	0	108	2	0	159	0	0	159	0	
Hourly Total	0	193	2	0	0	195	4	0	287	0	0	287	0	
7:00AM	0	128	1	0	0	129	0	0	151	0	0	151	0	
7:15AM	0	141	1	0	0	142	0	1	139	0	0	140	0	
7:30AM	0	145	3	0	0	148	5	1	136	0	0	137	0	
7:45AM	0	142	3	0	1	146	1	6	130	0	0	136	0	
Hourly Total	0	556	8	0	1	565	6	8	556	0	0	564	0	
8:00AM	0	129	4	0	1	134	0	1	121	0	0	122	0	
8:15AM	0	99	6	0	0	105	5	1	124	0	0	125	0	
8:30AM	0	148	1	0	0	149	27	2	158	0	0	160	1	
8:45AM	0	134	4	0	0	138	7	1	151	0	0	152	1	
Hourly Total	0	510	15	0	1	526	39	5	554	0	0	559	2	
9:00AM	0	120	0	0	0	120	1	3	117	0	0	120	0	
9:15AM	0	107	1	0	0	108	0	2	106	0	0	108	0	
Hourly Total	0	227	1	0	0	228	1	5	223	0	0	228	0	
2:30PM	0	106	4	0	0	110	0	1	157	0	0	158	0	
2:45PM	0	115	3	0	0	118	2	0	110	0	0	110	0	
Hourly Total	0	221	7	0	0	228	2	1	267	0	0	268	0	
3:00PM	0	123	2	0	0	125	21	1	127	0	0	128	4	
3:15PM	1	144	2	0	0	147	31	0	131	0	0	131	10	
3:30PM	0	119	3	0	0	122	20	3	118	1	0	122	11	
3:45PM	0	148	0	0	1	149	9	5	138	0	0	143	1	
Hourly Total	1	534	7	0	1	543	81	9	514	1	0	524	26	
4:00PM	0	152	0	0	0	152	6	1	135	0	0	136	1	
4:15PM	0	133	2	0	0	135	1	3	151	0	0	154	2	
4:30PM	0	140	5	0	0	145	3	10	150	0	0	160	1	
4:45PM	0	135	2	0	0	137	3	2	137	0	0	139	2	
Hourly Total	0	560	9	0	0	569	13	16	573	0	0	589	6	
5:00PM	0	140	3	0	1	144	0	6	157	0	0	163	5	
5:15PM	0	138	6	0	0	144	2	3	147	0	0	150	2	
5:30PM	0	138	4	0	0	142	10	0	136	0	0	136	1	
5:45PM	0	146	1	0	1	148	2	3	143	0	0	146	7	
Hourly Total	0	562	14	0	2	578	14	12	583	0	0	595	15	
6:00PM	1	152	2	0	0	155	4	4	117	0	0	121	2	
6:15PM	0	135	3	0	0	138	2	2	120	0	0	122	1	
Hourly Total	1	287	5	0	0	293	6	6	237	0	0	243	3	
Total	2	3650	68	0	5	3725	166	62	3794	1	0	3857	52	
% Approach	0.1%	98.0%	1.8%	0%	0.1%	-	-	1.6%	98.4%	0%	0%	-	-	
% Total	0%	45.9%	0.9%	0%	0.1%	46.8%	-	0.8%	47.7%	0%	0%	48.5%	-	
Lights	2	3518	64	0	5	3589	-	61	3653	1	0	3715	-	
% Lights	100%	96.4%	94.1%	0%	100%	96.3%	-	98.4%	96.3%	100%	0%	96.3%	-	
Articulated Trucks	0	7	0	0	0	7	-	0	14	0	0	14	-	
% Articulated Trucks	0%	0.2%	0%	0%	0%	0.2%	-	0%	0.4%	0%	0%	0.4%	-	
Buses and Single-Unit Trucks	0	125	4	0	0	129	-	1	127	0	0	128	-	
% Buses and Single-Unit Trucks	0%	3.4%	5.9%	0%	0%	3.5%	-	1.6%	3.3%	0%	0%	3.3%	-	
Pedestrians	-	-	-	-	-	-	165	-	-	-	-	-	52	
% Pedestrians	-	-	-	-	-	-	99.4%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	-	1	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0.6%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Austin Drive Northbound							Austin Drive Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 6:30AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	216
6:45AM	1	0	1	0	0	2	0	0	0	2	0	7	9	2	278
Hourly Total	1	0	1	0	0	2	0	0	0	2	0	8	10	2	494
7:00AM	1	0	0	0	0	1	0	0	0	2	0	6	8	0	289
7:15AM	1	0	0	0	0	1	0	1	0	8	0	1	10	0	293
7:30AM	2	0	2	0	0	4	0	3	1	2	0	2	8	2	297
7:45AM	1	0	1	0	0	2	0	4	1	4	0	2	11	1	295
Hourly Total	5	0	3	0	0	8	0	8	2	16	0	11	37	3	1174
8:00AM	2	0	1	0	0	3	0	3	2	1	0	0	6	0	265
8:15AM	0	0	1	0	0	1	0	1	1	5	0	3	10	0	241
8:30AM	1	0	0	0	0	1	0	3	1	8	0	0	12	5	322
8:45AM	1	0	1	0	0	2	1	2	1	5	0	0	8	1	300
Hourly Total	4	0	3	0	0	7	1	9	5	19	0	3	36	6	1128
9:00AM	0	0	0	0	0	0	0	1	0	2	0	0	3	0	243
9:15AM	0	0	0	0	1	1	0	1	0	2	0	1	4	0	221
Hourly Total	0	0	0	0	1	1	0	2	0	4	0	1	7	0	464
2:30PM	4	0	4	0	0	8	0	1	0	3	0	1	5	0	281
2:45PM	3	0	2	0	1	6	1	2	1	1	0	5	9	1	243
Hourly Total	7	0	6	0	1	14	1	3	1	4	0	6	14	1	524
3:00PM	1	0	4	0	0	5	3	0	0	3	0	3	6	8	264
3:15PM	2	0	4	0	0	6	12	0	1	2	0	1	4	4	288
3:30PM	2	0	4	0	0	6	1	1	1	0	0	7	9	3	259
3:45PM	2	0	5	0	1	8	0	2	0	5	0	4	11	0	311
Hourly Total	7	0	17	0	1	25	16	3	2	10	0	15	30	15	1122
4:00PM	2	0	0	0	2	4	0	1	0	1	0	1	3	2	295
4:15PM	1	0	1	0	1	3	1	1	2	3	0	4	10	1	302
4:30PM	9	0	3	0	2	14	2	4	0	2	0	3	9	0	328
4:45PM	8	0	8	0	0	16	3	2	0	3	0	3	8	0	300
Hourly Total	20	0	12	0	5	37	6	8	2	9	0	11	30	3	1225
5:00PM	4	0	2	0	1	7	1	0	0	3	0	2	5	2	319
5:15PM	14	0	9	0	0	23	4	1	1	6	0	1	9	1	326
5:30PM	5	0	0	0	1	6	0	4	0	4	0	1	9	0	293
5:45PM	2	0	4	0	1	7	0	2	0	5	0	3	10	5	311
Hourly Total	25	0	15	0	3	43	5	7	1	18	0	7	33	8	1249
6:00PM	3	0	3	0	2	8	2	3	0	3	0	3	9	2	293
6:15PM	6	0	1	0	2	9	0	2	1	7	0	0	10	0	279
Hourly Total	9	0	4	0	4	17	2	5	1	10	0	3	19	2	572
Total	78	0	61	0	15	154	31	45	14	92	0	65	216	40	7952
% Approach	50.6%	0%	39.6%	0%	9.7%	-	-	20.8%	6.5%	42.6%	0%	30.1%	-	-	-
% Total	1.0%	0%	0.8%	0%	0.2%	1.9%	-	0.6%	0.2%	1.2%	0%	0.8%	2.7%	-	-
Lights	77	0	57	0	15	149	-	43	14	92	0	64	213	-	7666
% Lights	98.7%	0%	93.4%	0%	100%	96.8%	-	95.6%	100%	100%	0%	98.5%	98.6%	-	96.4%
Articulated Trucks	0	0	1	0	0	1	-	0	0	0	0	0	0	-	22
% Articulated Trucks	0%	0%	1.6%	0%	0%	0.6%	-	0%	0%	0%	0%	0%	0%	-	0.3%
Buses and Single-Unit Trucks	1	0	3	0	0	4	-	2	0	0	0	1	3	-	264
% Buses and Single-Unit Trucks	1.3%	0%	4.9%	0%	0%	2.6%	-	4.4%	0%	0%	0%	1.5%	1.4%	-	3.3%
Pedestrians	-	-	-	-	-	-	31	-	-	-	-	-	-	40	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

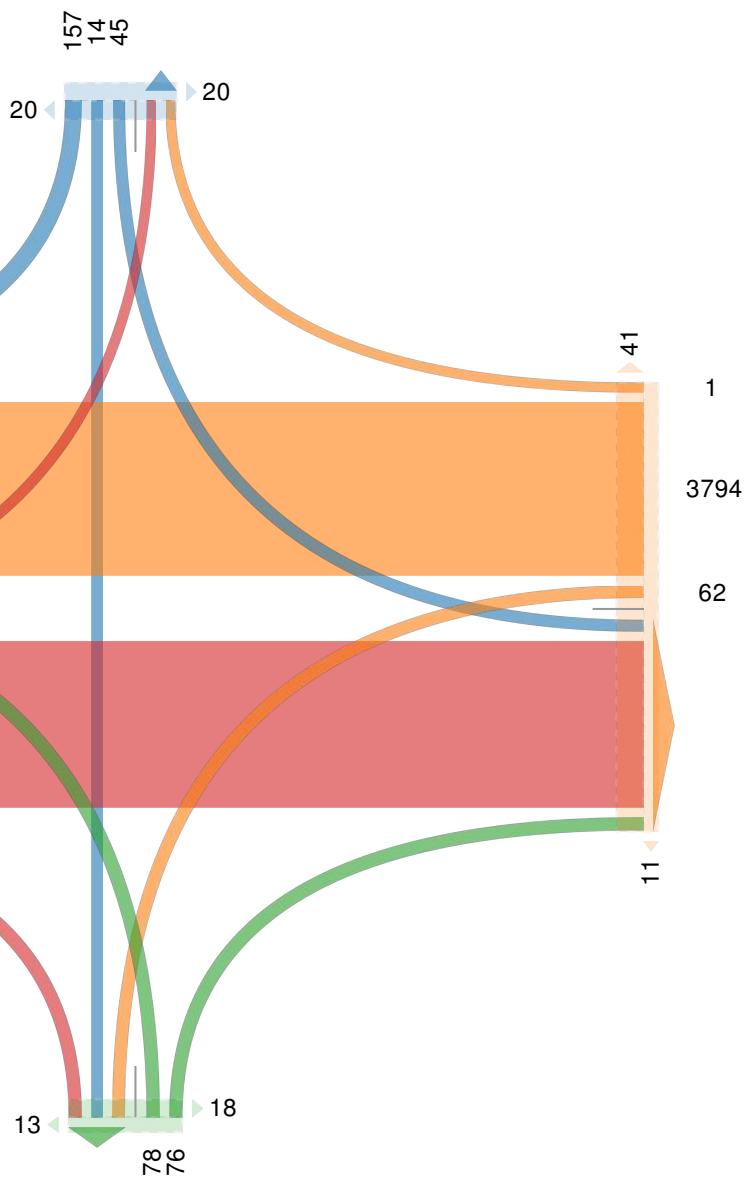
PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Austin Drive

Total: 219

In: 216 Out: 3



Out: 149 In: 154

Total: 303

[S] Austin Drive

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	App	Ped*
2019-04-24 7:00AM	0	128	1	0	0	129	0	0	151	0	0	151	0
7:15AM	0	141	1	0	0	142	0	1	139	0	0	140	0
7:30AM	0	145	3	0	0	148	5	1	136	0	0	137	0
7:45AM	0	142	3	0	1	146	1	6	130	0	0	136	0
Total	0	556	8	0	1	565	6	8	556	0	0	564	0
% Approach	0%	98.4%	1.4%	0%	0.2%	-	-	1.4%	98.6%	0%	0%	-	-
% Total	0%	47.4%	0.7%	0%	0.1%	48.1%	-	0.7%	47.4%	0%	0%	48.0%	-
PHF	-	0.959	0.667	-	0.250	0.954	-	0.333	0.921	-	-	0.934	-
Lights	0	536	8	0	1	545	-	7	525	0	0	532	-
% Lights	0%	96.4%	100%	0%	100%	96.5%	-	87.5%	94.4%	0%	0%	94.3%	-
Articulated Trucks	0	1	0	0	0	1	-	0	2	0	0	2	-
% Articulated Trucks	0%	0.2%	0%	0%	0%	0.2%	-	0%	0.4%	0%	0%	0.4%	-
Buses and Single-Unit Trucks	0	19	0	0	0	19	-	1	29	0	0	30	-
% Buses and Single-Unit Trucks	0%	3.4%	0%	0%	0%	3.4 %	-	12.5%	5.2%	0%	0%	5.3%	-
Pedestrians	-	-	-	-	-	-	6	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Austin Drive Northbound						Austin Drive Southbound								
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 7:00AM	1	0	0	0	0	1	0	0	0	2	0	6	8	0	289
7:15AM	1	0	0	0	0	1	0	1	0	8	0	1	10	0	293
7:30AM	2	0	2	0	0	4	0	3	1	2	0	2	8	2	297
7:45AM	1	0	1	0	0	2	0	4	1	4	0	2	11	1	295
Total	5	0	3	0	0	8	0	8	2	16	0	11	37	3	1174
% Approach	62.5%	0%	37.5%	0%	0%	-	-	21.6%	5.4%	43.2%	0%	29.7%	-	-	-
% Total	0.4%	0%	0.3%	0%	0%	0.7%	-	0.7%	0.2%	1.4%	0%	0.9%	3.2%	-	-
PHF	0.625	-	0.375	-	-	0.500	-	0.500	0.500	0.500	-	0.458	0.841	-	0.988
Lights	5	0	2	0	0	7	-	7	2	16	0	11	36	-	1120
% Lights	100%	0%	66.7%	0%	0%	87.5%	-	87.5%	100%	100%	0%	100%	97.3%	-	95.4%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	0	3
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0.3%
Buses and Single-Unit Trucks	0	0	1	0	0	1	-	1	0	0	0	0	1	-	51
% Buses and Single-Unit Trucks	0%	0%	33.3%	0%	0%	12.5%	-	12.5%	0%	0%	0%	0%	2.7%	-	4.3%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Austin Drive

Total: 37

In: 37 Out: 0

27 28

3

[W] N Springfield Road
In: 565 Total: 1153 Out: 588

556

9

6

556

8

Out: 567 Total: 1131 In: 564

[E] N Springfield Road

53

Out: 19 In: 8

Total: 27

[S] Austin Drive

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	App	Ped*	
2019-04-24 4:30PM	0	140	5	0	0	145	3	10	150	0	0	160	1	
4:45PM	0	135	2	0	0	137	3	2	137	0	0	139	2	
5:00PM	0	140	3	0	1	144	0	6	157	0	0	163	5	
5:15PM	0	138	6	0	0	144	2	3	147	0	0	150	2	
Total	0	553	16	0	1	570	8	21	591	0	0	612	10	
% Approach	0%	97.0%	2.8%	0%	0.2%	-	-	3.4%	96.6%	0%	0%	-	-	
% Total	0%	43.4%	1.3%	0%	0.1%	44.8%	-	1.6%	46.4%	0%	0%	48.1%	-	
PHF	-	0.988	0.667	-	0.250	0.983	-	0.525	0.941	-	-	0.939	-	
Lights	0	545	14	0	1	560	-	21	578	0	0	599	-	
% Lights	0%	98.6%	87.5%	0%	100%	98.2%	-	100%	97.8%	0%	0%	97.9%	-	
Articulated Trucks	0	0	0	0	0	0	-	0	1	0	0	1	-	
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0.2%	0%	0%	0.2%	-	
Buses and Single-Unit Trucks	0	8	2	0	0	10	-	0	12	0	0	12	-	
% Buses and Single-Unit Trucks	0%	1.4%	12.5%	0%	0%	1.8%	-	0%	2.0%	0%	0%	2.0%	-	
Pedestrians	-	-	-	-	-	-	8	-	-	-	-	-	10	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Austin Drive Northbound							Austin Drive Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 4:30PM	9	0	3	0	2	14	2	4	0	2	0	3	9	0	328
4:45PM	8	0	8	0	0	16	3	2	0	3	0	3	8	0	300
5:00PM	4	0	2	0	1	7	1	0	0	3	0	2	5	2	319
5:15PM	14	0	9	0	0	23	4	1	1	6	0	1	9	1	326
Total	35	0	22	0	3	60	10	7	1	14	0	9	31	3	1273
% Approach	58.3%	0%	36.7%	0%	5.0%	-	-	22.6%	3.2%	45.2%	0%	29.0%	-	-	-
% Total	2.7%	0%	1.7%	0%	0.2%	4.7%	-	0.5%	0.1%	1.1%	0%	0.7%	2.4%	-	-
PHF	0.625	-	0.611	-	0.375	0.652	-	0.438	0.250	0.583	-	0.750	0.861	-	0.970
Lights	35	0	21	0	3	59	-	7	1	14	0	9	31	-	1249
% Lights	100%	0%	95.5%	0%	100%	98.3%	-	100%	100%	100%	0%	100%	100%	-	98.1%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	0	0	1	0	0	1	-	0	0	0	0	0	0	-	23
% Buses and Single-Unit Trucks	0%	0%	4.5%	0%	0%	1.7%	-	0%	0%	0%	0%	0%	0%	-	1.8%
Pedestrians	-	-	-	-	-	-	10	-	-	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

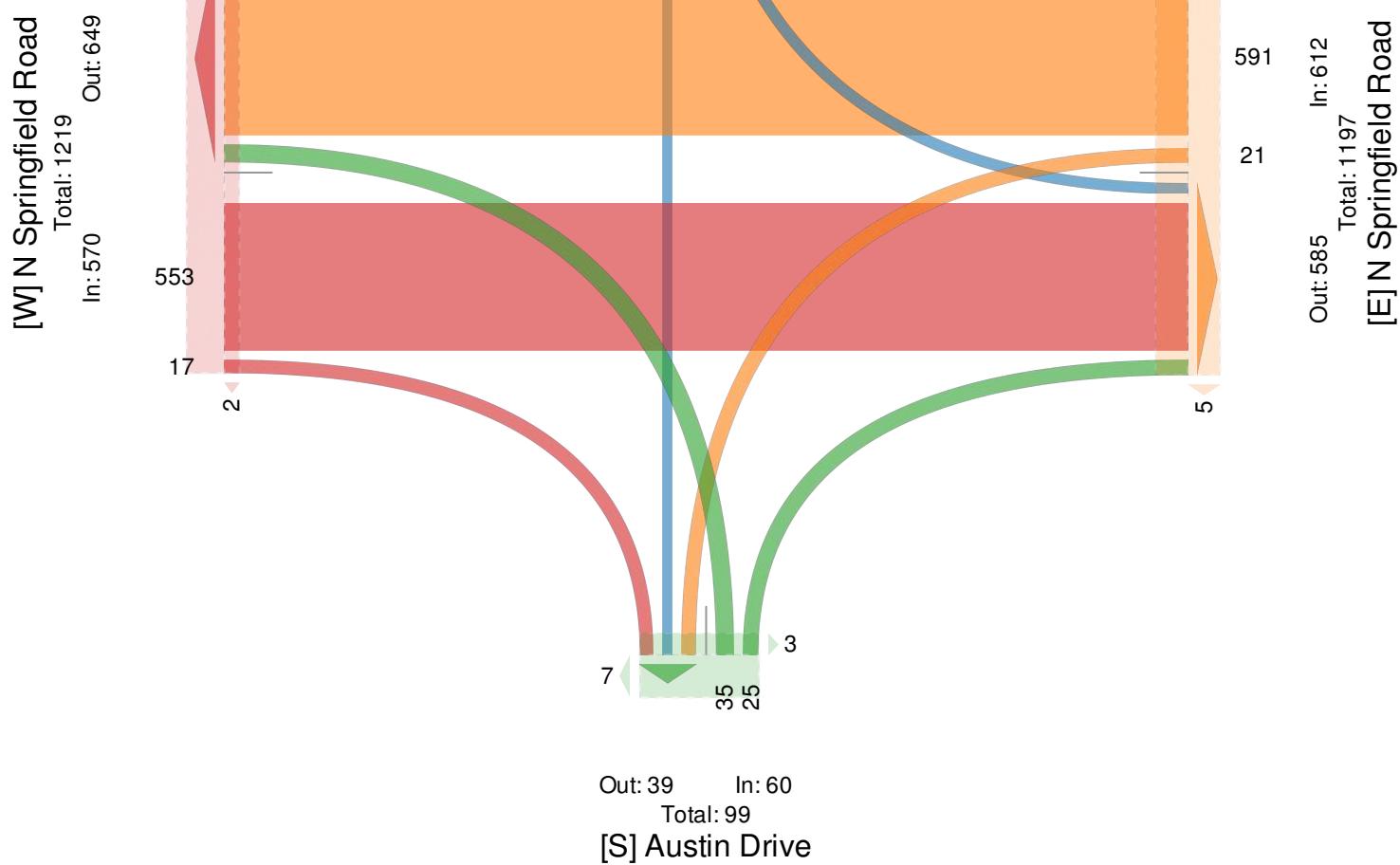
[N] Austin Drive

Total: 31

In: 31 Out: 0

23 1 7

1 2





Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 iklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin Drive
 Site Code: 1
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	N Springfield Road Eastbound							N Springfield Road Westbound							Austin Drive Northbound							Austin Drive Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total		
6:30 AM	0	0	87	0	0	2	87	0	0	128	0	0	128	0	0	0	0	0	0	0	0	0	0	0	1	0	1	216	
6:45 AM	0	0	106	2	0	2	108	0	0	159	0	0	159	0	1	0	1	0	0	2	0	0	0	2	7	2	9	278	
Hourly Total	0	0	193	2	0	4	195	0	0	287	0	0	287	0	1	0	1	0	0	2	0	0	0	2	8	2	10	494	
7:00 AM	0	0	128	1	0	0	129	0	0	151	0	0	151	0	1	0	0	0	0	1	0	0	0	2	6	0	8	289	
7:15 AM	0	0	141	1	0	0	142	0	1	139	0	0	140	0	1	0	0	0	0	1	0	1	0	8	1	0	10	293	
7:30 AM	0	0	145	3	0	5	148	0	1	136	0	0	137	0	2	0	2	0	0	4	0	3	1	2	2	2	8	297	
7:45 AM	0	0	142	3	1	1	146	0	6	130	0	0	136	0	1	0	1	0	0	2	0	4	1	4	2	1	11	295	
Hourly Total	0	0	556	8	1	6	565	0	8	556	0	0	564	0	5	0	3	0	0	8	0	8	2	16	11	3	37	1174	
8:00 AM	0	0	129	4	1	0	134	0	1	121	0	0	122	0	2	0	1	0	0	3	0	3	2	1	0	0	6	265	
8:15 AM	0	0	99	6	0	5	105	0	1	124	0	0	125	0	0	0	1	0	0	1	0	1	1	5	3	0	10	241	
8:30 AM	0	0	148	1	0	27	149	0	2	158	0	1	160	0	1	0	0	0	0	1	0	3	1	8	0	5	12	322	
8:45 AM	0	0	134	4	0	7	138	0	1	151	0	1	152	0	1	0	1	0	1	2	0	2	1	5	0	1	8	300	
Hourly Total	0	0	510	15	1	39	526	0	5	554	0	2	559	0	4	0	3	0	1	7	0	9	5	19	3	6	36	1128	
9:00 AM	0	0	120	0	0	1	120	0	3	117	0	0	120	0	0	0	0	0	0	0	0	1	0	2	0	0	3	243	
9:15 AM	0	0	107	1	0	0	108	0	2	106	0	0	108	0	0	0	0	1	0	1	0	1	0	2	1	0	4	221	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Hourly Total	0	0	227	1	0	1	228	0	5	223	0	0	228	0	0	0	0	1	0	1	0	2	0	4	1	0	7	464	
2:30 PM	0	0	106	4	0	0	110	0	1	157	0	0	158	0	4	0	4	0	0	8	0	1	0	3	1	0	5	281	
2:45 PM	0	0	115	3	0	2	118	0	0	110	0	0	110	0	3	0	2	1	1	6	0	2	1	1	5	1	9	243	
Hourly Total	0	0	221	7	0	2	228	0	1	267	0	0	268	0	7	0	6	1	1	14	0	3	1	4	6	1	14	524	
3:00 PM	0	0	123	2	0	21	125	0	1	127	0	4	128	0	1	0	4	0	3	5	0	0	0	3	3	8	6	264	
3:15 PM	0	1	144	2	0	31	147	0	0	131	0	10	131	0	2	0	4	0	0	12	6	0	0	1	2	1	4	4	288
3:30 PM	0	0	119	3	0	20	122	0	3	118	1	11	122	0	2	0	4	0	1	6	0	1	1	0	7	3	9	259	
3:45 PM	0	0	148	0	1	9	149	0	5	138	0	1	143	0	2	0	5	1	0	8	0	2	0	5	4	0	11	311	
Hourly Total	0	1	534	7	1	81	543	0	9	514	1	26	524	0	7	0	17	1	16	25	0	3	2	10	15	15	30	1122	
4:00 PM	0	0	152	0	0	6	152	0	1	135	0	1	136	0	2	0	0	2	0	4	0	1	0	1	2	3	3	295	
4:15 PM	0	0	133	2	0	1	135	0	3	151	0	2	154	0	1	0	1	1	1	3	0	1	2	3	4	1	10	302	
4:30 PM	0	0	140	5	0	3	145	0	10	150	0	1	160	0	9	0	3	2	2	14	0	4	0	2	3	0	9	328	
4:45 PM	0	0	135	2	0	3	137	0	2	137	0	2	139	0	8	0	8	0	3	16	0	2	0	3	3	0	8	300	
Hourly Total	0	0	560	9	0	13	569	0	16	573	0	6	589	0	20	0	12	5	6	37	0	8	2	9	11	3	30	1225	
5:00 PM	0	0	140	3	1	0	144	0	6	157	0	5	163	0	4	0	2	1	1	7	0	0	0	3	2	2	5	319	
5:15 PM	0	0	138	6	0	2	144	0	3	147	0	2	150	0	14	0	9	0	4	23	0	1	1	6	1	1	9	326	
5:30 PM	0	0	138	4	0	10	142	0	0	136	0	1	136	0	5	0	0	1	0	6	0	4	0	4	1	0	9	293	
5:45 PM	0	0	146	1	1	2	148	0	3	143	0	7	146	0	2	0	4	1	0	7	0	2	0	5	3	5	10	311	
Hourly Total	0	0	562	14	2	14	578	0	12	583	0	15	595	0	25	0	15	3	5	43	0	7	1	18	7	8	33	1249	
6:00 PM	0	1	152	2	0	4	155	0	4	117	0	2	121	0	3	0	3	2	2	8	0	3	0	3	2	9	293		
6:15 PM	0	0	135	3	0	2	138	0	2	120	0	1	122	0	6	0	1	2	0	9	0	2	1	7	0	0	10	279	

Grand Total	0	2	3650	68	5	166	3725	0	62	3794	1	52	3857	0	78	0	61	15	31	154	0	45	14	92	65	40	216	7952	
Approach %	0.0	0.1	98.0	1.8	0.1	-	-	0.0	1.6	98.4	0.0	-	-	0.0	50.6	0.0	39.6	9.7	-	-	0.0	20.8	6.5	42.6	30.1	-	-	-	
Total %	0.0	0.0	45.9	0.9	0.1	-	46.8	0.0	0.8	47.7	0.0	-	48.5	0.0	1.0	0.0	0.8	0.2	-	1.9	0.0	0.6	0.2	1.2	0.8	-	2.7	-	
Lights	0	2	3518	64	5	-	3589	0	61	3653	1	-	3715	0	77	0	57	15	-	149	0	43	14	92	64	-	213	7666	
% Lights	-	100.0	96.4	94.1	100.0	-	96.3	-	98.4	96.3	100.0	-	96.3	-	98.7	-	93.4	100.0	-	96.8	-	95.6	100.0	100.0	98.5	-	98.6	96.4	
Mediums	0	0	125	4	0	-	129	0	1	127	0	-	128	0	1	0	3	0	-	4	0	2	0	0	1	-	3	264	
% Mediums	-	0.0	3.4	5.9	0.0	-	3.5	-	1.6	3.3	0.0	-	3.3	-	1.3	-	4.9	0.0	-	2.6	-	4.4	0.0	0.0	1.5	-	1.4	3.3	
Articulated Trucks	0	0	7	0	0	-	7	0	0	14	0	-	14	0	0	0	1	0	-	1	0	0	0	0	0	-	0	22	
% Articulated Trucks	-	0.0	0.2	0.0	0.0	-	0.2	-	0.0	0.4	0.0	-	0.4	-	0.0	-	1.6	0.0	-	0.6	-	0.0	0.0	0.0	0.0	-	0.0	0.3	
Bicycles on Crosswalk	-	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	0.6	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	-	165	-	-	-	-	-	52	-	-	-	-	-	-	31	-	-	-	-	-	-	40	-	-
% Pedestrians	-	-	-	-	-	-	99.4	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-



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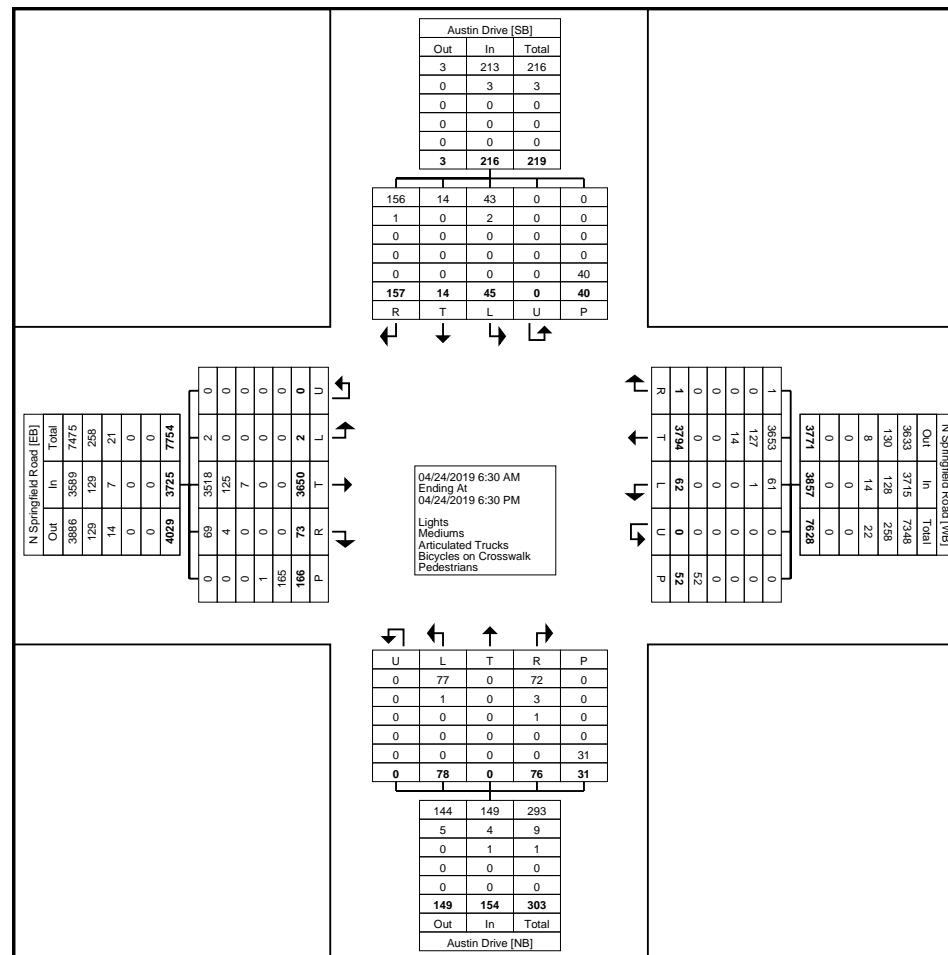
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PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin
Drive
Site Code: 1
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot



Imperial Traffic & Data Collection
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 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin Drive
 Site Code: 1
 Start Date: 04/24/2019
 Page No: 4

Turning Movement Peak Hour Data (7:00 AM)

Start Time	N Springfield Road Eastbound							N Springfield Road Westbound							Austin Drive Northbound							Austin Drive Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total		
7:00 AM	0	0	128	1	0	0	129	0	0	151	0	0	151	0	1	0	0	0	0	1	0	0	0	2	6	0	8	289	
7:15 AM	0	0	141	1	0	0	142	0	1	139	0	0	140	0	1	0	0	0	0	1	0	1	0	8	1	0	10	293	
7:30 AM	0	0	145	3	0	5	148	0	1	136	0	0	137	0	2	0	2	0	0	0	4	0	3	1	2	2	2	8	297
7:45 AM	0	0	142	3	1	1	146	0	6	130	0	0	136	0	1	0	1	0	0	0	2	0	4	1	4	2	1	11	295
Total	0	0	556	8	1	6	565	0	8	556	0	0	564	0	5	0	3	0	0	0	8	0	8	2	16	11	3	37	1174
Approach %	0.0	0.0	98.4	1.4	0.2	-	-	0.0	1.4	98.6	0.0	-	-	0.0	62.5	0.0	37.5	0.0	-	-	0.0	21.6	5.4	43.2	29.7	-	-	-	
Total %	0.0	0.0	47.4	0.7	0.1	-	48.1	0.0	0.7	47.4	0.0	-	48.0	0.0	0.4	0.0	0.3	0.0	-	0.7	0.0	0.7	0.2	1.4	0.9	-	3.2	-	
PHF	0.000	0.000	0.959	0.667	0.250	-	0.954	0.000	0.333	0.921	0.000	-	0.934	0.000	0.625	0.000	0.375	0.000	-	0.500	0.000	0.500	0.500	0.500	0.458	-	0.841	0.988	
Lights	0	0	536	8	1	-	545	0	7	525	0	-	532	0	5	0	2	0	-	7	0	7	2	16	11	-	36	1120	
% Lights	-	-	96.4	100.0	100.0	-	96.5	-	87.5	94.4	-	-	94.3	-	100.0	-	66.7	-	-	87.5	-	87.5	100.0	100.0	100.0	-	97.3	95.4	
Mediums	0	0	19	0	0	-	19	0	1	29	0	-	30	0	0	0	1	0	-	1	0	1	0	0	0	-	1	51	
% Mediums	-	-	3.4	0.0	0.0	-	3.4	-	12.5	5.2	-	-	5.3	-	0.0	-	33.3	-	-	12.5	-	12.5	0.0	0.0	0.0	-	2.7	4.3	
Articulated Trucks	0	0	1	0	0	-	1	0	0	2	0	-	2	0	0	0	0	0	-	0	0	0	0	0	-	0	3		
% Articulated Trucks	-	-	0.2	0.0	0.0	-	0.2	-	0.0	0.4	-	-	0.4	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.3		
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-		
Pedestrians	-	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	3	-	-	
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	



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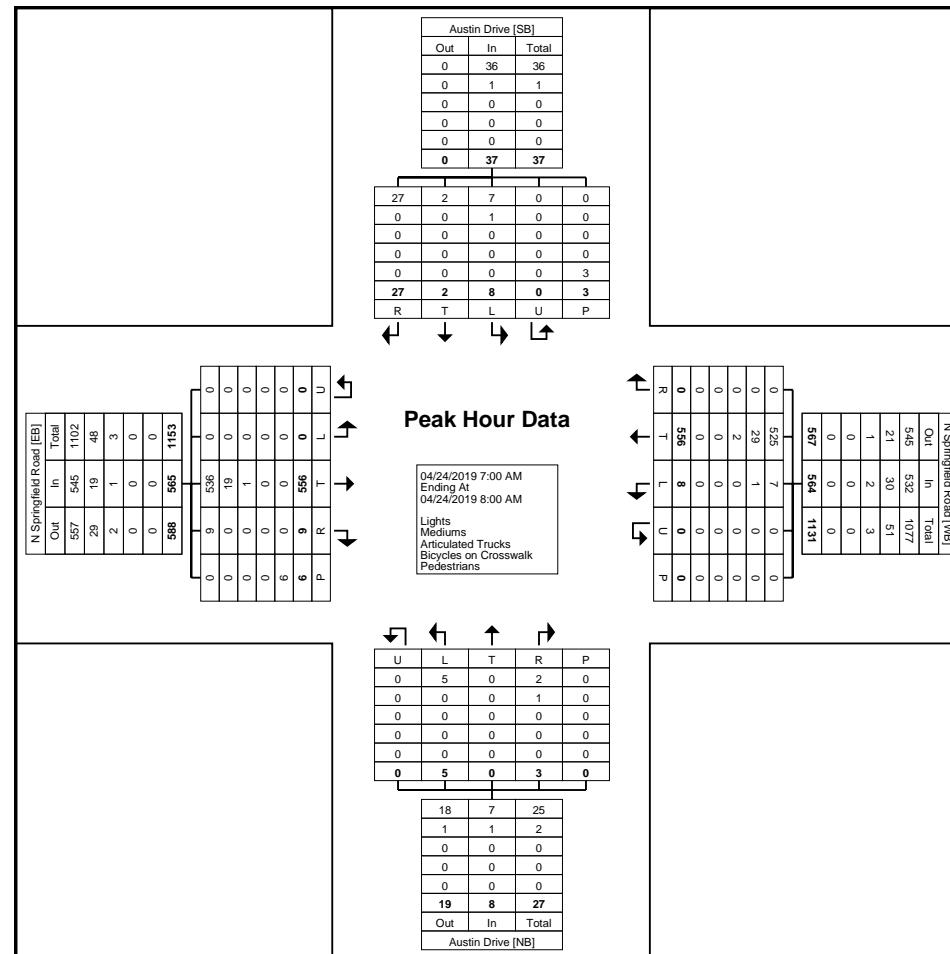
PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin
Drive
Site Code: 1
Start Date: 04/24/2019
Page No: 5



Turning Movement Peak Hour Data Plot (7:00 AM)



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 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin Drive
 Site Code: 1
 Start Date: 04/24/2019
 Page No: 6

Turning Movement Peak Hour Data (4:30 PM)

Start Time	N Springfield Road Eastbound							N Springfield Road Westbound							Austin Drive Northbound							Austin Drive Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total		
4:30 PM	0	0	140	5	0	3	145	0	10	150	0	1	160	0	9	0	3	2	2	14	0	4	0	2	3	0	9	328	
4:45 PM	0	0	135	2	0	3	137	0	2	137	0	2	139	0	8	0	8	0	3	16	0	2	0	3	3	0	8	300	
5:00 PM	0	0	140	3	1	0	144	0	6	157	0	5	163	0	4	0	2	1	1	7	0	0	0	3	2	2	5	319	
5:15 PM	0	0	138	6	0	2	144	0	3	147	0	2	150	0	14	0	9	0	4	23	0	1	1	6	1	1	9	326	
Total	0	0	553	16	1	8	570	0	21	591	0	10	612	0	35	0	22	3	10	60	0	7	1	14	9	3	31	1273	
Approach %	0.0	0.0	97.0	2.8	0.2	-	-	0.0	3.4	96.6	0.0	-	-	0.0	58.3	0.0	36.7	5.0	-	-	0.0	22.6	3.2	45.2	29.0	-	-	-	
Total %	0.0	0.0	43.4	1.3	0.1	-	44.8	0.0	1.6	46.4	0.0	-	-	0.0	2.7	0.0	1.7	0.2	-	4.7	0.0	0.5	0.1	1.1	0.7	-	2.4	-	
PHF	0.000	0.000	0.988	0.667	0.250	-	0.983	0.000	0.525	0.941	0.000	-	0.939	0.000	0.625	0.000	0.611	0.375	-	0.652	0.000	0.438	0.250	0.583	0.750	-	0.861	0.970	
Lights	0	0	545	14	1	-	560	0	21	578	0	-	599	0	35	0	21	3	-	59	0	7	1	14	9	-	31	1249	
% Lights	-	-	98.6	87.5	100.0	-	98.2	-	100.0	97.8	-	-	97.9	-	100.0	-	95.5	100.0	-	98.3	-	100.0	100.0	100.0	100.0	-	100.0	98.1	
Mediums	0	0	8	2	0	-	10	0	0	12	0	-	12	0	0	0	1	0	-	1	0	0	0	0	0	-	0	23	
% Mediums	-	-	1.4	12.5	0.0	-	1.8	-	0.0	2.0	-	-	2.0	-	0.0	-	4.5	0.0	-	1.7	-	0.0	0.0	0.0	0.0	-	0.0	1.8	
Articulated Trucks	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	0	-	0	0	0	0	0	-	0	1		
% Articulated Trucks	-	-	0.0	0.0	0.0	-	0.0	-	0.0	0.2	-	-	0.2	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1		
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	
Pedestrians	-	-	-	-	-	-	8	-	-	-	-	-	10	-	-	-	-	-	-	10	-	-	-	-	-	3	-	-	
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	



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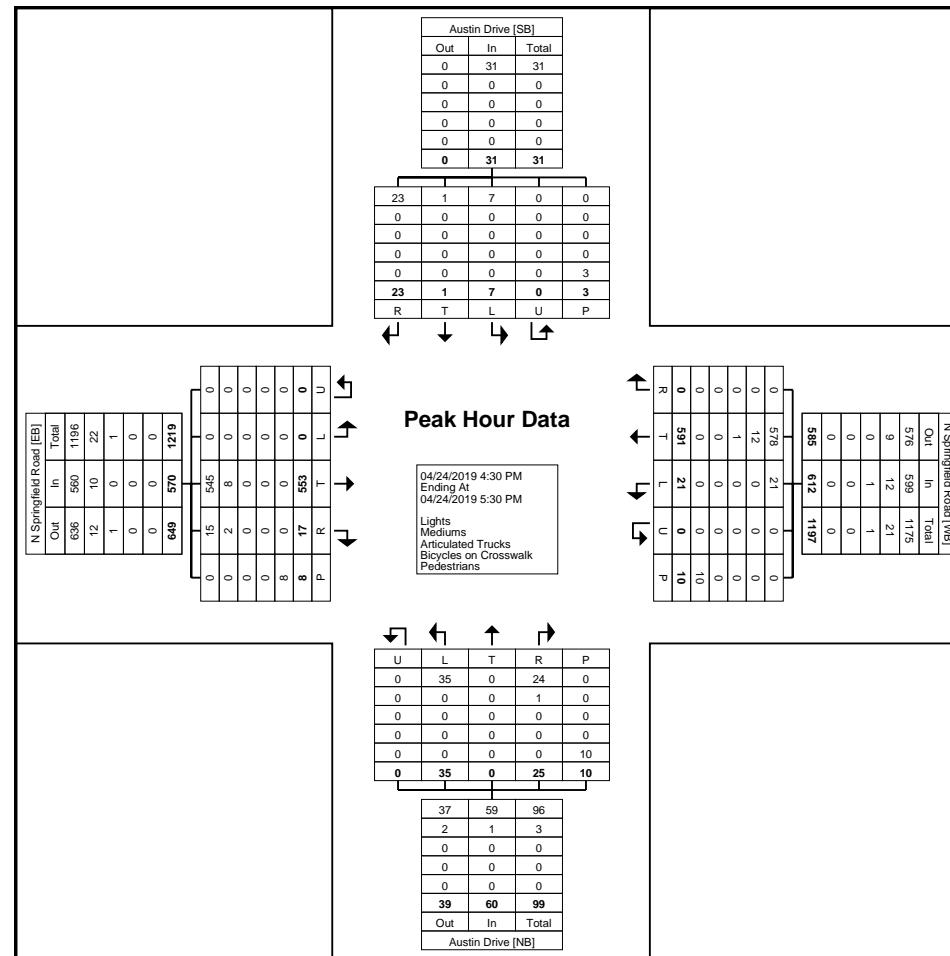
PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin
Drive
Site Code: 1
Start Date: 04/24/2019
Page No: 7



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



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 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.930496, -75.304528

Count Name: 2. N Springfield Road & Oak
 Avenue
 Site Code: 2
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	N Springfield Road Eastbound							N Springfield Road Westbound							N Oak Avenue Northbound							N Oak Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
6:30 AM	0	2	60	21	0	0	83	0	0	109	1	0	0	110	0	16	15	0	0	0	31	0	6	25	1	0	0	32	256
6:45 AM	0	1	85	21	1	1	108	0	1	125	5	0	0	131	0	32	19	1	0	0	52	0	6	22	3	0	0	31	322
Hourly Total	0	3	145	42	1	1	191	0	1	234	6	0	0	241	0	48	34	1	0	0	83	0	12	47	4	0	0	63	578
7:00 AM	0	3	95	32	1	0	131	0	4	122	10	0	0	136	0	26	32	0	0	0	58	0	15	31	8	0	1	54	379
7:15 AM	0	3	106	30	0	1	139	0	0	102	11	0	0	113	0	23	41	1	0	0	65	0	15	35	5	0	0	55	372
7:30 AM	0	3	107	36	0	1	146	0	3	106	11	2	0	122	0	22	27	0	0	0	49	0	17	39	8	1	0	65	382
7:45 AM	0	6	115	30	1	0	152	0	3	108	5	0	0	116	0	27	28	0	0	1	55	0	17	46	5	0	0	68	391
Hourly Total	0	15	423	128	2	2	568	0	10	438	37	2	0	487	0	98	128	1	0	1	227	0	64	151	26	1	1	242	1524
8:00 AM	0	7	106	22	0	1	135	0	2	102	3	0	0	107	0	19	28	1	0	1	48	0	9	50	1	0	0	60	350
8:15 AM	0	3	75	21	0	0	99	0	1	113	5	0	1	119	0	16	35	2	0	0	53	0	17	37	5	0	0	59	330
8:30 AM	0	18	96	28	3	0	145	0	5	130	6	0	0	141	0	28	27	0	0	4	55	0	7	27	1	0	1	35	376
8:45 AM	0	15	94	31	0	0	140	0	4	113	9	0	0	126	0	24	32	2	1	1	59	0	14	26	9	1	0	50	375
Hourly Total	0	43	371	102	3	1	519	0	12	458	23	0	1	493	0	87	122	5	1	6	215	0	47	140	16	1	1	204	1431
9:00 AM	0	3	95	20	0	0	118	0	2	93	7	0	0	102	0	18	21	2	0	2	41	0	6	31	10	1	0	48	309
9:15 AM	0	2	88	24	1	0	115	0	3	86	6	0	0	95	0	21	24	1	0	1	46	0	4	22	3	0	0	29	285
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Hourly Total	0	5	183	44	1	0	233	0	5	179	13	0	0	197	0	39	45	3	0	3	87	0	10	53	13	1	0	77	594
2:30 PM	0	4	86	25	0	1	115	0	0	112	7	0	0	119	0	34	25	2	0	0	61	0	7	22	3	1	0	33	328
2:45 PM	0	6	89	29	0	2	124	0	1	77	7	0	0	85	0	29	44	1	1	1	75	0	5	34	2	0	0	41	325
Hourly Total	0	10	175	54	0	3	239	0	1	189	14	0	0	204	0	63	69	3	1	1	136	0	12	56	5	1	0	74	653
3:00 PM	0	15	87	30	0	3	132	0	0	101	4	0	0	105	0	24	29	1	1	1	55	0	13	47	3	0	1	63	355
3:15 PM	0	18	89	40	0	4	147	0	3	93	7	0	0	103	0	36	33	1	0	8	70	0	11	29	2	0	2	42	362
3:30 PM	0	6	85	39	0	4	130	0	0	95	10	0	1	105	0	28	39	2	1	3	70	0	10	36	6	0	0	52	357
3:45 PM	0	7	107	32	0	3	146	0	1	105	10	0	1	116	0	30	36	2	0	2	68	0	9	34	6	0	0	49	379
Hourly Total	0	46	368	141	0	14	555	0	4	394	31	0	2	429	0	118	137	6	2	14	263	0	43	146	17	0	3	206	1453
4:00 PM	0	7	114	37	0	1	158	0	2	100	10	0	0	112	0	29	43	0	0	1	72	0	9	32	3	0	0	44	386
4:15 PM	0	6	104	26	2	4	138	0	4	117	9	0	0	130	0	33	51	1	0	0	85	0	12	45	4	0	0	61	414
4:30 PM	0	11	104	29	0	0	144	0	4	115	11	1	0	131	0	38	40	3	0	0	81	0	11	49	6	0	0	66	422
4:45 PM	0	15	107	22	0	0	144	0	1	107	11	1	2	120	0	26	46	2	1	7	75	0	13	44	2	1	0	60	399
Hourly Total	0	39	429	114	2	5	584	0	11	439	41	2	2	493	0	126	180	6	1	8	313	0	45	170	15	1	0	231	1621
5:00 PM	0	12	101	30	0	1	143	0	4	118	8	1	1	131	0	41	41	3	0	0	85	0	14	38	3	1	0	56	415
5:15 PM	0	6	101	47	1	0	155	0	2	110	9	2	0	123	0	40	45	1	1	3	87	0	10	50	7	0	0	67	432
5:30 PM	0	13	82	38	0	0	133	0	7	103	11	3	0	124	0	24	68	9	0	0	101	0	12	48	3	0	0	63	421
5:45 PM	0	11	88	50	0	2	149	0	1	110	9	4	0	124	0	27	41	3	0	1	71	0	12	38	10	0	2	60	404
Hourly Total	0	42	372	165	1	3	580	0	14	441	37	10	1	502	0	132	195	16	1	4	344	0	48	174	23	1	2	246	1672
6:00 PM	0	12	109	38	0	2	159	0	2	99	9	2	1	112	0	21	30	5	0	4	56	0	14	34	1	1	1	50	377
6:15 PM	0	8	110	21	0	2	139	0	1	80	3	1	1	85	0	32	36	1	0	2	69	0	8	33	1	2	0	44	337



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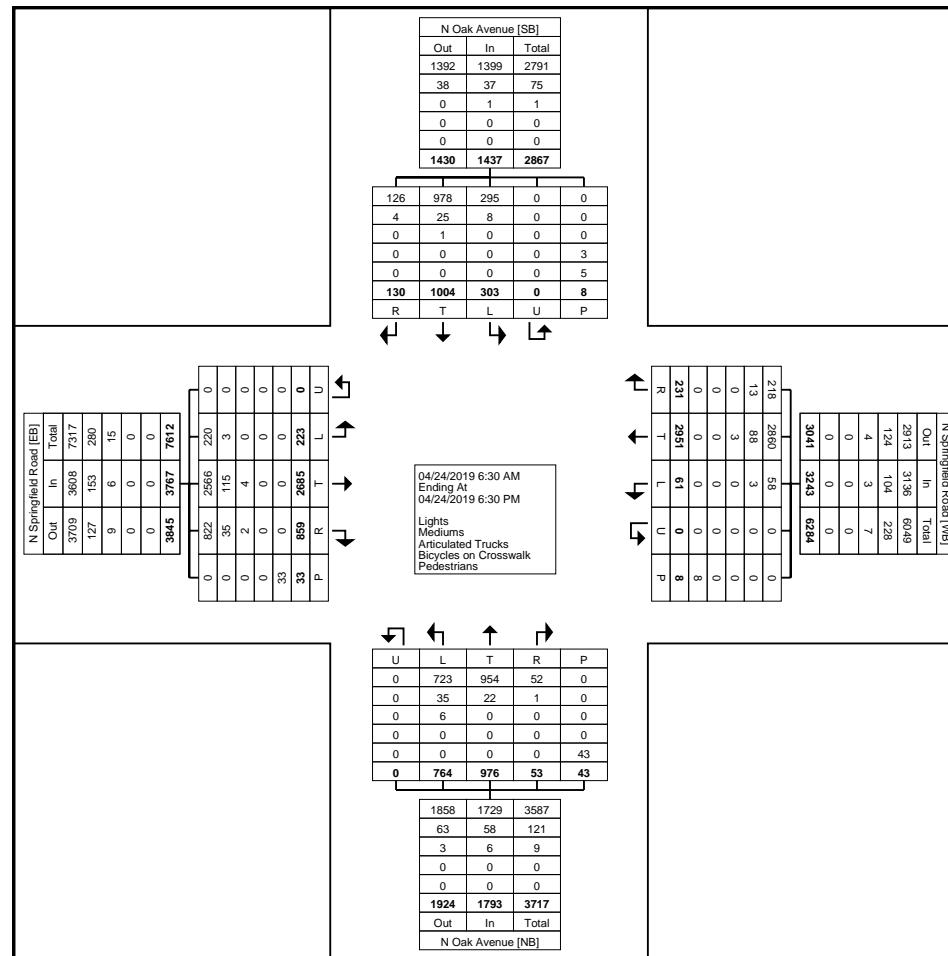
PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.930496, -75.304528

Count Name: 2. N Springfield Road & Oak Avenue
Site Code: 2
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.930496, -75.304528



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y Hill, New Jersey, United States
09-706-6100 lklein@imperialtdc.com

Count Name: 2. N Springfield Road & Oak Avenue
Site Code: 2
Start Date: 04/24/2019
Page No: 4

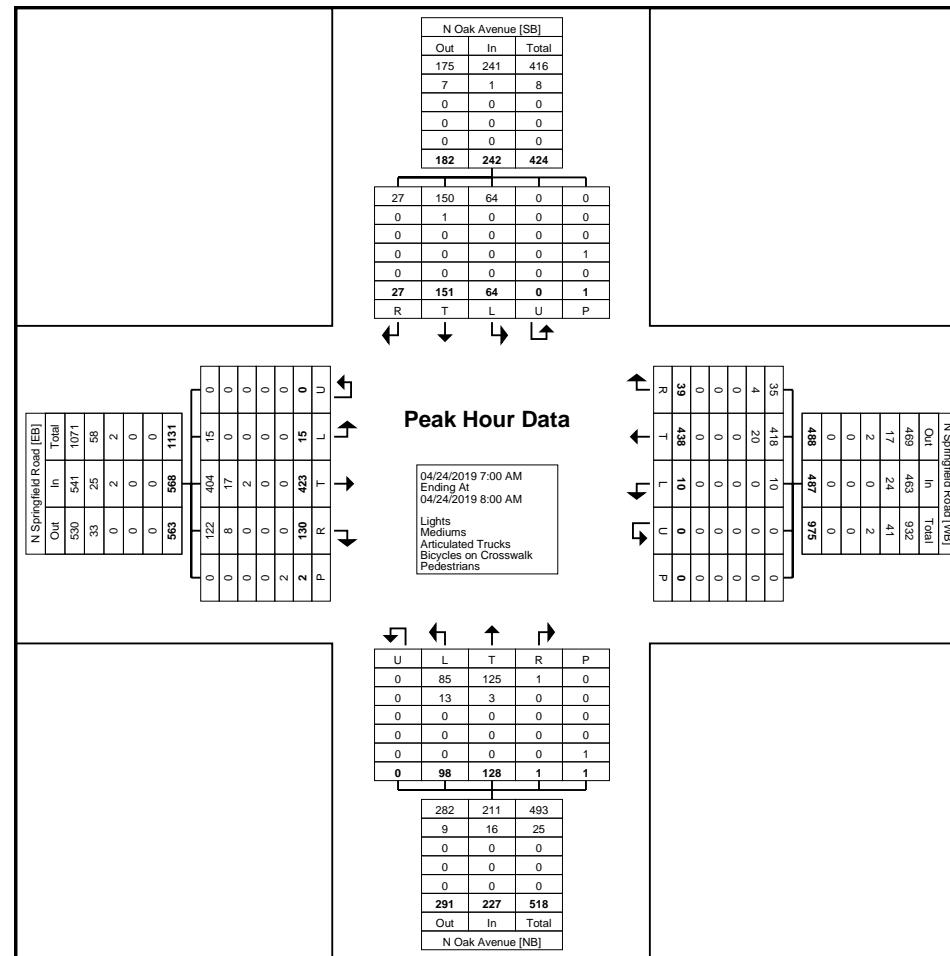
Turning Movement Peak Hour Data (7:00 AM)



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 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.930496, -75.304528

Count Name: 2. N Springfield Road & Oak
 Avenue
 Site Code: 2
 Start Date: 04/24/2019
 Page No: 5



Turning Movement Peak Hour Data Plot (7:00 AM)



Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.930496, -75.304528

Imperial Traffic & Data Collection
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609-706-6100 lklein@imperialtdc.com

Count Name: 2. N Springfield Road & Oak Avenue
Site Code: 2
Start Date: 04/24/2019
Page No: 6

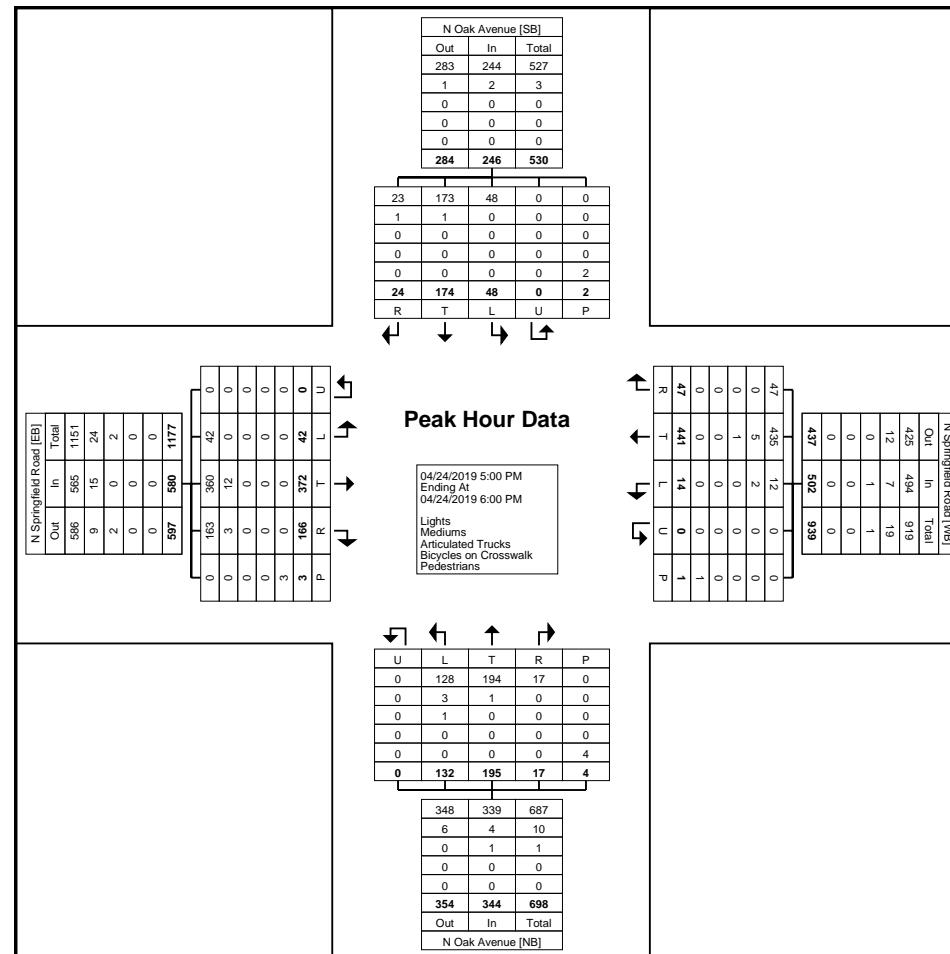
Turning Movement Peak Hour Data (5:00 PM)



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 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.930496, -75.304528

Count Name: 2. N Springfield Road & Oak Avenue
 Site Code: 2
 Start Date: 04/24/2019
 Page No: 7



Turning Movement Peak Hour Data Plot (5:00 PM)

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2019-04-24 6:30AM	2	60	21	0	0	83	0	0	109	1	0	0	110	0
6:45AM	1	85	21	0	1	108	1	1	125	5	0	0	131	0
Hourly Total	3	145	42	0	1	191	1	1	234	6	0	0	241	0
7:00AM	3	95	32	0	1	131	0	4	122	10	0	0	136	0
7:15AM	3	106	30	0	0	139	1	0	102	11	0	0	113	0
7:30AM	3	107	36	0	0	146	1	3	106	11	0	2	122	0
7:45AM	6	115	30	0	1	152	0	3	108	5	0	0	116	0
Hourly Total	15	423	128	0	2	568	2	10	438	37	0	2	487	0
8:00AM	7	106	22	0	0	135	1	2	102	3	0	0	107	0
8:15AM	3	75	21	0	0	99	0	1	113	5	0	0	119	1
8:30AM	18	96	28	0	3	145	0	5	130	6	0	0	141	0
8:45AM	15	94	31	0	0	140	0	4	113	9	0	0	126	0
Hourly Total	43	371	102	0	3	519	1	12	458	23	0	0	493	1
9:00AM	3	95	20	0	0	118	0	2	93	7	0	0	102	0
9:15AM	2	88	24	0	1	115	0	3	86	6	0	0	95	0
Hourly Total	5	183	44	0	1	233	0	5	179	13	0	0	197	0
2:30PM	4	86	25	0	0	115	1	0	112	7	0	0	119	0
2:45PM	6	89	29	0	0	124	2	1	77	7	0	0	85	0
Hourly Total	10	175	54	0	0	239	3	1	189	14	0	0	204	0
3:00PM	15	87	30	0	0	132	3	0	101	4	0	0	105	0
3:15PM	18	89	40	0	0	147	4	3	93	7	0	0	103	0
3:30PM	6	85	39	0	0	130	4	0	95	10	0	0	105	1
3:45PM	7	107	32	0	0	146	3	1	105	10	0	0	116	1
Hourly Total	46	368	141	0	0	555	14	4	394	31	0	0	429	2
4:00PM	7	114	37	0	0	158	1	2	100	10	0	0	112	0
4:15PM	6	104	26	0	2	138	4	4	117	9	0	0	130	0
4:30PM	11	104	29	0	0	144	0	4	115	11	0	1	131	0
4:45PM	15	107	22	0	0	144	0	1	107	11	0	1	120	2
Hourly Total	39	429	114	0	2	584	5	11	439	41	0	2	493	2
5:00PM	12	101	30	0	0	143	1	4	118	8	0	1	131	1
5:15PM	6	101	47	0	1	155	0	2	110	9	0	2	123	0
5:30PM	13	82	38	0	0	133	0	7	103	11	0	3	124	0
5:45PM	11	88	50	0	0	149	2	1	110	9	0	4	124	0
Hourly Total	42	372	165	0	1	580	3	14	441	37	0	10	502	1
6:00PM	12	109	38	0	0	159	2	2	99	9	0	2	112	1
6:15PM	8	110	21	0	0	139	2	1	80	3	0	1	85	1
Hourly Total	20	219	59	0	0	298	4	3	179	12	0	3	197	2
Total	223	2685	849	0	10	3767	33	61	2951	214	0	17	3243	8
% Approach	5.9%	71.3%	22.5%	0%	0.3%	-	-	1.9%	91.0%	6.6%	0%	0.5%	-	-
% Total	2.2%	26.2%	8.3%	0%	0.1%	36.8%	-	0.6%	28.8%	2.1%	0%	0.2%	31.7%	-
Lights	220	2566	813	0	9	3608	-	58	2860	201	0	17	3136	-
% Lights	98.7%	95.6%	95.8%	0%	90.0%	95.8%	-	95.1%	96.9%	93.9%	0%	100%	96.7%	-
Articulated Trucks	0	4	2	0	0	6	-	0	3	0	0	0	3	-
% Articulated Trucks	0%	0.1%	0.2%	0%	0%	0.2%	-	0%	0.1%	0%	0%	0%	0.1%	-
Buses and Single-Unit Trucks	3	115	34	0	1	153	-	3	88	13	0	0	104	-
% Buses and Single-Unit Trucks	1.3%	4.3%	4.0%	0%	10.0%	4.1%	-	4.9%	3.0%	6.1%	0%	0%	3.2%	-
Pedestrians	-	-	-	-	-	-	33	-	-	-	-	-	8	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Oak Avenue Northbound							N Oak Avenue Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 6:30AM	16	15	0	0	0	31	0	6	25	1	0	0	32	0	256
6:45AM	32	19	1	0	0	52	0	6	22	3	0	0	31	0	322
Hourly Total	48	34	1	0	0	83	0	12	47	4	0	0	63	0	578
7:00AM	26	32	0	0	0	58	0	15	31	8	0	0	54	1	379
7:15AM	23	41	1	0	0	65	0	15	35	5	0	0	55	0	372
7:30AM	22	27	0	0	0	49	0	17	39	8	0	1	65	0	382
7:45AM	27	28	0	0	0	55	1	17	46	5	0	0	68	0	391
Hourly Total	98	128	1	0	0	227	1	64	151	26	0	1	242	1	1524
8:00AM	19	28	1	0	0	48	1	9	50	1	0	0	60	0	350
8:15AM	16	35	2	0	0	53	0	17	37	5	0	0	59	0	330
8:30AM	28	27	0	0	0	55	4	7	27	1	0	0	35	1	376
8:45AM	24	32	2	0	1	59	1	14	26	9	0	1	50	0	375
Hourly Total	87	122	5	0	1	215	6	47	140	16	0	1	204	1	1431
9:00AM	18	21	2	0	0	41	2	6	31	10	0	1	48	0	309
9:15AM	21	24	1	0	0	46	1	4	22	3	0	0	29	0	285
Hourly Total	39	45	3	0	0	87	3	10	53	13	0	1	77	0	594
2:30PM	34	25	2	0	0	61	0	7	22	3	0	1	33	0	328
2:45PM	29	44	1	0	1	75	1	5	34	2	0	0	41	0	325
Hourly Total	63	69	3	0	1	136	1	12	56	5	0	1	74	0	653
3:00PM	24	29	1	0	1	55	1	13	47	3	0	0	63	1	355
3:15PM	36	33	1	0	0	70	8	11	29	2	0	0	42	2	362
3:30PM	28	39	2	0	1	70	3	10	36	6	0	0	52	0	357
3:45PM	30	36	2	0	0	68	2	9	34	6	0	0	49	0	379
Hourly Total	118	137	6	0	2	263	14	43	146	17	0	0	206	3	1453
4:00PM	29	43	0	0	0	72	1	9	32	3	0	0	44	0	386
4:15PM	33	51	1	0	0	85	0	12	45	4	0	0	61	0	414
4:30PM	38	40	3	0	0	81	0	11	49	6	0	0	66	0	422
4:45PM	26	46	2	0	1	75	7	13	44	2	0	1	60	0	399
Hourly Total	126	180	6	0	1	313	8	45	170	15	0	1	231	0	1621
5:00PM	41	41	3	0	0	85	0	14	38	3	0	1	56	0	415
5:15PM	40	45	1	0	1	87	3	10	50	7	0	0	67	0	432
5:30PM	24	68	9	0	0	101	0	12	48	3	0	0	63	0	421
5:45PM	27	41	3	0	0	71	1	12	38	10	0	0	60	2	404
Hourly Total	132	195	16	0	1	344	4	48	174	23	0	1	246	2	1672
6:00PM	21	30	5	0	0	56	4	14	34	1	0	1	50	1	377
6:15PM	32	36	1	0	0	69	2	8	33	1	0	2	44	0	337
Hourly Total	53	66	6	0	0	125	6	22	67	2	0	3	94	1	714
Total	764	976	47	0	6	1793	43	303	1004	121	0	9	1437	8	10240
% Approach	42.6%	54.4%	2.6%	0%	0.3%	-	-	21.1%	69.9%	8.4%	0%	0.6%	-	-	-
% Total	7.5%	9.5%	0.5%	0%	0.1%	17.5%	-	3.0%	9.8%	1.2%	0%	0.1%	14.0%	-	-
Lights	723	954	46	0	6	1729	-	295	978	117	0	9	1399	-	9872
% Lights	94.6%	97.7%	97.9%	0%	100%	96.4%	-	97.4%	97.4%	96.7%	0%	100%	97.4%	-	96.4%
Articulated Trucks	6	0	0	0	0	6	-	0	1	0	0	0	1	-	16
% Articulated Trucks	0.8%	0%	0%	0%	0%	0.3%	-	0%	0.1%	0%	0%	0%	0.1%	-	0.2%
Buses and Single-Unit Trucks	35	22	1	0	0	58	-	8	25	4	0	0	37	-	352
% Buses and Single-Unit Trucks	4.6%	2.3%	2.1%	0%	0%	3.2%	-	2.6%	2.5%	3.3%	0%	0%	2.6%	-	3.4%
Pedestrians	-	-	-	-	-	43	-	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	62.5%	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	37.5%	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

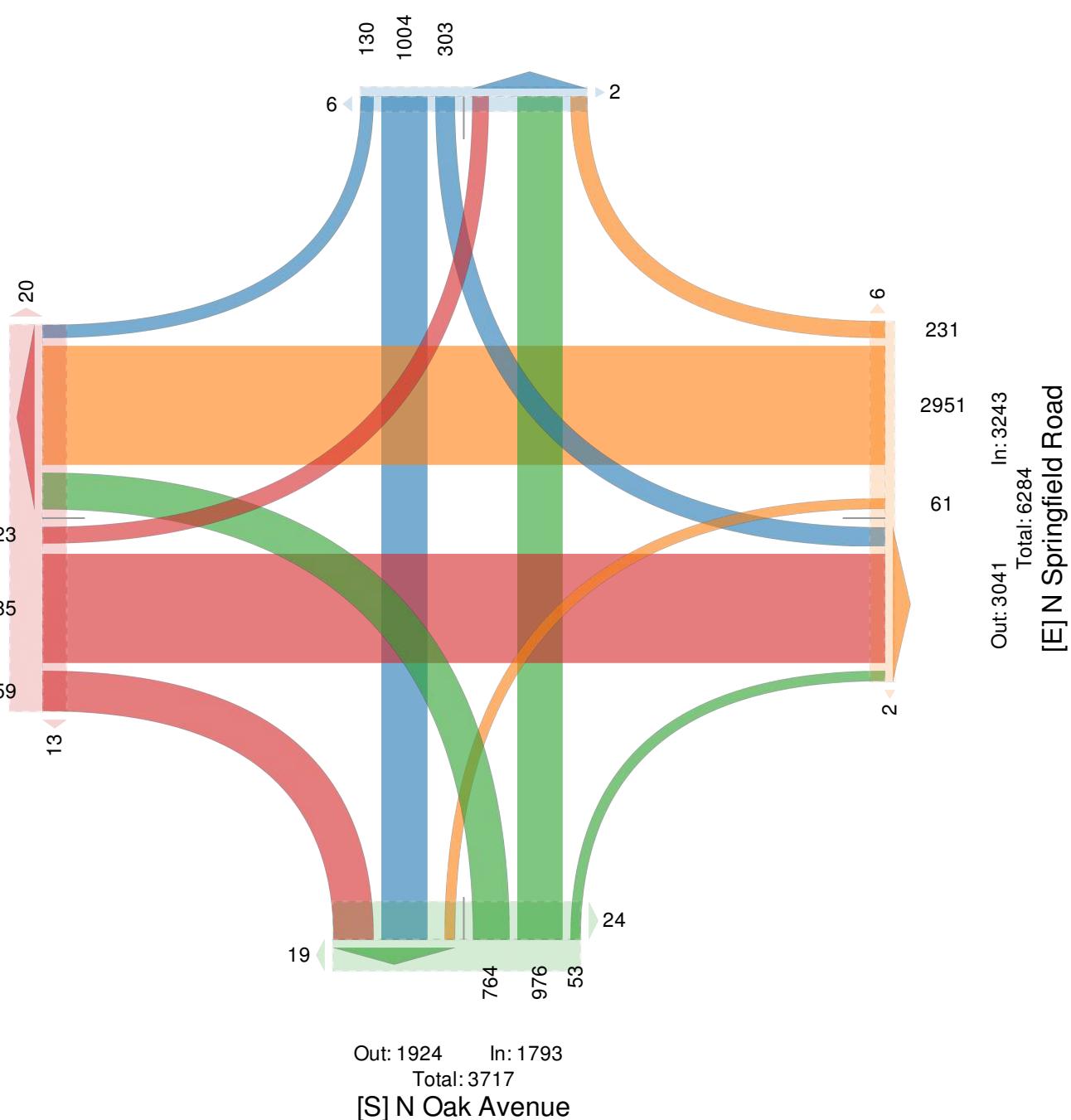
Cherry Hill, NJ, 08003, US

[N] N Oak Avenue

Total: 2867

In: 1437 Out: 1430

[W] N Springfield Road
In: 3767 Total: 7612 Out: 3845



[S] N Oak Avenue

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2019-04-24 7:00 AM	3	95	32	0	1	131	0	4	122	10	0	0	136	0
7:15 AM	3	106	30	0	0	139	1	0	102	11	0	0	113	0
7:30 AM	3	107	36	0	0	146	1	3	106	11	0	2	122	0
7:45 AM	6	115	30	0	1	152	0	3	108	5	0	0	116	0
Total	15	423	128	0	2	568	2	10	438	37	0	2	487	0
% Approach	2.6%	74.5%	22.5%	0%	0.4%	-	-	2.1%	89.9%	7.6%	0%	0.4%	-	-
% Total	1.0%	27.8%	8.4%	0%	0.1%	37.3%	-	0.7%	28.7%	2.4%	0%	0.1%	32.0%	-
PHF	0.625	0.920	0.889	-	0.500	0.934	-	0.625	0.898	0.841	-	0.250	0.895	-
Lights	15	404	121	0	1	541	-	10	418	33	0	2	463	-
% Lights	100%	95.5%	94.5%	0%	50.0%	95.2%	-	100%	95.4%	89.2%	0%	100%	95.1%	-
Articulated Trucks	0	2	0	0	0	2	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	0.5%	0%	0%	0%	0.4 %	-	0%	0%	0%	0%	0%	0 %	-
Buses and Single-Unit Trucks	0	17	7	0	1	25	-	0	20	4	0	0	24	-
% Buses and Single-Unit Trucks	0%	4.0%	5.5%	0%	50.0%	4.4 %	-	0%	4.6%	10.8%	0%	0%	4.9 %	-
Pedestrians	-	-	-	-	-	-	2	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Oak Avenue Northbound							N Oak Avenue Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 7:00AM	26	32	0	0	0	58	0	15	31	8	0	0	54	1	379
7:15AM	23	41	1	0	0	65	0	15	35	5	0	0	55	0	372
7:30AM	22	27	0	0	0	49	0	17	39	8	0	1	65	0	382
7:45AM	27	28	0	0	0	55	1	17	46	5	0	0	68	0	391
Total	98	128	1	0	0	227	1	64	151	26	0	1	242	1	1524
% Approach	43.2%	56.4%	0.4%	0%	0%	-	-	26.4%	62.4%	10.7%	0%	0.4%	-	-	-
% Total	6.4%	8.4%	0.1%	0%	0%	14.9%	-	4.2%	9.9%	1.7%	0%	0.1%	15.9%	-	-
PHF	0.907	0.780	0.250	-	-	0.873	-	0.941	0.821	0.813	-	0.250	0.890	-	0.974
Lights	85	125	1	0	0	211	-	64	150	26	0	1	241	-	1456
% Lights	86.7%	97.7%	100%	0%	0%	93.0%	-	100%	99.3%	100%	0%	100%	99.6%	-	95.5%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	2
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	13	3	0	0	0	16	-	0	1	0	0	0	1	-	66
% Buses and Single-Unit Trucks	13.3%	2.3%	0%	0%	0%	7.0%	-	0%	0.7%	0%	0%	0%	0.4%	-	4.3%
Pedestrians	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	0%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	1
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	100%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] N Oak Avenue

Total: 424

In: 242 Out: 182

27 151 64

[W] N Springfield Road
In: 568 Total: 1131 Out: 563

39
438
10
[E] N Springfield Road
Out: 488 Total: 975 In: 487

Out: 291 In: 227

Total: 518

[S] N Oak Avenue

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2019-04-24 5:00PM	12	101	30	0	0	143	1	4	118	8	0	1	131	1
5:15PM	6	101	47	0	1	155	0	2	110	9	0	2	123	0
5:30PM	13	82	38	0	0	133	0	7	103	11	0	3	124	0
5:45PM	11	88	50	0	0	149	2	1	110	9	0	4	124	0
Total	42	372	165	0	1	580	3	14	441	37	0	10	502	1
% Approach	7.2%	64.1%	28.4%	0%	0.2%	-	-	2.8%	87.8%	7.4%	0%	2.0%	-	-
% Total	2.5%	22.2%	9.9%	0%	0.1%	34.7%	-	0.8%	26.4%	2.2%	0%	0.6%	30.0%	-
PHF	0.808	0.921	0.825	-	0.250	0.935	-	0.500	0.934	0.841	-	0.625	0.958	-
Lights	42	360	162	0	1	565	-	12	435	37	0	10	494	-
% Lights	100%	96.8%	98.2%	0%	100%	97.4 %	-	85.7%	98.6%	100%	0%	100%	98.4 %	-
Articulated Trucks	0	0	0	0	0	0	-	0	1	0	0	0	1	-
% Articulated Trucks	0%	0%	0%	0%	0%	0 %	-	0%	0.2%	0%	0%	0%	0.2 %	-
Buses and Single-Unit Trucks	0	12	3	0	0	15	-	2	5	0	0	0	7	-
% Buses and Single-Unit Trucks	0%	3.2%	1.8%	0%	0%	2.6 %	-	14.3%	1.1%	0%	0%	0%	1.4 %	-
Pedestrians	-	-	-	-	-	-	3	-	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Oak Avenue Northbound							N Oak Avenue Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 5:00PM	41	41	3	0	0	85	0	14	38	3	0	1	56	0	415
5:15PM	40	45	1	0	1	87	3	10	50	7	0	0	67	0	432
5:30PM	24	68	9	0	0	101	0	12	48	3	0	0	63	0	421
5:45PM	27	41	3	0	0	71	1	12	38	10	0	0	60	2	404
Total	132	195	16	0	1	344	4	48	174	23	0	1	246	2	1672
% Approach	38.4%	56.7%	4.7%	0%	0.3%	-	-	19.5%	70.7%	9.3%	0%	0.4%	-	-	-
% Total	7.9%	11.7%	1.0%	0%	0.1%	20.6%	-	2.9%	10.4%	1.4%	0%	0.1%	14.7%	-	-
PHF	0.805	0.717	0.444	-	0.250	0.851	-	0.857	0.870	0.575	-	0.250	0.918	-	0.968
Lights	128	194	16	0	1	339	-	48	173	22	0	1	244	-	1642
% Lights	97.0%	99.5%	100%	0%	100%	98.5%	-	100%	99.4%	95.7%	0%	100%	99.2%	-	98.2%
Articulated Trucks	1	0	0	0	0	1	-	0	0	0	0	0	0	-	2
% Articulated Trucks	0.8%	0%	0%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	3	1	0	0	0	4	-	0	1	1	0	0	2	-	28
% Buses and Single-Unit Trucks	2.3%	0.5%	0%	0%	0%	1.2%	-	0%	0.6%	4.3%	0%	0%	0.8%	-	1.7%
Pedestrians	-	-	-	-	-	-	4	-	-	-	-	-	-	-	2
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] N Oak Avenue

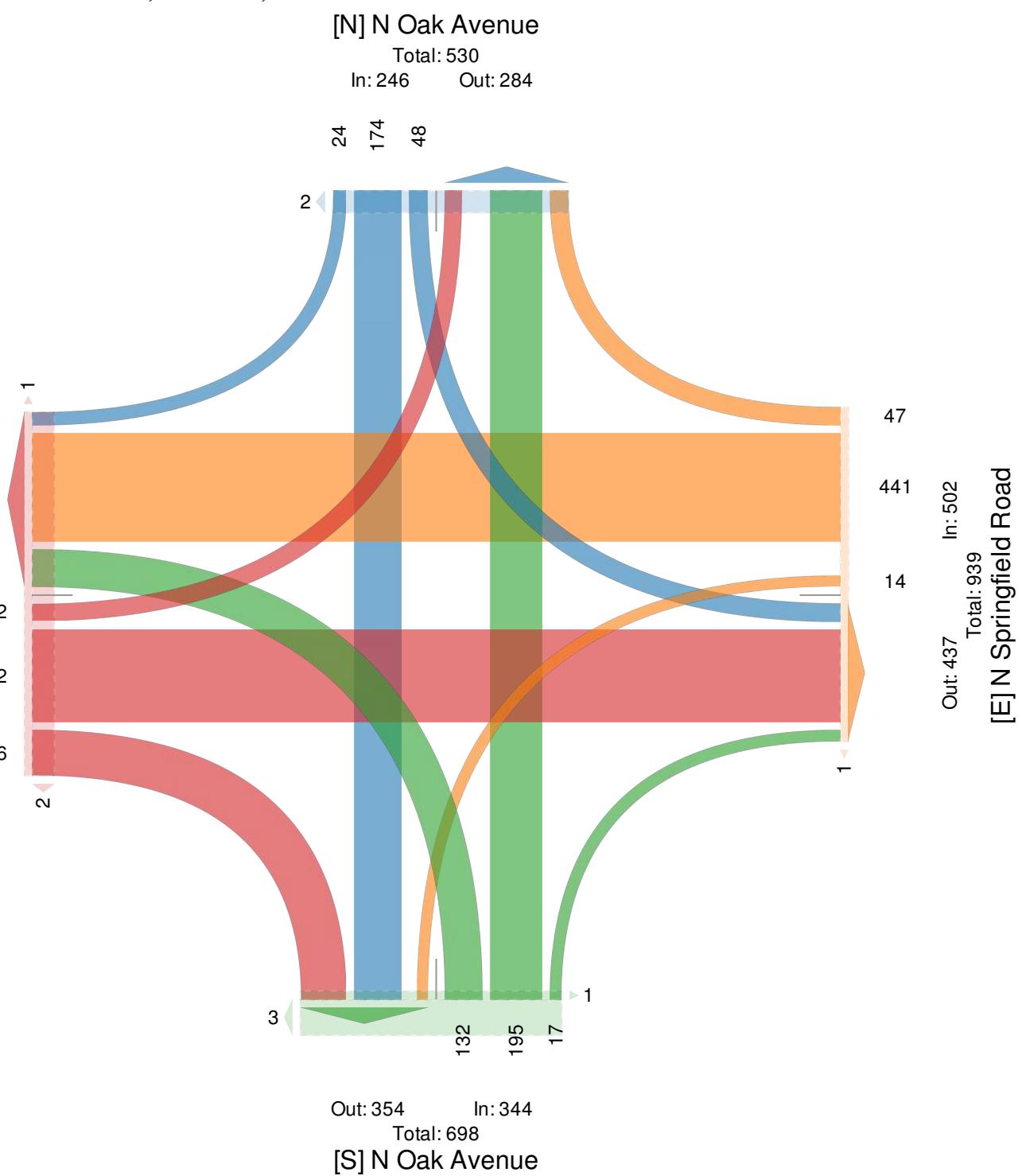
Total: 530

In: 246 Out: 284

24 174 48

[W] N Springfield Road
In: 580 Total: 1177 Out: 597

[E] N Springfield Road
Out: 437 Total: 939 In: 502



3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						N Church Street Northbound									
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*	
2019-04-24 6:30AM	0	66	0	0	0	66	0	2	2	107	0	0	0	111	0	0	3	0	1	0	4	1
6:45AM	0	90	2	0	0	92	0	1	2	124	0	0	0	127	0	0	2	0	2	0	4	0
Hourly Total	0	156	2	0	0	158	0	3	4	231	0	0	0	238	0	0	5	0	3	0	8	1
7:00AM	0	110	0	0	0	110	0	4	2	128	1	0	0	135	0	0	7	0	4	0	11	0
7:15AM	0	118	1	0	0	119	0	2	4	111	1	0	0	118	0	0	2	0	2	0	4	0
7:30AM	0	128	2	0	0	130	0	2	3	120	0	0	0	125	0	0	3	0	1	0	4	1
7:45AM	0	131	2	1	0	134	0	3	2	115	0	0	0	120	0	0	5	0	2	0	7	1
Hourly Total	0	487	5	1	0	493	0	11	11	474	2	0	0	498	0	0	17	0	9	0	26	2
8:00AM	0	110	2	0	0	112	0	3	1	105	0	0	0	109	0	0	5	0	1	0	6	2
8:15AM	0	90	3	0	0	93	0	2	1	118	0	0	0	121	0	0	4	0	0	0	4	0
8:30AM	0	102	2	0	0	104	0	0	1	138	0	0	0	139	0	0	4	0	2	0	6	2
8:45AM	0	103	7	0	0	110	0	6	3	124	0	0	0	133	1	0	1	0	5	0	6	0
Hourly Total	0	405	14	0	0	419	0	11	6	485	0	0	0	502	1	0	14	0	8	0	22	4
9:00AM	0	103	3	0	0	106	0	4	2	98	1	0	0	105	0	0	7	0	4	0	11	2
9:15AM	0	85	6	1	0	92	0	2	1	90	1	0	0	94	0	0	2	0	3	0	5	0
9:30AM	0	96	2	0	0	98	0	1	2	61	0	0	0	64	2	0	5	0	2	0	7	1
9:45AM	0	76	8	1	0	85	0	3	4	88	1	0	0	96	0	0	3	0	1	0	4	0
Hourly Total	0	360	19	2	0	381	0	10	9	337	3	0	0	359	2	0	17	0	10	0	27	3
10:00AM	0	66	3	0	0	69	0	1	5	68	2	0	0	76	2	0	0	0	1	0	1	1
10:15AM	0	72	2	0	0	74	0	1	1	66	0	0	0	68	0	0	0	0	1	0	1	1
10:30AM	1	74	7	0	0	82	0	0	1	62	1	0	0	64	2	1	1	0	1	0	3	1
10:45AM	0	86	2	0	0	88	0	0	4	56	0	0	0	60	1	0	4	0	1	1	6	0
Hourly Total	1	298	14	0	0	313	0	2	11	252	3	0	0	268	5	1	5	0	4	1	11	3
11:00AM	0	48	4	0	0	52	0	1	2	84	0	0	0	87	0	0	4	0	2	0	6	0
11:15AM	0	86	4	1	0	91	0	1	3	68	2	0	0	74	0	0	5	0	3	0	8	0
11:30AM	0	82	1	0	0	83	1	3	0	71	1	0	0	75	0	0	6	0	3	0	9	0
11:45AM	1	63	5	0	0	69	0	2	2	96	1	0	0	101	0	2	1	0	1	0	4	0
Hourly Total	1	279	14	1	0	295	1	7	7	319	4	0	0	337	0	2	16	0	9	0	27	0
12:00PM	2	68	5	0	0	75	0	3	3	70	0	1	0	77	0	0	2	0	2	0	4	0
12:15PM	0	56	3	0	0	59	0	4	0	91	0	0	0	95	0	0	6	0	4	0	10	0
12:30PM	1	85	4	2	0	92	0	1	1	85	2	0	0	89	1	0	1	0	2	0	3	0
12:45PM	0	73	4	0	0	77	0	0	1	70	0	0	0	71	0	0	4	0	1	0	5	1
Hourly Total	3	282	16	2	0	303	0	8	5	316	2	1	0	332	1	0	13	0	9	0	22	1
1:00PM	0	65	2	0	0	67	0	6	3	81	0	0	0	90	0	0	5	0	0	0	5	0
1:15PM	0	74	2	0	0	76	0	1	1	92	1	0	0	95	1	0	5	0	4	0	9	1
1:30PM	0	69	8	0	0	77	0	2	0	114	0	0	0	116	0	0	3	0	2	0	5	0
1:45PM	0	78	6	1	0	85	0	2	2	85	0	0	0	89	1	0	5	1	2	0	8	0
Hourly Total	0	286	18	1	0	305	0	11	6	372	1	0	0	390	2	0	18	1	8	0	27	1
2:00PM	0	89	2	0	0	91	0	2	1	92	0	0	0	95	3	0	4	1	3	0	8	0
2:15PM	0	94	6	0	0	100	0	3	1	105	2	0	0	111	0	0	11	0	2	0	13	0
2:30PM	1	86	7	1	0	95	0	2	3	111	0	0	0	116	0	0	6	0	0	0	6	1
2:45PM	0	90	4	0	0	94	0	5	0	85	0	0	0	90	0	0	4	0	3	0	7	1
Hourly Total	1	359	19	1	0	380	0	12	5	393	2	0	0	412	3	0	25	1	8	0	34	2
3:00PM	0	94	8	0	0	102	0	3	2	98	0	0	0	103	0	0	4	0	1	0	5	2
3:15PM	0	95	6	0	0	101	0	4	3	99	0	0	0	106	0	0	5	0	0	0	5	6
3:30PM	1	92	4	0	0	97	1	4	3	99	1	0	0	107	0	0	2	0	0	0	2	0
3:45PM	0	116	3	0	0	119	0	8	2	109	0	0	0	119	0	0	5	0	0	0	5	3
Hourly Total	1	397	21	0	0	419	1	19	10	405	1	0	0	435	0	0	16	0	1	0	17	11
4:00PM	0	116	8	1	0	125	0	1	3	109	0	0	0	113	1	0	5	0	0	0	5	1
4:15PM	1	108	7	0	0	116	0	4	5	134	0	0	0	143	0	0	2	0	4	0	6	0
4:30PM	0	116	4	0	0	120	0	0	0	118	0	3	0	121	0	0	3	0	4	0	7	0
4:45PM	1	114	7	0	0	122	0	1	1	115	1	0	0	118	0	0	5	0	2	0	7	3
Hourly Total	2	454	26	1	0	483	0	6	9	476	1	3	0	495	1	0	15	0	10	0	25	4
5:00PM	2	108	6	0	0	116	0	1	1	126	3	0	0	131	3	0	7	1	3	0	11	0
5:15PM	5	103	6	0	0	114	0	5	2	126	0	0	0	133	1	0	8	0	2	0	10	0
5:30PM	10	100	4	0	0	114	1	2	2	110	6	0	0	120	1	0	5	1	3	0	9	0
5:45PM	2	97	4	0	0	103	0	1	3	120	5	0	0	129	7	0	4	1	3	0	8	0
Hourly Total	19	408	20	0	0	447	1	9	8	482	14	0	0	513	12	0	24	3	11	0	38	0
6:00PM	7	110	10	0	0	127	0	5	2	108	2	0	0	117	1	0	5	1	1	0	7	4
6:15PM	4	109	9	0	0	122	0	3	3	83	2	0	0	91	0	0	1	0	1	0	2	0

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound							N Church Street Northbound						
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*
Hourly Total	11	219	19	0	0	249	0	8	5	191	4	0	208	1	0	6	1	2	0	9	4
Total	39	4390	207	9	0	4645	3	117	96	4733	37	4	4987	28	3	191	6	92	1	293	36
% Approach	0.8%	94.5%	4.5%	0.2%	0%	-	-	2.3%	1.9%	94.9%	0.7%	0.1%	-	-	1.0%	65.2%	2.0%	31.4%	0.3%	-	-
% Total	0.4%	43.2%	2.0%	0.1%	0%	45.7%	-	1.2%	0.9%	46.6%	0.4%	0%	49.1%	-	0%	1.9%	0.1%	0.9%	0%	2.9%	-
Lights	39	4210	201	9	0	4459	-	113	94	4541	35	4	4787	-	3	183	6	88	1	281	-
% Lights	100%	95.9%	97.1%	100%	0%	96.0%	-	96.6%	97.9%	95.9%	94.6%	100%	96.0%	-	100%	95.8%	100%	95.7%	100%	95.9%	-
Articulated Trucks	0	20	0	0	0	20	-	0	0	17	0	0	17	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	0.5%	0%	0%	0%	0.4%	-	0%	0%	0.4%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	160	6	0	0	166	-	4	2	175	2	0	183	-	0	8	0	4	0	12	-
% Buses and Single-Unit Trucks	0%	3.6%	2.9%	0%	0%	3.6%	-	3.4%	2.1%	3.7%	5.4%	0%	3.7%	-	0%	4.2%	0%	4.3%	0%	4.1%	-
Pedestrians	-	-	-	-	-	-	3	-	-	-	-	-	-	28	-	-	-	-	-	-	35
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-	-	-	-	-	-	97.2%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	-	2.8%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Wed Apr 24, 2019

Full Length (6:30 AM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
Time	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 6:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181
6:45AM	0	0	0	0	0	0	1	0	0	1	1	0	2	0	225
Hourly Total	0	0	0	0	0	0	1	0	0	1	1	0	2	1	406
7:00AM	0	0	0	0	0	0	0	0	0	3	2	0	5	0	261
7:15AM	0	0	0	0	0	0	0	0	0	2	2	0	4	0	245
7:30AM	0	0	0	1	0	1	0	0	0	4	0	0	4	0	264
7:45AM	0	0	0	0	0	0	0	0	0	3	1	0	4	1	265
Hourly Total	0	0	0	1	0	1	0	0	0	12	5	0	17	1	1035
8:00AM	0	0	0	0	0	0	0	0	0	1	1	0	2	0	229
8:15AM	0	0	0	0	0	0	0	0	0	2	0	0	2	0	220
8:30AM	0	0	0	0	0	0	4	0	0	2	0	0	2	0	251
8:45AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	250
Hourly Total	0	0	0	0	0	0	4	0	0	6	1	0	7	0	950
9:00AM	0	0	0	0	0	0	2	0	0	4	1	0	5	0	227
9:15AM	0	1	0	0	0	1	1	0	0	4	0	0	4	0	196
9:30AM	0	0	0	1	0	1	2	2	0	2	1	0	5	0	175
9:45AM	0	0	0	0	0	0	0	0	0	2	0	1	3	0	188
Hourly Total	0	1	0	1	0	2	5	2	0	12	2	1	17	0	786
10:00AM	0	0	0	1	0	1	0	0	0	2	1	0	3	0	150
10:15AM	0	0	0	1	0	1	0	0	0	3	1	1	5	0	149
10:30AM	0	1	0	0	0	1	2	0	0	5	0	0	5	0	155
10:45AM	0	0	0	1	0	1	1	0	0	2	0	0	2	0	157
Hourly Total	0	1	0	3	0	4	3	0	0	12	2	1	15	0	611
11:00AM	1	0	0	0	0	1	1	0	0	3	1	0	4	0	150
11:15AM	0	0	0	0	0	0	0	0	0	2	0	0	2	0	175
11:30AM	0	0	0	0	0	0	1	0	0	2	0	0	2	1	169
11:45AM	2	0	1	0	0	3	1	0	0	2	0	0	2	0	179
Hourly Total	3	0	1	0	0	4	3	0	0	9	1	0	10	1	673
12:00PM	1	0	0	0	0	1	0	1	0	3	0	0	4	0	161
12:15PM	1	0	0	0	0	1	0	0	0	5	3	0	8	0	173
12:30PM	0	0	0	0	0	0	0	2	0	5	1	0	8	0	192
12:45PM	1	0	0	0	0	1	0	2	0	2	0	0	4	0	158
Hourly Total	3	0	0	0	0	3	0	5	0	15	4	0	24	0	684
1:00PM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	165
1:15PM	0	0	0	1	0	1	0	1	0	2	0	0	3	0	184
1:30PM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	201
1:45PM	0	0	0	0	0	0	0	0	0	4	0	0	4	0	186
Hourly Total	0	0	0	1	0	1	0	1	0	12	0	0	13	0	736
2:00PM	0	1	0	0	0	1	3	0	0	1	1	0	2	0	197
2:15PM	0	0	0	1	0	1	0	0	0	4	0	0	4	0	229
2:30PM	3	0	0	0	0	3	0	0	0	4	0	0	4	0	224
2:45PM	2	0	0	0	0	2	0	0	0	4	2	0	6	0	199
Hourly Total	5	1	0	1	0	7	3	0	0	13	3	0	16	0	849
3:00PM	0	0	0	0	0	0	0	1	0	6	0	0	7	0	217
3:15PM	0	0	0	0	0	0	4	1	0	6	1	0	8	0	220
3:30PM	3	0	0	0	0	3	3	0	0	4	0	0	4	1	213
3:45PM	0	0	0	0	0	0	0	0	0	5	0	0	5	1	248
Hourly Total	3	0	0	0	0	3	7	2	0	21	1	0	24	2	898
4:00PM	0	0	0	0	0	0	1	0	0	7	1	0	8	0	251
4:15PM	0	0	0	0	0	0	0	0	0	3	1	0	4	0	269
4:30PM	0	0	0	0	0	0	3	2	0	6	0	0	8	0	256
4:45PM	0	0	0	0	0	0	2	1	0	1	0	0	2	0	249
Hourly Total	0	0	0	0	0	0	6	3	0	17	2	0	22	0	1025

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
5:00PM	0	0	0	0	0	0	0	1	0	5	0	0	6	0	264
5:15PM	0	0	0	0	0	0	1	0	1	4	1	0	6	0	263
5:30PM	1	0	0	3	0	4	4	3	0	5	1	0	9	0	256
5:45PM	0	0	0	0	0	0	9	0	4	1	0	0	5	0	245
Hourly Total	1	0	0	3	0	4	14	4	5	15	2	0	26	0	1028
6:00PM	0	0	0	0	0	0	1	0	0	4	0	0	4	0	255
6:15PM	0	1	0	0	0	1	0	0	2	3	1	0	6	1	222
Hourly Total	0	1	0	0	0	1	1	0	2	7	1	0	10	1	477
Total	15	4	1	10	0	30	47	17	7	152	25	2	203	6	10158
% Approach	50.0%	13.3%	3.3%	33.3%	0%	-	-	8.4%	3.4%	74.9%	12.3%	1.0%	-	-	-
% Total	0.1%	0%	0%	0.1%	0%	0.3%	-	0.2%	0.1%	1.5%	0.2%	0%	2.0%	-	-
Lights	15	4	1	9	0	29	-	15	7	147	22	2	193	-	9749
% Lights	100%	100%	100%	90.0%	0%	96.7%	-	88.2%	100%	96.7%	88.0%	100%	95.1%	-	96.0%
Articulated Trucks	0	0	0	0	0	0	-	1	0	0	0	0	1	-	38
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	5.9%	0%	0%	0%	0%	0.5%	-	0.4%
Buses and Single-Unit Trucks	0	0	0	1	0	1	-	1	0	5	3	0	9	-	371
% Buses and Single-Unit Trucks	0%	0%	0%	10.0%	0%	3.3%	-	5.9%	0%	3.3%	12.0%	0%	4.4 %	-	3.7%
Pedestrians	-	-	-	-	-	-	46	-	-	-	-	-	-	6	
% Pedestrians	-	-	-	-	-	-	97.9%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	1	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	2.1%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

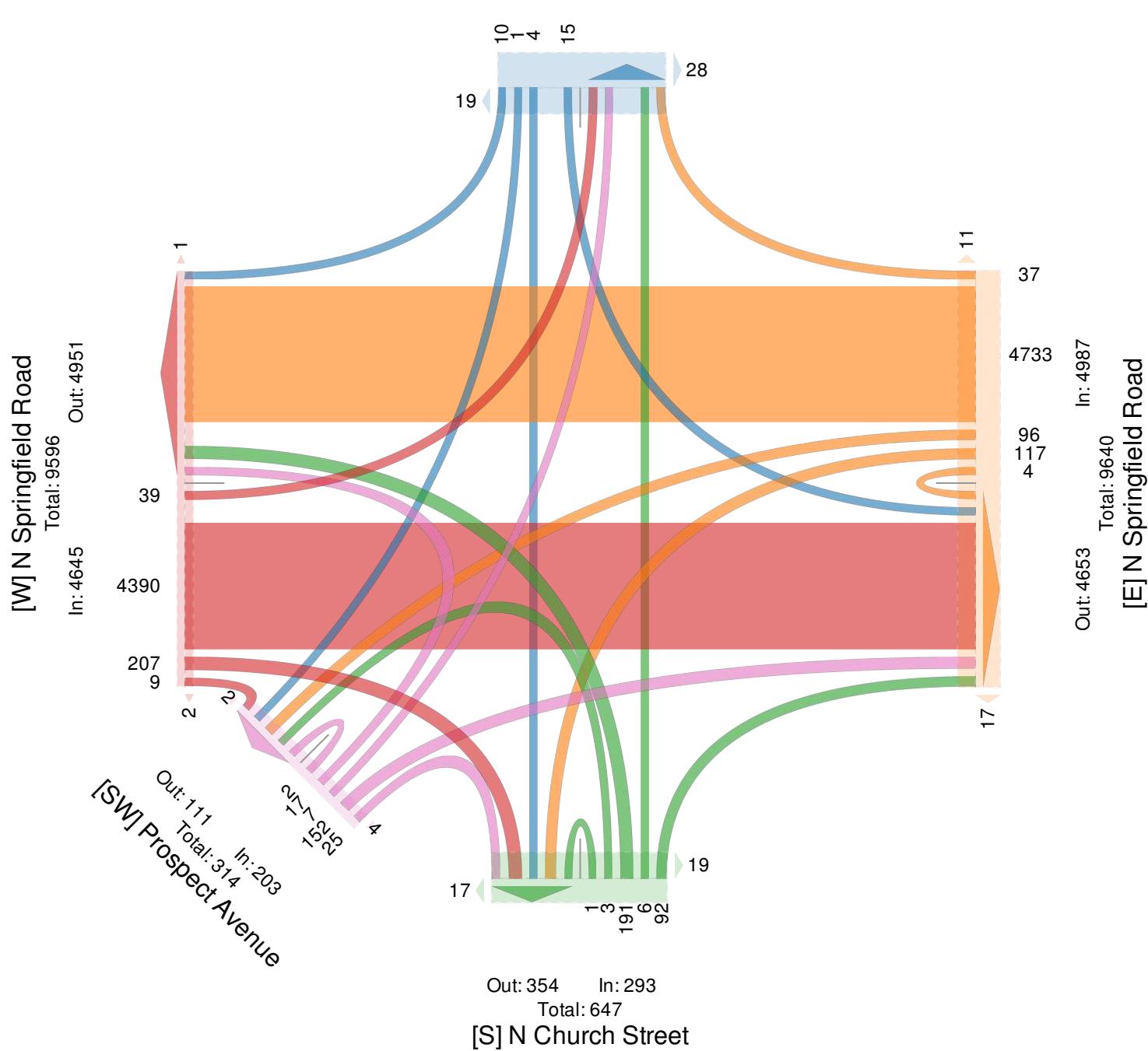
PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Sports Field Driveway

Total: 119

In: 30 Out: 89



3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						N Church Street Northbound								
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*
2019-04-24 7:00AM	0	110	0	0	0	110	0	4	2	128	1	0	135	0	0	7	0	4	0	11	0
7:15AM	0	118	1	0	0	119	0	2	4	111	1	0	118	0	0	2	0	2	0	4	0
7:30AM	0	128	2	0	0	130	0	2	3	120	0	0	125	0	0	3	0	1	0	4	1
7:45AM	0	131	2	1	0	134	0	3	2	115	0	0	120	0	0	5	0	2	0	7	1
Total	0	487	5	1	0	493	0	11	11	474	2	0	498	0	0	17	0	9	0	26	2
% Approach	0%	98.8%	1.0%	0.2%	0%	-	-	2.2%	2.2%	95.2%	0.4%	0%	-	-	0%	65.4%	0%	34.6%	0%	-	-
% Total	0%	47.1%	0.5%	0.1%	0%	47.6%	-	1.1%	1.1%	45.8%	0.2%	0%	48.1%	-	0%	1.6%	0%	0.9%	0%	2.5%	-
PHF	-	0.929	0.625	0.250	-	0.920	-	0.688	0.688	0.926	0.500	-	0.922	-	-	0.607	-	0.563	-	0.591	-
Lights	0	473	5	1	0	479	-	11	11	453	2	0	477	-	0	17	0	9	0	26	-
% Lights	0%	97.1%	100%	100%	0%	97.2%	-	100%	100%	95.6%	100%	0%	95.8%	-	0%	100%	0%	100%	0%	100%	-
Articulated Trucks	0	1	0	0	0	1	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	0.2%	0%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	13	0	0	0	13	-	0	0	21	0	0	21	-	0	0	0	0	0	0	-
% Buses and Single-Unit Trucks	0%	2.7%	0%	0%	0%	2.6%	-	0%	0%	4.4%	0%	0%	4.2%	-	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	2
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
Time	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 7:00AM	0	0	0	0	0	0	0	0	0	3	2	0	5	0	261
7:15AM	0	0	0	0	0	0	0	0	0	2	2	0	4	0	245
7:30AM	0	0	0	1	0	1	0	0	0	4	0	0	4	0	264
7:45AM	0	0	0	0	0	0	0	0	0	3	1	0	4	1	265
Total	0	0	0	1	0	1	0	0	0	12	5	0	17	1	1035
% Approach	0%	0%	0%	100%	0%	-	-	0%	0%	70.6%	29.4%	0%	-	-	-
% Total	0%	0%	0%	0.1%	0%	0.1%	-	0%	0%	1.2%	0.5%	0%	1.6%	-	-
PHF	-	-	-	0.250	-	0.250	-	-	-	0.750	0.625	-	0.850	-	0.976
Lights	0	0	0	1	0	1	-	0	0	11	2	0	13	-	996
% Lights	0%	0%	0%	100%	0%	100%	-	0%	0%	91.7%	40.0%	0%	76.5%	-	96.2%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	0	0	0	0	0	0	-	0	0	1	3	0	4	-	38
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	8.3%	60.0%	0%	23.5%	-	3.7%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

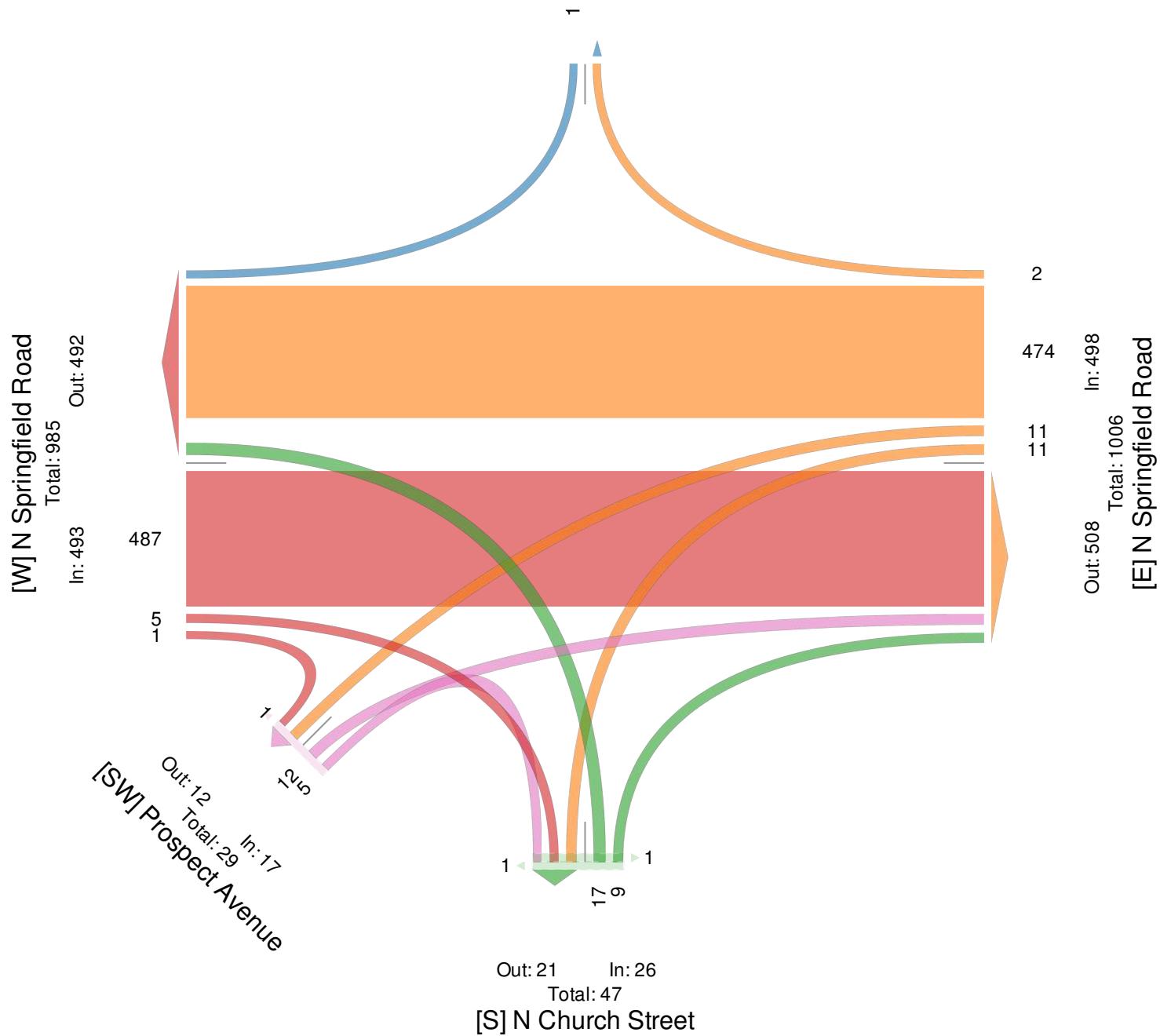
PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Sports Field Driveway

Total: 3

In: 1 Out: 2



3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						N Church Street Northbound								
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*
2019-04-24 11:45AM	1	63	5	0	0	69	0	2	2	96	1	0	101	0	2	1	0	1	0	4	0
12:00PM	2	68	5	0	0	75	0	3	3	70	0	1	77	0	0	2	0	2	0	4	0
12:15PM	0	56	3	0	0	59	0	4	0	91	0	0	95	0	0	6	0	4	0	10	0
12:30PM	1	85	4	2	0	92	0	1	1	85	2	0	89	1	0	1	0	2	0	3	0
Total	4	272	17	2	0	295	0	10	6	342	3	1	362	1	2	10	0	9	0	21	0
% Approach	1.4%	92.2%	5.8%	0.7%	0%	-	-	2.8%	1.7%	94.5%	0.8%	0.3%	-	-	9.5%	47.6%	0%	42.9%	0%	-	-
% Total	0.6%	38.6%	2.4%	0.3%	0%	41.8%	-	1.4%	0.9%	48.5%	0.4%	0.1%	51.3%	-	0.3%	1.4%	0%	1.3%	0%	3.0%	-
PHF	0.500	0.800	0.850	0.250	-	0.802	-	0.625	0.500	0.891	0.375	0.250	0.896	-	0.250	0.417	-	0.563	-	0.525	-
Lights	4	266	16	2	0	288	-	10	6	326	3	1	346	-	2	10	0	9	0	21	-
% Lights	100%	97.8%	94.1%	100%	0%	97.6%	-	100%	100%	95.3%	100%	100%	95.6%	-	100%	100%	0%	100%	0%	100%	-
Articulated Trucks	0	0	0	0	0	0	-	0	0	8	0	0	8	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	2.3%	0%	0%	2.2%	-	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	6	1	0	0	7	-	0	0	8	0	0	8	-	0	0	0	0	0	0	-
% Buses and Single-Unit Trucks	0%	2.2%	5.9%	0%	0%	2.4%	-	0%	0%	2.3%	0%	0%	2.2%	-	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
Time	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 11:45AM	2	0	1	0	0	3	1	0	0	2	0	0	2	0	179
12:00PM	1	0	0	0	0	1	0	1	0	3	0	0	4	0	161
12:15PM	1	0	0	0	0	1	0	0	0	5	3	0	8	0	173
12:30PM	0	0	0	0	0	0	0	2	0	5	1	0	8	0	192
Total	4	0	1	0	0	5	1	3	0	15	4	0	22	0	705
% Approach	80.0%	0%	20.0%	0%	0%	-	-	13.6%	0%	68.2%	18.2%	0%	-	-	-
% Total	0.6%	0%	0.1%	0%	0%	0.7%	-	0.4%	0%	2.1%	0.6%	0%	3.1%	-	-
PHF	0.500	-	0.250	-	-	0.417	-	0.375	-	0.750	0.333	-	0.688	-	0.918
Lights	4	0	1	0	0	5	-	3	0	15	4	0	22	-	682
% Lights	100%	0%	100%	0%	0%	100%	-	100%	0%	100%	100%	0%	100%	-	96.7%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	8
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	1.1%
Buses and Single-Unit Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	15
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	2.1%
Pedestrians	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Sports Field Driveway

Total: 12

In: 5 Out: 7

1 4

[W] N Springfield Road

Total: 650 Out: 355
In: 295

272

17

2

Out: 11 Total: 33 In: 22
[SW] Prospect Avenue

3
342
6
1

In: 362 Total: 663
Out: 301 [E] N Springfield Road

Out: 31 In: 21
Total: 52
[S] N Church Street

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						N Church Street Northbound								
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*
2019-04-24 4:15PM	1	108	7	0	0	116	0	4	5	134	0	0	143	0	0	2	0	4	0	6	0
4:30PM	0	116	4	0	0	120	0	0	0	118	0	3	121	0	0	3	0	4	0	7	0
4:45PM	1	114	7	0	0	122	0	1	1	115	1	0	118	0	0	5	0	2	0	7	3
5:00PM	2	108	6	0	0	116	0	1	1	126	3	0	131	3	0	7	1	3	0	11	0
Total	4	446	24	0	0	474	0	6	7	493	4	3	513	3	0	17	1	13	0	31	3
% Approach	0.8%	94.1%	5.1%	0%	0%	-	-	1.2%	1.4%	96.1%	0.8%	0.6%	-	-	0%	54.8%	3.2%	41.9%	0%	-	-
% Total	0.4%	43.0%	2.3%	0%	0%	45.7%	-	0.6%	0.7%	47.5%	0.4%	0.3%	49.4%	-	0%	1.6%	0.1%	1.3%	0%	3.0%	-
PHF	0.500	0.961	0.857	-	-	0.971	-	0.375	0.350	0.920	0.333	0.250	0.897	-	-	0.607	0.250	0.813	-	0.705	-
Lights	4	434	22	0	0	460	-	6	7	482	4	3	502	-	0	16	1	13	0	30	-
% Lights	100%	97.3%	91.7%	0%	0%	97.0%	-	100%	100%	97.8%	100%	100%	97.9%	-	0%	94.1%	100%	100%	0%	96.8%	-
Articulated Trucks	0	6	0	0	0	6	-	0	0	1	0	0	1	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	1.3%	0%	0%	0%	1.3%	-	0%	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	6	2	0	0	8	-	0	0	10	0	0	10	-	0	1	0	0	0	1	-
% Buses and Single-Unit Trucks	0%	1.3%	8.3%	0%	0%	1.7%	-	0%	0%	2.0%	0%	0%	1.9%	-	0%	5.9%	0%	0%	0%	3.2%	-
Pedestrians	-	-	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%

* Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
Time	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 4:15PM	0	0	0	0	0	0	0	0	0	3	1	0	4	0	269
4:30PM	0	0	0	0	0	0	3	2	0	6	0	0	8	0	256
4:45PM	0	0	0	0	0	0	2	1	0	1	0	0	2	0	249
5:00PM	0	0	0	0	0	0	0	1	0	5	0	0	6	0	264
Total	0	0	0	0	0	0	5	4	0	15	1	0	20	0	1038
% Approach	0%	0%	0%	0%	0%	-	-	20.0%	0%	75.0%	5.0%	0%	-	-	-
% Total	0%	0%	0%	0%	0%	0%	-	0.4%	0%	1.4%	0.1%	0%	1.9%	-	-
PHF	-	-	-	-	-	-	-	0.500	-	0.625	0.250	-	0.625	-	0.965
Lights	0	0	0	0	0	0	-	4	0	15	1	0	20	-	1012
% Lights	0%	0%	0%	0%	0%	-	-	100%	0%	100%	100%	0%	100%	-	97.5%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	7
% Articulated Trucks	0%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	-	0.7%
Buses and Single-Unit Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	19
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	-	1.8%
Pedestrians	-	-	-	-	-	-	5	-	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

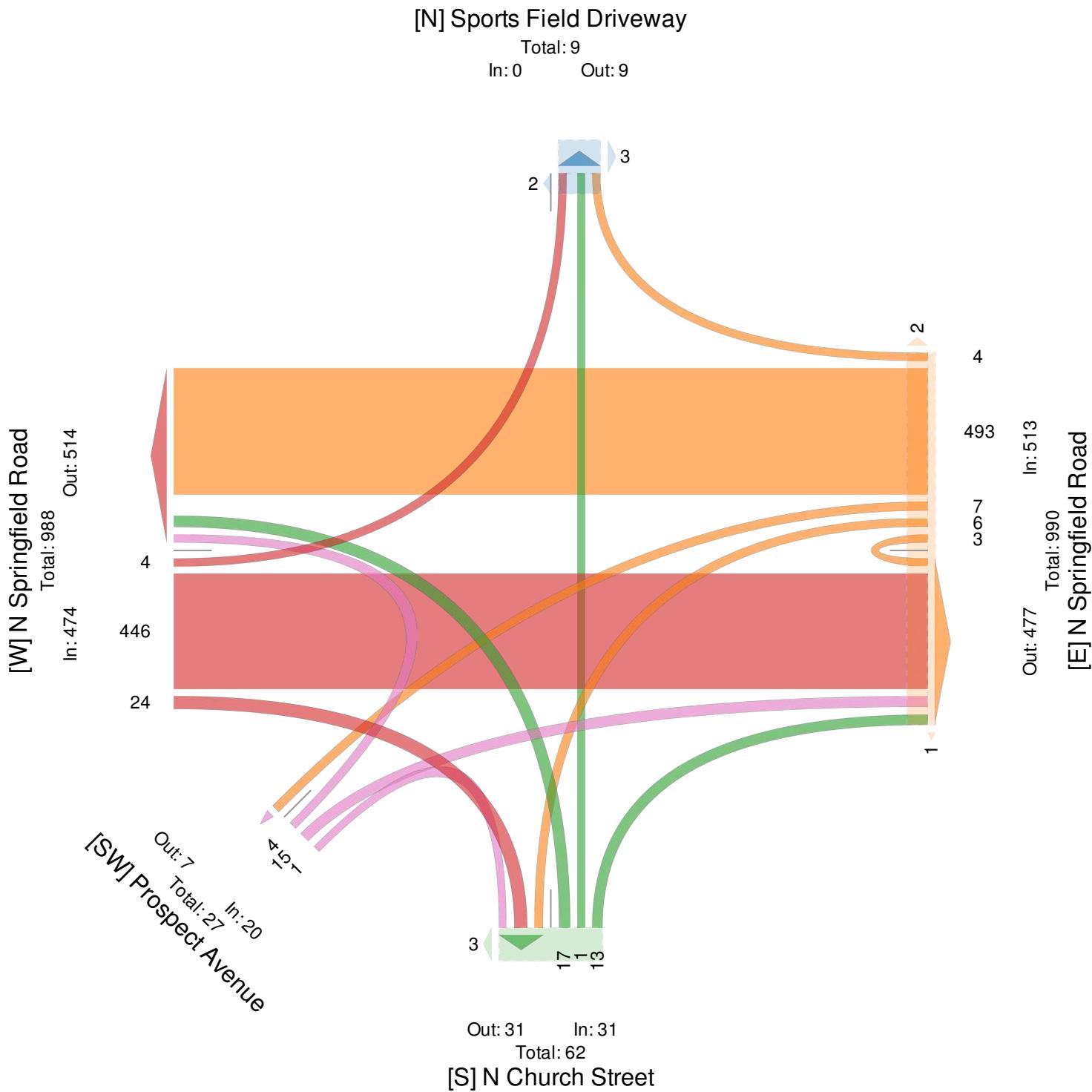
ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US



4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

 Provided by: Imperial Traffic & Data Collection
 PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound							N Sycamore Avenue Northbound												
Time	L	BL	T	R	U	RR	App	Ped*	L	T	R	HR	U	RR	HRR	App	Ped*	L	T	BR	R	U	BRR	RR	App	Ped*	
2019-04-24 6:30AM	2	2	60	0	0	0	64	0	0	104	1	1	0	0	0	106	0	1	1	0	0	0	0	2	1		
6:45AM	1	0	94	0	0	0	95	4	0	116	3	1	0	0	0	120	0	2	2	0	1	0	0	1	6	0	
Hourly Total	3	2	154	0	0	0	159	4	0	220	4	2	0	0	0	226	0	3	3	0	1	0	0	1	8	1	
7:00AM	6	4	109	0	0	0	119	0	0	118	5	0	0	0	0	123	0	3	0	0	0	0	0	0	3	0	
7:15AM	6	8	109	1	0	0	124	0	0	104	6	2	0	0	0	112	0	3	1	0	0	0	0	2	6	0	
7:30AM	1	1	126	0	0	0	128	4	0	117	10	1	0	0	0	128	0	1	2	1	3	0	0	0	7	0	
7:45AM	1	8	127	0	0	0	136	0	0	107	6	1	0	0	0	114	0	0	1	0	0	0	0	0	1	0	
Hourly Total	14	21	471	1	0	0	507	4	0	446	27	4	0	0	0	477	0	7	4	1	3	0	0	2	17	0	
8:00AM	3	3	114	0	0	0	120	0	0	99	11	2	0	0	0	112	0	2	1	1	0	0	0	0	4	2	
8:15AM	4	3	90	0	0	0	97	7	0	110	4	1	0	0	0	115	0	0	0	1	1	0	0	0	2	5	
8:30AM	4	4	95	0	0	0	103	0	0	133	2	1	0	1	0	137	0	1	2	1	0	0	0	0	4	2	
8:45AM	3	9	96	0	0	0	108	0	0	126	2	0	0	0	0	128	0	3	2	1	0	0	0	0	6	3	
Hourly Total	14	19	395	0	0	0	428	7	0	468	19	4	0	1	0	492	0	6	5	4	1	0	0	0	16	12	
9:00AM	5	10	96	0	0	0	111	0	0	96	9	4	0	0	0	109	0	2	0	1	0	0	0	1	4	0	
9:15AM	0	11	82	0	1	0	94	0	0	89	3	1	0	0	0	93	0	1	0	0	0	0	0	1	2	0	
Hourly Total	5	21	178	0	1	0	205	0	0	185	12	5	0	0	0	202	0	3	0	1	0	0	0	0	2	6	0
2:30PM	4	8	80	0	0	0	92	1	0	107	7	0	0	0	0	114	0	2	0	0	0	0	0	0	2	0	
2:45PM	7	8	90	0	0	0	105	0	0	82	10	3	0	1	0	96	0	3	1	0	0	0	0	0	4	2	
Hourly Total	11	16	170	0	0	0	197	1	0	189	17	3	0	1	0	210	0	5	1	0	0	0	0	0	6	2	
3:00PM	5	6	88	0	0	0	99	9	0	96	10	4	0	0	0	110	3	1	1	2	0	0	0	2	6	2	
3:15PM	6	15	82	0	0	0	103	4	0	94	14	1	0	0	0	109	1	3	0	0	0	0	0	2	5	3	
3:30PM	4	10	86	0	0	0	100	0	0	107	15	5	0	1	2	130	0	2	0	1	4	0	0	0	7	5	
3:45PM	3	13	103	0	0	0	119	2	0	112	12	4	0	0	0	128	3	1	0	1	0	0	0	1	3	3	
Hourly Total	18	44	359	0	0	0	421	15	0	409	51	14	0	1	2	477	7	7	1	4	4	0	0	5	21	13	
4:00PM	5	13	111	0	0	0	129	1	0	111	6	2	0	0	0	119	3	0	0	0	1	0	0	0	1	0	
4:15PM	4	9	103	0	0	0	116	1	0	128	3	4	0	4	0	139	0	3	0	0	1	0	0	0	4	0	
4:30PM	4	14	105	0	0	0	123	1	0	114	9	2	0	0	0	125	0	3	1	0	0	0	0	0	4	3	
4:45PM	1	9	109	0	0	0	119	0	0	108	8	5	0	0	0	121	1	1	0	0	0	0	0	0	1	0	
Hourly Total	14	45	428	0	0	0	487	3	0	461	26	13	0	4	0	504	4	7	1	0	2	0	0	0	10	3	
5:00PM	7	15	90	0	0	0	112	2	0	126	5	3	0	0	0	134	0	5	0	1	0	0	0	0	6	0	
5:15PM	4	7	98	0	0	0	109	0	0	108	12	2	0	0	0	122	3	1	0	0	0	0	0	1	2	0	
5:30PM	7	7	96	0	0	0	110	0	0	119	10	3	0	0	0	132	1	2	0	0	0	0	0	1	3	0	
5:45PM	6	3	91	0	0	0	100	0	0	120	9	3	0	0	0	132	0	3	1	0	0	0	0	0	4	0	
Hourly Total	24	32	375	0	0	0	431	2	0	473	36	11	0	0	0	520	4	11	1	1	0	0	0	2	15	0	
6:00PM	2	19	94	0	0	0	115	0	0	108	11	4	0	0	2	125	0	2	1	2	2	0	1	0	8	3	
6:15PM	6	8	102	0	0	0	116	0	0	84	12	2	0	0	0	98	2	1	0	0	0	0	0	2	3	4	
Hourly Total	8	27	196	0	0	0	231	0	0	192	23	6	0	0	2	223	2	3	1	2	2	0	1	2	11	7	
Total	111	227	2726	1	1	0	3066	36	0	3043	215	62	0	7	4	3331	17	52	17	13	13	0	1	14	110	38	
% Approach	3.6%	7.4%	88.9%	0%	0%	0%	-	-	0%	91.4%	6.5%	1.9%	0%	0.2%	0.1%	-	-	47.3%	15.5%	11.8%	11.8%	0%	0.9%	12.7%	-	-	
% Total	1.6%	3.3%	39.2%	0%	0%	0%	44.0%	-	0%	43.7%	3.1%	0.9%	0%	0.1%	0.1%	47.9%	-	0.7%	0.2%	0.2%	0.2%	0%	0%	0.2%	1.6%	-	
Lights	106	222	2611	1	1	0	2941	-	0	2940	205	61	0	6	4	3216	-	50	17	12	13	0	1	12	105	-	
% Lights	95.5%	97.8%	95.8%	100%	100%	0%	95.9%	-	0%	96.6%	95.3%	98.4%	0%	85.7%	100%	96.5%	-	96.2%	100%	92.3%	100%	0%	100%	85.7%	95.5%	-	
Articulated Trucks	0	0	6	0	0	0	6	-	0	5	0	0	0	0	0	5	-	0	0	0	0	0	0	0	0	0	
% Articulated Trucks	0%	0%	0.2%	0%	0%	0%	0.2%	-	0%	0.2%	0%	0%	0%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	0%	0%	0%		
Buses and Single-Unit Trucks	5	5	109	0	0	0	119	-	0	98	10	1	0	1	0	110	-	2	0	1	0	0	0	2	5	-	
% Buses and Single-Unit Trucks	4.5%	2.2%	4.0%	0%	0%	0%	3.9%	-	0%	3.2%	4.7%	1.6%	0%	14.3%	0%	3.3%	-	3.8%	0%	7.7%	0%	0%	0%	14.3%	4.5%	-	
Pedestrians	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	38	
% Pedestrians	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Sycamore Avenue Southbound								Fairview Avenue Southwestbound								
Time	HL	L	T	R	U	RR	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int	
2019-04-24 6:30AM	0	9	0	2	0	0	11	0	0	0	0	0	0	0	0	183	
6:45AM	1	10	0	5	0	0	16	3	0	0	0	0	0	0	6	237	
Hourly Total	1	19	0	7	0	0	27	3	0	0	0	0	0	0	6	420	
7:00AM	0	12	0	10	0	1	23	0	0	0	0	0	0	0	1	268	
7:15AM	0	14	0	5	0	2	21	0	0	0	0	0	0	0	0	263	
7:30AM	1	9	0	8	0	0	18	5	0	0	0	0	0	0	3	281	
7:45AM	0	9	0	5	0	0	14	0	0	0	0	0	0	0	0	265	
Hourly Total	1	44	0	28	0	3	76	5	0	0	0	0	0	0	4	1077	
8:00AM	0	14	0	5	0	0	19	6	0	0	0	0	0	0	0	255	
8:15AM	0	7	0	4	0	0	11	9	0	0	0	0	0	0	1	225	
8:30AM	0	8	0	5	0	0	13	5	0	0	0	0	0	0	1	257	
8:45AM	0	3	0	7	0	1	11	0	0	0	0	0	0	0	0	253	
Hourly Total	0	32	0	21	0	1	54	20	0	0	0	0	0	0	2	990	
9:00AM	0	6	0	7	0	1	14	1	0	0	0	0	0	0	2	238	
9:15AM	0	8	0	8	0	0	16	0	0	0	0	0	0	0	0	205	
Hourly Total	0	14	0	15	0	1	30	1	0	0	0	0	0	0	2	443	
2:30PM	0	4	0	5	0	2	11	0	0	0	0	0	0	0	1	219	
2:45PM	0	4	0	2	0	0	6	0	0	0	0	0	0	0	0	211	
Hourly Total	0	8	0	7	0	2	17	0	0	0	0	0	0	0	1	430	
3:00PM	0	10	0	6	0	0	16	6	0	0	0	0	0	0	1	231	
3:15PM	0	14	0	9	0	0	23	8	0	0	0	0	0	0	4	240	
3:30PM	1	8	0	4	0	1	14	5	0	0	0	0	0	0	6	251	
3:45PM	0	9	0	12	0	1	22	0	0	0	0	0	0	0	2	272	
Hourly Total	1	41	0	31	0	2	75	19	0	0	0	0	0	0	13	994	
4:00PM	0	8	0	4	0	0	12	3	0	0	0	0	0	0	4	261	
4:15PM	1	5	0	8	0	0	14	0	0	0	0	0	0	0	1	273	
4:30PM	0	8	0	3	0	0	11	2	0	0	0	0	0	0	3	263	
4:45PM	0	17	0	8	0	0	25	2	0	0	0	0	0	0	3	266	
Hourly Total	1	38	0	23	0	0	62	7	0	0	0	0	0	0	11	1063	
5:00PM	1	9	0	2	0	0	12	0	0	0	0	0	0	0	0	264	
5:15PM	0	15	0	11	0	0	26	1	0	0	0	0	0	0	4	259	
5:30PM	0	12	0	6	0	2	20	2	0	0	0	0	0	0	2	265	
5:45PM	0	15	0	4	0	1	20	5	0	0	0	0	0	0	7	256	
Hourly Total	1	51	0	23	0	3	78	8	0	0	0	0	0	0	13	1044	
6:00PM	0	7	0	6	0	1	14	0	0	0	0	0	0	0	0	262	
6:15PM	0	16	0	5	0	0	21	0	0	0	0	0	0	0	0	238	
Hourly Total	0	23	0	11	0	1	35	0	0	0	0	0	0	0	0	500	
Total	5	270	0	166	0	13	454	63	0	0	0	0	0	0	52	6961	
% Approach	1.1%	59.5%	0%	36.6%	0%	2.9%	-	-	0%	0%	0%	0%	0%	-	-	-	
% Total	0.1%	3.9%	0%	2.4%	0%	0.2%	6.5%	-	0%	0%	0%	0%	0%	0%	-	-	
Lights	5	258	0	159	0	13	435	-	0	0	0	0	0	0	-	6697	
% Lights	100%	95.6%	0%	95.8%	0%	100%	95.8%	-	0%	0%	0%	0%	0%	-	-	96.2%	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	11	
% Articulated Trucks	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	-	0.2%	
Buses and Single-Unit Trucks	0	12	0	7	0	0	19	-	0	0	0	0	0	0	-	253	
% Buses and Single-Unit Trucks	0%	4.4%	0%	4.2%	0%	0%	4.2%	-	0%	0%	0%	0%	0%	-	-	3.6%	
Pedestrians	-	-	-	-	-	-	-	63	-	-	-	-	-	-	50		
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	96.2%	-	
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	2		
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	3.8%	-	

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

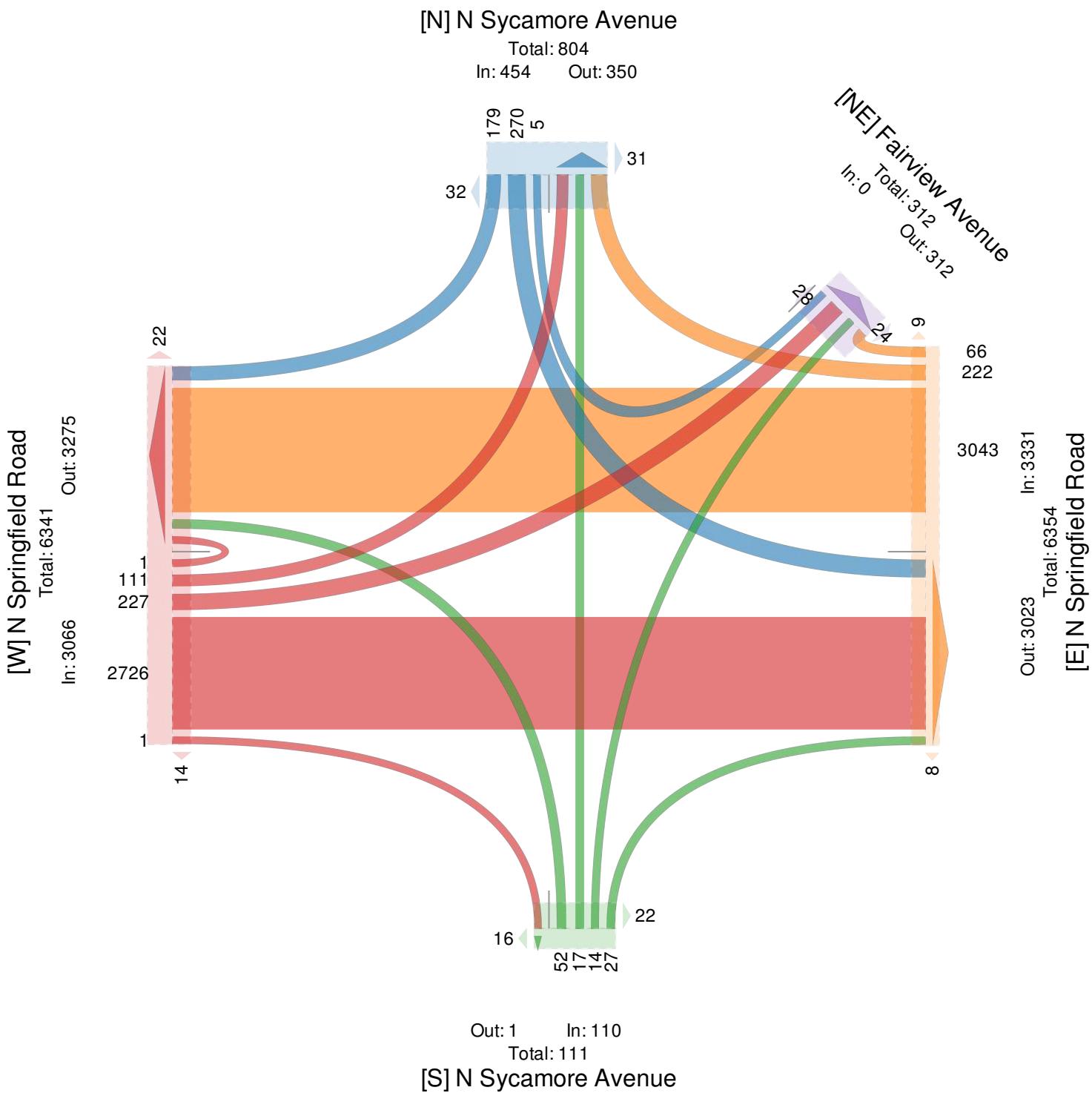
ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US



4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound							N Sycamore Avenue Northbound												
Time	L	BL	T	R	U	RR	App	Ped*	L	T	R	HR	U	RR	HRR	App	Ped*	L	T	BR	R	U	BRR	RR	App	Ped*	
2019-04-24 7:00AM	6	4	109	0	0	0	119	0	0	118	5	0	0	0	0	123	0	3	0	0	0	0	0	3	0		
7:15AM	6	8	109	1	0	0	124	0	0	104	6	2	0	0	0	0	112	0	3	1	0	0	0	2	6	0	
7:30AM	1	1	126	0	0	0	128	4	0	117	10	1	0	0	0	0	128	0	1	2	1	3	0	0	0	7	0
7:45AM	1	8	127	0	0	0	136	0	0	107	6	1	0	0	0	0	114	0	0	1	0	0	0	0	0	1	0
Total	14	21	471	1	0	0	507	4	0	446	27	4	0	0	0	0	477	0	7	4	1	3	0	0	2	17	0
% Approach	2.8%	4.1%	92.9%	0.2%	0%	0%	-	-	-0%	93.5%	5.7%	0.8%	0%	0%	0%	-	-	41.2%	23.5%	5.9%	17.6%	0%	0%	11.8%	-	-	
% Total	1.3%	1.9%	43.7%	0.1%	0%	0%	47.1%	-	-0%	41.4%	2.5%	0.4%	0%	0%	0%	0%	44.3%	-	0.6%	0.4%	0.1%	0.3%	0%	0%	0.2%	1.6%	-
PHF	0.583	0.656	0.927	0.250	-	-	0.932	-	-	0.945	0.675	0.500	-	-	-	0.932	-	0.583	0.500	0.250	0.250	-	-	0.250	0.607	-	
Lights	14	21	455	1	0	0	491	-	0	423	24	4	0	0	0	0	451	-	7	4	1	3	0	0	2	17	-
% Lights	100%	100%	96.6%	100%	0%	0%	96.8%	-	-0%	94.8%	88.9%	100%	0%	0%	0%	0%	94.5%	-	100%	100%	100%	100%	0%	0%	100%	-	-
Articulated Trucks	0	0	2	0	0	0	2	-	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	
% Articulated Trucks	0%	0%	0.4%	0%	0%	0%	0.4%	-	-0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	-	
Buses and Single-Unit Trucks	0	0	14	0	0	0	14	-	0	23	3	0	0	0	0	0	26	-	0	0	0	0	0	0	0	-	
% Buses and Single-Unit Trucks	0%	0%	3.0%	0%	0%	0%	2.8%	-	-0%	5.2%	11.1%	0%	0%	0%	0%	5.5%	-	0%	0%	0%	0%	0%	0%	0%	0%	-	
Pedestrians	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0		
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Sycamore Avenue Southbound								Fairview Avenue Southwestbound							
Time	HL	L	T	R	U	RR	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 7:00AM	0	12	0	10	0	1	23	0	0	0	0	0	0	0	1	268
7:15AM	0	14	0	5	0	2	21	0	0	0	0	0	0	0	0	263
7:30AM	1	9	0	8	0	0	18	5	0	0	0	0	0	0	3	281
7:45AM	0	9	0	5	0	0	14	0	0	0	0	0	0	0	0	265
Total	1	44	0	28	0	3	76	5	0	0	0	0	0	0	4	1077
% Approach	1.3%	57.9%	0%	36.8%	0%	3.9%	-	-	0%	0%	0%	0%	0%	-	-	-
% Total	0.1%	4.1%	0%	2.6%	0%	0.3%	7.1%	-	0%	0%	0%	0%	0%	0%	-	-
PHF	0.250	0.786	-	0.700	-	0.375	0.826	-	-	-	-	-	-	-	-	0.958
Lights	1	41	0	27	0	3	72	-	0	0	0	0	0	0	-	1031
% Lights	100%	93.2%	0%	96.4%	0%	100%	94.7%	-	0%	0%	0%	0%	0%	-	-	95.7%
Articulated Trucks	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-	2
% Articulated Trucks	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	-	0.2%
Buses and Single-Unit Trucks	0	3	0	1	0	0	4	-	0	0	0	0	0	0	-	44
% Buses and Single-Unit Trucks	0%	6.8%	0%	3.6%	0%	0%	5.3%	-	0%	0%	0%	0%	0%	-	-	4.1%
Pedestrians	-	-	-	-	-	-	-	5	-	-	-	-	-	-	4	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 121

In: 76 Out: 45

31 44 1
4

[W] N Springfield Road
Total: 991 Out: 484
In: 507

3
14 21
471
1

[NE] Fairview Avenue
In: 0 Total: 27 Out: 27

4 27
446

[E] N Springfield Road
Out: 520 Total: 997
In: 477

7 4 1 5

Out: 1 In: 17

Total: 18

[S] N Sycamore Avenue

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

PM Peak (3:45 PM - 4:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound							N Sycamore Avenue Northbound											
Time	L	BL	T	R	U	RR	App	Ped*	L	T	R	HR	U	RR	HRR	App	Ped*	L	T	BR	R	U	BRR	RR	App	Ped*
2019-04-24 3:45PM	3	13	103	0	0	0	119	2	0	112	12	4	0	0	0	128	3	1	0	1	0	0	0	1	3	3
4:00PM	5	13	111	0	0	0	129	1	0	111	6	2	0	0	0	119	3	0	0	0	1	0	0	0	1	0
4:15PM	4	9	103	0	0	0	116	1	0	128	3	4	0	4	0	139	0	3	0	0	1	0	0	0	4	0
4:30PM	4	14	105	0	0	0	123	1	0	114	9	2	0	0	0	125	0	3	1	0	0	0	0	0	4	3
Total	16	49	422	0	0	0	487	5	0	465	30	12	0	4	0	511	6	7	1	1	2	0	0	1	12	6
% Approach	3.3%	10.1%	86.7%	0%	0%	0%	-	-	-0%	91.0%	5.9%	2.3%	0%	0.8%	0%	-	-	58.3%	8.3%	8.3%	16.7%	0%	0%	8.3%	-	-
% Total	1.5%	4.6%	39.5%	0%	0%	0%	45.6%	-	-0%	43.5%	2.8%	1.1%	0%	0.4%	0%	47.8%	-	0.7%	0.1%	0.1%	0.2%	0%	0%	0.1%	1.1%	-
PHF	0.800	0.875	0.950	-	-	-	0.944	-	-	0.908	0.625	0.750	-	0.250	-	0.919	-	0.583	0.250	0.250	0.500	-	-	0.250	0.750	-
Lights	15	48	396	0	0	0	459	-	0	454	29	12	0	3	0	498	-	7	1	1	2	0	0	1	12	-
% Lights	93.8%	98.0%	93.8%	0%	0%	0%	94.3%	-	-0%	97.6%	96.7%	100%	0%	75.0%	0%	97.5%	-	100%	100%	100%	100%	0%	0%	100%	-	-
Articulated Trucks	0	0	2	0	0	0	2	-	0	2	0	0	0	0	0	2	-	0	0	0	0	0	0	0	0	-
% Articulated Trucks	0%	0%	0.5%	0%	0%	0%	0.4%	-	-0%	0.4%	0%	0%	0%	0%	0%	0.4%	-	0%	0%	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	1	1	24	0	0	0	26	-	0	9	1	0	0	1	0	11	-	0	0	0	0	0	0	0	0	-
% Buses and Single-Unit Trucks	6.3%	2.0%	5.7%	0%	0%	0%	5.3%	-	-0%	1.9%	3.3%	0%	0%	25.0%	0%	2.2%	-	0%	0%	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	6
% Pedestrians	-	-	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-	-100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-0%	-	-	-	-	-	-	-	-	-0%	-	-	-	-	-	-	-	-0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

PM Peak (3:45 PM - 4:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Sycamore Avenue Southbound								Fairview Avenue Southwestbound							
Time	HL	L	T	R	U	RR	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 3:45PM	0	9	0	12	0	1	22	0	0	0	0	0	0	0	2	272
4:00PM	0	8	0	4	0	0	12	3	0	0	0	0	0	0	4	261
4:15PM	1	5	0	8	0	0	14	0	0	0	0	0	0	0	1	273
4:30PM	0	8	0	3	0	0	11	2	0	0	0	0	0	0	3	263
Total	1	30	0	27	0	1	59	5	0	0	0	0	0	0	10	1069
% Approach	1.7%	50.8%	0%	45.8%	0%	1.7%	-	-	0%	0%	0%	0%	0%	0%	-	-
% Total	0.1%	2.8%	0%	2.5%	0%	0.1%	5.5%	-	0%	0%	0%	0%	0%	0%	-	-
PHF	0.250	0.833	-	0.563	-	0.250	0.670	-	-	-	-	-	-	-	-	0.979
Lights	1	30	0	26	0	1	58	-	0	0	0	0	0	0	-	1027
% Lights	100%	100%	0%	96.3%	0%	100%	98.3%	-	0%	0%	0%	0%	0%	-	-	96.1%
Articulated Trucks	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-	4
% Articulated Trucks	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	-	0.4%
Buses and Single-Unit Trucks	0	0	0	1	0	0	1	-	0	0	0	0	0	0	-	38
% Buses and Single-Unit Trucks	0%	0%	0%	3.7%	0%	0%	1.7%	-	0%	0%	0%	0%	0%	-	-	3.6%
Pedestrians	-	-	-	-	-	-	-	5	-	-	-	-	-	-	8	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	80.0%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	20.0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

PM Peak (3:45 PM - 4:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

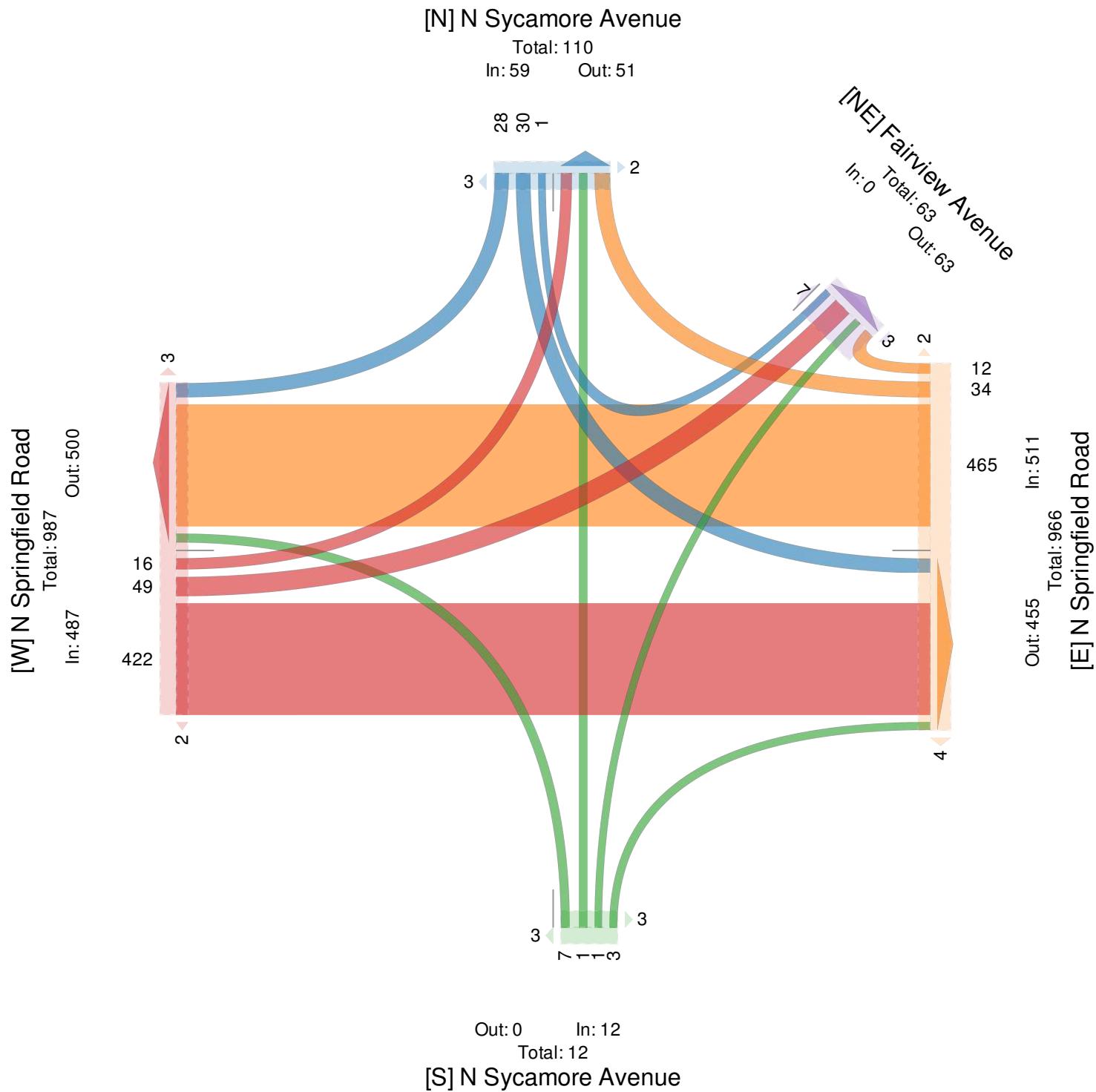
ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US





Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 iklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
 Site Code: 5
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	W Wyncliffe Avenue						W Wyncliffe Avenue						N Oak Avenue						N Oak Avenue						Int. Total
	Eastbound			Westbound			Northbound			Southbound															
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
6:30 AM	0	0	0	0	0	0	0	2	1	1	0	4	0	0	19	0	0	19	0	0	28	0	2	28	51
6:45 AM	0	0	0	0	1	0	0	2	6	0	0	8	0	0	25	3	0	28	0	3	32	2	1	37	73
Hourly Total	0	0	0	0	1	0	0	4	7	1	0	12	0	0	44	3	0	47	0	3	60	2	3	65	124
7:00 AM	0	0	0	0	1	0	0	6	2	0	0	8	0	1	41	0	0	42	0	0	47	1	0	48	98
7:15 AM	0	0	0	0	0	0	0	6	6	0	0	12	0	4	54	2	0	60	0	0	48	4	1	52	124
7:30 AM	1	0	0	0	1	1	0	7	3	1	0	11	0	1	40	1	1	42	0	0	51	1	3	52	106
7:45 AM	0	0	0	0	0	0	0	7	4	0	0	11	0	1	36	2	0	39	0	0	58	3	2	61	111
Hourly Total	1	0	0	0	2	1	0	26	15	1	0	42	0	7	171	5	1	183	0	0	204	9	6	213	439
8:00 AM	0	0	0	0	0	0	0	4	2	1	0	7	0	3	32	1	0	36	0	1	55	1	0	57	100
8:15 AM	0	0	0	0	0	0	0	4	6	1	3	11	0	2	36	2	0	40	0	0	48	2	2	50	101
8:30 AM	0	0	0	0	1	0	0	6	3	3	7	12	0	0	46	1	7	47	0	1	29	4	12	34	93
8:45 AM	0	0	0	0	0	0	0	5	2	3	0	10	0	2	43	6	0	51	0	1	35	4	2	40	101
Hourly Total	0	0	0	0	1	0	0	19	13	8	10	40	0	7	157	10	7	174	0	3	167	11	16	181	395
9:00 AM	0	0	0	1	2	1	0	2	1	2	0	5	0	1	27	1	0	29	1	2	42	3	0	48	83
9:15 AM	0	0	0	0	0	0	0	0	2	2	0	4	0	0	22	2	0	24	0	0	28	3	0	31	59
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hourly Total	0	0	0	1	2	1	0	2	3	4	0	9	0	1	49	3	0	53	1	2	71	6	0	80	143
2:30 PM	0	0	0	0	3	0	0	2	4	0	0	6	0	1	30	4	4	35	0	3	27	2	0	32	73
2:45 PM	0	0	0	0	0	0	0	1	4	2	0	7	0	3	47	4	0	54	0	1	42	1	1	44	105
Hourly Total	0	0	0	0	3	0	0	3	8	2	0	13	0	4	77	8	4	89	0	4	69	3	1	76	178
3:00 PM	0	0	0	0	0	0	0	3	1	2	0	6	0	1	36	5	7	42	0	2	59	0	4	61	109
3:15 PM	0	0	0	0	0	0	0	2	3	2	1	7	0	0	44	7	21	51	0	3	41	1	7	45	103
3:30 PM	0	0	0	0	0	0	0	7	2	1	2	10	0	2	51	7	4	60	1	1	44	6	9	52	122
3:45 PM	0	0	0	0	0	0	0	6	5	0	4	11	0	1	50	2	0	53	0	0	45	4	8	49	113
Hourly Total	0	0	0	0	0	0	0	18	11	5	7	34	0	4	181	21	32	206	1	6	189	11	28	207	447
4:00 PM	0	0	0	0	0	0	0	5	1	1	2	7	0	1	51	11	2	63	0	1	43	2	4	46	116
4:15 PM	0	0	0	0	0	0	0	0	5	3	1	8	0	2	50	8	0	60	0	2	55	4	0	61	129
4:30 PM	0	0	0	0	0	0	0	3	3	3	0	9	0	2	46	9	0	57	0	1	59	2	1	62	128
4:45 PM	0	0	0	0	0	0	0	4	2	4	0	10	0	4	49	14	1	67	0	1	54	2	0	57	134
Hourly Total	0	0	0	0	0	0	0	12	11	11	3	34	0	9	196	42	3	247	0	5	211	10	5	226	507
5:00 PM	0	0	0	0	0	0	0	4	2	3	0	9	0	2	51	7	1	60	0	4	55	2	1	61	130
5:15 PM	0	0	0	0	1	0	0	2	4	1	0	7	0	4	49	10	0	63	0	3	60	2	0	65	135
5:30 PM	0	0	1	0	0	1	0	3	2	3	1	8	0	3	66	12	0	81	0	2	57	2	1	61	151
5:45 PM	0	0	0	0	1	0	0	8	4	0	0	12	0	2	57	3	1	62	0	3	47	9	6	59	133
Hourly Total	0	0	1	0	2	1	0	17	12	7	1	36	0	11	223	32	2	266	0	12	219	15	8	246	549
6:00 PM	0	0	0	0	1	0	0	3	3	1	0	7	0	2	41	7	0	50	0	4	46	3	0	53	110

6:15 PM	0	0	0	0	1	0	0	2	1	1	1	4	0	4	37	7	0	48	0	4	39	4	2	47	99
Grand Total	1	0	1	1	13	3	0	106	84	41	22	231	0	49	1176	138	49	1363	2	43	1275	74	69	1394	2991
Approach %	33.3	0.0	33.3	33.3	-	-	0.0	45.9	36.4	17.7	-	-	0.0	3.6	86.3	10.1	-	-	0.1	3.1	91.5	5.3	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.1	0.0	3.5	2.8	1.4	-	7.7	0.0	1.6	39.3	4.6	-	45.6	0.1	1.4	42.6	2.5	-	46.6	-
Lights	1	0	1	0	-	2	0	102	84	39	-	225	0	45	1141	135	-	1321	2	39	1241	73	-	1355	2903
% Lights	100.0	-	100.0	0.0	-	66.7	-	96.2	100.0	95.1	-	97.4	-	91.8	97.0	97.8	-	96.9	100.0	90.7	97.3	98.6	-	97.2	97.1
Mediums	0	0	0	0	-	0	0	4	0	2	-	6	0	3	34	3	-	40	0	4	32	1	-	37	83
% Mediums	0.0	-	0.0	0.0	-	0.0	-	3.8	0.0	4.9	-	2.6	-	6.1	2.9	2.2	-	2.9	0.0	9.3	2.5	1.4	-	2.7	2.8
Articulated Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	1	1	0	-	2	0	0	2	0	-	2	5
% Articulated Trucks	0.0	-	0.0	100.0	-	33.3	-	0.0	0.0	0.0	-	0.0	-	2.0	0.1	0.0	-	0.1	0.0	0.0	0.2	0.0	-	0.1	0.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	13	-	-	-	-	-	22	-	-	-	-	-	-	49	-	-	-	-	69	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-



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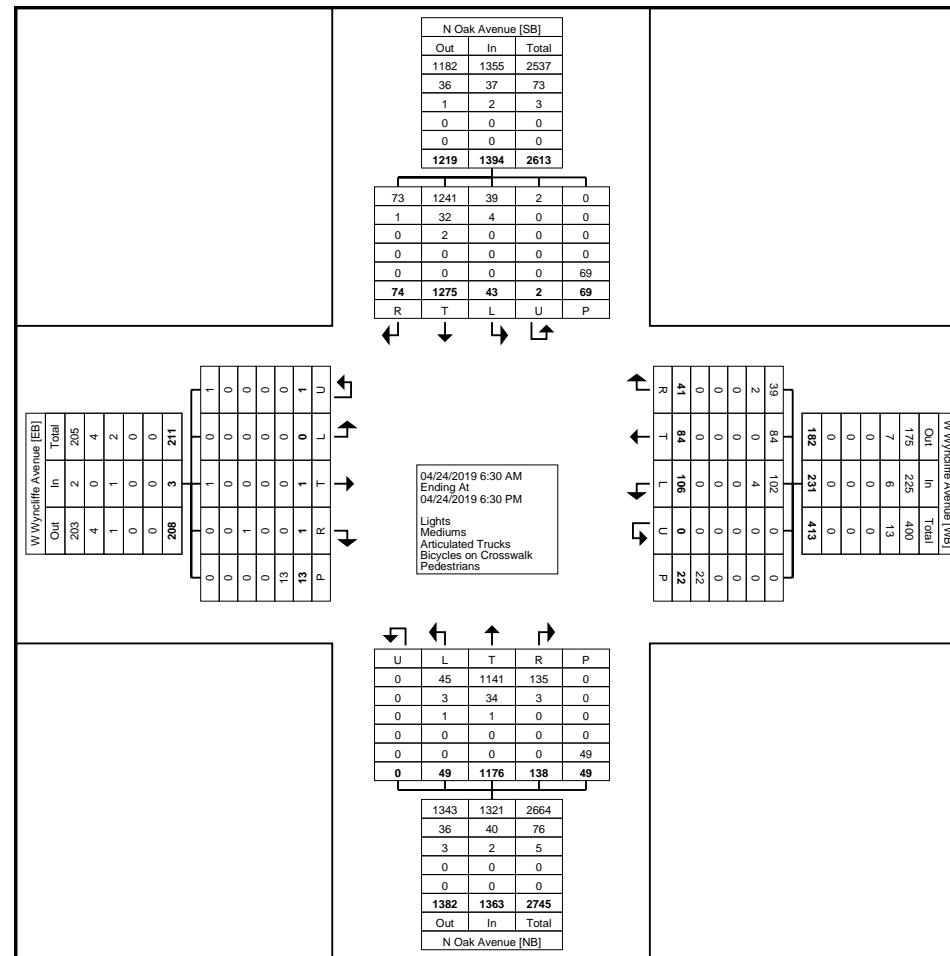
PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
Site Code: 5
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot



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 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
 Site Code: 5
 Start Date: 04/24/2019
 Page No: 4

Turning Movement Peak Hour Data (7:15 AM)

Start Time	W Wyncliffe Avenue						W Wyncliffe Avenue						N Oak Avenue						N Oak Avenue						Int. Total
	Eastbound			Westbound			Northbound			Southbound															
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
7:15 AM	0	0	0	0	0	0	6	6	0	0	12	0	4	54	2	0	60	0	0	48	4	1	52	124	
7:30 AM	1	0	0	0	1	1	0	7	3	1	0	11	0	1	40	1	1	42	0	0	51	1	3	52	106
7:45 AM	0	0	0	0	0	0	0	7	4	0	0	11	0	1	36	2	0	39	0	0	58	3	2	61	111
8:00 AM	0	0	0	0	0	0	0	4	2	1	0	7	0	3	32	1	0	36	0	1	55	1	0	57	100
Total	1	0	0	0	1	1	0	24	15	2	0	41	0	9	162	6	1	177	0	1	212	9	6	222	441
Approach %	100.0	0.0	0.0	0.0	-	-	0.0	58.5	36.6	4.9	-	-	0.0	5.1	91.5	3.4	-	-	0.0	0.5	95.5	4.1	-	-	-
Total %	0.2	0.0	0.0	0.0	-	0.2	0.0	5.4	3.4	0.5	-	9.3	0.0	2.0	36.7	1.4	-	40.1	0.0	0.2	48.1	2.0	-	50.3	-
PHF	0.250	0.000	0.000	0.000	-	0.250	0.000	0.857	0.625	0.500	-	0.854	0.000	0.563	0.750	0.750	-	0.738	0.000	0.250	0.914	0.563	-	0.910	0.889
Lights	1	0	0	0	-	1	0	24	15	2	-	41	0	8	152	6	-	166	0	1	208	9	-	218	426
% Lights	100.0	-	-	-	-	100.0	-	100.0	100.0	100.0	-	100.0	-	88.9	93.8	100.0	-	93.8	-	100.0	98.1	100.0	-	98.2	96.6
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	1	9	0	-	10	0	0	4	0	-	4	14
% Mediums	0.0	-	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	11.1	5.6	0.0	-	5.6	-	0.0	1.9	0.0	-	1.8	3.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Articulated Trucks	0.0	-	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.6	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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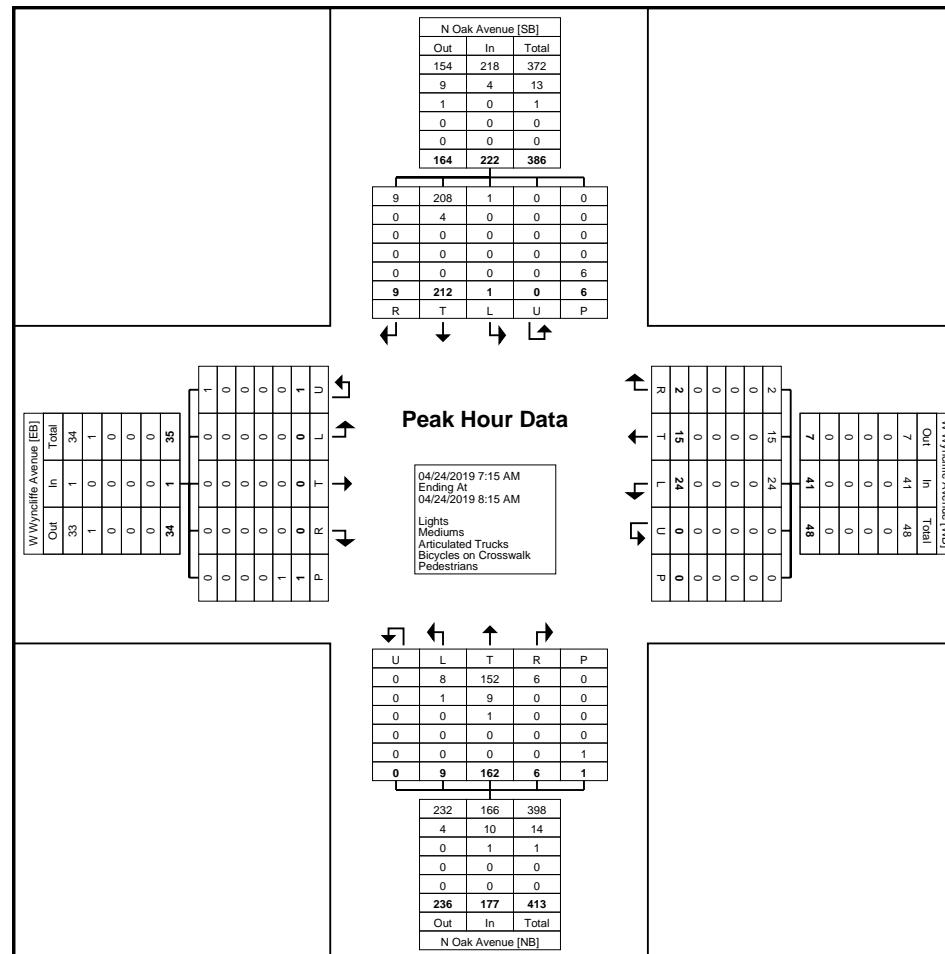
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609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
Site Code: 5
Start Date: 04/24/2019
Page No: 5



Turning Movement Peak Hour Data Plot (7:15 AM)



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Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
 Site Code: 5
 Start Date: 04/24/2019
 Page No: 6

Turning Movement Peak Hour Data (4:45 PM)

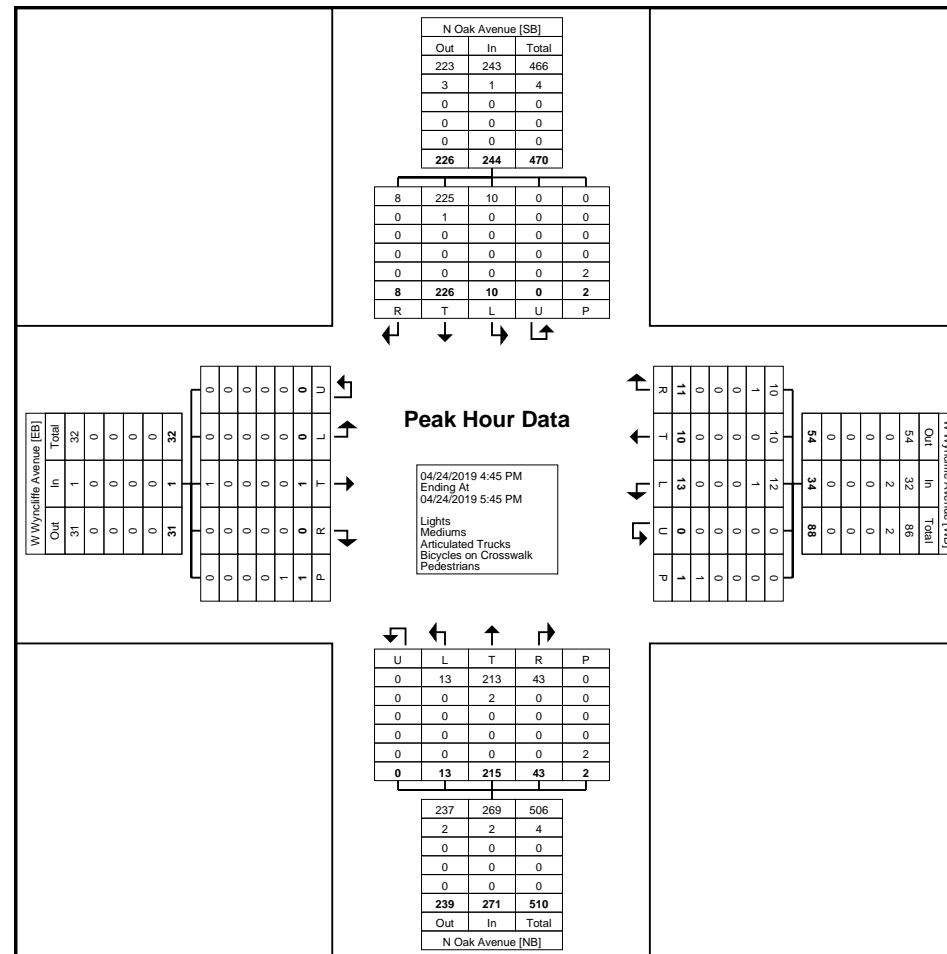
Start Time	W Wyncliffe Avenue						W Wyncliffe Avenue						N Oak Avenue						N Oak Avenue						Int. Total
	Eastbound			Westbound			Northbound			Southbound															
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
4:45 PM	0	0	0	0	0	0	4	2	4	0	10	0	4	49	14	1	67	0	1	54	2	0	57	134	
5:00 PM	0	0	0	0	0	0	4	2	3	0	9	0	2	51	7	1	60	0	4	55	2	1	61	130	
5:15 PM	0	0	0	0	1	0	2	4	1	0	7	0	4	49	10	0	63	0	3	60	2	0	65	135	
5:30 PM	0	0	1	0	0	1	3	2	3	1	8	0	3	66	12	0	81	0	2	57	2	1	61	151	
Total	0	0	1	0	1	1	0	13	10	11	1	34	0	13	215	43	2	271	0	10	226	8	2	244	550
Approach %	0.0	0.0	100.0	0.0	-	-	0.0	38.2	29.4	32.4	-	-	0.0	4.8	79.3	15.9	-	-	0.0	4.1	92.6	3.3	-	-	-
Total %	0.0	0.0	0.2	0.0	-	0.2	0.0	2.4	1.8	2.0	-	6.2	0.0	2.4	39.1	7.8	-	49.3	0.0	1.8	41.1	1.5	-	44.4	-
PHF	0.000	0.000	0.250	0.000	-	0.250	0.000	0.813	0.625	0.688	-	0.850	0.000	0.813	0.814	0.768	-	0.836	0.000	0.625	0.942	1.000	-	0.938	0.911
Lights	0	0	1	0	-	1	0	12	10	10	-	32	0	13	213	43	-	269	0	10	225	8	-	243	545
% Lights	-	-	100.0	-	-	100.0	-	92.3	100.0	90.9	-	94.1	-	100.0	99.1	100.0	-	99.3	-	100.0	99.6	100.0	-	99.6	99.1
Mediums	0	0	0	0	-	0	0	1	0	1	-	2	0	0	2	0	-	2	0	0	1	0	-	1	5
% Mediums	-	-	0.0	-	-	0.0	-	7.7	0.0	9.1	-	5.9	-	0.0	0.9	0.0	-	0.7	-	0.0	0.4	0.0	-	0.4	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0	
% Articulated Trucks	-	-	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	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	
Pedestrians	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	



Imperial Traffic & Data Collection
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609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
Site Code: 5
Start Date: 04/24/2019
Page No: 7



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



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Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
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Setup: MAK
Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe
Avenue
Site Code: 5
Start Date: 04/24/2019
Page No: 8

5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data Collection
PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound						W Wyncliffe Avenue Westbound						N Oak Avenue Northbound						N Oak Avenue Southbound								
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int		
2019-04-24 6:30AM	0	0	0	0	0	0	2	1	1	0	4	0	0	19	0	0	19	0	0	28	0	0	28	2	51		
6:45AM	0	0	0	0	0	1	2	6	0	0	8	0	0	25	3	0	28	0	3	32	2	0	37	1	73		
Hourly Total	0	0	0	0	0	1	4	7	1	0	12	0	0	44	3	0	47	0	3	60	2	0	65	3	124		
7:00AM	0	0	0	0	0	1	6	2	0	0	8	0	1	41	0	0	42	0	0	47	1	0	48	0	98		
7:15AM	0	0	0	0	0	0	6	6	0	0	12	0	4	54	2	0	60	0	0	48	4	0	52	1	124		
7:30AM	0	0	0	1	1	1	7	3	1	0	11	0	1	40	1	0	42	1	0	51	1	0	52	3	106		
7:45AM	0	0	0	0	0	0	7	4	0	0	11	0	1	36	2	0	39	0	0	58	3	0	61	2	111		
Hourly Total	0	0	0	1	1	2	26	15	1	0	42	0	7	171	5	0	183	1	0	204	9	0	213	6	439		
8:00AM	0	0	0	0	0	0	4	2	1	0	7	0	3	32	1	0	36	0	1	55	1	0	57	0	100		
8:15AM	0	0	0	0	0	0	4	6	1	0	11	3	2	36	2	0	40	0	0	48	2	0	50	2	101		
8:30AM	0	0	0	0	0	1	6	3	3	0	12	7	0	46	1	0	47	7	1	29	4	0	34	12	93		
8:45AM	0	0	0	0	0	0	5	2	3	0	10	0	2	43	6	0	51	0	1	35	4	0	40	2	101		
Hourly Total	0	0	0	0	0	1	19	13	8	0	40	10	7	157	10	0	174	7	3	167	11	0	181	16	395		
9:00AM	0	0	1	0	1	2	2	1	2	0	5	0	1	27	1	0	29	0	2	42	3	1	48	0	83		
9:15AM	0	0	0	0	0	0	0	2	2	0	4	0	0	22	2	0	24	0	0	28	3	0	31	0	59		
9:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1		
Hourly Total	0	0	1	0	1	2	2	3	4	0	9	0	1	49	3	0	53	0	2	71	6	1	80	0	143		
2:30PM	0	0	0	0	0	3	2	4	0	0	6	0	1	30	4	0	35	4	3	27	2	0	32	0	73		
2:45PM	0	0	0	0	0	0	1	4	2	0	7	0	3	47	4	0	54	0	1	42	1	0	44	1	105		
Hourly Total	0	0	0	0	0	3	3	8	2	0	13	0	4	77	8	0	89	4	4	69	3	0	76	1	178		
3:00PM	0	0	0	0	0	0	3	1	2	0	6	0	1	36	5	0	42	7	2	59	0	0	61	4	109		
3:15PM	0	0	0	0	0	0	2	3	2	0	7	1	0	44	7	0	51	21	3	41	1	0	45	7	103		
3:30PM	0	0	0	0	0	0	7	2	1	0	10	2	2	51	7	0	60	4	1	44	6	1	52	9	122		
3:45PM	0	0	0	0	0	0	6	5	0	0	11	4	1	50	2	0	53	0	0	45	4	0	49	8	113		
Hourly Total	0	0	0	0	0	0	18	11	5	0	34	7	4	181	21	0	206	32	6	189	11	1	207	28	447		
4:00PM	0	0	0	0	0	0	5	1	1	0	7	2	1	51	11	0	63	2	1	43	2	0	46	4	116		
4:15PM	0	0	0	0	0	0	0	5	3	0	8	1	2	50	8	0	60	0	2	55	4	0	61	0	129		
4:30PM	0	0	0	0	0	0	3	3	3	0	9	0	2	46	9	0	57	0	1	59	2	0	62	1	128		
4:45PM	0	0	0	0	0	0	4	2	4	0	10	0	4	49	14	0	67	1	1	54	2	0	57	0	134		
Hourly Total	0	0	0	0	0	0	12	11	11	0	34	3	9	196	42	0	247	3	5	211	10	0	226	5	507		
5:00PM	0	0	0	0	0	0	4	2	3	0	9	0	2	51	7	0	60	1	4	55	2	0	61	1	130		
5:15PM	0	0	0	0	0	1	2	4	1	0	7	0	4	49	10	0	63	0	3	60	2	0	65	0	135		
5:30PM	0	1	0	0	1	0	3	2	3	0	8	1	3	66	12	0	81	0	2	57	2	0	61	1	151		
5:45PM	0	0	0	0	0	1	8	4	0	0	12	0	2	57	3	0	62	1	3	47	9	0	59	6	133		
Hourly Total	0	1	0	0	1	2	17	12	7	0	36	1	11	223	32	0	266	2	12	219	15	0	246	8	549		
6:00PM	0	0	0	0	0	1	3	3	1	0	7	0	2	41	7	0	50	0	4	46	3	0	53	0	110		
6:15PM	0	0	0	0	0	1	2	1	1	0	4	1	4	37	7	0	48	0	4	39	4	0	47	2	99		
Hourly Total	0	0	0	0	0	2	5	4	2	0	11	1	6	78	14	0	98	0	8	85	7	0	100	2	209		
Total	0	1	1	1	1	3	13	106	84	41	0	231	22	49	1176	138	0	1363	49	43	1275	74	2	1394	69	2991	
% Approach	0%	33.3%	33.3%	33.3%	-	-	-45.9%	36.4%	17.7%	0%	-	-	-	3.6%	86.3%	10.1%	0%	-	-	3.1%	91.5%	5.3%	0.1%	-	-	-	
% Total	0%	0%	0%	0%	0.1%	-	-3.5%	2.8%	1.4%	0%	7.7%	-	-	1.6%	39.3%	4.6%	0%	45.6%	-	1.4%	42.6%	2.5%	0.1%	46.6%	-	-	
Lights	0	1	0	1	2	-	102	84	39	0	225	-	45	1141	135	0	1321	-	39	1241	73	2	1355	-	2903		
% Lights	0%	100%	0%	100%	66.7%	-	-96.2%	100%	95.1%	0%	97.4%	-	-	91.8%	97.0%	97.8%	0%	96.9%	-	90.7%	97.3%	98.6%	100%	97.2%	-	97.1%	
Articulated Trucks	0	0	1	0	1	1	-	0	0	0	0	0	-	1	1	0	0	2	-	0	2	0	0	2	-	5	
% Articulated Trucks	0%	0%	100%	0%	33.3%	-	-0%	0%	0%	0%	0%	0%	-	2.0%	0.1%	0%	0%	0.1%	-	0%	0.2%	0%	0%	0.1%	-	0.2%	
Buses and Single-Unit Trucks	0	0	0	0	0	0	-	4	0	2	0	6	-	3	34	3	0	40	-	4	32	1	0	37	-	83	
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	0%	-	3.8%	0%	4.9%	0%	2.6%	-	-	6.1%	2.9%	2.2%	0%	2.9%	-	9.3%	2.5%	1.4%	0%	2.7%	-	2.8%
Pedestrians	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	69		
% Pedestrians	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-	-	-	-	-100%		
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0		
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	0%		

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

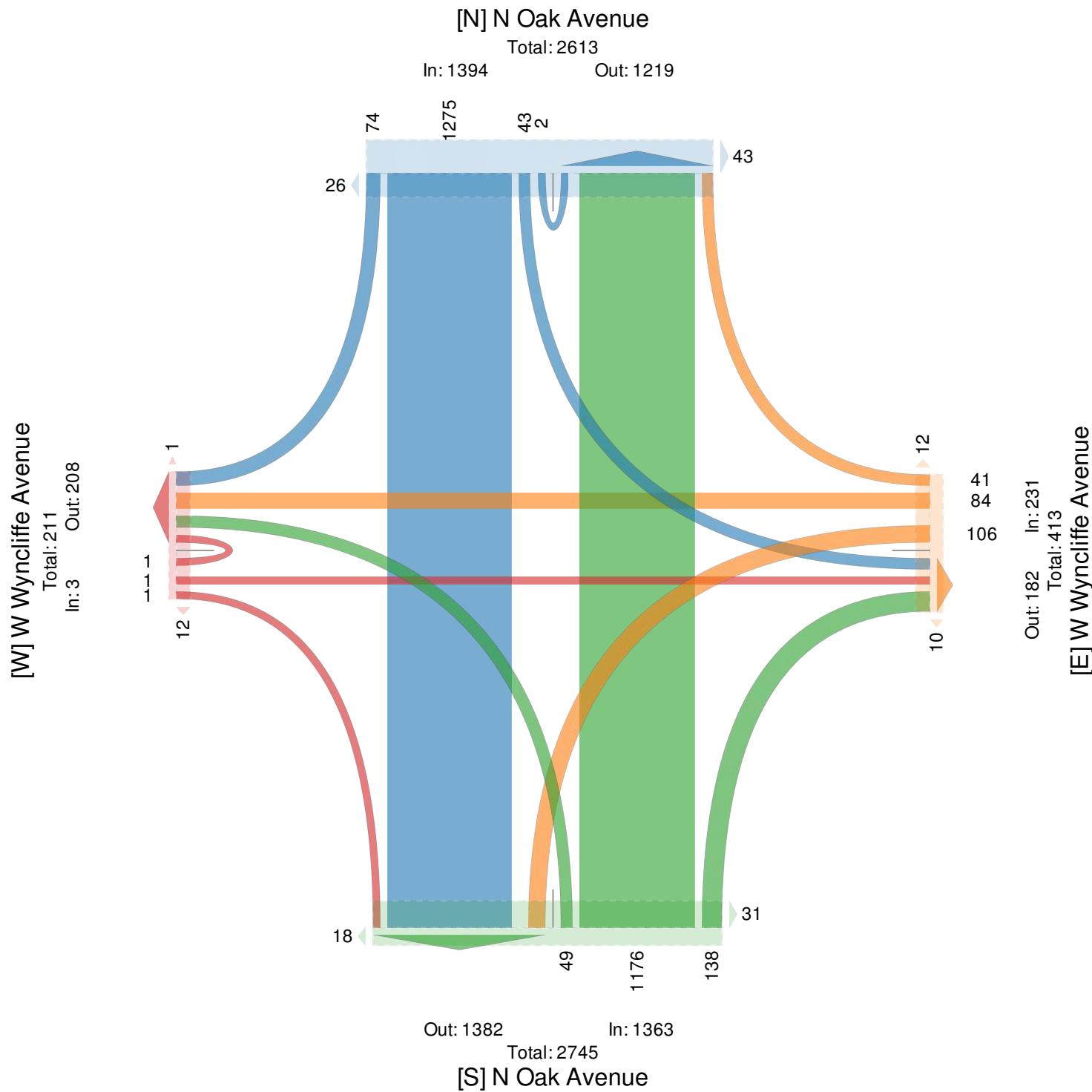
ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US



5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound					W Wyncliffe Avenue Westbound					N Oak Avenue Northbound					N Oak Avenue Southbound									
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
Time																									
2019-04-24 7:15AM	0	0	0	0	0	0	6	6	0	0	12	0	4	54	2	0	60	0	0	48	4	0	52	1	124
7:30AM	0	0	0	1	1	1	7	3	1	0	11	0	1	40	1	0	42	1	0	51	1	0	52	3	106
7:45AM	0	0	0	0	0	0	7	4	0	0	11	0	1	36	2	0	39	0	0	58	3	0	61	2	111
8:00AM	0	0	0	0	0	0	4	2	1	0	7	0	3	32	1	0	36	0	1	55	1	0	57	0	100
Total	0	0	0	1	1	1	24	15	2	0	41	0	9	162	6	0	177	1	1	212	9	0	222	6	441
% Approach	0%	0%	0%	100%	-	-	58.5%	36.6%	4.9%	0%	-	-	5.1%	91.5%	3.4%	0%	-	-	0.5%	95.5%	4.1%	0%	-	-	-
% Total	0%	0%	0%	0.2%	0.2%	-	5.4%	3.4%	0.5%	0%	9.3%	-	2.0%	36.7%	1.4%	0%	40.1%	-	0.2%	48.1%	2.0%	0%	50.3%	-	-
PHF	-	-	-	0.250	0.250	-	0.857	0.625	0.500	-	0.854	-	0.563	0.750	0.750	-	0.738	-	0.250	0.914	0.563	-	0.910	-	0.889
Lights	0	0	0	1	1	-	24	15	2	0	41	-	8	152	6	0	166	-	1	208	9	0	218	-	426
% Lights	0%	0%	0%	100%	100%	-	100%	100%	100%	0%	100%	-	88.9%	93.8%	100%	0%	93.8%	-	100%	98.1%	100%	0%	98.2%	-	96.6%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	0	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.6%	0%	0%	0.6%	-	0%	0%	0%	0%	0%	-	0.2%
Buses and Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	1	9	0	0	10	-	0	4	0	0	4	-	14
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	11.1%	5.6%	0%	0%	5.6%	-	0%	1.9%	0%	0%	1.8%	-	3.2%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	6	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

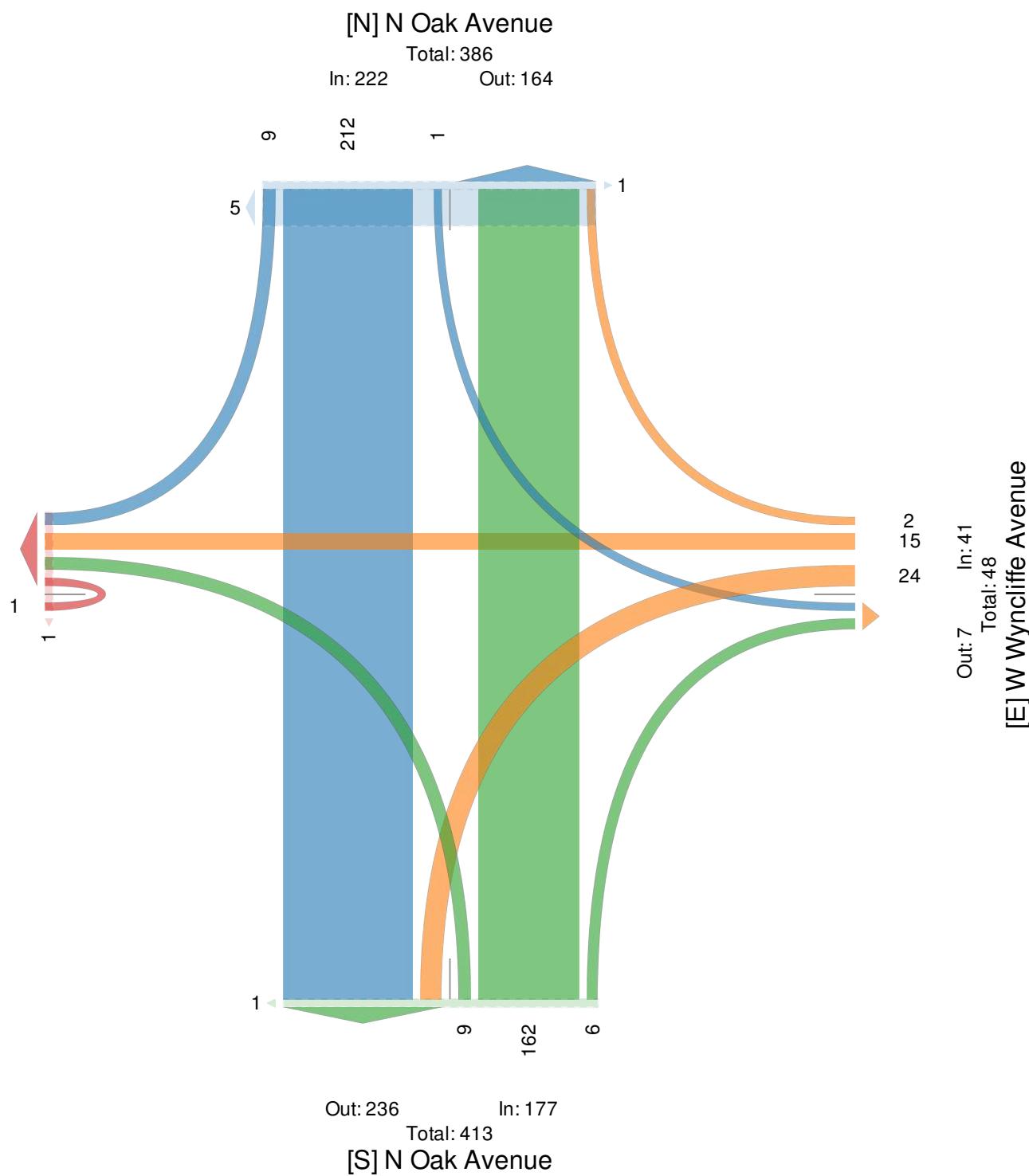
PO Box 4637,

Cherry Hill, NJ, 08003, US

[W] W Wyncliffe Avenue

Total: 35

In: 1 Out: 34



5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound					W Wyncliffe Avenue Westbound					N Oak Avenue Northbound					N Oak Avenue Southbound									
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2019-04-24 4:45PM	0	0	0	0	0	0	4	2	4	0	10	0	4	49	14	0	67	1	1	54	2	0	57	0	134
5:00PM	0	0	0	0	0	0	4	2	3	0	9	0	2	51	7	0	60	1	4	55	2	0	61	1	130
5:15PM	0	0	0	0	0	1	2	4	1	0	7	0	4	49	10	0	63	0	3	60	2	0	65	0	135
5:30PM	0	1	0	0	1	0	3	2	3	0	8	1	3	66	12	0	81	0	2	57	2	0	61	1	151
Total	0	1	0	0	1	1	13	10	11	0	34	1	13	215	43	0	271	2	10	226	8	0	244	2	550
% Approach	0%	100%	0%	0%	-	-	38.2%	29.4%	32.4%	0%	-	-	4.8%	79.3%	15.9%	0%	-	-	4.1%	92.6%	3.3%	0%	-	-	-
% Total	0%	0.2%	0%	0%	0.2%	-	2.4%	1.8%	2.0%	0%	6.2%	-	2.4%	39.1%	7.8%	0%	49.3%	-	1.8%	41.1%	1.5%	0%	44.4%	-	-
PHF	-	0.250	-	-	0.250	-	0.813	0.625	0.688	-	0.850	-	0.813	0.814	0.768	-	0.836	-	0.625	0.942	1.000	-	0.938	-	0.911
Lights	0	1	0	0	1	-	12	10	10	0	32	-	13	213	43	0	269	-	10	225	8	0	243	-	545
% Lights	0%	100%	0%	0%	100%	-	92.3%	100%	90.9%	0%	94.1%	-	100%	99.1%	100%	0%	99.3%	-	100%	99.6%	100%	0%	99.6%	-	99.1%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	0	-	1	0	1	0	2	-	0	2	0	0	2	-	0	1	0	0	1	-	5
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	7.7%	0%	9.1%	0%	5.9%	-	0%	0.9%	0%	0%	0.7%	-	0%	0.4%	0%	0%	0.4%	-	0.9%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

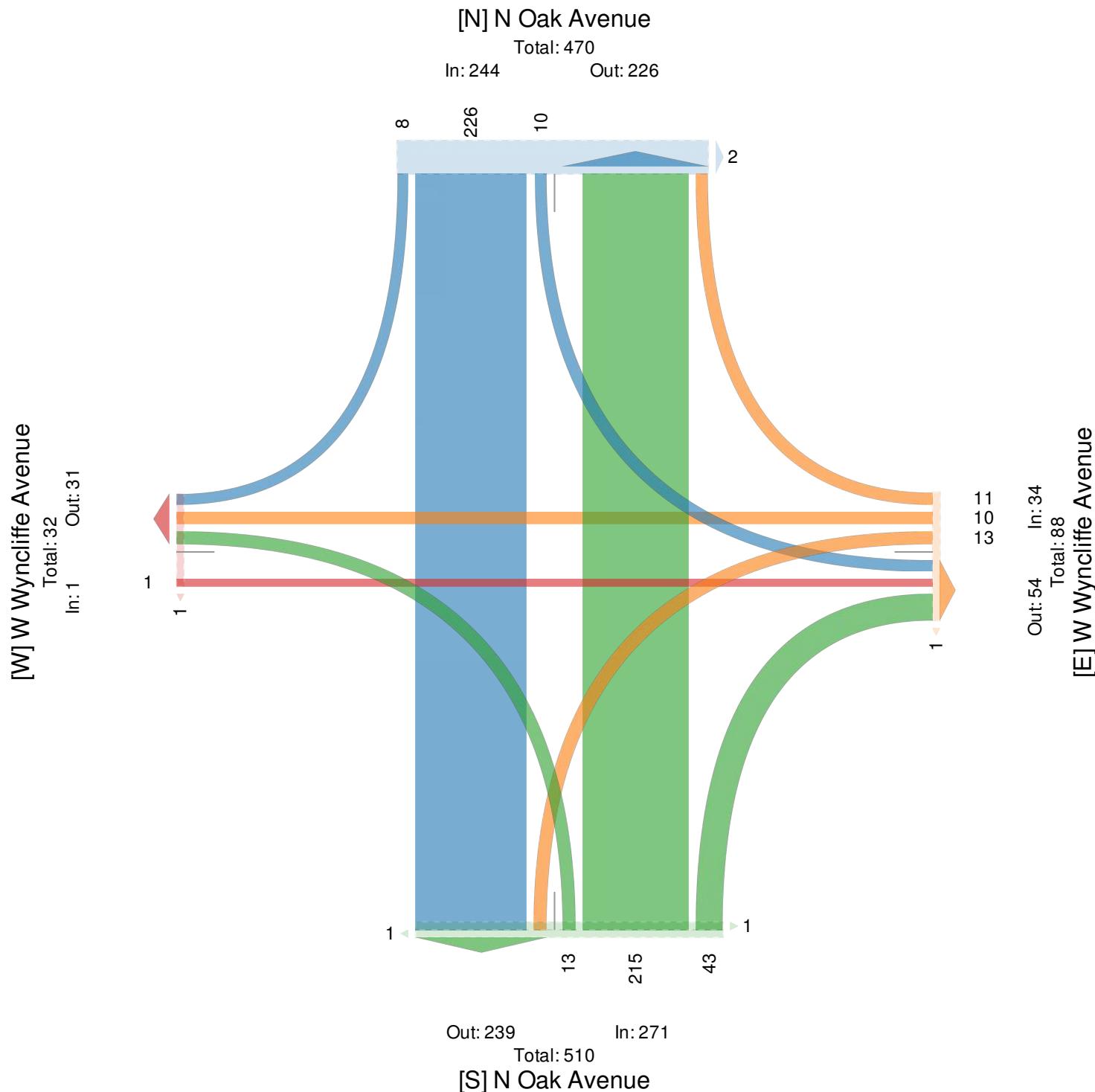
ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US





Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
 Street
 Site Code: 6
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
6:30 AM	0	2	0	1	2	0	3	1	0	4	0	0	8	0	8	14
6:45 AM	0	3	0	1	3	0	5	0	0	5	0	2	14	3	16	24
Hourly Total	0	5	0	2	5	0	8	1	0	9	0	2	22	3	24	38
7:00 AM	0	2	0	1	2	0	9	0	0	9	0	1	23	0	24	35
7:15 AM	0	5	2	0	7	0	12	0	0	12	0	1	14	2	15	34
7:30 AM	0	3	2	0	5	0	11	0	0	11	0	0	14	1	14	30
7:45 AM	0	4	0	0	4	0	8	0	0	8	0	1	11	0	12	24
Hourly Total	0	14	4	1	18	0	40	0	0	40	0	3	62	3	65	123
8:00 AM	0	1	1	1	2	0	13	0	0	13	0	0	17	1	17	32
8:15 AM	0	2	0	2	2	0	8	0	0	8	0	1	11	3	12	22
8:30 AM	0	3	1	0	4	0	11	0	0	11	0	0	9	0	9	24
8:45 AM	0	1	0	1	1	0	6	0	0	6	0	0	8	0	8	15
Hourly Total	0	7	2	4	9	0	38	0	0	38	0	1	45	4	46	93
9:00 AM	0	4	0	1	4	0	12	1	0	13	0	0	11	0	11	28
9:15 AM	0	2	0	0	2	0	4	0	0	4	0	1	11	0	12	18
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	6	0	1	6	0	16	1	0	17	0	1	22	0	23	46
2:30 PM	0	3	0	0	3	0	12	0	0	12	0	2	7	0	9	24
2:45 PM	0	3	2	0	5	0	16	3	0	19	0	2	5	0	7	31
Hourly Total	0	6	2	0	8	0	28	3	0	31	0	4	12	0	16	55
3:00 PM	0	0	0	1	0	0	14	1	2	15	0	0	14	0	14	29
3:15 PM	0	1	0	0	1	0	19	1	4	20	0	1	20	3	21	42
3:30 PM	0	0	1	0	1	0	19	1	0	20	0	1	13	1	14	35
3:45 PM	0	3	0	1	3	0	12	1	1	13	0	3	18	0	21	37
Hourly Total	0	4	1	2	5	0	64	4	7	68	0	5	65	4	70	143
4:00 PM	0	1	0	0	1	0	12	0	8	12	0	1	12	0	13	26
4:15 PM	0	3	0	1	3	0	10	1	1	11	0	0	12	2	12	26
4:30 PM	0	3	3	0	6	0	13	1	0	14	0	2	8	1	10	30
4:45 PM	0	4	1	1	5	0	11	0	0	11	0	1	20	0	21	37
Hourly Total	0	11	4	2	15	0	46	2	9	48	0	4	52	3	56	119
5:00 PM	0	2	0	0	2	0	12	0	0	12	0	0	10	0	10	24
5:15 PM	0	3	1	4	4	0	18	0	1	18	0	1	22	0	23	45
5:30 PM	0	2	0	0	2	0	16	0	0	16	0	1	21	1	22	40
5:45 PM	0	1	0	1	1	0	13	2	0	15	0	0	20	1	20	36
Hourly Total	0	8	1	5	9	0	59	2	1	61	0	2	73	2	75	145
6:00 PM	0	2	0	0	2	0	15	0	0	15	0	0	13	0	13	30
6:15 PM	0	3	1	0	4	0	18	1	0	19	0	0	17	0	17	40

Grand Total	0	66	15	17	81	0	332	14	17	346	0	22	383	19	405	832
Approach %	0.0	81.5	18.5	-	-	0.0	96.0	4.0	-	-	0.0	5.4	94.6	-	-	-
Total %	0.0	7.9	1.8	-	9.7	0.0	39.9	1.7	-	41.6	0.0	2.6	46.0	-	48.7	-
Lights	0	65	13	-	78	0	311	14	-	325	0	21	366	-	387	790
% Lights	-	98.5	86.7	-	96.3	-	93.7	100.0	-	93.9	-	95.5	95.6	-	95.6	95.0
Mediums	0	1	2	-	3	0	21	0	-	21	0	1	16	-	17	41
% Mediums	-	1.5	13.3	-	3.7	-	6.3	0.0	-	6.1	-	4.5	4.2	-	4.2	4.9
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	1	-	1	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.3	-	0.2	0.1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	17	-	-	-	-	17	-	-	-	-	19	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-



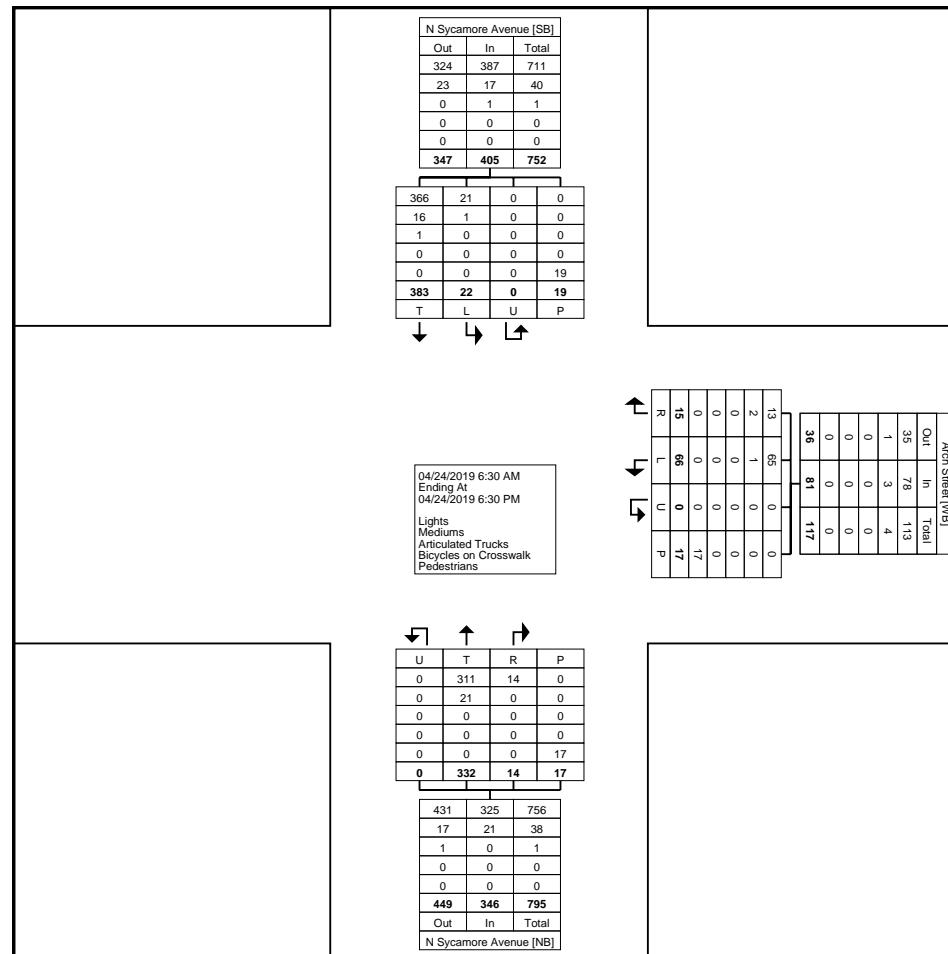
Imperial Traffic & Data Collection
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PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
Street
Site Code: 6
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot



Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
 Street
 Site Code: 6
 Start Date: 04/24/2019
 Page No: 4

Turning Movement Peak Hour Data (6:45 AM)

Start Time	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
6:45 AM	0	3	0	1	3	0	5	0	0	5	0	2	14	3	16	24
7:00 AM	0	2	0	1	2	0	9	0	0	9	0	1	23	0	24	35
7:15 AM	0	5	2	0	7	0	12	0	0	12	0	1	14	2	15	34
7:30 AM	0	3	2	0	5	0	11	0	0	11	0	0	14	1	14	30
Total	0	13	4	2	17	0	37	0	0	37	0	4	65	6	69	123
Approach %	0.0	76.5	23.5	-	-	0.0	100.0	0.0	-	-	0.0	5.8	94.2	-	-	-
Total %	0.0	10.6	3.3	-	13.8	0.0	30.1	0.0	-	30.1	0.0	3.3	52.8	-	56.1	-
PHF	0.000	0.650	0.500	-	0.607	0.000	0.771	0.000	-	0.771	0.000	0.500	0.707	-	0.719	0.879
Lights	0	13	4	-	17	0	32	0	-	32	0	4	62	-	66	115
% Lights	-	100.0	100.0	-	100.0	-	86.5	-	-	86.5	-	100.0	95.4	-	95.7	93.5
Mediums	0	0	0	-	0	0	5	0	-	5	0	0	3	-	3	8
% Mediums	-	0.0	0.0	-	0.0	-	13.5	-	-	13.5	-	0.0	4.6	-	4.3	6.5
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0	-	-	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	6	-	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	100.0	-	-	-

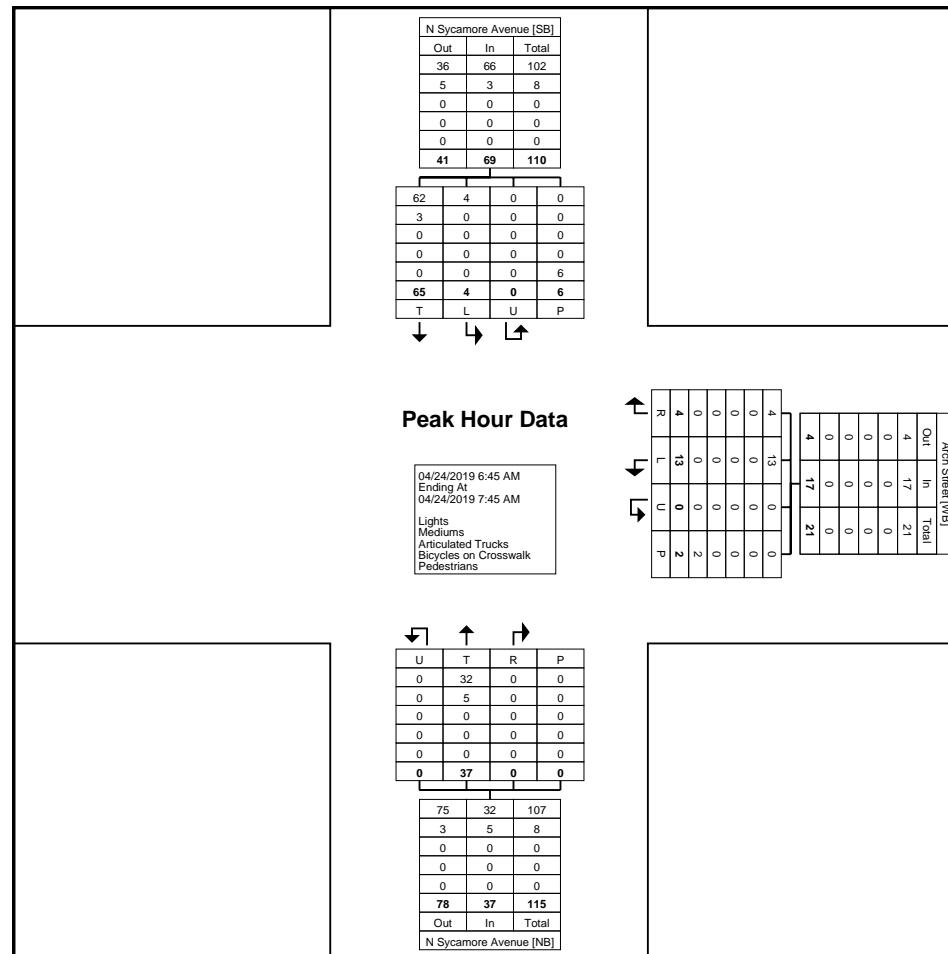


Imperial Traffic & Data Collection
www.imperialtdc.com
PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
Street
Site Code: 6
Start Date: 04/24/2019
Page No: 5



Turning Movement Peak Hour Data Plot (6:45 AM)



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 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
 Street
 Site Code: 6
 Start Date: 04/24/2019
 Page No: 6

Turning Movement Peak Hour Data (5:15 PM)

Start Time	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
5:15 PM	0	3	1	4	4	0	18	0	1	18	0	1	22	0	23	45
5:30 PM	0	2	0	0	2	0	16	0	0	16	0	1	21	1	22	40
5:45 PM	0	1	0	1	1	0	13	2	0	15	0	0	20	1	20	36
6:00 PM	0	2	0	0	2	0	15	0	0	15	0	0	13	0	13	30
Total	0	8	1	5	9	0	62	2	1	64	0	2	76	2	78	151
Approach %	0.0	88.9	11.1	-	-	0.0	96.9	3.1	-	-	0.0	2.6	97.4	-	-	-
Total %	0.0	5.3	0.7	-	6.0	0.0	41.1	1.3	-	42.4	0.0	1.3	50.3	-	51.7	-
PHF	0.000	0.667	0.250	-	0.563	0.000	0.861	0.250	-	0.889	0.000	0.500	0.864	-	0.848	0.839
Lights	0	8	1	-	9	0	61	2	-	63	0	2	75	-	77	149
% Lights	-	100.0	100.0	-	100.0	-	98.4	100.0	-	98.4	-	100.0	98.7	-	98.7	98.7
Mediums	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Mediums	-	0.0	0.0	-	0.0	-	1.6	0.0	-	1.6	-	0.0	0.0	-	0.0	0.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	1	-	1	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	1.3	-	1.3	0.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	0.0	-	-	-
Pedestrians	-	-	-	5	-	-	-	-	1	-	-	-	2	-	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-	-

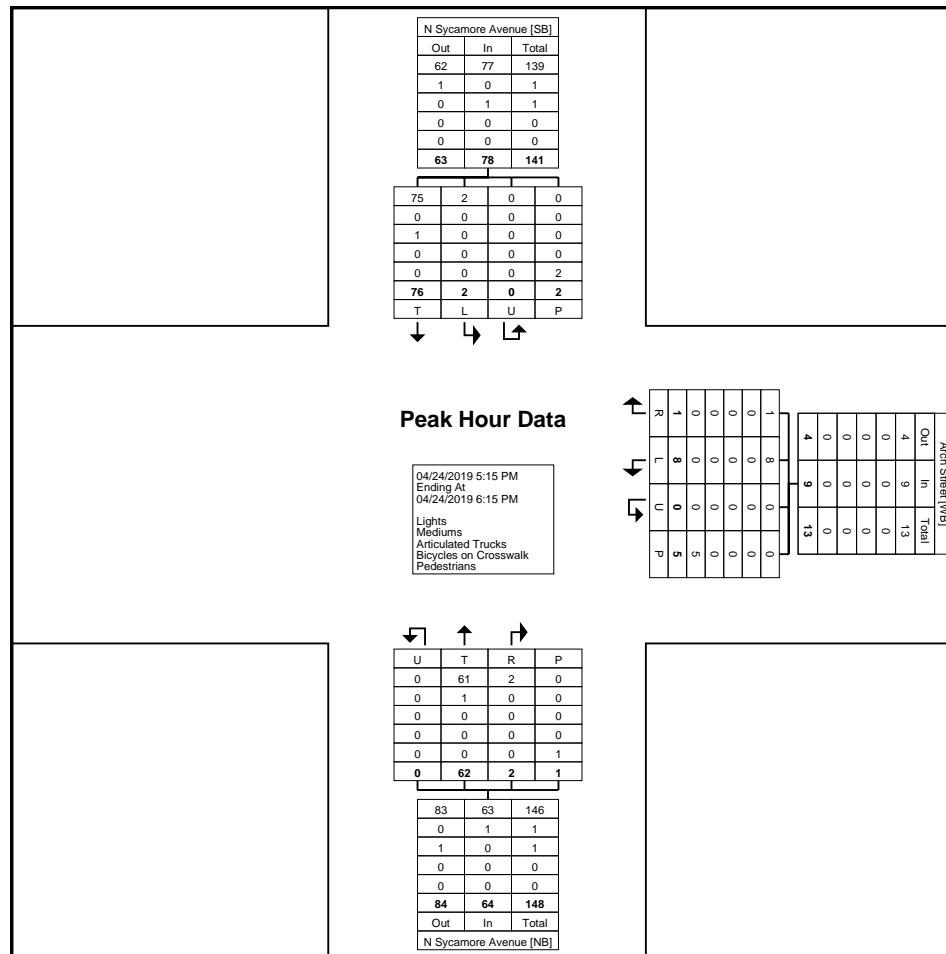


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 PO BOX 4637

Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
 Street
 Site Code: 6
 Start Date: 04/24/2019
 Page No: 7



Turning Movement Peak Hour Data Plot (5:15 PM)



Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931718, -75.300605

Imperial Traffic & Data Collection
www.imperialtdc.com
PO BOX 4637
Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Count Name: 6. N Sycamore Avenue & Arch
Street
Site Code: 6
Start Date: 04/24/2019
Page No: 8

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					
Time	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	Int
2019-04-24 6:30AM	2	0	0	2	1	3	1	0	4	0	0	8	0	8	0	14
6:45AM	3	0	0	3	1	5	0	0	5	0	2	14	0	16	3	24
Hourly Total	5	0	0	5	2	8	1	0	9	0	2	22	0	24	3	38
7:00AM	2	0	0	2	1	9	0	0	9	0	1	23	0	24	0	35
7:15AM	5	2	0	7	0	12	0	0	12	0	1	14	0	15	2	34
7:30AM	3	2	0	5	0	11	0	0	11	0	0	14	0	14	1	30
7:45AM	4	0	0	4	0	8	0	0	8	0	1	11	0	12	0	24
Hourly Total	14	4	0	18	1	40	0	0	40	0	3	62	0	65	3	123
8:00AM	1	1	0	2	1	13	0	0	13	0	0	17	0	17	1	32
8:15AM	2	0	0	2	2	8	0	0	8	0	1	11	0	12	3	22
8:30AM	3	1	0	4	0	11	0	0	11	0	0	9	0	9	0	24
8:45AM	1	0	0	1	1	6	0	0	6	0	0	8	0	8	0	15
Hourly Total	7	2	0	9	4	38	0	0	38	0	1	45	0	46	4	93
9:00AM	4	0	0	4	1	12	1	0	13	0	0	11	0	11	0	28
9:15AM	2	0	0	2	0	4	0	0	4	0	1	11	0	12	0	18
9:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	6	0	0	6	1	16	1	0	17	0	1	22	0	23	0	46
2:30PM	3	0	0	3	0	12	0	0	12	0	2	7	0	9	0	24
2:45PM	3	2	0	5	0	16	3	0	19	0	2	5	0	7	0	31
Hourly Total	6	2	0	8	0	28	3	0	31	0	4	12	0	16	0	55
3:00PM	0	0	0	0	1	14	1	0	15	2	0	14	0	14	0	29
3:15PM	1	0	0	1	0	19	1	0	20	4	1	20	0	21	3	42
3:30PM	0	1	0	1	0	19	1	0	20	0	1	13	0	14	1	35
3:45PM	3	0	0	3	1	12	1	0	13	1	3	18	0	21	0	37
Hourly Total	4	1	0	5	2	64	4	0	68	7	5	65	0	70	4	143
4:00PM	1	0	0	1	0	12	0	0	12	8	1	12	0	13	0	26
4:15PM	3	0	0	3	1	10	1	0	11	1	0	12	0	12	2	26
4:30PM	3	3	0	6	0	13	1	0	14	0	2	8	0	10	1	30
4:45PM	4	1	0	5	1	11	0	0	11	0	1	20	0	21	0	37
Hourly Total	11	4	0	15	2	46	2	0	48	9	4	52	0	56	3	119
5:00PM	2	0	0	2	0	12	0	0	12	0	0	10	0	10	0	24
5:15PM	3	1	0	4	4	18	0	0	18	1	1	22	0	23	0	45
5:30PM	2	0	0	2	0	16	0	0	16	0	1	21	0	22	1	40
5:45PM	1	0	0	1	1	13	2	0	15	0	0	20	0	20	1	36
Hourly Total	8	1	0	9	5	59	2	0	61	1	2	73	0	75	2	145
6:00PM	2	0	0	2	0	15	0	0	15	0	0	13	0	13	0	30
6:15PM	3	1	0	4	0	18	1	0	19	0	0	17	0	17	0	40
Hourly Total	5	1	0	6	0	33	1	0	34	0	0	30	0	30	0	70
Total	66	15	0	81	17	332	14	0	346	17	22	383	0	405	19	832
% Approach	81.5%	18.5%	0%	-	-	96.0%	4.0%	0%	-	-	5.4%	94.6%	0%	-	-	-
% Total	7.9%	1.8%	0%	9.7%	-	39.9%	1.7%	0%	41.6%	-	2.6%	46.0%	0%	48.7%	-	-
Lights	65	13	0	78	-	311	14	0	325	-	21	366	0	387	-	790
% Lights	98.5%	86.7%	0%	96.3%	-	93.7%	100%	0%	93.9%	-	95.5%	95.6%	0%	95.6%	-	95.0%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	1	0	1	-	1
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0.3%	0%	0.2%	-	0.1%
Buses and Single-Unit Trucks	1	2	0	3	-	21	0	0	21	-	1	16	0	17	-	41
% Buses and Single-Unit Trucks	1.5%	13.3%	0%	3.7%	-	6.3%	0%	0%	6.1%	-	4.5%	4.2%	0%	4.2%	-	4.9%
Pedestrians	-	-	-	-	17	-	-	-	-	17	-	-	-	-	19	
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

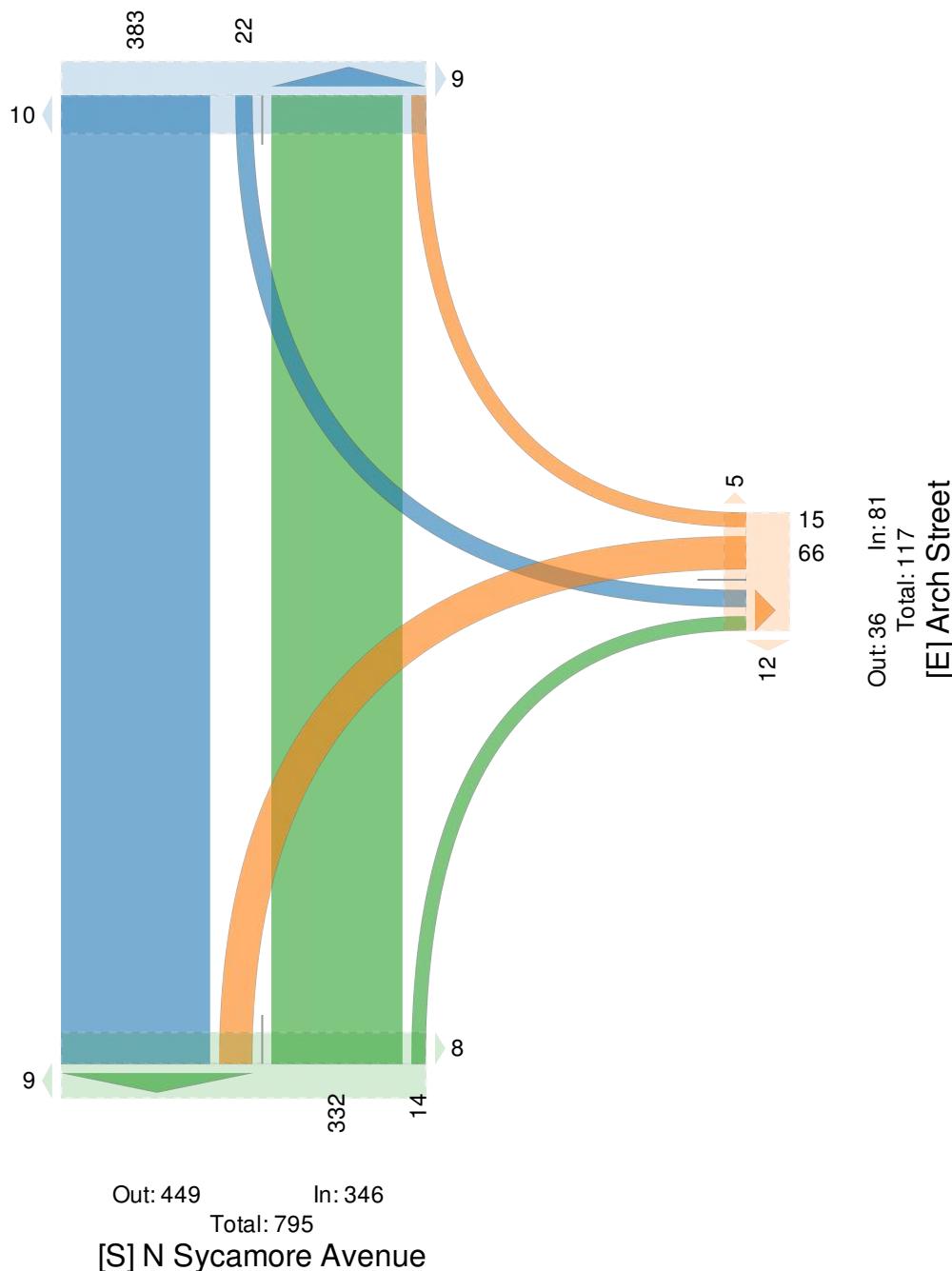
Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 752

In: 405

Out: 347



[S] N Sycamore Avenue

Out: 449 In: 346

Total: 795

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

AM Peak (6:45 AM - 7:45 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					
Time	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	Int
2019-04-24 6:45AM	3	0	0	3	1	5	0	0	5	0	2	14	0	16	3	24
7:00AM	2	0	0	2	1	9	0	0	9	0	1	23	0	24	0	35
7:15AM	5	2	0	7	0	12	0	0	12	0	1	14	0	15	2	34
7:30AM	3	2	0	5	0	11	0	0	11	0	0	14	0	14	1	30
Total	13	4	0	17	2	37	0	0	37	0	4	65	0	69	6	123
% Approach	76.5%	23.5%	0%	-	-	100%	0%	0%	-	-	5.8%	94.2%	0%	-	-	-
% Total	10.6%	3.3%	0%	13.8%	-	30.1%	0%	0%	30.1%	-	3.3%	52.8%	0%	56.1%	-	-
PHF	0.650	0.500	-	0.607	-	0.771	-	-	0.771	-	0.500	0.707	-	0.719	-	0.879
Lights	13	4	0	17	-	32	0	0	32	-	4	62	0	66	-	115
% Lights	100%	100%	0%	100%	-	86.5%	0%	0%	86.5%	-	100%	95.4%	0%	95.7%	-	93.5%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	-	5	0	0	5	-	0	3	0	3	-	8
% Buses and Single-Unit Trucks	0%	0%	0%	0%	-	13.5%	0%	0%	13.5%	-	0%	4.6%	0%	4.3%	-	6.5%
Pedestrians	-	-	-	-	2	-	-	-	-	0	-	-	-	-	-	6
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

AM Peak (6:45 AM - 7:45 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

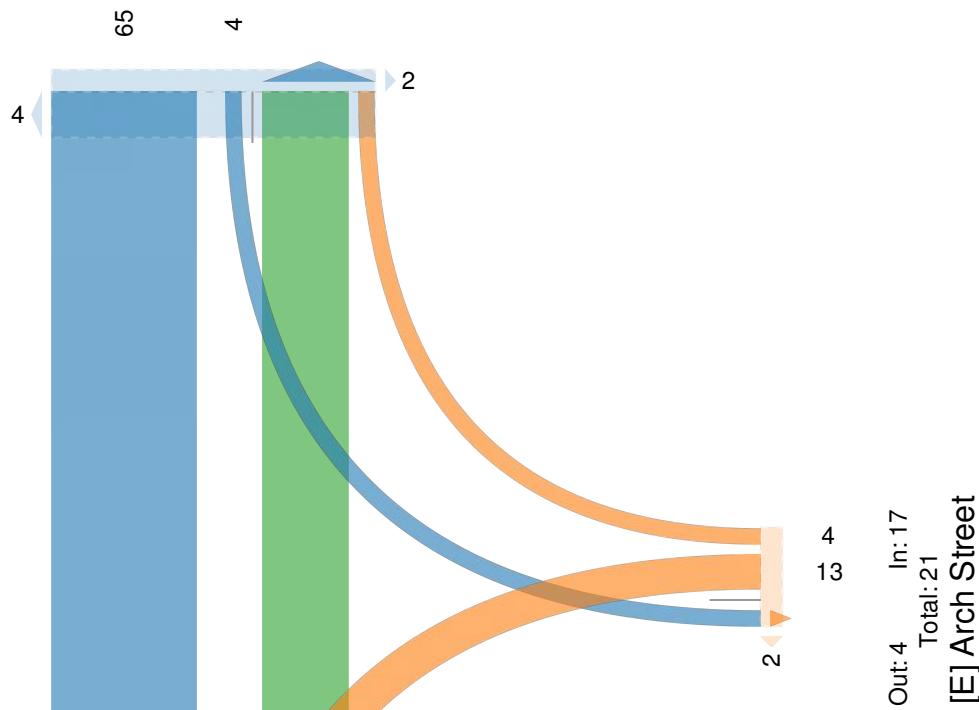
Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 110

In: 69

Out: 41



[S] N Sycamore Avenue

Out: 78

In: 37

Total: 115

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

PM Peak (5:15 PM - 6:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					
Time	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	Int
2019-04-24 5:15PM	3	1	0	4	4	18	0	0	18	1	1	22	0	23	0	45
5:30PM	2	0	0	2	0	16	0	0	16	0	1	21	0	22	1	40
5:45PM	1	0	0	1	1	13	2	0	15	0	0	20	0	20	1	36
6:00PM	2	0	0	2	0	15	0	0	15	0	0	13	0	13	0	30
Total	8	1	0	9	5	62	2	0	64	1	2	76	0	78	2	151
% Approach	88.9%	11.1%	0%	-	-	96.9%	3.1%	0%	-	-	2.6%	97.4%	0%	-	-	-
% Total	5.3%	0.7%	0%	6.0%	-	41.1%	1.3%	0%	42.4%	-	1.3%	50.3%	0%	51.7%	-	-
PHF	0.667	0.250	-	0.563	-	0.861	0.250	-	0.889	-	0.500	0.864	-	0.848	-	0.839
Lights	8	1	0	9	-	61	2	0	63	-	2	75	0	77	-	149
% Lights	100%	100%	0%	100%	-	98.4%	100%	0%	98.4%	-	100%	98.7%	0%	98.7%	-	98.7%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	1	0	1	-	1
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	1.3%	0%	1.3%	-	0.7%
Buses and Single-Unit Trucks	0	0	0	0	-	1	0	0	1	-	0	0	0	0	-	1
% Buses and Single-Unit Trucks	0%	0%	0%	0%	-	1.6%	0%	0%	1.6%	-	0%	0%	0%	0%	-	0.7%
Pedestrians	-	-	-	-	5	-	-	-	-	1	-	-	-	-	2	
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

PM Peak (5:15 PM - 6:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

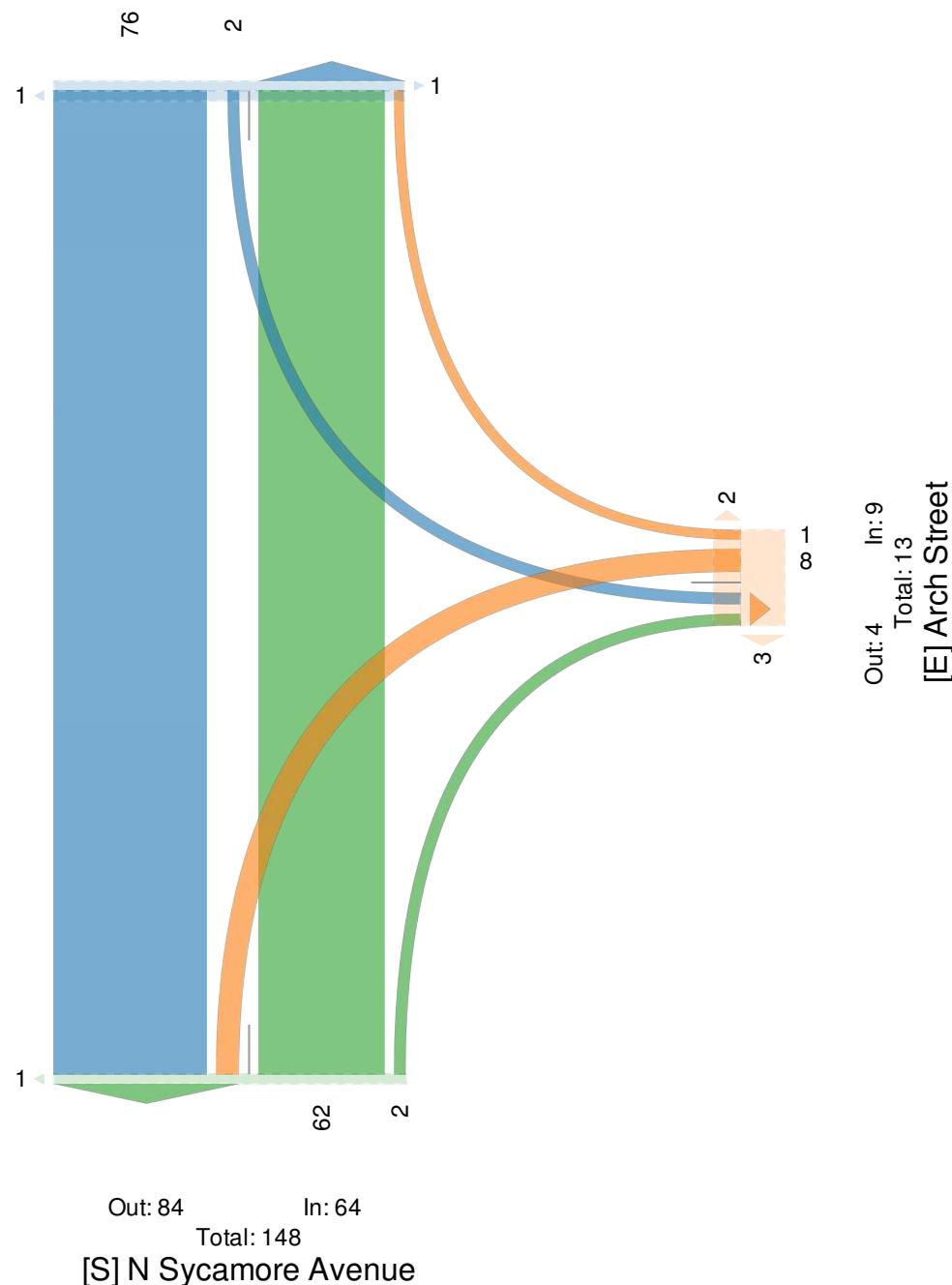
Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 141

In: 78

Out: 63



7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

 Provided by: Imperial Traffic & Data Collection
 PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound						E Wyncliffe Avenue Westbound						N Sycamore Avenue Northbound						N Sycamore Avenue Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2019-04-24 6:30AM	0	2	2	0	4	1	0	1	2	0	3	1	0	4	0	0	4	0	1	6	0	0	7	1	18
6:45AM	3	1	4	0	8	0	1	2	5	0	8	0	0	6	0	0	6	2	0	10	1	0	11	0	33
Hourly Total	3	3	6	0	12	1	1	3	7	0	11	1	0	10	0	0	10	2	1	16	1	0	18	1	51
7:00AM	1	0	2	0	3	0	1	3	3	0	7	0	0	9	0	0	9	2	2	21	2	0	25	0	44
7:15AM	1	3	4	0	8	1	0	6	5	0	11	2	1	15	1	0	17	2	1	10	1	0	12	0	48
7:30AM	0	3	0	0	3	2	0	4	8	0	12	0	2	12	0	0	14	0	2	12	0	0	14	3	43
7:45AM	4	1	3	0	8	0	0	4	5	0	9	0	1	7	0	0	8	0	1	8	0	0	9	0	34
Hourly Total	6	7	9	0	22	3	1	17	21	0	39	2	4	43	1	0	48	4	6	51	3	0	60	3	169
8:00AM	2	1	4	0	7	0	0	5	1	0	6	1	1	14	0	0	15	0	1	12	0	0	13	0	41
8:15AM	1	1	2	0	4	0	2	6	2	0	10	1	0	7	0	0	7	0	1	7	3	0	11	0	32
8:30AM	0	3	1	0	4	0	1	1	0	0	2	0	3	8	1	0	12	0	2	6	6	0	14	1	32
8:45AM	0	1	0	0	1	0	1	3	3	0	7	0	1	5	0	0	6	0	1	7	1	0	9	0	23
Hourly Total	3	6	7	0	16	0	4	15	6	0	25	2	5	34	1	0	40	0	5	32	10	0	47	1	128
9:00AM	2	3	0	0	5	0	0	3	4	0	7	0	1	10	1	0	12	0	1	11	0	0	12	0	36
9:15AM	0	0	0	0	0	0	0	0	3	0	3	0	2	3	0	0	5	0	1	12	0	0	13	0	21
Hourly Total	2	3	0	0	5	0	0	3	7	0	10	0	3	13	1	0	17	0	2	23	0	0	25	0	57
2:30PM	1	3	2	0	6	0	0	3	3	0	6	0	3	9	1	0	13	0	0	7	1	0	8	1	33
2:45PM	0	0	1	0	1	0	0	2	3	0	5	0	4	13	1	0	18	0	1	6	1	0	8	0	32
Hourly Total	1	3	3	0	7	0	0	5	6	0	11	0	7	22	2	0	31	0	1	13	2	0	16	1	65
3:00PM	3	1	2	0	6	0	0	8	7	0	15	0	5	10	0	0	15	0	2	12	1	0	15	0	51
3:15PM	5	0	4	0	9	0	0	5	2	0	7	0	2	15	2	0	19	0	4	15	1	0	20	0	55
3:30PM	1	4	2	0	7	1	2	9	4	0	15	0	8	13	0	0	21	2	2	12	2	0	16	2	59
3:45PM	1	3	3	0	7	0	0	6	5	0	11	0	1	10	0	0	11	0	1	16	3	0	20	0	49
Hourly Total	10	8	11	0	29	1	2	28	18	0	48	0	16	48	2	0	66	2	9	55	7	0	71	2	214
4:00PM	1	0	0	0	1	1	0	3	6	0	9	0	3	8	1	0	12	0	3	13	2	0	18	1	40
4:15PM	0	2	1	0	3	0	0	3	6	0	9	3	0	8	1	0	9	0	5	12	0	0	17	0	38
4:30PM	3	1	3	0	7	0	0	1	3	0	4	0	2	11	3	0	16	0	4	7	3	0	14	0	41
4:45PM	5	2	3	0	10	1	0	8	3	0	11	0	2	10	0	0	12	1	3	17	3	0	23	0	56
Hourly Total	9	5	7	0	21	2	0	15	18	0	33	3	7	37	5	0	49	1	15	49	8	0	72	1	175
5:00PM	1	4	2	1	8	5	0	6	4	0	10	0	1	8	1	0	10	0	6	9	1	0	16	2	44
5:15PM	0	5	1	0	6	0	0	6	6	0	12	3	1	19	0	0	20	1	3	19	3	0	25	0	63
5:30PM	1	5	2	1	9	1	0	5	9	0	14	0	1	12	1	0	14	2	3	17	2	0	22	1	59
5:45PM	1	3	2	0	6	0	0	3	1	0	4	0	4	7	2	0	13	0	4	15	6	0	25	0	48
Hourly Total	3	17	7	2	29	6	0	20	20	0	40	3	7	46	4	0	57	3	16	60	12	0	88	3	214
6:00PM	1	6	4	0	11	3	0	8	4	0	12	0	1	13	0	0	14	2	0	9	1	0	10	3	47
6:15PM	2	4	2	0	8	0	0	1	4	0	5	0	3	13	1	0	17	0	2	14	1	0	17	2	47
Hourly Total	3	10	6	0	19	3	0	9	8	0	17	0	4	26	1	0	31	2	2	23	2	0	27	5	94
Total	40	62	56	2	160	16	8	115	111	0	234	11	53	279	17	0	349	14	57	322	45	0	424	17	1167
% Approach	25.0%	38.8%	35.0%	1.3%	-	-	3.4%	49.1%	47.4%	0%	-	-	15.2%	79.9%	4.9%	0%	-	-	13.4%	75.9%	10.6%	0%	-	-	-
% Total	3.4%	5.3%	4.8%	0.2%	13.7%	-	0.7%	9.9%	9.5%	0%	20.1%	-	4.5%	23.9%	1.5%	0%	29.9%	-	4.9%	27.6%	3.9%	0%	36.3%	-	-
Lights	39	61	52	2	154	-	7	114	108	0	229	-	49	263	16	0	328	-	57	310	40	0	407	-	1118
% Lights	97.5%	98.4%	92.9%	100%	96.3%	-	87.5%	99.1%	97.3%	0%	97.9%	-	92.5%	94.3%	94.1%	0%	94.0%	-	100%	96.3%	88.9%	0%	96.0%	-	95.8%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%
Buses and Single-Unit Trucks	1	1	4	0	6	-	1	1	3	0	5	-	4	16	1	0	21	-	0	12	5	0	17	-	49
% Buses and Single-Unit Trucks	2.5%	1.6%	7.1%	0%	3.8%	-	12.5%	0.9%	2.7%	0%	2.1%	-	7.5%	5.7%	5.9%	0%	6.0%	-	0%	3.7%	11.1%	0%	4.0%	-	4.2%
Pedestrians	-	-	-	-	-	16	-	-	-	-	11	-	-	-	-	-	-	14	-	-	-	-	-	17	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

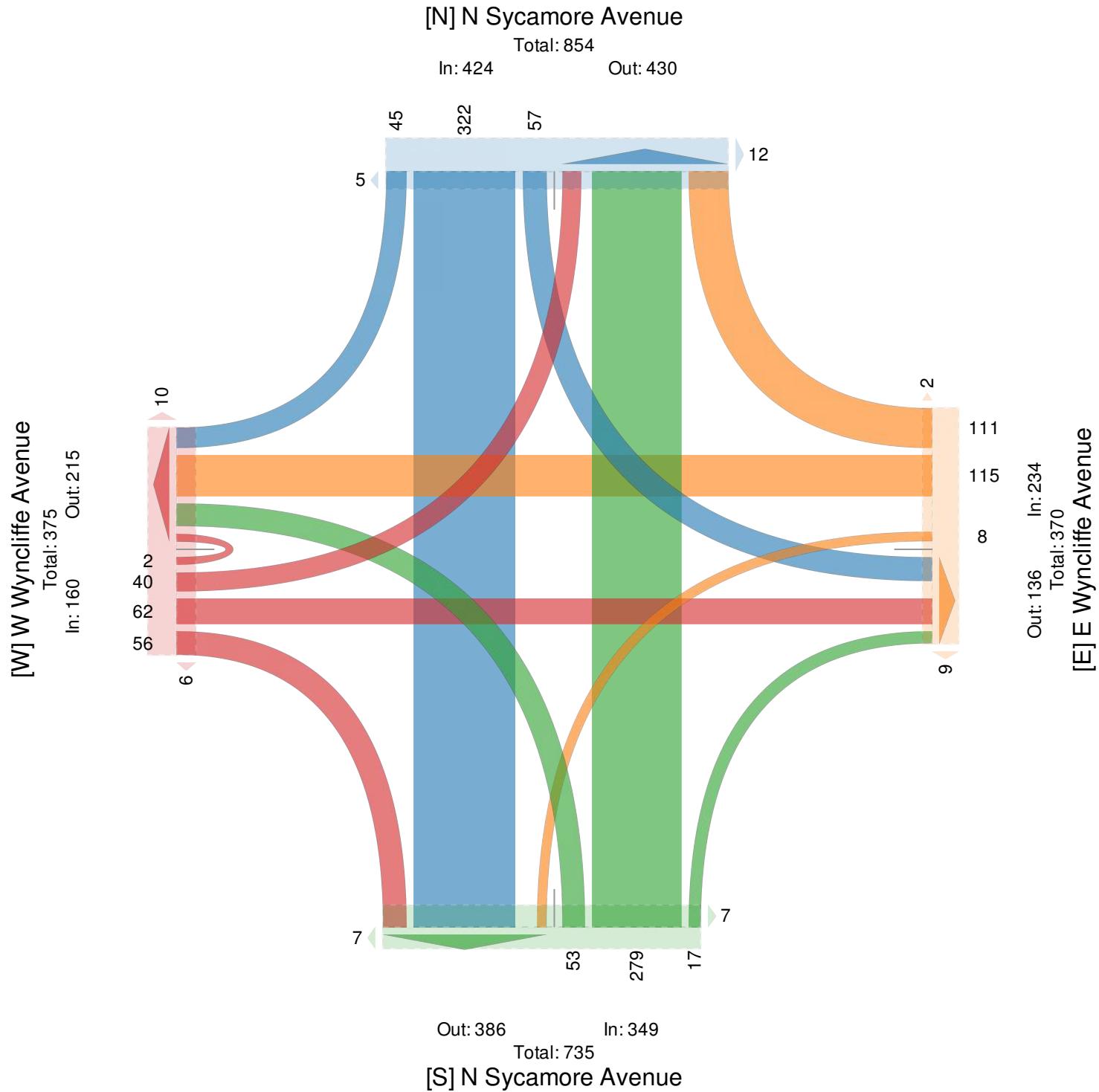
ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US



7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

 Provided by: Imperial Traffic & Data Collection
 PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound						E Wyncliffe Avenue Westbound						N Sycamore Avenue Northbound						N Sycamore Avenue Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2019-04-24 7:00AM	1	0	2	0	3	0	1	3	3	0	7	0	0	9	0	0	9	2	2	21	2	0	25	0	44
7:15AM	1	3	4	0	8	1	0	6	5	0	11	2	1	15	1	0	17	2	1	10	1	0	12	0	48
7:30AM	0	3	0	0	3	2	0	4	8	0	12	0	2	12	0	0	14	0	2	12	0	0	14	3	43
7:45AM	4	1	3	0	8	0	0	4	5	0	9	0	1	7	0	0	8	0	1	8	0	0	9	0	34
Total	6	7	9	0	22	3	1	17	21	0	39	2	4	43	1	0	48	4	6	51	3	0	60	3	169
% Approach	27.3%	31.8%	40.9%	0%	-	-	2.6%	43.6%	53.8%	0%	-	-	8.3%	89.6%	2.1%	0%	-	-	10.0%	85.0%	5.0%	0%	-	-	-
% Total	3.6%	4.1%	5.3%	0%	13.0%	-	0.6%	10.1%	12.4%	0%	23.1%	-	2.4%	25.4%	0.6%	0%	28.4%	%	3.6%	30.2%	1.8%	0%	35.5%	-	-
PHF	0.375	0.583	0.563	-	0.688	-	0.250	0.708	0.656	-	0.813	-	0.500	0.717	0.250	-	0.706	-	0.750	0.607	0.375	-	0.600	-	0.880
Lights	6	7	9	0	22	-	1	16	21	0	38	-	4	40	0	0	44	-	6	47	2	0	55	-	159
% Lights	100%	100%	100%	0%	100%	-	100%	94.1%	100%	0%	97.4%	-	100%	93.0%	0%	0%	91.7%	-	100%	92.2%	66.7%	0%	91.7%	-	94.1%
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	0	0	0	1	0	0	1	-	0	3	1	0	4	-	0	4	1	0	5	-	10
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	0%	5.9%	0%	0%	2.6%	-	0%	7.0%	100%	0%	8.3%	-	0%	7.8%	33.3%	0%	8.3%	-	5.9%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

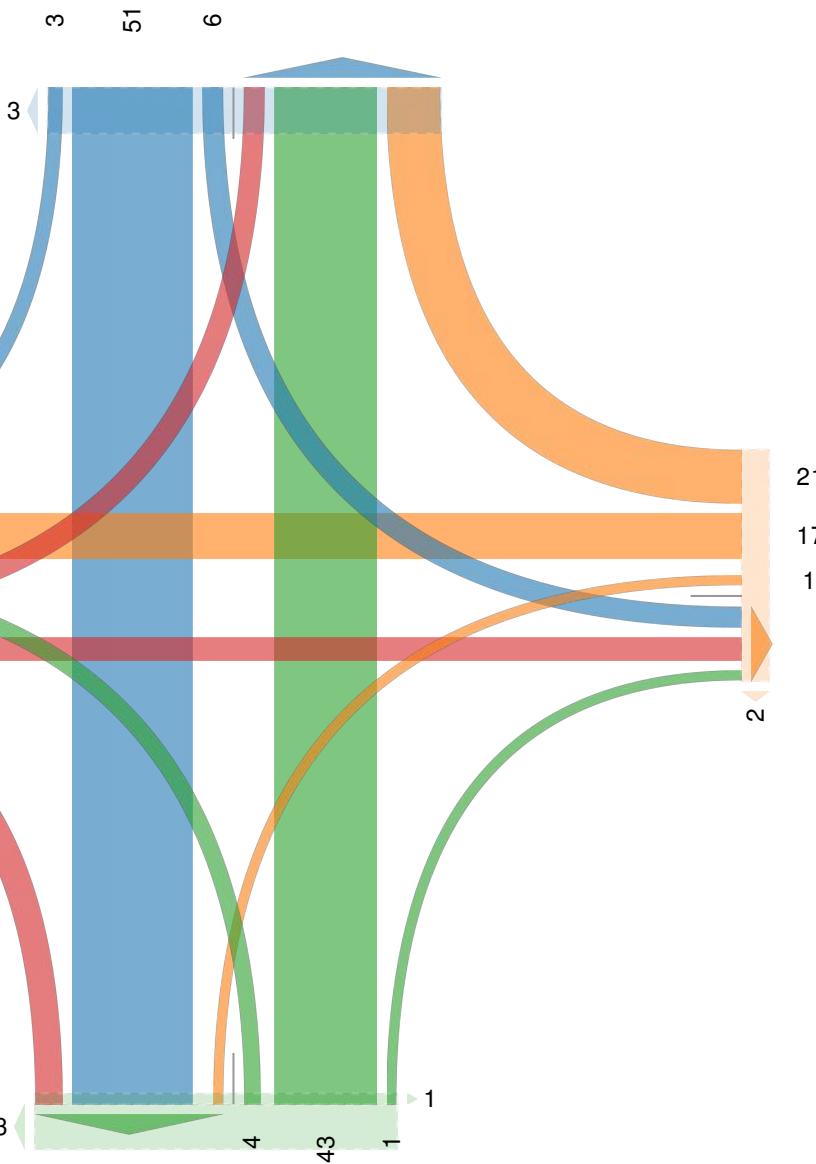
Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 130

In: 60

Out: 70



[S] N Sycamore Avenue

Total: 109

In: 48

Out: 61

7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

 Provided by: Imperial Traffic & Data Collection
 PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound						E Wyncliffe Avenue Westbound						N Sycamore Avenue Northbound						N Sycamore Avenue Southbound							
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int	
2019-04-24 4:45PM	5	2	3	0	10	1	0	8	3	0	11	0	2	10	0	0	12	1	3	17	3	0	23	0	56	
5:00PM	1	4	2	1	8	5	0	6	4	0	10	0	1	8	1	0	10	0	6	9	1	0	16	2	44	
5:15PM	0	5	1	0	6	0	0	6	6	0	12	3	1	19	0	0	20	1	3	19	3	0	25	0	63	
5:30PM	1	5	2	1	9	1	0	5	9	0	14	0	1	12	1	0	14	2	3	17	2	0	22	1	59	
Total	7	16	8	2	33	7	0	25	22	0	47	3	5	49	2	0	56	4	15	62	9	0	86	3	222	
% Approach	21.2%	48.5%	24.2%	6.1%	-	-	0%	53.2%	46.8%	0%	-	-	8.9%	87.5%	3.6%	0%	-	-	17.4%	72.1%	10.5%	0%	-	-	-	
% Total	3.2%	7.2%	3.6%	0.9%	14.9%	-	0%	11.3%	9.9%	0%	21.2%	-	2.3%	22.1%	0.9%	0%	25.2%	-	6.8%	27.9%	4.1%	0%	38.7%	-	-	
PHF	0.350	0.800	0.667	0.500	0.825	-	-	0.781	0.611	-	0.839	-	0.625	0.645	0.500	-	0.700	-	0.625	0.816	0.750	-	0.860	-	0.881	
Lights	7	16	8	2	33	-	0	25	22	0	47	-	4	48	2	0	54	-	15	61	8	0	84	-	218	
% Lights	100%	100%	100%	100%	100%	-	0%	100%	100%	0%	100%	-	80.0%	98.0%	100%	0%	96.4%	-	100%	98.4%	88.9%	0%	97.7%	-	98.2%	
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	
Buses and Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	1	1	0	0	2	-	0	1	1	0	2	-	4	
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	20.0%	2.0%	0%	0%	3.6%	-	0%	1.6%	11.1%	0%	2.3%	-	1.8%	
Pedestrians	-	-	-	-	-	-	7	-	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 164

In: 86

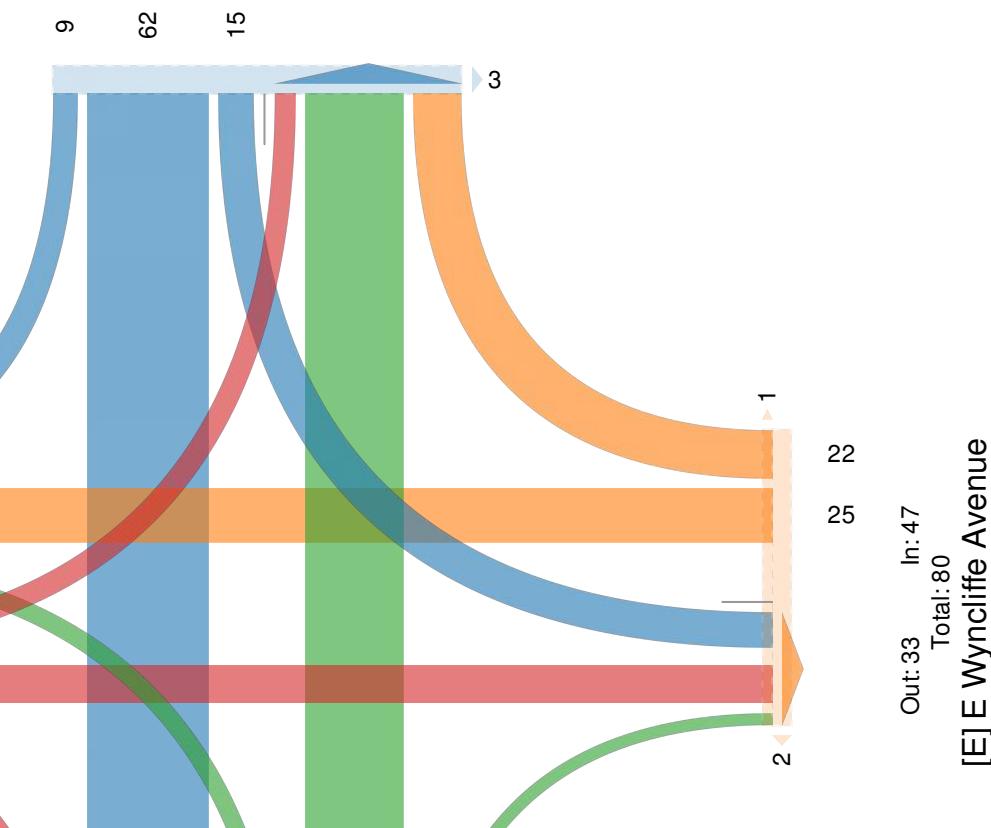
Out: 78

[W] W Wyncliffe Avenue

Total: 74

In: 33

Out: 41



[S] N Sycamore Avenue

Out: 70 In: 56

Total: 126



Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 iklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
 Wyncliffe Avenue/E Wyncliffe Avenue
 Site Code: 7
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	W Wyncliffe Avenue						E Wyncliffe Avenue						N Sycamore Avenue						N Sycamore Avenue						Int. Total
	Eastbound			Westbound			Northbound			Southbound															
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
6:30 AM	0	0	2	2	1	4	0	0	1	2	1	3	0	0	4	0	0	4	0	1	6	0	1	7	18
6:45 AM	0	3	1	4	0	8	0	1	2	5	0	8	0	0	6	0	2	6	0	0	10	1	0	11	33
Hourly Total	0	3	3	6	1	12	0	1	3	7	1	11	0	0	10	0	2	10	0	1	16	1	1	18	51
7:00 AM	0	1	0	2	0	3	0	1	3	3	0	7	0	0	9	0	2	9	0	2	21	2	0	25	44
7:15 AM	0	1	3	4	1	8	0	0	6	5	2	11	0	1	15	1	2	17	0	1	10	1	0	12	48
7:30 AM	0	0	3	0	2	3	0	0	4	8	0	12	0	2	12	0	0	14	0	2	12	0	3	14	43
7:45 AM	0	4	1	3	0	8	0	0	4	5	0	9	0	1	7	0	0	8	0	1	8	0	0	9	34
Hourly Total	0	6	7	9	3	22	0	1	17	21	2	39	0	4	43	1	4	48	0	6	51	3	3	60	169
8:00 AM	0	2	1	4	0	7	0	0	5	1	1	6	0	1	14	0	0	15	0	1	12	0	0	13	41
8:15 AM	0	1	1	2	0	4	0	2	6	2	1	10	0	0	7	0	0	7	0	1	7	3	0	11	32
8:30 AM	0	0	3	1	0	4	0	1	1	0	0	2	0	3	8	1	0	12	0	2	6	6	1	14	32
8:45 AM	0	0	1	0	0	1	0	1	3	3	0	7	0	1	5	0	0	6	0	1	7	1	0	9	23
Hourly Total	0	3	6	7	0	16	0	4	15	6	2	25	0	5	34	1	0	40	0	5	32	10	1	47	128
9:00 AM	0	2	3	0	0	5	0	0	3	4	0	7	0	1	10	1	0	12	0	1	11	0	0	12	36
9:15 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	2	3	0	0	5	0	1	12	0	0	13	21
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hourly Total	0	2	3	0	0	5	0	0	3	7	0	10	0	3	13	1	0	17	0	2	23	0	0	25	57
2:30 PM	0	1	3	2	0	6	0	0	3	3	0	6	0	3	9	1	0	13	0	0	7	1	1	8	33
2:45 PM	0	0	0	1	0	1	0	0	2	3	0	5	0	4	13	1	0	18	0	1	6	1	0	8	32
Hourly Total	0	1	3	3	0	7	0	0	5	6	0	11	0	7	22	2	0	31	0	1	13	2	1	16	65
3:00 PM	0	3	1	2	0	6	0	0	8	7	0	15	0	5	10	0	0	15	0	2	12	1	0	15	51
3:15 PM	0	5	0	4	0	9	0	0	5	2	0	7	0	2	15	2	0	19	0	4	15	1	0	20	55
3:30 PM	0	1	4	2	1	7	0	2	9	4	0	15	0	8	13	0	2	21	0	2	12	2	2	16	59
3:45 PM	0	1	3	3	0	7	0	0	6	5	0	11	0	1	10	0	0	11	0	1	16	3	0	20	49
Hourly Total	0	10	8	11	1	29	0	2	28	18	0	48	0	16	48	2	2	66	0	9	55	7	2	71	214
4:00 PM	0	1	0	0	1	1	0	0	3	6	0	9	0	3	8	1	0	12	0	3	13	2	1	18	40
4:15 PM	0	0	2	1	0	3	0	0	3	6	3	9	0	0	8	1	0	9	0	5	12	0	0	17	38
4:30 PM	0	3	1	3	0	7	0	0	1	3	0	4	0	2	11	3	0	16	0	4	7	3	0	14	41
4:45 PM	0	5	2	3	1	10	0	0	8	3	0	11	0	2	10	0	1	12	0	3	17	3	0	23	56
Hourly Total	0	9	5	7	2	21	0	0	15	18	3	33	0	7	37	5	1	49	0	15	49	8	1	72	175
5:00 PM	1	1	4	2	5	8	0	0	6	4	0	10	0	1	8	1	0	10	0	6	9	1	2	16	44
5:15 PM	0	0	5	1	0	6	0	0	6	6	3	12	0	1	19	0	1	20	0	3	19	3	0	25	63
5:30 PM	1	1	5	2	1	9	0	0	5	9	0	14	0	1	12	1	2	14	0	3	17	2	1	22	59
5:45 PM	0	1	3	2	0	6	0	0	3	1	0	4	0	4	7	2	0	13	0	4	15	6	0	25	48
Hourly Total	2	3	17	7	6	29	0	0	20	20	3	40	0	7	46	4	3	57	0	16	60	12	3	88	214
6:00 PM	0	1	6	4	3	11	0	0	8	4	0	12	0	1	13	0	2	14	0	0	9	1	3	10	47
6:15 PM	0	2	4	2	0	8	0	0	1	4	0	5	0	3	13	1	0	17	0	2	14	1	2	17	47

Grand Total	2	40	62	56	16	160	0	8	115	111	11	234	0	53	279	17	14	349	0	57	322	45	17	424	1167
Approach %	1.3	25.0	38.8	35.0	-	-	0.0	3.4	49.1	47.4	-	-	0.0	15.2	79.9	4.9	-	-	0.0	13.4	75.9	10.6	-	-	-
Total %	0.2	3.4	5.3	4.8	-	13.7	0.0	0.7	9.9	9.5	-	20.1	0.0	4.5	23.9	1.5	-	29.9	0.0	4.9	27.6	3.9	-	36.3	-
Lights	2	39	61	52	-	154	0	7	114	108	-	229	0	49	263	16	-	328	0	57	310	40	-	407	1118
% Lights	100.0	97.5	98.4	92.9	-	96.3	-	87.5	99.1	97.3	-	97.9	-	92.5	94.3	94.1	-	94.0	-	100.0	96.3	88.9	-	96.0	95.8
Mediums	0	1	1	4	-	6	0	1	1	3	-	5	0	4	16	1	-	21	0	0	12	5	-	17	49
% Mediums	0.0	2.5	1.6	7.1	-	3.8	-	12.5	0.9	2.7	-	2.1	-	7.5	5.7	5.9	-	6.0	-	0.0	3.7	11.1	-	4.0	4.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0	
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	-	16	-	-	-	-	-	11	-	-	-	-	-	14	-	-	-	-	-	17	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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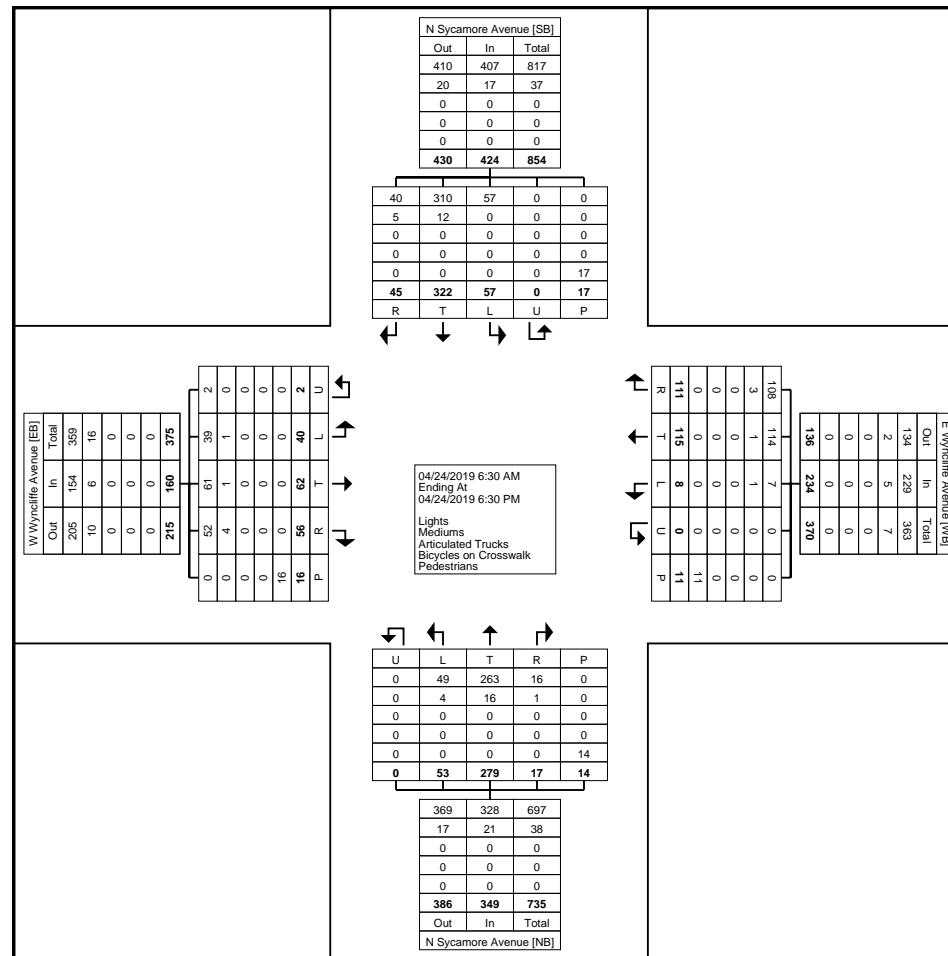
PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
Wyncliffe Avenue/E Wyncliffe Avenue
Site Code: 7
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot



Imperial Traffic & Data Collection
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 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
 Wyncliffe Avenue/E Wyncliffe Avenue
 Site Code: 7
 Start Date: 04/24/2019
 Page No: 4

Turning Movement Peak Hour Data (7:00 AM)

Start Time	W Wyncliffe Avenue						E Wyncliffe Avenue						N Sycamore Avenue						N Sycamore Avenue						Int. Total
	Eastbound						Westbound						Northbound						Southbound						
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
7:00 AM	0	1	0	2	0	3	0	1	3	3	0	7	0	0	9	0	2	9	0	2	21	2	0	25	44
7:15 AM	0	1	3	4	1	8	0	0	6	5	2	11	0	1	15	1	2	17	0	1	10	1	0	12	48
7:30 AM	0	0	3	0	2	3	0	0	4	8	0	12	0	2	12	0	0	14	0	2	12	0	3	14	43
7:45 AM	0	4	1	3	0	8	0	0	4	5	0	9	0	1	7	0	0	8	0	1	8	0	0	9	34
Total	0	6	7	9	3	22	0	1	17	21	2	39	0	4	43	1	4	48	0	6	51	3	3	60	169
Approach %	0.0	27.3	31.8	40.9	-	-	0.0	2.6	43.6	53.8	-	-	0.0	8.3	89.6	2.1	-	-	0.0	10.0	85.0	5.0	-	-	-
Total %	0.0	3.6	4.1	5.3	-	13.0	0.0	0.6	10.1	12.4	-	23.1	0.0	2.4	25.4	0.6	-	28.4	0.0	3.6	30.2	1.8	-	35.5	-
PHF	0.000	0.375	0.583	0.563	-	0.688	0.000	0.250	0.708	0.656	-	0.813	0.000	0.500	0.717	0.250	-	0.706	0.000	0.750	0.607	0.375	-	0.600	0.880
Lights	0	6	7	9	-	22	0	1	16	21	-	38	0	4	40	0	-	44	0	6	47	2	-	55	159
% Lights	-	100.0	100.0	100.0	-	100.0	-	100.0	94.1	100.0	-	97.4	-	100.0	93.0	0.0	-	91.7	-	100.0	92.2	66.7	-	91.7	94.1
Mediums	0	0	0	0	-	0	0	0	1	0	-	1	0	0	3	1	-	4	0	0	4	1	-	5	10
% Mediums	-	0.0	0.0	0.0	-	0.0	-	0.0	5.9	0.0	-	2.6	-	0.0	7.0	100.0	-	8.3	-	0.0	7.8	33.3	-	8.3	5.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	3	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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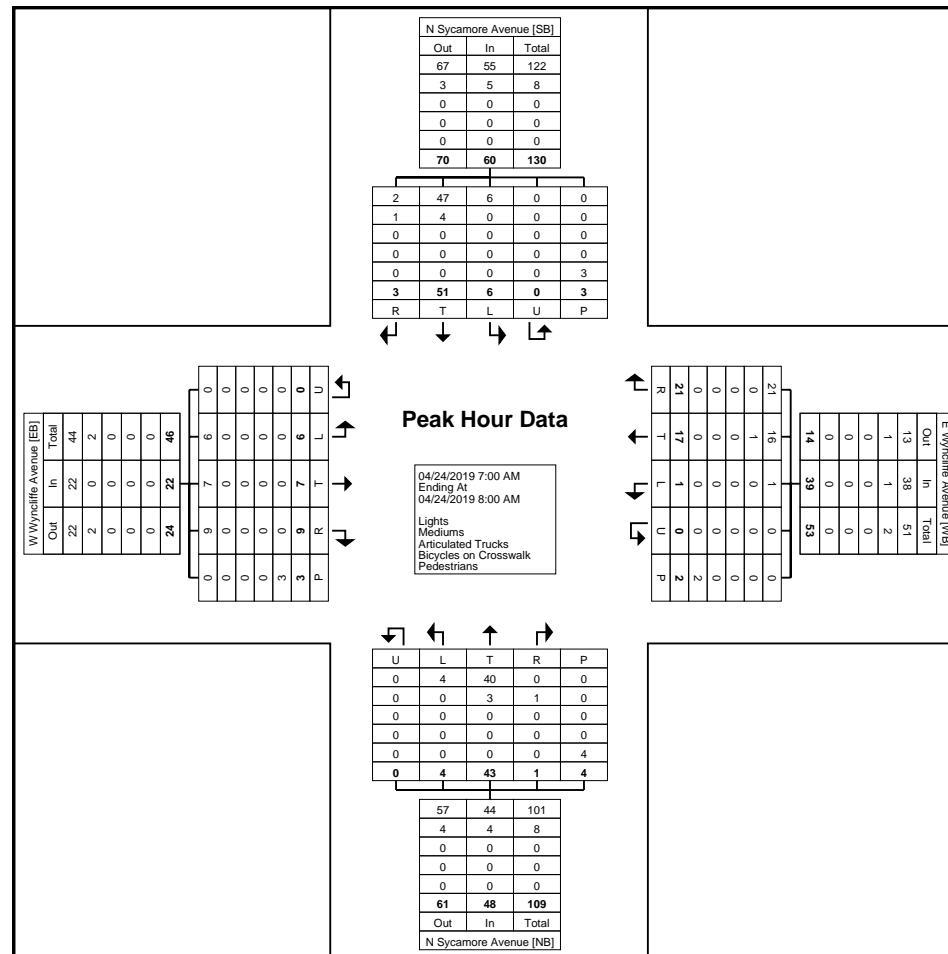
PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
Wynciffe Avenue/E Wynciffe Avenue
Site Code: 7
Start Date: 04/24/2019
Page No: 5



Turning Movement Peak Hour Data Plot (7:00 AM)



Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
 Wyncliffe Avenue/E Wyncliffe Avenue
 Site Code: 7
 Start Date: 04/24/2019
 Page No: 6

Turning Movement Peak Hour Data (4:45 PM)

Start Time	W Wyncliffe Avenue						E Wyncliffe Avenue						N Sycamore Avenue						N Sycamore Avenue						Int. Total			
	Eastbound						Westbound						Northbound						Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total	
4:45 PM	0	5	2	3	1	10	0	0	8	3	0	11	0	2	10	0	1	12	0	3	17	3	0	23	56			
5:00 PM	1	1	4	2	5	8	0	0	6	4	0	10	0	1	8	1	0	10	0	6	9	1	2	16	44			
5:15 PM	0	0	5	1	0	6	0	0	6	6	3	12	0	1	19	0	1	20	0	3	19	3	0	25	63			
5:30 PM	1	1	5	2	1	9	0	0	5	9	0	14	0	1	12	1	2	14	0	3	17	2	1	22	59			
Total	2	7	16	8	7	33	0	0	25	22	3	47	0	5	49	2	4	56	0	15	62	9	3	86	222			
Approach %	6.1	21.2	48.5	24.2	-	-	0.0	0.0	53.2	46.8	-	-	0.0	8.9	87.5	3.6	-	-	0.0	17.4	72.1	10.5	-	-	-			
Total %	0.9	3.2	7.2	3.6	-	14.9	0.0	0.0	11.3	9.9	-	21.2	0.0	2.3	22.1	0.9	-	25.2	0.0	6.8	27.9	4.1	-	38.7	-			
PHF	0.500	0.350	0.800	0.667	-	0.825	0.000	0.000	0.781	0.611	-	0.839	0.000	0.625	0.645	0.500	-	0.700	0.000	0.625	0.816	0.750	-	0.860	0.881			
Lights	2	7	16	8	-	33	0	0	25	22	-	47	0	4	48	2	-	54	0	15	61	8	-	84	218			
% Lights	100.0	100.0	100.0	100.0	-	100.0	-	-	100.0	100.0	-	100.0	-	80.0	98.0	100.0	-	96.4	-	100.0	98.4	88.9	-	97.7	98.2			
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	1	1	0	-	2	0	0	1	1	-	2	4			
% Mediums	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	20.0	2.0	0.0	-	3.6	-	0.0	1.6	11.1	-	2.3	1.8			
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0			
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0			
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-		
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-		
Pedestrians	-	-	-	-	-	7	-	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	3	-	-		
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-		



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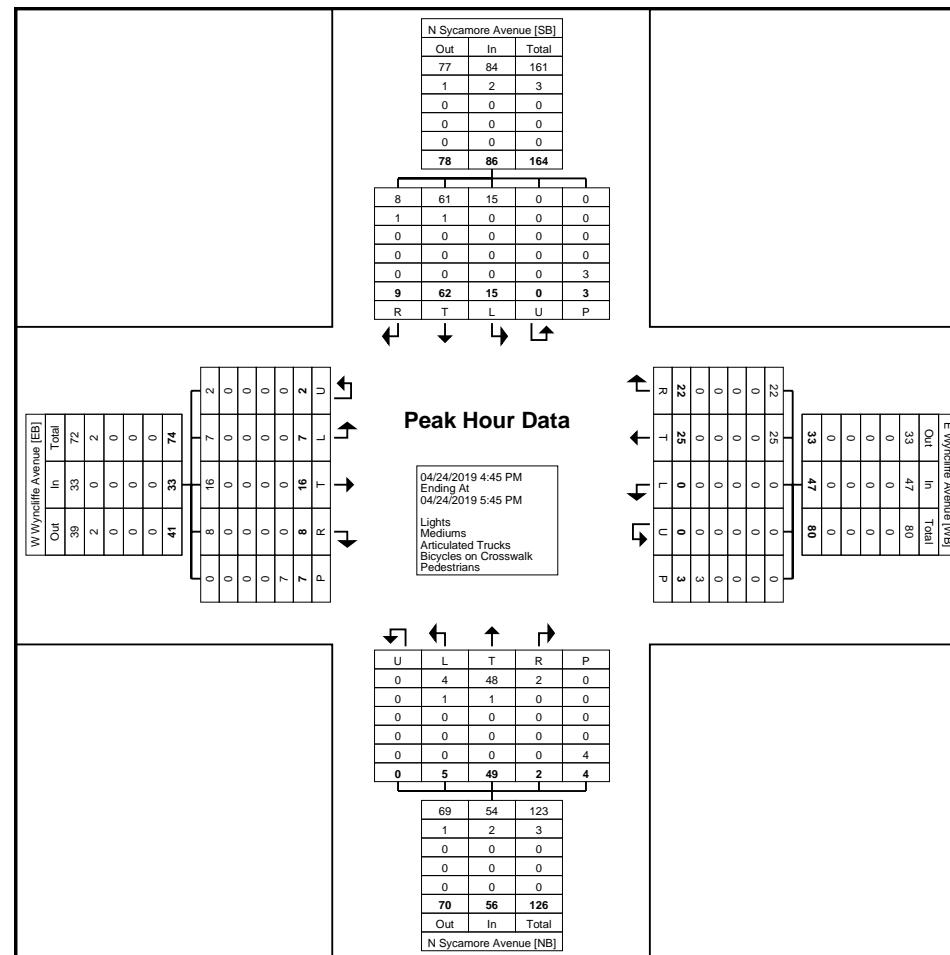
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PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
Wynciffe Avenue/E Wynciffe Avenue
Site Code: 7
Start Date: 04/24/2019
Page No: 7



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



Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.932859, -75.301075

Imperial Traffic & Data Collection
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PO BOX 4637
Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Count Name: 7. N Sycamore Avenue & W
Wyncliffe Avenue/E Wyncliffe Avenue
Site Code: 7
Start Date: 04/24/2019
Page No: 8

Tri-State Traffic Data

610-466-1469

TSTData.com

Page 1

Road: Springfield Rd

Location: 200 ft W of Church St

Counter: 22611

Site Code: 1

Station ID:

A to B EB

Latitude: 39° 93044.0000 North

Start Time	Thursday, March 28, 2019		Friday, March 29, 2019		Saturday, March 30, 2019		Sunday, March 31, 2019		Monday, April 1, 2019		Tuesday, April 2, 2019		Wednesday, April 3, 2019		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	80	27	87	50	115	71	66	32	54	21	65	25	78	38
01:00	*	*	15	32	51	30	56	53	16	17	22	17	23	8	30	26
02:00	*	*	19	17	32	30	32	35	16	13	19	12	13	15	22	20
03:00	*	*	20	11	26	13	27	27	21	12	13	11	16	18	20	15
04:00	*	*	29	45	25	22	31	26	26	46	20	32	26	35	26	34
05:00	*	*	77	158	35	82	31	65	78	173	88	178	86	198	66	142
06:00	*	*	254	414	110	226	76	174	243	408	274	450	243	427	200	350
07:00	*	*	436	440	190	232	150	174	467	424	457	465	466	495	361	372
08:00	*	*	437	451	248	284	161	193	423	479	387	485	406	507	344	400
09:00	*	*	328	327	281	330	222	208	351	338	355	342	380	343	320	315
10:00	*	*	351	314	278	395	236	270	281	289	312	287	292	330	292	314
11:00	*	*	332	320	311	339	232	235	279	274	280	303	302	309	289	297
12:00 PM	296	327	335	354	318	373	278	330	315	295	302	288	308	320	307	327
01:00	303	362	327	360	400	427	335	292	292	358	282	334	297	366	319	357
02:00	328	442	363	454	384	393	260	346	344	418	385	401	326	424	341	411
03:00	438	408	457	423	444	373	339	284	395	393	439	402	428	393	420	382
04:00	430	453	450	477	456	316	314	245	469	475	475	494	469	462	438	417
05:00	416	419	466	478	379	323	293	247	422	439	458	475	465	486	414	410
06:00	370	361	427	386	349	273	300	231	396	308	375	331	431	333	378	318
07:00	341	272	337	295	329	265	274	231	318	246	323	247	319	230	320	255
08:00	267	192	332	223	283	219	225	215	268	177	227	159	253	203	265	198
09:00	251	196	238	198	253	185	195	162	225	162	256	175	246	183	238	180
10:00	220	173	275	206	264	198	164	157	186	168	224	169	198	177	219	178
11:00	198	73	244	124	256	119	174	83	191	60	205	70	209	69	211	85
Total Day	3858	3678	6629	6534	5789	5497	4520	4354	6088	6004	6232	6148	6267	6356	5918	5841
AM Peak Vol.	-	-	08:00	08:00	11:00	10:00	10:00	10:00	07:00	08:00	07:00	08:00	07:00	08:00	07:00	08:00
PM Peak Vol.	15:00	16:00	17:00	17:00	16:00	13:00	15:00	14:00	16:00	16:00	16:00	16:00	16:00	17:00	16:00	16:00
	438	453	466	478	456	427	339	346	469	475	475	494	469	486	438	417

Tri-State Traffic Data

610-466-1469

TSTData.com

Road: Springfield Rd

Location: 200 ft W of Church St

Counter: 22611

Site Code: 1
 Station ID:
 A to B EB

Latitude: 39° 93044.0000 North

Start Time	Thursday, April 4, 2019		Friday, April 5, 2019		Saturday, April 6, 2019		Sunday, April 7, 2019		Monday, April 8, 2019		Tuesday, April 9, 2019		Wednesday, April 10, 2019		Week Average		
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	
12:00 AM	71	24	91	24	*	*	*	*	*	*	*	*	*	*	*	81	24
01:00	20	15	31	19	*	*	*	*	*	*	*	*	*	*	*	26	17
02:00	12	15	27	14	*	*	*	*	*	*	*	*	*	*	*	20	14
03:00	20	13	19	11	*	*	*	*	*	*	*	*	*	*	*	20	12
04:00	35	34	35	36	*	*	*	*	*	*	*	*	*	*	*	35	35
05:00	83	176	76	177	*	*	*	*	*	*	*	*	*	*	*	80	176
06:00	231	422	229	409	*	*	*	*	*	*	*	*	*	*	*	230	416
07:00	456	462	472	437	*	*	*	*	*	*	*	*	*	*	*	464	450
08:00	431	457	399	458	*	*	*	*	*	*	*	*	*	*	*	415	458
09:00	350	314	*	*	*	*	*	*	*	*	*	*	*	*	*	350	314
10:00	289	294	*	*	*	*	*	*	*	*	*	*	*	*	*	289	294
11:00	300	317	*	*	*	*	*	*	*	*	*	*	*	*	*	300	317
12:00 PM	316	340	*	*	*	*	*	*	*	*	*	*	*	*	*	316	340
01:00	306	348	*	*	*	*	*	*	*	*	*	*	*	*	*	306	348
02:00	338	400	*	*	*	*	*	*	*	*	*	*	*	*	*	338	400
03:00	457	402	*	*	*	*	*	*	*	*	*	*	*	*	*	457	402
04:00	467	467	*	*	*	*	*	*	*	*	*	*	*	*	*	467	467
05:00	465	453	*	*	*	*	*	*	*	*	*	*	*	*	*	465	453
06:00	412	371	*	*	*	*	*	*	*	*	*	*	*	*	*	412	371
07:00	352	291	*	*	*	*	*	*	*	*	*	*	*	*	*	352	291
08:00	259	205	*	*	*	*	*	*	*	*	*	*	*	*	*	259	205
09:00	259	166	*	*	*	*	*	*	*	*	*	*	*	*	*	259	166
10:00	253	180	*	*	*	*	*	*	*	*	*	*	*	*	*	253	180
11:00	225	77	*	*	*	*	*	*	*	*	*	*	*	*	*	225	77
Total Day	6407	6243	1379	1585	0	0	0	0	0	0	0	0	0	0	0	6419	6227
AM Peak Vol.	07:00	07:00	07:00	08:00	-	-	-	-	-	-	-	-	-	-	-	07:00	08:00
PM Peak Vol.	16:00	16:00	-	-	-	-	-	-	-	-	-	-	-	-	-	16:00	16:00
Comb. Total	20186		16127		11286		8874		12092		12380		12623			24405	
ADT	ADT 11,930		AADT 11,930														

Comb. Total	20186	16127	11286	8874	12092	12380	12623	24405
ADT	ADT 11,930		AADT 11,930					

Tri-State Traffic Data

610-466-1469

TSTData.com

Road: Sycamore Ave
 Location: 215 ft N of Springfield Rd
 Counter: 35308

Site Code: 2
 Station ID:
 A to B NB

Latitude: 39° 9' 93106.0000 North

Start Time	Thursday, March 28, 2019		Friday, March 29, 2019		Saturday, March 30, 2019		Sunday, March 31, 2019		Monday, April 1, 2019		Tuesday, April 2, 2019		Wednesday, April 3, 2019		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	9	2	13	11	10	9	4	5	6	5	9	3	8	6
01:00	*	*	5	1	3	2	10	12	8	2	4	5	6	4	6	4
02:00	*	*	2	3	2	1	6	13	2	1	3	0	4	4	3	4
03:00	*	*	1	2	3	6	4	1	0	3	4	4	1	3	2	3
04:00	*	*	3	7	0	5	6	0	3	10	1	8	1	6	2	6
05:00	*	*	8	23	6	7	4	6	8	23	8	18	9	15	7	15
06:00	*	*	11	37	10	13	4	5	11	30	15	37	20	48	12	28
07:00	*	*	38	58	20	27	7	20	44	66	37	80	40	61	31	52
08:00	*	*	46	56	22	38	19	32	38	53	36	60	34	68	32	51
09:00	*	*	24	39	36	49	24	36	34	37	33	35	40	32	32	38
10:00	*	*	39	37	45	52	28	34	30	28	27	38	35	43	34	39
11:00	*	*	32	30	46	46	36	39	26	26	35	44	59	35	39	37
12:00 PM	34	50	39	36	65	65	27	47	47	35	47	41	29	44	41	45
01:00	45	43	27	38	39	61	44	39	37	39	37	38	38	33	38	42
02:00	51	45	43	46	61	65	53	47	42	35	48	40	43	44	49	46
03:00	64	65	53	69	62	53	56	43	53	58	61	52	59	53	58	56
04:00	72	55	74	77	54	66	40	45	61	58	60	58	74	56	62	59
05:00	59	67	78	74	49	57	39	57	47	69	59	54	78	73	58	64
06:00	63	66	56	65	33	43	52	46	56	49	53	52	57	49	53	53
07:00	47	41	45	45	49	37	38	33	42	48	42	36	42	44	41	41
08:00	39	25	37	34	37	37	32	29	28	26	23	23	54	36	36	30
09:00	34	26	36	21	33	33	26	17	27	13	34	15	29	22	31	21
10:00	18	17	38	23	32	22	21	15	13	17	13	14	22	17	22	18
11:00	10	7	24	17	24	21	18	6	5	6	3	6	5	8	13	10
Total Day	536	507	768	840	744	817	604	631	666	737	689	763	788	801	713	768
AM Peak Vol.	-	-	08:00	07:00	11:00	10:00	11:00	11:00	07:00	07:00	07:00	07:00	11:00	08:00	11:00	07:00
PM Peak Vol.	16:00	17:00	17:00	16:00	12:00	16:00	15:00	17:00	16:00	17:00	15:00	16:00	17:00	17:00	16:00	17:00
	72	67	78	77	65	66	56	57	61	69	61	58	78	73	62	64

Tri-State Traffic Data

610-466-1469

TSTData.com

Road: Sycamore Ave
 Location: 215 ft N of Springfield Rd
 Counter: 35308

Site Code: 2
 Station ID:
 A to B NB

Latitude: 39° 9' 93106.0000 North

Start Time	Thursday, April 4, 2019		Friday, April 5, 2019		Saturday, April 6, 2019		Sunday, April 7, 2019		Monday, April 8, 2019		Tuesday, April 9, 2019		Wednesday, April 10, 2019		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	5	7	3	7	*	*	*	*	*	*	*	*	*	*	4	7
01:00	2	2	5	0	*	*	*	*	*	*	*	*	*	*	4	1
02:00	4	3	3	1	*	*	*	*	*	*	*	*	*	*	4	2
03:00	2	6	0	2	*	*	*	*	*	*	*	*	*	*	1	4
04:00	2	8	3	9	*	*	*	*	*	*	*	*	*	*	2	8
05:00	9	24	9	20	*	*	*	*	*	*	*	*	*	*	9	22
06:00	19	41	15	40	*	*	*	*	*	*	*	*	*	*	17	40
07:00	45	61	39	67	*	*	*	*	*	*	*	*	*	*	42	64
08:00	53	61	31	45	*	*	*	*	*	*	*	*	*	*	42	53
09:00	28	33	23	28	*	*	*	*	*	*	*	*	*	*	26	30
10:00	27	46	*	*	*	*	*	*	*	*	*	*	*	*	27	46
11:00	35	37	*	*	*	*	*	*	*	*	*	*	*	*	35	37
12:00 PM	30	38	*	*	*	*	*	*	*	*	*	*	*	*	30	38
01:00	38	35	*	*	*	*	*	*	*	*	*	*	*	*	38	35
02:00	42	41	*	*	*	*	*	*	*	*	*	*	*	*	42	41
03:00	52	50	*	*	*	*	*	*	*	*	*	*	*	*	52	50
04:00	64	75	*	*	*	*	*	*	*	*	*	*	*	*	64	75
05:00	65	66	*	*	*	*	*	*	*	*	*	*	*	*	65	66
06:00	54	57	*	*	*	*	*	*	*	*	*	*	*	*	54	57
07:00	52	40	*	*	*	*	*	*	*	*	*	*	*	*	52	40
08:00	39	19	*	*	*	*	*	*	*	*	*	*	*	*	39	19
09:00	25	23	*	*	*	*	*	*	*	*	*	*	*	*	25	23
10:00	24	19	*	*	*	*	*	*	*	*	*	*	*	*	24	19
11:00	15	9	*	*	*	*	*	*	*	*	*	*	*	*	15	9
Total Day	731	801	131	219	0	0	0	0	0	0	0	0	0	0	713	786
AM Peak Vol.	08:00 53	07:00 61	07:00 39	07:00 67	-	-	-	-	-	-	-	-	-	-	07:00 42	07:00 64
PM Peak Vol.	17:00 65	16:00 75	-	-	-	-	-	-	-	-	-	-	-	-	17:00 65	16:00 75

Comb. Total	2575	1958	1561	1235	1403	1452	1589	2980
ADT	ADT 1,490	AADT 1,490						

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	App	Ped*	
2019-04-24 6:30AM	0	87	0	0	0	87	2	0	128	0	0	128	0	
6:45AM	0	106	2	0	0	108	2	0	159	0	0	159	0	
Hourly Total	0	193	2	0	0	195	4	0	287	0	0	287	0	
7:00AM	0	128	1	0	0	129	0	0	151	0	0	151	0	
7:15AM	0	141	1	0	0	142	0	1	139	0	0	140	0	
7:30AM	0	145	3	0	0	148	5	1	136	0	0	137	0	
7:45AM	0	142	3	0	1	146	1	6	130	0	0	136	0	
Hourly Total	0	556	8	0	1	565	6	8	556	0	0	564	0	
8:00AM	0	129	4	0	1	134	0	1	121	0	0	122	0	
8:15AM	0	99	6	0	0	105	5	1	124	0	0	125	0	
8:30AM	0	148	1	0	0	149	27	2	158	0	0	160	1	
8:45AM	0	134	4	0	0	138	7	1	151	0	0	152	1	
Hourly Total	0	510	15	0	1	526	39	5	554	0	0	559	2	
9:00AM	0	120	0	0	0	120	1	3	117	0	0	120	0	
9:15AM	0	107	1	0	0	108	0	2	106	0	0	108	0	
Hourly Total	0	227	1	0	0	228	1	5	223	0	0	228	0	
2:30PM	0	106	4	0	0	110	0	1	157	0	0	158	0	
2:45PM	0	115	3	0	0	118	2	0	110	0	0	110	0	
Hourly Total	0	221	7	0	0	228	2	1	267	0	0	268	0	
3:00PM	0	123	2	0	0	125	21	1	127	0	0	128	4	
3:15PM	1	144	2	0	0	147	31	0	131	0	0	131	10	
3:30PM	0	119	3	0	0	122	20	3	118	1	0	122	11	
3:45PM	0	148	0	0	1	149	9	5	138	0	0	143	1	
Hourly Total	1	534	7	0	1	543	81	9	514	1	0	524	26	
4:00PM	0	152	0	0	0	152	6	1	135	0	0	136	1	
4:15PM	0	133	2	0	0	135	1	3	151	0	0	154	2	
4:30PM	0	140	5	0	0	145	3	10	150	0	0	160	1	
4:45PM	0	135	2	0	0	137	3	2	137	0	0	139	2	
Hourly Total	0	560	9	0	0	569	13	16	573	0	0	589	6	
5:00PM	0	140	3	0	1	144	0	6	157	0	0	163	5	
5:15PM	0	138	6	0	0	144	2	3	147	0	0	150	2	
5:30PM	0	138	4	0	0	142	10	0	136	0	0	136	1	
5:45PM	0	146	1	0	1	148	2	3	143	0	0	146	7	
Hourly Total	0	562	14	0	2	578	14	12	583	0	0	595	15	
6:00PM	1	152	2	0	0	155	4	4	117	0	0	121	2	
6:15PM	0	135	3	0	0	138	2	2	120	0	0	122	1	
Hourly Total	1	287	5	0	0	293	6	6	237	0	0	243	3	
Total	2	3650	68	0	5	3725	166	62	3794	1	0	3857	52	
% Approach	0.1%	98.0%	1.8%	0%	0.1%	-	-	1.6%	98.4%	0%	0%	-	-	
% Total	0%	45.9%	0.9%	0%	0.1%	46.8%	-	0.8%	47.7%	0%	0%	48.5%	-	
Lights	2	3518	64	0	5	3589	-	61	3653	1	0	3715	-	
% Lights	100%	96.4%	94.1%	0%	100%	96.3%	-	98.4%	96.3%	100%	0%	96.3%	-	
Articulated Trucks	0	7	0	0	0	7	-	0	14	0	0	14	-	
% Articulated Trucks	0%	0.2%	0%	0%	0%	0.2%	-	0%	0.4%	0%	0%	0.4%	-	
Buses and Single-Unit Trucks	0	125	4	0	0	129	-	1	127	0	0	128	-	
% Buses and Single-Unit Trucks	0%	3.4%	5.9%	0%	0%	3.5%	-	1.6%	3.3%	0%	0%	3.3%	-	
Pedestrians	-	-	-	-	-	-	165	-	-	-	-	-	52	
% Pedestrians	-	-	-	-	-	-	99.4%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	-	1	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0.6%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Austin Drive Northbound							Austin Drive Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 6:30AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	216
6:45AM	1	0	1	0	0	2	0	0	0	2	0	7	9	2	278
Hourly Total	1	0	1	0	0	2	0	0	0	2	0	8	10	2	494
7:00AM	1	0	0	0	0	1	0	0	0	2	0	6	8	0	289
7:15AM	1	0	0	0	0	1	0	1	0	8	0	1	10	0	293
7:30AM	2	0	2	0	0	4	0	3	1	2	0	2	8	2	297
7:45AM	1	0	1	0	0	2	0	4	1	4	0	2	11	1	295
Hourly Total	5	0	3	0	0	8	0	8	2	16	0	11	37	3	1174
8:00AM	2	0	1	0	0	3	0	3	2	1	0	0	6	0	265
8:15AM	0	0	1	0	0	1	0	1	1	5	0	3	10	0	241
8:30AM	1	0	0	0	0	1	0	3	1	8	0	0	12	5	322
8:45AM	1	0	1	0	0	2	1	2	1	5	0	0	8	1	300
Hourly Total	4	0	3	0	0	7	1	9	5	19	0	3	36	6	1128
9:00AM	0	0	0	0	0	0	0	1	0	2	0	0	3	0	243
9:15AM	0	0	0	0	1	1	0	1	0	2	0	1	4	0	221
Hourly Total	0	0	0	0	1	1	0	2	0	4	0	1	7	0	464
2:30PM	4	0	4	0	0	8	0	1	0	3	0	1	5	0	281
2:45PM	3	0	2	0	1	6	1	2	1	1	0	5	9	1	243
Hourly Total	7	0	6	0	1	14	1	3	1	4	0	6	14	1	524
3:00PM	1	0	4	0	0	5	3	0	0	3	0	3	6	8	264
3:15PM	2	0	4	0	0	6	12	0	1	2	0	1	4	4	288
3:30PM	2	0	4	0	0	6	1	1	1	0	0	7	9	3	259
3:45PM	2	0	5	0	1	8	0	2	0	5	0	4	11	0	311
Hourly Total	7	0	17	0	1	25	16	3	2	10	0	15	30	15	1122
4:00PM	2	0	0	0	2	4	0	1	0	1	0	1	3	2	295
4:15PM	1	0	1	0	1	3	1	1	2	3	0	4	10	1	302
4:30PM	9	0	3	0	2	14	2	4	0	2	0	3	9	0	328
4:45PM	8	0	8	0	0	16	3	2	0	3	0	3	8	0	300
Hourly Total	20	0	12	0	5	37	6	8	2	9	0	11	30	3	1225
5:00PM	4	0	2	0	1	7	1	0	0	3	0	2	5	2	319
5:15PM	14	0	9	0	0	23	4	1	1	6	0	1	9	1	326
5:30PM	5	0	0	0	1	6	0	4	0	4	0	1	9	0	293
5:45PM	2	0	4	0	1	7	0	2	0	5	0	3	10	5	311
Hourly Total	25	0	15	0	3	43	5	7	1	18	0	7	33	8	1249
6:00PM	3	0	3	0	2	8	2	3	0	3	0	3	9	2	293
6:15PM	6	0	1	0	2	9	0	2	1	7	0	0	10	0	279
Hourly Total	9	0	4	0	4	17	2	5	1	10	0	3	19	2	572
Total	78	0	61	0	15	154	31	45	14	92	0	65	216	40	7952
% Approach	50.6%	0%	39.6%	0%	9.7%	-	-	20.8%	6.5%	42.6%	0%	30.1%	-	-	-
% Total	1.0%	0%	0.8%	0%	0.2%	1.9%	-	0.6%	0.2%	1.2%	0%	0.8%	2.7%	-	-
Lights	77	0	57	0	15	149	-	43	14	92	0	64	213	-	7666
% Lights	98.7%	0%	93.4%	0%	100%	96.8%	-	95.6%	100%	100%	0%	98.5%	98.6%	-	96.4%
Articulated Trucks	0	0	1	0	0	1	-	0	0	0	0	0	0	-	22
% Articulated Trucks	0%	0%	1.6%	0%	0%	0.6%	-	0%	0%	0%	0%	0%	0%	-	0.3%
Buses and Single-Unit Trucks	1	0	3	0	0	4	-	2	0	0	0	1	3	-	264
% Buses and Single-Unit Trucks	1.3%	0%	4.9%	0%	0%	2.6%	-	4.4%	0%	0%	0%	1.5%	1.4%	-	3.3%
Pedestrians	-	-	-	-	-	-	31	-	-	-	-	-	-	40	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

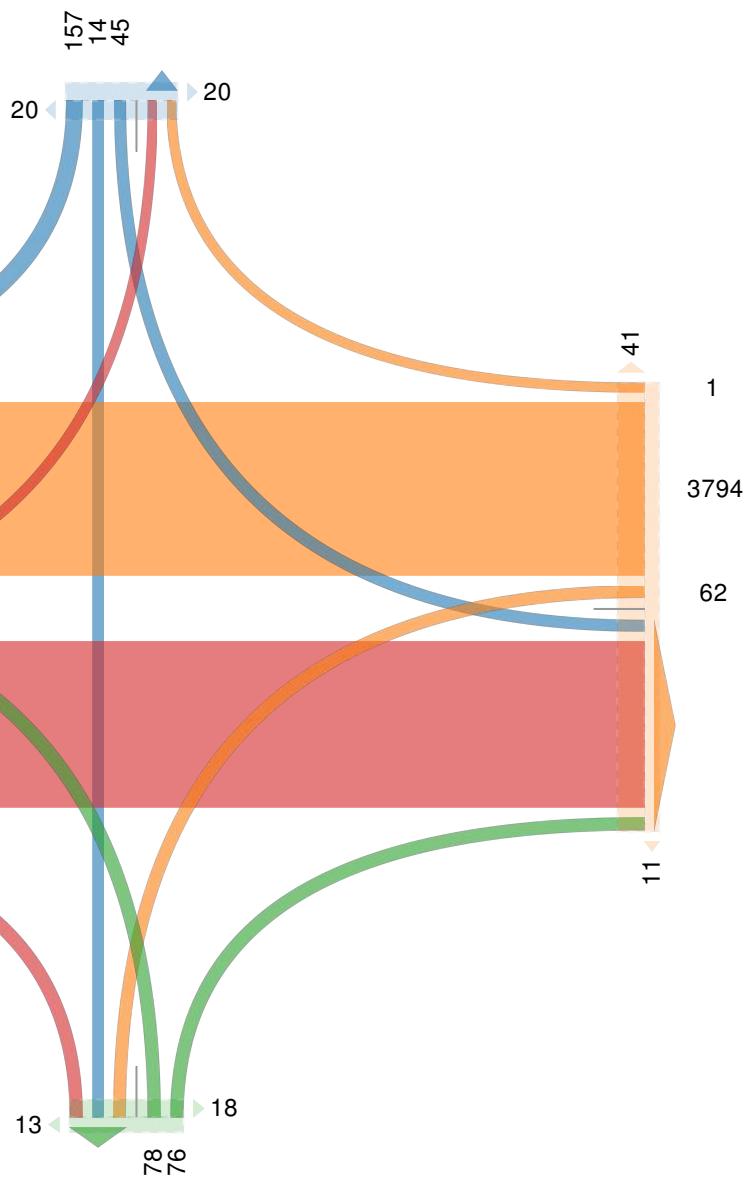
PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Austin Drive

Total: 219

In: 216 Out: 3



Out: 149 In: 154

Total: 303

[S] Austin Drive

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	App	Ped*
2019-04-24 7:00AM	0	128	1	0	0	129	0	0	151	0	0	151	0
7:15AM	0	141	1	0	0	142	0	1	139	0	0	140	0
7:30AM	0	145	3	0	0	148	5	1	136	0	0	137	0
7:45AM	0	142	3	0	1	146	1	6	130	0	0	136	0
Total	0	556	8	0	1	565	6	8	556	0	0	564	0
% Approach	0%	98.4%	1.4%	0%	0.2%	-	-	1.4%	98.6%	0%	0%	-	-
% Total	0%	47.4%	0.7%	0%	0.1%	48.1%	-	0.7%	47.4%	0%	0%	48.0%	-
PHF	-	0.959	0.667	-	0.250	0.954	-	0.333	0.921	-	-	0.934	-
Lights	0	536	8	0	1	545	-	7	525	0	0	532	-
% Lights	0%	96.4%	100%	0%	100%	96.5%	-	87.5%	94.4%	0%	0%	94.3%	-
Articulated Trucks	0	1	0	0	0	1	-	0	2	0	0	2	-
% Articulated Trucks	0%	0.2%	0%	0%	0%	0.2%	-	0%	0.4%	0%	0%	0.4%	-
Buses and Single-Unit Trucks	0	19	0	0	0	19	-	1	29	0	0	30	-
% Buses and Single-Unit Trucks	0%	3.4%	0%	0%	0%	3.4 %	-	12.5%	5.2%	0%	0%	5.3%	-
Pedestrians	-	-	-	-	-	-	6	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Austin Drive Northbound						Austin Drive Southbound								
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 7:00AM	1	0	0	0	0	1	0	0	0	2	0	6	8	0	289
7:15AM	1	0	0	0	0	1	0	1	0	8	0	1	10	0	293
7:30AM	2	0	2	0	0	4	0	3	1	2	0	2	8	2	297
7:45AM	1	0	1	0	0	2	0	4	1	4	0	2	11	1	295
Total	5	0	3	0	0	8	0	8	2	16	0	11	37	3	1174
% Approach	62.5%	0%	37.5%	0%	0%	-	-	21.6%	5.4%	43.2%	0%	29.7%	-	-	-
% Total	0.4%	0%	0.3%	0%	0%	0.7%	-	0.7%	0.2%	1.4%	0%	0.9%	3.2%	-	-
PHF	0.625	-	0.375	-	-	0.500	-	0.500	0.500	0.500	-	0.458	0.841	-	0.988
Lights	5	0	2	0	0	7	-	7	2	16	0	11	36	-	1120
% Lights	100%	0%	66.7%	0%	0%	87.5%	-	87.5%	100%	100%	0%	100%	97.3%	-	95.4%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	0	3
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0.3%
Buses and Single-Unit Trucks	0	0	1	0	0	1	-	1	0	0	0	0	1	-	51
% Buses and Single-Unit Trucks	0%	0%	33.3%	0%	0%	12.5%	-	12.5%	0%	0%	0%	0%	2.7%	-	4.3%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Austin Drive

Total: 37

In: 37 Out: 0

27 28

3

[W] N Springfield Road
In: 565 Total: 1153 Out: 588

556

9

6

556

8

Out: 567 Total: 1131 In: 564

[E] N Springfield Road

Out: 19 In: 8

Total: 27

[S] Austin Drive

53

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	App	Ped*	
2019-04-24 4:30PM	0	140	5	0	0	145	3	10	150	0	0	160	1	
4:45PM	0	135	2	0	0	137	3	2	137	0	0	139	2	
5:00PM	0	140	3	0	1	144	0	6	157	0	0	163	5	
5:15PM	0	138	6	0	0	144	2	3	147	0	0	150	2	
Total	0	553	16	0	1	570	8	21	591	0	0	612	10	
% Approach	0%	97.0%	2.8%	0%	0.2%	-	-	3.4%	96.6%	0%	0%	-	-	
% Total	0%	43.4%	1.3%	0%	0.1%	44.8%	-	1.6%	46.4%	0%	0%	48.1%	-	
PHF	-	0.988	0.667	-	0.250	0.983	-	0.525	0.941	-	-	0.939	-	
Lights	0	545	14	0	1	560	-	21	578	0	0	599	-	
% Lights	0%	98.6%	87.5%	0%	100%	98.2%	-	100%	97.8%	0%	0%	97.9%	-	
Articulated Trucks	0	0	0	0	0	0	-	0	1	0	0	1	-	
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0.2%	0%	0%	0.2%	-	
Buses and Single-Unit Trucks	0	8	2	0	0	10	-	0	12	0	0	12	-	
% Buses and Single-Unit Trucks	0%	1.4%	12.5%	0%	0%	1.8%	-	0%	2.0%	0%	0%	2.0%	-	
Pedestrians	-	-	-	-	-	-	8	-	-	-	-	-	10	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Austin Drive Northbound							Austin Drive Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 4:30PM	9	0	3	0	2	14	2	4	0	2	0	3	9	0	328
4:45PM	8	0	8	0	0	16	3	2	0	3	0	3	8	0	300
5:00PM	4	0	2	0	1	7	1	0	0	3	0	2	5	2	319
5:15PM	14	0	9	0	0	23	4	1	1	6	0	1	9	1	326
Total	35	0	22	0	3	60	10	7	1	14	0	9	31	3	1273
% Approach	58.3%	0%	36.7%	0%	5.0%	-	-	22.6%	3.2%	45.2%	0%	29.0%	-	-	-
% Total	2.7%	0%	1.7%	0%	0.2%	4.7%	-	0.5%	0.1%	1.1%	0%	0.7%	2.4%	-	-
PHF	0.625	-	0.611	-	0.375	0.652	-	0.438	0.250	0.583	-	0.750	0.861	-	0.970
Lights	35	0	21	0	3	59	-	7	1	14	0	9	31	-	1249
% Lights	100%	0%	95.5%	0%	100%	98.3%	-	100%	100%	100%	0%	100%	100%	-	98.1%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	0	0	1	0	0	1	-	0	0	0	0	0	0	-	23
% Buses and Single-Unit Trucks	0%	0%	4.5%	0%	0%	1.7%	-	0%	0%	0%	0%	0%	0%	-	1.8%
Pedestrians	-	-	-	-	-	-	10	-	-	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

1. N Springfield Road & Austin Drive - TMC

Wed Apr 24, 2019

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646344, Location: 39.93051, -75.305813, Site Code: 1

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

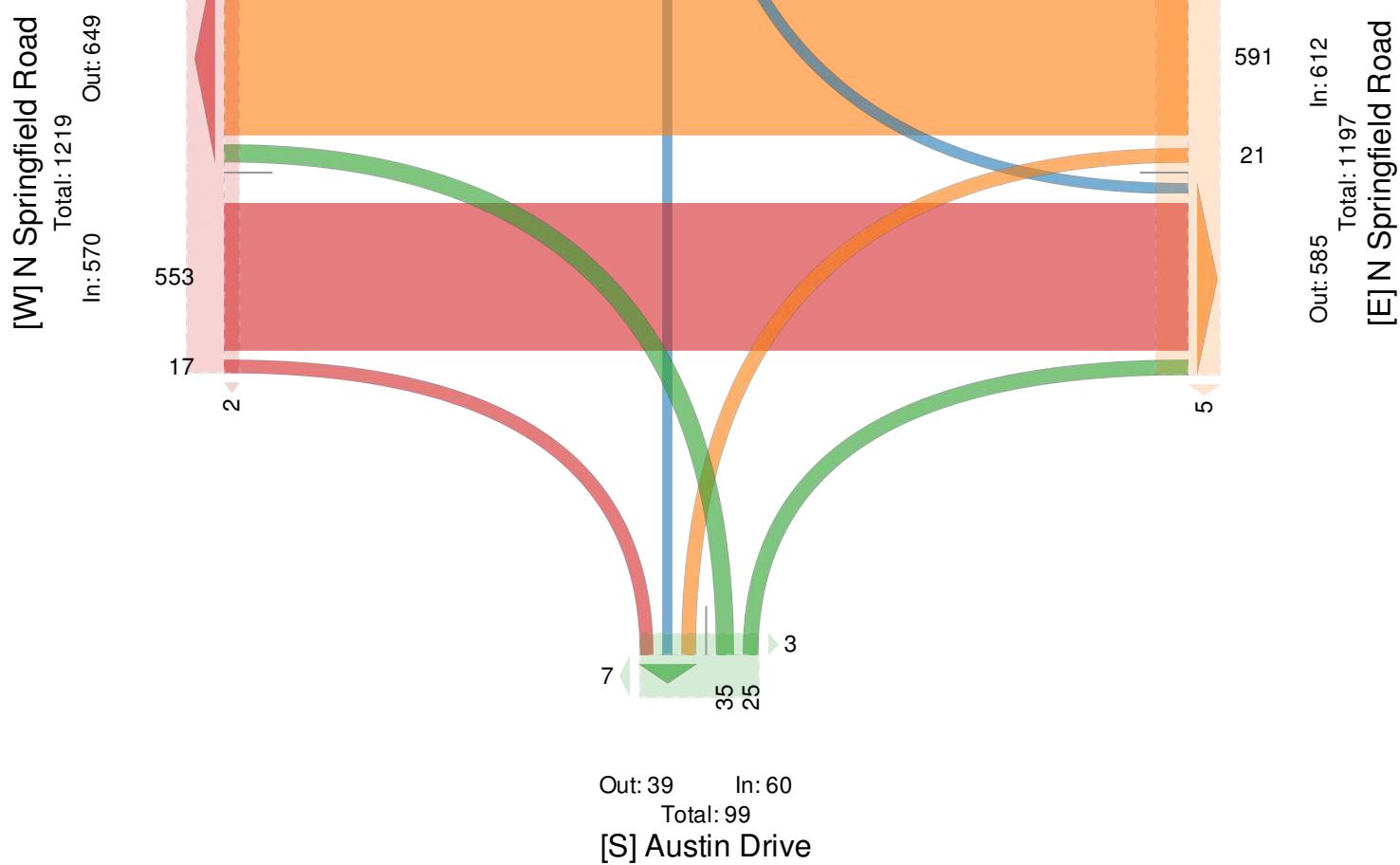
[N] Austin Drive

Total: 31

In: 31 Out: 0

23 1 7

1 2





Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 iklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin Drive
 Site Code: 1
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	N Springfield Road Eastbound							N Springfield Road Westbound							Austin Drive Northbound							Austin Drive Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total		
6:30 AM	0	0	87	0	0	2	87	0	0	128	0	0	128	0	0	0	0	0	0	0	0	0	0	0	1	0	1	216	
6:45 AM	0	0	106	2	0	2	108	0	0	159	0	0	159	0	1	0	1	0	0	2	0	0	0	2	7	2	9	278	
Hourly Total	0	0	193	2	0	4	195	0	0	287	0	0	287	0	1	0	1	0	0	2	0	0	0	2	8	2	10	494	
7:00 AM	0	0	128	1	0	0	129	0	0	151	0	0	151	0	1	0	0	0	0	1	0	0	0	2	6	0	8	289	
7:15 AM	0	0	141	1	0	0	142	0	1	139	0	0	140	0	1	0	0	0	0	1	0	1	0	8	1	0	10	293	
7:30 AM	0	0	145	3	0	5	148	0	1	136	0	0	137	0	2	0	2	0	0	4	0	3	1	2	2	2	8	297	
7:45 AM	0	0	142	3	1	1	146	0	6	130	0	0	136	0	1	0	1	0	0	2	0	4	1	4	2	1	11	295	
Hourly Total	0	0	556	8	1	6	565	0	8	556	0	0	564	0	5	0	3	0	0	8	0	8	2	16	11	3	37	1174	
8:00 AM	0	0	129	4	1	0	134	0	1	121	0	0	122	0	2	0	1	0	0	3	0	3	2	1	0	0	6	265	
8:15 AM	0	0	99	6	0	5	105	0	1	124	0	0	125	0	0	0	1	0	0	1	0	1	1	5	3	0	10	241	
8:30 AM	0	0	148	1	0	27	149	0	2	158	0	1	160	0	1	0	0	0	0	1	0	3	1	8	0	5	12	322	
8:45 AM	0	0	134	4	0	7	138	0	1	151	0	1	152	0	1	0	1	0	1	2	0	2	1	5	0	1	8	300	
Hourly Total	0	0	510	15	1	39	526	0	5	554	0	2	559	0	4	0	3	0	1	7	0	9	5	19	3	6	36	1128	
9:00 AM	0	0	120	0	0	1	120	0	3	117	0	0	120	0	0	0	0	0	0	0	0	1	0	2	0	0	3	243	
9:15 AM	0	0	107	1	0	0	108	0	2	106	0	0	108	0	0	0	0	1	0	1	0	1	0	2	1	0	4	221	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Hourly Total	0	0	227	1	0	1	228	0	5	223	0	0	228	0	0	0	0	1	0	1	0	2	0	4	1	0	7	464	
2:30 PM	0	0	106	4	0	0	110	0	1	157	0	0	158	0	4	0	4	0	0	8	0	1	0	3	1	0	5	281	
2:45 PM	0	0	115	3	0	2	118	0	0	110	0	0	110	0	3	0	2	1	1	6	0	2	1	1	5	1	9	243	
Hourly Total	0	0	221	7	0	2	228	0	1	267	0	0	268	0	7	0	6	1	1	14	0	3	1	4	6	1	14	524	
3:00 PM	0	0	123	2	0	21	125	0	1	127	0	4	128	0	1	0	4	0	3	5	0	0	0	3	3	8	6	264	
3:15 PM	0	1	144	2	0	31	147	0	0	131	0	10	131	0	2	0	4	0	0	12	6	0	0	1	2	1	4	4	288
3:30 PM	0	0	119	3	0	20	122	0	3	118	1	11	122	0	2	0	4	0	1	6	0	1	1	0	7	3	9	259	
3:45 PM	0	0	148	0	1	9	149	0	5	138	0	1	143	0	2	0	5	1	0	8	0	2	0	5	4	0	11	311	
Hourly Total	0	1	534	7	1	81	543	0	9	514	1	26	524	0	7	0	17	1	16	25	0	3	2	10	15	15	30	1122	
4:00 PM	0	0	152	0	0	6	152	0	1	135	0	1	136	0	2	0	0	2	0	4	0	1	0	1	2	3	3	295	
4:15 PM	0	0	133	2	0	1	135	0	3	151	0	2	154	0	1	0	1	1	1	3	0	1	2	3	4	1	10	302	
4:30 PM	0	0	140	5	0	3	145	0	10	150	0	1	160	0	9	0	3	2	2	14	0	4	0	2	3	0	9	328	
4:45 PM	0	0	135	2	0	3	137	0	2	137	0	2	139	0	8	0	8	0	3	16	0	2	0	3	3	0	8	300	
Hourly Total	0	0	560	9	0	13	569	0	16	573	0	6	589	0	20	0	12	5	6	37	0	8	2	9	11	3	30	1225	
5:00 PM	0	0	140	3	1	0	144	0	6	157	0	5	163	0	4	0	2	1	1	7	0	0	0	3	2	2	5	319	
5:15 PM	0	0	138	6	0	2	144	0	3	147	0	2	150	0	14	0	9	0	4	23	0	1	1	6	1	1	9	326	
5:30 PM	0	0	138	4	0	10	142	0	0	136	0	1	136	0	5	0	0	1	0	6	0	4	0	4	1	0	9	293	
5:45 PM	0	0	146	1	1	2	148	0	3	143	0	7	146	0	2	0	4	1	0	7	0	2	0	5	3	5	10	311	
Hourly Total	0	0	562	14	2	14	578	0	12	583	0	15	595	0	25	0	15	3	5	43	0	7	1	18	7	8	33	1249	
6:00 PM	0	1	152	2	0	4	155	0	4	117	0	2	121	0	3	0	3	2	2	8	0	3	0	3	2	9	293		
6:15 PM	0	0	135	3	0	2	138	0	2	120	0	1	122	0	6	0	1	2	0	9	0	2	1	7	0	0	10	279	

Grand Total	0	2	3650	68	5	166	3725	0	62	3794	1	52	3857	0	78	0	61	15	31	154	0	45	14	92	65	40	216	7952
Approach %	0.0	0.1	98.0	1.8	0.1	-	-	0.0	1.6	98.4	0.0	-	-	0.0	50.6	0.0	39.6	9.7	-	-	0.0	20.8	6.5	42.6	30.1	-	-	-
Total %	0.0	0.0	45.9	0.9	0.1	-	46.8	0.0	0.8	47.7	0.0	-	48.5	0.0	1.0	0.0	0.8	0.2	-	1.9	0.0	0.6	0.2	1.2	0.8	-	2.7	-
Lights	0	2	3518	64	5	-	3589	0	61	3653	1	-	3715	0	77	0	57	15	-	149	0	43	14	92	64	-	213	7666
% Lights	-	100.0	96.4	94.1	100.0	-	96.3	-	98.4	96.3	100.0	-	96.3	-	98.7	-	93.4	100.0	-	96.8	-	95.6	100.0	100.0	98.5	-	98.6	96.4
Mediums	0	0	125	4	0	-	129	0	1	127	0	-	128	0	1	0	3	0	-	4	0	2	0	0	1	-	3	264
% Mediums	-	0.0	3.4	5.9	0.0	-	3.5	-	1.6	3.3	0.0	-	3.3	-	1.3	-	4.9	0.0	-	2.6	-	4.4	0.0	0.0	1.5	-	1.4	3.3
Articulated Trucks	0	0	7	0	0	-	7	0	0	14	0	-	14	0	0	0	1	0	-	1	0	0	0	0	-	0	22	
% Articulated Trucks	-	0.0	0.2	0.0	0.0	-	0.2	-	0.0	0.4	0.0	-	0.4	-	0.0	-	1.6	0.0	-	0.6	-	0.0	0.0	0.0	0.0	-	0.0	0.3
Bicycles on Crosswalk	-	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	0.6	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	-	165	-	-	-	-	-	52	-	-	-	-	-	-	31	-	-	-	-	-	40	-	-
% Pedestrians	-	-	-	-	-	-	99.4	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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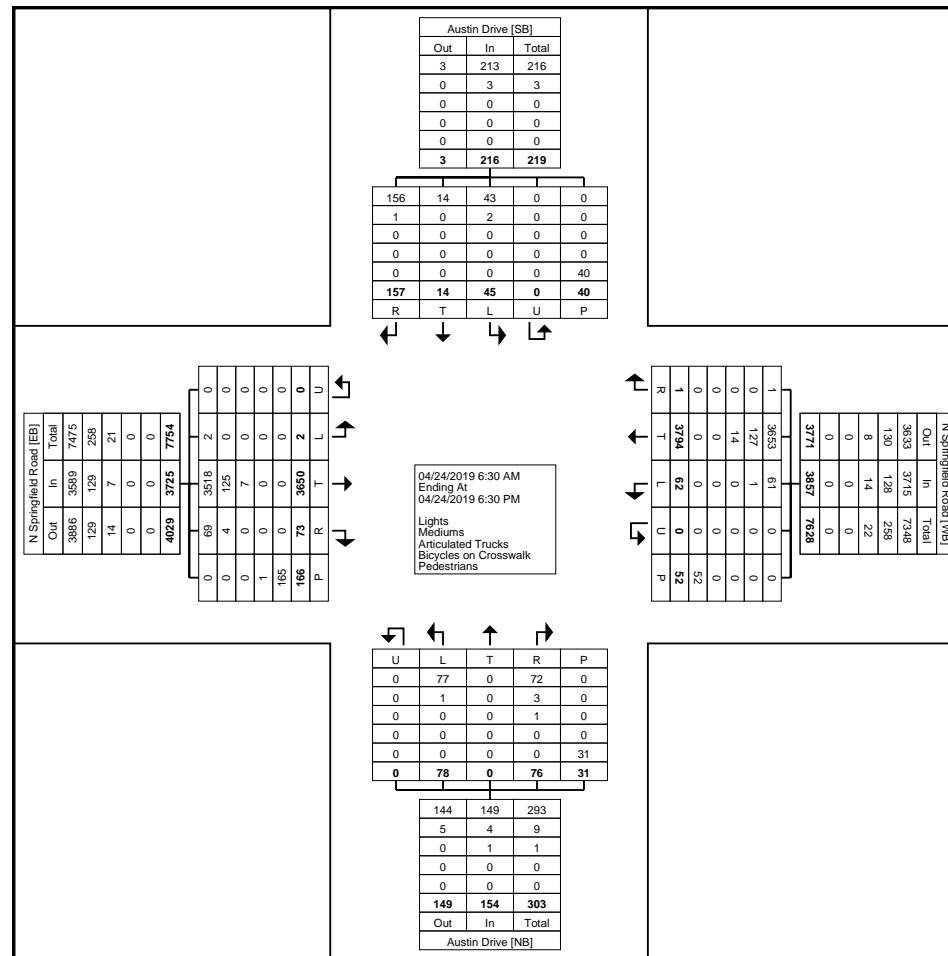
PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin
Drive
Site Code: 1
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot



Imperial Traffic & Data Collection
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 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin Drive
 Site Code: 1
 Start Date: 04/24/2019
 Page No: 4

Turning Movement Peak Hour Data (7:00 AM)

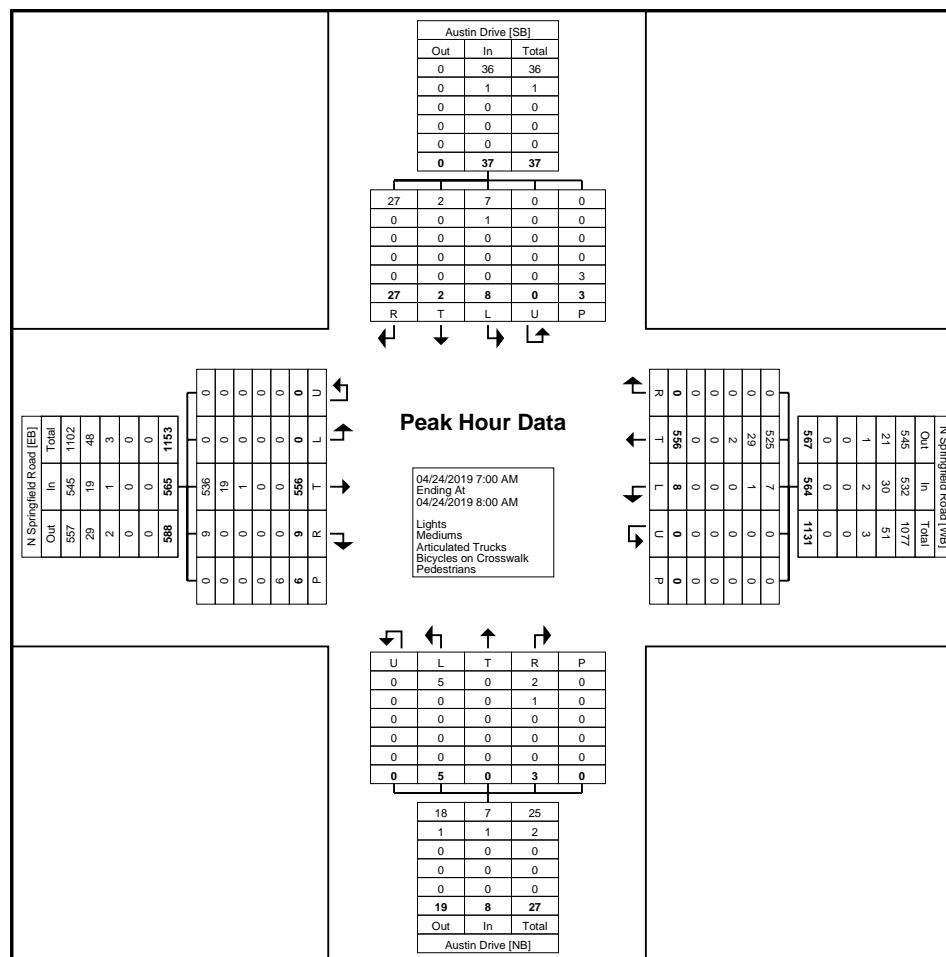
Start Time	N Springfield Road Eastbound							N Springfield Road Westbound							Austin Drive Northbound							Austin Drive Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total		
7:00 AM	0	0	128	1	0	0	129	0	0	151	0	0	151	0	1	0	0	0	0	1	0	0	0	2	6	0	8	289	
7:15 AM	0	0	141	1	0	0	142	0	1	139	0	0	140	0	1	0	0	0	0	1	0	1	0	8	1	0	10	293	
7:30 AM	0	0	145	3	0	5	148	0	1	136	0	0	137	0	2	0	2	0	0	0	4	0	3	1	2	2	2	8	297
7:45 AM	0	0	142	3	1	1	146	0	6	130	0	0	136	0	1	0	1	0	0	0	2	0	4	1	4	2	1	11	295
Total	0	0	556	8	1	6	565	0	8	556	0	0	564	0	5	0	3	0	0	0	8	0	8	2	16	11	3	37	1174
Approach %	0.0	0.0	98.4	1.4	0.2	-	-	0.0	1.4	98.6	0.0	-	-	0.0	62.5	0.0	37.5	0.0	-	-	0.0	21.6	5.4	43.2	29.7	-	-	-	
Total %	0.0	0.0	47.4	0.7	0.1	-	48.1	0.0	0.7	47.4	0.0	-	48.0	0.0	0.4	0.0	0.3	0.0	-	0.7	0.0	0.7	0.2	1.4	0.9	-	3.2	-	
PHF	0.000	0.000	0.959	0.667	0.250	-	0.954	0.000	0.333	0.921	0.000	-	0.934	0.000	0.625	0.000	0.375	0.000	-	0.500	0.000	0.500	0.500	0.500	0.458	-	0.841	0.988	
Lights	0	0	536	8	1	-	545	0	7	525	0	-	532	0	5	0	2	0	-	7	0	7	2	16	11	-	36	1120	
% Lights	-	-	96.4	100.0	100.0	-	96.5	-	87.5	94.4	-	-	94.3	-	100.0	-	66.7	-	-	87.5	-	87.5	100.0	100.0	100.0	-	97.3	95.4	
Mediums	0	0	19	0	0	-	19	0	1	29	0	-	30	0	0	0	1	0	-	1	0	1	0	0	0	-	1	51	
% Mediums	-	-	3.4	0.0	0.0	-	3.4	-	12.5	5.2	-	-	5.3	-	0.0	-	33.3	-	-	12.5	-	12.5	0.0	0.0	0.0	-	2.7	4.3	
Articulated Trucks	0	0	1	0	0	-	1	0	0	2	0	-	2	0	0	0	0	0	-	0	0	0	0	0	-	0	3		
% Articulated Trucks	-	-	0.2	0.0	0.0	-	0.2	-	0.0	0.4	-	-	0.4	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.3		
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-		
Pedestrians	-	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	3	-	-	
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.93051, -75.305813



Imperial Traffic & Data Collection
www.imperialtdc.com
PO BOX 4637
Wayne, New Jersey, United States 07470
609-706-6100 lklein@imperialtdc.com

Count Name: 1. N Springfield Road & Austin
Drive
Site Code: 1
Start Date: 04/24/2019
Page No: 5



Turning Movement Peak Hour Data Plot (7:00 AM)



Imperial Traffic & Data Collection
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 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.93051, -75.305813

Count Name: 1. N Springfield Road & Austin Drive
 Site Code: 1
 Start Date: 04/24/2019
 Page No: 6

Turning Movement Peak Hour Data (4:30 PM)

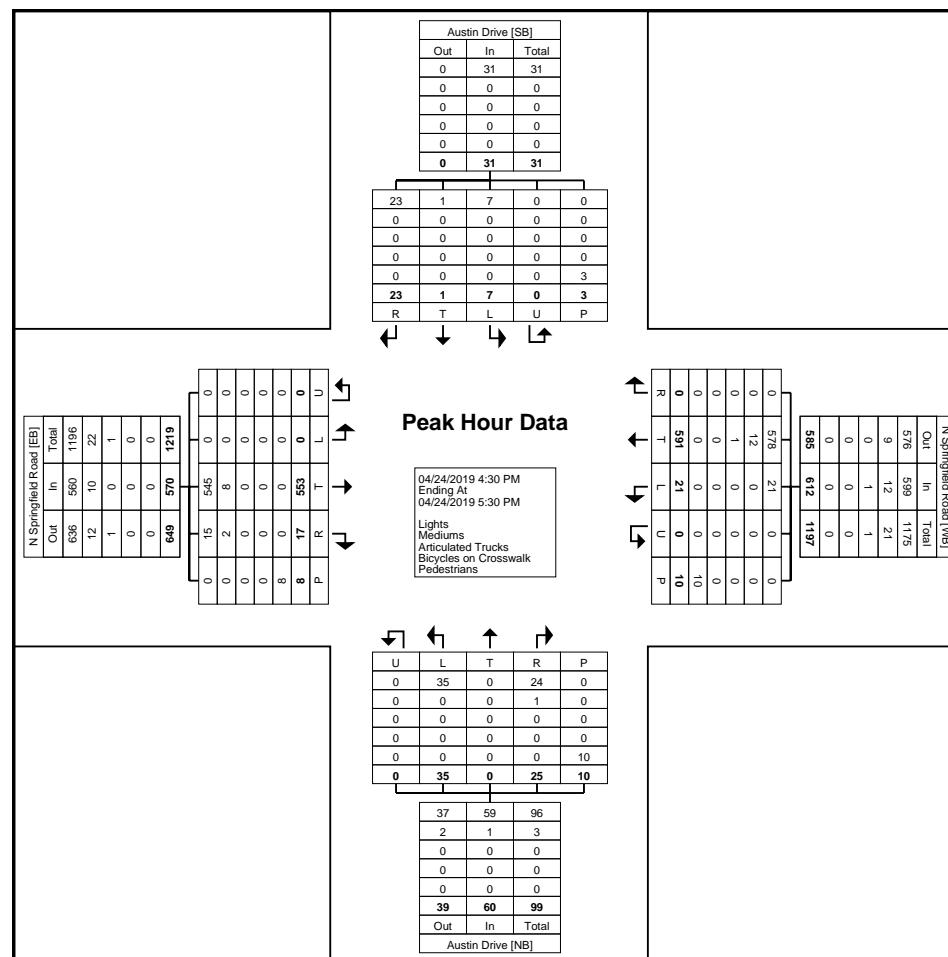
Start Time	N Springfield Road Eastbound							N Springfield Road Westbound							Austin Drive Northbound							Austin Drive Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total		
4:30 PM	0	0	140	5	0	3	145	0	10	150	0	1	160	0	9	0	3	2	2	14	0	4	0	2	3	0	9	328	
4:45 PM	0	0	135	2	0	3	137	0	2	137	0	2	139	0	8	0	8	0	3	16	0	2	0	3	3	0	8	300	
5:00 PM	0	0	140	3	1	0	144	0	6	157	0	5	163	0	4	0	2	1	1	7	0	0	0	3	2	2	5	319	
5:15 PM	0	0	138	6	0	2	144	0	3	147	0	2	150	0	14	0	9	0	4	23	0	1	1	6	1	1	9	326	
Total	0	0	553	16	1	8	570	0	21	591	0	10	612	0	35	0	22	3	10	60	0	7	1	14	9	3	31	1273	
Approach %	0.0	0.0	97.0	2.8	0.2	-	-	0.0	3.4	96.6	0.0	-	-	0.0	58.3	0.0	36.7	5.0	-	-	0.0	22.6	3.2	45.2	29.0	-	-	-	
Total %	0.0	0.0	43.4	1.3	0.1	-	44.8	0.0	1.6	46.4	0.0	-	-	0.0	2.7	0.0	1.7	0.2	-	4.7	0.0	0.5	0.1	1.1	0.7	-	2.4	-	
PHF	0.000	0.000	0.988	0.667	0.250	-	0.983	0.000	0.525	0.941	0.000	-	0.939	0.000	0.625	0.000	0.611	0.375	-	0.652	0.000	0.438	0.250	0.583	0.750	-	0.861	0.970	
Lights	0	0	545	14	1	-	560	0	21	578	0	-	599	0	35	0	21	3	-	59	0	7	1	14	9	-	31	1249	
% Lights	-	-	98.6	87.5	100.0	-	98.2	-	100.0	97.8	-	-	97.9	-	100.0	-	95.5	100.0	-	98.3	-	100.0	100.0	100.0	100.0	-	100.0	98.1	
Mediums	0	0	8	2	0	-	10	0	0	12	0	-	12	0	0	0	1	0	-	1	0	0	0	0	0	-	0	23	
% Mediums	-	-	1.4	12.5	0.0	-	1.8	-	0.0	2.0	-	-	2.0	-	0.0	-	4.5	0.0	-	1.7	-	0.0	0.0	0.0	0.0	-	0.0	1.8	
Articulated Trucks	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	0	-	0	0	0	0	0	-	0	1		
% Articulated Trucks	-	-	0.0	0.0	0.0	-	0.0	-	0.0	0.2	-	-	0.2	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1		
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	
Pedestrians	-	-	-	-	-	-	8	-	-	-	-	-	10	-	-	-	-	-	-	10	-	-	-	-	-	3	-	-	
% Pedestrians	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.93051, -75.305813



Imperial Traffic & Data Collection
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Troy Hill, New Jersey, United States 07080
609-706-6100 lklein@imperialtdc.com

Count Name: 1. N Springfield Road & Austin
Drive
Site Code: 1
Start Date: 04/24/2019
Page No: 7



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



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 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.930496, -75.304528

Count Name: 2. N Springfield Road & Oak
 Avenue
 Site Code: 2
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	N Springfield Road Eastbound							N Springfield Road Westbound							N Oak Avenue Northbound							N Oak Avenue Southbound							Int. Total
	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	U-Turn	Left	Thru	Right	Right on Red	Peds	App. Total	
6:30 AM	0	2	60	21	0	0	83	0	0	109	1	0	0	110	0	16	15	0	0	0	31	0	6	25	1	0	0	32	256
6:45 AM	0	1	85	21	1	1	108	0	1	125	5	0	0	131	0	32	19	1	0	0	52	0	6	22	3	0	0	31	322
Hourly Total	0	3	145	42	1	1	191	0	1	234	6	0	0	241	0	48	34	1	0	0	83	0	12	47	4	0	0	63	578
7:00 AM	0	3	95	32	1	0	131	0	4	122	10	0	0	136	0	26	32	0	0	0	58	0	15	31	8	0	1	54	379
7:15 AM	0	3	106	30	0	1	139	0	0	102	11	0	0	113	0	23	41	1	0	0	65	0	15	35	5	0	0	55	372
7:30 AM	0	3	107	36	0	1	146	0	3	106	11	2	0	122	0	22	27	0	0	0	49	0	17	39	8	1	0	65	382
7:45 AM	0	6	115	30	1	0	152	0	3	108	5	0	0	116	0	27	28	0	0	1	55	0	17	46	5	0	0	68	391
Hourly Total	0	15	423	128	2	2	568	0	10	438	37	2	0	487	0	98	128	1	0	1	227	0	64	151	26	1	1	242	1524
8:00 AM	0	7	106	22	0	1	135	0	2	102	3	0	0	107	0	19	28	1	0	1	48	0	9	50	1	0	0	60	350
8:15 AM	0	3	75	21	0	0	99	0	1	113	5	0	1	119	0	16	35	2	0	0	53	0	17	37	5	0	0	59	330
8:30 AM	0	18	96	28	3	0	145	0	5	130	6	0	0	141	0	28	27	0	0	4	55	0	7	27	1	0	1	35	376
8:45 AM	0	15	94	31	0	0	140	0	4	113	9	0	0	126	0	24	32	2	1	1	59	0	14	26	9	1	0	50	375
Hourly Total	0	43	371	102	3	1	519	0	12	458	23	0	1	493	0	87	122	5	1	6	215	0	47	140	16	1	1	204	1431
9:00 AM	0	3	95	20	0	0	118	0	2	93	7	0	0	102	0	18	21	2	0	2	41	0	6	31	10	1	0	48	309
9:15 AM	0	2	88	24	1	0	115	0	3	86	6	0	0	95	0	21	24	1	0	1	46	0	4	22	3	0	0	29	285
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Hourly Total	0	5	183	44	1	0	233	0	5	179	13	0	0	197	0	39	45	3	0	3	87	0	10	53	13	1	0	77	594
2:30 PM	0	4	86	25	0	1	115	0	0	112	7	0	0	119	0	34	25	2	0	0	61	0	7	22	3	1	0	33	328
2:45 PM	0	6	89	29	0	2	124	0	1	77	7	0	0	85	0	29	44	1	1	1	75	0	5	34	2	0	0	41	325
Hourly Total	0	10	175	54	0	3	239	0	1	189	14	0	0	204	0	63	69	3	1	1	136	0	12	56	5	1	0	74	653
3:00 PM	0	15	87	30	0	3	132	0	0	101	4	0	0	105	0	24	29	1	1	1	55	0	13	47	3	0	1	63	355
3:15 PM	0	18	89	40	0	4	147	0	3	93	7	0	0	103	0	36	33	1	0	8	70	0	11	29	2	0	2	42	362
3:30 PM	0	6	85	39	0	4	130	0	0	95	10	0	1	105	0	28	39	2	1	3	70	0	10	36	6	0	0	52	357
3:45 PM	0	7	107	32	0	3	146	0	1	105	10	0	1	116	0	30	36	2	0	2	68	0	9	34	6	0	0	49	379
Hourly Total	0	46	368	141	0	14	555	0	4	394	31	0	2	429	0	118	137	6	2	14	263	0	43	146	17	0	3	206	1453
4:00 PM	0	7	114	37	0	1	158	0	2	100	10	0	0	112	0	29	43	0	0	1	72	0	9	32	3	0	0	44	386
4:15 PM	0	6	104	26	2	4	138	0	4	117	9	0	0	130	0	33	51	1	0	0	85	0	12	45	4	0	0	61	414
4:30 PM	0	11	104	29	0	0	144	0	4	115	11	1	0	131	0	38	40	3	0	0	81	0	11	49	6	0	0	66	422
4:45 PM	0	15	107	22	0	0	144	0	1	107	11	1	2	120	0	26	46	2	1	7	75	0	13	44	2	1	0	60	399
Hourly Total	0	39	429	114	2	5	584	0	11	439	41	2	2	493	0	126	180	6	1	8	313	0	45	170	15	1	0	231	1621
5:00 PM	0	12	101	30	0	1	143	0	4	118	8	1	1	131	0	41	41	3	0	0	85	0	14	38	3	1	0	56	415
5:15 PM	0	6	101	47	1	0	155	0	2	110	9	2	0	123	0	40	45	1	1	3	87	0	10	50	7	0	0	67	432
5:30 PM	0	13	82	38	0	0	133	0	7	103	11	3	0	124	0	24	68	9	0	0	101	0	12	48	3	0	0	63	421
5:45 PM	0	11	88	50	0	2	149	0	1	110	9	4	0	124	0	27	41	3	0	1	71	0	12	38	10	0	2	60	404
Hourly Total	0	42	372	165	1	3	580	0	14	441	37	10	1	502	0	132	195	16	1	4	344	0	48	174	23	1	2	246	1672
6:00 PM	0	12	109	38	0	2	159	0	2	99	9	2	1	112	0	21	30	5	0	4	56	0	14	34	1	1	1	50	377
6:15 PM	0	8	110	21	0	2	139	0	1	80	3	1	1	85	0	32	36	1	0	2	69	0	8	33	1	2	0	44	337



Imperial Traffic & Data Collection

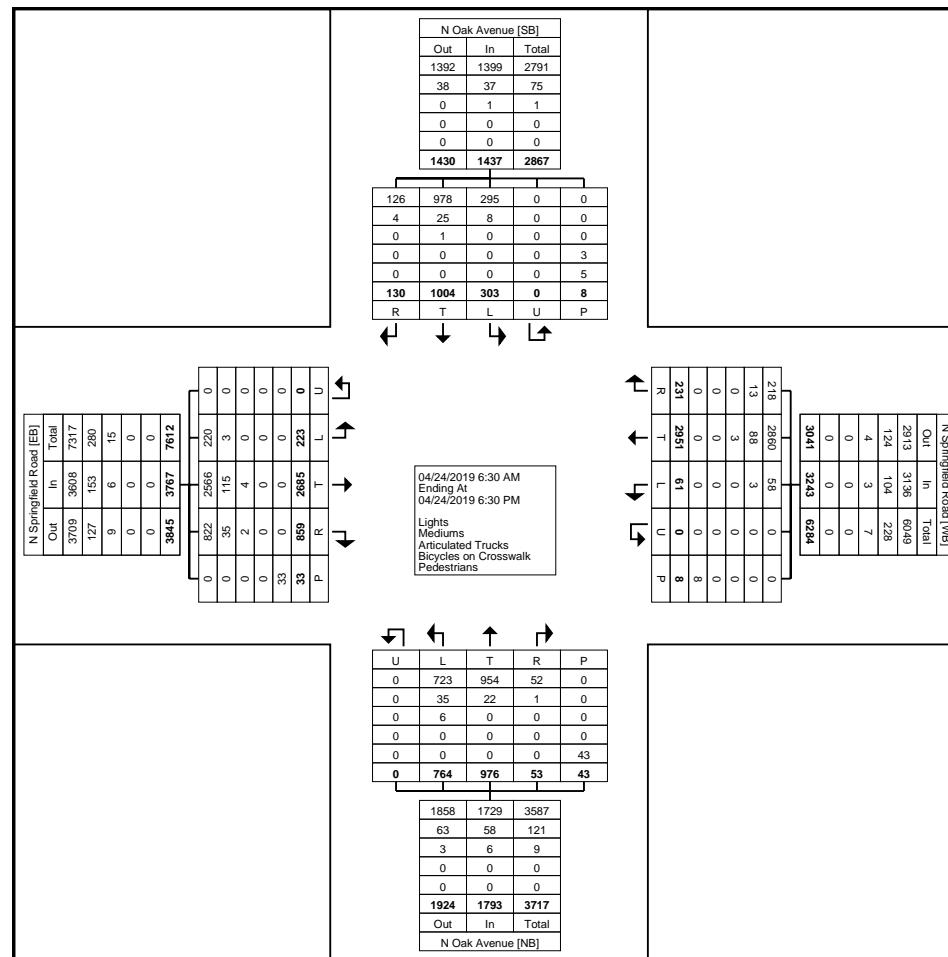
www.imperialtdc.com

PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.930496, -75.304528

Count Name: 2. N Springfield Road & Oak Avenue
Site Code: 2
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.930496, -75.304528



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09-706-6100 lklein@imperialtdc.com

Count Name: 2. N Springfield Road & Oak Avenue
Site Code: 2
Start Date: 04/24/2019
Page No: 4

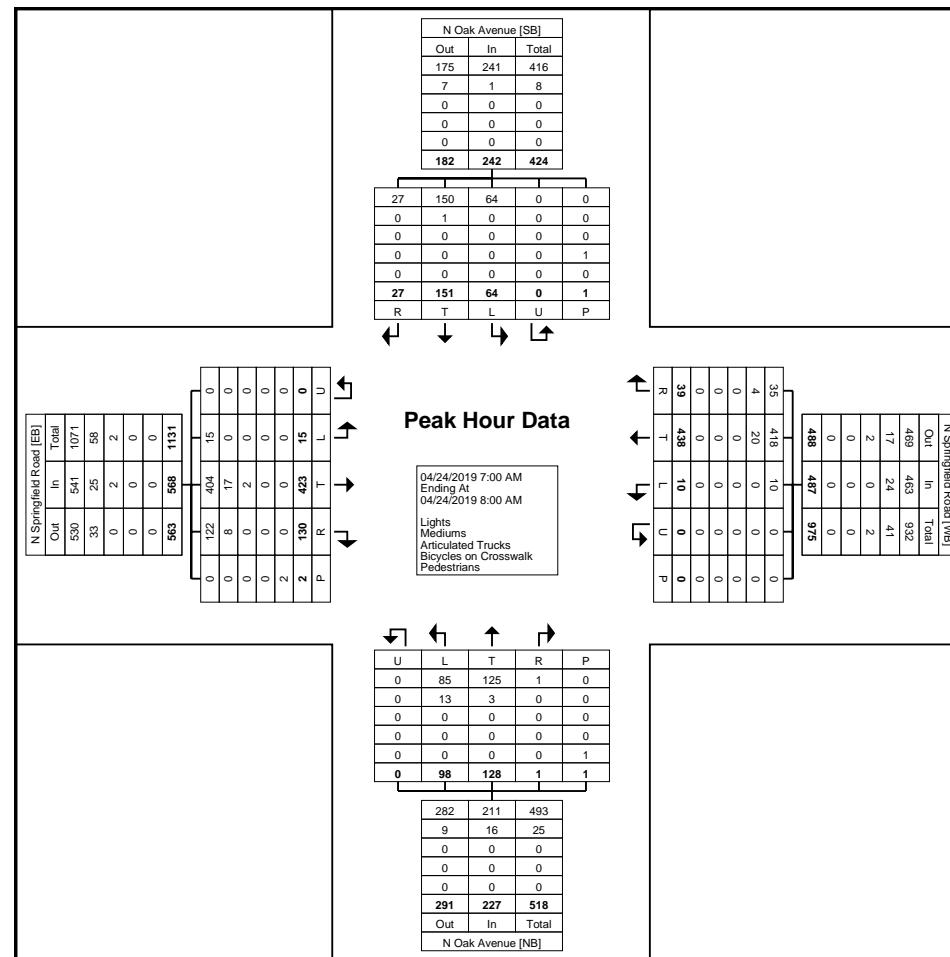
Turning Movement Peak Hour Data (7:00 AM)



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 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.930496, -75.304528

Count Name: 2. N Springfield Road & Oak
 Avenue
 Site Code: 2
 Start Date: 04/24/2019
 Page No: 5



Turning Movement Peak Hour Data Plot (7:00 AM)



Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.930496, -75.304528

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609-706-6100 lklein@imperialtdc.com

Count Name: 2. N Springfield Road & Oak Avenue
Site Code: 2
Start Date: 04/24/2019
Page No: 6

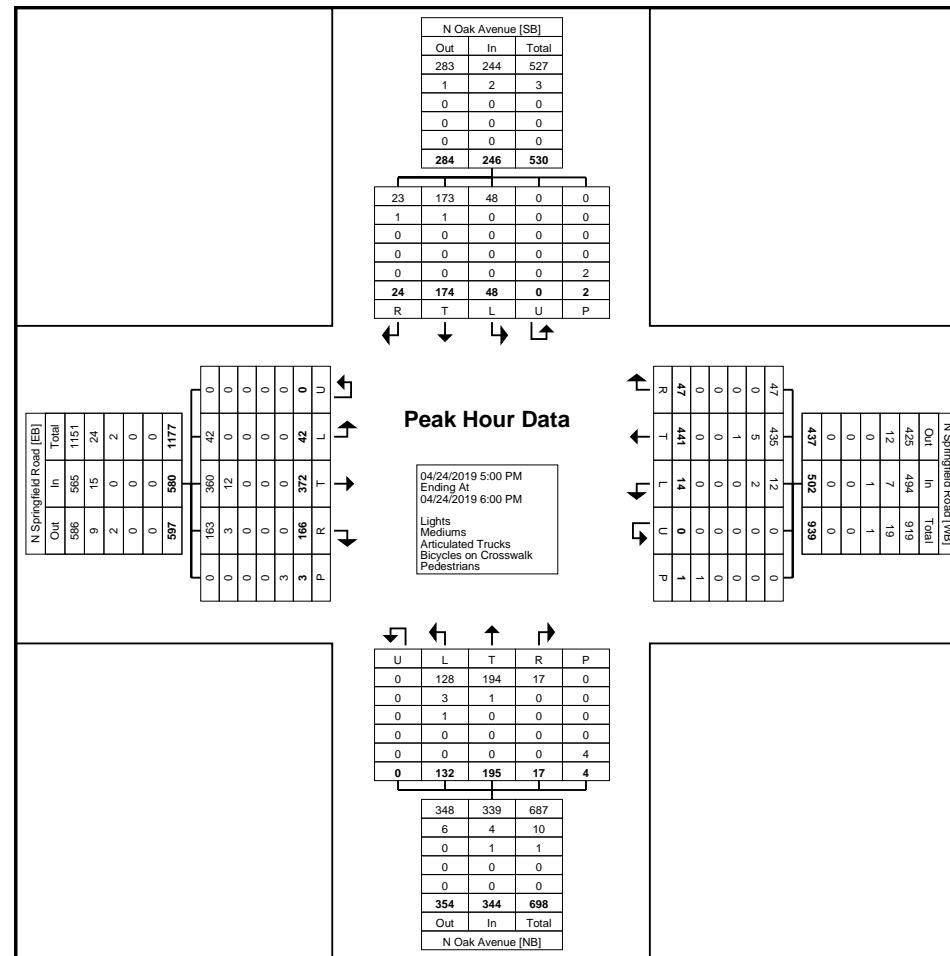
Turning Movement Peak Hour Data (5:00 PM)



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 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.930496, -75.304528

Count Name: 2. N Springfield Road & Oak Avenue
 Site Code: 2
 Start Date: 04/24/2019
 Page No: 7



Turning Movement Peak Hour Data Plot (5:00 PM)

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2019-04-24 6:30AM	2	60	21	0	0	83	0	0	109	1	0	0	110	0
6:45AM	1	85	21	0	1	108	1	1	125	5	0	0	131	0
Hourly Total	3	145	42	0	1	191	1	1	234	6	0	0	241	0
7:00AM	3	95	32	0	1	131	0	4	122	10	0	0	136	0
7:15AM	3	106	30	0	0	139	1	0	102	11	0	0	113	0
7:30AM	3	107	36	0	0	146	1	3	106	11	0	2	122	0
7:45AM	6	115	30	0	1	152	0	3	108	5	0	0	116	0
Hourly Total	15	423	128	0	2	568	2	10	438	37	0	2	487	0
8:00AM	7	106	22	0	0	135	1	2	102	3	0	0	107	0
8:15AM	3	75	21	0	0	99	0	1	113	5	0	0	119	1
8:30AM	18	96	28	0	3	145	0	5	130	6	0	0	141	0
8:45AM	15	94	31	0	0	140	0	4	113	9	0	0	126	0
Hourly Total	43	371	102	0	3	519	1	12	458	23	0	0	493	1
9:00AM	3	95	20	0	0	118	0	2	93	7	0	0	102	0
9:15AM	2	88	24	0	1	115	0	3	86	6	0	0	95	0
Hourly Total	5	183	44	0	1	233	0	5	179	13	0	0	197	0
2:30PM	4	86	25	0	0	115	1	0	112	7	0	0	119	0
2:45PM	6	89	29	0	0	124	2	1	77	7	0	0	85	0
Hourly Total	10	175	54	0	0	239	3	1	189	14	0	0	204	0
3:00PM	15	87	30	0	0	132	3	0	101	4	0	0	105	0
3:15PM	18	89	40	0	0	147	4	3	93	7	0	0	103	0
3:30PM	6	85	39	0	0	130	4	0	95	10	0	0	105	1
3:45PM	7	107	32	0	0	146	3	1	105	10	0	0	116	1
Hourly Total	46	368	141	0	0	555	14	4	394	31	0	0	429	2
4:00PM	7	114	37	0	0	158	1	2	100	10	0	0	112	0
4:15PM	6	104	26	0	2	138	4	4	117	9	0	0	130	0
4:30PM	11	104	29	0	0	144	0	4	115	11	0	1	131	0
4:45PM	15	107	22	0	0	144	0	1	107	11	0	1	120	2
Hourly Total	39	429	114	0	2	584	5	11	439	41	0	2	493	2
5:00PM	12	101	30	0	0	143	1	4	118	8	0	1	131	1
5:15PM	6	101	47	0	1	155	0	2	110	9	0	2	123	0
5:30PM	13	82	38	0	0	133	0	7	103	11	0	3	124	0
5:45PM	11	88	50	0	0	149	2	1	110	9	0	4	124	0
Hourly Total	42	372	165	0	1	580	3	14	441	37	0	10	502	1
6:00PM	12	109	38	0	0	159	2	2	99	9	0	2	112	1
6:15PM	8	110	21	0	0	139	2	1	80	3	0	1	85	1
Hourly Total	20	219	59	0	0	298	4	3	179	12	0	3	197	2
Total	223	2685	849	0	10	3767	33	61	2951	214	0	17	3243	8
% Approach	5.9%	71.3%	22.5%	0%	0.3%	-	-	1.9%	91.0%	6.6%	0%	0.5%	-	-
% Total	2.2%	26.2%	8.3%	0%	0.1%	36.8%	-	0.6%	28.8%	2.1%	0%	0.2%	31.7%	-
Lights	220	2566	813	0	9	3608	-	58	2860	201	0	17	3136	-
% Lights	98.7%	95.6%	95.8%	0%	90.0%	95.8%	-	95.1%	96.9%	93.9%	0%	100%	96.7%	-
Articulated Trucks	0	4	2	0	0	6	-	0	3	0	0	0	3	-
% Articulated Trucks	0%	0.1%	0.2%	0%	0%	0.2%	-	0%	0.1%	0%	0%	0%	0.1%	-
Buses and Single-Unit Trucks	3	115	34	0	1	153	-	3	88	13	0	0	104	-
% Buses and Single-Unit Trucks	1.3%	4.3%	4.0%	0%	10.0%	4.1%	-	4.9%	3.0%	6.1%	0%	0%	3.2%	-
Pedestrians	-	-	-	-	-	-	33	-	-	-	-	-	8	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Oak Avenue Northbound							N Oak Avenue Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 6:30AM	16	15	0	0	0	31	0	6	25	1	0	0	32	0	256
6:45AM	32	19	1	0	0	52	0	6	22	3	0	0	31	0	322
Hourly Total	48	34	1	0	0	83	0	12	47	4	0	0	63	0	578
7:00AM	26	32	0	0	0	58	0	15	31	8	0	0	54	1	379
7:15AM	23	41	1	0	0	65	0	15	35	5	0	0	55	0	372
7:30AM	22	27	0	0	0	49	0	17	39	8	0	1	65	0	382
7:45AM	27	28	0	0	0	55	1	17	46	5	0	0	68	0	391
Hourly Total	98	128	1	0	0	227	1	64	151	26	0	1	242	1	1524
8:00AM	19	28	1	0	0	48	1	9	50	1	0	0	60	0	350
8:15AM	16	35	2	0	0	53	0	17	37	5	0	0	59	0	330
8:30AM	28	27	0	0	0	55	4	7	27	1	0	0	35	1	376
8:45AM	24	32	2	0	1	59	1	14	26	9	0	1	50	0	375
Hourly Total	87	122	5	0	1	215	6	47	140	16	0	1	204	1	1431
9:00AM	18	21	2	0	0	41	2	6	31	10	0	1	48	0	309
9:15AM	21	24	1	0	0	46	1	4	22	3	0	0	29	0	285
Hourly Total	39	45	3	0	0	87	3	10	53	13	0	1	77	0	594
2:30PM	34	25	2	0	0	61	0	7	22	3	0	1	33	0	328
2:45PM	29	44	1	0	1	75	1	5	34	2	0	0	41	0	325
Hourly Total	63	69	3	0	1	136	1	12	56	5	0	1	74	0	653
3:00PM	24	29	1	0	1	55	1	13	47	3	0	0	63	1	355
3:15PM	36	33	1	0	0	70	8	11	29	2	0	0	42	2	362
3:30PM	28	39	2	0	1	70	3	10	36	6	0	0	52	0	357
3:45PM	30	36	2	0	0	68	2	9	34	6	0	0	49	0	379
Hourly Total	118	137	6	0	2	263	14	43	146	17	0	0	206	3	1453
4:00PM	29	43	0	0	0	72	1	9	32	3	0	0	44	0	386
4:15PM	33	51	1	0	0	85	0	12	45	4	0	0	61	0	414
4:30PM	38	40	3	0	0	81	0	11	49	6	0	0	66	0	422
4:45PM	26	46	2	0	1	75	7	13	44	2	0	1	60	0	399
Hourly Total	126	180	6	0	1	313	8	45	170	15	0	1	231	0	1621
5:00PM	41	41	3	0	0	85	0	14	38	3	0	1	56	0	415
5:15PM	40	45	1	0	1	87	3	10	50	7	0	0	67	0	432
5:30PM	24	68	9	0	0	101	0	12	48	3	0	0	63	0	421
5:45PM	27	41	3	0	0	71	1	12	38	10	0	0	60	2	404
Hourly Total	132	195	16	0	1	344	4	48	174	23	0	1	246	2	1672
6:00PM	21	30	5	0	0	56	4	14	34	1	0	1	50	1	377
6:15PM	32	36	1	0	0	69	2	8	33	1	0	2	44	0	337
Hourly Total	53	66	6	0	0	125	6	22	67	2	0	3	94	1	714
Total	764	976	47	0	6	1793	43	303	1004	121	0	9	1437	8	10240
% Approach	42.6%	54.4%	2.6%	0%	0.3%	-	-	21.1%	69.9%	8.4%	0%	0.6%	-	-	-
% Total	7.5%	9.5%	0.5%	0%	0.1%	17.5%	-	3.0%	9.8%	1.2%	0%	0.1%	14.0%	-	-
Lights	723	954	46	0	6	1729	-	295	978	117	0	9	1399	-	9872
% Lights	94.6%	97.7%	97.9%	0%	100%	96.4%	-	97.4%	97.4%	96.7%	0%	100%	97.4%	-	96.4%
Articulated Trucks	6	0	0	0	0	6	-	0	1	0	0	0	1	-	16
% Articulated Trucks	0.8%	0%	0%	0%	0%	0.3%	-	0%	0.1%	0%	0%	0%	0.1%	-	0.2%
Buses and Single-Unit Trucks	35	22	1	0	0	58	-	8	25	4	0	0	37	-	352
% Buses and Single-Unit Trucks	4.6%	2.3%	2.1%	0%	0%	3.2%	-	2.6%	2.5%	3.3%	0%	0%	2.6%	-	3.4%
Pedestrians	-	-	-	-	-	43	-	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	62.5%	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	37.5%	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

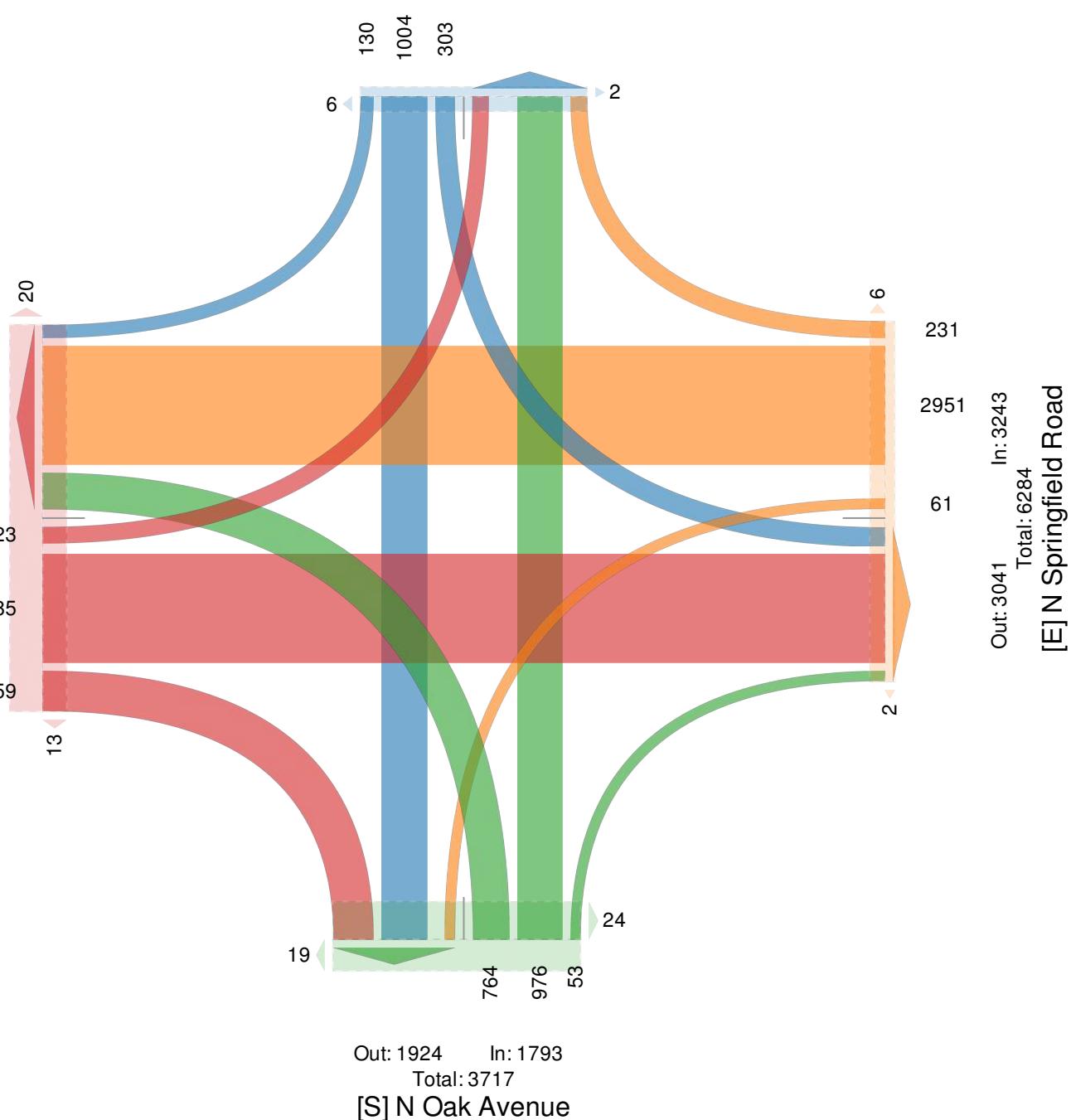
Cherry Hill, NJ, 08003, US

[N] N Oak Avenue

Total: 2867

In: 1437 Out: 1430

[W] N Springfield Road
In: 3767 Total: 7612 Out: 3845



[S] N Oak Avenue

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2019-04-24 7:00 AM	3	95	32	0	1	131	0	4	122	10	0	0	136	0
7:15 AM	3	106	30	0	0	139	1	0	102	11	0	0	113	0
7:30 AM	3	107	36	0	0	146	1	3	106	11	0	2	122	0
7:45 AM	6	115	30	0	1	152	0	3	108	5	0	0	116	0
Total	15	423	128	0	2	568	2	10	438	37	0	2	487	0
% Approach	2.6%	74.5%	22.5%	0%	0.4%	-	-	2.1%	89.9%	7.6%	0%	0.4%	-	-
% Total	1.0%	27.8%	8.4%	0%	0.1%	37.3%	-	0.7%	28.7%	2.4%	0%	0.1%	32.0%	-
PHF	0.625	0.920	0.889	-	0.500	0.934	-	0.625	0.898	0.841	-	0.250	0.895	-
Lights	15	404	121	0	1	541	-	10	418	33	0	2	463	-
% Lights	100%	95.5%	94.5%	0%	50.0%	95.2%	-	100%	95.4%	89.2%	0%	100%	95.1%	-
Articulated Trucks	0	2	0	0	0	2	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	0.5%	0%	0%	0%	0.4 %	-	0%	0%	0%	0%	0%	0 %	-
Buses and Single-Unit Trucks	0	17	7	0	1	25	-	0	20	4	0	0	24	-
% Buses and Single-Unit Trucks	0%	4.0%	5.5%	0%	50.0%	4.4 %	-	0%	4.6%	10.8%	0%	0%	4.9 %	-
Pedestrians	-	-	-	-	-	-	2	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Oak Avenue Northbound							N Oak Avenue Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 7:00AM	26	32	0	0	0	58	0	15	31	8	0	0	54	1	379
7:15AM	23	41	1	0	0	65	0	15	35	5	0	0	55	0	372
7:30AM	22	27	0	0	0	49	0	17	39	8	0	1	65	0	382
7:45AM	27	28	0	0	0	55	1	17	46	5	0	0	68	0	391
Total	98	128	1	0	0	227	1	64	151	26	0	1	242	1	1524
% Approach	43.2%	56.4%	0.4%	0%	0%	-	-	26.4%	62.4%	10.7%	0%	0.4%	-	-	-
% Total	6.4%	8.4%	0.1%	0%	0%	14.9%	-	4.2%	9.9%	1.7%	0%	0.1%	15.9%	-	-
PHF	0.907	0.780	0.250	-	-	0.873	-	0.941	0.821	0.813	-	0.250	0.890	-	0.974
Lights	85	125	1	0	0	211	-	64	150	26	0	1	241	-	1456
% Lights	86.7%	97.7%	100%	0%	0%	93.0%	-	100%	99.3%	100%	0%	100%	99.6%	-	95.5%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	2
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	13	3	0	0	0	16	-	0	1	0	0	0	1	-	66
% Buses and Single-Unit Trucks	13.3%	2.3%	0%	0%	0%	7.0%	-	0%	0.7%	0%	0%	0%	0.4%	-	4.3%
Pedestrians	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	0%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	1
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	100%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] N Oak Avenue

Total: 424

In: 242 Out: 182

27 151 64

[W] N Springfield Road
In: 568 Total: 1131 Out: 563

39
438
10
[E] N Springfield Road
Out: 488 Total: 975 In: 487

Out: 291 In: 227

Total: 518

[S] N Oak Avenue

98 128 1

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound						
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*
2019-04-24 5:00PM	12	101	30	0	0	143	1	4	118	8	0	1	131	1
5:15PM	6	101	47	0	1	155	0	2	110	9	0	2	123	0
5:30PM	13	82	38	0	0	133	0	7	103	11	0	3	124	0
5:45PM	11	88	50	0	0	149	2	1	110	9	0	4	124	0
Total	42	372	165	0	1	580	3	14	441	37	0	10	502	1
% Approach	7.2%	64.1%	28.4%	0%	0.2%	-	-	2.8%	87.8%	7.4%	0%	2.0%	-	-
% Total	2.5%	22.2%	9.9%	0%	0.1%	34.7%	-	0.8%	26.4%	2.2%	0%	0.6%	30.0%	-
PHF	0.808	0.921	0.825	-	0.250	0.935	-	0.500	0.934	0.841	-	0.625	0.958	-
Lights	42	360	162	0	1	565	-	12	435	37	0	10	494	-
% Lights	100%	96.8%	98.2%	0%	100%	97.4 %	-	85.7%	98.6%	100%	0%	100%	98.4 %	-
Articulated Trucks	0	0	0	0	0	0	-	0	1	0	0	0	1	-
% Articulated Trucks	0%	0%	0%	0%	0%	0 %	-	0%	0.2%	0%	0%	0%	0.2 %	-
Buses and Single-Unit Trucks	0	12	3	0	0	15	-	2	5	0	0	0	7	-
% Buses and Single-Unit Trucks	0%	3.2%	1.8%	0%	0%	2.6 %	-	14.3%	1.1%	0%	0%	0%	1.4 %	-
Pedestrians	-	-	-	-	-	-	3	-	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Oak Avenue Northbound							N Oak Avenue Southbound							
Time	L	T	R	U	RR	App	Ped*	L	T	R	U	RR	App	Ped*	Int
2019-04-24 5:00PM	41	41	3	0	0	85	0	14	38	3	0	1	56	0	415
5:15PM	40	45	1	0	1	87	3	10	50	7	0	0	67	0	432
5:30PM	24	68	9	0	0	101	0	12	48	3	0	0	63	0	421
5:45PM	27	41	3	0	0	71	1	12	38	10	0	0	60	2	404
Total	132	195	16	0	1	344	4	48	174	23	0	1	246	2	1672
% Approach	38.4%	56.7%	4.7%	0%	0.3%	-	-	19.5%	70.7%	9.3%	0%	0.4%	-	-	-
% Total	7.9%	11.7%	1.0%	0%	0.1%	20.6%	-	2.9%	10.4%	1.4%	0%	0.1%	14.7%	-	-
PHF	0.805	0.717	0.444	-	0.250	0.851	-	0.857	0.870	0.575	-	0.250	0.918	-	0.968
Lights	128	194	16	0	1	339	-	48	173	22	0	1	244	-	1642
% Lights	97.0%	99.5%	100%	0%	100%	98.5%	-	100%	99.4%	95.7%	0%	100%	99.2%	-	98.2%
Articulated Trucks	1	0	0	0	0	1	-	0	0	0	0	0	0	-	2
% Articulated Trucks	0.8%	0%	0%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	3	1	0	0	0	4	-	0	1	1	0	0	2	-	28
% Buses and Single-Unit Trucks	2.3%	0.5%	0%	0%	0%	1.2%	-	0%	0.6%	4.3%	0%	0%	0.8%	-	1.7%
Pedestrians	-	-	-	-	-	-	4	-	-	-	-	-	-	-	2
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

2. N Springfield Road & Oak Avenue - TMC

Wed Apr 24, 2019

PM Peak (5 PM - 6 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646347, Location: 39.930496, -75.304528, Site Code: 2

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] N Oak Avenue

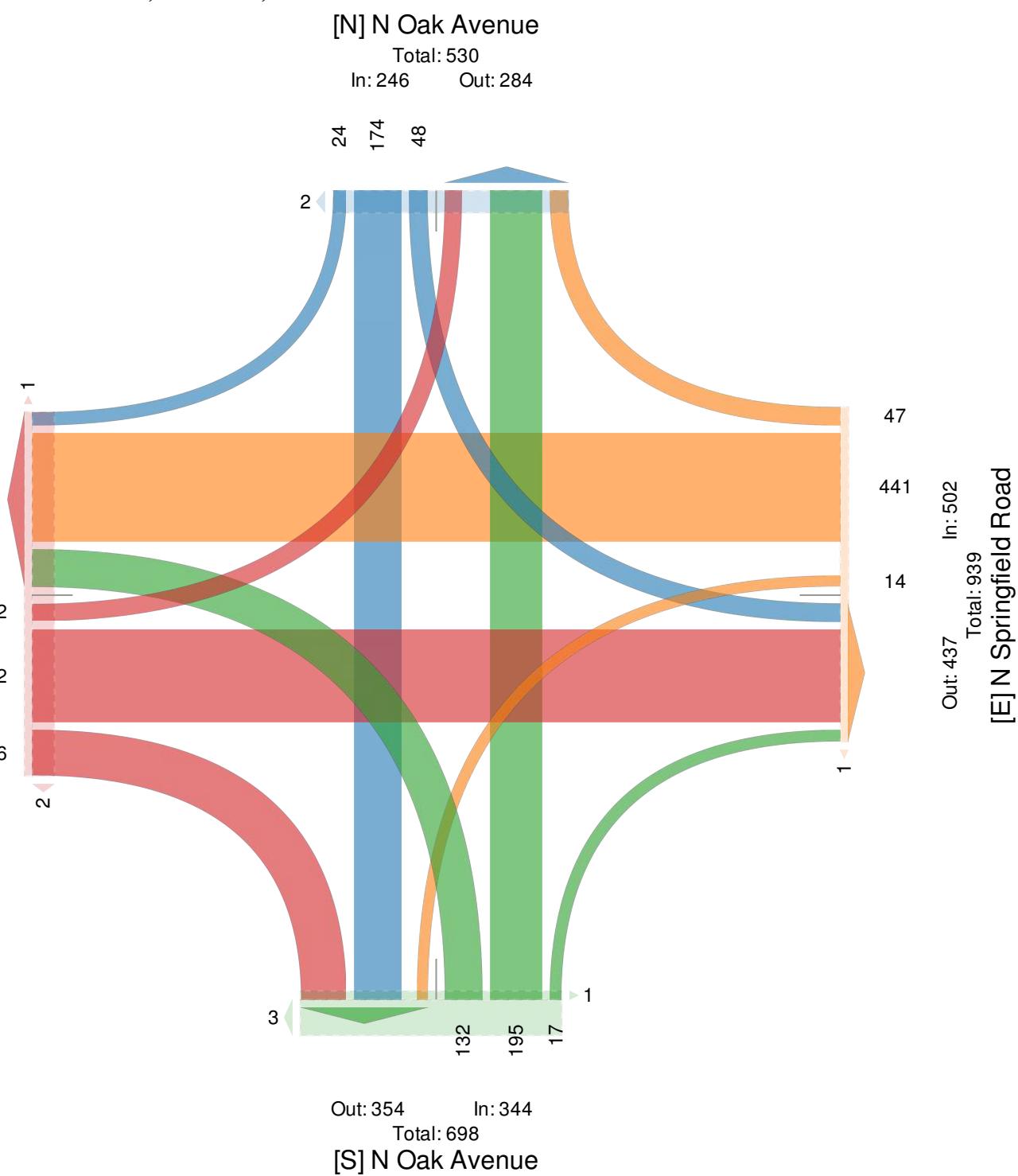
Total: 530

In: 246 Out: 284

24 174 48

[W] N Springfield Road
In: 580 Total: 1177 Out: 597

[E] N Springfield Road
Out: 437 Total: 939 In: 502



Out: 354 In: 344

Total: 698

[S] N Oak Avenue

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						N Church Street Northbound									
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*	
2019-04-24 6:30AM	0	66	0	0	0	66	0	2	2	107	0	0	0	111	0	0	3	0	1	0	4	1
6:45AM	0	90	2	0	0	92	0	1	2	124	0	0	0	127	0	0	2	0	2	0	4	0
Hourly Total	0	156	2	0	0	158	0	3	4	231	0	0	0	238	0	0	5	0	3	0	8	1
7:00AM	0	110	0	0	0	110	0	4	2	128	1	0	0	135	0	0	7	0	4	0	11	0
7:15AM	0	118	1	0	0	119	0	2	4	111	1	0	0	118	0	0	2	0	2	0	4	0
7:30AM	0	128	2	0	0	130	0	2	3	120	0	0	0	125	0	0	3	0	1	0	4	1
7:45AM	0	131	2	1	0	134	0	3	2	115	0	0	0	120	0	0	5	0	2	0	7	1
Hourly Total	0	487	5	1	0	493	0	11	11	474	2	0	0	498	0	0	17	0	9	0	26	2
8:00AM	0	110	2	0	0	112	0	3	1	105	0	0	0	109	0	0	5	0	1	0	6	2
8:15AM	0	90	3	0	0	93	0	2	1	118	0	0	0	121	0	0	4	0	0	0	4	0
8:30AM	0	102	2	0	0	104	0	0	1	138	0	0	0	139	0	0	4	0	2	0	6	2
8:45AM	0	103	7	0	0	110	0	6	3	124	0	0	0	133	1	0	1	0	5	0	6	0
Hourly Total	0	405	14	0	0	419	0	11	6	485	0	0	0	502	1	0	14	0	8	0	22	4
9:00AM	0	103	3	0	0	106	0	4	2	98	1	0	0	105	0	0	7	0	4	0	11	2
9:15AM	0	85	6	1	0	92	0	2	1	90	1	0	0	94	0	0	2	0	3	0	5	0
9:30AM	0	96	2	0	0	98	0	1	2	61	0	0	0	64	2	0	5	0	2	0	7	1
9:45AM	0	76	8	1	0	85	0	3	4	88	1	0	0	96	0	0	3	0	1	0	4	0
Hourly Total	0	360	19	2	0	381	0	10	9	337	3	0	0	359	2	0	17	0	10	0	27	3
10:00AM	0	66	3	0	0	69	0	1	5	68	2	0	0	76	2	0	0	0	1	0	1	1
10:15AM	0	72	2	0	0	74	0	1	1	66	0	0	0	68	0	0	0	0	1	0	1	1
10:30AM	1	74	7	0	0	82	0	0	1	62	1	0	0	64	2	1	1	0	1	0	3	1
10:45AM	0	86	2	0	0	88	0	0	4	56	0	0	0	60	1	0	4	0	1	1	6	0
Hourly Total	1	298	14	0	0	313	0	2	11	252	3	0	0	268	5	1	5	0	4	1	11	3
11:00AM	0	48	4	0	0	52	0	1	2	84	0	0	0	87	0	0	4	0	2	0	6	0
11:15AM	0	86	4	1	0	91	0	1	3	68	2	0	0	74	0	0	5	0	3	0	8	0
11:30AM	0	82	1	0	0	83	1	3	0	71	1	0	0	75	0	0	6	0	3	0	9	0
11:45AM	1	63	5	0	0	69	0	2	2	96	1	0	0	101	0	2	1	0	1	0	4	0
Hourly Total	1	279	14	1	0	295	1	7	7	319	4	0	0	337	0	2	16	0	9	0	27	0
12:00PM	2	68	5	0	0	75	0	3	3	70	0	1	0	77	0	0	2	0	2	0	4	0
12:15PM	0	56	3	0	0	59	0	4	0	91	0	0	0	95	0	0	6	0	4	0	10	0
12:30PM	1	85	4	2	0	92	0	1	1	85	2	0	0	89	1	0	1	0	2	0	3	0
12:45PM	0	73	4	0	0	77	0	0	1	70	0	0	0	71	0	0	4	0	1	0	5	1
Hourly Total	3	282	16	2	0	303	0	8	5	316	2	1	0	332	1	0	13	0	9	0	22	1
1:00PM	0	65	2	0	0	67	0	6	3	81	0	0	0	90	0	0	5	0	0	0	5	0
1:15PM	0	74	2	0	0	76	0	1	1	92	1	0	0	95	1	0	5	0	4	0	9	1
1:30PM	0	69	8	0	0	77	0	2	0	114	0	0	0	116	0	0	3	0	2	0	5	0
1:45PM	0	78	6	1	0	85	0	2	2	85	0	0	0	89	1	0	5	1	2	0	8	0
Hourly Total	0	286	18	1	0	305	0	11	6	372	1	0	0	390	2	0	18	1	8	0	27	1
2:00PM	0	89	2	0	0	91	0	2	1	92	0	0	0	95	3	0	4	1	3	0	8	0
2:15PM	0	94	6	0	0	100	0	3	1	105	2	0	0	111	0	0	11	0	2	0	13	0
2:30PM	1	86	7	1	0	95	0	2	3	111	0	0	0	116	0	0	6	0	0	0	6	1
2:45PM	0	90	4	0	0	94	0	5	0	85	0	0	0	90	0	0	4	0	3	0	7	1
Hourly Total	1	359	19	1	0	380	0	12	5	393	2	0	0	412	3	0	25	1	8	0	34	2
3:00PM	0	94	8	0	0	102	0	3	2	98	0	0	0	103	0	0	4	0	1	0	5	2
3:15PM	0	95	6	0	0	101	0	4	3	99	0	0	0	106	0	0	5	0	0	0	5	6
3:30PM	1	92	4	0	0	97	1	4	3	99	1	0	0	107	0	0	2	0	0	0	2	0
3:45PM	0	116	3	0	0	119	0	8	2	109	0	0	0	119	0	0	5	0	0	0	5	3
Hourly Total	1	397	21	0	0	419	1	19	10	405	1	0	0	435	0	0	16	0	1	0	17	11
4:00PM	0	116	8	1	0	125	0	1	3	109	0	0	0	113	1	0	5	0	0	0	5	1
4:15PM	1	108	7	0	0	116	0	4	5	134	0	0	0	143	0	0	2	0	4	0	6	0
4:30PM	0	116	4	0	0	120	0	0	0	118	0	3	0	121	0	0	3	0	4	0	7	0
4:45PM	1	114	7	0	0	122	0	1	1	115	1	0	0	118	0	0	5	0	2	0	7	3
Hourly Total	2	454	26	1	0	483	0	6	9	476	1	3	0	495	1	0	15	0	10	0	25	4
5:00PM	2	108	6	0	0	116	0	1	1	126	3	0	0	131	3	0	7	1	3	0	11	0
5:15PM	5	103	6	0	0	114	0	5	2	126	0	0	0	133	1	0	8	0	2	0	10	0
5:30PM	10	100	4	0	0	114	1	2	2	110	6	0	0	120	1	0	5	1	3	0	9	0
5:45PM	2	97	4	0	0	103	0	1	3	120	5	0	0	129	7	0	4	1	3	0	8	0
Hourly Total	19	408	20	0	0	447	1	9	8	482	14	0	0	513	12	0	24	3	11	0	38	0
6:00PM	7	110	10	0	0	127	0	5	2	108	2	0	0	117	1	0	5	1	1	0	7	4
6:15PM	4	109	9	0	0	122	0	3	3	83	2	0	0	91	0	0	1	0	1	0	2	0

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound							N Church Street Northbound						
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*
Hourly Total	11	219	19	0	0	249	0	8	5	191	4	0	208	1	0	6	1	2	0	9	4
Total	39	4390	207	9	0	4645	3	117	96	4733	37	4	4987	28	3	191	6	92	1	293	36
% Approach	0.8%	94.5%	4.5%	0.2%	0%	-	-	2.3%	1.9%	94.9%	0.7%	0.1%	-	-	1.0%	65.2%	2.0%	31.4%	0.3%	-	-
% Total	0.4%	43.2%	2.0%	0.1%	0%	45.7%	-	1.2%	0.9%	46.6%	0.4%	0%	49.1%	-	0%	1.9%	0.1%	0.9%	0%	2.9%	-
Lights	39	4210	201	9	0	4459	-	113	94	4541	35	4	4787	-	3	183	6	88	1	281	-
% Lights	100%	95.9%	97.1%	100%	0%	96.0%	-	96.6%	97.9%	95.9%	94.6%	100%	96.0%	-	100%	95.8%	100%	95.7%	100%	95.9%	-
Articulated Trucks	0	20	0	0	0	20	-	0	0	17	0	0	17	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	0.5%	0%	0%	0%	0.4%	-	0%	0%	0.4%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	160	6	0	0	166	-	4	2	175	2	0	183	-	0	8	0	4	0	12	-
% Buses and Single-Unit Trucks	0%	3.6%	2.9%	0%	0%	3.6%	-	3.4%	2.1%	3.7%	5.4%	0%	3.7%	-	0%	4.2%	0%	4.3%	0%	4.1%	-
Pedestrians	-	-	-	-	-	-	3	-	-	-	-	-	-	28	-	-	-	-	-	-	35
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-	-	-	-	-	-	97.2%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	-	2.8%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Wed Apr 24, 2019

Full Length (6:30 AM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
Time	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 6:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181
6:45AM	0	0	0	0	0	0	1	0	0	1	1	0	2	0	225
Hourly Total	0	0	0	0	0	0	1	0	0	1	1	0	2	1	406
7:00AM	0	0	0	0	0	0	0	0	0	3	2	0	5	0	261
7:15AM	0	0	0	0	0	0	0	0	0	2	2	0	4	0	245
7:30AM	0	0	0	1	0	1	0	0	0	4	0	0	4	0	264
7:45AM	0	0	0	0	0	0	0	0	0	3	1	0	4	1	265
Hourly Total	0	0	0	1	0	1	0	0	0	12	5	0	17	1	1035
8:00AM	0	0	0	0	0	0	0	0	0	1	1	0	2	0	229
8:15AM	0	0	0	0	0	0	0	0	0	2	0	0	2	0	220
8:30AM	0	0	0	0	0	0	4	0	0	2	0	0	2	0	251
8:45AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	250
Hourly Total	0	0	0	0	0	0	4	0	0	6	1	0	7	0	950
9:00AM	0	0	0	0	0	0	2	0	0	4	1	0	5	0	227
9:15AM	0	1	0	0	0	1	1	0	0	4	0	0	4	0	196
9:30AM	0	0	0	1	0	1	2	2	0	2	1	0	5	0	175
9:45AM	0	0	0	0	0	0	0	0	0	2	0	1	3	0	188
Hourly Total	0	1	0	1	0	2	5	2	0	12	2	1	17	0	786
10:00AM	0	0	0	1	0	1	0	0	0	2	1	0	3	0	150
10:15AM	0	0	0	1	0	1	0	0	0	3	1	1	5	0	149
10:30AM	0	1	0	0	0	1	2	0	0	5	0	0	5	0	155
10:45AM	0	0	0	1	0	1	1	0	0	2	0	0	2	0	157
Hourly Total	0	1	0	3	0	4	3	0	0	12	2	1	15	0	611
11:00AM	1	0	0	0	0	1	1	0	0	3	1	0	4	0	150
11:15AM	0	0	0	0	0	0	0	0	0	2	0	0	2	0	175
11:30AM	0	0	0	0	0	0	1	0	0	2	0	0	2	1	169
11:45AM	2	0	1	0	0	3	1	0	0	2	0	0	2	0	179
Hourly Total	3	0	1	0	0	4	3	0	0	9	1	0	10	1	673
12:00PM	1	0	0	0	0	1	0	1	0	3	0	0	4	0	161
12:15PM	1	0	0	0	0	1	0	0	0	5	3	0	8	0	173
12:30PM	0	0	0	0	0	0	0	2	0	5	1	0	8	0	192
12:45PM	1	0	0	0	0	1	0	2	0	2	0	0	4	0	158
Hourly Total	3	0	0	0	0	3	0	5	0	15	4	0	24	0	684
1:00PM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	165
1:15PM	0	0	0	1	0	1	0	1	0	2	0	0	3	0	184
1:30PM	0	0	0	0	0	0	0	0	0	3	0	0	3	0	201
1:45PM	0	0	0	0	0	0	0	0	0	4	0	0	4	0	186
Hourly Total	0	0	0	1	0	1	0	1	0	12	0	0	13	0	736
2:00PM	0	1	0	0	0	1	3	0	0	1	1	0	2	0	197
2:15PM	0	0	0	1	0	1	0	0	0	4	0	0	4	0	229
2:30PM	3	0	0	0	0	3	0	0	0	4	0	0	4	0	224
2:45PM	2	0	0	0	0	2	0	0	0	4	2	0	6	0	199
Hourly Total	5	1	0	1	0	7	3	0	0	13	3	0	16	0	849
3:00PM	0	0	0	0	0	0	0	1	0	6	0	0	7	0	217
3:15PM	0	0	0	0	0	0	4	1	0	6	1	0	8	0	220
3:30PM	3	0	0	0	0	3	3	0	0	4	0	0	4	1	213
3:45PM	0	0	0	0	0	0	0	0	0	5	0	0	5	1	248
Hourly Total	3	0	0	0	0	3	7	2	0	21	1	0	24	2	898
4:00PM	0	0	0	0	0	0	1	0	0	7	1	0	8	0	251
4:15PM	0	0	0	0	0	0	0	0	0	3	1	0	4	0	269
4:30PM	0	0	0	0	0	0	3	2	0	6	0	0	8	0	256
4:45PM	0	0	0	0	0	0	2	1	0	1	0	0	2	0	249
Hourly Total	0	0	0	0	0	0	6	3	0	17	2	0	22	0	1025

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
5:00PM	0	0	0	0	0	0	0	1	0	5	0	0	6	0	264
5:15PM	0	0	0	0	0	0	1	0	1	4	1	0	6	0	263
5:30PM	1	0	0	3	0	4	4	3	0	5	1	0	9	0	256
5:45PM	0	0	0	0	0	0	9	0	4	1	0	0	5	0	245
Hourly Total	1	0	0	3	0	4	14	4	5	15	2	0	26	0	1028
6:00PM	0	0	0	0	0	0	1	0	0	4	0	0	4	0	255
6:15PM	0	1	0	0	0	1	0	0	2	3	1	0	6	1	222
Hourly Total	0	1	0	0	0	1	1	0	2	7	1	0	10	1	477
Total	15	4	1	10	0	30	47	17	7	152	25	2	203	6	10158
% Approach	50.0%	13.3%	3.3%	33.3%	0%	-	-	8.4%	3.4%	74.9%	12.3%	1.0%	-	-	-
% Total	0.1%	0%	0%	0.1%	0%	0.3%	-	0.2%	0.1%	1.5%	0.2%	0%	2.0%	-	-
Lights	15	4	1	9	0	29	-	15	7	147	22	2	193	-	9749
% Lights	100%	100%	100%	90.0%	0%	96.7%	-	88.2%	100%	96.7%	88.0%	100%	95.1%	-	96.0%
Articulated Trucks	0	0	0	0	0	0	-	1	0	0	0	0	1	-	38
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	5.9%	0%	0%	0%	0%	0.5%	-	0.4%
Buses and Single-Unit Trucks	0	0	0	1	0	1	-	1	0	5	3	0	9	-	371
% Buses and Single-Unit Trucks	0%	0%	0%	10.0%	0%	3.3%	-	5.9%	0%	3.3%	12.0%	0%	4.4 %	-	3.7%
Pedestrians	-	-	-	-	-	-	46	-	-	-	-	-	-	6	
% Pedestrians	-	-	-	-	-	-	97.9%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	1	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	2.1%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

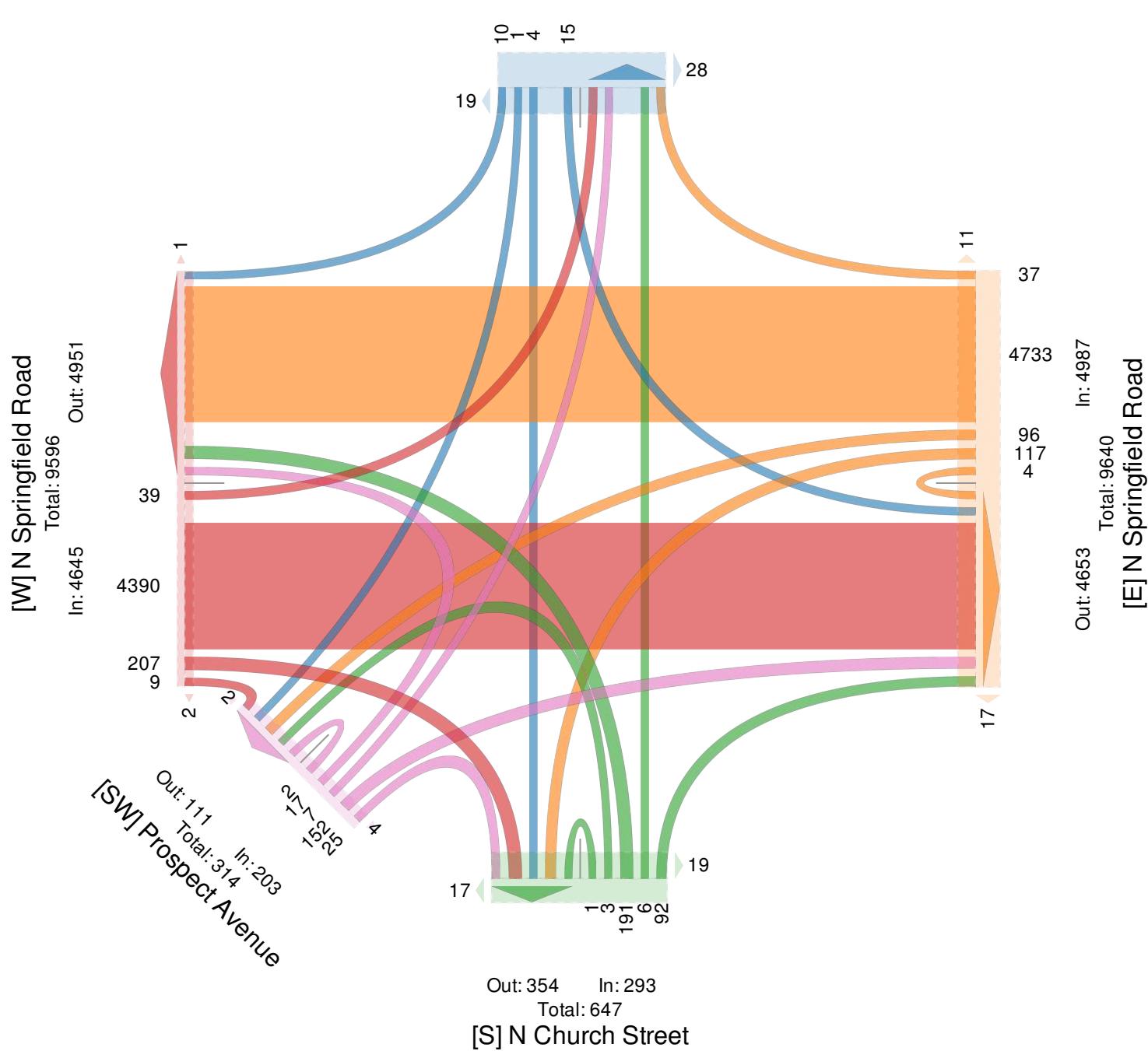
PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Sports Field Driveway

Total: 119

In: 30 Out: 89



3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						N Church Street Northbound								
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*
2019-04-24 7:00AM	0	110	0	0	0	110	0	4	2	128	1	0	135	0	0	7	0	4	0	11	0
7:15AM	0	118	1	0	0	119	0	2	4	111	1	0	118	0	0	2	0	2	0	4	0
7:30AM	0	128	2	0	0	130	0	2	3	120	0	0	125	0	0	3	0	1	0	4	1
7:45AM	0	131	2	1	0	134	0	3	2	115	0	0	120	0	0	5	0	2	0	7	1
Total	0	487	5	1	0	493	0	11	11	474	2	0	498	0	0	17	0	9	0	26	2
% Approach	0%	98.8%	1.0%	0.2%	0%	-	-	2.2%	2.2%	95.2%	0.4%	0%	-	-	0%	65.4%	0%	34.6%	0%	-	-
% Total	0%	47.1%	0.5%	0.1%	0%	47.6%	-	1.1%	1.1%	45.8%	0.2%	0%	48.1%	-	0%	1.6%	0%	0.9%	0%	2.5%	-
PHF	-	0.929	0.625	0.250	-	0.920	-	0.688	0.688	0.926	0.500	-	0.922	-	-	0.607	-	0.563	-	0.591	-
Lights	0	473	5	1	0	479	-	11	11	453	2	0	477	-	0	17	0	9	0	26	-
% Lights	0%	97.1%	100%	100%	0%	97.2%	-	100%	100%	95.6%	100%	0%	95.8%	-	0%	100%	0%	100%	0%	100%	-
Articulated Trucks	0	1	0	0	0	1	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	0.2%	0%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	13	0	0	0	13	-	0	0	21	0	0	21	-	0	0	0	0	0	0	-
% Buses and Single-Unit Trucks	0%	2.7%	0%	0%	0%	2.6%	-	0%	0%	4.4%	0%	0%	4.2%	-	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	2
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
Time	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 7:00AM	0	0	0	0	0	0	0	0	0	3	2	0	5	0	261
7:15AM	0	0	0	0	0	0	0	0	0	2	2	0	4	0	245
7:30AM	0	0	0	1	0	1	0	0	0	4	0	0	4	0	264
7:45AM	0	0	0	0	0	0	0	0	0	3	1	0	4	1	265
Total	0	0	0	1	0	1	0	0	0	12	5	0	17	1	1035
% Approach	0%	0%	0%	100%	0%	-	-	0%	0%	70.6%	29.4%	0%	-	-	-
% Total	0%	0%	0%	0.1%	0%	0.1%	-	0%	0%	1.2%	0.5%	0%	1.6%	-	-
PHF	-	-	-	0.250	-	0.250	-	-	-	0.750	0.625	-	0.850	-	0.976
Lights	0	0	0	1	0	1	-	0	0	11	2	0	13	-	996
% Lights	0%	0%	0%	100%	0%	100%	-	0%	0%	91.7%	40.0%	0%	76.5%	-	96.2%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	0	0	0	0	0	0	-	0	0	1	3	0	4	-	38
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	8.3%	60.0%	0%	23.5%	-	3.7%
Pedestrians	-	-	-	-	-	-	0	-	-	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

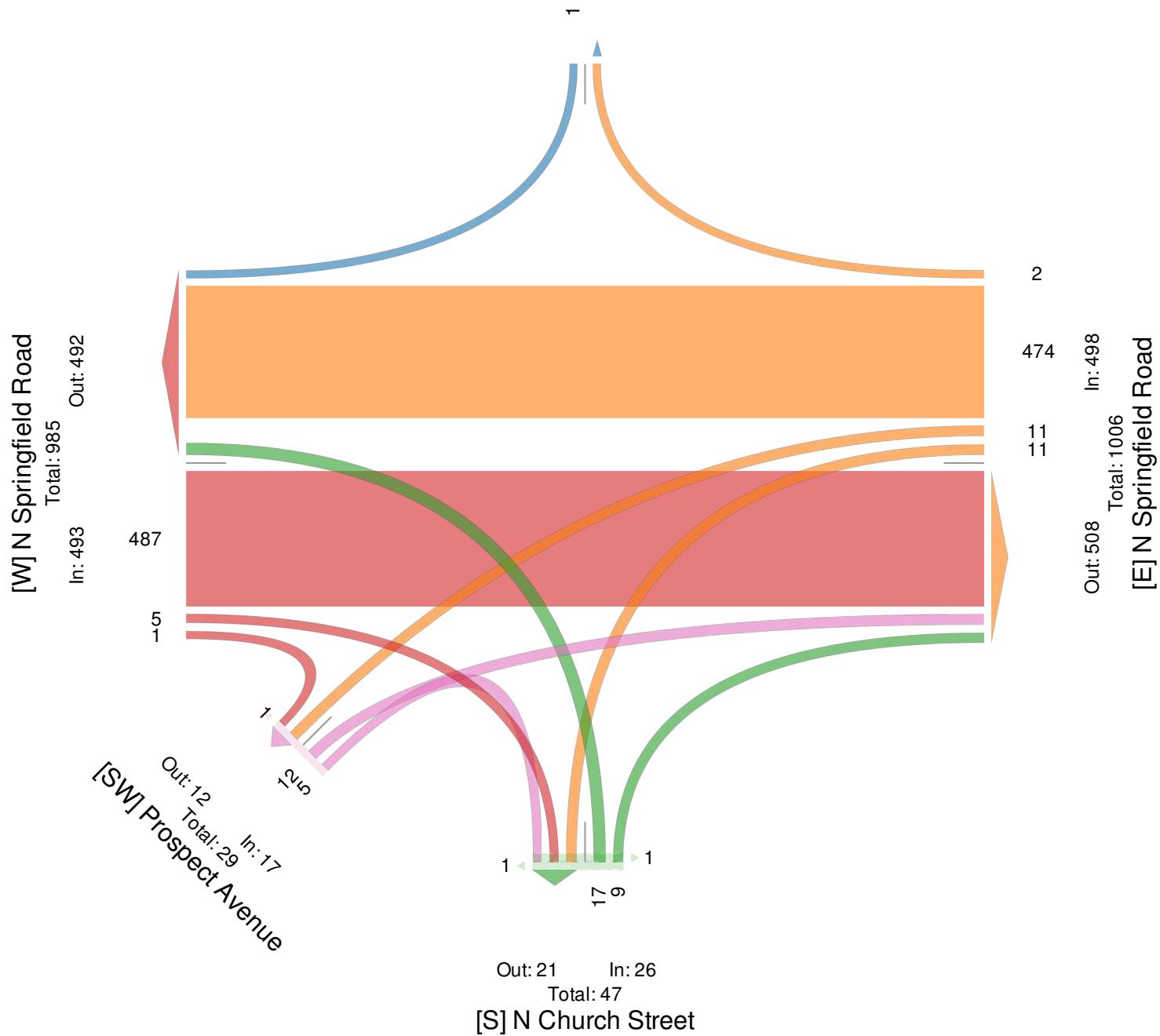
PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Sports Field Driveway

Total: 3

In: 1 Out: 2



3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						N Church Street Northbound								
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*
2019-04-24 11:45AM	1	63	5	0	0	69	0	2	2	96	1	0	101	0	2	1	0	1	0	4	0
12:00PM	2	68	5	0	0	75	0	3	3	70	0	1	77	0	0	2	0	2	0	4	0
12:15PM	0	56	3	0	0	59	0	4	0	91	0	0	95	0	0	6	0	4	0	10	0
12:30PM	1	85	4	2	0	92	0	1	1	85	2	0	89	1	0	1	0	2	0	3	0
Total	4	272	17	2	0	295	0	10	6	342	3	1	362	1	2	10	0	9	0	21	0
% Approach	1.4%	92.2%	5.8%	0.7%	0%	-	-	2.8%	1.7%	94.5%	0.8%	0.3%	-	-	9.5%	47.6%	0%	42.9%	0%	-	-
% Total	0.6%	38.6%	2.4%	0.3%	0%	41.8%	-	1.4%	0.9%	48.5%	0.4%	0.1%	51.3%	-	0.3%	1.4%	0%	1.3%	0%	3.0%	-
PHF	0.500	0.800	0.850	0.250	-	0.802	-	0.625	0.500	0.891	0.375	0.250	0.896	-	0.250	0.417	-	0.563	-	0.525	-
Lights	4	266	16	2	0	288	-	10	6	326	3	1	346	-	2	10	0	9	0	21	-
% Lights	100%	97.8%	94.1%	100%	0%	97.6%	-	100%	100%	95.3%	100%	100%	95.6%	-	100%	100%	0%	100%	0%	100%	-
Articulated Trucks	0	0	0	0	0	0	-	0	0	8	0	0	8	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	2.3%	0%	0%	2.2%	-	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	6	1	0	0	7	-	0	0	8	0	0	8	-	0	0	0	0	0	0	-
% Buses and Single-Unit Trucks	0%	2.2%	5.9%	0%	0%	2.4%	-	0%	0%	2.3%	0%	0%	2.2%	-	0%	0%	0%	0%	0%	0%	-
Pedestrians	-	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
Time	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 11:45AM	2	0	1	0	0	3	1	0	0	2	0	0	2	0	179
12:00PM	1	0	0	0	0	1	0	1	0	3	0	0	4	0	161
12:15PM	1	0	0	0	0	1	0	0	0	5	3	0	8	0	173
12:30PM	0	0	0	0	0	0	0	2	0	5	1	0	8	0	192
Total	4	0	1	0	0	5	1	3	0	15	4	0	22	0	705
% Approach	80.0%	0%	20.0%	0%	0%	-	-	13.6%	0%	68.2%	18.2%	0%	-	-	-
% Total	0.6%	0%	0.1%	0%	0%	0.7%	-	0.4%	0%	2.1%	0.6%	0%	3.1%	-	-
PHF	0.500	-	0.250	-	-	0.417	-	0.375	-	0.750	0.333	-	0.688	-	0.918
Lights	4	0	1	0	0	5	-	3	0	15	4	0	22	-	682
% Lights	100%	0%	100%	0%	0%	100%	-	100%	0%	100%	100%	0%	100%	-	96.7%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	8
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	1.1%
Buses and Single-Unit Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	15
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	2.1%
Pedestrians	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Sports Field Driveway

Total: 12

In: 5 Out: 7

1 4

[W] N Springfield Road

Total: 650 Out: 355
In: 295

272

17

2

Out: 11 Total: 33 In: 22
[SW] Prospect Avenue

2

10

9

Out: 31 In: 21

Total: 52

[S] N Church Street

3

342

6

1

In: 362

Out: 301 Total: 663
[E] N Springfield Road

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound						N Springfield Road Westbound						N Church Street Northbound								
Time	L	T	R	HR	U	App	Ped*	L	BL	T	R	U	App	Ped*	HL	L	T	R	U	App	Ped*
2019-04-24 4:15PM	1	108	7	0	0	116	0	4	5	134	0	0	143	0	0	2	0	4	0	6	0
4:30PM	0	116	4	0	0	120	0	0	0	118	0	3	121	0	0	3	0	4	0	7	0
4:45PM	1	114	7	0	0	122	0	1	1	115	1	0	118	0	0	5	0	2	0	7	3
5:00PM	2	108	6	0	0	116	0	1	1	126	3	0	131	3	0	7	1	3	0	11	0
Total	4	446	24	0	0	474	0	6	7	493	4	3	513	3	0	17	1	13	0	31	3
% Approach	0.8%	94.1%	5.1%	0%	0%	-	-	1.2%	1.4%	96.1%	0.8%	0.6%	-	-	0%	54.8%	3.2%	41.9%	0%	-	-
% Total	0.4%	43.0%	2.3%	0%	0%	45.7%	-	0.6%	0.7%	47.5%	0.4%	0.3%	49.4%	-	0%	1.6%	0.1%	1.3%	0%	3.0%	-
PHF	0.500	0.961	0.857	-	-	0.971	-	0.375	0.350	0.920	0.333	0.250	0.897	-	-	0.607	0.250	0.813	-	0.705	-
Lights	4	434	22	0	0	460	-	6	7	482	4	3	502	-	0	16	1	13	0	30	-
% Lights	100%	97.3%	91.7%	0%	0%	97.0%	-	100%	100%	97.8%	100%	100%	97.9%	-	0%	94.1%	100%	100%	0%	96.8%	-
Articulated Trucks	0	6	0	0	0	6	-	0	0	1	0	0	1	-	0	0	0	0	0	0	-
% Articulated Trucks	0%	1.3%	0%	0%	0%	1.3%	-	0%	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	0%	-
Buses and Single-Unit Trucks	0	6	2	0	0	8	-	0	0	10	0	0	10	-	0	1	0	0	0	1	-
% Buses and Single-Unit Trucks	0%	1.3%	8.3%	0%	0%	1.7%	-	0%	0%	2.0%	0%	0%	1.9%	-	0%	5.9%	0%	0%	0%	3.2%	-
Pedestrians	-	-	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%

* Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Sports Field Drive way Southbound							Prospect Avenue Northeastbound							
Time	L	T	BR	R	U	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 4:15PM	0	0	0	0	0	0	0	0	0	3	1	0	4	0	269
4:30PM	0	0	0	0	0	0	3	2	0	6	0	0	8	0	256
4:45PM	0	0	0	0	0	0	2	1	0	1	0	0	2	0	249
5:00PM	0	0	0	0	0	0	0	1	0	5	0	0	6	0	264
Total	0	0	0	0	0	0	5	4	0	15	1	0	20	0	1038
% Approach	0%	0%	0%	0%	0%	-	-	20.0%	0%	75.0%	5.0%	0%	-	-	-
% Total	0%	0%	0%	0%	0%	0%	-	0.4%	0%	1.4%	0.1%	0%	1.9%	-	-
PHF	-	-	-	-	-	-	-	0.500	-	0.625	0.250	-	0.625	-	0.965
Lights	0	0	0	0	0	0	-	4	0	15	1	0	20	-	1012
% Lights	0%	0%	0%	0%	0%	-	-	100%	0%	100%	100%	0%	100%	-	97.5%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	7
% Articulated Trucks	0%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	-	0.7%
Buses and Single-Unit Trucks	0	0	0	0	0	0	-	0	0	0	0	0	0	-	19
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	-	1.8%
Pedestrians	-	-	-	-	-	-	5	-	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

3. N Springfield Road & N Church Street/Pros... - TMC

Wed Apr 24, 2019

PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646350, Location: 39.930409, -75.301738, Site Code: 3

Provided by: Imperial Traffic & Data

Collection

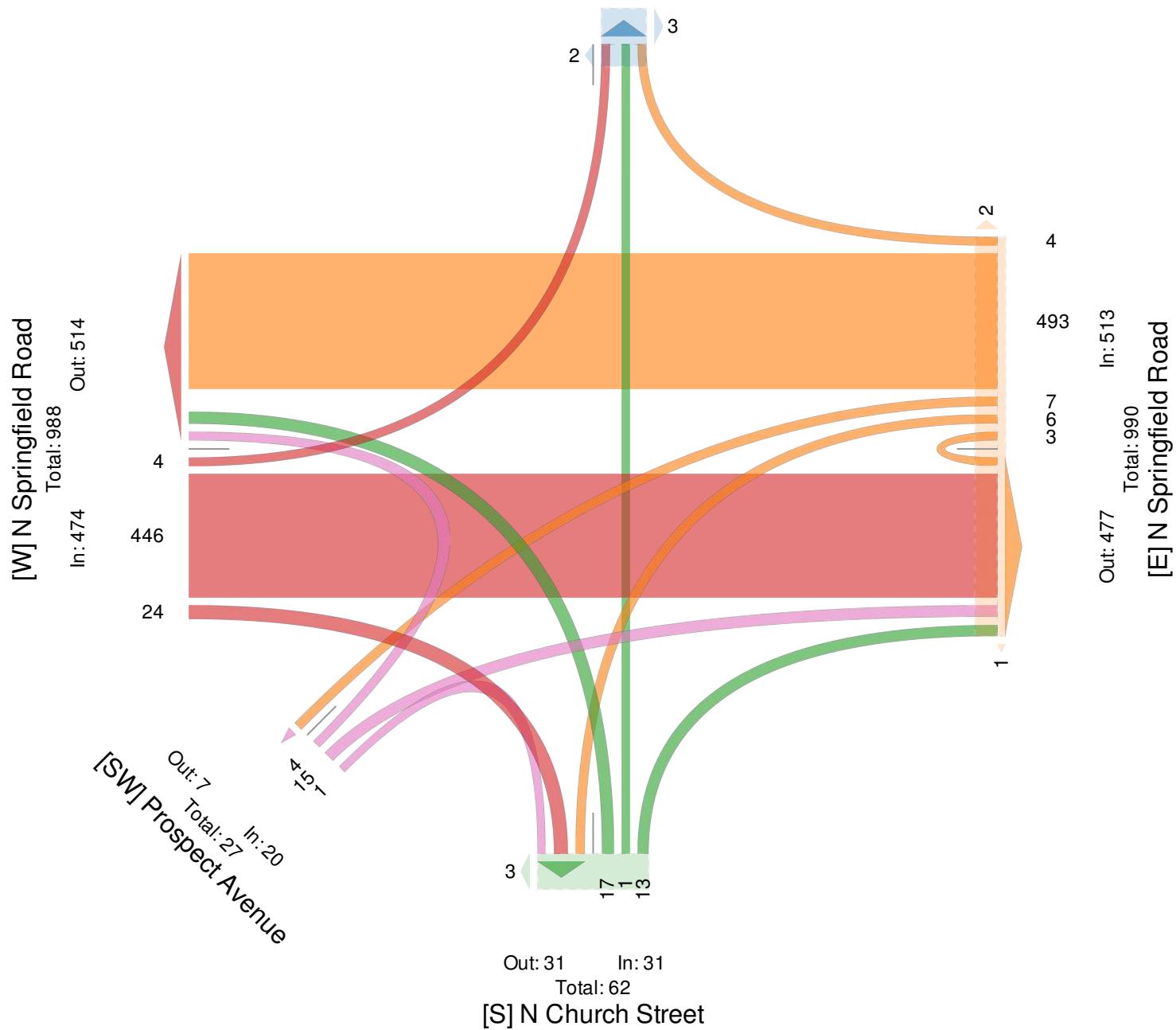
PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] Sports Field Driveway

Total: 9

In: 0 Out: 9



4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

 Provided by: Imperial Traffic & Data Collection
 PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound							N Sycamore Avenue Northbound												
Time	L	BL	T	R	U	RR	App	Ped*	L	T	R	HR	U	RR	HRR	App	Ped*	L	T	BR	R	U	BRR	RR	App	Ped*	
2019-04-24 6:30AM	2	2	60	0	0	0	64	0	0	104	1	1	0	0	0	106	0	1	1	0	0	0	0	2	1		
6:45AM	1	0	94	0	0	0	95	4	0	116	3	1	0	0	0	120	0	2	2	0	1	0	0	1	6	0	
Hourly Total	3	2	154	0	0	0	159	4	0	220	4	2	0	0	0	226	0	3	3	0	1	0	0	1	8	1	
7:00AM	6	4	109	0	0	0	119	0	0	118	5	0	0	0	0	123	0	3	0	0	0	0	0	0	3	0	
7:15AM	6	8	109	1	0	0	124	0	0	104	6	2	0	0	0	112	0	3	1	0	0	0	0	2	6	0	
7:30AM	1	1	126	0	0	0	128	4	0	117	10	1	0	0	0	128	0	1	2	1	3	0	0	0	7	0	
7:45AM	1	8	127	0	0	0	136	0	0	107	6	1	0	0	0	114	0	0	1	0	0	0	0	0	1	0	
Hourly Total	14	21	471	1	0	0	507	4	0	446	27	4	0	0	0	477	0	7	4	1	3	0	0	2	17	0	
8:00AM	3	3	114	0	0	0	120	0	0	99	11	2	0	0	0	112	0	2	1	1	0	0	0	0	4	2	
8:15AM	4	3	90	0	0	0	97	7	0	110	4	1	0	0	0	115	0	0	0	1	1	0	0	0	2	5	
8:30AM	4	4	95	0	0	0	103	0	0	133	2	1	0	1	0	137	0	1	2	1	0	0	0	0	4	2	
8:45AM	3	9	96	0	0	0	108	0	0	126	2	0	0	0	0	128	0	3	2	1	0	0	0	0	6	3	
Hourly Total	14	19	395	0	0	0	428	7	0	468	19	4	0	1	0	492	0	6	5	4	1	0	0	0	16	12	
9:00AM	5	10	96	0	0	0	111	0	0	96	9	4	0	0	0	109	0	2	0	1	0	0	0	1	4	0	
9:15AM	0	11	82	0	1	0	94	0	0	89	3	1	0	0	0	93	0	1	0	0	0	0	0	1	2	0	
Hourly Total	5	21	178	0	1	0	205	0	0	185	12	5	0	0	0	202	0	3	0	1	0	0	0	0	2	6	0
2:30PM	4	8	80	0	0	0	92	1	0	107	7	0	0	0	0	114	0	2	0	0	0	0	0	0	2	0	
2:45PM	7	8	90	0	0	0	105	0	0	82	10	3	0	1	0	96	0	3	1	0	0	0	0	0	4	2	
Hourly Total	11	16	170	0	0	0	197	1	0	189	17	3	0	1	0	210	0	5	1	0	0	0	0	0	6	2	
3:00PM	5	6	88	0	0	0	99	9	0	96	10	4	0	0	0	110	3	1	1	2	0	0	0	2	6	2	
3:15PM	6	15	82	0	0	0	103	4	0	94	14	1	0	0	0	109	1	3	0	0	0	0	0	2	5	3	
3:30PM	4	10	86	0	0	0	100	0	0	107	15	5	0	1	2	130	0	2	0	1	4	0	0	0	7	5	
3:45PM	3	13	103	0	0	0	119	2	0	112	12	4	0	0	0	128	3	1	0	1	0	0	0	1	3	3	
Hourly Total	18	44	359	0	0	0	421	15	0	409	51	14	0	1	2	477	7	7	1	4	4	0	0	5	21	13	
4:00PM	5	13	111	0	0	0	129	1	0	111	6	2	0	0	0	119	3	0	0	0	1	0	0	0	1	0	
4:15PM	4	9	103	0	0	0	116	1	0	128	3	4	0	4	0	139	0	3	0	0	1	0	0	0	4	0	
4:30PM	4	14	105	0	0	0	123	1	0	114	9	2	0	0	0	125	0	3	1	0	0	0	0	0	4	3	
4:45PM	1	9	109	0	0	0	119	0	0	108	8	5	0	0	0	121	1	1	0	0	0	0	0	0	1	0	
Hourly Total	14	45	428	0	0	0	487	3	0	461	26	13	0	4	0	504	4	7	1	0	2	0	0	0	10	3	
5:00PM	7	15	90	0	0	0	112	2	0	126	5	3	0	0	0	134	0	5	0	1	0	0	0	0	6	0	
5:15PM	4	7	98	0	0	0	109	0	0	108	12	2	0	0	0	122	3	1	0	0	0	0	0	1	2	0	
5:30PM	7	7	96	0	0	0	110	0	0	119	10	3	0	0	0	132	1	2	0	0	0	0	0	1	3	0	
5:45PM	6	3	91	0	0	0	100	0	0	120	9	3	0	0	0	132	0	3	1	0	0	0	0	0	4	0	
Hourly Total	24	32	375	0	0	0	431	2	0	473	36	11	0	0	0	520	4	11	1	1	0	0	0	2	15	0	
6:00PM	2	19	94	0	0	0	115	0	0	108	11	4	0	0	2	125	0	2	1	2	2	0	1	0	8	3	
6:15PM	6	8	102	0	0	0	116	0	0	84	12	2	0	0	0	98	2	1	0	0	0	0	0	2	3	4	
Hourly Total	8	27	196	0	0	0	231	0	0	192	23	6	0	0	2	223	2	3	1	2	2	0	1	2	11	7	
Total	111	227	2726	1	1	0	3066	36	0	3043	215	62	0	7	4	3331	17	52	17	13	13	0	1	14	110	38	
% Approach	3.6%	7.4%	88.9%	0%	0%	0%	-	-	0%	91.4%	6.5%	1.9%	0%	0.2%	0.1%	-	-	47.3%	15.5%	11.8%	11.8%	0%	0.9%	12.7%	-	-	
% Total	1.6%	3.3%	39.2%	0%	0%	0%	44.0%	-	0%	43.7%	3.1%	0.9%	0%	0.1%	0.1%	47.9%	-	0.7%	0.2%	0.2%	0.2%	0%	0%	0.2%	1.6%	-	
Lights	106	222	2611	1	1	0	2941	-	0	2940	205	61	0	6	4	3216	-	50	17	12	13	0	1	12	105	-	
% Lights	95.5%	97.8%	95.8%	100%	100%	0%	95.9%	-	0%	96.6%	95.3%	98.4%	0%	85.7%	100%	96.5%	-	96.2%	100%	92.3%	100%	0%	100%	85.7%	95.5%	-	
Articulated Trucks	0	0	6	0	0	0	6	-	0	5	0	0	0	0	0	5	-	0	0	0	0	0	0	0	0	0	
% Articulated Trucks	0%	0%	0.2%	0%	0%	0%	0.2%	-	0%	0.2%	0%	0%	0%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Buses and Single-Unit Trucks	5	5	109	0	0	0	119	-	0	98	10	1	0	1	0	110	-	2	0	1	0	0	0	2	5	-	
% Buses and Single-Unit Trucks	4.5%	2.2%	4.0%	0%	0%	0%	3.9%	-	0%	3.2%	4.7%	1.6%	0%	14.3%	0%	3.3%	-	3.8%	0%	7.7%	0%	0%	0%	14.3%	4.5%	-	
Pedestrians	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	38	
% Pedestrians	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Sycamore Avenue Southbound								Fairview Avenue Southwestbound							
Time	HL	L	T	R	U	RR	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 6:30AM	0	9	0	2	0	0	11	0	0	0	0	0	0	0	0	183
6:45AM	1	10	0	5	0	0	16	3	0	0	0	0	0	0	6	237
Hourly Total	1	19	0	7	0	0	27	3	0	0	0	0	0	0	6	420
7:00AM	0	12	0	10	0	1	23	0	0	0	0	0	0	0	1	268
7:15AM	0	14	0	5	0	2	21	0	0	0	0	0	0	0	0	263
7:30AM	1	9	0	8	0	0	18	5	0	0	0	0	0	0	3	281
7:45AM	0	9	0	5	0	0	14	0	0	0	0	0	0	0	0	265
Hourly Total	1	44	0	28	0	3	76	5	0	0	0	0	0	0	4	1077
8:00AM	0	14	0	5	0	0	19	6	0	0	0	0	0	0	0	255
8:15AM	0	7	0	4	0	0	11	9	0	0	0	0	0	0	1	225
8:30AM	0	8	0	5	0	0	13	5	0	0	0	0	0	0	1	257
8:45AM	0	3	0	7	0	1	11	0	0	0	0	0	0	0	0	253
Hourly Total	0	32	0	21	0	1	54	20	0	0	0	0	0	0	2	990
9:00AM	0	6	0	7	0	1	14	1	0	0	0	0	0	0	2	238
9:15AM	0	8	0	8	0	0	16	0	0	0	0	0	0	0	0	205
Hourly Total	0	14	0	15	0	1	30	1	0	0	0	0	0	0	2	443
2:30PM	0	4	0	5	0	2	11	0	0	0	0	0	0	0	1	219
2:45PM	0	4	0	2	0	0	6	0	0	0	0	0	0	0	0	211
Hourly Total	0	8	0	7	0	2	17	0	0	0	0	0	0	0	1	430
3:00PM	0	10	0	6	0	0	16	6	0	0	0	0	0	0	1	231
3:15PM	0	14	0	9	0	0	23	8	0	0	0	0	0	0	4	240
3:30PM	1	8	0	4	0	1	14	5	0	0	0	0	0	0	6	251
3:45PM	0	9	0	12	0	1	22	0	0	0	0	0	0	0	2	272
Hourly Total	1	41	0	31	0	2	75	19	0	0	0	0	0	0	13	994
4:00PM	0	8	0	4	0	0	12	3	0	0	0	0	0	0	4	261
4:15PM	1	5	0	8	0	0	14	0	0	0	0	0	0	0	1	273
4:30PM	0	8	0	3	0	0	11	2	0	0	0	0	0	0	3	263
4:45PM	0	17	0	8	0	0	25	2	0	0	0	0	0	0	3	266
Hourly Total	1	38	0	23	0	0	62	7	0	0	0	0	0	0	11	1063
5:00PM	1	9	0	2	0	0	12	0	0	0	0	0	0	0	0	264
5:15PM	0	15	0	11	0	0	26	1	0	0	0	0	0	0	4	259
5:30PM	0	12	0	6	0	2	20	2	0	0	0	0	0	0	2	265
5:45PM	0	15	0	4	0	1	20	5	0	0	0	0	0	0	7	256
Hourly Total	1	51	0	23	0	3	78	8	0	0	0	0	0	0	13	1044
6:00PM	0	7	0	6	0	1	14	0	0	0	0	0	0	0	0	262
6:15PM	0	16	0	5	0	0	21	0	0	0	0	0	0	0	0	238
Hourly Total	0	23	0	11	0	1	35	0	0	0	0	0	0	0	0	500
Total	5	270	0	166	0	13	454	63	0	0	0	0	0	0	52	6961
% Approach	1.1%	59.5%	0%	36.6%	0%	2.9%	-	-	0%	0%	0%	0%	0%	-	-	-
% Total	0.1%	3.9%	0%	2.4%	0%	0.2%	6.5%	-	0%	0%	0%	0%	0%	0%	-	-
Lights	5	258	0	159	0	13	435	-	0	0	0	0	0	0	-	6697
% Lights	100%	95.6%	0%	95.8%	0%	100%	95.8%	-	0%	0%	0%	0%	0%	-	-	96.2%
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	11
% Articulated Trucks	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	-	0.2%
Buses and Single-Unit Trucks	0	12	0	7	0	0	19	-	0	0	0	0	0	0	-	253
% Buses and Single-Unit Trucks	0%	4.4%	0%	4.2%	0%	0%	4.2%	-	0%	0%	0%	0%	0%	-	-	3.6%
Pedestrians	-	-	-	-	-	-	-	63	-	-	-	-	-	-	50	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	96.2%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	2	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	3.8%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

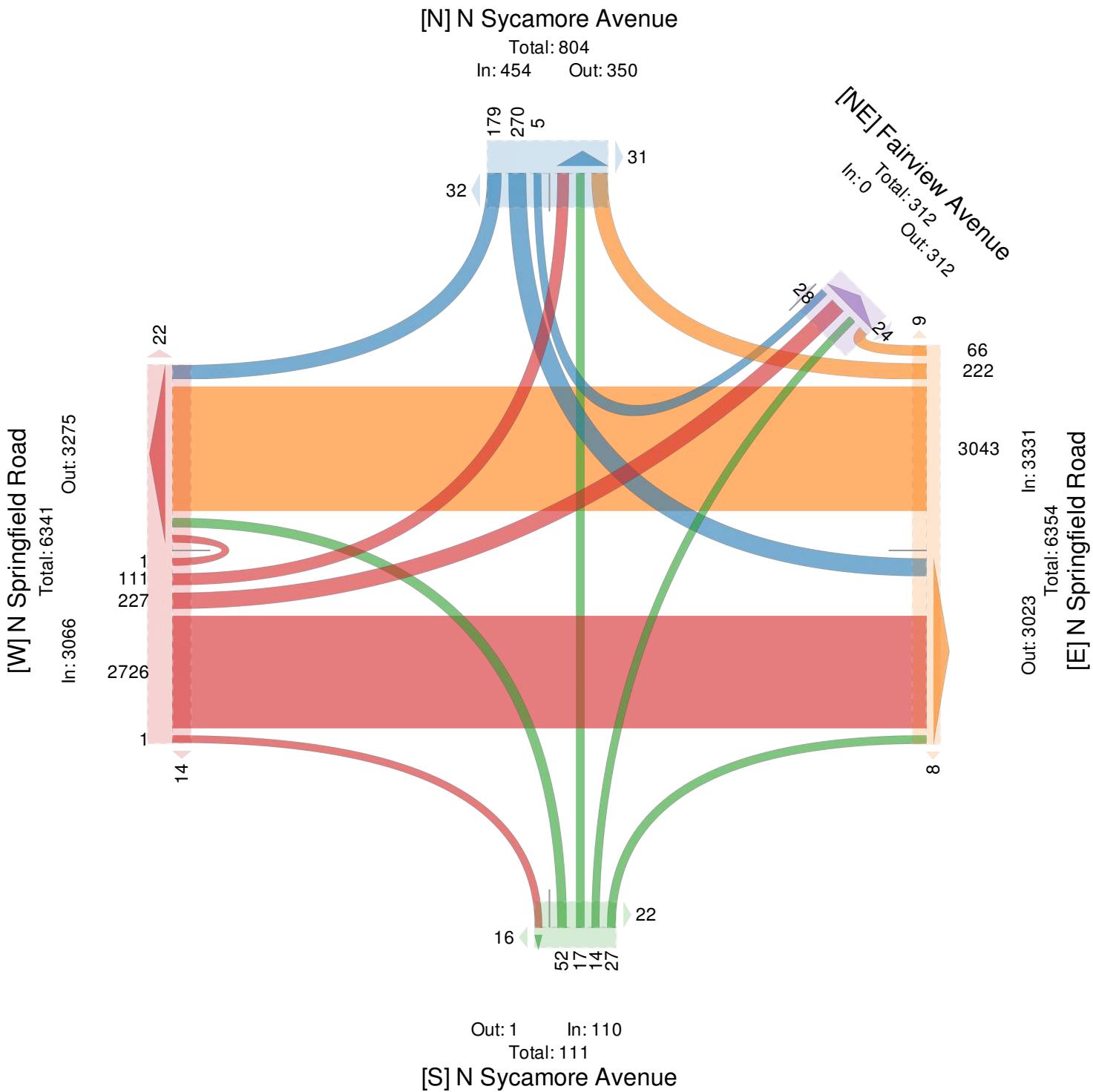
ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US



4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound							N Sycamore Avenue Northbound												
Time	L	BL	T	R	U	RR	App	Ped*	L	T	R	HR	U	RR	HRR	App	Ped*	L	T	BR	R	U	BRR	RR	App	Ped*	
2019-04-24 7:00AM	6	4	109	0	0	0	119	0	0	118	5	0	0	0	0	123	0	3	0	0	0	0	0	3	0		
7:15AM	6	8	109	1	0	0	124	0	0	104	6	2	0	0	0	0	112	0	3	1	0	0	0	2	6	0	
7:30AM	1	1	126	0	0	0	128	4	0	117	10	1	0	0	0	0	128	0	1	2	1	3	0	0	0	7	0
7:45AM	1	8	127	0	0	0	136	0	0	107	6	1	0	0	0	0	114	0	0	1	0	0	0	0	0	1	0
Total	14	21	471	1	0	0	507	4	0	446	27	4	0	0	0	0	477	0	7	4	1	3	0	0	2	17	0
% Approach	2.8%	4.1%	92.9%	0.2%	0%	0%	-	-	-0%	93.5%	5.7%	0.8%	0%	0%	0%	-	-	41.2%	23.5%	5.9%	17.6%	0%	0%	11.8%	-	-	
% Total	1.3%	1.9%	43.7%	0.1%	0%	0%	47.1%	-	-0%	41.4%	2.5%	0.4%	0%	0%	0%	0%	44.3%	-	0.6%	0.4%	0.1%	0.3%	0%	0%	0.2%	1.6%	-
PHF	0.583	0.656	0.927	0.250	-	-	0.932	-	-	0.945	0.675	0.500	-	-	-	0.932	-	0.583	0.500	0.250	0.250	-	-	0.250	0.607	-	
Lights	14	21	455	1	0	0	491	-	0	423	24	4	0	0	0	0	451	-	7	4	1	3	0	0	2	17	-
% Lights	100%	100%	96.6%	100%	0%	0%	96.8%	-	-0%	94.8%	88.9%	100%	0%	0%	0%	0%	94.5%	-	100%	100%	100%	100%	0%	0%	100%	-	-
Articulated Trucks	0	0	2	0	0	0	2	-	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	
% Articulated Trucks	0%	0%	0.4%	0%	0%	0%	0.4%	-	-0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	-	
Buses and Single-Unit Trucks	0	0	14	0	0	0	14	-	0	23	3	0	0	0	0	0	26	-	0	0	0	0	0	0	0	-	
% Buses and Single-Unit Trucks	0%	0%	3.0%	0%	0%	0%	2.8%	-	-0%	5.2%	11.1%	0%	0%	0%	0%	5.5%	-	0%	0%	0%	0%	0%	0%	0%	0%	-	
Pedestrians	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0		
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Sycamore Avenue Southbound								Fairview Avenue Southwestbound							
Time	HL	L	T	R	U	RR	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int
2019-04-24 7:00AM	0	12	0	10	0	1	23	0	0	0	0	0	0	0	1	268
7:15AM	0	14	0	5	0	2	21	0	0	0	0	0	0	0	0	263
7:30AM	1	9	0	8	0	0	18	5	0	0	0	0	0	0	3	281
7:45AM	0	9	0	5	0	0	14	0	0	0	0	0	0	0	0	265
Total	1	44	0	28	0	3	76	5	0	0	0	0	0	0	4	1077
% Approach	1.3%	57.9%	0%	36.8%	0%	3.9%	-	-	0%	0%	0%	0%	0%	-	-	-
% Total	0.1%	4.1%	0%	2.6%	0%	0.3%	7.1%	-	0%	0%	0%	0%	0%	0%	-	-
PHF	0.250	0.786	-	0.700	-	0.375	0.826	-	-	-	-	-	-	-	-	0.958
Lights	1	41	0	27	0	3	72	-	0	0	0	0	0	0	-	1031
% Lights	100%	93.2%	0%	96.4%	0%	100%	94.7%	-	0%	0%	0%	0%	0%	-	-	95.7%
Articulated Trucks	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-	2
% Articulated Trucks	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	-	0.2%
Buses and Single-Unit Trucks	0	3	0	1	0	0	4	-	0	0	0	0	0	0	-	44
% Buses and Single-Unit Trucks	0%	6.8%	0%	3.6%	0%	0%	5.3%	-	0%	0%	0%	0%	0%	-	-	4.1%
Pedestrians	-	-	-	-	-	-	-	5	-	-	-	-	-	-	4	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 121

In: 76 Out: 45

31 44 1
4

[W] N Springfield Road
Total: 991 Out: 484
In: 507

3
14 21
471
1

[NE] Fairview Avenue
In: 0 Total: 27 Out: 27

4 27
446

[E] N Springfield Road
Out: 520 Total: 997
In: 477

7 4 1 5

Out: 1 In: 17

Total: 18

[S] N Sycamore Avenue

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

PM Peak (3:45 PM - 4:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	N Springfield Road Eastbound							N Springfield Road Westbound							N Sycamore Avenue Northbound													
Time	L	BL	T	R	U	RR	App	Ped*	L	T	R	HR	U	RR	HRR	App	Ped*	L	T	BR	R	U	BRR	RR	App	Ped*		
2019-04-24 3:45PM	3	13	103	0	0	0	119	2	0	112	12	4	0	0	0	128	3	1	0	1	0	0	0	1	3	3		
4:00PM	5	13	111	0	0	0	129	1	0	111	6	2	0	0	0	119	3	0	0	0	1	0	0	0	1	0		
4:15PM	4	9	103	0	0	0	116	1	0	128	3	4	0	4	0	139	0	3	0	0	1	0	0	0	4	0		
4:30PM	4	14	105	0	0	0	123	1	0	114	9	2	0	0	0	125	0	3	1	0	0	0	0	0	4	3		
Total	16	49	422	0	0	0	487	5	0	465	30	12	0	4	0	511	6	7	1	1	2	0	0	1	12	6		
% Approach	3.3%	10.1%	86.7%	0%	0%	0%	-	-	0%	91.0%	5.9%	2.3%	0%	0.8%	0%	-	-	58.3%	8.3%	8.3%	16.7%	0%	0%	8.3%	-	-		
% Total	1.5%	4.6%	39.5%	0%	0%	0%	45.6%	-	0%	43.5%	2.8%	1.1%	0%	0.4%	0%	47.8%	-	0.7%	0.1%	0.1%	0.2%	0%	0%	0.1%	1.1%	-		
PHF	0.800	0.875	0.950	-	-	-	0.944	-	-	0.908	0.625	0.750	-	0.250	-	0.919	-	0.583	0.250	0.250	0.500	-	-	0.250	0.750	-		
Lights	15	48	396	0	0	0	459	-	0	454	29	12	0	3	0	498	-	7	1	1	2	0	0	1	12	-		
% Lights	93.8%	98.0%	93.8%	0%	0%	0%	94.3%	-	0%	97.6%	96.7%	100%	0%	75.0%	0%	97.5%	-	100%	100%	100%	100%	0%	0%	100%	-	-		
Articulated Trucks	0	0	2	0	0	0	2	-	0	2	0	0	0	0	0	2	-	0	0	0	0	0	0	0	0	-		
% Articulated Trucks	0%	0%	0.5%	0%	0%	0%	0.4%	-	0%	0.4%	0%	0%	0%	0%	0%	0.4%	-	0%	0%	0%	0%	0%	0%	0%	0%	-		
Buses and Single-Unit Trucks	1	1	24	0	0	0	26	-	0	9	1	0	0	1	0	11	-	0	0	0	0	0	0	0	0	-		
% Buses and Single-Unit Trucks	6.3%	2.0%	5.7%	0%	0%	0%	5.3%	-	0%	1.9%	3.3%	0%	0%	25.0%	0%	2.2%	-	0%	0%	0%	0%	0%	0%	0%	0%	-		
Pedestrians	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	6		
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%			
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	0		
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	0%		

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

PM Peak (3:45 PM - 4:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	N Sycamore Avenue Southbound								Fairview Avenue Southwestbound								
Time	HL	L	T	R	U	RR	App	Ped*	HL	BL	BR	HR	U	App	Ped*	Int	
2019-04-24 3:45PM	0	9	0	12	0	1	22	0	0	0	0	0	0	0	2	272	
4:00PM	0	8	0	4	0	0	12	3	0	0	0	0	0	0	4	261	
4:15PM	1	5	0	8	0	0	14	0	0	0	0	0	0	0	1	273	
4:30PM	0	8	0	3	0	0	11	2	0	0	0	0	0	0	3	263	
Total	1	30	0	27	0	1	59	5	0	0	0	0	0	0	10	1069	
% Approach	1.7%	50.8%	0%	45.8%	0%	1.7%	-	-	0%	0%	0%	0%	0%	0%	-	-	
% Total	0.1%	2.8%	0%	2.5%	0%	0.1%	5.5%	-	0%	0%	0%	0%	0%	0%	-	-	
PHF	0.250	0.833	-	0.563	-	0.250	0.670	-	-	-	-	-	-	-	-	0.979	
Lights	1	30	0	26	0	1	58	-	0	0	0	0	0	0	-	1027	
% Lights	100%	100%	0%	96.3%	0%	100%	98.3%	-	0%	0%	0%	0%	0%	-	-	96.1%	
Articulated Trucks	0	0	0	0	0	0	0	-	0	0	0	0	0	0	-	4	
% Articulated Trucks	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	-	0.4%	
Buses and Single-Unit Trucks	0	0	0	1	0	0	1	-	0	0	0	0	0	0	-	38	
% Buses and Single-Unit Trucks	0%	0%	0%	3.7%	0%	0%	1.7%	-	0%	0%	0%	0%	0%	-	-	3.6%	
Pedestrians	-	-	-	-	-	-	-	5	-	-	-	-	-	-	8		
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	80.0%	-	
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	2		
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	20.0%	-	

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, BRR: Bear right on red, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

4. N Springfield Road & N Sycamore Avenue - TMC

Wed Apr 24, 2019

PM Peak (3:45 PM - 4:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

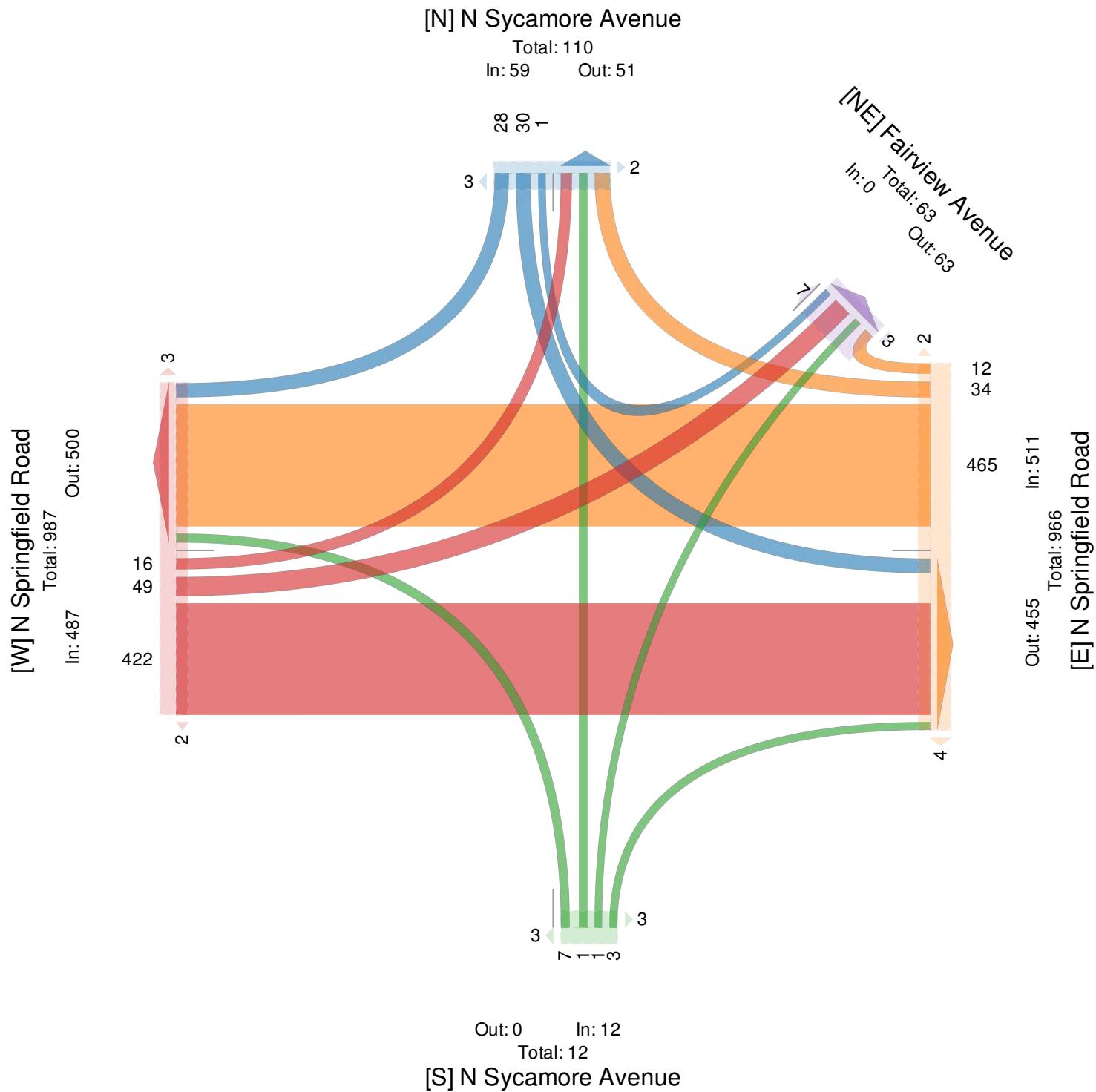
ID: 646354, Location: 39.930433, -75.30022, Site Code: 4

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US





Imperial Traffic & Data Collection
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 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 iklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
 Site Code: 5
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	W Wyncliffe Avenue						W Wyncliffe Avenue						N Oak Avenue						N Oak Avenue						Int. Total
	Eastbound			Westbound			Northbound			Southbound															
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
6:30 AM	0	0	0	0	0	0	0	2	1	1	0	4	0	0	19	0	0	19	0	0	28	0	2	28	51
6:45 AM	0	0	0	0	1	0	0	2	6	0	0	8	0	0	25	3	0	28	0	3	32	2	1	37	73
Hourly Total	0	0	0	0	1	0	0	4	7	1	0	12	0	0	44	3	0	47	0	3	60	2	3	65	124
7:00 AM	0	0	0	0	1	0	0	6	2	0	0	8	0	1	41	0	0	42	0	0	47	1	0	48	98
7:15 AM	0	0	0	0	0	0	0	6	6	0	0	12	0	4	54	2	0	60	0	0	48	4	1	52	124
7:30 AM	1	0	0	0	1	1	0	7	3	1	0	11	0	1	40	1	1	42	0	0	51	1	3	52	106
7:45 AM	0	0	0	0	0	0	0	7	4	0	0	11	0	1	36	2	0	39	0	0	58	3	2	61	111
Hourly Total	1	0	0	0	2	1	0	26	15	1	0	42	0	7	171	5	1	183	0	0	204	9	6	213	439
8:00 AM	0	0	0	0	0	0	0	4	2	1	0	7	0	3	32	1	0	36	0	1	55	1	0	57	100
8:15 AM	0	0	0	0	0	0	0	4	6	1	3	11	0	2	36	2	0	40	0	0	48	2	2	50	101
8:30 AM	0	0	0	0	1	0	0	6	3	3	7	12	0	0	46	1	7	47	0	1	29	4	12	34	93
8:45 AM	0	0	0	0	0	0	0	5	2	3	0	10	0	2	43	6	0	51	0	1	35	4	2	40	101
Hourly Total	0	0	0	0	1	0	0	19	13	8	10	40	0	7	157	10	7	174	0	3	167	11	16	181	395
9:00 AM	0	0	0	1	2	1	0	2	1	2	0	5	0	1	27	1	0	29	1	2	42	3	0	48	83
9:15 AM	0	0	0	0	0	0	0	0	2	2	0	4	0	0	22	2	0	24	0	0	28	3	0	31	59
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hourly Total	0	0	0	1	2	1	0	2	3	4	0	9	0	1	49	3	0	53	1	2	71	6	0	80	143
2:30 PM	0	0	0	0	3	0	0	2	4	0	0	6	0	1	30	4	4	35	0	3	27	2	0	32	73
2:45 PM	0	0	0	0	0	0	0	1	4	2	0	7	0	3	47	4	0	54	0	1	42	1	1	44	105
Hourly Total	0	0	0	0	3	0	0	3	8	2	0	13	0	4	77	8	4	89	0	4	69	3	1	76	178
3:00 PM	0	0	0	0	0	0	0	3	1	2	0	6	0	1	36	5	7	42	0	2	59	0	4	61	109
3:15 PM	0	0	0	0	0	0	0	2	3	2	1	7	0	0	44	7	21	51	0	3	41	1	7	45	103
3:30 PM	0	0	0	0	0	0	0	7	2	1	2	10	0	2	51	7	4	60	1	1	44	6	9	52	122
3:45 PM	0	0	0	0	0	0	0	6	5	0	4	11	0	1	50	2	0	53	0	0	45	4	8	49	113
Hourly Total	0	0	0	0	0	0	0	18	11	5	7	34	0	4	181	21	32	206	1	6	189	11	28	207	447
4:00 PM	0	0	0	0	0	0	0	5	1	1	2	7	0	1	51	11	2	63	0	1	43	2	4	46	116
4:15 PM	0	0	0	0	0	0	0	0	5	3	1	8	0	2	50	8	0	60	0	2	55	4	0	61	129
4:30 PM	0	0	0	0	0	0	0	3	3	3	0	9	0	2	46	9	0	57	0	1	59	2	1	62	128
4:45 PM	0	0	0	0	0	0	0	4	2	4	0	10	0	4	49	14	1	67	0	1	54	2	0	57	134
Hourly Total	0	0	0	0	0	0	0	12	11	11	3	34	0	9	196	42	3	247	0	5	211	10	5	226	507
5:00 PM	0	0	0	0	0	0	0	4	2	3	0	9	0	2	51	7	1	60	0	4	55	2	1	61	130
5:15 PM	0	0	0	0	1	0	0	2	4	1	0	7	0	4	49	10	0	63	0	3	60	2	0	65	135
5:30 PM	0	0	1	0	0	1	0	3	2	3	1	8	0	3	66	12	0	81	0	2	57	2	1	61	151
5:45 PM	0	0	0	0	1	0	0	8	4	0	0	12	0	2	57	3	1	62	0	3	47	9	6	59	133
Hourly Total	0	0	1	0	2	1	0	17	12	7	1	36	0	11	223	32	2	266	0	12	219	15	8	246	549
6:00 PM	0	0	0	0	1	0	0	3	3	1	0	7	0	2	41	7	0	50	0	4	46	3	0	53	110

6:15 PM	0	0	0	0	1	0	0	2	1	1	1	4	0	4	37	7	0	48	0	4	39	4	2	47	99
Grand Total	1	0	1	1	13	3	0	106	84	41	22	231	0	49	1176	138	49	1363	2	43	1275	74	69	1394	2991
Approach %	33.3	0.0	33.3	33.3	-	-	0.0	45.9	36.4	17.7	-	-	0.0	3.6	86.3	10.1	-	-	0.1	3.1	91.5	5.3	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.1	0.0	3.5	2.8	1.4	-	7.7	0.0	1.6	39.3	4.6	-	45.6	0.1	1.4	42.6	2.5	-	46.6	-
Lights	1	0	1	0	-	2	0	102	84	39	-	225	0	45	1141	135	-	1321	2	39	1241	73	-	1355	2903
% Lights	100.0	-	100.0	0.0	-	66.7	-	96.2	100.0	95.1	-	97.4	-	91.8	97.0	97.8	-	96.9	100.0	90.7	97.3	98.6	-	97.2	97.1
Mediums	0	0	0	0	-	0	0	4	0	2	-	6	0	3	34	3	-	40	0	4	32	1	-	37	83
% Mediums	0.0	-	0.0	0.0	-	0.0	-	3.8	0.0	4.9	-	2.6	-	6.1	2.9	2.2	-	2.9	0.0	9.3	2.5	1.4	-	2.7	2.8
Articulated Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	1	1	0	-	2	0	0	2	0	-	2	5
% Articulated Trucks	0.0	-	0.0	100.0	-	33.3	-	0.0	0.0	0.0	-	0.0	-	2.0	0.1	0.0	-	0.1	0.0	0.0	0.2	0.0	-	0.1	0.2
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	13	-	-	-	-	-	22	-	-	-	-	-	-	49	-	-	-	-	69	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-



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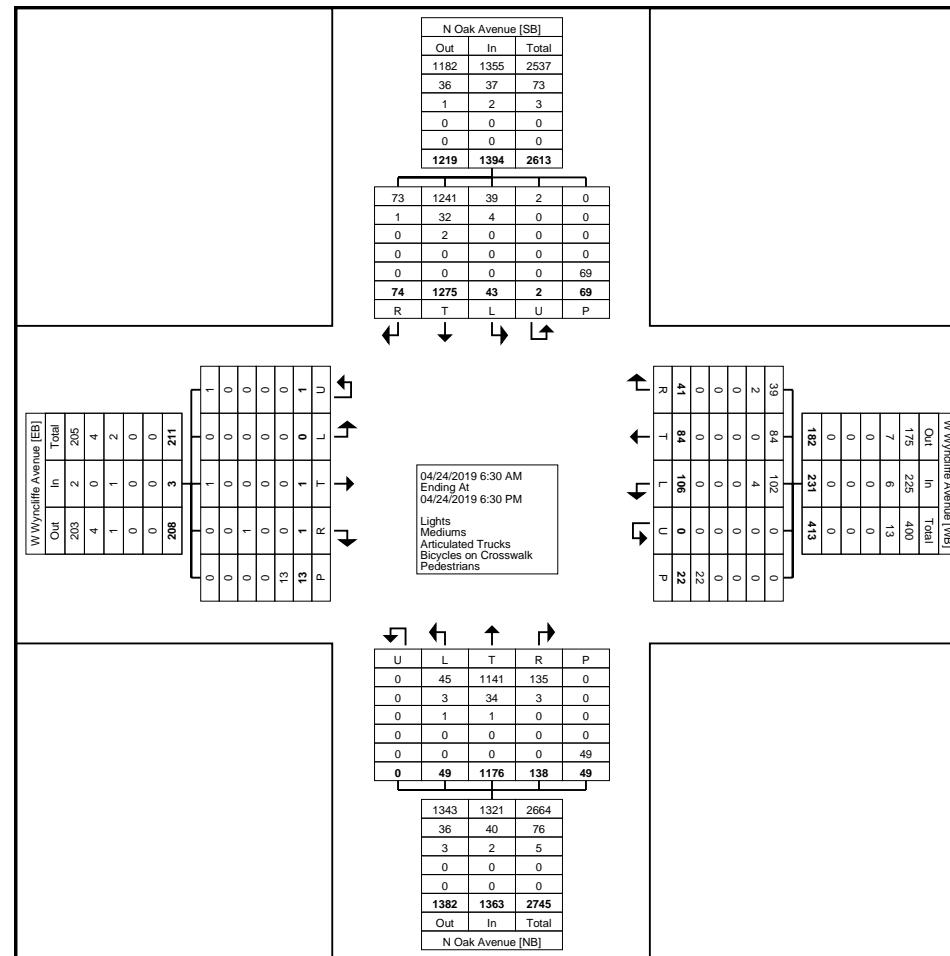
PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
Site Code: 5
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot



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Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
 Site Code: 5
 Start Date: 04/24/2019
 Page No: 4

Turning Movement Peak Hour Data (7:15 AM)

Start Time	W Wyncliffe Avenue						W Wyncliffe Avenue						N Oak Avenue						N Oak Avenue						Int. Total
	Eastbound			Westbound			Northbound			Southbound															
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
7:15 AM	0	0	0	0	0	0	6	6	0	0	12	0	4	54	2	0	60	0	0	48	4	1	52	124	
7:30 AM	1	0	0	0	1	1	0	7	3	1	0	11	0	1	40	1	1	42	0	0	51	1	3	52	106
7:45 AM	0	0	0	0	0	0	0	7	4	0	0	11	0	1	36	2	0	39	0	0	58	3	2	61	111
8:00 AM	0	0	0	0	0	0	0	4	2	1	0	7	0	3	32	1	0	36	0	1	55	1	0	57	100
Total	1	0	0	0	1	1	0	24	15	2	0	41	0	9	162	6	1	177	0	1	212	9	6	222	441
Approach %	100.0	0.0	0.0	0.0	-	-	0.0	58.5	36.6	4.9	-	-	0.0	5.1	91.5	3.4	-	-	0.0	0.5	95.5	4.1	-	-	-
Total %	0.2	0.0	0.0	0.0	-	0.2	0.0	5.4	3.4	0.5	-	9.3	0.0	2.0	36.7	1.4	-	40.1	0.0	0.2	48.1	2.0	-	50.3	-
PHF	0.250	0.000	0.000	0.000	-	0.250	0.000	0.857	0.625	0.500	-	0.854	0.000	0.563	0.750	0.750	-	0.738	0.000	0.250	0.914	0.563	-	0.910	0.889
Lights	1	0	0	0	-	1	0	24	15	2	-	41	0	8	152	6	-	166	0	1	208	9	-	218	426
% Lights	100.0	-	-	-	-	100.0	-	100.0	100.0	100.0	-	100.0	-	88.9	93.8	100.0	-	93.8	-	100.0	98.1	100.0	-	98.2	96.6
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	1	9	0	-	10	0	0	4	0	-	4	14
% Mediums	0.0	-	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	11.1	5.6	0.0	-	5.6	-	0.0	1.9	0.0	-	1.8	3.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Articulated Trucks	0.0	-	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.6	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	0.2
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



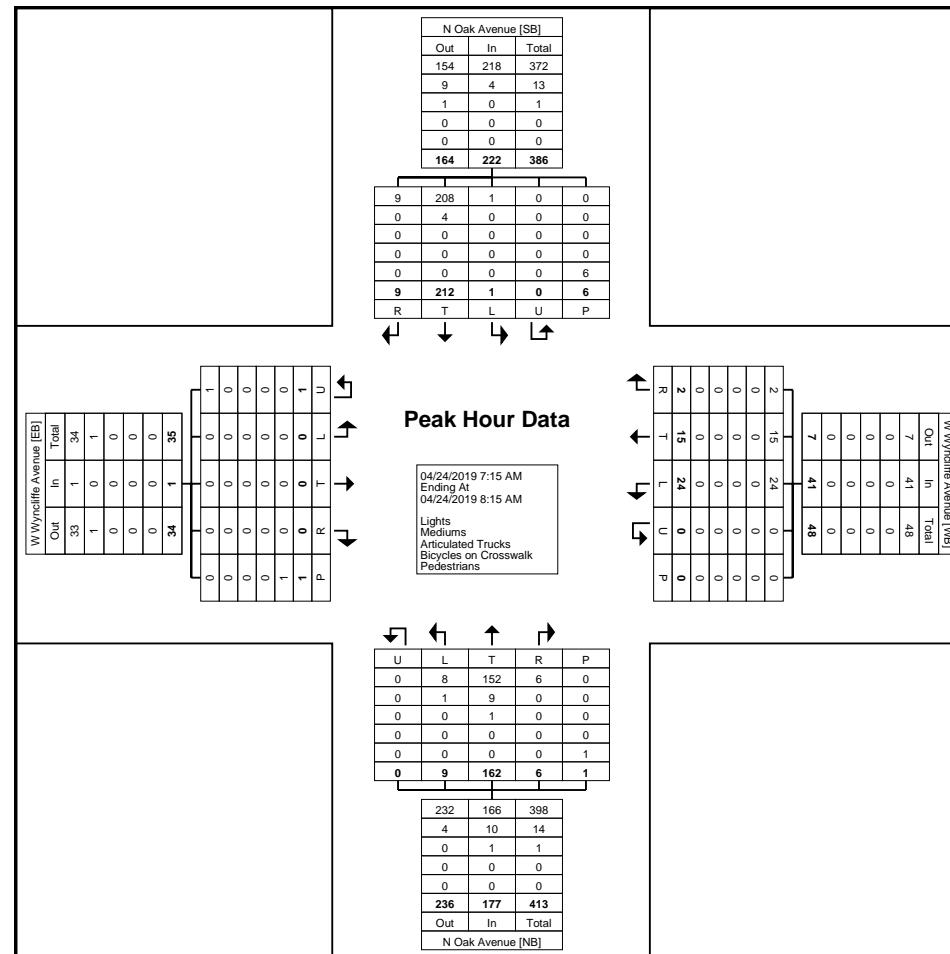
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Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
Site Code: 5
Start Date: 04/24/2019
Page No: 5



Turning Movement Peak Hour Data Plot (7:15 AM)



Imperial Traffic & Data Collection
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Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe Avenue
 Site Code: 5
 Start Date: 04/24/2019
 Page No: 6

Turning Movement Peak Hour Data (4:45 PM)

Start Time	W Wyncliffe Avenue						W Wyncliffe Avenue						N Oak Avenue						N Oak Avenue						Int. Total
	Eastbound			Westbound			Northbound			Southbound															
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
4:45 PM	0	0	0	0	0	0	4	2	4	0	10	0	4	49	14	1	67	0	1	54	2	0	57	134	
5:00 PM	0	0	0	0	0	0	4	2	3	0	9	0	2	51	7	1	60	0	4	55	2	1	61	130	
5:15 PM	0	0	0	0	1	0	2	4	1	0	7	0	4	49	10	0	63	0	3	60	2	0	65	135	
5:30 PM	0	0	1	0	0	1	3	2	3	1	8	0	3	66	12	0	81	0	2	57	2	1	61	151	
Total	0	0	1	0	1	1	0	13	10	11	1	34	0	13	215	43	2	271	0	10	226	8	2	244	550
Approach %	0.0	0.0	100.0	0.0	-	-	0.0	38.2	29.4	32.4	-	-	0.0	4.8	79.3	15.9	-	-	0.0	4.1	92.6	3.3	-	-	-
Total %	0.0	0.0	0.2	0.0	-	0.2	0.0	2.4	1.8	2.0	-	6.2	0.0	2.4	39.1	7.8	-	49.3	0.0	1.8	41.1	1.5	-	44.4	-
PHF	0.000	0.000	0.250	0.000	-	0.250	0.000	0.813	0.625	0.688	-	0.850	0.000	0.813	0.814	0.768	-	0.836	0.000	0.625	0.942	1.000	-	0.938	0.911
Lights	0	0	1	0	-	1	0	12	10	10	-	32	0	13	213	43	-	269	0	10	225	8	-	243	545
% Lights	-	-	100.0	-	-	100.0	-	92.3	100.0	90.9	-	94.1	-	100.0	99.1	100.0	-	99.3	-	100.0	99.6	100.0	-	99.6	99.1
Mediums	0	0	0	0	-	0	0	1	0	1	-	2	0	0	2	0	-	2	0	0	1	0	-	1	5
% Mediums	-	-	0.0	-	-	0.0	-	7.7	0.0	9.1	-	5.9	-	0.0	0.9	0.0	-	0.7	-	0.0	0.4	0.0	-	0.4	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0	
% Articulated Trucks	-	-	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	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	
Pedestrians	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	



Imperial Traffic & Data Collection

www.imperialtdc.com

PO BOX 4637

Cherry Hill, New Jersey, United States 08034

609-706-6100 lklein@imperialtdc.com

Project: Springfield Road

Municipality: Clifton Heights, Delaware County,

PA

Setup: MAK

Location: 39.931765, -75.30524

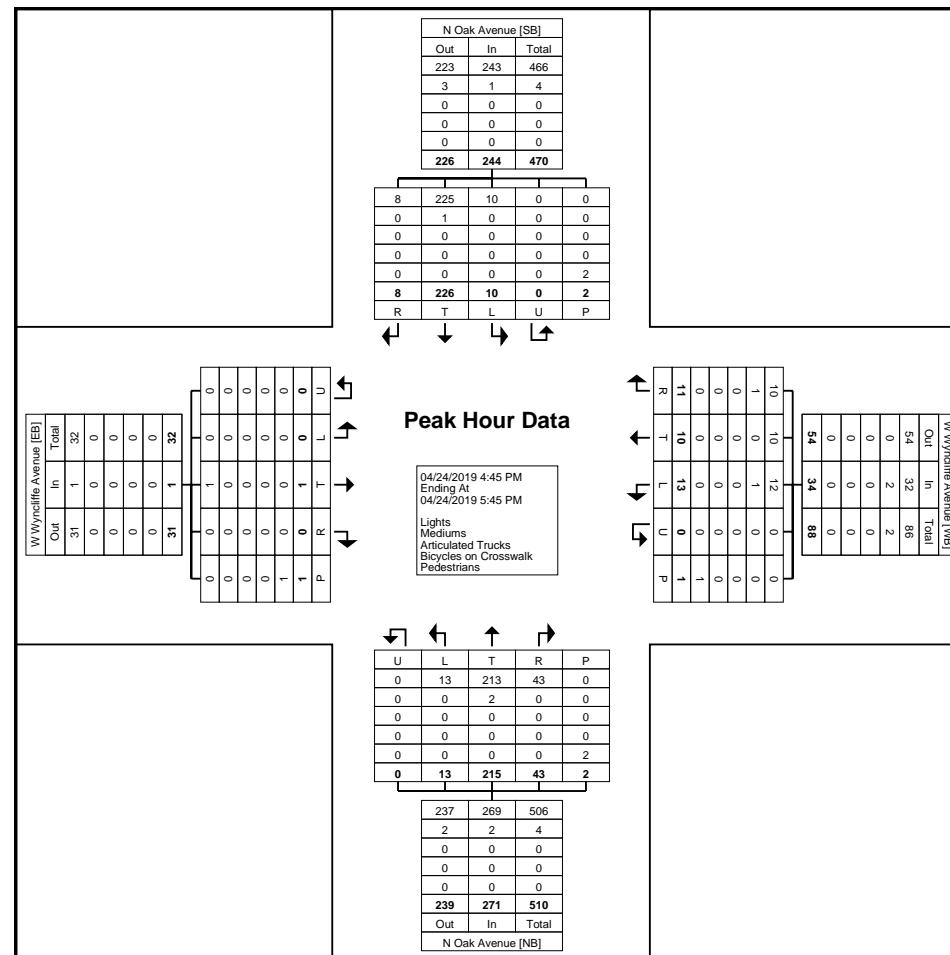
Count Name: 5. N Oak Avenue & W Wyncliffe

Avenue

Site Code: 5

Start Date: 04/24/2019

Page No: 7



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



Imperial Traffic & Data Collection
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PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931765, -75.30524

Count Name: 5. N Oak Avenue & W Wyncliffe
Avenue
Site Code: 5
Start Date: 04/24/2019
Page No: 8

5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data Collection
PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound						W Wyncliffe Avenue Westbound						N Oak Avenue Northbound						N Oak Avenue Southbound							
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int	
2019-04-24 6:30AM	0	0	0	0	0	0	2	1	1	0	4	0	0	19	0	0	19	0	0	28	0	0	28	2	51	
6:45AM	0	0	0	0	0	1	2	6	0	0	8	0	0	25	3	0	28	0	3	32	2	0	37	1	73	
Hourly Total	0	0	0	0	0	1	4	7	1	0	12	0	0	44	3	0	47	0	3	60	2	0	65	3	124	
7:00AM	0	0	0	0	0	1	6	2	0	0	8	0	1	41	0	0	42	0	0	47	1	0	48	0	98	
7:15AM	0	0	0	0	0	0	6	6	0	0	12	0	4	54	2	0	60	0	0	48	4	0	52	1	124	
7:30AM	0	0	0	1	1	1	7	3	1	0	11	0	1	40	1	0	42	1	0	51	1	0	52	3	106	
7:45AM	0	0	0	0	0	0	7	4	0	0	11	0	1	36	2	0	39	0	0	58	3	0	61	2	111	
Hourly Total	0	0	0	1	1	2	26	15	1	0	42	0	7	171	5	0	183	1	0	204	9	0	213	6	439	
8:00AM	0	0	0	0	0	0	4	2	1	0	7	0	3	32	1	0	36	0	1	55	1	0	57	0	100	
8:15AM	0	0	0	0	0	0	4	6	1	0	11	3	2	36	2	0	40	0	0	48	2	0	50	2	101	
8:30AM	0	0	0	0	0	1	6	3	3	0	12	7	0	46	1	0	47	7	1	29	4	0	34	12	93	
8:45AM	0	0	0	0	0	0	5	2	3	0	10	0	2	43	6	0	51	0	1	35	4	0	40	2	101	
Hourly Total	0	0	0	0	0	1	19	13	8	0	40	10	7	157	10	0	174	7	3	167	11	0	181	16	395	
9:00AM	0	0	1	0	1	2	2	1	2	0	5	0	1	27	1	0	29	0	2	42	3	1	48	0	83	
9:15AM	0	0	0	0	0	0	0	2	2	0	4	0	0	22	2	0	24	0	0	28	3	0	31	0	59	
9:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	
Hourly Total	0	0	1	0	1	2	2	3	4	0	9	0	1	49	3	0	53	0	2	71	6	1	80	0	143	
2:30PM	0	0	0	0	0	3	2	4	0	0	6	0	1	30	4	0	35	4	3	27	2	0	32	0	73	
2:45PM	0	0	0	0	0	0	1	4	2	0	7	0	3	47	4	0	54	0	1	42	1	0	44	1	105	
Hourly Total	0	0	0	0	0	3	3	8	2	0	13	0	4	77	8	0	89	4	4	69	3	0	76	1	178	
3:00PM	0	0	0	0	0	0	3	1	2	0	6	0	1	36	5	0	42	7	2	59	0	0	61	4	109	
3:15PM	0	0	0	0	0	0	2	3	2	0	7	1	0	44	7	0	51	21	3	41	1	0	45	7	103	
3:30PM	0	0	0	0	0	0	7	2	1	0	10	2	2	51	7	0	60	4	1	44	6	1	52	9	122	
3:45PM	0	0	0	0	0	0	6	5	0	0	11	4	1	50	2	0	53	0	0	45	4	0	49	8	113	
Hourly Total	0	0	0	0	0	0	18	11	5	0	34	7	4	181	21	0	206	32	6	189	11	1	207	28	447	
4:00PM	0	0	0	0	0	0	5	1	1	0	7	2	1	51	11	0	63	2	1	43	2	0	46	4	116	
4:15PM	0	0	0	0	0	0	0	5	3	0	8	1	2	50	8	0	60	0	2	55	4	0	61	0	129	
4:30PM	0	0	0	0	0	0	3	3	3	0	9	0	2	46	9	0	57	0	1	59	2	0	62	1	128	
4:45PM	0	0	0	0	0	0	4	2	4	0	10	0	4	49	14	0	67	1	1	54	2	0	57	0	134	
Hourly Total	0	0	0	0	0	0	12	11	11	0	34	3	9	196	42	0	247	3	5	211	10	0	226	5	507	
5:00PM	0	0	0	0	0	0	4	2	3	0	9	0	2	51	7	0	60	1	4	55	2	0	61	1	130	
5:15PM	0	0	0	0	0	1	2	4	1	0	7	0	4	49	10	0	63	0	3	60	2	0	65	0	135	
5:30PM	0	1	0	0	1	0	3	2	3	0	8	1	3	66	12	0	81	0	2	57	2	0	61	1	151	
5:45PM	0	0	0	0	0	1	8	4	0	0	12	0	2	57	3	0	62	1	3	47	9	0	59	6	133	
Hourly Total	0	1	0	0	1	2	17	12	7	0	36	1	11	223	32	0	266	2	12	219	15	0	246	8	549	
6:00PM	0	0	0	0	0	1	3	3	1	0	7	0	2	41	7	0	50	0	4	46	3	0	53	0	110	
6:15PM	0	0	0	0	0	1	2	1	1	0	4	1	4	37	7	0	48	0	4	39	4	0	47	2	99	
Hourly Total	0	0	0	0	0	2	5	4	2	0	11	1	6	78	14	0	98	0	8	85	7	0	100	2	209	
Total	0	1	1	1	1	3	13	106	84	41	0	231	22	49	1176	138	0	1363	49	43	1275	74	2	1394	69	2991
% Approach	0%	33.3%	33.3%	33.3%	-	-	-45.9%	36.4%	17.7%	0%	-	-	-	3.6%	86.3%	10.1%	0%	-	-	3.1%	91.5%	5.3%	0.1%	-	-	-
% Total	0%	0%	0%	0%	0.1%	-	-3.5%	2.8%	1.4%	0%	7.7%	-	-	1.6%	39.3%	4.6%	0%	45.6%	-	1.4%	42.6%	2.5%	0.1%	46.6%	-	-
Lights	0	1	0	1	2	-	102	84	39	0	225	-	45	1141	135	0	1321	-	39	1241	73	2	1355	-	2903	
% Lights	0%	100%	0%	100%	66.7%	-	-96.2%	100%	95.1%	0%	97.4%	-	-	91.8%	97.0%	97.8%	0%	96.9%	-	90.7%	97.3%	98.6%	100%	97.2%	-	97.1%
Articulated Trucks	0	0	1	0	1	1	-	0	0	0	0	0	-	1	1	0	0	2	-	0	2	0	0	2	-	5
% Articulated Trucks	0%	0%	100%	0%	33.3%	-	-0%	0%	0%	0%	0%	0%	-	2.0%	0.1%	0%	0%	0.1%	-	0%	0.2%	0%	0%	0.1%	-	0.2%
Buses and Single-Unit Trucks	0	0	0	0	0	0	-	4	0	2	0	6	-	3	34	3	0	40	-	4	32	1	0	37	-	83
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	0%	-	3.8%	0%	4.9%	0%	2.6%	-	6.1%	2.9%	2.2%	0%	2.9%	-	9.3%	2.5%	1.4%	0%	2.7%	-	2.8%
Pedestrians	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	69	
% Pedestrians	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-	-	-	-	-100%	
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

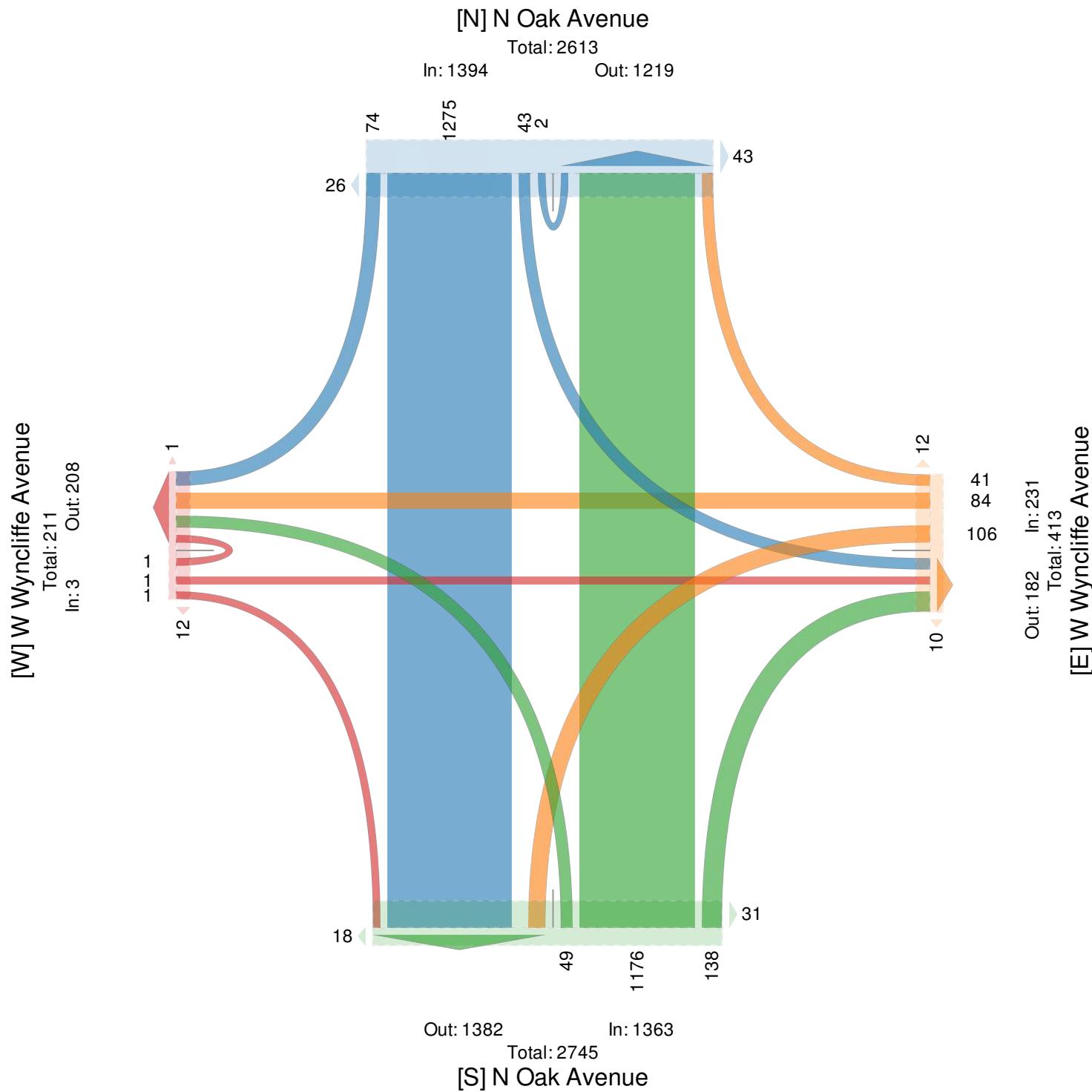
ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US



5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound					W Wyncliffe Avenue Westbound					N Oak Avenue Northbound					N Oak Avenue Southbound									
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
Time																									
2019-04-24 7:15AM	0	0	0	0	0	0	6	6	0	0	12	0	4	54	2	0	60	0	0	48	4	0	52	1	124
7:30AM	0	0	0	1	1	1	7	3	1	0	11	0	1	40	1	0	42	1	0	51	1	0	52	3	106
7:45AM	0	0	0	0	0	0	7	4	0	0	11	0	1	36	2	0	39	0	0	58	3	0	61	2	111
8:00AM	0	0	0	0	0	0	4	2	1	0	7	0	3	32	1	0	36	0	1	55	1	0	57	0	100
Total	0	0	0	1	1	1	24	15	2	0	41	0	9	162	6	0	177	1	1	212	9	0	222	6	441
% Approach	0%	0%	0%	100%	-	-	58.5%	36.6%	4.9%	0%	-	-	5.1%	91.5%	3.4%	0%	-	-	0.5%	95.5%	4.1%	0%	-	-	-
% Total	0%	0%	0%	0.2%	0.2%	-	5.4%	3.4%	0.5%	0%	9.3%	-	2.0%	36.7%	1.4%	0%	40.1%	-	0.2%	48.1%	2.0%	0%	50.3%	-	-
PHF	-	-	-	0.250	0.250	-	0.857	0.625	0.500	-	0.854	-	0.563	0.750	0.750	-	0.738	-	0.250	0.914	0.563	-	0.910	-	0.889
Lights	0	0	0	1	1	-	24	15	2	0	41	-	8	152	6	0	166	-	1	208	9	0	218	-	426
% Lights	0%	0%	0%	100%	100%	-	100%	100%	100%	0%	100%	-	88.9%	93.8%	100%	0%	93.8%	-	100%	98.1%	100%	0%	98.2%	-	96.6%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	0	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.6%	0%	0%	0.6%	-	0%	0%	0%	0%	0%	-	0.2%
Buses and Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	1	9	0	0	10	-	0	4	0	0	4	-	14
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	11.1%	5.6%	0%	0%	5.6%	-	0%	1.9%	0%	0%	1.8%	-	3.2%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	6	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

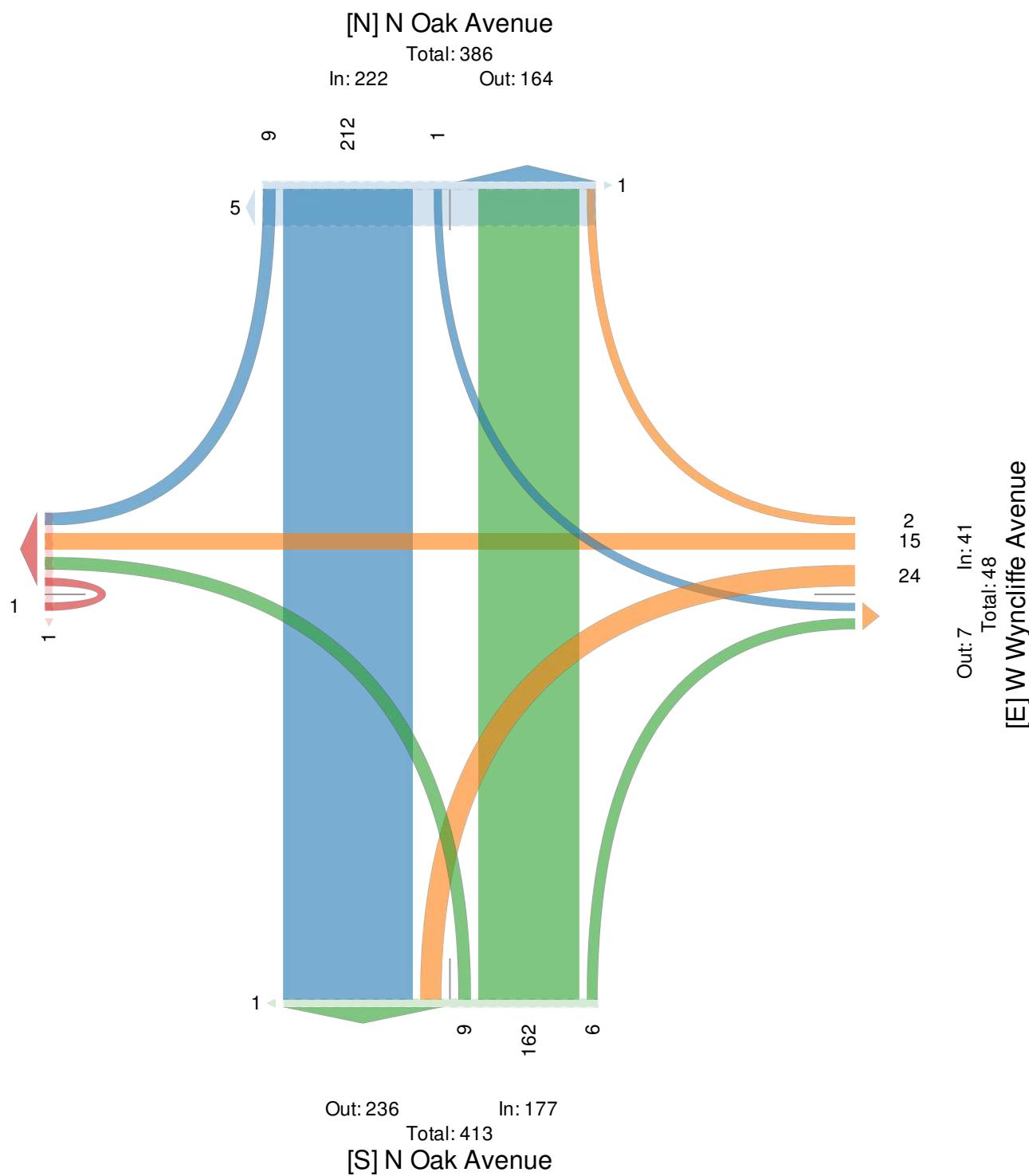
PO Box 4637,

Cherry Hill, NJ, 08003, US

[W] W Wyncliffe Avenue

Total: 35

In: 1 Out: 34



5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound					W Wyncliffe Avenue Westbound					N Oak Avenue Northbound					N Oak Avenue Southbound									
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2019-04-24 4:45PM	0	0	0	0	0	0	4	2	4	0	10	0	4	49	14	0	67	1	1	54	2	0	57	0	134
5:00PM	0	0	0	0	0	0	4	2	3	0	9	0	2	51	7	0	60	1	4	55	2	0	61	1	130
5:15PM	0	0	0	0	0	1	2	4	1	0	7	0	4	49	10	0	63	0	3	60	2	0	65	0	135
5:30PM	0	1	0	0	1	0	3	2	3	0	8	1	3	66	12	0	81	0	2	57	2	0	61	1	151
Total	0	1	0	0	1	1	13	10	11	0	34	1	13	215	43	0	271	2	10	226	8	0	244	2	550
% Approach	0%	100%	0%	0%	-	-	38.2%	29.4%	32.4%	0%	-	-	4.8%	79.3%	15.9%	0%	-	-	4.1%	92.6%	3.3%	0%	-	-	-
% Total	0%	0.2%	0%	0%	0.2%	-	2.4%	1.8%	2.0%	0%	6.2%	-	2.4%	39.1%	7.8%	0%	49.3%	-	1.8%	41.1%	1.5%	0%	44.4%	-	-
PHF	-	0.250	-	-	0.250	-	0.813	0.625	0.688	-	0.850	-	0.813	0.814	0.768	-	0.836	-	0.625	0.942	1.000	-	0.938	-	0.911
Lights	0	1	0	0	1	-	12	10	10	0	32	-	13	213	43	0	269	-	10	225	8	0	243	-	545
% Lights	0%	100%	0%	0%	100%	-	92.3%	100%	90.9%	0%	94.1%	-	100%	99.1%	100%	0%	99.3%	-	100%	99.6%	100%	0%	99.6%	-	99.1%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	0	-	1	0	1	0	2	-	0	2	0	0	2	-	0	1	0	0	1	-	5
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	7.7%	0%	9.1%	0%	5.9%	-	0%	0.9%	0%	0%	0.7%	-	0%	0.4%	0%	0%	0.4%	-	0.9%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

5. N Oak Avenue & W Wyncliffe Avenue - TMC

Wed Apr 24, 2019

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

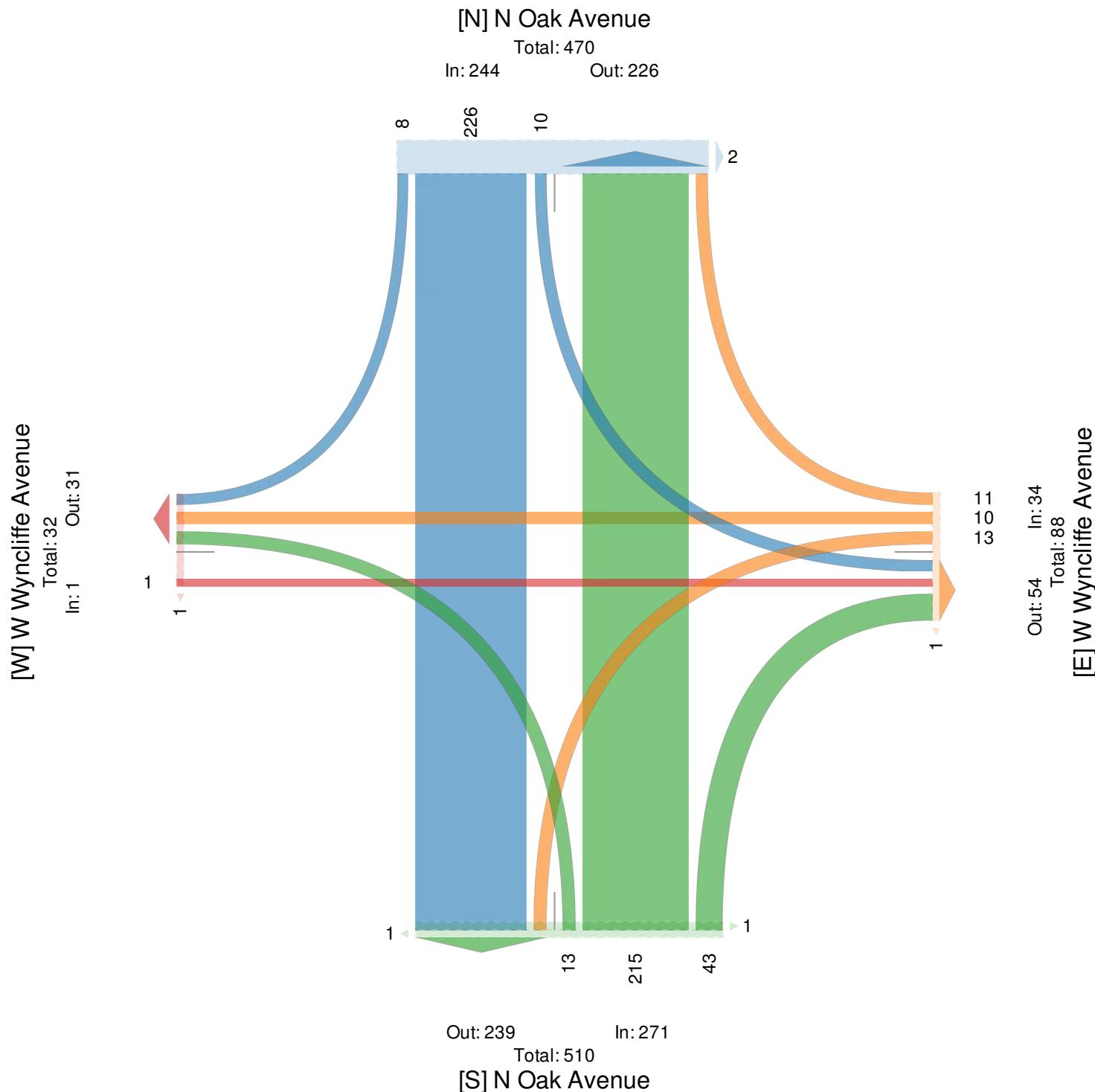
ID: 646357, Location: 39.931765, -75.30524, Site Code: 5

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US





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 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
 Street
 Site Code: 6
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
6:30 AM	0	2	0	1	2	0	3	1	0	4	0	0	8	0	8	14
6:45 AM	0	3	0	1	3	0	5	0	0	5	0	2	14	3	16	24
Hourly Total	0	5	0	2	5	0	8	1	0	9	0	2	22	3	24	38
7:00 AM	0	2	0	1	2	0	9	0	0	9	0	1	23	0	24	35
7:15 AM	0	5	2	0	7	0	12	0	0	12	0	1	14	2	15	34
7:30 AM	0	3	2	0	5	0	11	0	0	11	0	0	14	1	14	30
7:45 AM	0	4	0	0	4	0	8	0	0	8	0	1	11	0	12	24
Hourly Total	0	14	4	1	18	0	40	0	0	40	0	3	62	3	65	123
8:00 AM	0	1	1	1	2	0	13	0	0	13	0	0	17	1	17	32
8:15 AM	0	2	0	2	2	0	8	0	0	8	0	1	11	3	12	22
8:30 AM	0	3	1	0	4	0	11	0	0	11	0	0	9	0	9	24
8:45 AM	0	1	0	1	1	0	6	0	0	6	0	0	8	0	8	15
Hourly Total	0	7	2	4	9	0	38	0	0	38	0	1	45	4	46	93
9:00 AM	0	4	0	1	4	0	12	1	0	13	0	0	11	0	11	28
9:15 AM	0	2	0	0	2	0	4	0	0	4	0	1	11	0	12	18
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	6	0	1	6	0	16	1	0	17	0	1	22	0	23	46
2:30 PM	0	3	0	0	3	0	12	0	0	12	0	2	7	0	9	24
2:45 PM	0	3	2	0	5	0	16	3	0	19	0	2	5	0	7	31
Hourly Total	0	6	2	0	8	0	28	3	0	31	0	4	12	0	16	55
3:00 PM	0	0	0	1	0	0	14	1	2	15	0	0	14	0	14	29
3:15 PM	0	1	0	0	1	0	19	1	4	20	0	1	20	3	21	42
3:30 PM	0	0	1	0	1	0	19	1	0	20	0	1	13	1	14	35
3:45 PM	0	3	0	1	3	0	12	1	1	13	0	3	18	0	21	37
Hourly Total	0	4	1	2	5	0	64	4	7	68	0	5	65	4	70	143
4:00 PM	0	1	0	0	1	0	12	0	8	12	0	1	12	0	13	26
4:15 PM	0	3	0	1	3	0	10	1	1	11	0	0	12	2	12	26
4:30 PM	0	3	3	0	6	0	13	1	0	14	0	2	8	1	10	30
4:45 PM	0	4	1	1	5	0	11	0	0	11	0	1	20	0	21	37
Hourly Total	0	11	4	2	15	0	46	2	9	48	0	4	52	3	56	119
5:00 PM	0	2	0	0	2	0	12	0	0	12	0	0	10	0	10	24
5:15 PM	0	3	1	4	4	0	18	0	1	18	0	1	22	0	23	45
5:30 PM	0	2	0	0	2	0	16	0	0	16	0	1	21	1	22	40
5:45 PM	0	1	0	1	1	0	13	2	0	15	0	0	20	1	20	36
Hourly Total	0	8	1	5	9	0	59	2	1	61	0	2	73	2	75	145
6:00 PM	0	2	0	0	2	0	15	0	0	15	0	0	13	0	13	30
6:15 PM	0	3	1	0	4	0	18	1	0	19	0	0	17	0	17	40

Grand Total	0	66	15	17	81	0	332	14	17	346	0	22	383	19	405	832
Approach %	0.0	81.5	18.5	-	-	0.0	96.0	4.0	-	-	0.0	5.4	94.6	-	-	-
Total %	0.0	7.9	1.8	-	9.7	0.0	39.9	1.7	-	41.6	0.0	2.6	46.0	-	48.7	-
Lights	0	65	13	-	78	0	311	14	-	325	0	21	366	-	387	790
% Lights	-	98.5	86.7	-	96.3	-	93.7	100.0	-	93.9	-	95.5	95.6	-	95.6	95.0
Mediums	0	1	2	-	3	0	21	0	-	21	0	1	16	-	17	41
% Mediums	-	1.5	13.3	-	3.7	-	6.3	0.0	-	6.1	-	4.5	4.2	-	4.2	4.9
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	1	-	1	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.3	-	0.2	0.1
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	17	-	-	-	-	17	-	-	-	-	19	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-



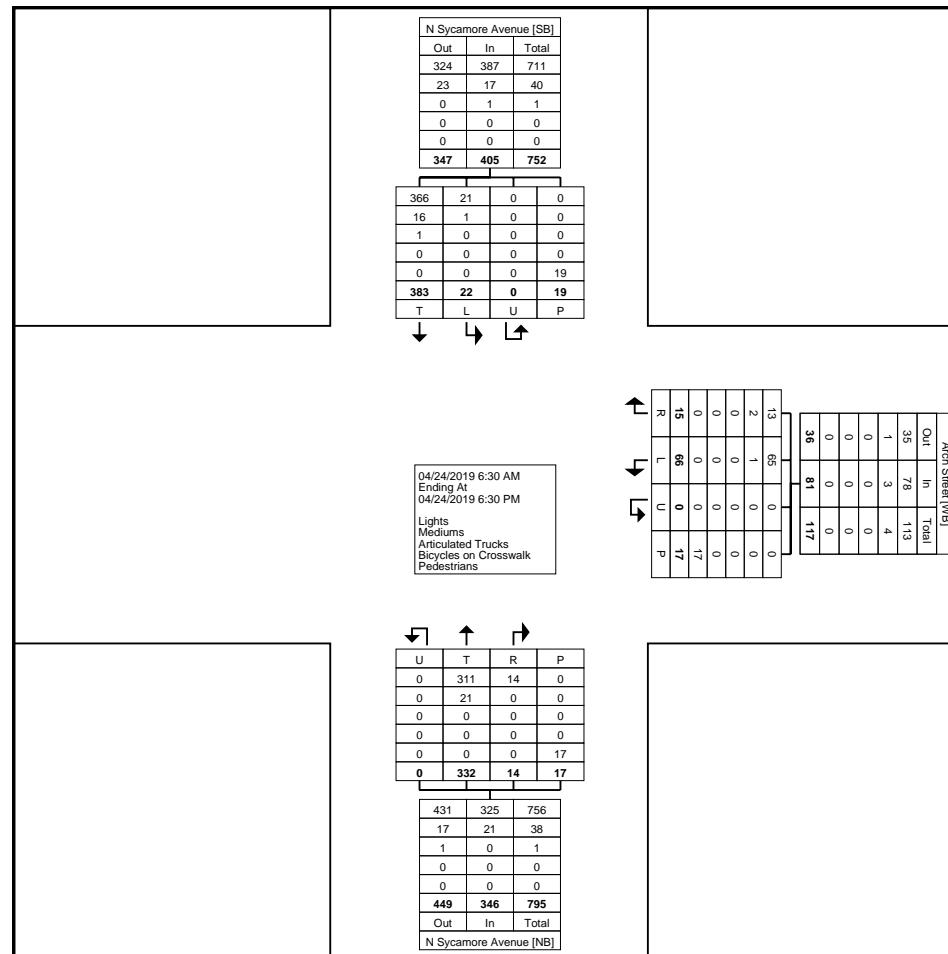
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609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
Street
Site Code: 6
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot



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Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
 Street
 Site Code: 6
 Start Date: 04/24/2019
 Page No: 4

Turning Movement Peak Hour Data (6:45 AM)

Start Time	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
6:45 AM	0	3	0	1	3	0	5	0	0	5	0	2	14	3	16	24
7:00 AM	0	2	0	1	2	0	9	0	0	9	0	1	23	0	24	35
7:15 AM	0	5	2	0	7	0	12	0	0	12	0	1	14	2	15	34
7:30 AM	0	3	2	0	5	0	11	0	0	11	0	0	14	1	14	30
Total	0	13	4	2	17	0	37	0	0	37	0	4	65	6	69	123
Approach %	0.0	76.5	23.5	-	-	0.0	100.0	0.0	-	-	0.0	5.8	94.2	-	-	-
Total %	0.0	10.6	3.3	-	13.8	0.0	30.1	0.0	-	30.1	0.0	3.3	52.8	-	56.1	-
PHF	0.000	0.650	0.500	-	0.607	0.000	0.771	0.000	-	0.771	0.000	0.500	0.707	-	0.719	0.879
Lights	0	13	4	-	17	0	32	0	-	32	0	4	62	-	66	115
% Lights	-	100.0	100.0	-	100.0	-	86.5	-	-	86.5	-	100.0	95.4	-	95.7	93.5
Mediums	0	0	0	-	0	0	5	0	-	5	0	0	3	-	3	8
% Mediums	-	0.0	0.0	-	0.0	-	13.5	-	-	13.5	-	0.0	4.6	-	4.3	6.5
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	-	-	-	-	0.0	-	-	-
Pedestrians	-	-	-	2	-	-	-	-	0	-	-	-	6	-	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	100.0	-	-	-

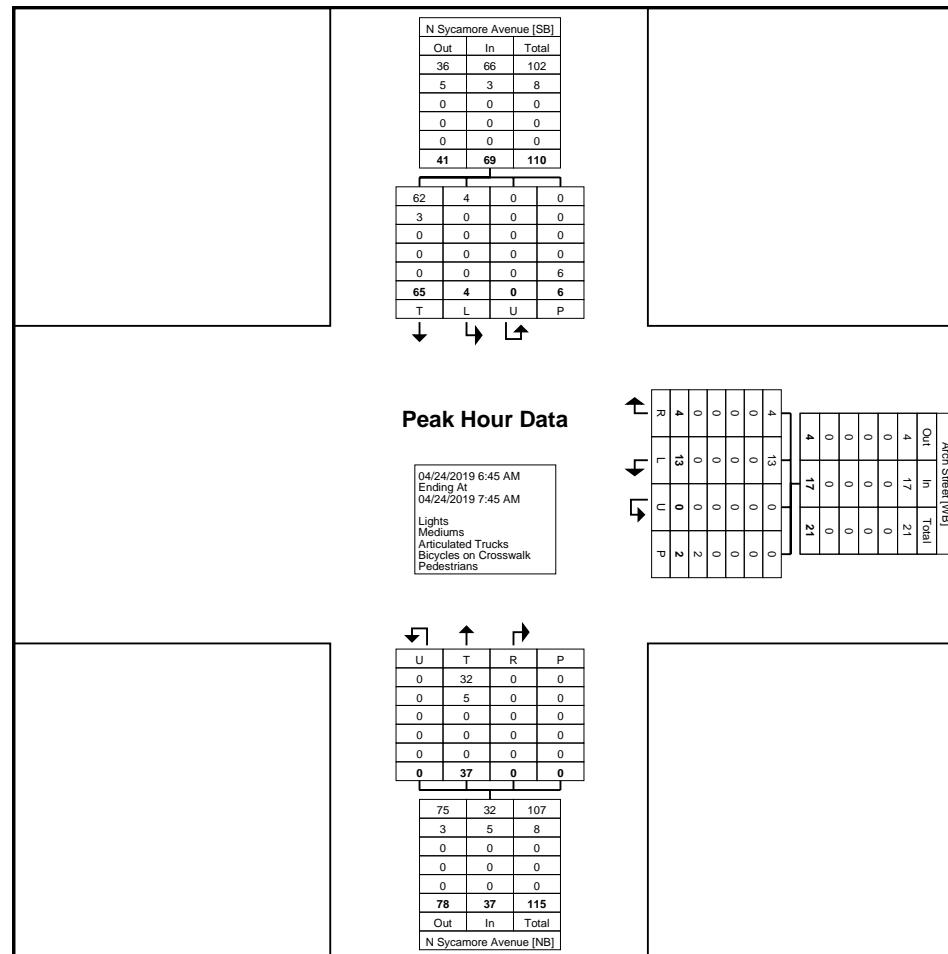


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Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
Street
Site Code: 6
Start Date: 04/24/2019
Page No: 5



Turning Movement Peak Hour Data Plot (6:45 AM)



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Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
 Street
 Site Code: 6
 Start Date: 04/24/2019
 Page No: 6

Turning Movement Peak Hour Data (5:15 PM)

Start Time	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
5:15 PM	0	3	1	4	4	0	18	0	1	18	0	1	22	0	23	45
5:30 PM	0	2	0	0	2	0	16	0	0	16	0	1	21	1	22	40
5:45 PM	0	1	0	1	1	0	13	2	0	15	0	0	20	1	20	36
6:00 PM	0	2	0	0	2	0	15	0	0	15	0	0	13	0	13	30
Total	0	8	1	5	9	0	62	2	1	64	0	2	76	2	78	151
Approach %	0.0	88.9	11.1	-	-	0.0	96.9	3.1	-	-	0.0	2.6	97.4	-	-	-
Total %	0.0	5.3	0.7	-	6.0	0.0	41.1	1.3	-	42.4	0.0	1.3	50.3	-	51.7	-
PHF	0.000	0.667	0.250	-	0.563	0.000	0.861	0.250	-	0.889	0.000	0.500	0.864	-	0.848	0.839
Lights	0	8	1	-	9	0	61	2	-	63	0	2	75	-	77	149
% Lights	-	100.0	100.0	-	100.0	-	98.4	100.0	-	98.4	-	100.0	98.7	-	98.7	98.7
Mediums	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Mediums	-	0.0	0.0	-	0.0	-	1.6	0.0	-	1.6	-	0.0	0.0	-	0.0	0.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	1	-	1	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	1.3	-	1.3	0.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	-	-	-	0.0	-	-	-	0.0	-	-	-
Pedestrians	-	-	-	5	-	-	-	-	1	-	-	-	2	-	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-	-

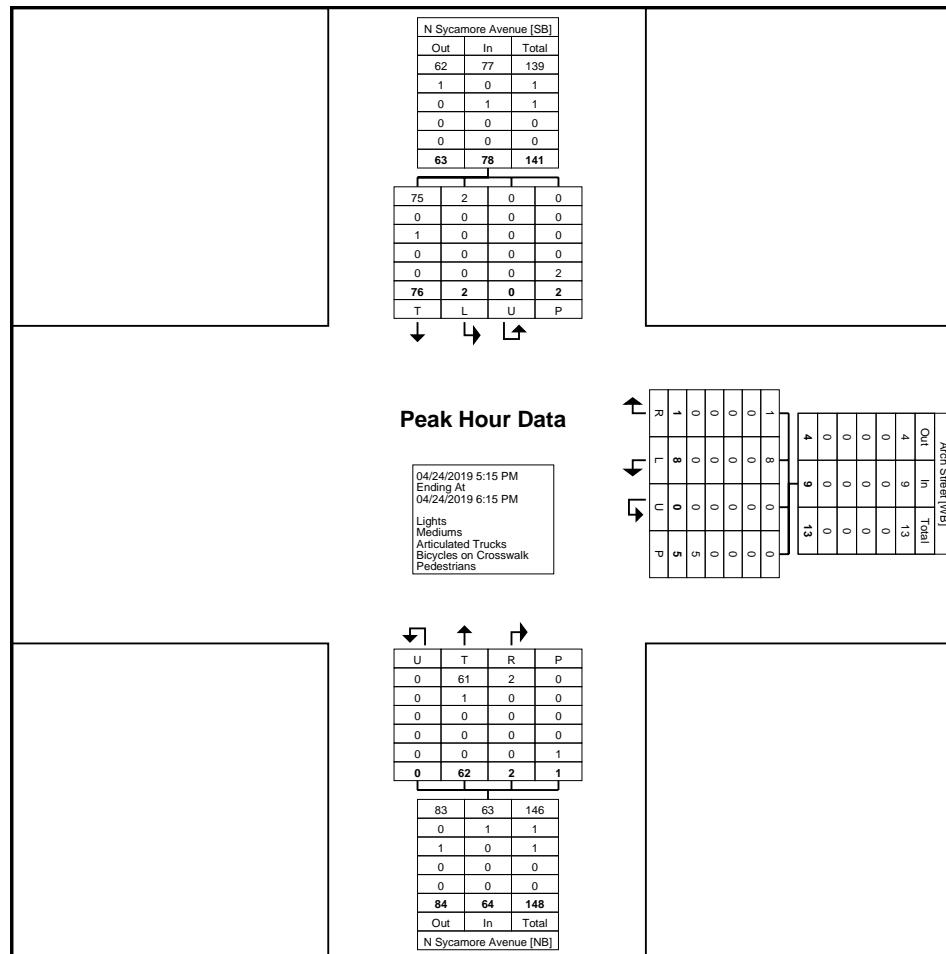


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Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.931718, -75.300605

Count Name: 6. N Sycamore Avenue & Arch
 Street
 Site Code: 6
 Start Date: 04/24/2019
 Page No: 7



Turning Movement Peak Hour Data Plot (5:15 PM)



Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.931718, -75.300605

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Count Name: 6. N Sycamore Avenue & Arch
Street
Site Code: 6
Start Date: 04/24/2019
Page No: 8

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					
Time	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	Int
2019-04-24 6:30AM	2	0	0	2	1	3	1	0	4	0	0	8	0	8	0	14
6:45AM	3	0	0	3	1	5	0	0	5	0	2	14	0	16	3	24
Hourly Total	5	0	0	5	2	8	1	0	9	0	2	22	0	24	3	38
7:00AM	2	0	0	2	1	9	0	0	9	0	1	23	0	24	0	35
7:15AM	5	2	0	7	0	12	0	0	12	0	1	14	0	15	2	34
7:30AM	3	2	0	5	0	11	0	0	11	0	0	14	0	14	1	30
7:45AM	4	0	0	4	0	8	0	0	8	0	1	11	0	12	0	24
Hourly Total	14	4	0	18	1	40	0	0	40	0	3	62	0	65	3	123
8:00AM	1	1	0	2	1	13	0	0	13	0	0	17	0	17	1	32
8:15AM	2	0	0	2	2	8	0	0	8	0	1	11	0	12	3	22
8:30AM	3	1	0	4	0	11	0	0	11	0	0	9	0	9	0	24
8:45AM	1	0	0	1	1	6	0	0	6	0	0	8	0	8	0	15
Hourly Total	7	2	0	9	4	38	0	0	38	0	1	45	0	46	4	93
9:00AM	4	0	0	4	1	12	1	0	13	0	0	11	0	11	0	28
9:15AM	2	0	0	2	0	4	0	0	4	0	1	11	0	12	0	18
9:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	6	0	0	6	1	16	1	0	17	0	1	22	0	23	0	46
2:30PM	3	0	0	3	0	12	0	0	12	0	2	7	0	9	0	24
2:45PM	3	2	0	5	0	16	3	0	19	0	2	5	0	7	0	31
Hourly Total	6	2	0	8	0	28	3	0	31	0	4	12	0	16	0	55
3:00PM	0	0	0	0	1	14	1	0	15	2	0	14	0	14	0	29
3:15PM	1	0	0	1	0	19	1	0	20	4	1	20	0	21	3	42
3:30PM	0	1	0	1	0	19	1	0	20	0	1	13	0	14	1	35
3:45PM	3	0	0	3	1	12	1	0	13	1	3	18	0	21	0	37
Hourly Total	4	1	0	5	2	64	4	0	68	7	5	65	0	70	4	143
4:00PM	1	0	0	1	0	12	0	0	12	8	1	12	0	13	0	26
4:15PM	3	0	0	3	1	10	1	0	11	1	0	12	0	12	2	26
4:30PM	3	3	0	6	0	13	1	0	14	0	2	8	0	10	1	30
4:45PM	4	1	0	5	1	11	0	0	11	0	1	20	0	21	0	37
Hourly Total	11	4	0	15	2	46	2	0	48	9	4	52	0	56	3	119
5:00PM	2	0	0	2	0	12	0	0	12	0	0	10	0	10	0	24
5:15PM	3	1	0	4	4	18	0	0	18	1	1	22	0	23	0	45
5:30PM	2	0	0	2	0	16	0	0	16	0	1	21	0	22	1	40
5:45PM	1	0	0	1	1	13	2	0	15	0	0	20	0	20	1	36
Hourly Total	8	1	0	9	5	59	2	0	61	1	2	73	0	75	2	145
6:00PM	2	0	0	2	0	15	0	0	15	0	0	13	0	13	0	30
6:15PM	3	1	0	4	0	18	1	0	19	0	0	17	0	17	0	40
Hourly Total	5	1	0	6	0	33	1	0	34	0	0	30	0	30	0	70
Total	66	15	0	81	17	332	14	0	346	17	22	383	0	405	19	832
% Approach	81.5%	18.5%	0%	-	-	96.0%	4.0%	0%	-	-	5.4%	94.6%	0%	-	-	-
% Total	7.9%	1.8%	0%	9.7%	-	39.9%	1.7%	0%	41.6%	-	2.6%	46.0%	0%	48.7%	-	-
Lights	65	13	0	78	-	311	14	0	325	-	21	366	0	387	-	790
% Lights	98.5%	86.7%	0%	96.3%	-	93.7%	100%	0%	93.9%	-	95.5%	95.6%	0%	95.6%	-	95.0%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	1	0	1	-	1
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0.3%	0%	0.2%	-	0.1%
Buses and Single-Unit Trucks	1	2	0	3	-	21	0	0	21	-	1	16	0	17	-	41
% Buses and Single-Unit Trucks	1.5%	13.3%	0%	3.7%	-	6.3%	0%	0%	6.1%	-	4.5%	4.2%	0%	4.2%	-	4.9%
Pedestrians	-	-	-	-	17	-	-	-	-	17	-	-	-	-	19	
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

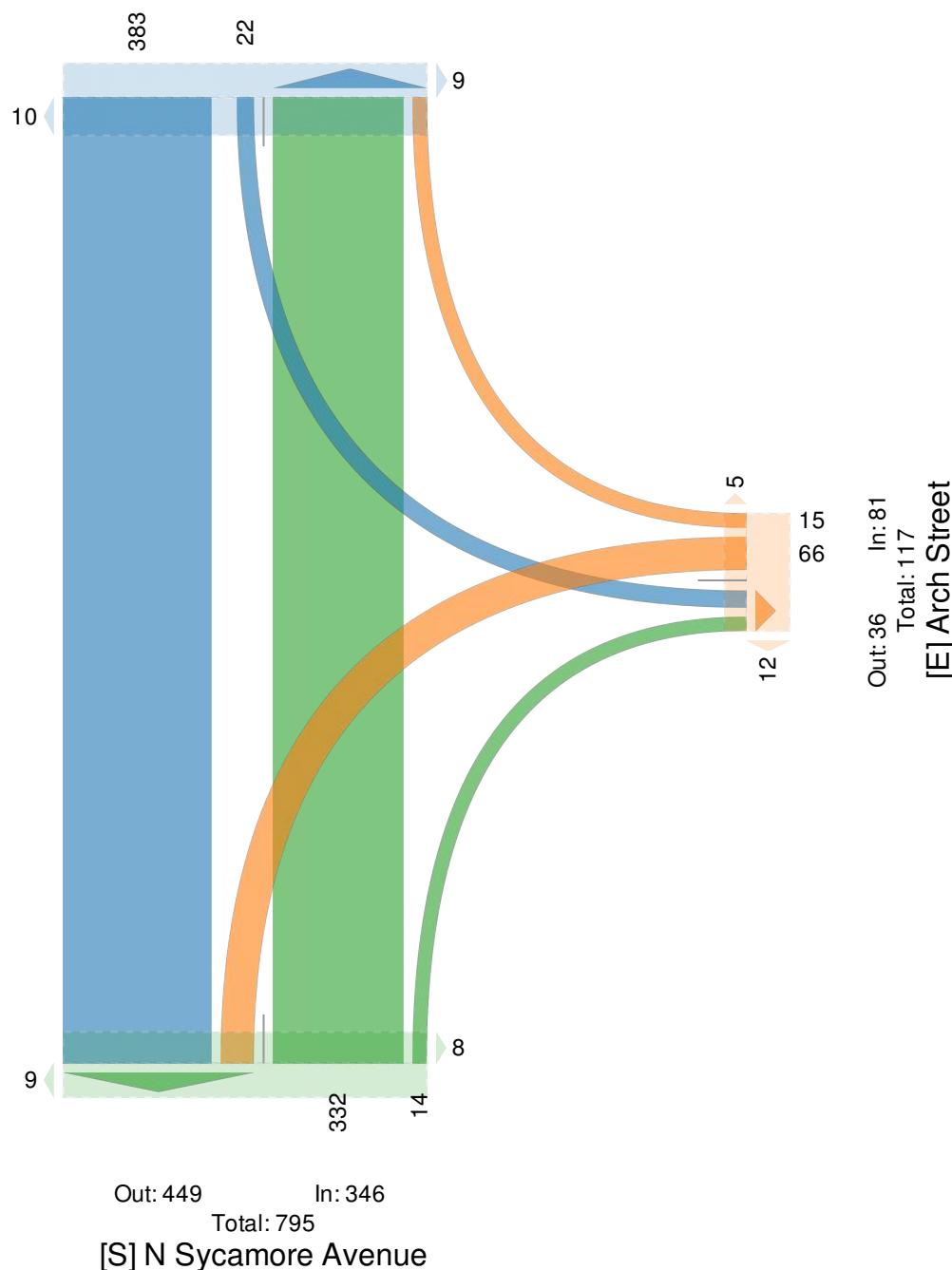
Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 752

In: 405

Out: 347



[S] N Sycamore Avenue

Out: 449 In: 346

Total: 795

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

AM Peak (6:45 AM - 7:45 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					
Time	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	Int
2019-04-24 6:45AM	3	0	0	3	1	5	0	0	5	0	2	14	0	16	3	24
7:00AM	2	0	0	2	1	9	0	0	9	0	1	23	0	24	0	35
7:15AM	5	2	0	7	0	12	0	0	12	0	1	14	0	15	2	34
7:30AM	3	2	0	5	0	11	0	0	11	0	0	14	0	14	1	30
Total	13	4	0	17	2	37	0	0	37	0	4	65	0	69	6	123
% Approach	76.5%	23.5%	0%	-	-	100%	0%	0%	-	-	5.8%	94.2%	0%	-	-	-
% Total	10.6%	3.3%	0%	13.8%	-	30.1%	0%	0%	30.1%	-	3.3%	52.8%	0%	56.1%	-	-
PHF	0.650	0.500	-	0.607	-	0.771	-	-	0.771	-	0.500	0.707	-	0.719	-	0.879
Lights	13	4	0	17	-	32	0	0	32	-	4	62	0	66	-	115
% Lights	100%	100%	0%	100%	-	86.5%	0%	0%	86.5%	-	100%	95.4%	0%	95.7%	-	93.5%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	-	5	0	0	5	-	0	3	0	3	-	8
% Buses and Single-Unit Trucks	0%	0%	0%	0%	-	13.5%	0%	0%	13.5%	-	0%	4.6%	0%	4.3%	-	6.5%
Pedestrians	-	-	-	-	2	-	-	-	-	0	-	-	-	-	-	6
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

AM Peak (6:45 AM - 7:45 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

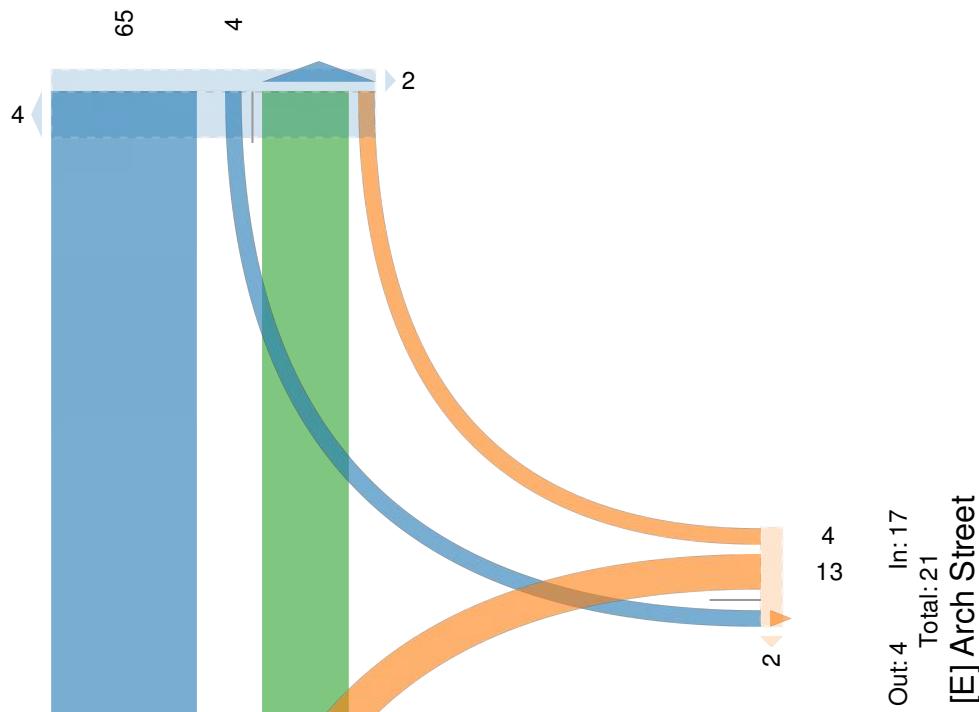
Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 110

In: 69

Out: 41



[S] N Sycamore Avenue

Out: 78

In: 37

Total: 115

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

PM Peak (5:15 PM - 6:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

Leg Direction	Arch Street Westbound					N Sycamore Avenue Northbound					N Sycamore Avenue Southbound					
Time	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	Int
2019-04-24 5:15PM	3	1	0	4	4	18	0	0	18	1	1	22	0	23	0	45
5:30PM	2	0	0	2	0	16	0	0	16	0	1	21	0	22	1	40
5:45PM	1	0	0	1	1	13	2	0	15	0	0	20	0	20	1	36
6:00PM	2	0	0	2	0	15	0	0	15	0	0	13	0	13	0	30
Total	8	1	0	9	5	62	2	0	64	1	2	76	0	78	2	151
% Approach	88.9%	11.1%	0%	-	-	96.9%	3.1%	0%	-	-	2.6%	97.4%	0%	-	-	-
% Total	5.3%	0.7%	0%	6.0%	-	41.1%	1.3%	0%	42.4%	-	1.3%	50.3%	0%	51.7%	-	-
PHF	0.667	0.250	-	0.563	-	0.861	0.250	-	0.889	-	0.500	0.864	-	0.848	-	0.839
Lights	8	1	0	9	-	61	2	0	63	-	2	75	0	77	-	149
% Lights	100%	100%	0%	100%	-	98.4%	100%	0%	98.4%	-	100%	98.7%	0%	98.7%	-	98.7%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	1	0	1	-	1
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	1.3%	0%	1.3%	-	0.7%
Buses and Single-Unit Trucks	0	0	0	0	-	1	0	0	1	-	0	0	0	0	-	1
% Buses and Single-Unit Trucks	0%	0%	0%	0%	-	1.6%	0%	0%	1.6%	-	0%	0%	0%	0%	-	0.7%
Pedestrians	-	-	-	-	5	-	-	-	-	1	-	-	-	-	2	
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

6. N Sycamore Avenue & Arch Street - TMC

Wed Apr 24, 2019

PM Peak (5:15 PM - 6:15 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646360, Location: 39.931718, -75.300605, Site Code: 6

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

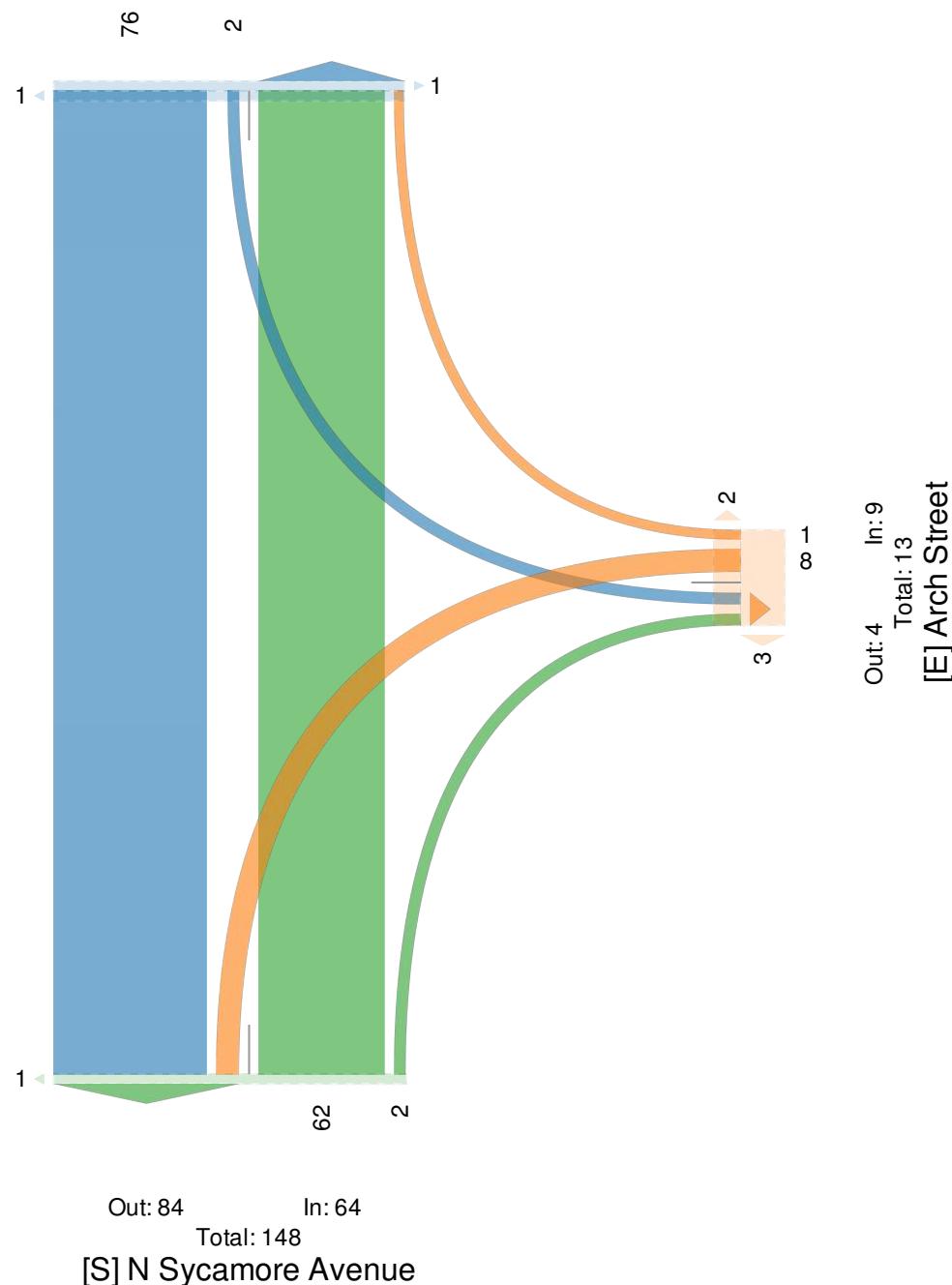
Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 141

In: 78

Out: 63



7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

 Provided by: Imperial Traffic & Data Collection
 PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound						E Wyncliffe Avenue Westbound						N Sycamore Avenue Northbound						N Sycamore Avenue Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2019-04-24 6:30AM	0	2	2	0	4	1	0	1	2	0	3	1	0	4	0	0	4	0	1	6	0	0	7	1	18
6:45AM	3	1	4	0	8	0	1	2	5	0	8	0	0	6	0	0	6	2	0	10	1	0	11	0	33
Hourly Total	3	3	6	0	12	1	1	3	7	0	11	1	0	10	0	0	10	2	1	16	1	0	18	1	51
7:00AM	1	0	2	0	3	0	1	3	3	0	7	0	0	9	0	0	9	2	2	21	2	0	25	0	44
7:15AM	1	3	4	0	8	1	0	6	5	0	11	2	1	15	1	0	17	2	1	10	1	0	12	0	48
7:30AM	0	3	0	0	3	2	0	4	8	0	12	0	2	12	0	0	14	0	2	12	0	0	14	3	43
7:45AM	4	1	3	0	8	0	0	4	5	0	9	0	1	7	0	0	8	0	1	8	0	0	9	0	34
Hourly Total	6	7	9	0	22	3	1	17	21	0	39	2	4	43	1	0	48	4	6	51	3	0	60	3	169
8:00AM	2	1	4	0	7	0	0	5	1	0	6	1	1	14	0	0	15	0	1	12	0	0	13	0	41
8:15AM	1	1	2	0	4	0	2	6	2	0	10	1	0	7	0	0	7	0	1	7	3	0	11	0	32
8:30AM	0	3	1	0	4	0	1	1	0	0	2	0	3	8	1	0	12	0	2	6	6	0	14	1	32
8:45AM	0	1	0	0	1	0	1	3	3	0	7	0	1	5	0	0	6	0	1	7	1	0	9	0	23
Hourly Total	3	6	7	0	16	0	4	15	6	0	25	2	5	34	1	0	40	0	5	32	10	0	47	1	128
9:00AM	2	3	0	0	5	0	0	3	4	0	7	0	1	10	1	0	12	0	1	11	0	0	12	0	36
9:15AM	0	0	0	0	0	0	0	0	3	0	3	0	2	3	0	0	5	0	1	12	0	0	13	0	21
Hourly Total	2	3	0	0	5	0	0	3	7	0	10	0	3	13	1	0	17	0	2	23	0	0	25	0	57
2:30PM	1	3	2	0	6	0	0	3	3	0	6	0	3	9	1	0	13	0	0	7	1	0	8	1	33
2:45PM	0	0	1	0	1	0	0	2	3	0	5	0	4	13	1	0	18	0	1	6	1	0	8	0	32
Hourly Total	1	3	3	0	7	0	0	5	6	0	11	0	7	22	2	0	31	0	1	13	2	0	16	1	65
3:00PM	3	1	2	0	6	0	0	8	7	0	15	0	5	10	0	0	15	0	2	12	1	0	15	0	51
3:15PM	5	0	4	0	9	0	0	5	2	0	7	0	2	15	2	0	19	0	4	15	1	0	20	0	55
3:30PM	1	4	2	0	7	1	2	9	4	0	15	0	8	13	0	0	21	2	2	12	2	0	16	2	59
3:45PM	1	3	3	0	7	0	0	6	5	0	11	0	1	10	0	0	11	0	1	16	3	0	20	0	49
Hourly Total	10	8	11	0	29	1	2	28	18	0	48	0	16	48	2	0	66	2	9	55	7	0	71	2	214
4:00PM	1	0	0	0	1	1	0	3	6	0	9	0	3	8	1	0	12	0	3	13	2	0	18	1	40
4:15PM	0	2	1	0	3	0	0	3	6	0	9	3	0	8	1	0	9	0	5	12	0	0	17	0	38
4:30PM	3	1	3	0	7	0	0	1	3	0	4	0	2	11	3	0	16	0	4	7	3	0	14	0	41
4:45PM	5	2	3	0	10	1	0	8	3	0	11	0	2	10	0	0	12	1	3	17	3	0	23	0	56
Hourly Total	9	5	7	0	21	2	0	15	18	0	33	3	7	37	5	0	49	1	15	49	8	0	72	1	175
5:00PM	1	4	2	1	8	5	0	6	4	0	10	0	1	8	1	0	10	0	6	9	1	0	16	2	44
5:15PM	0	5	1	0	6	0	0	6	6	0	12	3	1	19	0	0	20	1	3	19	3	0	25	0	63
5:30PM	1	5	2	1	9	1	0	5	9	0	14	0	1	12	1	0	14	2	3	17	2	0	22	1	59
5:45PM	1	3	2	0	6	0	0	3	1	0	4	0	4	7	2	0	13	0	4	15	6	0	25	0	48
Hourly Total	3	17	7	2	29	6	0	20	20	0	40	3	7	46	4	0	57	3	16	60	12	0	88	3	214
6:00PM	1	6	4	0	11	3	0	8	4	0	12	0	1	13	0	0	14	2	0	9	1	0	10	3	47
6:15PM	2	4	2	0	8	0	0	1	4	0	5	0	3	13	1	0	17	0	2	14	1	0	17	2	47
Hourly Total	3	10	6	0	19	3	0	9	8	0	17	0	4	26	1	0	31	2	2	23	2	0	27	5	94
Total	40	62	56	2	160	16	8	115	111	0	234	11	53	279	17	0	349	14	57	322	45	0	424	17	1167
% Approach	25.0%	38.8%	35.0%	1.3%	-	-	3.4%	49.1%	47.4%	0%	-	-	15.2%	79.9%	4.9%	0%	-	-	13.4%	75.9%	10.6%	0%	-	-	-
% Total	3.4%	5.3%	4.8%	0.2%	13.7%	-	0.7%	9.9%	9.5%	0%	20.1%	-	4.5%	23.9%	1.5%	0%	29.9%	-	4.9%	27.6%	3.9%	0%	36.3%	-	-
Lights	39	61	52	2	154	-	7	114	108	0	229	-	49	263	16	0	328	-	57	310	40	0	407	-	1118
% Lights	97.5%	98.4%	92.9%	100%	96.3%	-	87.5%	99.1%	97.3%	0%	97.9%	-	92.5%	94.3%	94.1%	0%	94.0%	-	100%	96.3%	88.9%	0%	96.0%	-	95.8%
Articulated Trucks	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0
% Articulated Trucks	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%
Buses and Single-Unit Trucks	1	1	4	0	6	-	1	1	3	0	5	-	4	16	1	0	21	-	0	12	5	0	17	-	49
% Buses and Single-Unit Trucks	2.5%	1.6%	7.1%	0%	3.8%	-	12.5%	0.9%	2.7%	0%	2.1%	-	7.5%	5.7%	5.9%	0%	6.0%	-	0%	3.7%	11.1%	0%	4.0%	-	4.2%
Pedestrians	-	-	-	-	-	16	-	-	-	-	11	-	-	-	-	-	-	14	-	-	-	-	-	17	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-	0%	-	-	-	-	-	0%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

Full Length (6:30 AM-9:30 AM, 2:30 PM-6:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

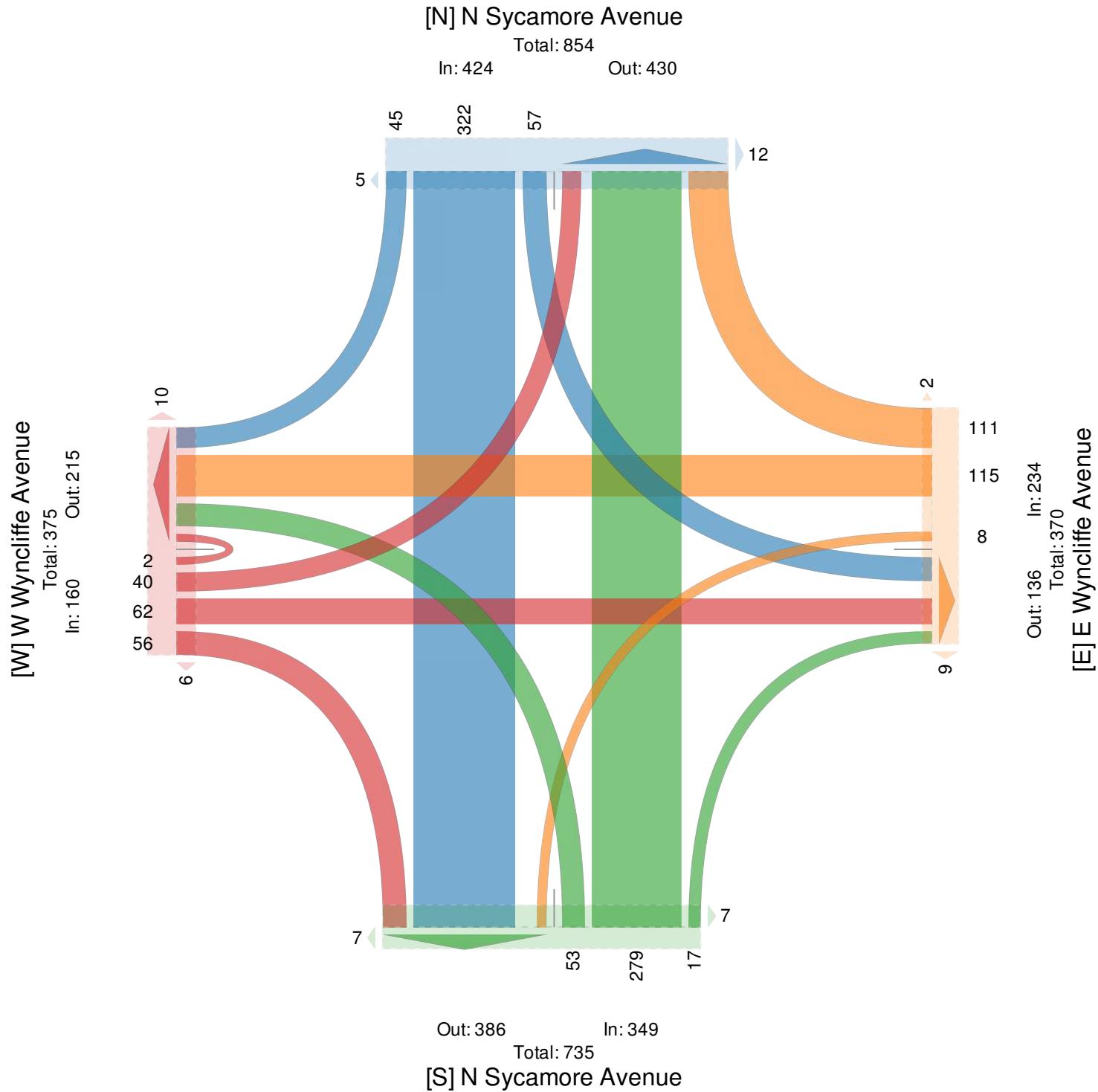
ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US



7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

 Provided by: Imperial Traffic & Data Collection
 PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound						E Wyncliffe Avenue Westbound						N Sycamore Avenue Northbound						N Sycamore Avenue Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2019-04-24 7:00AM	1	0	2	0	3	0	1	3	3	0	7	0	0	9	0	0	9	2	2	21	2	0	25	0	44
7:15AM	1	3	4	0	8	1	0	6	5	0	11	2	1	15	1	0	17	2	1	10	1	0	12	0	48
7:30AM	0	3	0	0	3	2	0	4	8	0	12	0	2	12	0	0	14	0	2	12	0	0	14	3	43
7:45AM	4	1	3	0	8	0	0	4	5	0	9	0	1	7	0	0	8	0	1	8	0	0	9	0	34
Total	6	7	9	0	22	3	1	17	21	0	39	2	4	43	1	0	48	4	6	51	3	0	60	3	169
% Approach	27.3%	31.8%	40.9%	0%	-	-	2.6%	43.6%	53.8%	0%	-	-	8.3%	89.6%	2.1%	0%	-	-	10.0%	85.0%	5.0%	0%	-	-	-
% Total	3.6%	4.1%	5.3%	0%	13.0%	-	0.6%	10.1%	12.4%	0%	23.1%	-	2.4%	25.4%	0.6%	0%	28.4%	%	3.6%	30.2%	1.8%	0%	35.5%	-	-
PHF	0.375	0.583	0.563	-	0.688	-	0.250	0.708	0.656	-	0.813	-	0.500	0.717	0.250	-	0.706	-	0.750	0.607	0.375	-	0.600	-	0.880
Lights	6	7	9	0	22	-	1	16	21	0	38	-	4	40	0	0	44	-	6	47	2	0	55	-	159
% Lights	100%	100%	100%	0%	100%	-	100%	94.1%	100%	0%	97.4%	-	100%	93.0%	0%	0%	91.7%	-	100%	92.2%	66.7%	0%	91.7%	-	94.1%
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	0	0	0	0	0	1	0	0	1	-	0	3	1	0	4	-	0	4	1	0	5	-	10
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	0%	5.9%	0%	0%	2.6%	-	0%	7.0%	100%	0%	8.3%	-	0%	7.8%	33.3%	0%	8.3%	-	5.9%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

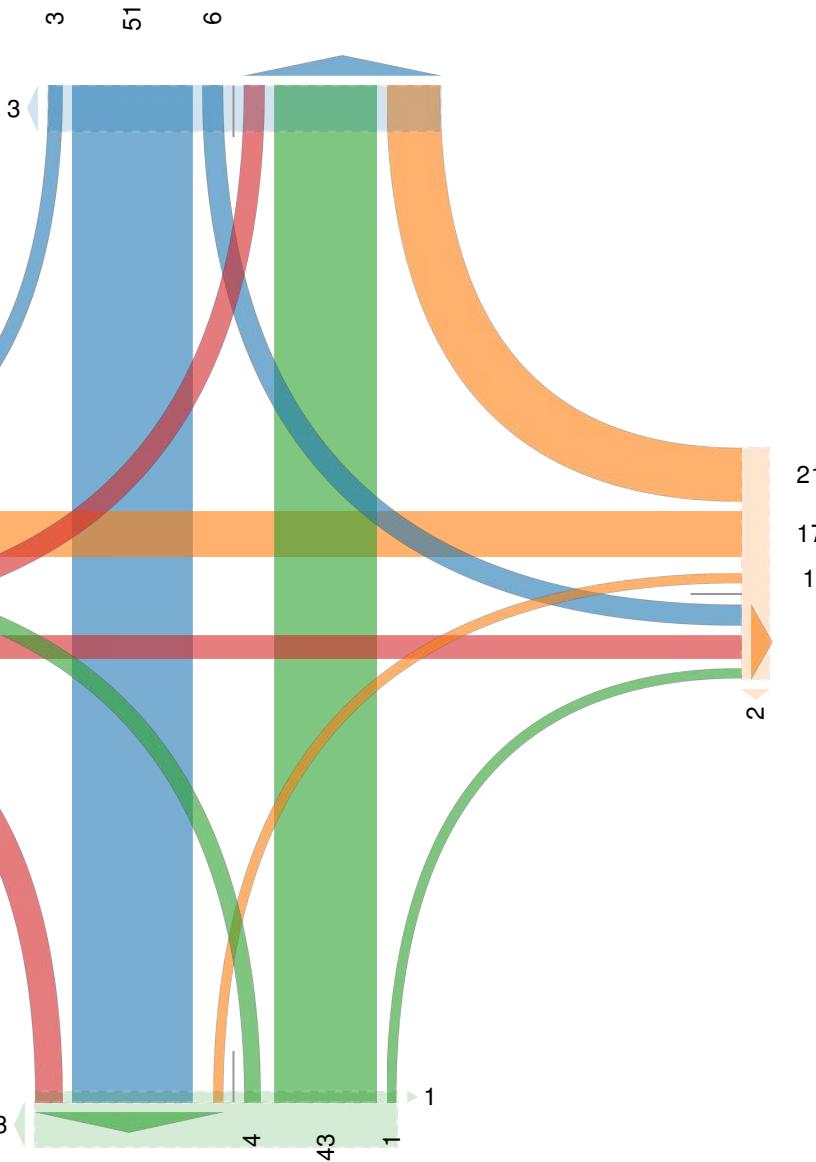
Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 130

In: 60

Out: 70



7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

 Provided by: Imperial Traffic & Data Collection
 PO Box 4637, Cherry Hill, NJ, 08003, US

Leg Direction	W Wyncliffe Avenue Eastbound						E Wyncliffe Avenue Westbound						N Sycamore Avenue Northbound						N Sycamore Avenue Southbound							
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int	
2019-04-24 4:45PM	5	2	3	0	10	1	0	8	3	0	11	0	2	10	0	0	12	1	3	17	3	0	23	0	56	
5:00PM	1	4	2	1	8	5	0	6	4	0	10	0	1	8	1	0	10	0	6	9	1	0	16	2	44	
5:15PM	0	5	1	0	6	0	0	6	6	0	12	3	1	19	0	0	20	1	3	19	3	0	25	0	63	
5:30PM	1	5	2	1	9	1	0	5	9	0	14	0	1	12	1	0	14	2	3	17	2	0	22	1	59	
Total	7	16	8	2	33	7	0	25	22	0	47	3	5	49	2	0	56	4	15	62	9	0	86	3	222	
% Approach	21.2%	48.5%	24.2%	6.1%	-	-	0%	53.2%	46.8%	0%	-	-	8.9%	87.5%	3.6%	0%	-	-	17.4%	72.1%	10.5%	0%	-	-	-	
% Total	3.2%	7.2%	3.6%	0.9%	14.9%	-	0%	11.3%	9.9%	0%	21.2%	-	2.3%	22.1%	0.9%	0%	25.2%	-	6.8%	27.9%	4.1%	0%	38.7%	-	-	
PHF	0.350	0.800	0.667	0.500	0.825	-	-	0.781	0.611	-	0.839	-	0.625	0.645	0.500	-	0.700	-	0.625	0.816	0.750	-	0.860	-	0.881	
Lights	7	16	8	2	33	-	0	25	22	0	47	-	4	48	2	0	54	-	15	61	8	0	84	-	218	
% Lights	100%	100%	100%	100%	100%	-	0%	100%	100%	0%	100%	-	80.0%	98.0%	100%	0%	96.4%	-	100%	98.4%	88.9%	0%	97.7%	-	98.2%	
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	
Buses and Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	1	1	0	0	2	-	0	1	1	0	2	-	4	
% Buses and Single-Unit Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	20.0%	2.0%	0%	0%	3.6%	-	0%	1.6%	11.1%	0%	2.3%	-	1.8%	
Pedestrians	-	-	-	-	-	-	7	-	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

7. N Sycamore Avenue & W Wyncliffe Avenue/E ... - TMC

Wed Apr 24, 2019

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 646366, Location: 39.932859, -75.301075, Site Code: 7

Provided by: Imperial Traffic & Data

Collection

PO Box 4637,

Cherry Hill, NJ, 08003, US

[N] N Sycamore Avenue

Total: 164

In: 86

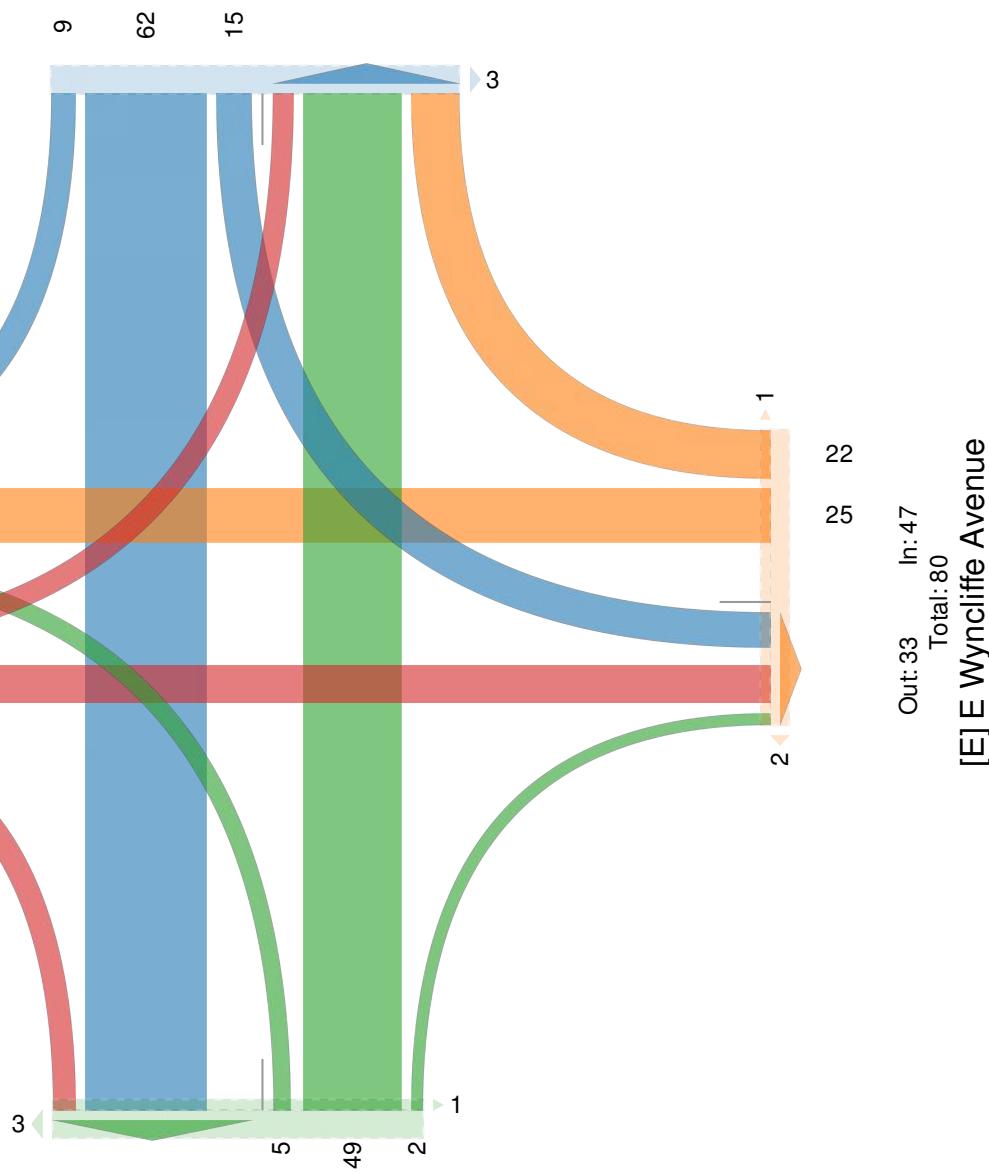
Out: 78

[W] W Wyncliffe Avenue

Total: 74

In: 33

Out: 41



[S] N Sycamore Avenue

Total: 126

In: 56

Out: 70



Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 iklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
 Wyncliffe Avenue/E Wyncliffe Avenue
 Site Code: 7
 Start Date: 04/24/2019
 Page No: 1

Turning Movement Data

Start Time	W Wyncliffe Avenue						E Wyncliffe Avenue						N Sycamore Avenue						N Sycamore Avenue						Int. Total
	Eastbound			Westbound			Northbound			Southbound															
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
6:30 AM	0	0	2	2	1	4	0	0	1	2	1	3	0	0	4	0	0	4	0	1	6	0	1	7	18
6:45 AM	0	3	1	4	0	8	0	1	2	5	0	8	0	0	6	0	2	6	0	0	10	1	0	11	33
Hourly Total	0	3	3	6	1	12	0	1	3	7	1	11	0	0	10	0	2	10	0	1	16	1	1	18	51
7:00 AM	0	1	0	2	0	3	0	1	3	3	0	7	0	0	9	0	2	9	0	2	21	2	0	25	44
7:15 AM	0	1	3	4	1	8	0	0	6	5	2	11	0	1	15	1	2	17	0	1	10	1	0	12	48
7:30 AM	0	0	3	0	2	3	0	0	4	8	0	12	0	2	12	0	0	14	0	2	12	0	3	14	43
7:45 AM	0	4	1	3	0	8	0	0	4	5	0	9	0	1	7	0	0	8	0	1	8	0	0	9	34
Hourly Total	0	6	7	9	3	22	0	1	17	21	2	39	0	4	43	1	4	48	0	6	51	3	3	60	169
8:00 AM	0	2	1	4	0	7	0	0	5	1	1	6	0	1	14	0	0	15	0	1	12	0	0	13	41
8:15 AM	0	1	1	2	0	4	0	2	6	2	1	10	0	0	7	0	0	7	0	1	7	3	0	11	32
8:30 AM	0	0	3	1	0	4	0	1	1	0	0	2	0	3	8	1	0	12	0	2	6	6	1	14	32
8:45 AM	0	0	1	0	0	1	0	1	3	3	0	7	0	1	5	0	0	6	0	1	7	1	0	9	23
Hourly Total	0	3	6	7	0	16	0	4	15	6	2	25	0	5	34	1	0	40	0	5	32	10	1	47	128
9:00 AM	0	2	3	0	0	5	0	0	3	4	0	7	0	1	10	1	0	12	0	1	11	0	0	12	36
9:15 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	2	3	0	0	5	0	1	12	0	0	13	21
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hourly Total	0	2	3	0	0	5	0	0	3	7	0	10	0	3	13	1	0	17	0	2	23	0	0	25	57
2:30 PM	0	1	3	2	0	6	0	0	3	3	0	6	0	3	9	1	0	13	0	0	7	1	1	8	33
2:45 PM	0	0	0	1	0	1	0	0	2	3	0	5	0	4	13	1	0	18	0	1	6	1	0	8	32
Hourly Total	0	1	3	3	0	7	0	0	5	6	0	11	0	7	22	2	0	31	0	1	13	2	1	16	65
3:00 PM	0	3	1	2	0	6	0	0	8	7	0	15	0	5	10	0	0	15	0	2	12	1	0	15	51
3:15 PM	0	5	0	4	0	9	0	0	5	2	0	7	0	2	15	2	0	19	0	4	15	1	0	20	55
3:30 PM	0	1	4	2	1	7	0	2	9	4	0	15	0	8	13	0	2	21	0	2	12	2	2	16	59
3:45 PM	0	1	3	3	0	7	0	0	6	5	0	11	0	1	10	0	0	11	0	1	16	3	0	20	49
Hourly Total	0	10	8	11	1	29	0	2	28	18	0	48	0	16	48	2	2	66	0	9	55	7	2	71	214
4:00 PM	0	1	0	0	1	1	0	0	3	6	0	9	0	3	8	1	0	12	0	3	13	2	1	18	40
4:15 PM	0	0	2	1	0	3	0	0	3	6	3	9	0	0	8	1	0	9	0	5	12	0	0	17	38
4:30 PM	0	3	1	3	0	7	0	0	1	3	0	4	0	2	11	3	0	16	0	4	7	3	0	14	41
4:45 PM	0	5	2	3	1	10	0	0	8	3	0	11	0	2	10	0	1	12	0	3	17	3	0	23	56
Hourly Total	0	9	5	7	2	21	0	0	15	18	3	33	0	7	37	5	1	49	0	15	49	8	1	72	175
5:00 PM	1	1	4	2	5	8	0	0	6	4	0	10	0	1	8	1	0	10	0	6	9	1	2	16	44
5:15 PM	0	0	5	1	0	6	0	0	6	6	3	12	0	1	19	0	1	20	0	3	19	3	0	25	63
5:30 PM	1	1	5	2	1	9	0	0	5	9	0	14	0	1	12	1	2	14	0	3	17	2	1	22	59
5:45 PM	0	1	3	2	0	6	0	0	3	1	0	4	0	4	7	2	0	13	0	4	15	6	0	25	48
Hourly Total	2	3	17	7	6	29	0	0	20	20	3	40	0	7	46	4	3	57	0	16	60	12	3	88	214
6:00 PM	0	1	6	4	3	11	0	0	8	4	0	12	0	1	13	0	2	14	0	0	9	1	3	10	47
6:15 PM	0	2	4	2	0	8	0	0	1	4	0	5	0	3	13	1	0	17	0	2	14	1	2	17	47

Grand Total	2	40	62	56	16	160	0	8	115	111	11	234	0	53	279	17	14	349	0	57	322	45	17	424	1167
Approach %	1.3	25.0	38.8	35.0	-	-	0.0	3.4	49.1	47.4	-	-	0.0	15.2	79.9	4.9	-	-	0.0	13.4	75.9	10.6	-	-	-
Total %	0.2	3.4	5.3	4.8	-	13.7	0.0	0.7	9.9	9.5	-	20.1	0.0	4.5	23.9	1.5	-	29.9	0.0	4.9	27.6	3.9	-	36.3	-
Lights	2	39	61	52	-	154	0	7	114	108	-	229	0	49	263	16	-	328	0	57	310	40	-	407	1118
% Lights	100.0	97.5	98.4	92.9	-	96.3	-	87.5	99.1	97.3	-	97.9	-	92.5	94.3	94.1	-	94.0	-	100.0	96.3	88.9	-	96.0	95.8
Mediums	0	1	1	4	-	6	0	1	1	3	-	5	0	4	16	1	-	21	0	0	12	5	-	17	49
% Mediums	0.0	2.5	1.6	7.1	-	3.8	-	12.5	0.9	2.7	-	2.1	-	7.5	5.7	5.9	-	6.0	-	0.0	3.7	11.1	-	4.0	4.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0	
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	-	16	-	-	-	-	-	11	-	-	-	-	-	14	-	-	-	-	-	17	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



Imperial Traffic & Data Collection

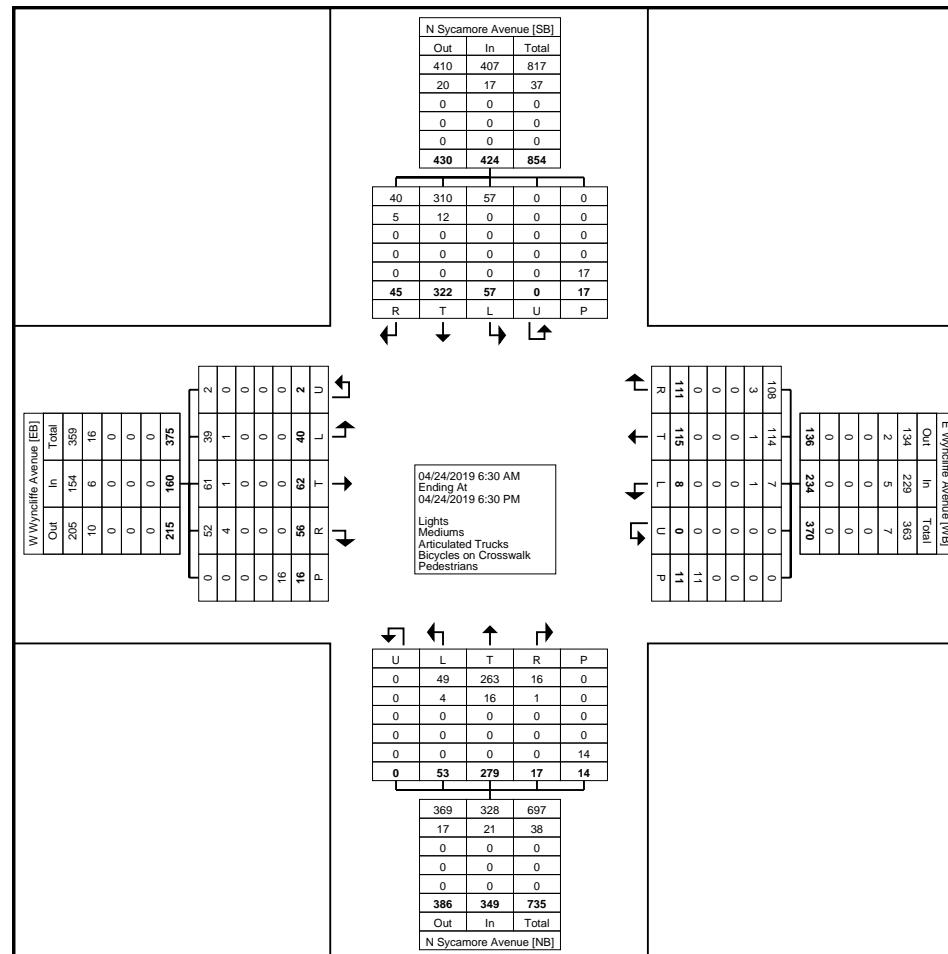
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PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
Wyncliffe Avenue/E Wyncliffe Avenue
Site Code: 7
Start Date: 04/24/2019
Page No: 3



Turning Movement Data Plot



Imperial Traffic & Data Collection
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 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
 Wyncliffe Avenue/E Wyncliffe Avenue
 Site Code: 7
 Start Date: 04/24/2019
 Page No: 4

Turning Movement Peak Hour Data (7:00 AM)

Start Time	W Wyncliffe Avenue						E Wyncliffe Avenue						N Sycamore Avenue						N Sycamore Avenue						Int. Total
	Eastbound						Westbound						Northbound						Southbound						
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
7:00 AM	0	1	0	2	0	3	0	1	3	3	0	7	0	0	9	0	2	9	0	2	21	2	0	25	44
7:15 AM	0	1	3	4	1	8	0	0	6	5	2	11	0	1	15	1	2	17	0	1	10	1	0	12	48
7:30 AM	0	0	3	0	2	3	0	0	4	8	0	12	0	2	12	0	0	14	0	2	12	0	3	14	43
7:45 AM	0	4	1	3	0	8	0	0	4	5	0	9	0	1	7	0	0	8	0	1	8	0	0	9	34
Total	0	6	7	9	3	22	0	1	17	21	2	39	0	4	43	1	4	48	0	6	51	3	3	60	169
Approach %	0.0	27.3	31.8	40.9	-	-	0.0	2.6	43.6	53.8	-	-	0.0	8.3	89.6	2.1	-	-	0.0	10.0	85.0	5.0	-	-	-
Total %	0.0	3.6	4.1	5.3	-	13.0	0.0	0.6	10.1	12.4	-	23.1	0.0	2.4	25.4	0.6	-	28.4	0.0	3.6	30.2	1.8	-	35.5	-
PHF	0.000	0.375	0.583	0.563	-	0.688	0.000	0.250	0.708	0.656	-	0.813	0.000	0.500	0.717	0.250	-	0.706	0.000	0.750	0.607	0.375	-	0.600	0.880
Lights	0	6	7	9	-	22	0	1	16	21	-	38	0	4	40	0	-	44	0	6	47	2	-	55	159
% Lights	-	100.0	100.0	100.0	-	100.0	-	100.0	94.1	100.0	-	97.4	-	100.0	93.0	0.0	-	91.7	-	100.0	92.2	66.7	-	91.7	94.1
Mediums	0	0	0	0	-	0	0	0	1	0	-	1	0	0	3	1	-	4	0	0	4	1	-	5	10
% Mediums	-	0.0	0.0	0.0	-	0.0	-	0.0	5.9	0.0	-	2.6	-	0.0	7.0	100.0	-	8.3	-	0.0	7.8	33.3	-	8.3	5.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	3	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



Imperial Traffic & Data Collection

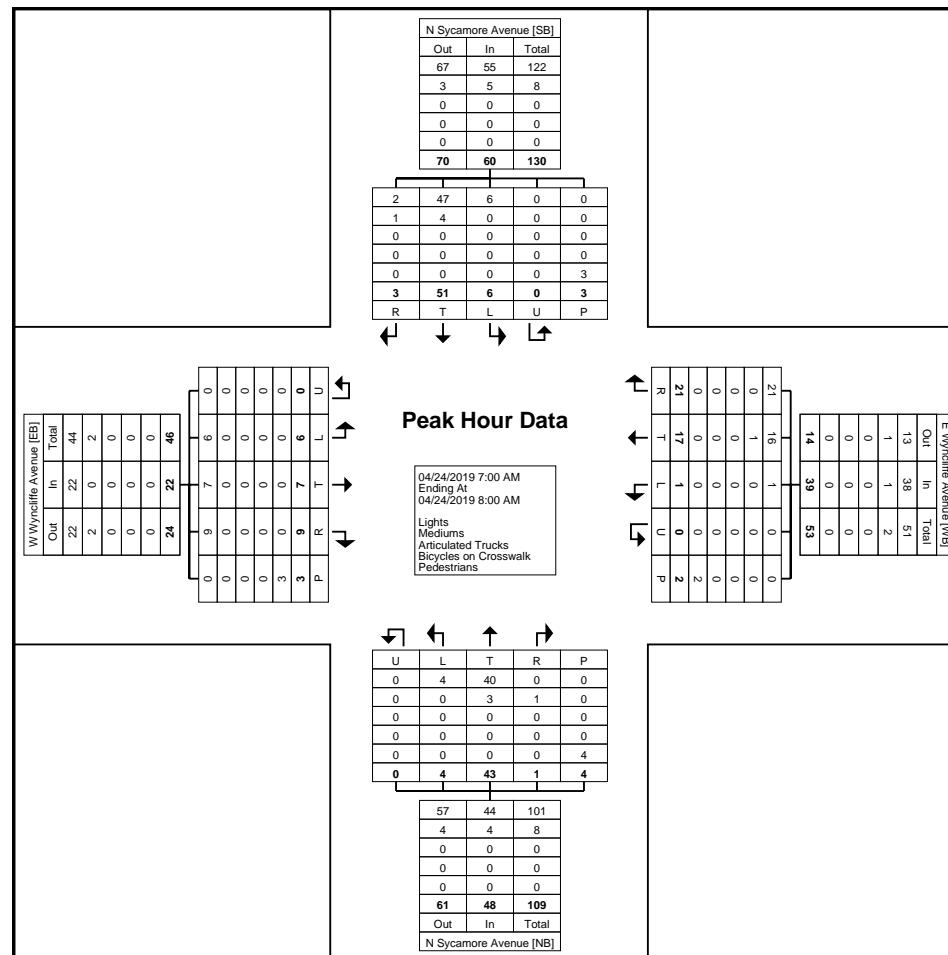
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Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
Wynciffe Avenue/E Wynciffe Avenue
Site Code: 7
Start Date: 04/24/2019
Page No: 5



Turning Movement Peak Hour Data Plot (7:00 AM)



Imperial Traffic & Data Collection
www.imperialtdc.com
 PO BOX 4637
 Cherry Hill, New Jersey, United States 08034
 609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
 Municipality: Clifton Heights, Delaware County,
 PA
 Setup: MAK
 Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
 Wyncliffe Avenue/E Wyncliffe Avenue
 Site Code: 7
 Start Date: 04/24/2019
 Page No: 6

Turning Movement Peak Hour Data (4:45 PM)

Start Time	W Wyncliffe Avenue						E Wyncliffe Avenue						N Sycamore Avenue						N Sycamore Avenue						Int. Total
	Eastbound						Westbound						Northbound						Southbound						
U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total		
4:45 PM	0	5	2	3	10	0	0	8	3	0	11	0	2	10	0	1	12	0	3	17	3	0	23	56	
5:00 PM	1	1	4	2	5	8	0	0	6	4	0	10	0	1	8	1	0	10	0	6	9	1	2	16	44
5:15 PM	0	0	5	1	0	6	0	0	6	6	3	12	0	1	19	0	1	20	0	3	19	3	0	25	63
5:30 PM	1	1	5	2	1	9	0	0	5	9	0	14	0	1	12	1	2	14	0	3	17	2	1	22	59
Total	2	7	16	8	7	33	0	0	25	22	3	47	0	5	49	2	4	56	0	15	62	9	3	86	222
Approach %	6.1	21.2	48.5	24.2	-	-	0.0	0.0	53.2	46.8	-	-	0.0	8.9	87.5	3.6	-	-	0.0	17.4	72.1	10.5	-	-	-
Total %	0.9	3.2	7.2	3.6	-	14.9	0.0	0.0	11.3	9.9	-	21.2	0.0	2.3	22.1	0.9	-	25.2	0.0	6.8	27.9	4.1	-	38.7	-
PHF	0.500	0.350	0.800	0.667	-	0.825	0.000	0.000	0.781	0.611	-	0.839	0.000	0.625	0.645	0.500	-	0.700	0.000	0.625	0.816	0.750	-	0.860	0.881
Lights	2	7	16	8	-	33	0	0	25	22	-	47	0	4	48	2	-	54	0	15	61	8	-	84	218
% Lights	100.0	100.0	100.0	100.0	-	100.0	-	-	100.0	100.0	-	100.0	-	80.0	98.0	100.0	-	96.4	-	100.0	98.4	88.9	-	97.7	98.2
Mediums	0	0	0	0	-	0	0	0	0	0	-	0	0	1	1	0	-	2	0	0	1	1	-	2	4
% Mediums	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	20.0	2.0	0.0	-	3.6	-	0.0	1.6	11.1	-	2.3	1.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	
Pedestrians	-	-	-	-	-	7	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	3	-	
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	



Imperial Traffic & Data Collection

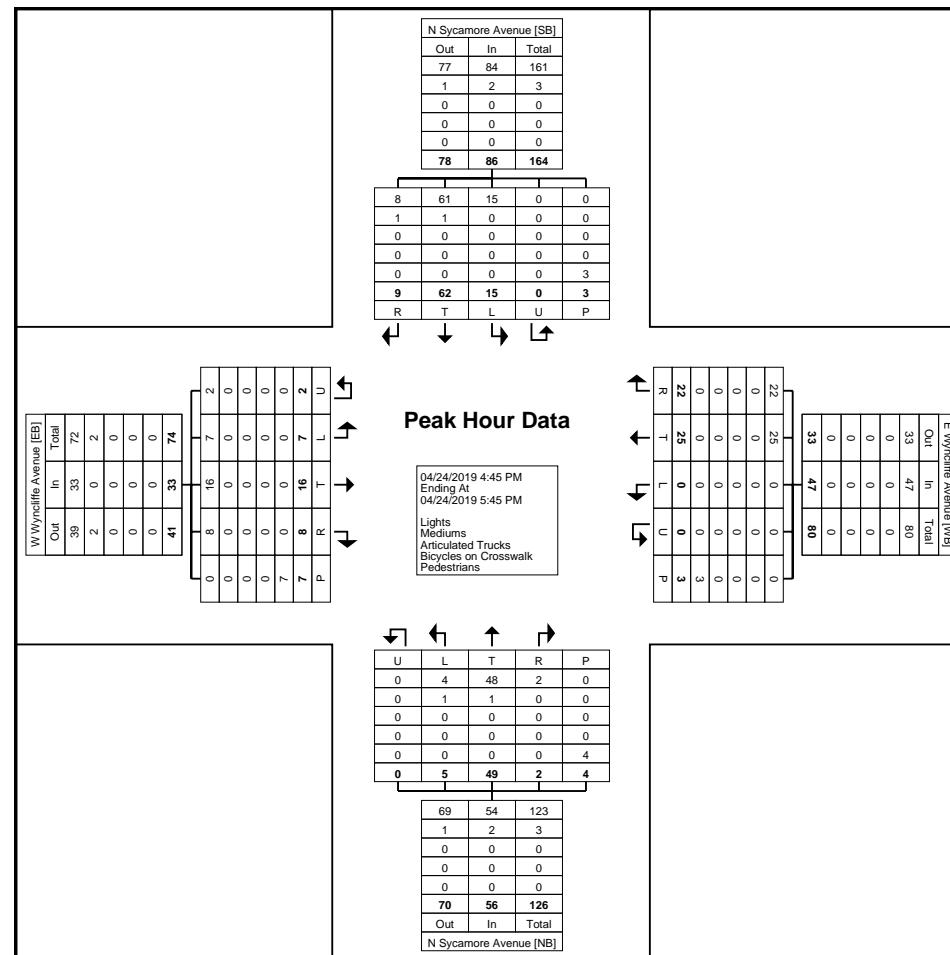
www.imperialtdc.com

PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
Wynciffe Avenue/E Wynciffe Avenue
Site Code: 7
Start Date: 04/24/2019
Page No: 7



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



Imperial Traffic & Data Collection
www.imperialtdc.com

PO BOX 4637

Cherry Hill, New Jersey, United States 08034
609-706-6100 lklein@imperialtdc.com

Project: Springfield Road
Municipality: Clifton Heights, Delaware County,
PA
Setup: MAK
Location: 39.932859, -75.301075

Count Name: 7. N Sycamore Avenue & W
Wyncliffe Avenue/E Wyncliffe Avenue
Site Code: 7
Start Date: 04/24/2019
Page No: 8

Tri-State Traffic Data

610-466-1469

TSTData.com

Page 1

Road: Springfield Rd

Location: 200 ft W of Church St

Counter: 22611

Site Code: 1

Station ID:

A to B EB

Latitude: 39° 93044.0000 North

Start Time	Thursday, March 28, 2019		Friday, March 29, 2019		Saturday, March 30, 2019		Sunday, March 31, 2019		Monday, April 1, 2019		Tuesday, April 2, 2019		Wednesday, April 3, 2019		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	80	27	87	50	115	71	66	32	54	21	65	25	78	38
01:00	*	*	15	32	51	30	56	53	16	17	22	17	23	8	30	26
02:00	*	*	19	17	32	30	32	35	16	13	19	12	13	15	22	20
03:00	*	*	20	11	26	13	27	27	21	12	13	11	16	18	20	15
04:00	*	*	29	45	25	22	31	26	26	46	20	32	26	35	26	34
05:00	*	*	77	158	35	82	31	65	78	173	88	178	86	198	66	142
06:00	*	*	254	414	110	226	76	174	243	408	274	450	243	427	200	350
07:00	*	*	436	440	190	232	150	174	467	424	457	465	466	495	361	372
08:00	*	*	437	451	248	284	161	193	423	479	387	485	406	507	344	400
09:00	*	*	328	327	281	330	222	208	351	338	355	342	380	343	320	315
10:00	*	*	351	314	278	395	236	270	281	289	312	287	292	330	292	314
11:00	*	*	332	320	311	339	232	235	279	274	280	303	302	309	289	297
12:00 PM	296	327	335	354	318	373	278	330	315	295	302	288	308	320	307	327
01:00	303	362	327	360	400	427	335	292	292	358	282	334	297	366	319	357
02:00	328	442	363	454	384	393	260	346	344	418	385	401	326	424	341	411
03:00	438	408	457	423	444	373	339	284	395	393	439	402	428	393	420	382
04:00	430	453	450	477	456	316	314	245	469	475	475	494	469	462	438	417
05:00	416	419	466	478	379	323	293	247	422	439	458	475	465	486	414	410
06:00	370	361	427	386	349	273	300	231	396	308	375	331	431	333	378	318
07:00	341	272	337	295	329	265	274	231	318	246	323	247	319	230	320	255
08:00	267	192	332	223	283	219	225	215	268	177	227	159	253	203	265	198
09:00	251	196	238	198	253	185	195	162	225	162	256	175	246	183	238	180
10:00	220	173	275	206	264	198	164	157	186	168	224	169	198	177	219	178
11:00	198	73	244	124	256	119	174	83	191	60	205	70	209	69	211	85
Total Day	3858	3678	6629	6534	5789	5497	4520	4354	6088	6004	6232	6148	6267	6356	5918	5841
AM Peak Vol.	-	-	08:00	08:00	11:00	10:00	10:00	10:00	07:00	08:00	07:00	08:00	07:00	08:00	07:00	08:00
PM Peak Vol.	15:00	16:00	17:00	17:00	16:00	13:00	15:00	14:00	16:00	16:00	16:00	16:00	16:00	17:00	16:00	16:00
	438	453	466	478	456	427	339	346	469	475	475	494	469	486	438	417

Tri-State Traffic Data

610-466-1469

TSTData.com

Road: Springfield Rd

Location: 200 ft W of Church St

Counter: 22611

Site Code: 1
 Station ID:
 A to B EB

Latitude: 39° 93044.0000 North

Start Time	Thursday, April 4, 2019		Friday, April 5, 2019		Saturday, April 6, 2019		Sunday, April 7, 2019		Monday, April 8, 2019		Tuesday, April 9, 2019		Wednesday, April 10, 2019		Week Average		
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	
12:00 AM	71	24	91	24	*	*	*	*	*	*	*	*	*	*	*	81	24
01:00	20	15	31	19	*	*	*	*	*	*	*	*	*	*	*	26	17
02:00	12	15	27	14	*	*	*	*	*	*	*	*	*	*	*	20	14
03:00	20	13	19	11	*	*	*	*	*	*	*	*	*	*	*	20	12
04:00	35	34	35	36	*	*	*	*	*	*	*	*	*	*	*	35	35
05:00	83	176	76	177	*	*	*	*	*	*	*	*	*	*	*	80	176
06:00	231	422	229	409	*	*	*	*	*	*	*	*	*	*	*	230	416
07:00	456	462	472	437	*	*	*	*	*	*	*	*	*	*	*	464	450
08:00	431	457	399	458	*	*	*	*	*	*	*	*	*	*	*	415	458
09:00	350	314	*	*	*	*	*	*	*	*	*	*	*	*	*	350	314
10:00	289	294	*	*	*	*	*	*	*	*	*	*	*	*	*	289	294
11:00	300	317	*	*	*	*	*	*	*	*	*	*	*	*	*	300	317
12:00 PM	316	340	*	*	*	*	*	*	*	*	*	*	*	*	*	316	340
01:00	306	348	*	*	*	*	*	*	*	*	*	*	*	*	*	306	348
02:00	338	400	*	*	*	*	*	*	*	*	*	*	*	*	*	338	400
03:00	457	402	*	*	*	*	*	*	*	*	*	*	*	*	*	457	402
04:00	467	467	*	*	*	*	*	*	*	*	*	*	*	*	*	467	467
05:00	465	453	*	*	*	*	*	*	*	*	*	*	*	*	*	465	453
06:00	412	371	*	*	*	*	*	*	*	*	*	*	*	*	*	412	371
07:00	352	291	*	*	*	*	*	*	*	*	*	*	*	*	*	352	291
08:00	259	205	*	*	*	*	*	*	*	*	*	*	*	*	*	259	205
09:00	259	166	*	*	*	*	*	*	*	*	*	*	*	*	*	259	166
10:00	253	180	*	*	*	*	*	*	*	*	*	*	*	*	*	253	180
11:00	225	77	*	*	*	*	*	*	*	*	*	*	*	*	*	225	77
Total Day	6407	6243	1379	1585	0	0	0	0	0	0	0	0	0	0	0	6419	6227
AM Peak Vol.	07:00	07:00	07:00	08:00	-	-	-	-	-	-	-	-	-	-	-	07:00	08:00
PM Peak Vol.	16:00	16:00	-	-	-	-	-	-	-	-	-	-	-	-	-	16:00	16:00
Comb. Total	20186		16127		11286		8874		12092		12380		12623			24405	
ADT	ADT 11,930		AADT 11,930														

Comb. Total	20186	16127	11286	8874	12092	12380	12623	24405
ADT	ADT 11,930		AADT 11,930					

Tri-State Traffic Data

610-466-1469

TSTData.com

Road: Sycamore Ave
 Location: 215 ft N of Springfield Rd
 Counter: 35308

Site Code: 2
 Station ID:
 A to B NB

Latitude: 39° 9' 93106.0000 North

Start Time	Thursday, March 28, 2019		Friday, March 29, 2019		Saturday, March 30, 2019		Sunday, March 31, 2019		Monday, April 1, 2019		Tuesday, April 2, 2019		Wednesday, April 3, 2019		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	9	2	13	11	10	9	4	5	6	5	9	3	8	6
01:00	*	*	5	1	3	2	10	12	8	2	4	5	6	4	6	4
02:00	*	*	2	3	2	1	6	13	2	1	3	0	4	4	3	4
03:00	*	*	1	2	3	6	4	1	0	3	4	4	1	3	2	3
04:00	*	*	3	7	0	5	6	0	3	10	1	8	1	6	2	6
05:00	*	*	8	23	6	7	4	6	8	23	8	18	9	15	7	15
06:00	*	*	11	37	10	13	4	5	11	30	15	37	20	48	12	28
07:00	*	*	38	58	20	27	7	20	44	66	37	80	40	61	31	52
08:00	*	*	46	56	22	38	19	32	38	53	36	60	34	68	32	51
09:00	*	*	24	39	36	49	24	36	34	37	33	35	40	32	32	38
10:00	*	*	39	37	45	52	28	34	30	28	27	38	35	43	34	39
11:00	*	*	32	30	46	46	36	39	26	26	35	44	59	35	39	37
12:00 PM	34	50	39	36	65	65	27	47	47	35	47	41	29	44	41	45
01:00	45	43	27	38	39	61	44	39	37	39	37	38	38	33	38	42
02:00	51	45	43	46	61	65	53	47	42	35	48	40	43	44	49	46
03:00	64	65	53	69	62	53	56	43	53	58	61	52	59	53	58	56
04:00	72	55	74	77	54	66	40	45	61	58	60	58	74	56	62	59
05:00	59	67	78	74	49	57	39	57	47	69	59	54	78	73	58	64
06:00	63	66	56	65	33	43	52	46	56	49	53	52	57	49	53	53
07:00	47	41	45	45	49	37	38	33	42	48	42	36	42	44	41	41
08:00	39	25	37	34	37	37	32	29	28	26	23	23	54	36	36	30
09:00	34	26	36	21	33	33	26	17	27	13	34	15	29	22	31	21
10:00	18	17	38	23	32	22	21	15	13	17	13	14	22	17	22	18
11:00	10	7	24	17	24	21	18	6	5	6	3	6	5	8	13	10
Total Day	536	507	768	840	744	817	604	631	666	737	689	763	788	801	713	768
AM Peak Vol.	-	-	08:00	07:00	11:00	10:00	11:00	11:00	07:00	07:00	07:00	07:00	11:00	08:00	11:00	07:00
PM Peak Vol.	16:00	17:00	17:00	16:00	12:00	16:00	15:00	17:00	16:00	17:00	15:00	16:00	17:00	17:00	16:00	17:00
	72	67	78	77	65	66	56	57	61	69	61	58	78	73	62	64

Tri-State Traffic Data

610-466-1469

TSTData.com

Road: Sycamore Ave
 Location: 215 ft N of Springfield Rd
 Counter: 35308

Site Code: 2
 Station ID:
 A to B NB

Latitude: 39° 9' 93106.0000 North

Start Time	Thursday, April 4, 2019		Friday, April 5, 2019		Saturday, April 6, 2019		Sunday, April 7, 2019		Monday, April 8, 2019		Tuesday, April 9, 2019		Wednesday, April 10, 2019		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	5	7	3	7	*	*	*	*	*	*	*	*	*	*	4	7
01:00	2	2	5	0	*	*	*	*	*	*	*	*	*	*	4	1
02:00	4	3	3	1	*	*	*	*	*	*	*	*	*	*	4	2
03:00	2	6	0	2	*	*	*	*	*	*	*	*	*	*	1	4
04:00	2	8	3	9	*	*	*	*	*	*	*	*	*	*	2	8
05:00	9	24	9	20	*	*	*	*	*	*	*	*	*	*	9	22
06:00	19	41	15	40	*	*	*	*	*	*	*	*	*	*	17	40
07:00	45	61	39	67	*	*	*	*	*	*	*	*	*	*	42	64
08:00	53	61	31	45	*	*	*	*	*	*	*	*	*	*	42	53
09:00	28	33	23	28	*	*	*	*	*	*	*	*	*	*	26	30
10:00	27	46	*	*	*	*	*	*	*	*	*	*	*	*	27	46
11:00	35	37	*	*	*	*	*	*	*	*	*	*	*	*	35	37
12:00 PM	30	38	*	*	*	*	*	*	*	*	*	*	*	*	30	38
01:00	38	35	*	*	*	*	*	*	*	*	*	*	*	*	38	35
02:00	42	41	*	*	*	*	*	*	*	*	*	*	*	*	42	41
03:00	52	50	*	*	*	*	*	*	*	*	*	*	*	*	52	50
04:00	64	75	*	*	*	*	*	*	*	*	*	*	*	*	64	75
05:00	65	66	*	*	*	*	*	*	*	*	*	*	*	*	65	66
06:00	54	57	*	*	*	*	*	*	*	*	*	*	*	*	54	57
07:00	52	40	*	*	*	*	*	*	*	*	*	*	*	*	52	40
08:00	39	19	*	*	*	*	*	*	*	*	*	*	*	*	39	19
09:00	25	23	*	*	*	*	*	*	*	*	*	*	*	*	25	23
10:00	24	19	*	*	*	*	*	*	*	*	*	*	*	*	24	19
11:00	15	9	*	*	*	*	*	*	*	*	*	*	*	*	15	9
Total Day	731	801	131	219	0	0	0	0	0	0	0	0	0	0	713	786
AM Peak Vol.	08:00 53	07:00 61	07:00 39	07:00 67	-	-	-	-	-	-	-	-	-	-	07:00 42	07:00 64
PM Peak Vol.	17:00 65	16:00 75	-	-	-	-	-	-	-	-	-	-	-	-	17:00 65	16:00 75

Comb. Total	2575	1958	1561	1235	1403	1452	1589	2980
ADT	ADT 1,490	AADT 1,490						

APPENDIX B

EXISTING QUEUE DATA

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002





QUEUE ANALYSIS

1. Springfield Road & Austin Drive

Initial values represent number of vehicles queued at approach immediately after signal turned red.

Maximum values represent number of vehicles queued at approach when signal turned green.

QUEUE ANALYSIS

2. Springfield Road & Oak Avenue

Initial values represent number of vehicles queued at approach immediately after signal turned red.

Maximum values represent number of vehicles queued at approach when signal turned green.

	Springfield Road				Oak Avenue			
	Eastbound		Westbound		Northbound		Southbound	
	Initial	Max	Initial	Max	Initial	Max	Initial	Max
6:30 AM	0	0	0	0	0	0	0	1
6:45 AM	0	0	0	0	0	0	3	0
7:00 AM	3	0	0	0	2	0	0	0
7:15 AM	3	0	0	0	0	0	0	0
7:30 AM	5	0	0	0	0	0	2	0
7:45 AM	0	0	5	0	0	0	6	0
8:00 AM	0	0	5	0	4	0	5	0
8:15 AM	0	0	1	0	4	0	4	0
8:30 AM	0	0	2	0	0	0	0	0
8:45 AM	3	0	5	0	0	0	0	0
9:00 AM	0	0	6	0	3	0	0	0
9:15 AM	9	0	0	0	0	0	2	0
9:30 AM	3	0	0	0	0	0	0	0
2:30 PM	0	0	5	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0
3:00 PM	0	0	2	6	0	0	0	0
3:15 PM	0	3	0	7	0	0	0	0
3:30 PM	0	5	0	2	1	0	0	0
3:45 PM	0	4	3	0	0	0	0	0
4:00 PM	0	0	0	6	0	0	0	0
4:15 PM	1	3	0	6	0	0	0	0
4:30 PM	0	0	1	5	0	0	0	0
4:45 PM	0	0	1	8	0	4	0	0
5:00 PM	0	0	0	8	2	0	2	0
5:15 PM	0	10	1	7	0	0	0	0
5:30 PM	1	5 back up	0	0	0	0	0	0
5:45 PM	2	6	0	0	0	0	0	0
6:00 PM	0	0	5	0	0	0	0	0
6:15 PM	1	0 back up	0	9	2	0	0	0
6:30 PM	0	0	1	7	0	0	0	0

QUEUE ANALYSIS

3. Springfield Road & Church Road/Prospect Road

Values represent number of vehicles queued at approach at given time.

Intersection is unsignalized.

	Springfield Road		Church Road		Baseball Field Drive	Prospect Road
	Eastbound	Westbound	Northbound	Southbound	Northwestbound	
6:30 AM	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0
7:45 AM	0	0	1	0	0	0
8:00 AM	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0
9:00 AM	0	0	1	0	0	0
9:15 AM	0	0	1	0	0	0
9:30 AM	0	0	0	0	0	1
9:45 AM	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	1
2:15 PM	0	0	1	0	0	0
2:30 PM	0	0	0	1	0	0
2:45 PM	0	0	0	1	0	0
3:00 PM	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0
5:00 PM	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0



5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
6:00 PM	0	0	0	0	0
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	0	0

QUEUE ANALYSIS

4. Springfield Road & Sycamore Avenue

Initial values represent number of vehicles queued at approach immediately after signal turned red.

Maximum values represent number of vehicles queued at approach when signal turned green.

Springfield Road				Sycamore Avenue				Fairview Avenue	
Eastbound		Westbound		Northbound		Southbound		Southeastbound	
Initial	Max	Initial	Max	Initial	Max	Initial	Max	Initial	Max
6:30 AM	0	0	0	0	0	0	0		
6:45 AM	0	0	0	8	0	0	0	1	
7:00 AM	0	1	0	0	0	0	0	0	
7:15 AM	0	1	0	9+	0	0	0	2	
7:30 AM	0	3	0	4	0	1	0	1	
7:45 AM	0	1	0	0	0	0	0	1	
8:00 AM	0	2	0	0	0	0	0	1	
8:15 AM	0	0	0	1	0	0	0	0	
8:30 AM	0	2	0	1	0	0	2 Held by trash truck	2	
8:45 AM	0	3	0	7	0	2	0	2	
9:00 AM	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	1	0	1	0	2	
9:30 AM	0	1	0	8	0	1	0	0	
2:30 PM	0	2	0	6	0	0	0	1	
2:45 PM	0	0	0	2	0	0	0	1	
3:00 PM	0	3	0	0	0	1	0	3	
3:15 PM	0	0	0	0	0	0	0	0	
3:30 PM	0	0	0	1	0	1	0	1	
3:45 PM	0	1	0	0	0	0	0	1	
4:00 PM	0	1	0	1	0	0	0	0	
4:15 PM	0	1	0	2	0	1	0	1	
4:30 PM	0	1	0	2	0	1	0	2	
4:45 PM	0	1	0	8	0	0	0	3	
5:00 PM	0	1	0	2	0	0	0	1	
5:15 PM	0	1	0	5	0	0	0	2	
5:30 PM	0	0	0	1	0	1	0	1	
5:45 PM	0	0	0	0	0	0	0	2	
6:00 PM	0	0	0	2	0	2	0	0	
6:15 PM	0	2	0	0	0	0	0	0	
6:30 PM	0	2	0	0	0	0	0	2	

QUEUE ANALYSIS

5. Wyncliffe Avenue & Oak Avenue

Values represent number of vehicles queued at approach at given time.
Intersection is unsignalized.

Wyncliffe Avenue	Oak Avenue		
	Westbound	Northbound	Southbound
6:30 AM	0	0	0
6:45 AM	0	1	1
7:00 AM	0	0	1
7:15 AM	0	2	1
7:30 AM	0	0	1
7:45 AM	0	0	0
8:00 AM	0	1	1
8:15 AM	0	1	1
8:30 AM	0	0	0
8:45 AM	1	1	0
9:00 AM	0	0	2
9:15 AM	0	0	0
9:30 AM	0	0	1
2:30 PM	0	0	0
2:45 PM	0	0	1
3:00 PM	0	0	1
3:15 PM	1	1	0
3:30 PM	0	0	2
3:45 PM	1	1	1
4:00 PM	0	1	0
4:15 PM	0	1	0
4:30 PM	0	0	0
4:45 PM	0	0	0
5:00 PM	1	0	1
5:15 PM	0	0	1
5:30 PM	0	1	1
5:45 PM	0	0	2
6:00 PM	0	0	0
6:15 PM	0	1	1
6:30 PM	0	0	0

QUEUE ANALYSIS

6. Sycamore Avenue & Arch Street

Values represent number of vehicles queued at approach at given time.
Intersection is unsignalized.

	Arch Street	Sycamore Avenue	
	Westbound	Northbound	Southbound
6:30 AM	0	0	0
6:45 AM	0	0	0
7:00 AM	0	0	0
7:15 AM	0	0	0
7:30 AM	0	0	0
7:45 AM	1	1	0
8:00 AM	0	1	0
8:15 AM	0	1	0
8:30 AM	0	1	0
8:45 AM	0	0	0
9:00 AM	0	0	0
9:15 AM	0	0	0
9:30 AM	0	0	0
2:30 PM	0	0	0
2:45 PM	0	0	0
3:00 PM	0	0	0
3:15 PM	0	0	0
3:30 PM	0	0	0
3:45 PM	0	0	1
4:00 PM	0	0	0
4:15 PM	0	0	0
4:30 PM	0	0	0
4:45 PM	0	0	0
5:00 PM	0	0	0
5:15 PM	1	0	1
5:30 PM	0	0	1
5:45 PM	0	0	0
6:00 PM	0	0	0
6:15 PM	0	0	0
6:30 PM	0	1	0

QUEUE ANALYSIS

7. Sycamore Avenue & Wyncliffe Avenue

Values represent number of vehicles queued at approach at given time.
Intersection is unsignalized.

	Wyncliffe Avenue		Sycamore Avenue	
	Eastbound	Westbound	Northbound	Southbound
6:30 AM	0	0	0	0
6:45 AM	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	1	0	0	0
7:30 AM	1	0	0	0
7:45 AM	0	0	0	1
8:00 AM	0	0	0	1
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	1	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
2:30 PM	0	0	0	0
2:45 PM	0	0	0	0
3:00 PM	1	1	0	1
3:15 PM	0	0	0	0
3:30 PM	0	0	0	0
3:45 PM	0	0	0	0
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	1
5:45 PM	0	0	0	0
6:00 PM	0	0	0	0
6:15 PM	0	0	0	1
6:30 PM	0	0	0	0

APPENDIX C

PHOTOGRAPHS

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



Springfield Rd & Austin Dr – Eastbound Approach



50 Feet



200 Feet

Springfield Rd & Austin Dr – Westbound Approach



50 Feet



200 Feet

Springfield Rd & Austin Dr – Southbound Approach



50 Feet



200 Feet

Springfield Rd & Oak Ave – Eastbound Approach



50 Feet



200 Feet

Springfield Rd & Oak Ave – Westbound Approach



50 Feet



200 Feet

Springfield Rd & Oak Ave – Southbound Approach



50 Feet



200 Feet

Springfield Rd & Oak Ave – Northbound Approach



50 Feet



200 Feet

Springfield Rd & Prospect Ave/Church St – Eastbound Approach



50 Feet



200 Feet

Springfield Rd & Prospect Ave/Church St – Westbound Approach



50 Feet



200 Feet

Springfield Rd & Prospect Ave/Church St – Northbound Approach



50 Feet



200 Feet

Springfield Rd & Prospect Ave/Church St – North-eastbound Approach



50 Feet



200 Feet

Springfield Rd & Sycamore Ave – Eastbound Approach



50 Feet



200 Feet

Springfield Rd & Sycamore Ave – Westbound Approach



50 Feet



200 Feet

Springfield Rd & Sycamore Ave – Southbound Approach



50 Feet



200 Feet

Springfield Rd & Sycamore Ave – Northbound Approach



50 Feet



200 Feet

Oak Ave & Wyncliffe Ave – Westbound Approach



50 Feet



200 Feet

Oak Ave & Wyncliffe Ave – Southbound Approach



Google Earth

50 Feet



Google earth

200 Feet

Oak Ave & Wyncliffe Ave – Northbound Approach



50 Feet



200 Feet

Oak Ave & Wyncliffe Ave – Eastbound Approach



50 Feet



200 Feet

Arch St & Sycamore Ave – Westbound Approach



50 Feet



200 Feet

Arch St & Sycamore Ave – Southbound Approach



50 Feet



200 Feet

Arch St & Sycamore Ave Ave – Northbound Approach



50 Feet



200 Feet

Wyncliffe Ave & Sycamore Ave – Eastbound Approach



50 Feet



200 Feet

Wyncliffe Ave & Sycamore Ave – Westbound Approach



50 Feet



200 Feet

Wyncliffe Ave & Sycamore Ave – Southbound Approach



50 Feet



200 Feet

Wyncliffe Ave & Sycamore Ave – Northbound Approach



50 Feet



200 Feet

APPENDIX D

SIGNAL PERMIT PLANS

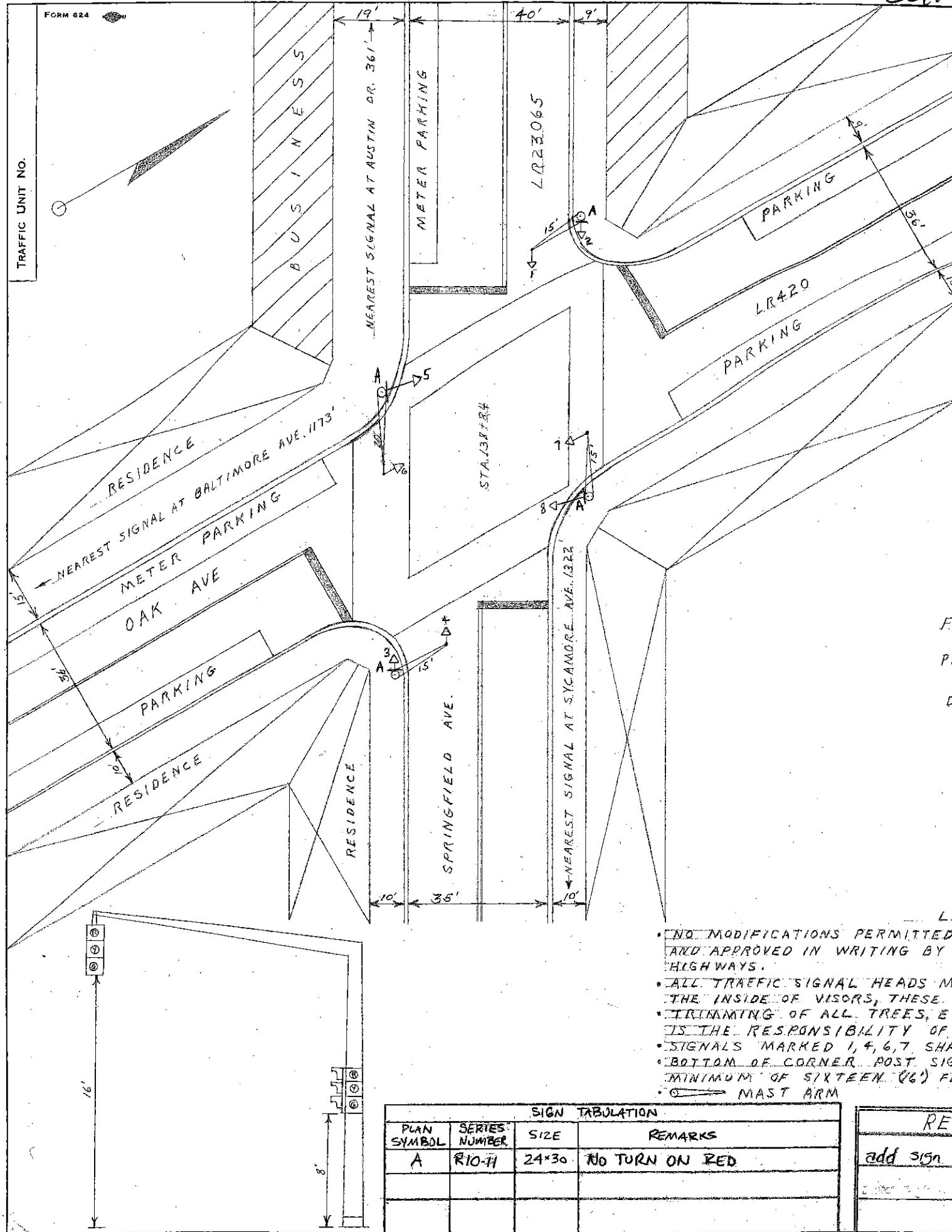
CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA



CUSTON 175

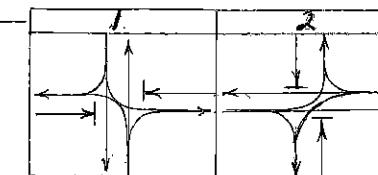
FORM 624

TRAFFIC UNIT NO.



Movement and Color Sequence Chart

PHAS



	1	2	3	4	5	6
1	G	Y	R	R	R	R
2	G	Y	R	R	R	R
3	G	Y	R	R	R	R
4	G	Y	R	R	R	R
5	R	R	R	G	Y	R
6	R	R	R	G	Y	R
7	R	R	R	G	Y	R
8	R	R	R	G	Y	R
NE -	30	3	2	20	3	2

REVISIONS	DATE	APP'D.
PERMIT #2941		

-FLASHING

SIGNALS

(R)	8"
(Y)	8"
(G)	8"

FIXED TIME	30	3	2	20	3	2	= 60 SEC
PERCENTAGE	50	5	3	34	5	3	= 100%
DIAL SET	0	50	55	58	92	97	0%

60 SECOND CYCLE

NOTE

McTiff

SIGNALS TO BE INTERCONNECTED TO ADJACENT SIGNALS BY MEANS OF T.B.C.

LEGEND

- NO MODIFICATIONS PERMITTED UNLESS REQUESTED BY PERMITTEE AND APPROVED IN WRITING BY THE PENNSYLVANIA DEPARTMENT OF HIGHWAYS.
 - ALL TRAFFIC SIGNAL HEADS MUST BE PAINTED FEDERAL YELLOW EXCEPT THE INSIDE OF VISORS, THESE ARE TO BE PAINTED BLACK.
 - TRIMMING OF ALL TREES, ETC. TO AFFORD VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE AT ALL TIMES.
 - SIGNALS MARKED 1, 4, 6, 7 SHALL HAVE 12" LENSES
 - BOTTOM OF CORNER POST SIGNAL FACE SHALL BE MOUNTED AT A MINIMUM OF SIXTEEN (16') FEET ABOVE THE PAVEMENT
 - ~~—~~ MAST ARM

SIGN TABULATION			
PLAN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-H	24x30	NO TURN ON RED

REVISION	DATE	DATE	DATE
add sign A & adjust times	BBB 8/20	Old 8/20 new 8/20	NAM 9/3

**PENNSYLVANIA DEPARTMENT OF HIGHWAYS
TRAFFIC DIVISION**

PENNSYLVANIA DEPARTMENT OF HIGHWAYS TRAFFIC DIVISION	
TRAFFIC SIGNALS FOR OAK AND SPRINGFIELD AVENUES	
COUNTY DELAWARE BOR. CLIFTON HEIGHTS	
DRAWN BY J. G.	DATE
APPROVED BARSZOWSKI	DATE
APPROVED SCALE 1" = 20'	DATE
TRAFFIC UNIT NO. 14	

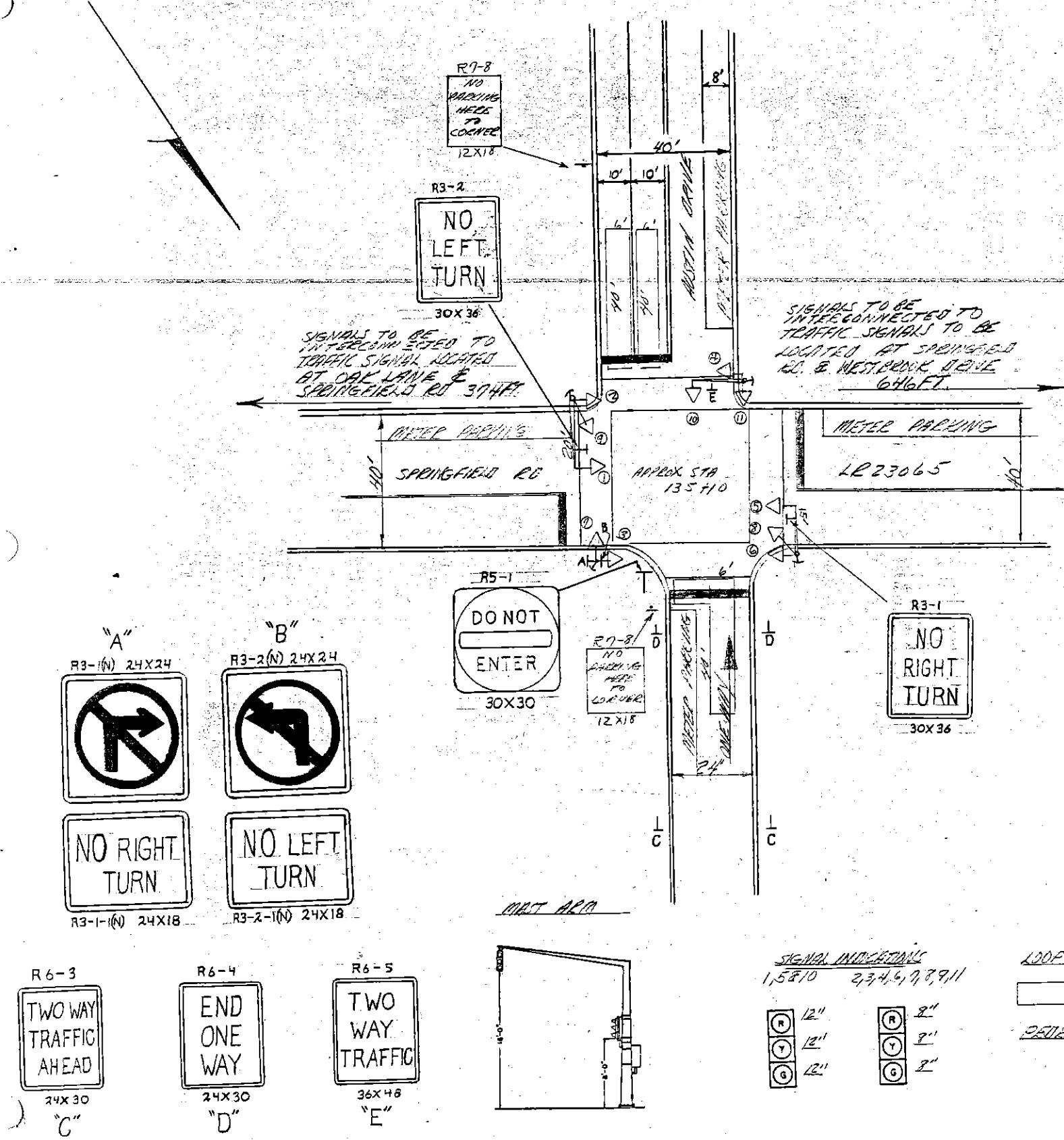
CLIFTON HEIGHTS BOROUGH

CONDITION DIAGRAM FORMAT

590

Form 6164-B Rev. 11-68
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HIGHWAYS
BUREAU OF TRAFFIC ENGINEERING

Movement Diagram, Color Sequence



Phase	A	B			
Signal	1	2	3	4	5
1	G	Y	R	R	R
2	G	Y	E	R	R
3	G	Y	R	R	R
4	G	Y	R	R	R
5	G	Y	R	R	R
6	G	Y	R	R	R
7	R	R	R	G	Y
8	R	R	E	G	Y
9	R	E	R	G	Y
10	R	R	R	G	Y
11	E	R	E	G	Y

Timing Diagram	Fixed	3.2	3.2	3
Initial			0	
Vehicle Ext			2	
Maximum			20	
Per. Time			10 SEC	

NOTES

Installation, operation and maintenance of these signals shall be in accordance with Pennsylvania Department of Highways Regulations governing the design, location and operation of signs, signals and markings.

All signs and markings indicated on this drawing are considered part of the Permit and shall be installed accordingly.

Placing and maintaining of the limit lines is the responsibility of the municipality and shall be kept in an effective condition at all times.

All maintenance work necessary for proper visibility of the signals is the responsibility of the municipality.

No modifications of this installation are permitted unless prior approval is granted, in writing, by the Secretary of Highways.

Painted parts of this installation, except for signal heads, shall be highway yellow or green in color. Signal heads shall be highway yellow and the inside of the visors or hoods shall be a dull black.

Post mounted signals shall be installed with the signal heads a minimum of 2'(feet) behind the face of the curb or edge of the shoulder.

Signals erected over the roadway shall have a minimum clearance of 16'(feet) above the roadway. Post mounted signals shall be a minimum of 8'(feet) above the sidewalk or pavement grade.

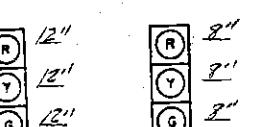
The minimum horizontal distance between signals, measured at right angles to the approach, shall be 8'(feet).

Exact location of detectors shall be determined at the time of installation by a representative of the Department.

BOROUGH TO RESTRICT PARKING AS INDICATED ON DIAGRAM.

SIGNALS TO BE INTERCONNECTED TO ADJACENT SIGNALS LOCATED AT THE INTERSECTIONS OF OAK LANE AND SPRINGFIELD ROAD, AND WEST BROOK DRIVE AND SPRINGFIELD ROAD.

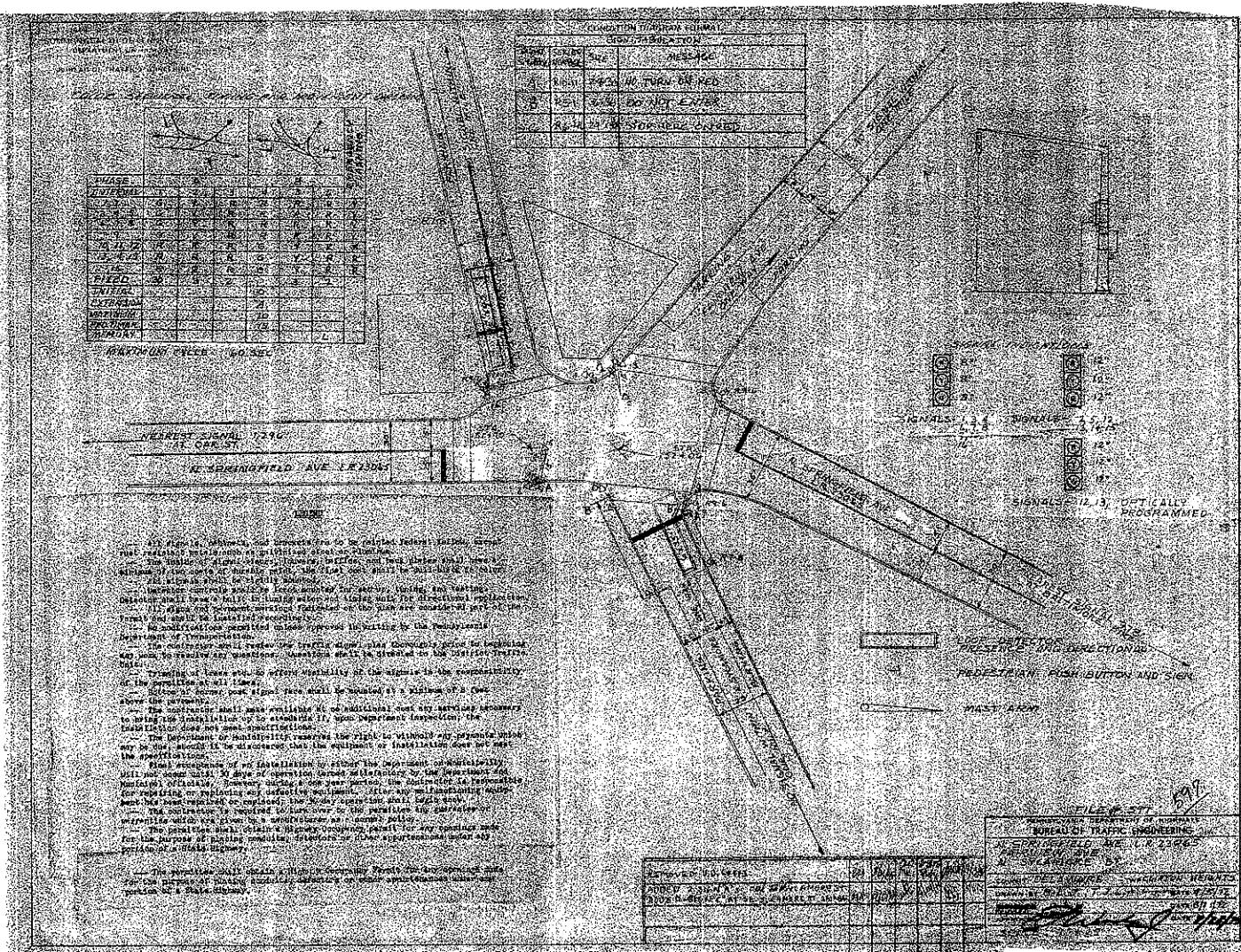
SIGNAL INVERSIONS
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12



LOOP DETECTORS PRESENCE & DIRECTION

PEDESTRIAN PUSHBUTTON

PENNSYLVANIA DEPARTMENT OF HIGHWAYS BUREAU OF TRAFFIC ENGINEERING	
SPRINGFIELD ROAD / LR 23065 /	
EASTON DRIVE	
COUNTY DEPARTMENT	CLIFTON HEIGHTS
DRAWN BY T. NEILSON	DATE 5-5-67
APPROVED FILE # 590	DATE
APPROVED PERMIT # 5049	DATE
SCALE 1" = 25'	



CLIFTON HEIGHTS BORO

FILE #0564

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 RIDICILY 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 COMPLETES 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: DELAWARE

MUNICIPALITY: CLIFTON HEIGHTS BOROUGH

INTERSECTION: OAK AVENUE AND
SPRINGFIELD AVENUE

REVIEWED:

DATE

MUNICIPAL OFFICIAL

DATE

RECOMMENDED:

DISTRICT TRAFFIC ENGINEER

DATE

NO. REVISION DES./REV. DATE REV. DATE RECOM. DATE

1 LANE ADJUSTMENT - ST PROJECT MS 12/22/17 LUTZ 12/22/17

2 NEW DWG EJR 5/8/18 1/22/18 1/22/18

3

4

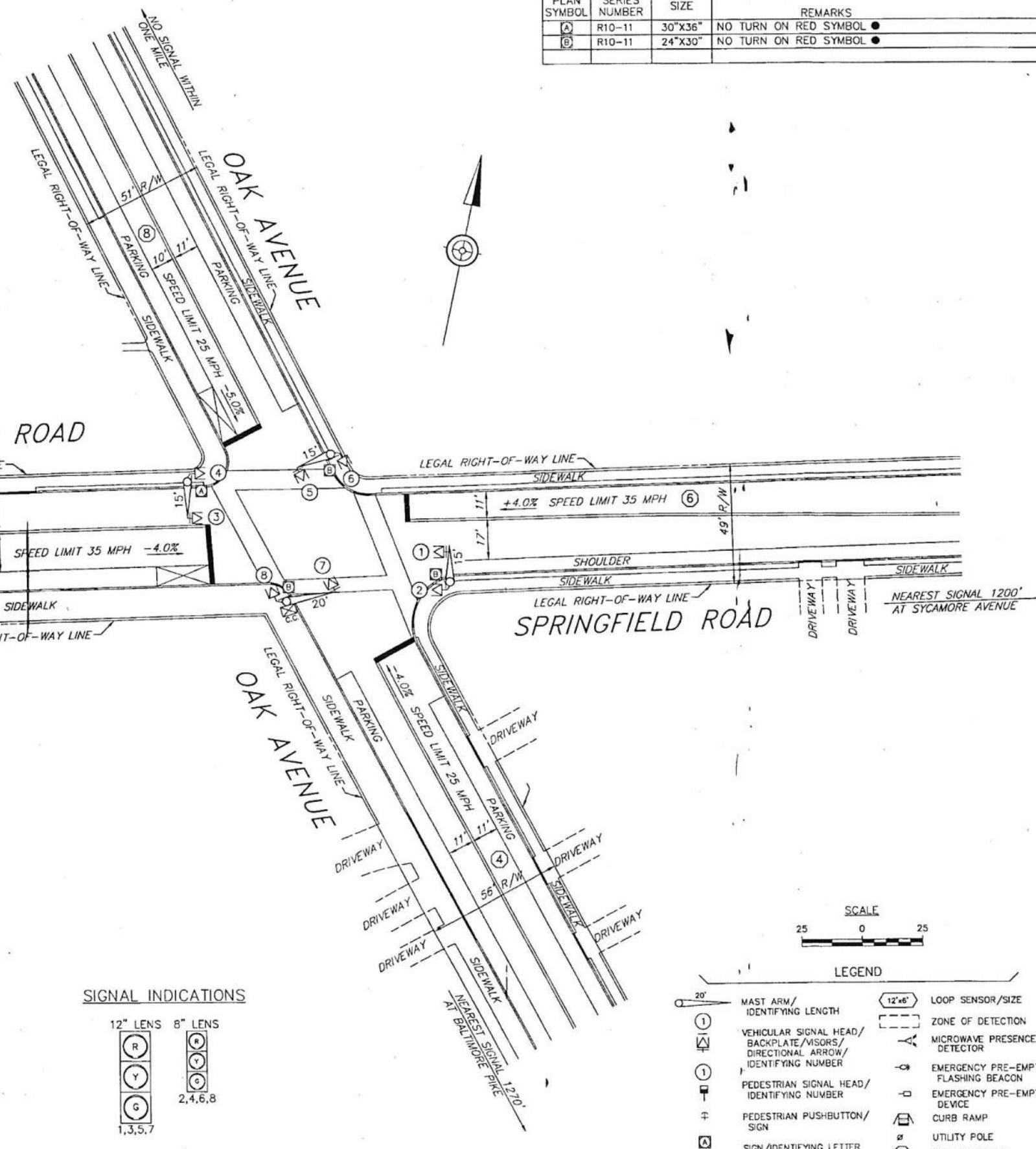
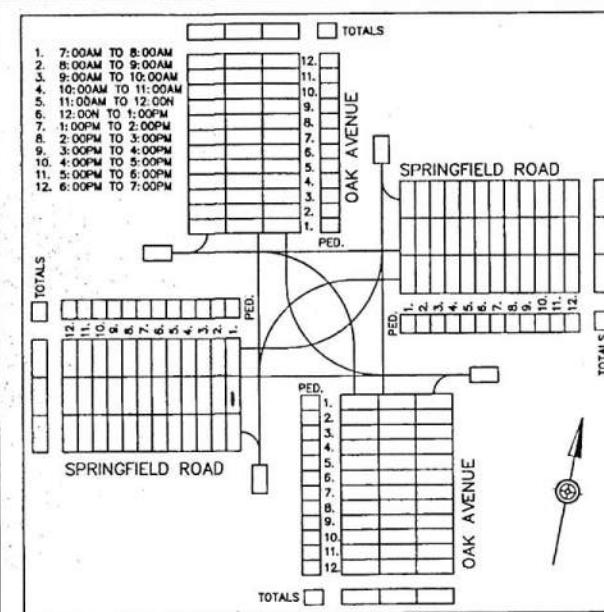
5

6

7

B

SHEET 2 OF 2 PERMIT # 63-0564 FILE # 0564



SIGNAL TO BE INTERCONNECTED TO ADJACENT SIGNALS LOCATED AT THE INTERSECTIONS OF SPRINGFIELD ROAD AND AUSTIN DRIVE AND SPRINGFIELD ROAD AND WESTBROOK DRIVE BY MEANS OF TBC.

SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS 1-8

APPENDIX E

LEVEL OF SERVICE CRITERIA

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA



LEVEL OF SERVICE

Level of Service is a term used to describe vehicle operator satisfaction with the driving experience. Research has determined that operator satisfaction is based primarily on travel speed and delay. In urban environments these factors, travel speed and delay, are primarily controlled by the operation of intersections.

By utilizing models to simulate the flow of traffic at intersections, the average delay experienced by vehicles can be estimated. These models consider such factors as traffic volumes, roadway geometry, traffic control, and driver behavior. Levels of Service designations are based on a comparison of the average delays calculated by the models with perceived acceptable delays.

The following tables illustrate the guidelines used for designated Levels of Service at intersections:

**Level of Service Criteria
for Signalized Intersections⁽¹⁾**

Level of Service	Control Delay (Seconds per Vehicle)
A	≤ 10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	> 80

⁽¹⁾ Exhibit 18-4, Level of Service from Control Delay (2010 HCM)

**Level of Service Criteria
for Unsignalized Intersections⁽²⁾**

Level of Service	Control Delay (Seconds per Vehicle)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	> 50

⁽²⁾ Table Exhibit 19-1, Level of Service Criteria for TWSC and AWSC intersections (2010 HCM)

APPENDIX F

EXISTING CAPACITY AND QUEUE ANALYSIS WORKSHEETS

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Existing Conditions 2019
AM Peak

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	556	9	8	556	0	5	0	3	8	2	27
Future Volume (vph)	0	556	9	8	556	0	5	0	3	8	2	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	11	11	10	10	10	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99			0.98		
Frt		0.998							0.850		0.901	
Flt Protected					0.999			0.950			0.989	
Satd. Flow (prot)	0	1687	0	0	1639	0	1596	0	1074	0	1735	0
Flt Permitted					0.994						0.989	
Satd. Flow (perm)	0	1687	0	0	1630	0	1666	0	1074	0	1735	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		2							35		27	
Link Speed (mph)		35			35			20			20	
Link Distance (ft)		555			352			184			157	
Travel Time (s)		10.8			6.9			6.3			5.4	
Confl. Peds. (#/hr)							6				6	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	3%	0%	12%	6%	0%	0%	0%	33%	12%	0%	0%
Parking (#/hr)			0							0		
Adj. Flow (vph)	0	562	9	8	562	0	5	0	3	8	2	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	571	0	0	570	0	5	0	3	0	37	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)	0				0			10			10	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.17	1.17	1.17	0.91	0.91	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0		1		1	1	1	
Detector Template			Left						Left			
Leading Detector (ft)	0		20	0		35		35	20		35	
Trailing Detector (ft)	0		0	0		-5		-5	0		-5	
Detector 1 Position(ft)	0		0	0		-5		-5	0		-5	
Detector 1 Size(ft)	6		20	6		40		40	20		40	
Detector 1 Type	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	NA		Perm	NA		Perm		Perm	Perm	Perm	NA	
Protected Phases	2			6							4	
Permitted Phases			6			8		8		4		
Detector Phase	2		6	6		8		8		4		4
Switch Phase												
Minimum Initial (s)	32.0		32.0	32.0		5.0		5.0	5.0	5.0		

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Existing Conditions 2019
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	37.0			37.0	37.0		10.0		10.0	10.0		10.0
Total Split (s)		37.0		37.0	37.0		25.0		25.0	25.0		25.0
Total Split (%)	59.7%		59.7%	59.7%		40.3%		40.3%	40.3%	40.3%		40.3%
Maximum Green (s)	32.0		32.0	32.0		20.0		20.0	20.0	20.0		20.0
Yellow Time (s)	3.0		3.0	3.0		3.0		3.0	3.0	3.0		3.0
All-Red Time (s)	2.0		2.0	2.0		2.0		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)	4.0			4.0		4.0		4.0		4.0		4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0		2.0	2.0		2.0		2.0	2.0	2.0		2.0
Recall Mode	Max		Max	Max		None		None	None	None		None
Act Effect Green (s)	44.1			44.1		6.4		6.4		6.4		6.4
Actuated g/C Ratio	0.88			0.88		0.13		0.13		0.13		0.13
v/c Ratio	0.39			0.40		0.02		0.02		0.15		
Control Delay	3.1			3.2		18.2		0.3		11.9		
Queue Delay	0.0			0.0		0.0		0.0		0.0		
Total Delay	3.1			3.3		18.2		0.3		11.9		
LOS	A			A		B		A		B		
Approach Delay	3.1			3.3			11.5			11.9		
Approach LOS	A			A			B			B		

Intersection Summary

Area Type: Other

Cycle Length: 62

Actuated Cycle Length: 50.4

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 3.5

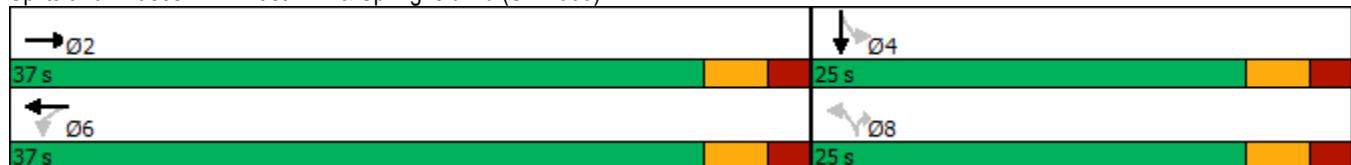
Intersection LOS: A

Intersection Capacity Utilization 53.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Austin Dr & Springfield Rd (SR 2009)



HCM 6th Edition methodology does not support Non-NEMA phasing.

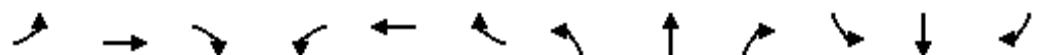
Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Existing Conditions 2019
AM Peak

	→	→	←	←	↔	↔	↑	↑	↓	↓	↗	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	423	130	10	438	39	98	128	1	64	151	27
Future Volume (vph)	15	423	130	10	438	39	98	128	1	64	151	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	11	11	11	11	11	11	10	10	10
Grade (%)	-4%			4%			-4%			-5%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00			1.00			1.00			1.00		
Frt	0.969			0.989			0.999			0.985		
Flt Protected	0.999			0.999			0.979			0.987		
Satd. Flow (prot)	0	1921	0	0	1597	0	0	1626	0	0	1659	0
Flt Permitted	0.985			0.988			0.784			0.878		
Satd. Flow (perm)	0	1894	0	0	1580	0	0	1301	0	0	1476	0
Right Turn on Red		No			No			No		No		No
Satd. Flow (RTOR)												
Link Speed (mph)	35			35			25			25		
Link Distance (ft)	352			776			332			486		
Travel Time (s)	6.9			15.1			9.1			13.3		
Confl. Peds. (#/hr)	1	1	1		1	2				2		
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%	4%	6%	0%	5%	10%	13%	2%	0%	0%	1%	0%
Parking (#/hr)	0								0			0
Adj. Flow (vph)	15	436	134	10	452	40	101	132	1	66	156	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	585	0	0	502	0	0	234	0	0	250	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			0			0	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	24				16			35			16	
Two way Left Turn Lane												
Headway Factor	0.89	0.89	0.89	1.15	1.15	1.15	1.09	1.09	1.09	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases	2				6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	25.0		25.0	25.0	
Total Split (%)	58.3%	58.3%		58.3%	58.3%		41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	30.0	30.0		30.0	30.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0			-1.0			-1.0			-1.0		
Total Lost Time (s)	4.0			4.0			4.0			4.0		
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	31.0			31.0			21.0			21.0		
Actuated g/C Ratio	0.52			0.52			0.35			0.35		
v/c Ratio	0.60			0.62			0.51			0.48		

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Existing Conditions 2019
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		13.4			14.4			20.4			19.2	
Queue Delay			2.0		0.0			0.0			0.0	
Total Delay		15.4			14.4			20.4			19.2	
LOS			B		B			C			B	
Approach Delay		15.4			14.4			20.4			19.2	
Approach LOS			B		B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 16.4

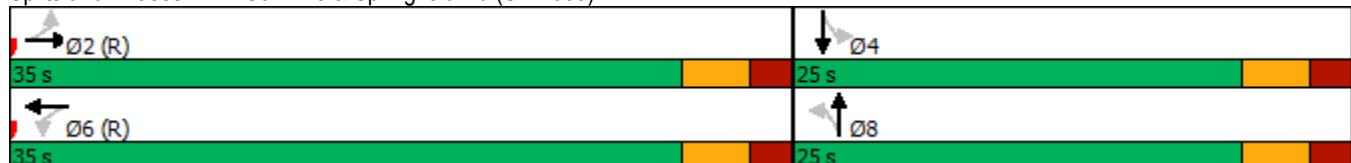
Intersection LOS: B

Intersection Capacity Utilization 68.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Oak Ave & Springfield Rd (SR 2009)



HCM 6th Signalized Intersection Summary
2: Oak Ave & Springfield Rd (SR 2009)

Existing Conditions 2019
AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	423	130	10	438	39	98	128	1	64	151	27
Future Volume (veh/h)	15	423	130	10	438	39	98	128	1	64	151	27
Initial Q (Q _b), 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	0.90	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1968	1968	1968	1641	1641	1641	1921	1921	1921	1972	1972	1972
Adj Flow Rate, veh/h	15	436	134	10	452	40	101	132	1	66	156	28
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, %	4	4	4	5	5	5	2	2	2	1	1	1
Cap, veh/h	70	663	200	66	759	66	281	333	2	183	398	64
Arrive On Green	0.50	0.52	0.50	0.50	0.52	0.50	0.33	0.35	0.35	0.33	0.35	0.33
Sat Flow, veh/h	16	1284	386	10	1469	128	556	952	6	307	1136	182
Grp Volume(v), veh/h	585	0	0	502	0	0	234	0	0	250	0	0
Grp Sat Flow(s), veh/h/ln	1686	0	0	1607	0	0	1515	0	0	1626	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	15.5	0.0	0.0	13.3	0.0	0.0	6.4	0.0	0.0	6.7	0.0	0.0
Prop In Lane	0.03		0.23	0.02		0.08	0.43		0.00	0.26		0.11
Lane Grp Cap(c), veh/h	905	0	0	864	0	0	591	0	0	618	0	0
V/C Ratio(X)	0.65	0.00	0.00	0.58	0.00	0.00	0.40	0.00	0.00	0.40	0.00	0.00
Avail Cap(c_a), veh/h	905	0	0	864	0	0	591	0	0	618	0	0
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.9	0.0	0.0	10.3	0.0	0.0	14.9	0.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	3.6	0.0	0.0	2.8	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.6	0.0	0.0	4.5	0.0	0.0	2.6	0.0	0.0	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.4	0.0	0.0	13.1	0.0	0.0	16.9	0.0	0.0	16.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h	585			502			234			250		
Approach Delay, s/veh	14.4			13.1			16.9			16.9		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	35.0		25.0		35.0		25.0					
Change Period (Y+R _c), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		20.0		30.0		20.0					
Max Q Clear Time (g_c+l1), s	0.0		0.0		0.0		0.0					
Green Ext Time (p_c), s	0.0		0.0		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			14.8									
HCM 6th LOS			B									

Lanes, Volumes, Timings

3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

Existing Conditions 2019

AM Peak



Lane Group	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR2
Lane Configurations												
Traffic Volume (vph)	487	5	1	11	11	474	2	17	0	9	0	1
Future Volume (vph)	487	5	1	11	11	474	2	17	0	9	0	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	12	11	12	11	11	12	12	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.998					0.999			0.953		0.865	
Flt Protected							0.998			0.968		
Satd. Flow (prot)	1687	0	0	0	0	1671	0	0	1550	0	1505	0
Flt Permitted							0.998			0.968		
Satd. Flow (perm)	1687	0	0	0	0	1671	0	0	1550	0	1505	0
Link Speed (mph)	35					35			30		30	
Link Distance (ft)	776					441			498		435	
Travel Time (s)	15.1					8.6			11.3		9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)						1						
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 (%)	3%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	497	5	1	11	11	484	2	17	0	9	0	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	503	0	0	0	0	508	0	0	26	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0					0			0		0	
Link Offset(ft)	0					0			60		0	
Crosswalk Width(ft)	16					16			16		16	
Two way Left Turn Lane												
Headway Factor	1.12	1.07	1.12	1.07	1.12	1.12	1.07	1.07	1.17	1.07	1.12	1.07
Turning Speed (mph)		9	9	15	15		9	15		9		9
Sign Control	Free					Free			Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	67.6%					ICU Level of Service C						
Analysis Period (min)	15											

Lanes, Volumes, Timings

3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

Existing Conditions 2019

AM Peak

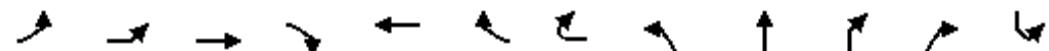


Lane Group	NEL	NER	NER2
Lane Configurations			
Traffic Volume (vph)	0	12	5
Future Volume (vph)	0	12	5
Ideal Flow (vphpl)	1800	1800	1800
Lane Width (ft)	10	12	12
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor			
Frt	0.865		
Flt Protected			
Satd. Flow (prot)	1179	0	0
Flt Permitted			
Satd. Flow (perm)	1179	0	0
Link Speed (mph)	20		
Link Distance (ft)	604		
Travel Time (s)	20.6		
Confl. Peds. (#/hr)		2	
Confl. Bikes (#/hr)			
Peak Hour Factor	0.98	0.98	0.98
Heavy Vehicles (%)	2%	8%	60%
Adj. Flow (vph)	0	12	5
Shared Lane Traffic (%)			
Lane Group Flow (vph)	17	0	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Right	Right
Median Width(ft)	10		
Link Offset(ft)	10		
Crosswalk Width(ft)	16		
Two way Left Turn Lane			
Headway Factor	1.17	1.07	1.07
Turning Speed (mph)	15	9	9
Sign Control	Stop		
Intersection Summary			

Lanes, Volumes, Timings

Existing Conditions 2019

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak



Lane Group	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	14	21	471	1	446	27	4	7	4	1	5	1
Future Volume (vph)	14	21	471	1	446	27	4	7	4	1	5	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	15	15	15	15	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												0.99
Frt							0.991					0.952
Flt Protected						0.997						0.980
Satd. Flow (prot)	0	0	1921	0	1860	0	0	0	1553	0	0	0
Flt Permitted						0.954						0.889
Satd. Flow (perm)	0	0	1837	0	1860	0	0	0	1406	0	0	0
Right Turn on Red					No			Yes				Yes
Satd. Flow (RTOR)						1			5			
Link Speed (mph)				35		35			20			
Link Distance (ft)				441		605			483			
Travel Time (s)				8.6		11.8			16.5			
Confl. Peds. (#/hr)	5	4				5	4	4		4		4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	3%	0%	5%	11%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	15	22	491	1	465	28	4	7	4	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	529	0	497	0	0	0	17	0	0	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Left	Right	Left	Right	Right	Left	Left	Right	Right	Left
Median Width(ft)					0				0			
Link Offset(ft)				10		10			0			
Crosswalk Width(ft)				16		16			16			
Two way Left Turn Lane												
Headway Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	15		9		9	9	15		9	9	15
Number of Detectors	1	1	0		0			1	1			1
Detector Template	Left	Left						Left				Left
Leading Detector (ft)	20	20	0		0			20	45			20
Trailing Detector (ft)	0	0	0		0			0	-5			0
Detector 1 Position(ft)	0	0	0		0			0	-5			0
Detector 1 Size(ft)	20	20	6		6			20	50			20
Detector 1 Type	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
Detector 1 Queue (s)	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
Turn Type	Perm	Perm	NA		NA			Perm	NA			Perm
Protected Phases			2		6				8			
Permitted Phases	2	2						8				4
Detector Phase	2	2	2		6			8	8			4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0			5.0	5.0			5.0
Minimum Split (s)	10.0	10.0	10.0		10.0			10.0	10.0			10.0

Lanes, Volumes, Timings

Existing Conditions 2019

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak



Lane Group	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	44	0	31
Future Volume (vph)	44	0	31
Ideal Flow (vphpl)	1800	1800	1800
Lane Width (ft)	10	10	10
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor	0.99		
Frt	0.945		
Flt Protected	0.971		
Satd. Flow (prot)	0	1449	0
Flt Permitted	0.808		
Satd. Flow (perm)	0	1202	0
Right Turn on Red		No	
Satd. Flow (RTOR)			
Link Speed (mph)	20		
Link Distance (ft)	477		
Travel Time (s)	16.3		
Confl. Peds. (#/hr)		4	
Peak Hour Factor	0.96	0.96	0.96
Heavy Vehicles (%)	7%	0%	3%
Adj. Flow (vph)	46	0	32
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0	79	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)	0		
Link Offset(ft)	25		
Crosswalk Width(ft)	30		
Two way Left Turn Lane			
Headway Factor	1.17	1.17	1.17
Turning Speed (mph)	15		9
Number of Detectors	1	1	
Detector Template	Left		
Leading Detector (ft)	20	45	
Trailing Detector (ft)	0	-5	
Detector 1 Position(ft)	0	-5	
Detector 1 Size(ft)	20	50	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Turn Type	Perm	NA	
Protected Phases		4	
Permitted Phases	4		
Detector Phase	4	4	
Switch Phase			
Minimum Initial (s)	5.0	5.0	
Minimum Split (s)	10.0	10.0	

Lanes, Volumes, Timings

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak

Existing Conditions 2019



Lane Group	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Total Split (s)	35.0	35.0	35.0		35.0			25.0	25.0			25.0
Total Split (%)	58.3%	58.3%	58.3%		58.3%			41.7%	41.7%			41.7%
Maximum Green (s)	30.0	30.0	30.0		30.0			20.0	20.0			20.0
Yellow Time (s)	3.0	3.0	3.0		3.0			3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0		2.0			2.0	2.0			2.0
Lost Time Adjust (s)				-1.0		-1.0			-1.0			
Total Lost Time (s)				4.0		4.0			4.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2	0.2		0.2			0.2	0.2			0.2
Recall Mode	Max	Max	Max		Max			None	None			None
Act Effect Green (s)			38.4		38.4							6.8
Actuated g/C Ratio			0.79		0.79							0.14
v/c Ratio			0.36		0.34							0.08
Control Delay			4.1		3.9							15.6
Queue Delay			0.0		0.0							0.0
Total Delay			4.1		3.9							15.6
LOS			A		A							B
Approach Delay			4.1		3.9							15.6
Approach LOS			A		A							B

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 48.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 5.7

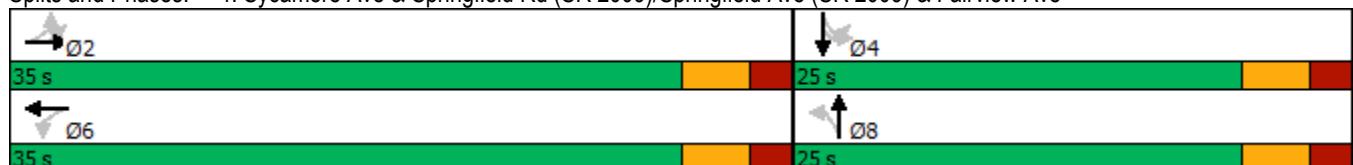
Intersection LOS: A

Intersection Capacity Utilization 70.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave



Lanes, Volumes, Timings

Existing Conditions 2019

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak



Lane Group	SBL	SBT	SBR
Total Split (s)	25.0	25.0	
Total Split (%)	41.7%	41.7%	
Maximum Green (s)	20.0	20.0	
Yellow Time (s)	3.0	3.0	
All-Red Time (s)	2.0	2.0	
Lost Time Adjust (s)	-1.0		
Total Lost Time (s)	4.0		
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	0.2	0.2	
Recall Mode	None	None	
Act Effect Green (s)		7.4	
Actuated g/C Ratio		0.15	
v/c Ratio		0.43	
Control Delay		25.3	
Queue Delay		0.0	
Total Delay		25.3	
LOS		C	
Approach Delay		25.3	
Approach LOS		C	
Intersection Summary			

HCM 6th Edition methodology does not support more than 4 approaches.

Lanes, Volumes, Timings
5: Oak Ave & Wyncliffe Ave

Existing Conditions 2019
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	24	15	2	9	162	6	1	212	9
Future Volume (vph)	0	0	0	24	15	2	9	162	6	1	212	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.994			0.995			0.995
Flt Protected						0.971			0.997			
Satd. Flow (prot)	0	0	0	0	1737	0	0	1684	0	0	1757	0
Flt Permitted						0.971			0.997			
Satd. Flow (perm)	0	0	0	0	1737	0	0	1684	0	0	1757	0
Link Speed (mph)		25				25			25			25
Link Distance (ft)		262				804			486			552
Travel Time (s)		7.1				21.9			13.3			15.1
Confl. Peds. (#/hr)				1		6	1					1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	11%	6%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	27	17	2	10	182	7	1	238	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	46	0	0	199	0	0	249	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Stop			Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	28.1%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 8.8
Intersection LOS A

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR									
Lane Configurations																					
Traffic Vol, veh/h	0	0	0	24	15	2	9	162	6	1	212	9									
Future Vol, veh/h	0	0	0	24	15	2	9	162	6	1	212	9									
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89									
Heavy Vehicles, %	0	0	0	0	0	0	11	6	0	0	2	0									
Mvmt Flow	0	0	0	27	17	2	10	182	7	1	238	10									
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0									
Approach				WB	NB				SB												
Opposing Approach							SB	NB													
Opposing Lanes	0						1	1													
Conflicting Approach Left	NB						WB														
Conflicting Lanes Left	1						0														
Conflicting Approach Right	SB						WB														
Conflicting Lanes Right	1						1														
HCM Control Delay	8.3						8.9														
HCM LOS	A						A														

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	5%	59%	0%
Vol Thru, %	92%	37%	95%
Vol Right, %	3%	5%	4%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	177	41	222
LT Vol	9	24	1
Through Vol	162	15	212
RT Vol	6	2	9
Lane Flow Rate	199	46	249
Geometry Grp	1	1	1
Degree of Util (X)	0.246	0.064	0.292
Departure Headway (Hd)	4.449	4.967	4.209
Convergence, Y/N	Yes	Yes	Yes
Cap	811	722	858
Service Time	2.455	2.99	2.214
HCM Lane V/C Ratio	0.245	0.064	0.29
HCM Control Delay	8.9	8.3	8.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.2	1.2

Lanes, Volumes, Timings
6: Sycamore Ave & Arch St

Existing Conditions 2019
AM Peak



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	4	37	0	4	65
Future Volume (vph)	13	4	37	0	4	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966					
Flt Protected	0.964					0.997
Satd. Flow (prot)	1676	0	1474	0	0	1600
Flt Permitted	0.964					0.997
Satd. Flow (perm)	1676	0	1474	0	0	1600
Link Speed (mph)	25		25			25
Link Distance (ft)	311		477			433
Travel Time (s)	8.5		13.0			11.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	14%	0%	0%	5%
Adj. Flow (vph)	15	5	42	0	5	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	42	0	0	79
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	17.1%					
Analysis Period (min)	15					
ICU Level of Service	A					

Intersection

Intersection Delay, s/veh 7.4
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	4	37	0	4	65
Future Vol, veh/h	13	4	37	0	4	65
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	14	0	0	5
Mvmt Flow	15	5	42	0	5	74
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB			WB		
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.3		7.5		7.4	
HCM LOS	A		A		A	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	76%	6%
Vol Thru, %	100%	0%	94%
Vol Right, %	0%	24%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	37	17	69
LT Vol	0	13	4
Through Vol	37	0	65
RT Vol	0	4	0
Lane Flow Rate	42	19	78
Geometry Grp	1	1	1
Degree of Util (X)	0.049	0.022	0.087
Departure Headway (Hd)	4.231	4.119	3.976
Convergence, Y/N	Yes	Yes	Yes
Cap	847	863	902
Service Time	2.255	2.175	1.996
HCM Lane V/C Ratio	0.05	0.022	0.086
HCM Control Delay	7.5	7.3	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3

Lanes, Volumes, Timings
7: Sycamore Ave & Wyncliffe Ave

Existing Conditions 2019
AM Peak

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	7	9	1	17	21	4	43	1	6	51	3
Future Volume (vph)	6	7	9	1	17	21	4	43	1	6	51	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.926			0.998			0.994	
Flt Protected		0.986			0.999			0.995			0.995	
Satd. Flow (prot)	0	1679	0	0	1623	0	0	1570	0	0	1535	0
Flt Permitted		0.986			0.999			0.995			0.995	
Satd. Flow (perm)	0	1679	0	0	1623	0	0	1570	0	0	1535	0
Link Speed (mph)		25			25			20			20	
Link Distance (ft)		463			400			433			329	
Travel Time (s)		12.6			10.9			14.8			11.2	
Confl. Peds. (#/hr)	3		4	4		3	3		2	2		3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	0%	7%	0%	0%	8%	33%
Adj. Flow (vph)	7	8	10	1	19	24	5	49	1	7	58	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	44	0	0	55	0	0	68	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	18.0%											
Analysis Period (min)	15											
ICU Level of Service	A											

HCM 6th AWSC
7: Sycamore Ave & Wyncliffe Ave

Existing Conditions 2019
AM Peak

Intersection

Intersection Delay, s/veh 7.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	7	9	1	17	21	4	43	1	6	51	3
Future Vol, veh/h	6	7	9	1	17	21	4	43	1	6	51	3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	6	0	0	7	0	0	8	33
Mvmt Flow	7	8	10	1	19	24	5	49	1	7	58	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
Opposing Approach	WB			EB			NB			SB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.1			7.1			7.4			7.4		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	27%	3%	10%
Vol Thru, %	90%	32%	44%	85%
Vol Right, %	2%	41%	54%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	22	39	60
LT Vol	4	6	1	6
Through Vol	43	7	17	51
RT Vol	1	9	21	3
Lane Flow Rate	55	25	44	68
Geometry Grp	1	1	1	1
Degree of Util (X)	0.062	0.027	0.047	0.077
Departure Headway (Hd)	4.076	3.955	3.812	4.05
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	875	896	930	882
Service Time	2.115	2.02	1.875	2.088
HCM Lane V/C Ratio	0.063	0.028	0.047	0.077
HCM Control Delay	7.4	7.1	7.1	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.1	0.2

Queuing and Blocking Report

Existing Conditions 2019

AM Peak

Intersection: 1: Austin Dr & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NB	SB
Directions Served	TR	LT	L	R	LTR
Maximum Queue (ft)	137	183	30	44	59
Average Queue (ft)	39	45	4	4	23
95th Queue (ft)	101	131	22	22	49
Link Distance (ft)	760	268	149	149	92
Upstream Blk Time (%)		0			0
Queuing Penalty (veh)		0			0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Oak Ave & Springfield Rd (SR 2009)

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	47	272	315	234	194
Average Queue (ft)	9	152	135	102	91
95th Queue (ft)	32	242	259	186	157
Link Distance (ft)		268	689	703	405
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		2			
Storage Bay Dist (ft)		25			
Storage Blk Time (%)		4	32		
Queuing Penalty (veh)		23	5		

Intersection: 3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

Movement	EB	WB	NB	SB	NE
Directions Served	LTR>	<LTR	LTR	LTR>	<LR>
Maximum Queue (ft)	26	188	57	12	52
Average Queue (ft)	1	23	19	1	9
95th Queue (ft)	16	99	46	8	32
Link Distance (ft)	689	273	414	389	555
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report

Existing Conditions 2019

AM Peak

Intersection: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave

Movement	EB	WB	NB	SB
Directions Served	<LTR	LTR>	LTR>	<LTR
Maximum Queue (ft)	224	109	43	61
Average Queue (ft)	89	36	13	16
95th Queue (ft)	190	87	39	43
Link Distance (ft)	273	873	441	336
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	1			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak Ave & Wyncliffe Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	41	86	79
Average Queue (ft)	24	46	46
95th Queue (ft)	47	72	69
Link Distance (ft)	747	405	523
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Sycamore Ave & Arch St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	34	58	55
Average Queue (ft)	11	26	28
95th Queue (ft)	34	57	51
Link Distance (ft)	280	336	383
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Sycamore Ave & Wyncliffe Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	49	55	61
Average Queue (ft)	7	22	26	28
95th Queue (ft)	21	46	50	53
Link Distance (ft)	384	372	383	278
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 30

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Existing Conditions 2019
PM Peak

	←	→	↖	↙	↔	↙	↖	↑	↗	↘	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	553	17	21	591	0	35	0	25	7	1	23
Future Volume (vph)	0	553	17	21	591	0	35	0	25	7	1	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	11	11	10	10	10	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00		0.99		0.97		0.97	
Frt		0.996							0.850		0.899	
Flt Protected					0.998		0.950				0.989	
Satd. Flow (prot)	0	1709	0	0	1704	0	1596	0	1373	0	1771	0
Flt Permitted					0.977		0.741				0.989	
Satd. Flow (perm)	0	1709	0	0	1668	0	1231	0	1326	0	1765	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		4							35		24	
Link Speed (mph)		35			35			20			20	
Link Distance (ft)		555			352			184			157	
Travel Time (s)		10.8			6.9			6.3			5.4	
Confl. Peds. (#/hr)	3		10	10		3	8		10	10		8
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%	1%	12%	0%	2%	0%	0%	0%	4%	0%	0%	0%
Parking (#/hr)			0						0			
Adj. Flow (vph)	0	570	18	22	609	0	36	0	26	7	1	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	588	0	0	631	0	36	0	26	0	32	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			10			10	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.17	1.17	1.17	0.91	0.91	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0		1		1	1	1	
Detector Template			Left						Left			
Leading Detector (ft)	0		20	0		35		35	20		35	
Trailing Detector (ft)	0		0	0		-5		-5	0		-5	
Detector 1 Position(ft)	0		0	0		-5		-5	0		-5	
Detector 1 Size(ft)	6		20	6		40		40	20		40	
Detector 1 Type	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	NA		Perm	NA		Perm		Perm	Perm	Perm	NA	
Protected Phases	2			6							4	
Permitted Phases			6			8		8		4		
Detector Phase	2		6	6		8		8		4		4
Switch Phase												
Minimum Initial (s)	32.0		32.0	32.0		5.0		5.0	5.0	5.0		

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Existing Conditions 2019
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	37.0			37.0	37.0		10.0		10.0	10.0		10.0
Total Split (s)		37.0		37.0	37.0		25.0		25.0	25.0		25.0
Total Split (%)	59.7%		59.7%	59.7%		40.3%		40.3%	40.3%	40.3%		40.3%
Maximum Green (s)	32.0		32.0	32.0		20.0		20.0	20.0	20.0		20.0
Yellow Time (s)	3.0		3.0	3.0		3.0		3.0	3.0	3.0		3.0
All-Red Time (s)	2.0		2.0	2.0		2.0		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)	4.0			4.0		4.0		4.0		4.0		4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0		2.0	2.0		2.0		2.0	2.0	2.0		2.0
Recall Mode	Max		Max	Max		None		None	None	None		None
Act Effect Green (s)	40.4			40.4		7.3		7.3		6.8		
Actuated g/C Ratio	0.80			0.80		0.15		0.15		0.14		
v/c Ratio	0.43			0.47		0.20		0.12		0.12		
Control Delay	4.4			4.9		20.7		7.6		11.4		
Queue Delay	0.0			0.3		0.0		0.0		0.0		
Total Delay	4.4			5.2		20.7		7.6		11.4		
LOS	A			A		C		A		B		
Approach Delay	4.4			5.2			15.2			11.4		
Approach LOS	A			A			B			B		

Intersection Summary

Area Type: Other

Cycle Length: 62

Actuated Cycle Length: 50.3

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 5.5

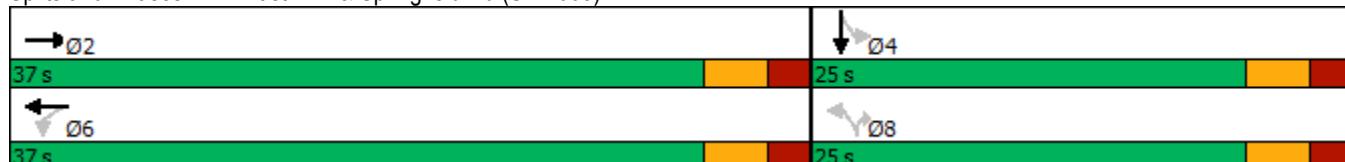
Intersection LOS: A

Intersection Capacity Utilization 66.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Austin Dr & Springfield Rd (SR 2009)



HCM 6th Edition methodology does not support Non-NEMA phasing.

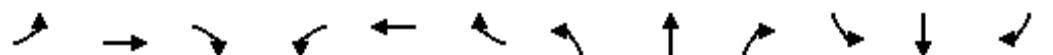
Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Existing Conditions 2019
PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	372	166	14	441	47	132	195	17	48	174	24
Future Volume (vph)	42	372	166	14	441	47	132	195	17	48	174	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	11	11	11	11	11	11	10	10	10
Grade (%)	-4%				4%			-4%			-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99				1.00			1.00			1.00	
Frt		0.961				0.987			0.993			0.987
Flt Protected		0.996				0.999			0.981			0.990
Satd. Flow (prot)	0	1935	0	0	1657	0	0	1707	0	0	1660	0
Flt Permitted		0.943				0.982			0.764			0.895
Satd. Flow (perm)	0	1832	0	0	1629	0	0	1328	0	0	1501	0
Right Turn on Red			No			No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		352			764			332			486	
Travel Time (s)		6.9			14.9			9.1			13.3	
Confl. Peds. (#/hr)	2		4	4		2	3		1	1		3
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%	3%	1%	14%	1%	0%	3%	0%	0%	0%	1%	4%
Parking (#/hr)			0						0			0
Adj. Flow (vph)	43	384	171	14	455	48	136	201	18	49	179	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	598	0	0	517	0	0	355	0	0	253	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		24			16			30			16	
Two way Left Turn Lane												
Headway Factor	0.89	0.89	0.89	1.15	1.15	1.15	1.09	1.09	1.09	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	25.0		25.0	25.0	
Total Split (%)	58.3%	58.3%		58.3%	58.3%		41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	30.0	30.0		30.0	30.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		31.0			31.0			21.0			21.0	
Actuated g/C Ratio		0.52			0.52			0.35			0.35	
v/c Ratio		0.63			0.61			0.77			0.48	

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Existing Conditions 2019
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		14.2			14.3			31.0			19.1	
Queue Delay			2.3		0.0			0.0			0.0	
Total Delay		16.5			14.3			31.0			19.1	
LOS			B		B			C			B	
Approach Delay		16.5			14.3			31.0			19.1	
Approach LOS			B		B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 19.2

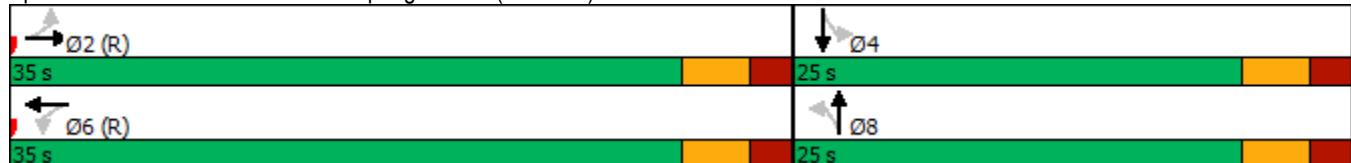
Intersection LOS: B

Intersection Capacity Utilization 95.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Oak Ave & Springfield Rd (SR 2009)



HCM 6th Signalized Intersection Summary
2: Oak Ave & Springfield Rd (SR 2009)

Existing Conditions 2019
PM Peak

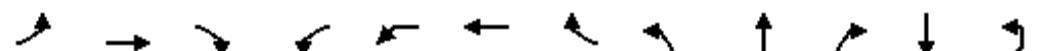
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	372	166	14	441	47	132	195	17	48	174	24
Future Volume (veh/h)	42	372	166	14	441	47	132	195	17	48	174	24
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1983	1983	1983	1697	1697	1697	1949	1949	1949	1972	1972	1972
Adj Flow Rate, veh/h	43	384	171	14	455	48	136	201	18	49	179	25
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, %	3	3	3	1	1	1	0	0	0	1	1	1
Cap, veh/h	98	570	242	70	766	79	258	338	27	142	458	58
Arrive On Green	0.50	0.52	0.50	0.50	0.52	0.50	0.33	0.35	0.35	0.33	0.35	0.33
Sat Flow, veh/h	65	1103	468	16	1482	153	500	965	78	200	1309	166
Grp Volume(v), veh/h	598	0	0	517	0	0	355	0	0	253	0	0
Grp Sat Flow(s), veh/h/ln	1636	0	0	1651	0	0	1542	0	0	1675	0	0
Q Serve(g_s), s	3.2	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	16.5	0.0	0.0	13.3	0.0	0.0	11.2	0.0	0.0	6.7	0.0	0.0
Prop In Lane	0.07		0.29	0.03		0.09	0.38		0.05	0.19		0.10
Lane Grp Cap(c), veh/h	882	0	0	887	0	0	597	0	0	630	0	0
V/C Ratio(X)	0.68	0.00	0.00	0.58	0.00	0.00	0.59	0.00	0.00	0.40	0.00	0.00
Avail Cap(c_a), veh/h	882	0	0	887	0	0	597	0	0	630	0	0
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.1	0.0	0.0	10.3	0.0	0.0	16.3	0.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	0.0	2.8	0.0	0.0	4.3	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.9	0.0	0.0	4.6	0.0	0.0	4.6	0.0	0.0	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.2	0.0	0.0	13.0	0.0	0.0	20.6	0.0	0.0	16.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h	598			517			355			253		
Approach Delay, s/veh	15.2			13.0			20.6			16.9		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	35.0		25.0		35.0		25.0					
Change Period (Y+R _c), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		20.0		30.0		20.0					
Max Q Clear Time (g_c+l1), s	0.0		0.0		0.0		0.0					
Green Ext Time (p_c), s	0.0		0.0		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

Lanes, Volumes, Timings

3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

Existing Conditions 2019

PM Peak



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	NEL2
Lane Configurations												
Traffic Volume (vph)	4	446	24	6	7	493	4	17	1	13	0	4
Future Volume (vph)	4	446	24	6	7	493	4	17	1	13	0	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	11	11	12	12	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.993				0.999			0.945			
Flt Protected						0.999			0.973			
Satd. Flow (prot)	0	1674	0	0	0	1704	0	0	1494	0	1740	0
Flt Permitted						0.999			0.973			
Satd. Flow (perm)	0	1674	0	0	0	1704	0	0	1494	0	1740	0
Link Speed (mph)		35				35			30		30	
Link Distance (ft)		764				448			498		435	
Travel Time (s)		14.9				8.7			11.3		9.9	
Confl. Peds. (#/hr)	5		3	3			5			3		
Confl. Bikes (#/hr)												
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%	3%	8%	0%	0%	2%	0%	6%	0%	0%	0%	0%
Adj. Flow (vph)	4	460	25	6	7	508	4	18	1	13	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	489	0	0	0	525	0	0	32	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		0				0			0		0	
Link Offset(ft)		0				0			70		0	
Crosswalk Width(ft)		16				16			16		16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.12	1.12	1.07	1.07	1.17	1.07	1.12	1.07
Turning Speed (mph)	15		9	15	15		9	15		9		15
Sign Control		Free				Free			Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	55.1%					ICU Level of Service B						
Analysis Period (min)	15											

Lanes, Volumes, Timings

3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

Existing Conditions 2019

PM Peak



Lane Group	NEL	NER	NER2
Lane Configurations			
Traffic Volume (vph)	0	15	1
Future Volume (vph)	0	15	1
Ideal Flow (vphpl)	1800	1800	1800
Lane Width (ft)	10	12	12
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor			
Frt	0.892		
Flt Protected	0.990		
Satd. Flow (prot)	1484	0	0
Flt Permitted	0.990		
Satd. Flow (perm)	1484	0	0
Link Speed (mph)	20		
Link Distance (ft)	607		
Travel Time (s)	20.7		
Confl. Peds. (#/hr)	5	3	3
Confl. Bikes (#/hr)			
Peak Hour Factor	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%
Adj. Flow (vph)	0	15	1
Shared Lane Traffic (%)			
Lane Group Flow (vph)	20	0	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Right	Right
Median Width(ft)	10		
Link Offset(ft)	10		
Crosswalk Width(ft)	16		
Two way Left Turn Lane			
Headway Factor	1.17	1.07	1.07
Turning Speed (mph)	15	9	9
Sign Control	Stop		
Intersection Summary			

Lanes, Volumes, Timings

Existing Conditions 2019

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Traffic Volume (vph)	16	49	422	465	34	12	7	1	1	3	1	30
Future Volume (vph)	16	49	422	465	34	12	7	1	1	3	1	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	15	15	15	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	1.00			0.98			
Frt						0.988			0.955			
Flt Protected					0.993				0.972			
Satd. Flow (prot)	0	0	1862	1912	0	0	0	1537	0	0	0	0
Flt Permitted					0.897				0.786			
Satd. Flow (perm)	0	0	1681	1912	0	0	0	1238	0	0	0	0
Right Turn on Red							Yes			Yes		
Satd. Flow (RTOR)					3				3			
Link Speed (mph)				35	35				20			
Link Distance (ft)				448	605				483			
Travel Time (s)				8.7	11.8				16.5			
Confl. Peds. (#/hr)	5	10			5	10	5		10	6	10	6
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 (%)	6%	2%	6%	2%	3%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	16	50	431	474	35	12	7	1	1	3	1	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	497	521	0	0	0	12	0	0	0	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Left	Right	Right	Left	Left
Median Width(ft)				0	0				0			
Link Offset(ft)				0	20				12			
Crosswalk Width(ft)				16	16				16			
Two way Left Turn Lane												
Headway Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	15			9	9	15		9	9	15	15
Number of Detectors	1	1	0	0			1	1			1	1
Detector Template	Left	Left					Left				Left	Left
Leading Detector (ft)	20	20	0	0			20	45			20	20
Trailing Detector (ft)	0	0	0	0			0	-5			0	0
Detector 1 Position(ft)	0	0	0	0			0	-5			0	0
Detector 1 Size(ft)	20	20	6	6			20	50			20	20
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	Perm	NA	NA			Perm	NA			Perm	Perm
Protected Phases			2	6				8				
Permitted Phases	2	2						8			4	4
Detector Phase	2	2	2	6			8	8			4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0			5.0	5.0			5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0			10.0	10.0			10.0	10.0

Lanes, Volumes, Timings

Existing Conditions 2019

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	28
Future Volume (vph)	0	28
Ideal Flow (vphpl)	1800	1800
Lane Width (ft)	10	10
Lane Util. Factor	1.00	1.00
Ped Bike Factor	0.98	
Frt	0.936	
Flt Protected	0.974	
Satd. Flow (prot)	1484	0
Flt Permitted	0.829	
Satd. Flow (perm)	1248	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	20	
Link Distance (ft)	487	
Travel Time (s)	16.6	
Confl. Peds. (#/hr)		5
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	0%	4%
Adj. Flow (vph)	0	29
Shared Lane Traffic (%)		
Lane Group Flow (vph)	61	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	0	
Link Offset(ft)	20	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.17	1.17
Turning Speed (mph)		9
Number of Detectors	1	
Detector Template		
Leading Detector (ft)	45	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	50	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	10.0	

Lanes, Volumes, Timings

Existing Conditions 2019

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBL
Total Split (s)	35.0	35.0	35.0	35.0			25.0	25.0			25.0	25.0
Total Split (%)	58.3%	58.3%	58.3%	58.3%			41.7%	41.7%			41.7%	41.7%
Maximum Green (s)	30.0	30.0	30.0	30.0			20.0	20.0			20.0	20.0
Yellow Time (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0			2.0	2.0			2.0	2.0
Lost Time Adjust (s)				-1.0	-1.0				-1.0			
Total Lost Time (s)				4.0	4.0				4.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2	0.2	0.2			0.2	0.2			0.2	0.2
Recall Mode	Max	Max	Max	Max			None	None			None	None
Act Effect Green (s)			38.3	38.3							6.6	
Actuated g/C Ratio			0.80	0.80							0.14	
v/c Ratio			0.37	0.34							0.07	
Control Delay			3.9	3.5							16.0	
Queue Delay			0.0	0.0							0.0	
Total Delay			3.9	3.5							16.0	
LOS			A	A							B	
Approach Delay			3.9	3.5							16.0	
Approach LOS			A	A							B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 47.8

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 4.9

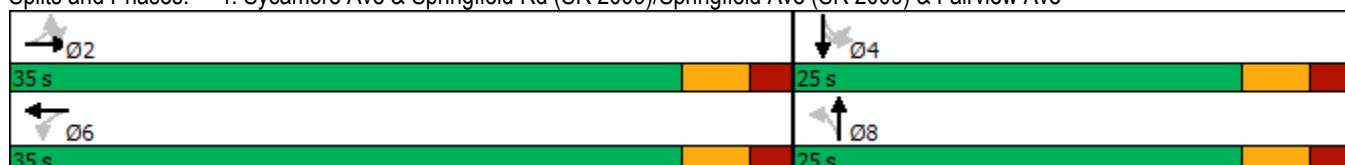
Intersection LOS: A

Intersection Capacity Utilization 70.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave



Lanes, Volumes, Timings

Existing Conditions 2019

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	SBT	SBR
Total Split (s)	25.0	
Total Split (%)	41.7%	
Maximum Green (s)	20.0	
Yellow Time (s)	3.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	-1.0	
Total Lost Time (s)	4.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	0.2	
Recall Mode	None	
Act Effect Green (s)	6.8	
Actuated g/C Ratio	0.14	
v/c Ratio	0.35	
Control Delay	23.4	
Queue Delay	0.0	
Total Delay	23.4	
LOS	C	
Approach Delay	23.4	
Approach LOS	C	
Intersection Summary		

HCM 6th Edition methodology does not support more than 4 approaches.

Lanes, Volumes, Timings
5: Oak Ave & Wyncliffe Ave

Existing Conditions 2019
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	13	10	11	13	215	43	10	226	8
Future Volume (vph)	0	0	0	13	10	11	13	215	43	10	226	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.956			0.979			0.995
Flt Protected						0.981			0.998			0.998
Satd. Flow (prot)	0	0	0	0	1593	0	0	1745	0	0	1787	0
Flt Permitted						0.981			0.998			0.998
Satd. Flow (perm)	0	0	0	0	1593	0	0	1745	0	0	1787	0
Link Speed (mph)		25				25			25			25
Link Distance (ft)		262				804			486			552
Travel Time (s)		7.1				21.9			13.3			15.1
Confl. Peds. (#/hr)	2		2	2		2	1		1	1		1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	8%	0%	9%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	14	11	12	14	236	47	11	248	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	37	0	0	297	0	0	268	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Stop			Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	35.7%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 9.3
Intersection LOS A

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations																
Traffic Vol, veh/h	0	0	0	13	10	11	13	215	43	10	226	8				
Future Vol, veh/h	0	0	0	13	10	11	13	215	43	10	226	8				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91				
Heavy Vehicles, %	0	0	0	8	0	9	0	1	0	0	0	0				
Mvmt Flow	0	0	0	14	11	12	14	236	47	11	248	9				
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0				
Approach				WB	NB				SB							
Opposing Approach							SB	NB								
Opposing Lanes							0	1								
Conflicting Approach Left							NB	WB								
Conflicting Lanes Left							1	0								
Conflicting Approach Right							SB	WB								
Conflicting Lanes Right							1	1								
HCM Control Delay							8.4	9.4								
HCM LOS							A	A								

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	5%	38%	4%
Vol Thru, %	79%	29%	93%
Vol Right, %	16%	32%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	271	34	244
LT Vol	13	13	10
Through Vol	215	10	226
RT Vol	43	11	8
Lane Flow Rate	298	37	268
Geometry Grp	1	1	1
Degree of Util (X)	0.346	0.053	0.319
Departure Headway (Hd)	4.184	5.114	4.282
Convergence, Y/N	Yes	Yes	Yes
Cap	864	701	845
Service Time	2.191	3.142	2.289
HCM Lane V/C Ratio	0.345	0.053	0.317
HCM Control Delay	9.4	8.4	9.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.6	0.2	1.4

Lanes, Volumes, Timings
6: Sycamore Ave & Arch St

Existing Conditions 2019
PM Peak



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	1	62	2	2	76
Future Volume (vph)	8	1	62	2	2	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.988		0.996			
Flt Protected	0.957					0.999
Satd. Flow (prot)	1702	0	1641	0	0	1662
Flt Permitted	0.957					0.999
Satd. Flow (perm)	1702	0	1641	0	0	1662
Link Speed (mph)	25		25			25
Link Distance (ft)	311		487			433
Travel Time (s)	8.5		13.3			11.8
Confl. Peds. (#/hr)	1	2		5	5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%
Adj. Flow (vph)	10	1	74	2	2	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	76	0	0	92
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.6%				ICU Level of Service A	
Analysis Period (min)	15					

Intersection

Intersection Delay, s/veh 7.5
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	1	62	2	2	76
Future Vol, veh/h	8	1	62	2	2	76
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	10	1	74	2	2	90
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB			WB		
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.4		7.4		7.5	
HCM LOS	A		A		A	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	89%	3%
Vol Thru, %	97%	0%	97%
Vol Right, %	3%	11%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	64	9	78
LT Vol	0	8	2
Through Vol	62	0	76
RT Vol	2	1	0
Lane Flow Rate	76	11	93
Geometry Grp	1	1	1
Degree of Util (X)	0.085	0.013	0.103
Departure Headway (Hd)	4.004	4.302	3.982
Convergence, Y/N	Yes	Yes	Yes
Cap	895	823	901
Service Time	2.027	2.373	2.002
HCM Lane V/C Ratio	0.085	0.013	0.103
HCM Control Delay	7.4	7.4	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0	0.3

Lanes, Volumes, Timings
7: Sycamore Ave & Wyncliffe Ave

Existing Conditions 2019
PM Peak

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	16	8	0	25	22	5	49	2	15	62	9
Future Volume (vph)	9	16	8	0	25	22	5	49	2	15	62	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.967			0.936			0.996			0.986	
Flt Protected		0.987						0.995			0.991	
Satd. Flow (prot)	0	1718	0	0	1685	0	0	1607	0	0	1600	0
Flt Permitted		0.987						0.995			0.991	
Satd. Flow (perm)	0	1718	0	0	1685	0	0	1607	0	0	1600	0
Link Speed (mph)		25			25			20			20	
Link Distance (ft)		463			400			433			329	
Travel Time (s)		12.6			10.9			14.8			11.2	
Confl. Peds. (#/hr)	3		4	4		3	7		3	3		7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	20%	2%	0%	0%	2%	11%
Adj. Flow (vph)	10	18	9	0	28	25	6	56	2	17	70	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	53	0	0	64	0	0	97	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop		Stop		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	25.3%											
Analysis Period (min)	15											
ICU Level of Service	A											

Intersection

Intersection Delay, s/veh 7.6

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	9	16	8	0	25	22	5	49	2	15	62	9
Future Vol, veh/h	9	16	8	0	25	22	5	49	2	15	62	9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	20	2	0	0	2	11
Mvmt Flow	10	18	9	0	28	25	6	56	2	17	70	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB		SB			NB		
Opposing Lanes	1				1		1			1		
Conflicting Approach Left	SB				NB		EB			WB		
Conflicting Lanes Left	1				1		1			1		
Conflicting Approach Right	NB				SB		WB			EB		
Conflicting Lanes Right	1				1		1			1		
HCM Control Delay	7.4				7.3		7.9			7.7		
HCM LOS	A				A		A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	27%	0%	17%
Vol Thru, %	88%	48%	53%	72%
Vol Right, %	4%	24%	47%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	33	47	86
LT Vol	5	9	0	15
Through Vol	49	16	25	62
RT Vol	2	8	22	9
Lane Flow Rate	64	38	53	98
Geometry Grp	1	1	1	1
Degree of Util (X)	0.079	0.043	0.058	0.111
Departure Headway (Hd)	4.468	4.13	3.927	4.077
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	795	852	896	872
Service Time	2.531	2.229	2.024	2.138
HCM Lane V/C Ratio	0.081	0.045	0.059	0.112
HCM Control Delay	7.9	7.4	7.3	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.1	0.2	0.4

Queuing and Blocking Report

Existing Coditons 2019

PM Peak

Intersection: 1: Austin Dr & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NB	SB
Directions Served	TR	LT	L	R	LTR
Maximum Queue (ft)	174	257	63	43	51
Average Queue (ft)	60	84	25	18	20
95th Queue (ft)	132	196	56	44	47
Link Distance (ft)	715	268	150	150	92
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		2			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Oak Ave & Springfield Rd (SR 2009)

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	49	267	382	506	276
Average Queue (ft)	22	157	146	231	116
95th Queue (ft)	53	255	285	467	224
Link Distance (ft)		268	684	707	405
Upstream Blk Time (%)		0		0	
Queuing Penalty (veh)		3		0	
Storage Bay Dist (ft)		25			
Storage Blk Time (%)		13	33		
Queuing Penalty (veh)		70	14		

Intersection: 3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NE
Directions Served	LTR	<LTR	LTR	<LR>
Maximum Queue (ft)	111	135	70	52
Average Queue (ft)	7	13	23	16
95th Queue (ft)	51	72	52	43
Link Distance (ft)	684	272	407	577
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Existing Coditons 2019

PM Peak

Intersection: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave

Movement	EB	WB	NB	SB
Directions Served	<LTR	LTR>	LTR>	<LTR
Maximum Queue (ft)	289	121	45	51
Average Queue (ft)	116	43	11	14
95th Queue (ft)	250	100	35	36
Link Distance (ft)	272	896	441	366
Upstream Blk Time (%)	2			
Queuing Penalty (veh)	9			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak Ave & Wyncliffe Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	52	104	70
Average Queue (ft)	23	53	45
95th Queue (ft)	49	83	67
Link Distance (ft)	747	405	523
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Sycamore Ave & Arch St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	28	53	51
Average Queue (ft)	7	31	30
95th Queue (ft)	26	47	44
Link Distance (ft)	280	366	383
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report

Existing Coditons 2019

PM Peak

Intersection: 7: Sycamore Ave & Wyncliffe Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	33	49	52	55
Average Queue (ft)	10	23	28	30
95th Queue (ft)	24	45	47	48
Link Distance (ft)	384	372	383	278
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 97

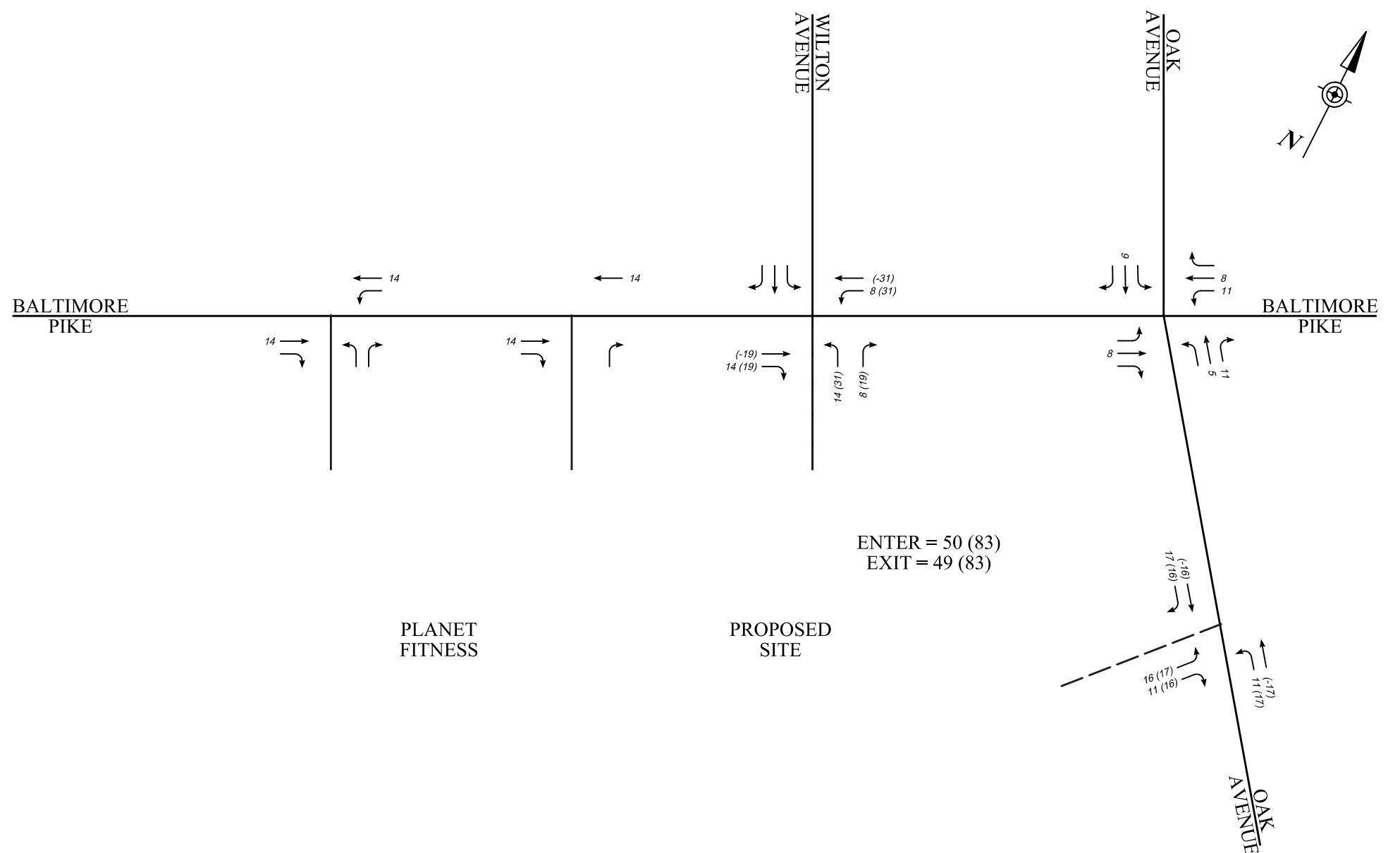
APPENDIX G

NEARBY PLANNED DEVELOPMENTS

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



**KEY:**

----- PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

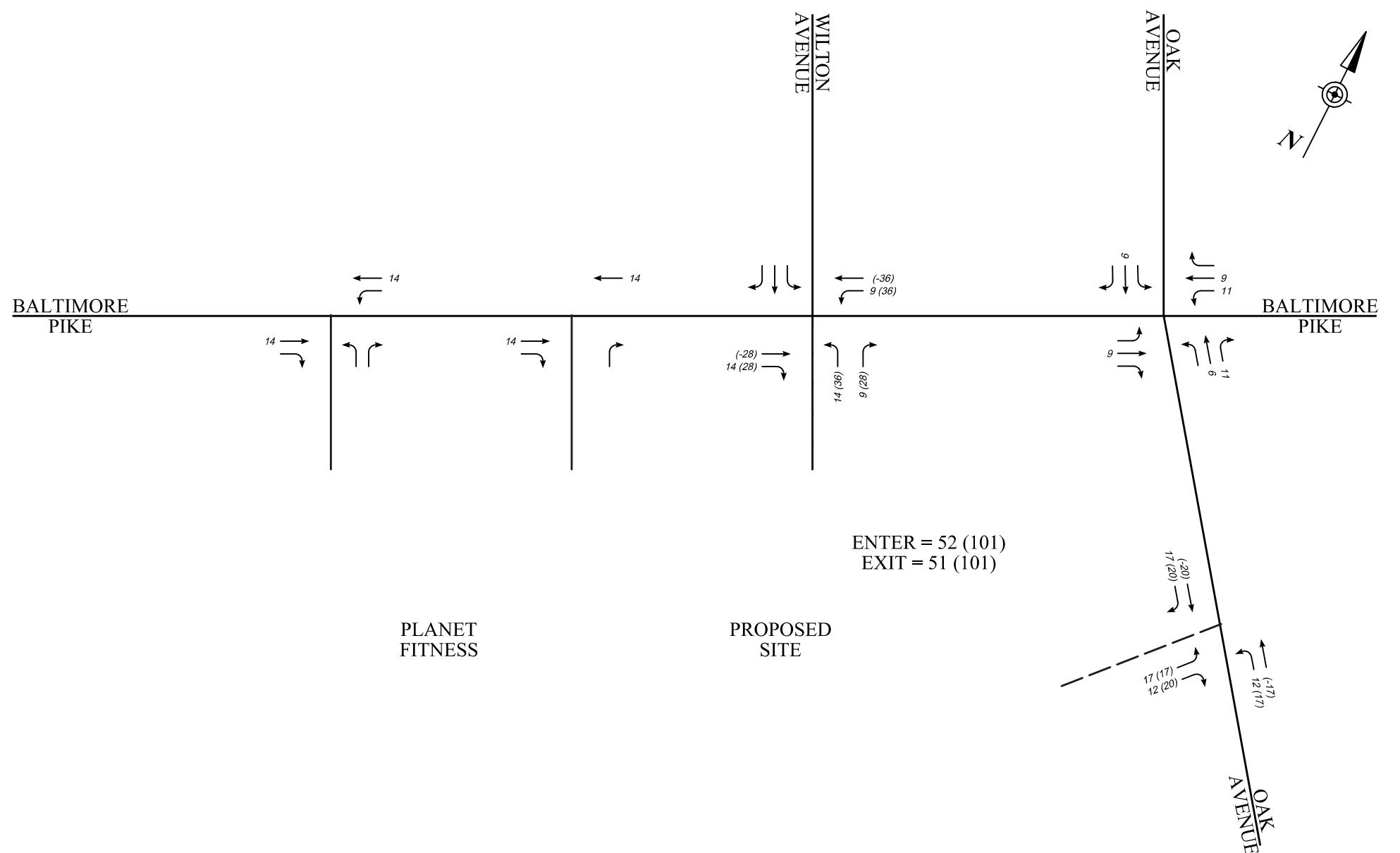


TRAFFIC PLANNING AND DESIGN, INC.
Providing transportation engineering and related services across the eastern United States

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FIGURE 12

PROPOSED WAWA
WEEKDAY AM PEAK HOUR
TRIP DISTRIBUTIONS

**KEY:**

----- PROPOSED DRIVEWAY

NEW(PASS-BY)TRIPS

SCHEMATIC DRAWING:NOT TO SCALE

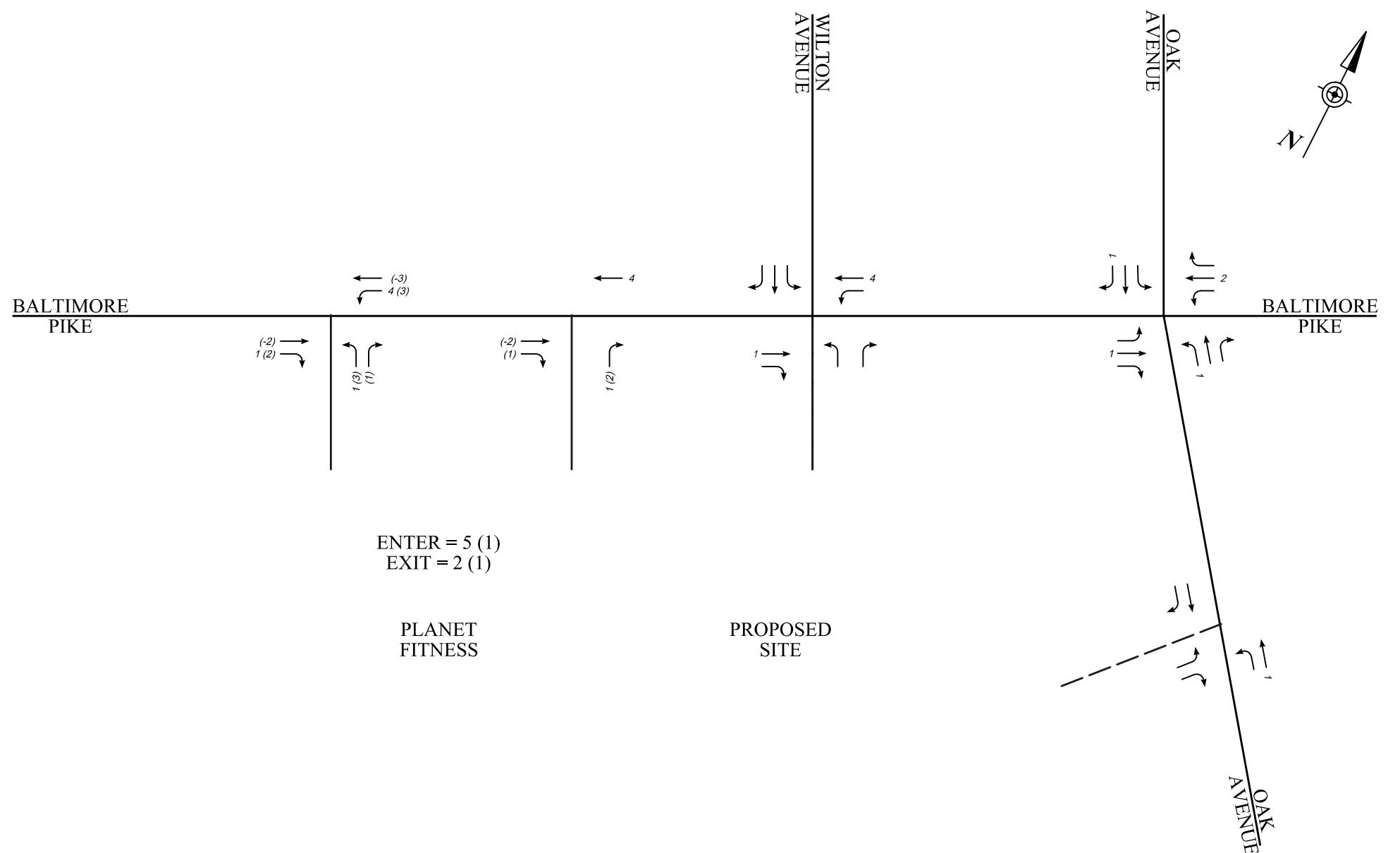


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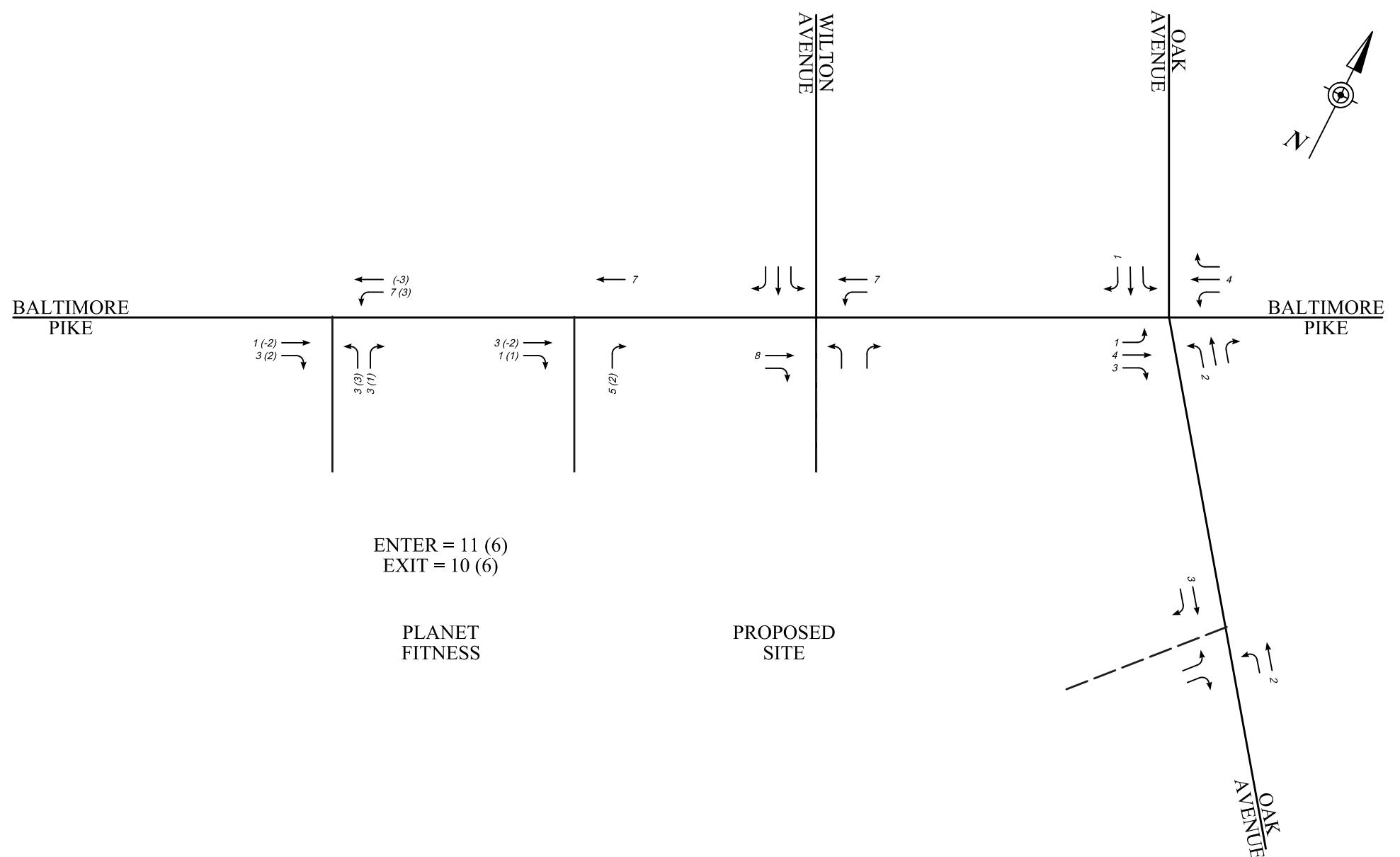
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FIGURE 13

PROPOSED WAWA
WEEKDAY PM PEAK HOUR
TRIP DISTRIBUTIONS



 <small>Est. 1989</small> TRAFFIC PLANNING AND DESIGN, INC. <i>Providing transportation engineering and related services across the eastern United States</i>	www.TrafficPD.com
FIGURE 15 PROPOSED RETAIL WEEKDAY AM PEAK HOUR TRIP DISTRIBUTIONS	

**KEY:****----- PROPOSED DRIVEWAY****NEW(PASS-BY)TRIPS****SCHEMATIC DRAWING:NOT TO SCALE**

Est. 1989
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FIGURE 16

PROPOSED RETAIL
WEEKDAY PM PEAK HOUR
TRIP DISTRIBUTIONS

APPENDIX H

NO BUILD CAPACITY AND QUEUE ANALYSIS WORKSHEETS

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

No Build 2022
AM Peak

	←	→	↙	↖	↔	↖	↗	↙	↑	↗	↖	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	559	9	8	558	0	5	0	3	8	2	27	
Future Volume (vph)	0	559	9	8	558	0	5	0	3	8	2	27	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	
Lane Width (ft)	11	11	11	11	11	11	10	10	10	16	16	16	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							0.99			0.98			
Frt		0.998							0.850		0.901		
Flt Protected					0.999			0.950			0.989		
Satd. Flow (prot)	0	1687	0	0	1639	0	1596	0	1074	0	1735	0	
Flt Permitted					0.994						0.989		
Satd. Flow (perm)	0	1687	0	0	1630	0	1666	0	1074	0	1735	0	
Right Turn on Red			Yes			No			Yes			Yes	
Satd. Flow (RTOR)	2								35		27		
Link Speed (mph)	35			35				20			20		
Link Distance (ft)	798			352				184			157		
Travel Time (s)	15.5				6.9			6.3			5.4		
Confl. Peds. (#/hr)							6				6		
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Heavy Vehicles (%)	0%	3%	0%	12%	6%	0%	0%	0%	33%	12%	0%	0%	
Parking (#/hr)			0							0			
Adj. Flow (vph)	0	565	9	8	564	0	5	0	3	8	2	27	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	574	0	0	572	0	5	0	3	0	37	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0			0			10			10			
Link Offset(ft)	0			0			0			0			
Crosswalk Width(ft)	16			16			16			16			
Two way Left Turn Lane													
Headway Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.17	1.17	1.17	0.91	0.91	0.91	
Turning Speed (mph)	15		9	15		9	15		9	15		9	
Number of Detectors		0		1	0		1		1	1	1		
Detector Template			Left						Left				
Leading Detector (ft)	0		20	0		35		35	20	35			
Trailing Detector (ft)	0		0	0		-5		-5	0	-5			
Detector 1 Position(ft)	0		0	0		-5		-5	0	-5			
Detector 1 Size(ft)	6		20	6		40		40	20	40			
Detector 1 Type	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			
Detector 1 Queue (s)	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			
Turn Type	NA		Perm	NA		Perm		Perm	Perm	NA			
Protected Phases	2			6						4			
Permitted Phases			6			8		8	4				
Detector Phase	2		6	6		8		8	4	4			
Switch Phase													
Minimum Initial (s)	32.0		32.0	32.0		5.0		5.0	5.0	5.0			

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

No Build 2022

AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	37.0			37.0	37.0		10.0		10.0	10.0		10.0
Total Split (s)		37.0		37.0	37.0		25.0		25.0	25.0		25.0
Total Split (%)	59.7%			59.7%	59.7%		40.3%		40.3%	40.3%		40.3%
Maximum Green (s)	32.0			32.0	32.0		20.0		20.0	20.0		20.0
Yellow Time (s)		3.0		3.0	3.0		3.0		3.0	3.0		3.0
All-Red Time (s)		2.0		2.0	2.0		2.0		2.0	2.0		2.0
Lost Time Adjust (s)		-1.0			-1.0		-1.0		-1.0		-1.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0		2.0	2.0		2.0
Recall Mode	Max			Max	Max		None		None	None		None
Act Effect Green (s)	44.1			44.1			6.4		6.4			6.4
Actuated g/C Ratio	0.88			0.88			0.13		0.13			0.13
v/c Ratio	0.39			0.40			0.02		0.02			0.15
Control Delay	3.1			3.2			18.2		0.3			11.9
Queue Delay	0.0			0.0			0.0		0.0			0.0
Total Delay	3.1			3.3			18.2		0.3			11.9
LOS	A			A			B		A			B
Approach Delay	3.1			3.3			11.5					11.9
Approach LOS	A			A			B					B

Intersection Summary

Area Type: Other

Cycle Length: 62

Actuated Cycle Length: 50.4

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 3.5

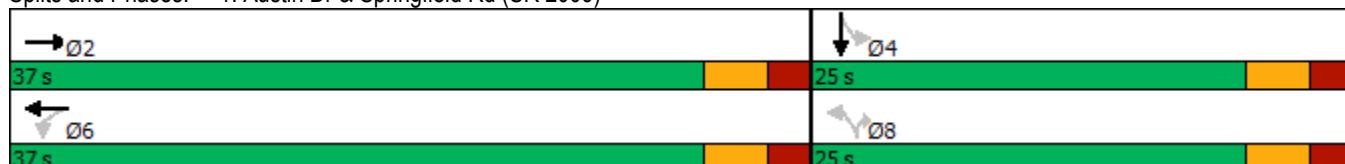
Intersection LOS: A

Intersection Capacity Utilization 53.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Austin Dr & Springfield Rd (SR 2009)



HCM 6th Edition methodology does not support Non-NEMA phasing.

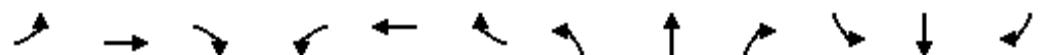
Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

No Build 2022
AM Peak

	↑	→	↓	↗	↖	↙	↖	↑	↗	↘	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	423	133	10	438	39	100	131	1	64	155	27
Future Volume (vph)	15	423	133	10	438	39	100	131	1	64	155	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	16	16	11	11	11	11	11	11	10	10	10
Grade (%)	-4%				4%			-4%			-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00			1.00	
Frt		0.969			0.989			0.999			0.985	
Flt Protected		0.999			0.999			0.979			0.987	
Satd. Flow (prot)	0	1921	0	0	1597	0	0	1626	0	0	1659	0
Flt Permitted		0.985			0.988			0.779			0.879	
Satd. Flow (perm)	0	1894	0	0	1580	0	0	1293	0	0	1478	0
Right Turn on Red			No			No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		352			776			778			486	
Travel Time (s)		6.9			15.1			21.2			13.3	
Confl. Peds. (#/hr)	1		1	1		1	2				2	
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%	4%	6%	0%	5%	10%	13%	2%	0%	0%	1%	0%
Parking (#/hr)		0						0			0	
Adj. Flow (vph)	15	436	137	10	452	40	103	135	1	66	160	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	588	0	0	502	0	0	239	0	0	254	0
Enter Blocked Intersection	Yes	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		24			16			35			16	
Two way Left Turn Lane												
Headway Factor	1.05	0.89	0.89	1.15	1.15	1.15	1.09	1.09	1.09	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	11.5	11.5		11.5	11.5		10.0	10.0		10.0	10.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	25.0		25.0	25.0	
Total Split (%)	58.3%	58.3%		58.3%	58.3%		41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	30.0	30.0		30.0	30.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		31.0			31.0			21.0			21.0	
Actuated g/C Ratio		0.52			0.52			0.35			0.35	
v/c Ratio		0.60			0.62			0.53			0.49	

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

No Build 2022
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		13.4			14.4			20.8			19.3	
Queue Delay		2.1			0.0			0.0			0.0	
Total Delay		15.5			14.4			20.8			19.3	
LOS		B			B			C			B	
Approach Delay		15.5			14.4			20.8			19.3	
Approach LOS		B			B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 16.5

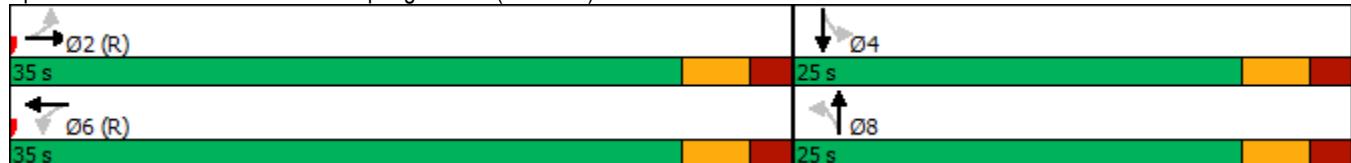
Intersection LOS: B

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Oak Ave & Springfield Rd (SR 2009)



HCM 6th Signalized Intersection Summary
2: Oak Ave & Springfield Rd (SR 2009)

No Build 2022
AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	423	133	10	438	39	100	131	1	64	155	27
Future Volume (veh/h)	15	423	133	10	438	39	100	131	1	64	155	27
Initial Q (Q _b), 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	0.90	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1892	1968	1968	1641	1641	1641	1921	1921	1921	1972	1972	1972
Adj Flow Rate, veh/h	15	436	137	10	452	40	103	135	1	66	160	28
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, %	4	4	4	5	5	5	2	2	2	1	1	1
Cap, veh/h	70	660	203	66	759	66	280	333	2	181	402	63
Arrive On Green	0.50	0.52	0.50	0.50	0.52	0.50	0.33	0.35	0.35	0.33	0.35	0.33
Sat Flow, veh/h	16	1277	393	10	1469	128	553	952	6	301	1148	180
Grp Volume(v), veh/h	588	0	0	502	0	0	239	0	0	254	0	0
Grp Sat Flow(s), veh/h/ln	1685	0	0	1606	0	0	1511	0	0	1629	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	15.7	0.0	0.0	13.3	0.0	0.0	6.6	0.0	0.0	6.8	0.0	0.0
Prop In Lane	0.03			0.23	0.02		0.08	0.43		0.00	0.26	0.11
Lane Grp Cap(c), veh/h	904	0	0	864	0	0	590	0	0	618	0	0
V/C Ratio(X)	0.65	0.00	0.00	0.58	0.00	0.00	0.41	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	904	0	0	864	0	0	590	0	0	618	0	0
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.9	0.0	0.0	10.3	0.0	0.0	15.0	0.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	3.6	0.0	0.0	2.8	0.0	0.0	2.1	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.6	0.0	0.0	4.5	0.0	0.0	2.7	0.0	0.0	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.5	0.0	0.0	13.1	0.0	0.0	17.0	0.0	0.0	17.0	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h	588			502			239			254		
Approach Delay, s/veh	14.5			13.1			17.0			17.0		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+R _c), s	35.0			25.0			35.0			25.0		
Change Period (Y+R _c), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	30.0			20.0			30.0			20.0		
Max Q Clear Time (g_c+l1), s	0.0			0.0			0.0			0.0		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay				14.8								
HCM 6th LOS				B								

Lanes, Volumes, Timings

No Build 2022

3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

AM Peak



Lane Group	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR2
Lane Configurations												
Traffic Volume (vph)	487	5	1	11	11	474	2	17	0	9	0	1
Future Volume (vph)	487	5	1	11	11	474	2	17	0	9	0	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	12	11	12	11	11	12	12	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.998					0.999			0.953		0.865	
Flt Protected							0.998			0.968		
Satd. Flow (prot)	1687	0	0	0	0	1671	0	0	1550	0	1505	0
Flt Permitted							0.998			0.968		
Satd. Flow (perm)	1687	0	0	0	0	1671	0	0	1550	0	1505	0
Link Speed (mph)	35					35			30		30	
Link Distance (ft)	776					441			498		435	
Travel Time (s)	15.1					8.6			11.3		9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)						1						
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 (%)	3%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	497	5	1	11	11	484	2	17	0	9	0	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	503	0	0	0	0	508	0	0	26	0	1	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Left	Right	Left	Left	Right	Left	Right
Median Width(ft)	0					0			0		0	
Link Offset(ft)	0					0			60		0	
Crosswalk Width(ft)	16					16			16		16	
Two way Left Turn Lane												
Headway Factor	1.12	1.07	1.12	1.07	1.12	1.12	1.07	1.07	1.17	1.07	1.12	1.07
Turning Speed (mph)		9	9	15	15		9	15		9		9
Sign Control	Free					Free			Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	67.6%					ICU Level of Service C						
Analysis Period (min)	15											

Lanes, Volumes, Timings

No Build 2022

3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

AM Peak



Lane Group	NEL	NER	NER2
Lane Configurations			
Traffic Volume (vph)	0	12	5
Future Volume (vph)	0	12	5
Ideal Flow (vphpl)	1800	1800	1800
Lane Width (ft)	10	12	12
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor			
Frt	0.865		
Flt Protected			
Satd. Flow (prot)	1179	0	0
Flt Permitted			
Satd. Flow (perm)	1179	0	0
Link Speed (mph)	20		
Link Distance (ft)	604		
Travel Time (s)	20.6		
Confl. Peds. (#/hr)		2	
Confl. Bikes (#/hr)			
Peak Hour Factor	0.98	0.98	0.98
Heavy Vehicles (%)	2%	8%	60%
Adj. Flow (vph)	0	12	5
Shared Lane Traffic (%)			
Lane Group Flow (vph)	17	0	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Right	Right
Median Width(ft)	10		
Link Offset(ft)	10		
Crosswalk Width(ft)	16		
Two way Left Turn Lane			
Headway Factor	1.17	1.07	1.07
Turning Speed (mph)	15	9	9
Sign Control	Stop		
Intersection Summary			

Lanes, Volumes, Timings

No Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak

Lane Group	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	14	21	471	1	446	27	4	7	4	1	5	1
Future Volume (vph)	14	21	471	1	446	27	4	7	4	1	5	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	15	15	15	15	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												0.99
Frt							0.991					0.952
Flt Protected						0.997						0.980
Satd. Flow (prot)	0	0	1921	0	1860	0	0	0	1553	0	0	0
Flt Permitted						0.954						0.889
Satd. Flow (perm)	0	0	1837	0	1860	0	0	0	1406	0	0	0
Right Turn on Red					No			Yes				Yes
Satd. Flow (RTOR)						1			5			
Link Speed (mph)				35		35			20			
Link Distance (ft)				441		961			483			
Travel Time (s)				8.6		18.7			16.5			
Confl. Peds. (#/hr)	5	4				5	4	4		4		4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	3%	0%	5%	11%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	15	22	491	1	465	28	4	7	4	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	529	0	497	0	0	0	17	0	0	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Left	Right	Left	Right	Right	Left	Left	Right	Right	Left
Median Width(ft)					0				0			
Link Offset(ft)					10				0			
Crosswalk Width(ft)					16				16			
Two way Left Turn Lane												
Headway Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	15		9		9	9	15		9	9	15
Number of Detectors	1	1	0		0			1	1			1
Detector Template	Left	Left						Left				Left
Leading Detector (ft)	20	20	0		0			20	45			20
Trailing Detector (ft)	0	0	0		0			0	-5			0
Detector 1 Position(ft)	0	0	0		0			0	-5			0
Detector 1 Size(ft)	20	20	6		6			20	50			20
Detector 1 Type	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
Detector 1 Queue (s)	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
Turn Type	Perm	Perm	NA		NA			Perm	NA			Perm
Protected Phases			2		6				8			
Permitted Phases	2	2						8				4
Detector Phase	2	2	2		6			8	8			4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0			5.0	5.0			5.0
Minimum Split (s)	10.0	10.0	10.0		10.0			10.0	10.0			10.0



Lane Group	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	44	0	31
Future Volume (vph)	44	0	31
Ideal Flow (vphpl)	1800	1800	1800
Lane Width (ft)	10	10	10
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor	0.99		
Frt	0.945		
Flt Protected	0.971		
Satd. Flow (prot)	0	1449	0
Flt Permitted	0.808		
Satd. Flow (perm)	0	1202	0
Right Turn on Red		No	
Satd. Flow (RTOR)			
Link Speed (mph)	20		
Link Distance (ft)	477		
Travel Time (s)	16.3		
Confl. Peds. (#/hr)		4	
Peak Hour Factor	0.96	0.96	0.96
Heavy Vehicles (%)	7%	0%	3%
Adj. Flow (vph)	46	0	32
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0	79	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)	0		
Link Offset(ft)	25		
Crosswalk Width(ft)	30		
Two way Left Turn Lane			
Headway Factor	1.17	1.17	1.17
Turning Speed (mph)	15		9
Number of Detectors	1	1	
Detector Template	Left		
Leading Detector (ft)	20	45	
Trailing Detector (ft)	0	-5	
Detector 1 Position(ft)	0	-5	
Detector 1 Size(ft)	20	50	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Turn Type	Perm	NA	
Protected Phases		4	
Permitted Phases	4		
Detector Phase	4	4	
Switch Phase			
Minimum Initial (s)	5.0	5.0	
Minimum Split (s)	10.0	10.0	

Lanes, Volumes, Timings

No Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak



Lane Group	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Total Split (s)	35.0	35.0	35.0		35.0			25.0	25.0			25.0
Total Split (%)	58.3%	58.3%	58.3%		58.3%			41.7%	41.7%			41.7%
Maximum Green (s)	30.0	30.0	30.0		30.0			20.0	20.0			20.0
Yellow Time (s)	3.0	3.0	3.0		3.0			3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0		2.0			2.0	2.0			2.0
Lost Time Adjust (s)				-1.0		-1.0			-1.0			
Total Lost Time (s)				4.0		4.0			4.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2	0.2		0.2			0.2	0.2			0.2
Recall Mode	Max	Max	Max		Max			None	None			None
Act Effect Green (s)			38.4		38.4				6.8			
Actuated g/C Ratio			0.79		0.79				0.14			
v/c Ratio			0.36		0.34				0.08			
Control Delay			4.1		3.9				15.6			
Queue Delay			0.0		0.0				0.0			
Total Delay			4.1		3.9				15.6			
LOS			A		A				B			
Approach Delay			4.1		3.9				15.6			
Approach LOS			A		A				B			

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 48.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 5.7

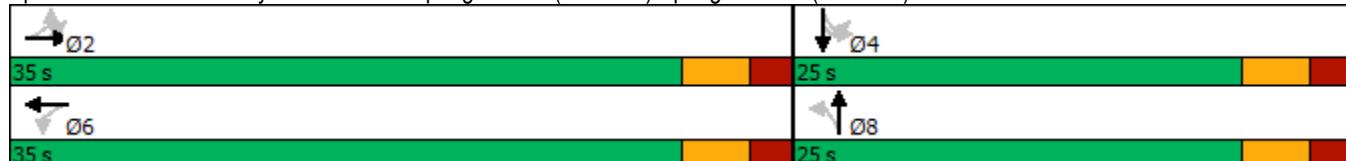
Intersection LOS: A

Intersection Capacity Utilization 70.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave



Lanes, Volumes, Timings

No Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak



Lane Group	SBL	SBT	SBR
Total Split (s)	25.0	25.0	
Total Split (%)	41.7%	41.7%	
Maximum Green (s)	20.0	20.0	
Yellow Time (s)	3.0	3.0	
All-Red Time (s)	2.0	2.0	
Lost Time Adjust (s)	-1.0		
Total Lost Time (s)	4.0		
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	0.2	0.2	
Recall Mode	None	None	
Act Effect Green (s)		7.4	
Actuated g/C Ratio		0.15	
v/c Ratio		0.43	
Control Delay		25.3	
Queue Delay		0.0	
Total Delay		25.3	
LOS		C	
Approach Delay		25.3	
Approach LOS		C	
Intersection Summary			

HCM 6th Edition methodology does not support more than 4 approaches.

Lanes, Volumes, Timings
5: Oak Ave & Wyncliffe Ave

No Build 2022
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	24	15	2	9	165	6	1	216	9
Future Volume (vph)	0	0	0	24	15	2	9	165	6	1	216	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.994			0.995			0.995
Flt Protected						0.971			0.998			
Satd. Flow (prot)	0	0	0	0	1737	0	0	1686	0	0	1757	0
Flt Permitted						0.971			0.998			
Satd. Flow (perm)	0	0	0	0	1737	0	0	1686	0	0	1757	0
Link Speed (mph)		25				25			25			25
Link Distance (ft)		262				804			486			552
Travel Time (s)		7.1				21.9			13.3			15.1
Confl. Peds. (#/hr)					1		6	1				1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	11%	6%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	27	17	2	10	185	7	1	243	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	46	0	0	202	0	0	254	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Stop			Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	28.3%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 8.9
Intersection LOS A

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations																
Traffic Vol, veh/h	0	0	0	24	15	2	9	165	6	1	216	9				
Future Vol, veh/h	0	0	0	24	15	2	9	165	6	1	216	9				
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89				
Heavy Vehicles, %	0	0	0	0	0	0	11	6	0	0	2	0				
Mvmt Flow	0	0	0	27	17	2	10	185	7	1	243	10				
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0				
Approach				WB	NB				SB							
Opposing Approach							SB	NB								
Opposing Lanes	0						1	1								
Conflicting Approach Left	NB						WB									
Conflicting Lanes Left	1						0	1								
Conflicting Approach Right	SB						WB									
Conflicting Lanes Right	1						1	0								
HCM Control Delay	8.3						8.9	9								
HCM LOS	A						A	A								

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	5%	59%	0%
Vol Thru, %	92%	37%	96%
Vol Right, %	3%	5%	4%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	180	41	226
LT Vol	9	24	1
Through Vol	165	15	216
RT Vol	6	2	9
Lane Flow Rate	202	46	254
Geometry Grp	1	1	1
Degree of Util (X)	0.25	0.064	0.297
Departure Headway (Hd)	4.453	4.983	4.213
Convergence, Y/N	Yes	Yes	Yes
Cap	811	720	858
Service Time	2.459	3.006	2.218
HCM Lane V/C Ratio	0.249	0.064	0.296
HCM Control Delay	8.9	8.3	9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.2	1.2

Lanes, Volumes, Timings
6: Sycamore Ave & Arch St

No Build 2022
AM Peak



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	4	37	0	4	65
Future Volume (vph)	13	4	37	0	4	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966					
Flt Protected	0.964					0.997
Satd. Flow (prot)	1676	0	1474	0	0	1600
Flt Permitted	0.964					0.997
Satd. Flow (perm)	1676	0	1474	0	0	1600
Link Speed (mph)	25		25			25
Link Distance (ft)	311		477			433
Travel Time (s)	8.5		13.0			11.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	14%	0%	0%	5%
Adj. Flow (vph)	15	5	42	0	5	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	42	0	0	79
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	17.1%				ICU Level of Service A	
Analysis Period (min)	15					

Intersection

Intersection Delay, s/veh 7.4
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	4	37	0	4	65
Future Vol, veh/h	13	4	37	0	4	65
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	14	0	0	5
Mvmt Flow	15	5	42	0	5	74
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB			WB		
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.3		7.5		7.4	
HCM LOS	A		A		A	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	76%	6%
Vol Thru, %	100%	0%	94%
Vol Right, %	0%	24%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	37	17	69
LT Vol	0	13	4
Through Vol	37	0	65
RT Vol	0	4	0
Lane Flow Rate	42	19	78
Geometry Grp	1	1	1
Degree of Util (X)	0.049	0.022	0.087
Departure Headway (Hd)	4.231	4.119	3.976
Convergence, Y/N	Yes	Yes	Yes
Cap	847	863	902
Service Time	2.255	2.175	1.996
HCM Lane V/C Ratio	0.05	0.022	0.086
HCM Control Delay	7.5	7.3	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3

Lanes, Volumes, Timings
7: Sycamore Ave & Wyncliffe Ave

No Build 2022
AM Peak

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	7	9	1	17	21	4	43	1	6	51	3
Future Volume (vph)	6	7	9	1	17	21	4	43	1	6	51	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.926			0.998			0.994	
Flt Protected		0.986			0.999			0.995			0.995	
Satd. Flow (prot)	0	1679	0	0	1623	0	0	1570	0	0	1535	0
Flt Permitted		0.986			0.999			0.995			0.995	
Satd. Flow (perm)	0	1679	0	0	1623	0	0	1570	0	0	1535	0
Link Speed (mph)		25			25			20			20	
Link Distance (ft)		463			400			433			329	
Travel Time (s)		12.6			10.9			14.8			11.2	
Confl. Peds. (#/hr)	3		4	4		3	3		2	2		3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	0%	7%	0%	0%	8%	33%
Adj. Flow (vph)	7	8	10	1	19	24	5	49	1	7	58	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	44	0	0	55	0	0	68	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	18.0%											
Analysis Period (min)	15											
ICU Level of Service	A											

Intersection

Intersection Delay, s/veh 7.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	7	9	1	17	21	4	43	1	6	51	3
Future Vol, veh/h	6	7	9	1	17	21	4	43	1	6	51	3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	6	0	0	7	0	0	8	33
Mvmt Flow	7	8	10	1	19	24	5	49	1	7	58	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
Opposing Approach	WB			EB			NB			SB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.1			7.1			7.4			7.4		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	27%	3%	10%
Vol Thru, %	90%	32%	44%	85%
Vol Right, %	2%	41%	54%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	22	39	60
LT Vol	4	6	1	6
Through Vol	43	7	17	51
RT Vol	1	9	21	3
Lane Flow Rate	55	25	44	68
Geometry Grp	1	1	1	1
Degree of Util (X)	0.062	0.027	0.047	0.077
Departure Headway (Hd)	4.076	3.955	3.812	4.05
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	875	896	930	882
Service Time	2.115	2.02	1.875	2.088
HCM Lane V/C Ratio	0.063	0.028	0.047	0.077
HCM Control Delay	7.4	7.1	7.1	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.1	0.2

Queuing and Blocking Report

No Build 2022

AM Peak

Intersection: 1: Austin Dr & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NB	SB
Directions Served	TR	LT	L	R	LTR
Maximum Queue (ft)	149	184	32	41	54
Average Queue (ft)	40	45	5	3	23
95th Queue (ft)	108	130	24	21	50
Link Distance (ft)	759	268	150	150	92
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Oak Ave & Springfield Rd (SR 2009)

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	46	268	353	224	201
Average Queue (ft)	8	146	138	107	96
95th Queue (ft)	33	237	272	186	168
Link Distance (ft)		268	688	703	405
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		2			
Storage Bay Dist (ft)		25			
Storage Blk Time (%)		4	32		
Queuing Penalty (veh)		23	5		

Intersection: 3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

Movement	EB	WB	NB	SB	NE
Directions Served	LTR>	<LTR	LTR	LTR>	<LR>
Maximum Queue (ft)	33	176	60	18	41
Average Queue (ft)	1	22	20	1	9
95th Queue (ft)	20	99	51	9	30
Link Distance (ft)	688	273	414	389	555
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report

No Build 2022

AM Peak

Intersection: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave

Movement	EB	WB	NB	SB
Directions Served	<LTR	LTR>	LTR>	<LTR
Maximum Queue (ft)	251	119	36	65
Average Queue (ft)	90	37	14	15
95th Queue (ft)	195	88	39	43
Link Distance (ft)	273	890	440	336
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	2			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak Ave & Wyncliffe Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	40	92	76
Average Queue (ft)	24	47	46
95th Queue (ft)	46	76	68
Link Distance (ft)	747	405	523
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Sycamore Ave & Arch St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	34	57	55
Average Queue (ft)	11	26	28
95th Queue (ft)	34	55	50
Link Distance (ft)	280	336	383
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Sycamore Ave & Wyncliffe Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	19	46	53	57
Average Queue (ft)	7	22	25	27
95th Queue (ft)	19	46	49	51
Link Distance (ft)	384	372	383	278
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 31

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

No Build 2022
PM Peak

	←	→	↖	↙	↔	↙	↖	↑	↗	↘	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	556	17	21	593	0	35	0	25	7	1	23
Future Volume (vph)	0	556	17	21	593	0	35	0	25	7	1	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	11	11	10	10	10	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00		0.99		0.97		0.98	
Frt		0.996							0.850		0.899	
Flt Protected					0.998		0.950				0.989	
Satd. Flow (prot)	0	1709	0	0	1704	0	1596	0	1373	0	1775	0
Flt Permitted					0.977		0.741				0.989	
Satd. Flow (perm)	0	1709	0	0	1668	0	1231	0	1326	0	1769	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		4							35		24	
Link Speed (mph)		35			35			20			20	
Link Distance (ft)		555			352			184			157	
Travel Time (s)		10.8			6.9			6.3			5.4	
Confl. Peds. (#/hr)	3		10	10		3	8		10	10		6
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%	1%	12%	0%	2%	0%	0%	0%	4%	0%	0%	0%
Parking (#/hr)			0						0			
Adj. Flow (vph)	0	573	18	22	611	0	36	0	26	7	1	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	591	0	0	633	0	36	0	26	0	32	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	0				0			10			10	
Link Offset(ft)	0				0			0			0	
Crosswalk Width(ft)	16				16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.17	1.17	1.17	0.91	0.91	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0		1		1	1	1	
Detector Template			Left						Left			
Leading Detector (ft)	0		20	0		35		35	20		35	
Trailing Detector (ft)	0		0	0		-5		-5	0		-5	
Detector 1 Position(ft)	0		0	0		-5		-5	0		-5	
Detector 1 Size(ft)	6		20	6		40		40	20		40	
Detector 1 Type	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	NA		Perm	NA		Perm		Perm	Perm	Perm	NA	
Protected Phases	2				6						4	
Permitted Phases			6			8		8		4		
Detector Phase	2		6	6		8		8		4		4
Switch Phase												
Minimum Initial (s)	32.0		32.0	32.0		5.0		5.0	5.0	5.0		

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

No Build 2022
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	37.0			37.0	37.0		10.0		10.0	10.0		10.0
Total Split (s)		37.0		37.0	37.0		25.0		25.0	25.0		25.0
Total Split (%)	59.7%			59.7%	59.7%		40.3%		40.3%	40.3%		40.3%
Maximum Green (s)	32.0			32.0	32.0		20.0		20.0	20.0		20.0
Yellow Time (s)	3.0			3.0	3.0		3.0		3.0	3.0		3.0
All-Red Time (s)	2.0			2.0	2.0		2.0		2.0	2.0		2.0
Lost Time Adjust (s)	-1.0			-1.0	-1.0		-1.0		-1.0	-1.0		-1.0
Total Lost Time (s)	4.0				4.0		4.0		4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0		2.0	2.0		2.0
Recall Mode	Max			Max	Max		None		None	None		None
Act Effect Green (s)	40.4				40.4		7.3		7.3		6.8	
Actuated g/C Ratio	0.80				0.80		0.15		0.15		0.14	
v/c Ratio	0.43				0.47		0.20		0.12		0.12	
Control Delay	4.4				4.9		20.7		7.6		11.4	
Queue Delay	0.0				0.3		0.0		0.0		0.0	
Total Delay	4.4				5.2		20.7		7.6		11.4	
LOS	A				A		C		A		B	
Approach Delay	4.4					5.2		15.2			11.4	
Approach LOS	A				A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 62

Actuated Cycle Length: 50.3

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 5.5

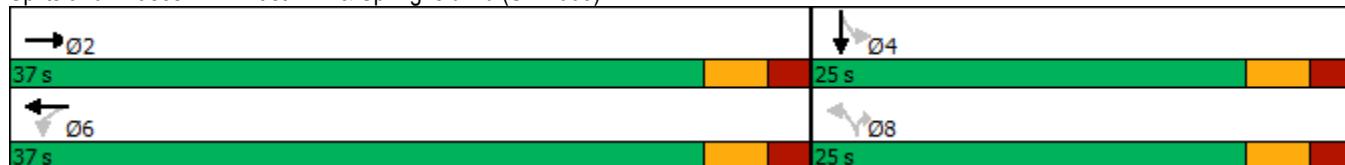
Intersection LOS: A

Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Austin Dr & Springfield Rd (SR 2009)



HCM 6th Edition methodology does not support Non-NEMA phasing.

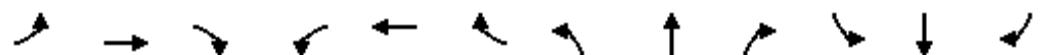
Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

No Build 2022
PM Peak

	↗	→	↘	↙	←	↖	↑	↗	↘	↓	↙	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	372	169	14	441	47	134	200	17	48	178	24
Future Volume (vph)	42	372	169	14	441	47	134	200	17	48	178	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	11	11	11	11	11	11	10	10	10
Grade (%)	-4%			4%			-4%			-5%		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99			1.00			1.00			1.00		
Frt		0.961			0.987			0.993			0.987	
Flt Protected		0.996			0.999			0.981			0.991	
Satd. Flow (prot)	0	1935	0	0	1657	0	0	1708	0	0	1662	0
Flt Permitted		0.943			0.982			0.759			0.895	
Satd. Flow (perm)	0	1832	0	0	1629	0	0	1320	0	0	1501	0
Right Turn on Red			No			No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		352			764			332			486	
Travel Time (s)		6.9			14.9			9.1			13.3	
Confl. Peds. (#/hr)	2		4	4		2	3		1	1		3
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%	3%	1%	14%	1%	0%	3%	0%	0%	0%	1%	4%
Parking (#/hr)			0						0		0	
Adj. Flow (vph)	43	384	174	14	455	48	138	206	18	49	184	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	601	0	0	517	0	0	362	0	0	258	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		24			16			30			16	
Two way Left Turn Lane												
Headway Factor	0.89	0.89	0.89	1.15	1.15	1.15	1.09	1.09	1.09	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	25.0		25.0	25.0	
Total Split (%)	58.3%	58.3%		58.3%	58.3%		41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	30.0	30.0		30.0	30.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		31.0			31.0			21.0			21.0	
Actuated g/C Ratio		0.52			0.52			0.35			0.35	
v/c Ratio		0.64			0.61			0.78			0.49	

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

No Build 2022
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		14.3			14.3			32.5			19.2	
Queue Delay			2.3			0.0			0.0		0.0	
Total Delay			16.6			14.3			32.5		19.2	
LOS				B		B		C			B	
Approach Delay				16.6		14.3		32.5			19.2	
Approach LOS				B		B		C			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 19.6

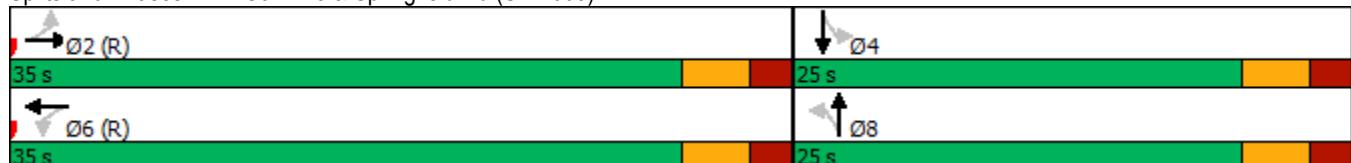
Intersection LOS: B

Intersection Capacity Utilization 96.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Oak Ave & Springfield Rd (SR 2009)



HCM 6th Signalized Intersection Summary
2: Oak Ave & Springfield Rd (SR 2009)

No Build 2022
PM Peak

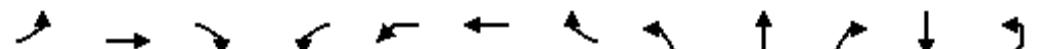
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	372	169	14	441	47	134	200	17	48	178	24
Future Volume (veh/h)	42	372	169	14	441	47	134	200	17	48	178	24
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1983	1983	1983	1697	1697	1697	1949	1949	1949	1972	1972	1972
Adj Flow Rate, veh/h	43	384	174	14	455	48	138	206	18	49	184	25
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, %	3	3	3	1	1	1	0	0	0	1	1	1
Cap, veh/h	98	567	245	70	766	79	257	337	27	140	461	57
Arrive On Green	0.50	0.52	0.50	0.50	0.52	0.50	0.33	0.35	0.35	0.33	0.35	0.33
Sat Flow, veh/h	65	1097	474	16	1482	153	497	963	76	196	1316	162
Grp Volume(v), veh/h	601	0	0	517	0	0	362	0	0	258	0	0
Grp Sat Flow(s), veh/h/ln	1636	0	0	1651	0	0	1536	0	0	1674	0	0
Q Serve(g_s), s	3.4	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	16.6	0.0	0.0	13.3	0.0	0.0	11.7	0.0	0.0	6.9	0.0	0.0
Prop In Lane	0.07		0.29	0.03		0.09	0.38		0.05	0.19		0.10
Lane Grp Cap(c), veh/h	882	0	0	887	0	0	595	0	0	629	0	0
V/C Ratio(X)	0.68	0.00	0.00	0.58	0.00	0.00	0.61	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	882	0	0	887	0	0	595	0	0	629	0	0
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.1	0.0	0.0	10.3	0.0	0.0	16.4	0.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	0.0	2.8	0.0	0.0	4.6	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	6.0	0.0	0.0	4.6	0.0	0.0	4.7	0.0	0.0	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.3	0.0	0.0	13.0	0.0	0.0	21.0	0.0	0.0	17.0	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h	601			517			362			258		
Approach Delay, s/veh	15.3			13.0			21.0			17.0		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	35.0		25.0		35.0		25.0					
Change Period (Y+R _c), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		20.0		30.0		20.0					
Max Q Clear Time (g_c+l1), s	0.0		0.0		0.0		0.0					
Green Ext Time (p_c), s	0.0		0.0		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			16.1									
HCM 6th LOS			B									

Lanes, Volumes, Timings

No Build 2022

3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

PM Peak



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBT	NEL2
Lane Configurations												
Traffic Volume (vph)	4	446	24	6	7	493	4	17	1	13	0	4
Future Volume (vph)	4	446	24	6	7	493	4	17	1	13	0	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	11	12	12	11	11	12	12	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.993				0.999			0.945			
Flt Protected						0.999			0.973			
Satd. Flow (prot)	0	1674	0	0	0	1704	0	0	1494	0	1740	0
Flt Permitted						0.999			0.973			
Satd. Flow (perm)	0	1674	0	0	0	1704	0	0	1494	0	1740	0
Link Speed (mph)		35				35			30		30	
Link Distance (ft)		764				448			498		435	
Travel Time (s)		14.9				8.7			11.3		9.9	
Confl. Peds. (#/hr)	5		3	3			5			3		
Confl. Bikes (#/hr)												
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%	3%	8%	0%	0%	2%	0%	6%	0%	0%	0%	0%
Adj. Flow (vph)	4	460	25	6	7	508	4	18	1	13	0	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	489	0	0	0	525	0	0	32	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Left	Left	Right	Left	Left
Median Width(ft)		0				0			0		0	
Link Offset(ft)		0				0			70		0	
Crosswalk Width(ft)		16				16			16		16	
Two way Left Turn Lane												
Headway Factor	1.07	1.12	1.07	1.07	1.12	1.12	1.07	1.07	1.17	1.07	1.12	1.07
Turning Speed (mph)	15		9	15	15		9	15		9		15
Sign Control		Free				Free			Stop		Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	55.1%					ICU Level of Service B						
Analysis Period (min)	15											

Lanes, Volumes, Timings

No Build 2022

3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

PM Peak



Lane Group	NEL	NER	NER2
Lane Configurations			
Traffic Volume (vph)	0	15	1
Future Volume (vph)	0	15	1
Ideal Flow (vphpl)	1800	1800	1800
Lane Width (ft)	10	12	12
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor			
Frt	0.892		
Flt Protected	0.990		
Satd. Flow (prot)	1484	0	0
Flt Permitted	0.990		
Satd. Flow (perm)	1484	0	0
Link Speed (mph)	20		
Link Distance (ft)	607		
Travel Time (s)	20.7		
Confl. Peds. (#/hr)	5	3	3
Confl. Bikes (#/hr)			
Peak Hour Factor	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%
Adj. Flow (vph)	0	15	1
Shared Lane Traffic (%)			
Lane Group Flow (vph)	20	0	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Right	Right
Median Width(ft)	10		
Link Offset(ft)	10		
Crosswalk Width(ft)	16		
Two way Left Turn Lane			
Headway Factor	1.17	1.07	1.07
Turning Speed (mph)	15	9	9
Sign Control	Stop		
Intersection Summary			

Lanes, Volumes, Timings

No Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Traffic Volume (vph)	16	49	422	465	34	12	7	1	1	3	1	30
Future Volume (vph)	16	49	422	465	34	12	7	1	1	3	1	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	15	15	15	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	1.00			0.98			
Frt						0.988			0.955			
Flt Protected					0.993				0.972			
Satd. Flow (prot)	0	0	1862	1912	0	0	0	1537	0	0	0	0
Flt Permitted					0.897				0.786			
Satd. Flow (perm)	0	0	1681	1912	0	0	0	1238	0	0	0	0
Right Turn on Red							Yes			Yes		
Satd. Flow (RTOR)					3				3			
Link Speed (mph)				35	35				20			
Link Distance (ft)				448	605				483			
Travel Time (s)				8.7	11.8				16.5			
Confl. Peds. (#/hr)	5	10			5	10	5		10	6	10	6
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 (%)	6%	2%	6%	2%	3%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	16	50	431	474	35	12	7	1	1	3	1	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	497	521	0	0	0	12	0	0	0	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Left	Right	Right	Left	Left
Median Width(ft)				0	0				0			
Link Offset(ft)				0	20				12			
Crosswalk Width(ft)				16	16				16			
Two way Left Turn Lane												
Headway Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	15			9	9	15		9	9	15	15
Number of Detectors	1	1	0	0			1	1			1	1
Detector Template	Left	Left					Left				Left	Left
Leading Detector (ft)	20	20	0	0			20	45			20	20
Trailing Detector (ft)	0	0	0	0			0	-5			0	0
Detector 1 Position(ft)	0	0	0	0			0	-5			0	0
Detector 1 Size(ft)	20	20	6	6			20	50			20	20
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	Perm	NA	NA			Perm	NA			Perm	Perm
Protected Phases			2	6				8				
Permitted Phases	2	2						8			4	4
Detector Phase	2	2	2	6			8	8			4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0			5.0	5.0			5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0			10.0	10.0			10.0	10.0



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	28
Future Volume (vph)	0	28
Ideal Flow (vphpl)	1800	1800
Lane Width (ft)	10	10
Lane Util. Factor	1.00	1.00
Ped Bike Factor	0.98	
Frt	0.936	
Flt Protected	0.974	
Satd. Flow (prot)	1484	0
Flt Permitted	0.829	
Satd. Flow (perm)	1248	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	20	
Link Distance (ft)	487	
Travel Time (s)	16.6	
Confl. Peds. (#/hr)		5
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	0%	4%
Adj. Flow (vph)	0	29
Shared Lane Traffic (%)		
Lane Group Flow (vph)	61	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	0	
Link Offset(ft)	20	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.17	1.17
Turning Speed (mph)		9
Number of Detectors	1	
Detector Template		
Leading Detector (ft)	45	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	50	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	10.0	

Lanes, Volumes, Timings

No Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBL
Total Split (s)	35.0	35.0	35.0	35.0			25.0	25.0			25.0	25.0
Total Split (%)	58.3%	58.3%	58.3%	58.3%			41.7%	41.7%			41.7%	41.7%
Maximum Green (s)	30.0	30.0	30.0	30.0			20.0	20.0			20.0	20.0
Yellow Time (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0			2.0	2.0			2.0	2.0
Lost Time Adjust (s)				-1.0	-1.0				-1.0			
Total Lost Time (s)				4.0	4.0				4.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2	0.2	0.2			0.2	0.2			0.2	0.2
Recall Mode	Max	Max	Max	Max			None	None			None	None
Act Effect Green (s)			38.3	38.3							6.6	
Actuated g/C Ratio			0.80	0.80							0.14	
v/c Ratio			0.37	0.34							0.07	
Control Delay			3.9	3.5							16.0	
Queue Delay			0.0	0.0							0.0	
Total Delay			3.9	3.5							16.0	
LOS			A	A							B	
Approach Delay			3.9	3.5							16.0	
Approach LOS			A	A							B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 47.8

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.37

Intersection Signal Delay: 4.9

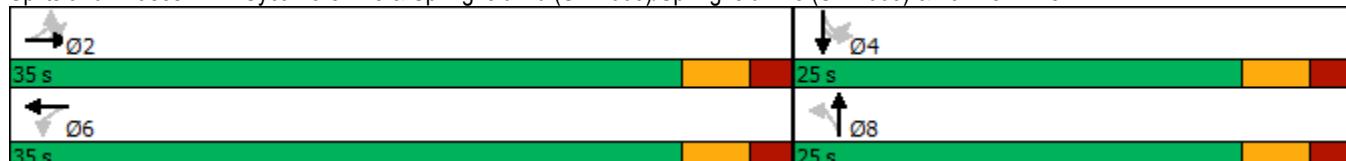
Intersection LOS: A

Intersection Capacity Utilization 70.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave



Lanes, Volumes, Timings

No Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	SBT	SBR
Total Split (s)	25.0	
Total Split (%)	41.7%	
Maximum Green (s)	20.0	
Yellow Time (s)	3.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	-1.0	
Total Lost Time (s)	4.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	0.2	
Recall Mode	None	
Act Effect Green (s)	6.8	
Actuated g/C Ratio	0.14	
v/c Ratio	0.35	
Control Delay	23.4	
Queue Delay	0.0	
Total Delay	23.4	
LOS	C	
Approach Delay	23.4	
Approach LOS	C	
Intersection Summary		

HCM 6th Edition methodology does not support more than 4 approaches.

Lanes, Volumes, Timings
5: Oak Ave & Wyncliffe Ave

No Build 2022
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	13	10	11	13	220	43	10	230	8
Future Volume (vph)	0	0	0	13	10	11	13	220	43	10	230	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.956			0.979			0.996
Flt Protected						0.981			0.998			0.998
Satd. Flow (prot)	0	0	0	0	1593	0	0	1745	0	0	1789	0
Flt Permitted						0.981			0.998			0.998
Satd. Flow (perm)	0	0	0	0	1593	0	0	1745	0	0	1789	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		262			804			486			552	
Travel Time (s)		7.1			21.9			13.3			15.1	
Confl. Peds. (#/hr)	2		2	2		2	1		1	1		1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	8%	0%	9%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	14	11	12	14	242	47	11	253	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	37	0	0	303	0	0	273	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	36.0%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 9.4

Intersection LOS A

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	13	10	11	13	220	43	10	230	8
Future Vol, veh/h	0	0	0	13	10	11	13	220	43	10	230	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	8	0	9	0	1	0	0	0	0
Mvmt Flow	0	0	0	14	11	12	14	242	47	11	253	9
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0
Approach												
				WB			NB			SB		
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left					NB					WB		
Conflicting Lanes Left					1			0		1		
Conflicting Approach Right					SB			WB				
Conflicting Lanes Right					1			1		0		
HCM Control Delay				8.5			9.5			9.3		
HCM LOS				A			A			A		

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	5%	38%	4%
Vol Thru, %	80%	29%	93%
Vol Right, %	16%	32%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	276	34	248
LT Vol	13	13	10
Through Vol	220	10	230
RT Vol	43	11	8
Lane Flow Rate	303	37	273
Geometry Grp	1	1	1
Degree of Util (X)	0.353	0.053	0.324
Departure Headway (Hd)	4.187	5.135	4.283
Convergence, Y/N	Yes	Yes	Yes
Cap	861	698	842
Service Time	2.197	3.163	2.295
HCM Lane V/C Ratio	0.352	0.053	0.324
HCM Control Delay	9.5	8.5	9.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.6	0.2	1.4

Lanes, Volumes, Timings
6: Sycamore Ave & Arch St

No Build 2022
PM Peak



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	8	1	62	2	2	76
Future Volume (vph)	8	1	62	2	2	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.988		0.996			
Flt Protected	0.957				0.999	
Satd. Flow (prot)	1702	0	1641	0	0	1662
Flt Permitted	0.957				0.999	
Satd. Flow (perm)	1702	0	1641	0	0	1662
Link Speed (mph)	25		25		25	
Link Distance (ft)	311		487		433	
Travel Time (s)	8.5		13.3		11.8	
Confl. Peds. (#/hr)	1	2		5	5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%
Adj. Flow (vph)	10	1	74	2	2	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	76	0	0	92
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0		0	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.6%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Intersection Delay, s/veh 7.5
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	1	62	2	2	76
Future Vol, veh/h	8	1	62	2	2	76
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	10	1	74	2	2	90
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB			WB		
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.4		7.4		7.5	
HCM LOS	A		A		A	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	89%	3%
Vol Thru, %	97%	0%	97%
Vol Right, %	3%	11%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	64	9	78
LT Vol	0	8	2
Through Vol	62	0	76
RT Vol	2	1	0
Lane Flow Rate	76	11	93
Geometry Grp	1	1	1
Degree of Util (X)	0.085	0.013	0.103
Departure Headway (Hd)	4.004	4.302	3.982
Convergence, Y/N	Yes	Yes	Yes
Cap	895	823	901
Service Time	2.027	2.373	2.002
HCM Lane V/C Ratio	0.085	0.013	0.103
HCM Control Delay	7.4	7.4	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0	0.3

Lanes, Volumes, Timings
7: Sycamore Ave & Wyncliffe Ave

No Build 2022
PM Peak

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	16	8	0	25	22	5	49	2	15	62	9
Future Volume (vph)	9	16	8	0	25	22	5	49	2	15	62	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.967			0.936			0.996			0.986	
Flt Protected		0.987						0.995			0.991	
Satd. Flow (prot)	0	1718	0	0	1685	0	0	1607	0	0	1600	0
Flt Permitted		0.987						0.995			0.991	
Satd. Flow (perm)	0	1718	0	0	1685	0	0	1607	0	0	1600	0
Link Speed (mph)		25			25			20			20	
Link Distance (ft)		463			400			433			329	
Travel Time (s)		12.6			10.9			14.8			11.2	
Confl. Peds. (#/hr)	3		4	4		3	7		3	3		7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	20%	2%	0%	0%	2%	11%
Adj. Flow (vph)	10	18	9	0	28	25	6	56	2	17	70	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	53	0	0	64	0	0	97	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop		Stop		
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	25.3%											
Analysis Period (min)	15											
ICU Level of Service	A											

Intersection

Intersection Delay, s/veh 7.6

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	16	8	0	25	22	5	49	2	15	62	9
Future Vol, veh/h	9	16	8	0	25	22	5	49	2	15	62	9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	20	2	0	0	2	11
Mvmt Flow	10	18	9	0	28	25	6	56	2	17	70	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB		SB			NB		
Opposing Lanes	1				1		1			1		
Conflicting Approach Left	SB				NB		EB			WB		
Conflicting Lanes Left	1				1		1			1		
Conflicting Approach Right	NB				SB		WB			EB		
Conflicting Lanes Right	1				1		1			1		
HCM Control Delay	7.4				7.3		7.9			7.7		
HCM LOS	A				A		A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	27%	0%	17%
Vol Thru, %	88%	48%	53%	72%
Vol Right, %	4%	24%	47%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	33	47	86
LT Vol	5	9	0	15
Through Vol	49	16	25	62
RT Vol	2	8	22	9
Lane Flow Rate	64	38	53	98
Geometry Grp	1	1	1	1
Degree of Util (X)	0.079	0.043	0.058	0.111
Departure Headway (Hd)	4.468	4.13	3.927	4.077
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	795	852	896	872
Service Time	2.531	2.229	2.024	2.138
HCM Lane V/C Ratio	0.081	0.045	0.059	0.112
HCM Control Delay	7.9	7.4	7.3	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.1	0.2	0.4

Queuing and Blocking Report

No Build 2022

PM Peak

Intersection: 1: Austin Dr & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NB	SB
Directions Served	TR	LT	L	R	LTR
Maximum Queue (ft)	172	254	55	54	54
Average Queue (ft)	60	90	26	17	21
95th Queue (ft)	128	208	52	45	47
Link Distance (ft)	781	268	150	150	92
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		1			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Oak Ave & Springfield Rd (SR 2009)

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	49	264	370	446	281
Average Queue (ft)	22	154	153	214	109
95th Queue (ft)	51	251	290	397	214
Link Distance (ft)		268	684	722	405
Upstream Blk Time (%)		0			0
Queuing Penalty (veh)		2			0
Storage Bay Dist (ft)		25			
Storage Blk Time (%)		14	32		
Queuing Penalty (veh)		77	13		

Intersection: 3: Prospect Ave & Church St/Sports Field Driveway & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NE
Directions Served	LTR	<LTR	LTR	<LR>
Maximum Queue (ft)	112	93	81	44
Average Queue (ft)	8	9	24	15
95th Queue (ft)	57	50	60	41
Link Distance (ft)	684	272	407	577
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

No Build 2022

PM Peak

Intersection: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave

Movement	EB	WB	NB	SB
Directions Served	<LTR	LTR>	LTR>	<LTR
Maximum Queue (ft)	295	133	35	59
Average Queue (ft)	107	43	10	14
95th Queue (ft)	235	101	33	38
Link Distance (ft)	272	891	441	366
Upstream Blk Time (%)	1			
Queuing Penalty (veh)	5			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak Ave & Wyncliffe Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	53	102	77
Average Queue (ft)	22	54	46
95th Queue (ft)	49	84	70
Link Distance (ft)	747	405	523
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Sycamore Ave & Arch St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	28	56	49
Average Queue (ft)	7	29	30
95th Queue (ft)	26	50	46
Link Distance (ft)	280	366	383
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Sycamore Ave & Wyncliffe Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	25	42	50	56
Average Queue (ft)	10	23	26	30
95th Queue (ft)	24	44	47	48
Link Distance (ft)	384	372	383	278
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 99

APPENDIX I

SKETCH PLAN

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA



SITE INFORMATION:

ADDRESS: 271 N SPRINGFIELD ROAD
CLIFTON HEIGHTS, PA
CLIENT: UPPER DARBY SCHOOL DISTRICT
4611 BOND AVENUE
DREXEL HILL, PA 19026

GENERAL NOTES:

- A FIELD SURVEY OF THE SITE WAS PERFORMED BY PENNONI ASSOCIATES ON APRIL 29, 2019.
- UNLESS SPECIFICALLY STATED OR SHOWN HEREON TO THE CONTRARY, THIS SURVEY IS MADE SUBJECT TO AND DOES NOT LOCATE OR DELINEATE:
 - RIGHTS OF INTERESTS OF THE UNITED STATES OF AMERICA OR THE COMMONWEALTH OF PENNSYLVANIA, OVER LANDS NOW OR FORMERLY OWNED BY TIDELANDER, BUT NO LONGER VISIBLE OR PHYSICALLY EXISTING, OR ANY OTHER EXISTING ANY ANIMAL, MARINE, OR BOTANICAL SPECIES REGULATED BY OR UNDER THE JURISDICTION OF ANY FEDERAL, STATE, OR LOCAL AGENCY.
 - ANY SUBSURFACE OR SUBTERANEAN CONDITION, EASEMENTS OR RIGHTS, INCLUDING, BUT NOT LIMITED TO MINERAL OR MINING RIGHTS, OR THE LOCATION OF OR RIGHTS TO ANY SUBSURFACE STRUCTURES, CONTAINERS OR FACILITIES OR ANY OTHER NATURAL OR MAN-MADE SUBSURFACE CONDITION WHICH MAY OR MAY NOT AFFECT THE USE OR DEVELOPMENT POTENTIAL OF THE SUBJECT PROPERTY.
- LOCATIONS OF ON AND OFF SITE UTILITIES AS SHOWN ARE APPROXIMATE AND MAY OR MAY NOT BE COMPLETE. THE NATURE AND EXACT LOCATION OF EXISTING UTILITIES SHOULD BE VERIFIED PRIOR TO INITIATING ANY ACTIVITY THAT MAY AFFECT THEIR USE OR LOCATION.
- THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM EXISTING UTILITY RECORDS AVAILABLE AT THE TIME THESE PLANS WERE PREPARED AND FROM SURFACE OBSERVATION OF THE SITE.
- COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES AND STRUCTURES IS NOT GUARANTEED.
- IN ACCORDANCE WITH PA ACT 287 OF 1974 AS AMENDED BY PA ACT 121 OF 2008 ENTITLED "UNDERGROUND UTILITY LINE PROTECTION LAW", THE CONTRACTOR SHALL NOTIFY ALL UTILITIES WITHIN THE WORK AREA VIA THE PENNSYLVANIA ONE CALL SYSTEM, INC. (800-242-1776) A MINIMUM OF 3 WORKING DAYS BEFORE THE START OF EXCAVATION.
- THE CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES AND STRUCTURES BEFORE THE START OF WORK.
- THIS SITE IS CURRENTLY ZONED IN THE RCD CONSERVATION DISTRICT.
- REFERENCE IS MADE TO PENNSYLVANIA ONE CALL SYSTEM, ASSIGNED SERIAL NUMBER 20191162180 IN ACCORDANCE WITH PA ACT 287 OF 1974 AS AMENDED BY PA ACT 121 OF 2008 ENTITLED "UNDERGROUND UTILITY LINE PROTECTION LAW" (800-242-1776).
- THIS PLAN WAS PREPARED IN ACCORDANCE WITH INSTRUCTIONS OF THE CLIENT.
- VERTICAL DATUM IS BASED ON NAVD 1988.
- HORIZONTAL COORDINATE DATUM IS IN PENNSYLVANIA STATE PLANE COORDINATE SYSTEM SOUTH ZONE, NORTH AMERICAN DATUM 1983 BASED ON GPS OBSERVATION.
- BENCHMARK: NJIT - LEICA SMARTNET VIA GPS OBSERVATION
- PROPERTY BOUNDARY INFORMATION OBTAINED FROM DEED PLOTS PERFORMED BY PENNONI ASSOCIATES ON MAY 13, 2019.
- THE SITE IS SERVED BY PUBLIC SEWER (DELCORO).
- THE SITE IS SERVED BY PUBLIC WATER (AQUA PA).
- A PENNDOT HOP PERMIT IS REQUIRED FOR THE SITE IMPROVEMENTS WITHIN THE ROW.

ZONING REQUIREMENTS - RCD CONSERVATION DISTRICT

BOROUGH OF CLIFTON HEIGHTS ZONING CODE - CHAPTER 340			
SECTION	USE REGULATIONS	REQUIRED/ALLOWABLE	PROPOSED
340-35	MINIMUM LOT AREA	6,000 SF	598,019 SF
	MINIMUM LOT FRONTAGE	50 FT	1144 FT
	TOTAL IMPROVEMENT COVERAGE	40%	39.6%
340-38	FRONT YARD SETBACK	25 FT	51.5 FT
	SIDE YARD SETBACK	10 FT	142.0 FT
	REAR YARD SETBACK	25 FT	229.5 FT
	MAXIMUM BUILDING HEIGHT	3 STORIES / 35 FT	LESS THAN 3 STORIES / LESS THAN 35 FT

OWNER/DEVELOPER'S CERTIFICATION

COMMONWEALTH OF PENNSYLVANIA COUNTY OF DELAWARE
ON THE _____ DAY OF _____, A.D. _____, BEFORE ME,
THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA,
RESIDING IN _____, PERSONALLY APPEARED
(NAME OF OFFICER OF THE CORPORATION), WHO
ACKNOWLEDGED (HIMSELF) TO ME, THE (PRESIDENT OR SECRETARY), BEING
AUTHORIZED TO DO SO, (HE/SHE) EXECUTED THIS CERTIFICATE, KNOWING THAT
SAID CORPORATION IS THE OWNER OF THE DESIGNATED LAND, THAT ALL NECESSARY
APPROVAL OF THE PLAN HAS BEEN OBTAINED AND IS ENDORSED THEREON AND THAT
SAID CORPORATION DESIRES THAT THE FOREGOING PLAN MAY BE DULY RECORDED.

ATTEST

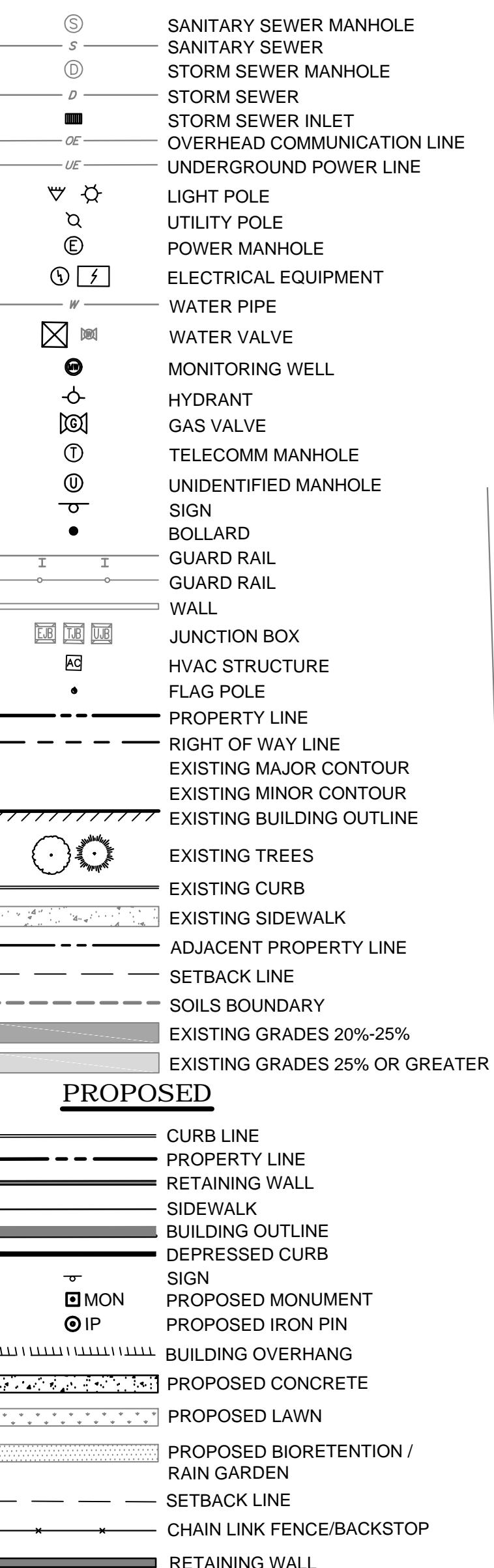
SECRETARY

NOTARY PUBLIC

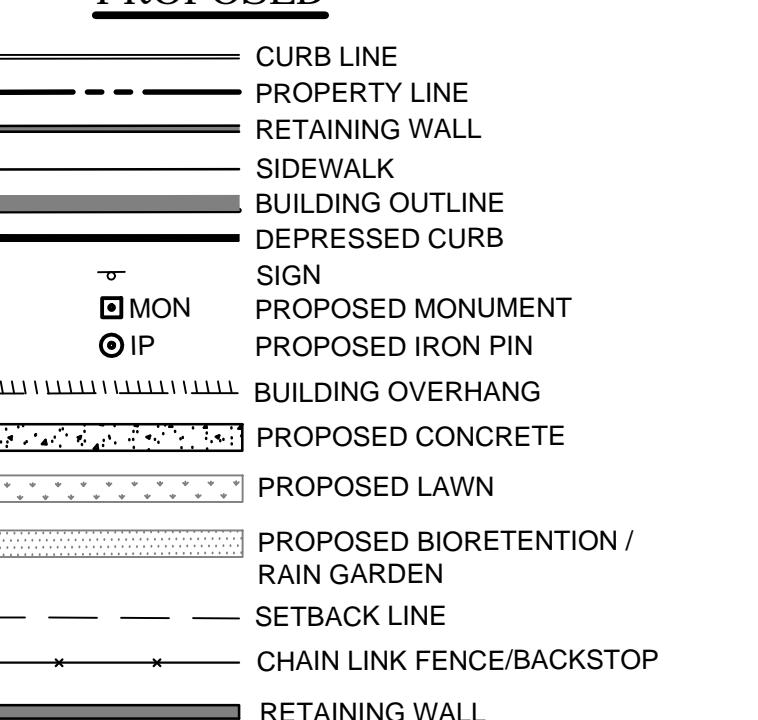
MY COMMISSION EXPIRES

ENGINEER CERTIFICATION:

ON THIS DATE
HEREBY CERTIFY THAT THIS SITE PLAN MEETS THE DELAWARE COUNTY
SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

LEGEND
EXISTING

PROPOSED



ISSUED FOR: PRELIMINARY LAND DEVELOPMENT SUBMISSION

UPPER DARBY SCHOOL DISTRICT
CLIFTON HEIGHTS BOROUGH
DELAWARE COUNTY, PA

UPPER DARBY SCHOOL DISTRICT
4611 BOND ROAD
DREXEL HILL, PA 19026

JOB NO.: USDSX19002
DATE: 05.22.2019
DWN. BY: DDL
SHEET NO.: 4 OF 17

KCB Associates Inc.
Architects
801 Broad Street Suite 300
Philadelphia, PA 19103
t 215.222.3585
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kcb-architects.com

Pennoni
CONSULTANTS

PDE #xxxx
NOT FOR CONSTRUCTION
CS1001

APPENDIX J

VOLUME DEVELOPMENT WORKSHEETS

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	2019 Existing	Growth Factor	Proposed Wawa	Proposed Retail	2022 No Build
Springfield Road & Austin Drive	EBT	556	0	3		559
	EBR	9	0			9
	WBL	8	0			8
	WBT	556	0	2		558
	NBL	5	0			5
	NBR	3	0			3
	SBL	8	0			8
	SBT	2	0			2
	SBR	27	0			27
Springfield Road & Oak Avenue	EBL	15	0			15
	EBT	423	0			423
	EBR	130	0	3		133
	WBL	10	0			10
	WBT	438	0			438
	WBR	39	0			39
	NBL	98	0	2		100
	NBT	128	0	3		131
	NBR	1	0			1
	SBL	64	0			64
	SBT	151	0	3	1	155
	SBR	27	0			27

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	2019 Existing	Growth Factor	Proposed Wawa	Proposed Retail	2022 No Build
Springfield Road & Church	EBL	0	0			0
	EBT	487	0			487
	EBR	5	0			5
	EBHR	1	0			1
	WBU	0	0			0
	WBL	11	0			11
	WBBL	11	0			11
	WBT	474	0			474
	WBR	2	0			2
	NBU	0	0			0
	NBHL	0	0			0
	NBL	17	0			17
	NBT	0	0			0
	NBR	9	0			9
	SBL	0	0			0
	SBT	0	0			0
	SBBR	0	0			0
Prospect Avenue	SBR	1	0			1
	NEU	0	0			0
	NEHL	0	0			0
	NEL	0	0			0
	NER	12	0			12
	NEHR	5	0			5
Springfield Road & Sycamore Avenue & Fairview Avenue	EBU	0	0			0
	EBL	14	0			14
	EBBL	21	0			21
	EBT	471	0			471
	WBT	446	0			446
	WBR	27	0			27
	WBHR	4	0			4
	NBL	7	0			7
	NBT	4	0			4
	NBBR	1	0			1
	NBR	5	0			5
	SBHL	0	0			0
	SBL	44	0			44
	SBR	31	0			31

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	2019 Existing	Growth Factor	Proposed Wawa	Proposed Retail	2022 No Build
Wyncliffe Avenue & Oak Avenue	WBL	24	0			24
	WBT	15	0			15
	WBR	2	0			2
	NBL	9	0			9
	NBT	162	0	3		165
	NBR	6	0			6
	SBU	0	0			0
	SBL	1	0			1
	SBT	212	0	3	1	216
Arch Street & Sycamore Avenue	SBR	9	0			9
	WBL	13	0			13
	WBR	4	0			4
	NBT	37	0			37
	NBR	0	0			0
	SBL	4	0			4
Wyncliffe Avenue & Sycamore Avenue	SBT	65	0			65
	EBU	0	0			0
	EBL	6	0			6
	EBT	7	0			7
	EBR	9	0			9
	WBL	1	0			1
	WBT	17	0			17
	WBR	21	0			21
	NBL	4	0			4
	NBT	43	0			43
	NBR	1	0			1
	SBL	6	0			6
Springfield Avenue & CHMS Exit Only Driveway	SBT	51	0			51
	SBR	3	0			3
	EBT	488	0			488
	WBT	487	0			487
Springfield Avenue & CHMS Enter Only Driveway	NBL	0	0			0
	NBR	0	0			0
	EBL	0	0			0
	EBT	488	0			488
Springfield Avenue & CHMS Enter Only Driveway	WBT	487	0			487
	WBR	0	0			0

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	2019 Existing	Growth Factor	Proposed Wawa	Proposed Retail	2022 No Build
Oak Avenue & CHMS Enter Only Driveway	NBT	182	0	3		185
	NBR	0	0			0
	SBL	0	0			0
	SBT	242	0	3	1	246
Sycamore Avenue & CHMS Exit Only Driveway	EBL	0	0			0
	EBR	0	0			0
	NBT	37	0			37
	SBT	78	0			78

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School				
		Car Trips				
		% Enter	Entering	% Exit	Exiting	Total
Springfield Road & Austin Drive	EBT	19%	57		0	57
	EBR		0		0	0
	WBL		0		0	0
	WBT		0	19%	48	48
	NBL		0		0	0
	NBR		0		0	0
	SBL		0		0	0
	SBT		0		0	0
	SBR		0		0	0
Springfield Road & Oak Avenue	EBL	19%	57		0	57
	EBT		0		0	0
	EBR		0		0	0
	WBL		0	18%	46	46
	WBT		0	19%	48	48
	WBR	41%	122		0	122
	NBL		0		0	0
	NBT	18%	54		0	54
	NBR		0		0	0
	SBL		0		0	0
	SBT		0		0	0
	SBR		0		0	0

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School				
		Car Trips				
		% Enter	Entering	% Exit	Exiting	Total
Springfield Road & Church Street/Sports Field Driveway & Prospect Avenue	EBL		0		0	0
	EBT		0		0	0
	EBR		0		0	0
	EBHR		0		0	0
	WBU		0		0	0
	WBL		0		0	0
	WBBL		0		0	0
	WBT	41%	122	37%	94	216
	WBR		0		0	0
	NBU		0		0	0
	NBHL		0		0	0
	NBL		0		0	0
	NBT		0		0	0
	NBR		0		0	0
	SBL		0		0	0
	SBT		0		0	0
	SBBR		0		0	0
	SBR		0		0	0
	NEU		0		0	0
	NEHL		0		0	0
	NEL		0		0	0
	NER		0		0	0
	NEHR		0		0	0
Springfield Road & Sycamore Avenue & Fairview Avenue	EBU		0		0	0
	EBL		0		0	0
	EBBL		0		0	0
	EBT		0		0	0
	WBT	41%	122		0	122
	WBR		0		0	0
	WBHR		0		0	0
	NBL		0		0	0
	NBT		0		0	0
	NBBR		0		0	0
	NBR		0		0	0
	SBHL		0		0	0
	SBL		0	41%	104	104
	SBR		0	37%	94	94

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School				
		Car Trips				
		% Enter	Entering	% Exit	Exiting	Total
Wyncliffe Avenue & Oak Avenue	WBL	5%	15		0	15
	WBT		0		0	0
	WBR		0	17%	43	43
	NBL		0		0	0
	NBT		0		0	0
	NBR		0		0	0
	SBU		0		0	0
	SBL		0		0	0
	SBT	17%	51		0	51
Arch Street & Sycamore Avenue	SBR		0		0	0
	WBL		0		0	0
	WBR		0		0	0
	NBT		0	22%	56	56
	NBR		0		0	0
	SBL		0		0	0
Wyncliffe Avenue & Sycamore Avenue	SBT		0		0	0
	EBU		0		0	0
	EBL		0		0	0
	EBT		0		0	0
	EBR		0		0	0
	WBL		0		0	0
	WBT	2%	6		0	6
	WBR		0		0	0
	NBL		0	17%	43	43
	NBT		0	3%	8	8
	NBR		0	2%	5	5
	SBL		0		0	0
Springfield Avenue & CHMS Exit Only Driveway	SBT		0		0	0
	SBR	3%	9		0	9
	EBT		0		0	0
	WBT	41%	122	37%	94	216
Springfield Avenue & CHMS Enter Only Driveway	NBL		0		0	0
	NBR		0		0	0
	EBL		0		0	0
	EBT		0		0	0
	WBT	41%	122	37%	94	216
	WBR		0		0	0

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School				
		Car Trips				
		% Enter	Entering	% Exit	Exiting	Total
Oak Avenue & CHMS Enter Only Driveway	NBT		0		0	0
	NBR	78%	232		0	232
	SBL	22%	66		0	66
	SBT		0		0	0
Sycamore Avenue & CHMS Exit Only Driveway	EBL		0	22%	56	56
	EBR		0	78%	197	197
	NBT		0		0	0
	SBT		0		0	0

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School					Total Trips	2022 Build		
		Bus Trips								
		% Enter	Entering	% Exit	Exiting	Total				
Springfield Road & Austin Drive	EBT	50%	4		0	4	61	620		
	EBR		0		0	0	0	9		
	WBL		0		0	0	0	8		
	WBT		0	50%	4	4	52	610		
	NBL		0		0	0	0	5		
	NBR		0		0	0	0	3		
	SBL		0		0	0	0	8		
	SBT		0		0	0	0	2		
	SBR		0		0	0	0	27		
Springfield Road & Oak Avenue	EBL		0		0	0	57	72		
	EBT	50%	4		0	4	4	427		
	EBR		0		0	0	0	133		
	WBL		0		0	0	46	56		
	WBT		0	50%	4	4	52	490		
	WBR		0		0	0	122	161		
	NBL		0		0	0	0	100		
	NBT		0		0	0	54	185		
	NBR		0		0	0	0	1		
	SBL		0		0	0	0	64		
	SBT		0		0	0	0	155		
	SBR		0		0	0	0	27		

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School					Total Trips	2022 Build		
		Bus Trips								
		% Enter	Entering	% Exit	Exiting	Total				
Springfield Road & Church	EBL	50%	0	0	0	0	0	0		
	EBT		4	50%	4	8	8	495		
Street/Sports Field Driveway & Prospect Avenue	EBR		0	0	0	0	0	5		
	EBHR		0	0	0	0	0	1		
	WBU		0	0	0	0	0	0		
	WBL		0	0	0	0	0	11		
	WBBL		0	0	0	0	0	11		
	WBT		0	0	0	0	216	690		
	WBR		0	0	0	0	-2	0		
	NBU		0	0	0	0	0	0		
	NBHL		0	0	0	0	0	0		
	NBL		0	0	0	0	0	17		
	NBT		0	0	0	0	0	0		
	NBR		0	0	0	0	0	9		
	SBL		0	0	0	0	0	0		
	SBT		0	0	0	0	0	0		
	SBBR		0	0	0	0	0	0		
	SBR		0	0	0	0	0	1		
	NEU		0	0	0	0	0	0		
	NEHL		0	0	0	0	0	0		
	NEL		0	0	0	0	0	0		
	NER		0	0	0	0	0	12		
	NEHR		0	0	0	0	0	5		
Springfield Road & Sycamore Avenue & Fairview Avenue	EBU	50%	0	0	0	0	0	0		
	EBL		0	0	0	0	0	14		
	EBBL		0	0	0	0	0	21		
	EBT		0	50%	4	4	4	475		
	WBT		4	0	0	4	126	572		
	WBR		0	0	0	0	0	27		
	WBHR		0	0	0	0	0	4		
	NBL		0	0	0	0	0	7		
	NBT		0	0	0	0	0	4		
	NBBR		0	0	0	0	0	1		
	NBR		0	0	0	0	0	5		
	SBHL		0	0	0	0	0	0		
	SBL		0	0	0	0	104	148		
	SBR		0	0	0	0	94	125		

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School					Total Trips	2022 Build		
		Bus Trips								
		% Enter	Entering	% Exit	Exiting	Total				
Wyncliffe Avenue & Oak Avenue	WBL		0		0	0	15	39		
	WBT		0		0	0	0	15		
	WBR		0		0	0	43	45		
	NBL		0		0	0	0	9		
	NBT		0		0	0	0	165		
	NBR		0		0	0	0	6		
	SBU		0		0	0	0	0		
	SBL		0		0	0	0	1		
	SBT		0		0	0	51	267		
	SBR		0		0	0	0	9		
Arch Street & Sycamore Avenue	WBL		0		0	0	0	13		
	WBR		0		0	0	0	4		
	NBT		0		0	0	56	93		
	NBR		0		0	0	0	0		
	SBL		0		0	0	0	4		
	SBT		0		0	0	0	65		
Wyncliffe Avenue & Sycamore Avenue	EBU		0		0	0	0	0		
	EBL		0		0	0	0	6		
	EBT		0		0	0	0	7		
	EBR		0		0	0	0	9		
	WBL		0		0	0	0	1		
	WBT		0		0	0	6	23		
	WBR		0		0	0	0	21		
	NBL		0		0	0	43	47		
	NBT		0		0	0	8	51		
	NBR		0		0	0	5	6		
	SBL		0		0	0	0	6		
	SBT		0		0	0	0	51		
	SBR		0		0	0	9	12		
Springfield Avenue & CHMS Exit Only Driveway	EBT	50%	4		0	4	4	492		
	WBT		0		0	0	216	703		
	NBL		0	50%	4	4	4	4		
	NBR		0	50%	4	4	4	4		
Springfield Avenue & CHMS Enter Only Driveway	EBL	50%	4		0	4	4	4		
	EBT		0	50%	4	4	4	492		
	WBT		0		0	0	216	703		
	WBR	50%	4		0	4	4	4		

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

AM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School					Total Trips	2022 Build		
		Bus Trips								
		% Enter	Entering	% Exit	Exiting	Total				
Oak Avenue & CHMS Enter Only Driveway	NBT		0		0	0	0	185		
	NBR		0		0	0	232	232		
	SBL		0		0	0	66	66		
	SBT		0		0	0	0	246		
Sycamore Avenue & CHMS Exit Only Driveway	EBL		0		0	0	56	56		
	EBR		0		0	0	197	197		
	NBT		0		0	0	0	37		
	SBT		0		0	0	0	78		

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	2019 Existing	Growth Factor	Proposed Wawa	Proposed Retail	2022 No Build
Springfield Road & Austin Drive	EBT	553	0	3		556
	EBR	17	0			17
	WBL	21	0			21
	WBT	591	0	2		593
	NBL	35	0			35
	NBR	25	0			25
	SBL	7	0			7
	SBT	1	0			1
	SBR	23	0			23
Springfield Road & Oak Avenue	EBL	42	0			42
	EBT	372	0			372
	EBR	166	0	3		169
	WBL	14	0			14
	WBT	441	0			441
	WBR	47	0			47
	NBL	132	0	2		134
	NBT	195	0	4	1	200
	NBR	17	0			17
	SBL	48	0			48
	SBT	174	0	3	1	178
	SBR	24	0			24

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	2019 Existing	Growth Factor	Proposed Wawa	Proposed Retail	2022 No Build
Springfield Road & Church	EBL	4	0			4
	EBT	446	0			446
	EBR	24	0			24
	EBHR	0	0			0
	WBU	3	0			3
	WBL	6	0			6
	WBBL	7	0			7
	WBT	493	0			493
	WBR	4	0			4
	NBU	0	0			0
	NBHL	0	0			0
	NBL	17	0			17
	NBT	1	0			1
	NBR	13	0			13
	SBL	0	0			0
	SBT	0	0			0
	SBBR	0	0			0
	SBR	0	0			0
Street/Sports Field Driveway & Prospect Avenue	NEU	0	0			0
	NEHL	4	0			4
	NEL	0	0			0
	NER	15	0			15
	NEHR	1	0			1
	EBU	0	0			0
	EBL	16	0			16
	EBBL	49	0			49
	EBT	422	0			422
	WBT	465	0			465
	WBR	34	0			34
	WBHR	12	0			12
	NBL	7	0			7
	NBT	1	0			1
Springfield Road & Sycamore Avenue & Fairview Avenue	NBBR	1	0			1
	NBR	3	0			3
	SBHL	1	0			1
	SBL	30	0			30
	SBR	28	0			28

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	2019 Existing	Growth Factor	Proposed Wawa	Proposed Retail	2022 No Build
Wyncliffe Avenue & Oak Avenue	WBL	13	0			13
	WBT	10	0			10
	WBR	11	0			11
	NBL	13	0			13
	NBT	215	0	4	1	220
	NBR	43	0			43
	SBU	0	0			0
	SBL	10	0			10
	SBT	226	0	3	1	230
	SBR	8	0			8
Arch Street & Sycamore Avenue	WBL	8	0			8
	WBR	1	0			1
	NBT	62	0			62
	NBR	2	0			2
	SBL	2	0			2
	SBT	76	0			76
Wyncliffe Avenue & Sycamore Avenue	EBU	2	0			2
	EBL	7	0			7
	EBT	16	0			16
	EBR	8	0			8
	WBL	0	0			0
	WBT	25	0			25
	WBR	22	0			22
	NBL	5	0			5
	NBT	49	0			49
	NBR	2	0			2
	SBL	15	0			15
	SBT	62	0			62
	SBR	9	0			9
Springfield Avenue & CHMS Exit Only Driveway	EBT	437	0			437
	WBT	502	0			502
	NBL	0	0			0
	NBR	0	0			0
Springfield Avenue & CHMS Enter Only Driveway	EBL	0	0			0
	EBT	437	0			437
	WBT	502	0			502
	WBR	0	0			0

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	2019 Existing	Growth Factor	Proposed Wawa	Proposed Retail	2022 No Build
Oak Avenue & CHMS Enter Only Driveway	NBT	284	0	4	1	289
	NBR	0	0			0
	SBL	0	0			0
	SBT	246	0	3	1	250
Sycamore Avenue & CHMS Exit Only Driveway	EBL	0	0			0
	EBR	0	0			0
	NBT	64	0			64
	SBT	84	0			84

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School				
		Car Trips				
		% Enter	Entering	% Exit	Exiting	Total
Springfield Road & Austin Drive	EBT	19%	15		0	15
	EBR		0		0	0
	WBL		0		0	0
	WBT		0	19%	16	16
	NBL		0		0	0
	NBR		0		0	0
	SBL		0		0	0
	SBT		0		0	0
	SBR		0		0	0
Springfield Road & Oak Avenue	EBL	19%	15		0	15
	EBT		0		0	0
	EBR		0		0	0
	WBL		0	18%	15	15
	WBT		0	19%	16	16
	WBR	41%	32		0	32
	NBL		0		0	0
	NBT	18%	14		0	14
	NBR		0		0	0
	SBL		0		0	0
	SBT		0		0	0
	SBR		0		0	0

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School				
		Car Trips				
		% Enter	Entering	% Exit	Exiting	Total
Springfield Road & Church Street/Sports Field Driveway & Prospect Avenue	EBL		0		0	0
	EBT		0		0	0
	EBR		0		0	0
	EBHR		0		0	0
	WBU		0		0	0
	WBL		0		0	0
	WBBL		0		0	0
	WBT	41%	32	37%	31	63
	WBR		0		0	0
	NBU		0		0	0
	NBHL		0		0	0
	NBL		0		0	0
	NBT		0		0	0
	NBR		0		0	0
	SBL		0		0	0
	SBT		0		0	0
	SBBR		0		0	0
	SBR		0		0	0
	NEU		0		0	0
	NEHL		0		0	0
	NEL		0		0	0
	NER		0		0	0
	NEHR		0		0	0
Springfield Road & Sycamore Avenue & Fairview Avenue	EBU		0		0	0
	EBL		0		0	0
	EBBL		0		0	0
	EBT		0		0	0
	WBT	41%	32		0	32
	WBR		0		0	0
	WBHR		0		0	0
	NBL		0		0	0
	NBT		0		0	0
	NBBR		0		0	0
	NBR		0		0	0
	SBHL		0		0	0
	SBL		0	41%	34	34
	SBR		0	37%	31	31

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School				
		Car Trips				
		% Enter	Entering	% Exit	Exiting	Total
Wyncliffe Avenue & Oak Avenue	WBL	5%	4		0	4
	WBT		0		0	0
	WBR		0	17%	14	14
	NBL		0		0	0
	NBT		0		0	0
	NBR		0		0	0
	SBU		0		0	0
	SBL		0		0	0
	SBT	17%	13		0	13
Arch Street & Sycamore Avenue	SBR		0		0	0
	WBL		0		0	0
	WBR		0		0	0
	NBT		0	22%	18	18
	NBR		0		0	0
Wyncliffe Avenue & Sycamore Avenue	SBL		0		0	0
	SBT		0		0	0
	EBU		0		0	0
	EBL		0		0	0
	EBT		0		0	0
	EBR		0		0	0
	WBL		0		0	0
	WBT	2%	2		0	2
	WBR		0		0	0
	NBL		0	17%	14	14
Springfield Avenue & CHMS Exit Only Driveway	NBT		0	3%	2	2
	NBR		0	2%	2	2
	SBL		0		0	0
	SBT		0		0	0
Springfield Avenue & CHMS Enter Only Driveway	SBR	3%	2		0	2
	EBT		0		0	0
	WBT	41%	32	37%	31	63
	NBL		0		0	0
	NBR		0		0	0

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School				
		Car Trips				
		% Enter	Entering	% Exit	Exiting	Total
Oak Avenue & CHMS Enter Only Driveway	NBT		0		0	0
	NBR	78%	62		0	62
	SBL	22%	17		0	17
	SBT		0		0	0
Sycamore Avenue & CHMS Exit Only Driveway	EBL		0	22%	18	18
	EBR		0	78%	65	65
	NBT		0		0	0
	SBT		0		0	0

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School					Total Trips	2022 Build		
		Bus Trips								
		% Enter	Entering	% Exit	Exiting	Total				
Springfield Road & Austin Drive	EBT	50%	4		0	4	19	575		
	EBR		0		0	0	0	17		
	WBL		0		0	0	0	21		
	WBT		0	50%	4	4	20	613		
	NBL		0		0	0	0	35		
	NBR		0		0	0	0	25		
	SBL		0		0	0	0	7		
	SBT		0		0	0	0	1		
	SBR		0		0	0	0	23		
Springfield Road & Oak Avenue	EBL		0		0	0	15	57		
	EBT	50%	4		0	4	4	376		
	EBR		0		0	0	0	169		
	WBL		0		0	0	15	29		
	WBT		0	50%	4	4	20	461		
	WBR		0		0	0	32	79		
	NBL		0		0	0	0	134		
	NBT		0		0	0	14	214		
	NBR		0		0	0	0	17		
	SBL		0		0	0	0	48		
	SBT		0		0	0	0	178		
	SBR		0		0	0	0	24		

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School					Total Trips	2022 Build		
		Bus Trips								
		% Enter	Entering	% Exit	Exiting	Total				
Springfield Road & Church Street/Sports Field Driveway & Prospect Avenue	EBL		0		0	0	-4	0		
	EBT	50%	4	50%	4	8	8	454		
	EBR		0		0	0	0	24		
	EBHR		0		0	0	0	0		
	WBU		0		0	0	0	3		
	WBL		0		0	0	0	6		
	WBBL		0		0	0	0	7		
	WBT		0		0	0	63	556		
	WBR		0		0	0	-4	0		
	NBU		0		0	0	0	0		
	NBHL		0		0	0	0	0		
	NBL		0		0	0	0	17		
	NBT		0		0	0	-1	0		
	NBR		0		0	0	0	13		
	SBL		0		0	0	0	0		
	SBT		0		0	0	0	0		
	SBBR		0		0	0	0	0		
	SBR		0		0	0	0	0		
	NEU		0		0	0	0	0		
	NEHL		0		0	0	0	4		
	NEL		0		0	0	0	0		
	NER		0		0	0	0	15		
	NEHR		0		0	0	0	1		
Springfield Road & Sycamore Avenue & Fairview Avenue	EBU		0		0	0	0	0		
	EBL		0		0	0	0	16		
	EBBL		0		0	0	0	49		
	EBT	50%	0	50%	4	4	4	426		
	WBT	50%	4	0	4	4	36	501		
	WBR		0		0	0	0	34		
	WBHR		0		0	0	0	12		
	NBL		0		0	0	0	7		
	NBT		0		0	0	0	1		
	NBBR		0		0	0	0	1		
	NBR		0		0	0	0	3		
	SBHL		0		0	0	0	1		
	SBL		0		0	0	34	64		
	SBR		0		0	0	31	59		

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School					Total Trips	2022 Build		
		Bus Trips								
		% Enter	Entering	% Exit	Exiting	Total				
Wyncliffe Avenue & Oak Avenue	WBL		0		0	0	4	17		
	WBT		0		0	0	0	10		
	WBR		0		0	0	14	25		
	NBL		0		0	0	0	13		
	NBT		0		0	0	0	220		
	NBR		0		0	0	0	43		
	SBU		0		0	0	0	0		
	SBL		0		0	0	0	10		
	SBT		0		0	0	13	243		
	SBR		0		0	0	0	8		
Arch Street & Sycamore Avenue	WBL		0		0	0	0	8		
	WBR		0		0	0	0	1		
	NBT		0		0	0	18	80		
	NBR		0		0	0	0	2		
	SBL		0		0	0	0	2		
	SBT		0		0	0	0	76		
Wyncliffe Avenue & Sycamore Avenue	EBU		0		0	0	0	2		
	EBL		0		0	0	0	7		
	EBT		0		0	0	0	16		
	EBR		0		0	0	0	8		
	WBL		0		0	0	0	0		
	WBT		0		0	0	2	27		
	WBR		0		0	0	0	22		
	NBL		0		0	0	14	19		
	NBT		0		0	0	2	51		
	NBR		0		0	0	2	4		
	SBL		0		0	0	0	15		
	SBT		0		0	0	0	62		
	SBR		0		0	0	2	11		
Springfield Avenue & CHMS Exit Only Driveway	EBT	50%	4		0	4	4	441		
	WBT		0		0	0	63	565		
	NBL		0	50%	4	4	4	4		
	NBR		0	50%	4	4	4	4		
Springfield Avenue & CHMS Enter Only Driveway	EBL	50%	4		0	4	4	4		
	EBT		0	50%	4	4	4	441		
	WBT		0		0	0	63	565		
	WBR	50%	4		0	4	4	4		

Trip Distribution

UDSDX19002

Completed By: JDN

Checked By:

PM Peak Hour Trip Distribution

Intersection	Movement	Clifton Heights Middle School					Total Trips	2022 Build		
		Bus Trips								
		% Enter	Entering	% Exit	Exiting	Total				
Oak Avenue & CHMS Enter Only Driveway	NBT		0		0	0	0	289		
	NBR		0		0	0	62	62		
	SBL		0		0	0	17	17		
	SBT		0		0	0	0	250		
Sycamore Avenue & CHMS Exit Only Driveway	EBL		0		0	0	18	18		
	EBR		0		0	0	65	65		
	NBT		0		0	0	0	64		
	SBT		0		0	0	0	84		

APPENDIX K

TURN LANE WARRANT WORKSHEETS

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



Turn Lane Warrant and Length Analysis Workbook

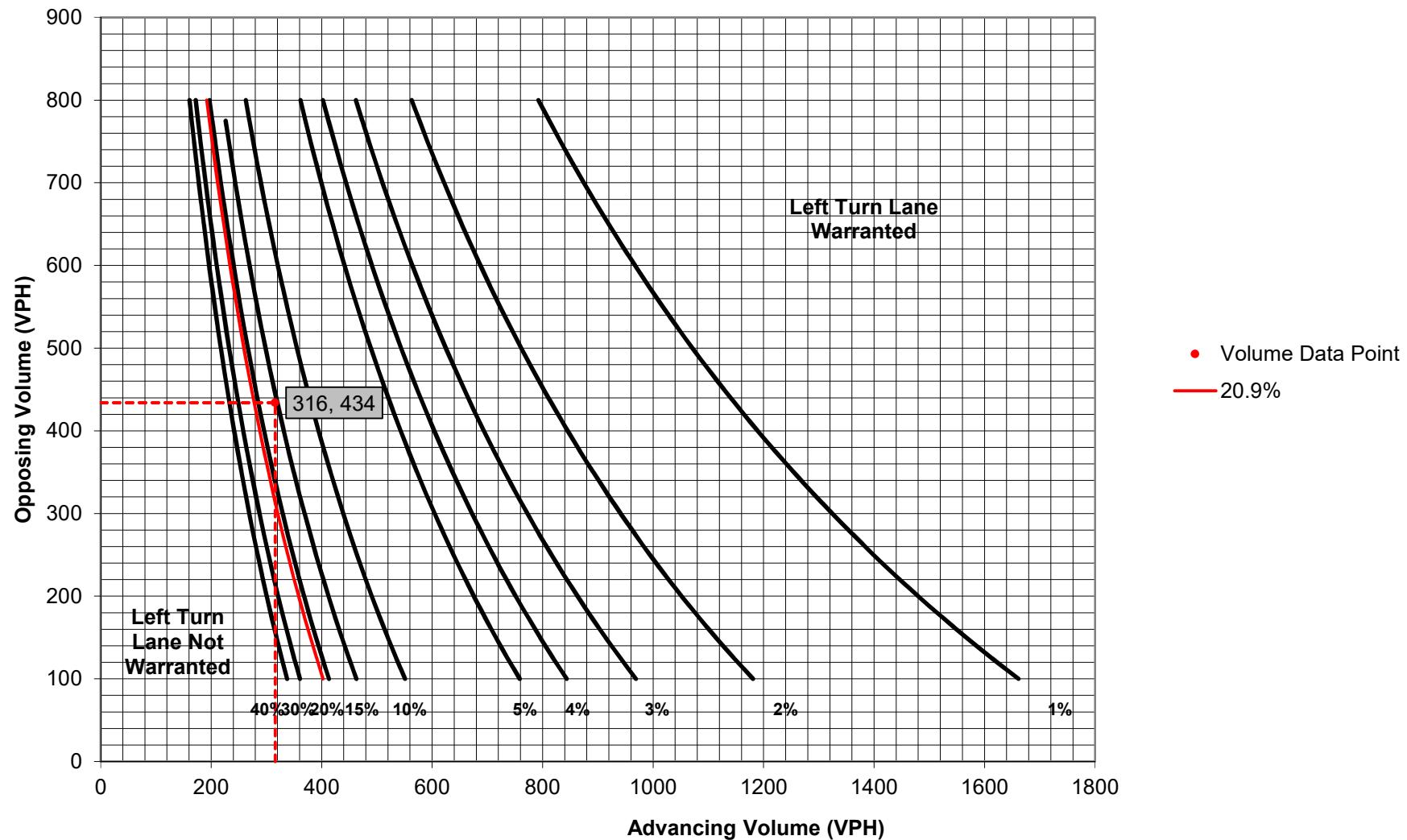
STUDY LOCATION AND ANALYSIS INFORMATION					
Municipality:	Clifton Heights		Analysis Date:	5/5/2019	
County:	Delaware County		Conducted By:	AAJ	
PennDOT Engineering District:	6		Checked By:	JDN	
			Agency/Company Name:	Pennoni	
Intersection & Approach Description:	Oak Street and Proposed Drive				
Analysis Period:	2022 Build		Number of Approach Lanes:	1	
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided	
Intersection Control:	Unsignalized		Type of Analysis Left or Right-Turn Lane Analysis?: Left Turn Lane		
Posted Speed Limit (MPH):	25				
Type of Terrain:	Rolling				

VOLUME CALCULATIONS																																											
Left Turn Lane Volume Calculations																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Movement</th> <th>Include?</th> <th>Volume</th> <th>% Trucks</th> <th>PCEV</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Advancing</td> <td>Left</td> <td>Yes</td> <td>66</td> <td>0.0%</td> <td>66</td> </tr> <tr> <td>Through</td> <td>-</td> <td>246</td> <td>1.0%</td> <td>250</td> </tr> <tr> <td>Right</td> <td>Yes</td> <td></td> <td>0.0%</td> <td>0</td> </tr> <tr> <td rowspan="3">Opposing</td> <td>Left</td> <td>Yes</td> <td></td> <td>0.0%</td> <td>0</td> </tr> <tr> <td>Through</td> <td>-</td> <td>185</td> <td>6.0%</td> <td>202</td> </tr> <tr> <td>Right</td> <td>Yes</td> <td>232</td> <td>0.0%</td> <td>232</td> </tr> </tbody> </table>						Movement	Include?	Volume	% Trucks	PCEV		Advancing	Left	Yes	66	0.0%	66	Through	-	246	1.0%	250	Right	Yes		0.0%	0	Opposing	Left	Yes		0.0%	0	Through	-	185	6.0%	202	Right	Yes	232	0.0%	232
Movement	Include?	Volume	% Trucks	PCEV																																							
Advancing	Left	Yes	66	0.0%	66																																						
	Through	-	246	1.0%	250																																						
	Right	Yes		0.0%	0																																						
Opposing	Left	Yes		0.0%	0																																						
	Through	-	185	6.0%	202																																						
	Right	Yes	232	0.0%	232																																						
Advancing Volume:	316																																										
Opposing Volume:	434																																										
Left Turn Volume:	66																																										
% Left Turns in Advancing Volume: 20.89%																																											
Right Turn Lane Volume Calculations																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Movement</th> <th>Include?</th> <th>Volume</th> <th>% Trucks</th> <th>PCEV</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Advancing</td> <td>Left</td> <td>Yes</td> <td>0</td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td>Through</td> <td>-</td> <td></td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td>Right</td> <td>-</td> <td></td> <td>0.0%</td> <td>N/A</td> </tr> </tbody> </table>						Movement	Include?	Volume	% Trucks	PCEV		Advancing	Left	Yes	0	0.0%	N/A	Through	-		0.0%	N/A	Right	-		0.0%	N/A																
Movement	Include?	Volume	% Trucks	PCEV																																							
Advancing	Left	Yes	0	0.0%	N/A																																						
	Through	-		0.0%	N/A																																						
	Right	-		0.0%	N/A																																						
Advancing Volume:	N/A																																										
Right Turn Volume:	N/A																																										

TURN LANE WARRANT FINDINGS					
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings		
Applicable Warrant Figure:			Applicable Warrant Figure:		
Figure 1			N/A		
Warrant Met?:			Warrant Met?:		
Yes			N/A		

TURN LANE LENGTH CALCULATIONS																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Intersection Control:</td> <td colspan="2">Unsignalized</td> <td colspan="3"></td> </tr> <tr> <td>Design Hour Volume of Turning Lane:</td> <td colspan="2">66</td> <td colspan="3"></td> </tr> <tr> <td>Cycles Per Hour (Assumed):</td> <td colspan="2">Known</td> <td colspan="3"></td> </tr> <tr> <td>Cycles Per Hour (If Known):</td> <td colspan="2">40</td> <td colspan="3" style="text-align: right;">Average # of Vehicles/Cycle: 2.0</td> </tr> </tbody> </table>						Intersection Control:	Unsignalized					Design Hour Volume of Turning Lane:	66					Cycles Per Hour (Assumed):	Known					Cycles Per Hour (If Known):	40		Average # of Vehicles/Cycle: 2.0		
Intersection Control:	Unsignalized																												
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PennDOT Publication 46, Exhibit 11-6																													
Type of Traffic Control	Speed (MPH)																												
	25-35		40-45		50-60																								
	Turn Demand Volume																												
	High	Low	High	Low	High	Low																							
Signalized	A	A	B or C	B or C	B or C																								
Unsignalized	A	A	C	B	B or C																								
Left Turn Lane Storage Length, Condition A: 100 Feet																													
Condition B: N/A Feet																													
Condition C: N/A Feet																													
Required Left Turn Lane Storage Length: 100 Feet																													
Additional Findings: N/A																													
Additional Comments / Justifications: 																													

**Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)

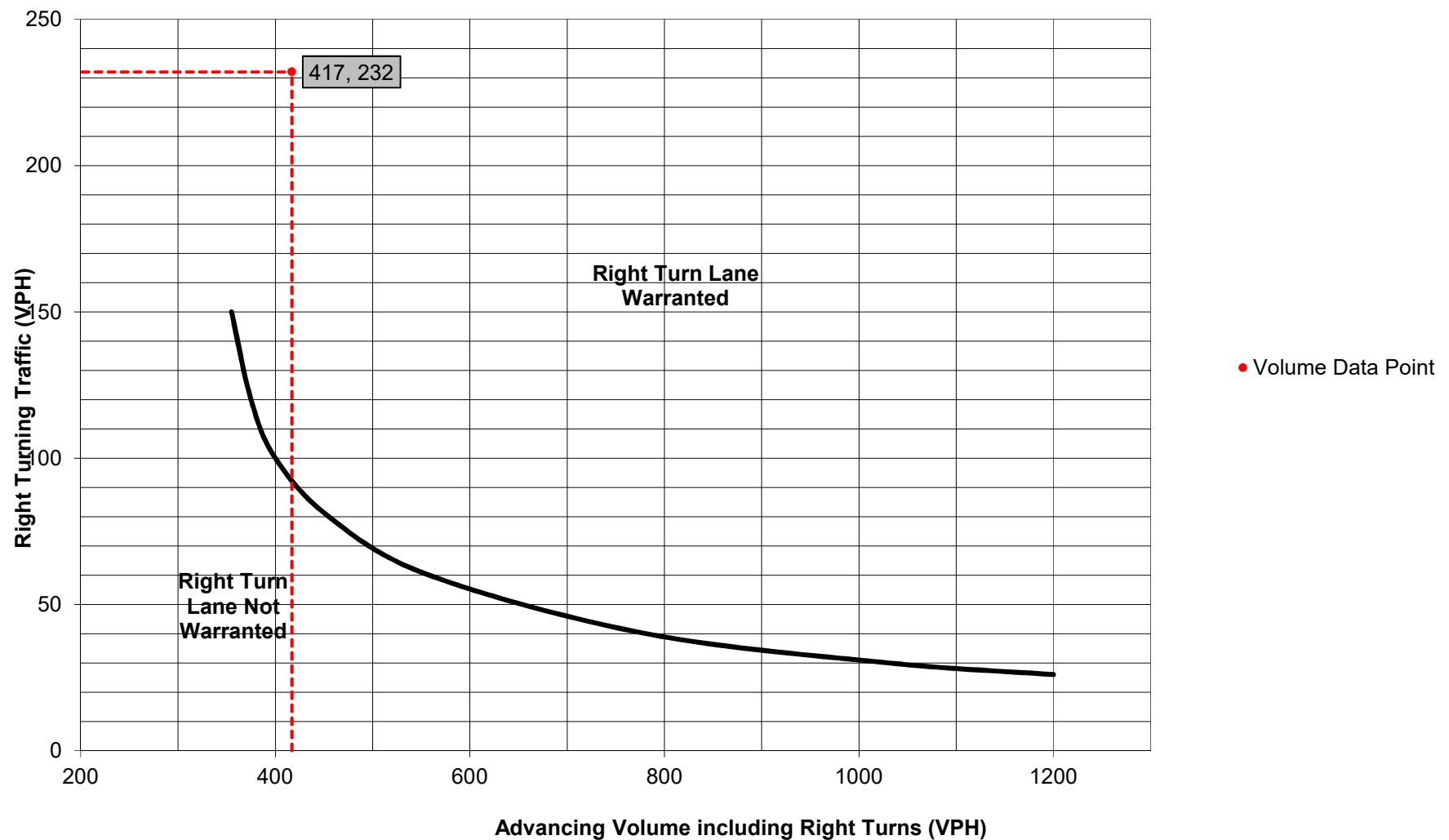


Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION					
Municipality:	Clifton Heights		Analysis Date:	5/5/2019	
County:	Delaware County		Conducted By:	AAJ	
PennDOT Engineering District:	6		Checked By:	JDN	
			Agency/Company Name:	Pennoni	
Intersection & Approach Description:	Oak Street and Proposed Drive				
Analysis Period:	2022 Build		Number of Approach Lanes:	1	
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided	
Intersection Control:	Unsignalized		Type of Analysis Left or Right-Turn Lane Analysis?: Right Turn Lane		
Posted Speed Limit (MPH):	25				
Type of Terrain:	Rolling				

VOLUME CALCULATIONS																																												
Left Turn Lane Volume Calculations																																												
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	Right	-	232	0.0%																																								
Advancing Volume: 417 Right Turn Volume: 232																																												
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Warrant Met?: N/A			Warrant Met?: Yes																																									
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	A	A	B or C	B or C	B or C	B or C																																						
Unsignalized	A	A	C	B	B or C	B																																						
Right Turn Lane Storage Length, Condition A: 250 Feet																																												
Condition B: N/A Feet																																												
Condition C: N/A Feet																																												
Required Right Turn Lane Storage Length: 250 Feet																																												
Additional Findings: N/A																																												
Additional Comments / Justifications:																																												

**Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)**



Turn Lane Warrant and Length Analysis Workbook

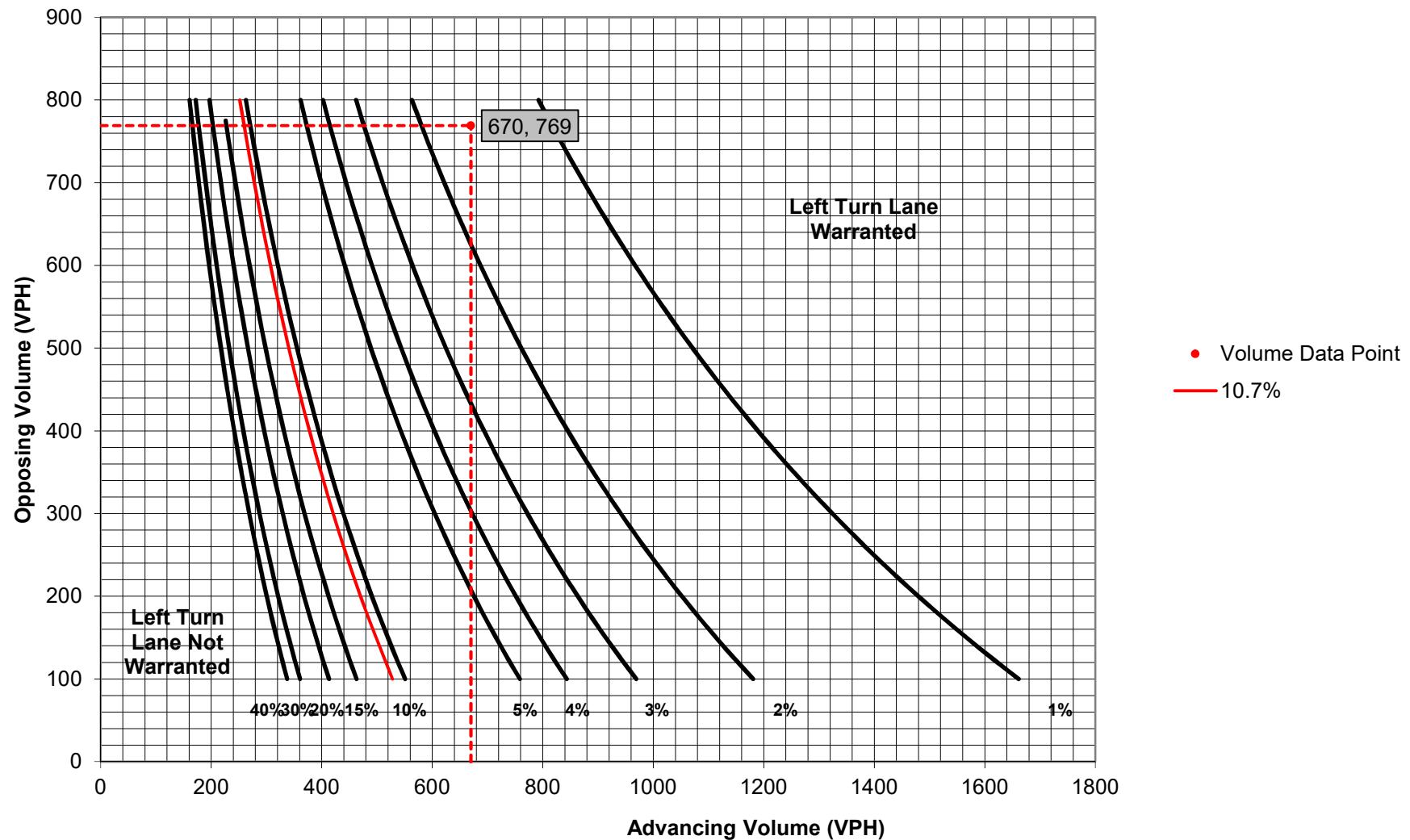
STUDY LOCATION AND ANALYSIS INFORMATION					
Municipality:	Clifton Heights		Analysis Date:	5/5/2019	
County:	Delaware County		Conducted By:	AAJ	
PennDOT Engineering District:	6		Checked By:	JDN	
			Agency/Company Name:	Pennoni	
Intersection & Approach Description:	Oak Street and Springfield Rd - EBL				
Analysis Period:	2022 Build		Number of Approach Lanes:	1	
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided	
Intersection Control:	Signalized		Type of Analysis Left or Right-Turn Lane Analysis?: Left Turn Lane		
Posted Speed Limit (MPH):	35				
Type of Terrain:	Rolling				

VOLUME CALCULATIONS																																											
Left Turn Lane Volume Calculations																																											
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Movement	Include?	Volume	% Trucks	PCEV																																							
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	Right	Yes	133	6.0%	145																																						
Opposing	Left	Yes	56	0.0%	56																																						
	Through	-	490	5.0%	527																																						
	Right	Yes	161	10.0%	186																																						
Advancing Volume:	670																																										
Opposing Volume:	769																																										
Left Turn Volume:	72																																										
% Left Turns in Advancing Volume: 10.75%																																											
Right Turn Lane Volume Calculations																																											
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	Through	-	5.0%	N/A																																							
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Advancing Volume:	N/A																																										
Right Turn Volume:	N/A																																										

TURN LANE WARRANT FINDINGS					
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings		
Applicable Warrant Figure:			Applicable Warrant Figure:		
Figure 1			N/A		
Warrant Met?:			Warrant Met?:		
Yes			N/A		

TURN LANE LENGTH CALCULATIONS																													
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Signalized	A	A	B or C	B or C	B or C																								
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Left Turn Lane Storage Length, Condition A: 75 Feet																													
Condition B: N/A Feet																													
Condition C: N/A Feet																													
Required Left Turn Lane Storage Length: 75 Feet																													
Additional Findings: N/A																													
Additional Comments / Justifications: 																													

**Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

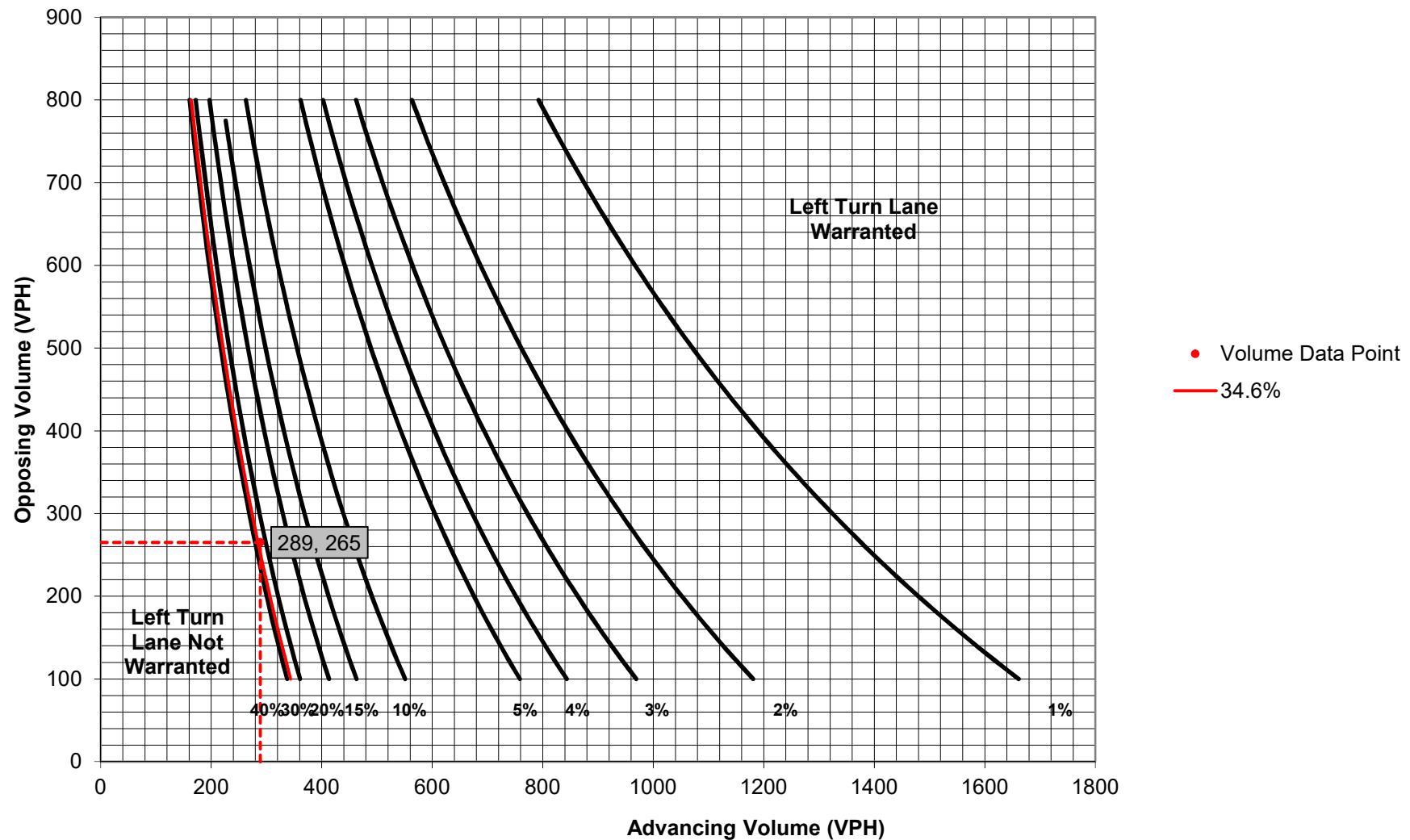
STUDY LOCATION AND ANALYSIS INFORMATION					
Municipality:	Clifton Heights		Analysis Date:	5/5/2019	
County:	Delaware County		Conducted By:	AAJ	
PennDOT Engineering District:	6		Checked By:	JDN	
			Agency/Company Name:	Pennoni	
Intersection & Approach Description:	Oak Street and Springfield Rd - NBL				
Analysis Period:	2022 Build		Number of Approach Lanes:	1	
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided	
Intersection Control:	Signalized		Type of Analysis Left or Right-Turn Lane Analysis?: Left Turn Lane		
Posted Speed Limit (MPH):	25				
Type of Terrain:	Rolling				

VOLUME CALCULATIONS																																											
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Movement	Include?	Volume	% Trucks	PCEV																																							
Advancing	Left	Yes	100	0.0%	100																																						
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	Right	Yes	27	1.0%	28																																						
Advancing Volume:	289		Opposing Volume:	265																																							
Left Turn Volume:	100		% Left Turns in Advancing Volume: 34.60%																																								
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**Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

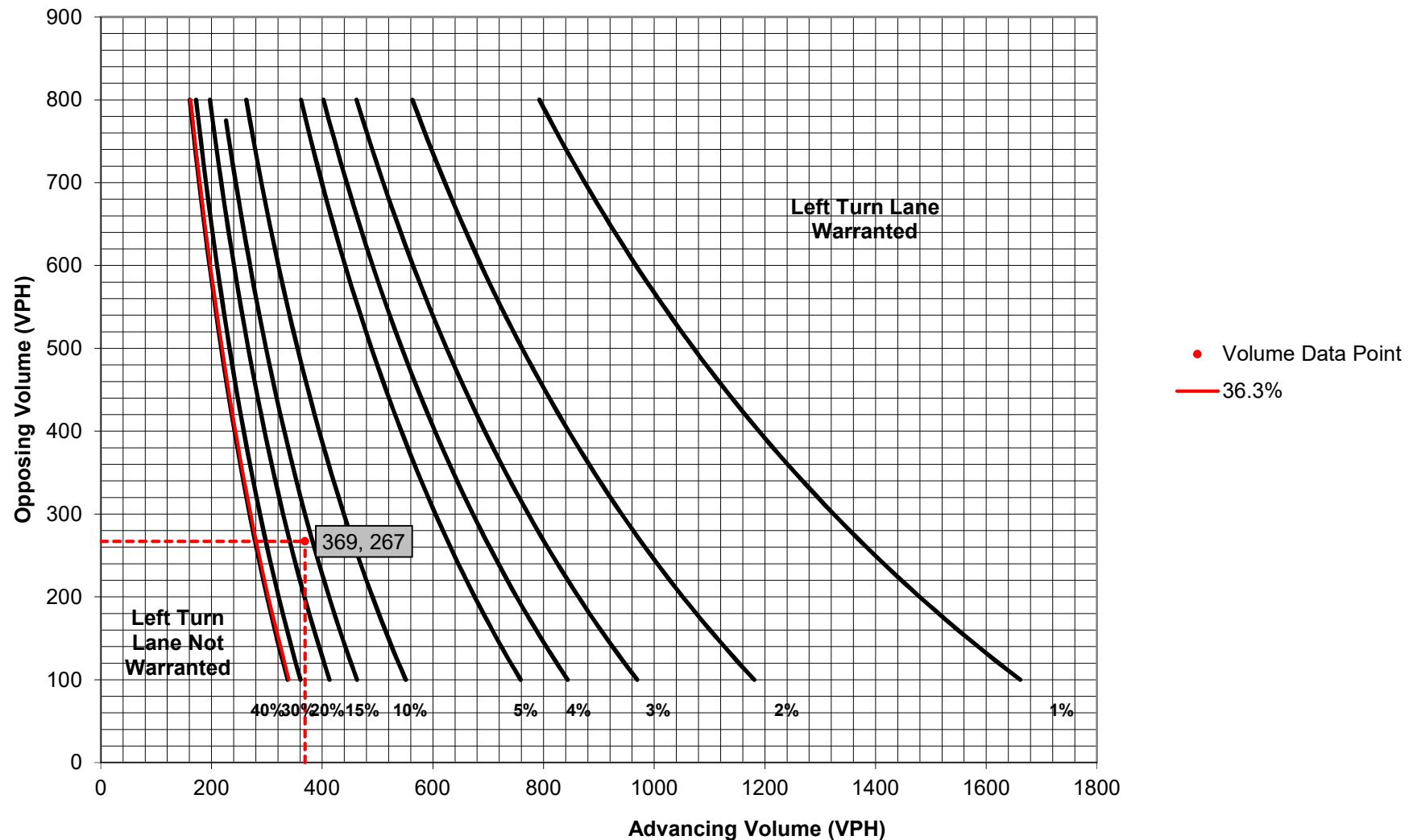
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Design Hour:	PM Peak Hour		Undivided or Divided Highway:	Undivided	
Intersection Control:	Signalized		Type of Analysis Left or Right-Turn Lane Analysis?: Left Turn Lane		
Posted Speed Limit (MPH):	25				
Type of Terrain:	Rolling				

VOLUME CALCULATIONS																																											
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Movement	Include?	Volume	% Trucks	PCEV																																							
Advancing	Left	Yes	134	0.0%	134																																						
	Through	-	214	1.0%	218																																						
	Right	Yes	17	0.0%	17																																						
Opposing	Left	Yes	48	13.0%	58																																						
	Through	-	178	2.0%	184																																						
	Right	Yes	24	1.0%	25																																						
Advancing Volume:	369																																										
Opposing Volume:	267																																										
Left Turn Volume:	134																																										
% Left Turns in Advancing Volume: 36.31%																																											
Right Turn Lane Volume Calculations																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Movement</th> <th>Include?</th> <th>Volume</th> <th>% Trucks</th> <th>PCEV</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Advancing</td> <td>Left</td> <td>Yes</td> <td>0.0%</td> <td>N/A</td> <td></td> </tr> <tr> <td>Through</td> <td>-</td> <td>5.0%</td> <td>N/A</td> <td></td> </tr> <tr> <td>Right</td> <td>-</td> <td>10.0%</td> <td>N/A</td> <td></td> </tr> </tbody> </table>						Movement	Include?	Volume	% Trucks	PCEV		Advancing	Left	Yes	0.0%	N/A		Through	-	5.0%	N/A		Right	-	10.0%	N/A																	
Movement	Include?	Volume	% Trucks	PCEV																																							
Advancing	Left	Yes	0.0%	N/A																																							
	Through	-	5.0%	N/A																																							
	Right	-	10.0%	N/A																																							
Advancing Volume:	N/A																																										
Right Turn Volume:	N/A																																										

TURN LANE WARRANT FINDINGS					
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings		
Applicable Warrant Figure:		Figure 1	Applicable Warrant Figure:		N/A
Warrant Met?:		Yes	Warrant Met?:		N/A

TURN LANE LENGTH CALCULATIONS																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Intersection Control:</td> <td colspan="2">Signalized</td> <td colspan="3"></td> </tr> <tr> <td>Design Hour Volume of Turning Lane:</td> <td colspan="2">134</td> <td colspan="3"></td> </tr> <tr> <td>Cycles Per Hour (Assumed):</td> <td colspan="2">Known</td> <td colspan="3"></td> </tr> <tr> <td>Cycles Per Hour (If Known):</td> <td colspan="2">60</td> <td colspan="3" style="text-align: right;">Average # of Vehicles/Cycle: 2.0</td> </tr> </tbody> </table>						Intersection Control:	Signalized					Design Hour Volume of Turning Lane:	134					Cycles Per Hour (Assumed):	Known					Cycles Per Hour (If Known):	60		Average # of Vehicles/Cycle: 2.0		
Intersection Control:	Signalized																												
Design Hour Volume of Turning Lane:	134																												
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Type of Traffic Control	Speed (MPH)																												
	25-35		40-45		50-60																								
	Turn Demand Volume																												
	High	Low	High	Low	High	Low																							
Signalized	A	A	B or C	B or C	B or C	B or C																							
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Left Turn Lane Storage Length, Condition A: 100 Feet																													
Condition B: N/A Feet																													
Condition C: N/A Feet																													
Required Left Turn Lane Storage Length: 100 Feet																													
Additional Findings: N/A																													
Additional Comments / Justifications:																													

**Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

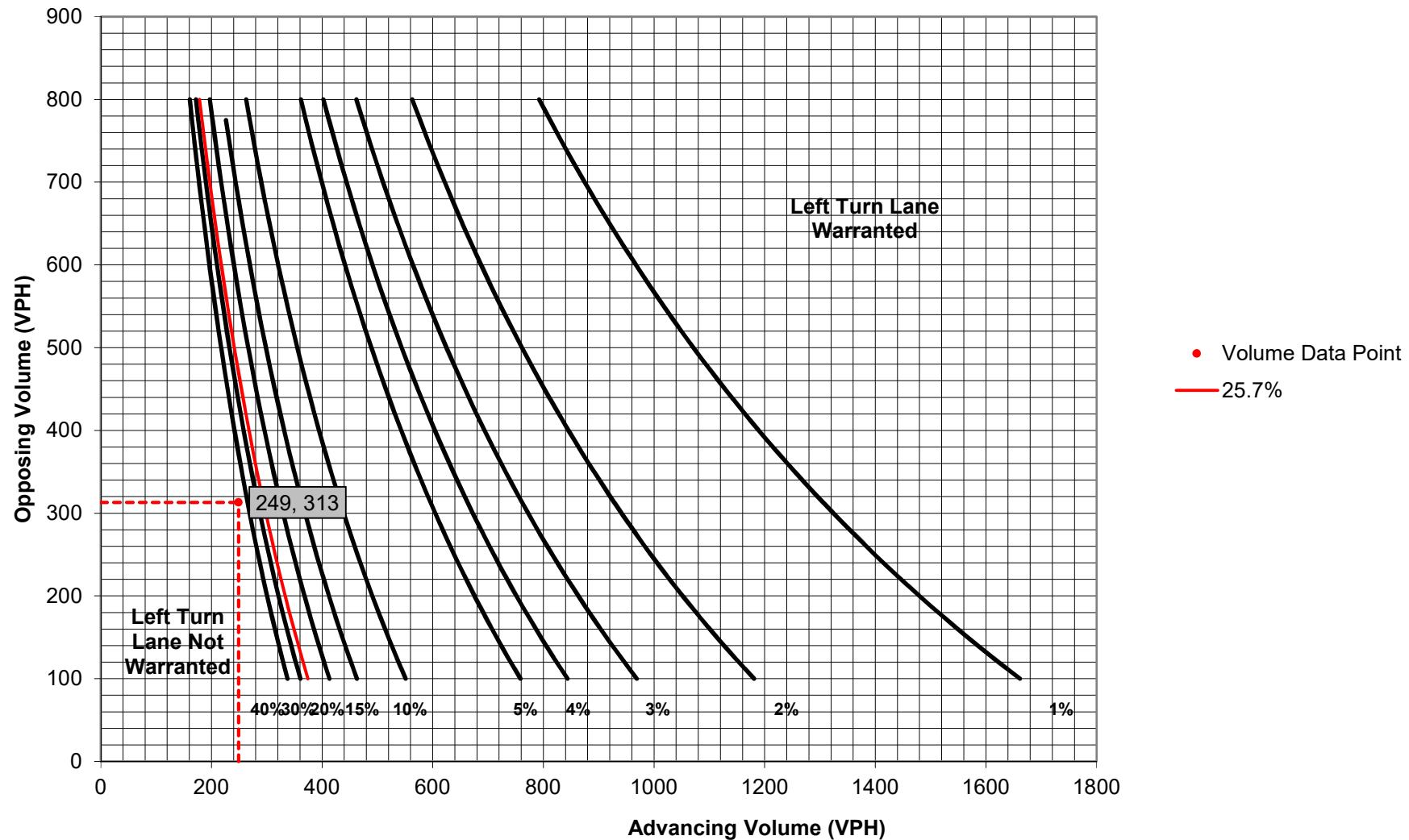
STUDY LOCATION AND ANALYSIS INFORMATION					
Municipality:	Clifton Heights		Analysis Date:	5/5/2019	
County:	Delaware County		Conducted By:	AAJ	
PennDOT Engineering District:	6		Checked By:	JDN	
			Agency/Company Name:	Pennoni	
Intersection & Approach Description:	Oak Street and Springfield Rd - SBL				
Analysis Period:	2022 Build		Number of Approach Lanes:	1	
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided	
Intersection Control:	Signalized		Type of Analysis Left or Right-Turn Lane Analysis?: Left Turn Lane		
Posted Speed Limit (MPH):	25				
Type of Terrain:	Rolling				

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Movement	Include?	Volume	% Trucks	PCEV																																							
Advancing	Left	Yes	64	0.0%	64																																						
	Through	-	155	1.0%	158																																						
	Right	Yes	27	0.0%	27																																						
Opposing	Left	Yes	100	13.0%	120																																						
	Through	-	185	2.0%	191																																						
	Right	Yes	1	1.0%	2																																						
Advancing Volume:	249																																										
Opposing Volume:	313																																										
Left Turn Volume:	64																																										
% Left Turns in Advancing Volume: 25.70%																																											
Right Turn Lane Volume Calculations																																											
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	Through	-	5.0%	N/A																																							
	Right	-	10.0%	N/A																																							
Advancing Volume:	N/A																																										
Right Turn Volume:	N/A																																										

TURN LANE WARRANT FINDINGS					
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings		
Applicable Warrant Figure:		Figure 1	Applicable Warrant Figure:		N/A
Warrant Met?:		No	Warrant Met?:		N/A

TURN LANE LENGTH CALCULATIONS																													
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PennDOT Publication 46, Exhibit 11-6																													
Type of Traffic Control	Speed (MPH)																												
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Additional Findings: N/A																													
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**Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

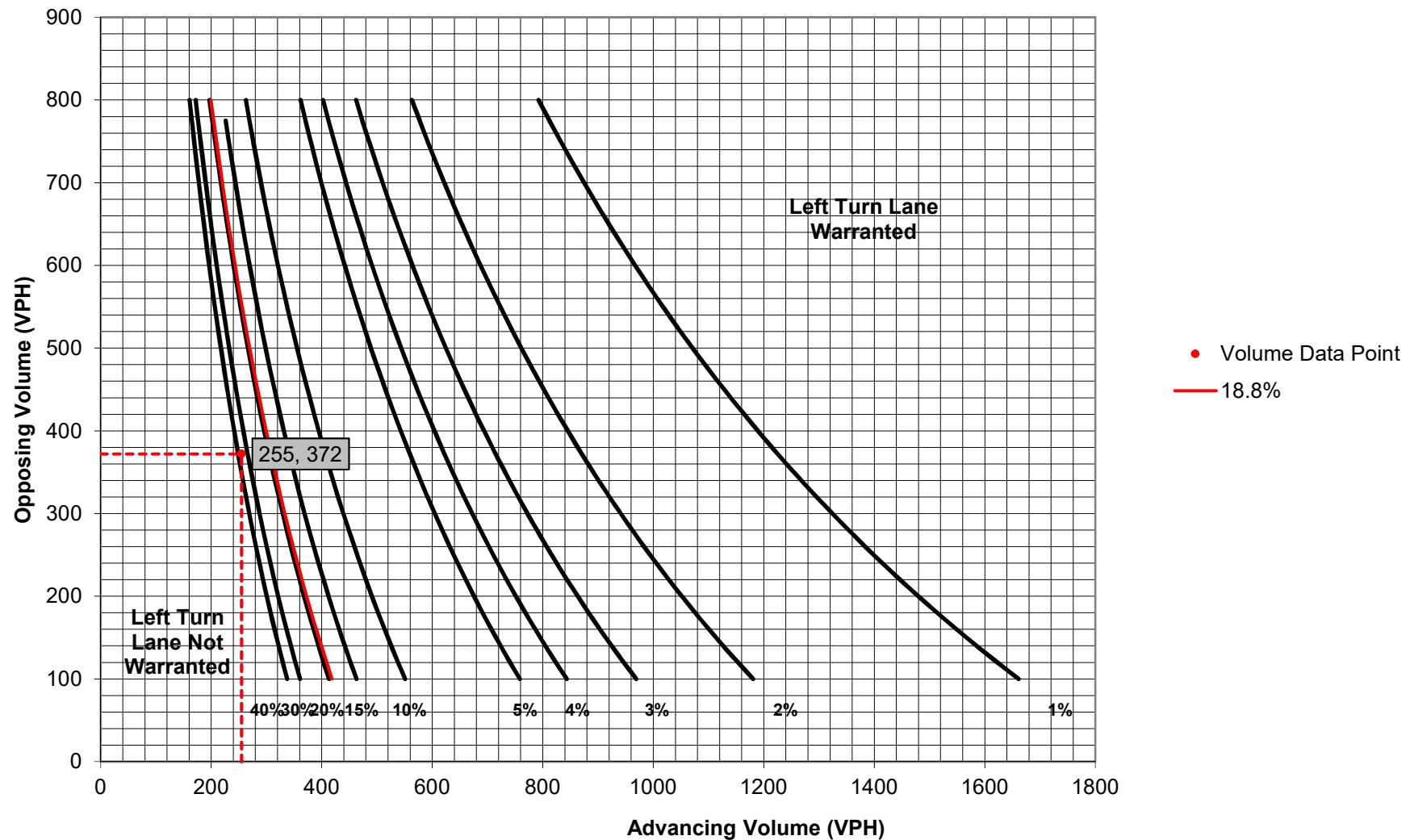
STUDY LOCATION AND ANALYSIS INFORMATION					
Municipality:	Clifton Heights		Analysis Date:	5/5/2019	
County:	Delaware County		Conducted By:	AAJ	
PennDOT Engineering District:	6		Checked By:	JDN	
			Agency/Company Name:	Pennoni	
Intersection & Approach Description:	Oak Street and Springfield Rd - SBL				
Analysis Period:	2022 Build		Number of Approach Lanes:	1	
Design Hour:	PM Peak Hour		Undivided or Divided Highway:	Undivided	
Intersection Control:	Signalized		Type of Analysis Left or Right-Turn Lane Analysis?: Left Turn Lane		
Posted Speed Limit (MPH):	25				
Type of Terrain:	Rolling				

VOLUME CALCULATIONS																																											
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Movement	Include?	Volume	% Trucks	PCEV																																							
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	Right	Yes	24	4.0%	26																																						
Opposing	Left	Yes	134	3.0%	141																																						
	Through	-	214	0.0%	214																																						
	Right	Yes	17	0.0%	17																																						
Advancing Volume:	255		Opposing Volume:	372																																							
Left Turn Volume:	48		% Left Turns in Advancing Volume: 18.82%																																								
Right Turn Lane Volume Calculations																																											
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	Through	-	5.0%	N/A																																							
	Right	-	10.0%	N/A																																							
Advancing Volume:	N/A		Right Turn Volume:	N/A																																							

TURN LANE WARRANT FINDINGS					
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings		
Applicable Warrant Figure:		Figure 1	Applicable Warrant Figure:		N/A
Warrant Met?:		No	Warrant Met?:		N/A

TURN LANE LENGTH CALCULATIONS																													
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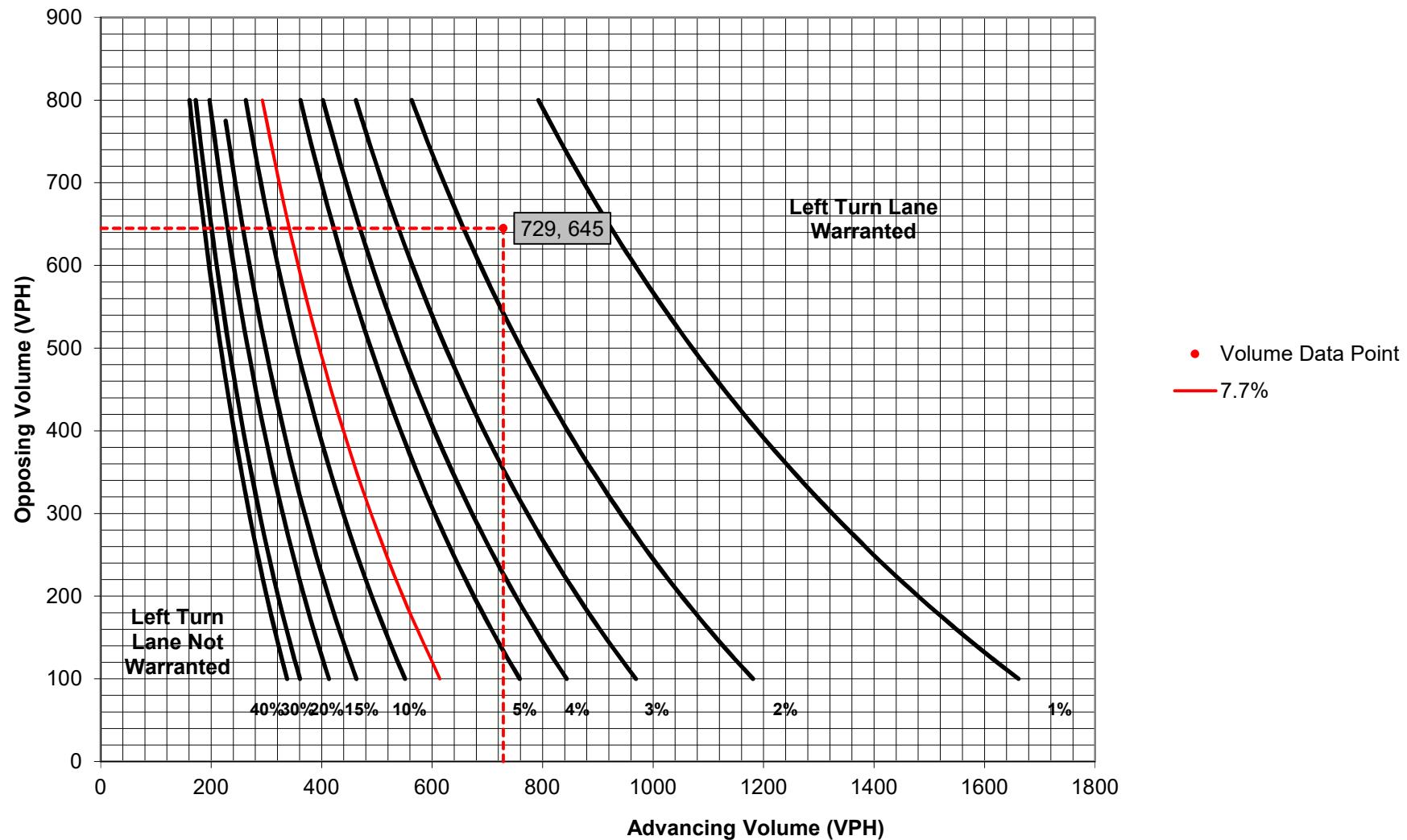
**Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)**
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Turn Lane Warrant and Length Analysis Workbook

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PennDOT Engineering District:	6		Checked By:	JDN																																							
			Agency/Company Name:	Pennoni Associates, Inc.																																							
Intersection & Approach Description:	Oak Street & Springfield Rd - WBL																																										
Analysis Period:	2022 Build		Number of Approach Lanes:	1																																							
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided																																							
Intersection Control:	Signalized																																										
Posted Speed Limit (MPH):	35																																										
Type of Terrain:	Level		Type of Analysis																																								
	Left or Right-Turn Lane Analysis?: Left Turn Lane																																										
VOLUME CALCULATIONS																																											
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Movement	Include?	Volume	% Trucks	PCEV																																							
Advancing	Left	Yes	56	0.0%	56																																						
	Through	-	490	5.0%	503																																						
	Right	Yes	161	10.0%	170																																						
Opposing	Left	Yes	72	0.0%	72																																						
	Through	-	427	4.0%	436																																						
	Right	Yes	133	6.0%	137																																						
Advancing Volume:	729																																										
Opposing Volume:	645																																										
Left Turn Volume:	56																																										
% Left Turns in Advancing Volume:	7.68%																																										
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TURN LANE LENGTH CALCULATIONS																																											
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Unsignalized	A	A	C	B	B or C	B																																					
Left Turn Lane Storage Length, Condition A: 75 Feet																																											
Condition B: N/A Feet																																											
Condition C: N/A Feet																																											
Required Left Turn Lane Storage Length: 75 Feet																																											
Additional Findings: N/A																																											
Additional Comments / Justifications:																																											

**Figure 1. Warrant for left turn lanes on two-lane roadways
(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

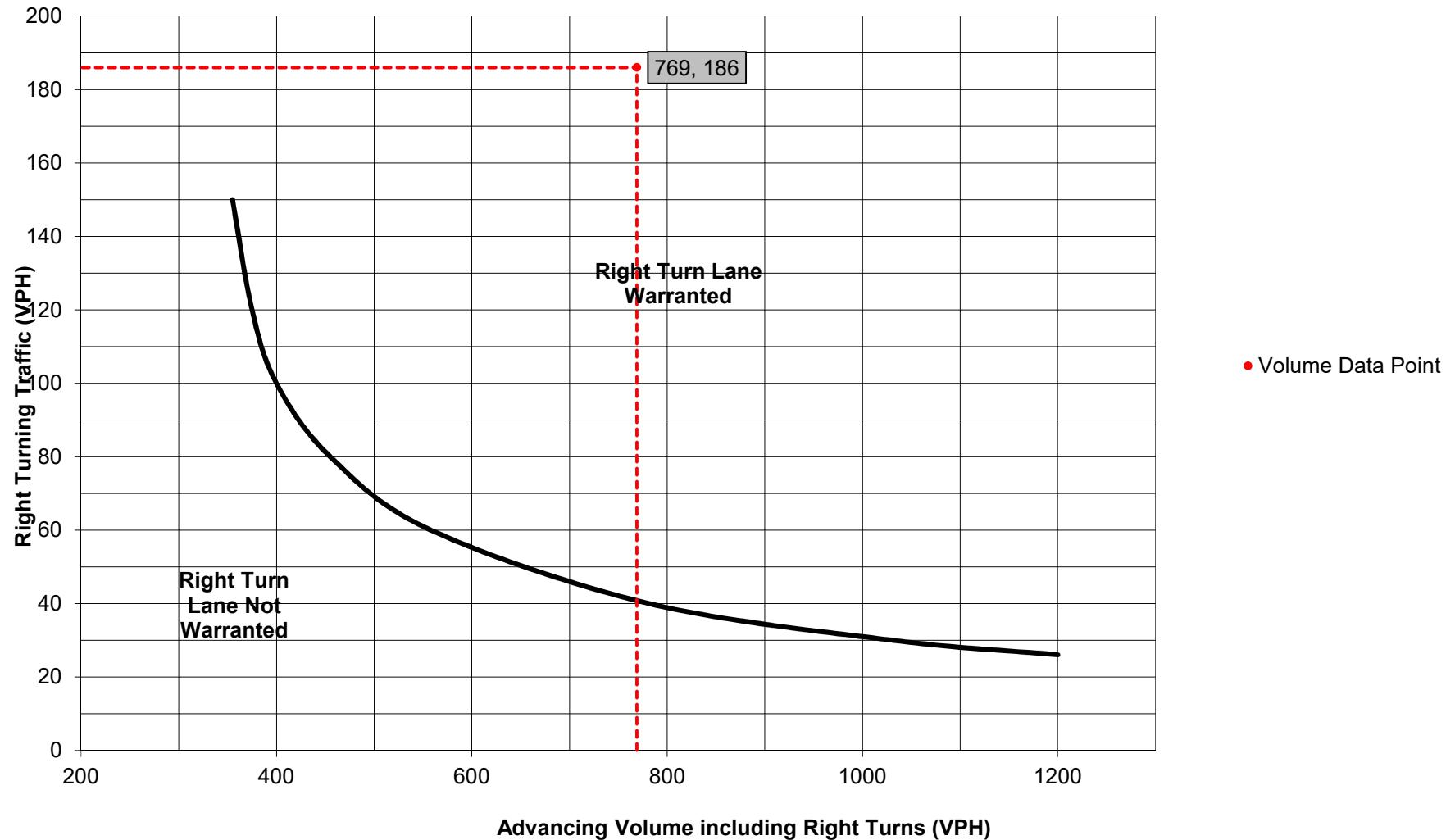
STUDY LOCATION AND ANALYSIS INFORMATION					
Municipality:	Clifton Heights		Analysis Date:	5/5/2019	
County:	Delaware County		Conducted By:	AAJ	
PennDOT Engineering District:	6		Checked By:	JDN	
			Agency/Company Name:	Pennoni	
Intersection & Approach Description:	Oak Street and Springfield Rd - WBR				
Analysis Period:	2022 Build		Number of Approach Lanes:	1	
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided	
Intersection Control:	Signalized		Type of Analysis Left or Right-Turn Lane Analysis?: Right Turn Lane		
Posted Speed Limit (MPH):	35				
Type of Terrain:	Rolling				

VOLUME CALCULATIONS																																						
Left Turn Lane Volume Calculations																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Movement</th> <th>Include?</th> <th>Volume</th> <th>% Trucks</th> <th>PCEV</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Advancing</td> <td>Left</td> <td>Yes</td> <td>20.0%</td> <td>N/A</td> <td rowspan="3" style="vertical-align: middle;"> Advancing Volume: N/A Opposing Volume: N/A Left Turn Volume: N/A </td> </tr> <tr> <td>Through</td> <td>-</td> <td>20.0%</td> <td>N/A</td> </tr> <tr> <td>Right</td> <td>Yes</td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td rowspan="3">Opposing</td> <td>Left</td> <td>Yes</td> <td>0.0%</td> <td>N/A</td> </tr> <tr> <td>Through</td> <td>-</td> <td>20.0%</td> <td>N/A</td> </tr> <tr> <td>Right</td> <td>Yes</td> <td>0.0%</td> <td>N/A</td> </tr> </tbody> </table>						Movement	Include?	Volume	% Trucks	PCEV		Advancing	Left	Yes	20.0%	N/A	Advancing Volume: N/A Opposing Volume: N/A Left Turn Volume: N/A	Through	-	20.0%	N/A	Right	Yes	0.0%	N/A	Opposing	Left	Yes	0.0%	N/A	Through	-	20.0%	N/A	Right	Yes	0.0%	N/A
Movement	Include?	Volume	% Trucks	PCEV																																		
Advancing	Left	Yes	20.0%	N/A	Advancing Volume: N/A Opposing Volume: N/A Left Turn Volume: N/A																																	
	Through	-	20.0%	N/A																																		
	Right	Yes	0.0%	N/A																																		
Opposing	Left	Yes	0.0%	N/A																																		
	Through	-	20.0%	N/A																																		
	Right	Yes	0.0%	N/A																																		
% Left Turns in Advancing Volume: N/A																																						
Right Turn Lane Volume Calculations																																						
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Movement	Include?	Volume	% Trucks	PCEV																																		
Advancing	Left	Yes	56	0.0%	Advancing Volume: 769 Right Turn Volume: 186																																	
	Through	-	490	5.0%																																		
	Right	-	161	10.0%																																		

TURN LANE WARRANT FINDINGS					
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings		
Applicable Warrant Figure: N/A			Applicable Warrant Figure: Figure 9		
Warrant Met?: N/A			Warrant Met?: Yes		

TURN LANE LENGTH CALCULATIONS																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Intersection Control:</td> <td colspan="2">Signalized</td> <td colspan="3"></td> </tr> <tr> <td>Design Hour Volume of Turning Lane:</td> <td colspan="2">186</td> <td colspan="3"></td> </tr> <tr> <td>Cycles Per Hour (Assumed):</td> <td colspan="2">Known</td> <td colspan="3"></td> </tr> <tr> <td>Cycles Per Hour (If Known):</td> <td colspan="2">40</td> <td colspan="3"> Average # of Vehicles/Cycle: 5.0 </td> </tr> </tbody> </table>						Intersection Control:	Signalized					Design Hour Volume of Turning Lane:	186					Cycles Per Hour (Assumed):	Known					Cycles Per Hour (If Known):	40		Average # of Vehicles/Cycle: 5.0		
Intersection Control:	Signalized																												
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Cycles Per Hour (Assumed):	Known																												
Cycles Per Hour (If Known):	40		Average # of Vehicles/Cycle: 5.0																										
PennDOT Publication 46, Exhibit 11-6																													
Type of Traffic Control	Speed (MPH)																												
	25-35		40-45		50-60																								
	Turn Demand Volume																												
	High	Low	High	Low	High	Low																							
Signalized	A	A	B or C	B or C	B or C																								
Unsignalized	A	A	C	B	B or C																								
Right Turn Lane Storage Length, Condition A: 200 Feet																													
Condition B: N/A Feet																													
Condition C: N/A Feet																													
Required Right Turn Lane Storage Length: 200 Feet																													
Additional Findings: N/A																													
Additional Comments / Justifications:																													

**Figure 9. Warrant for right turn lanes on two-lane roadways
(40 mph or lower speeds, unsignalized and signalized intersections)**



APPENDIX L

BUILD CAPACITY ANALYSIS AND QUEUE WORKSHEETS

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Build 2022
AM Peak

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	620	9	8	610	0	5	0	3	8	2	27
Future Volume (vph)	0	620	9	8	610	0	5	0	3	8	2	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	11	11	10	10	10	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99			0.98		
Frt		0.998							0.850		0.901	
Flt Protected					0.999		0.950				0.989	
Satd. Flow (prot)	0	1687	0	0	1639	0	1596	0	1074	0	1735	0
Flt Permitted					0.994						0.989	
Satd. Flow (perm)	0	1687	0	0	1630	0	1666	0	1074	0	1735	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)	2							35			27	
Link Speed (mph)	35			35			20			20		
Link Distance (ft)	555			352			184			157		
Travel Time (s)	10.8			6.9			6.3			5.4		
Confl. Peds. (#/hr)						6					6	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	3%	0%	12%	6%	0%	0%	0%	33%	12%	0%	0%
Parking (#/hr)			0							0		
Adj. Flow (vph)	0	626	9	8	616	0	5	0	3	8	2	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	635	0	0	624	0	5	0	3	0	37	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	0			0			10			10		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.17	1.17	1.17	0.91	0.91	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0		1		1	1	1	
Detector Template			Left						Left			
Leading Detector (ft)	0		20	0		35		35	20		35	
Trailing Detector (ft)	0		0	0		-5		-5	0		-5	
Detector 1 Position(ft)	0		0	0		-5		-5	0		-5	
Detector 1 Size(ft)	6		20	6		40		40	20		40	
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	NA		Perm	NA		Perm		Perm	Perm	NA		
Protected Phases	2			6						4		
Permitted Phases			6			8		8	4			
Detector Phase	2		6	6		8		8	4	4		
Switch Phase												
Minimum Initial (s)	32.0		32.0	32.0		5.0		5.0	5.0	5.0	5.0	

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Build 2022
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	37.0			37.0	37.0		10.0		10.0	10.0		10.0
Total Split (s)		37.0		37.0	37.0		25.0		25.0	25.0		25.0
Total Split (%)	59.7%		59.7%	59.7%		40.3%		40.3%	40.3%	40.3%		40.3%
Maximum Green (s)	32.0		32.0	32.0		20.0		20.0	20.0	20.0		20.0
Yellow Time (s)	3.0		3.0	3.0		3.0		3.0	3.0	3.0		3.0
All-Red Time (s)	2.0		2.0	2.0		2.0		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)	4.0			4.0		4.0		4.0		4.0		4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0		2.0	2.0		2.0		2.0	2.0	2.0		2.0
Recall Mode	Max		Max	Max		None		None	None	None		None
Act Effect Green (s)	44.1			44.1		6.4		6.4		6.4		6.4
Actuated g/C Ratio	0.88			0.88		0.13		0.13		0.13		0.13
v/c Ratio	0.43			0.44		0.02		0.02		0.15		
Control Delay	3.4			3.5		18.2		0.3		11.9		
Queue Delay	0.0			0.0		0.0		0.0		0.0		
Total Delay	3.4			3.6		18.2		0.3		11.9		
LOS	A			A		B		A		B		
Approach Delay	3.4			3.6			11.5			11.9		
Approach LOS	A			A		B			B			

Intersection Summary

Area Type: Other

Cycle Length: 62

Actuated Cycle Length: 50.4

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 3.8

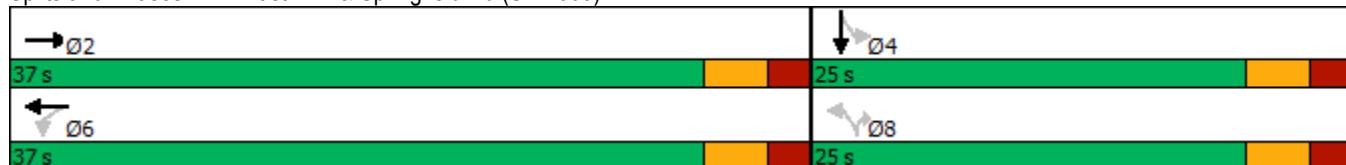
Intersection LOS: A

Intersection Capacity Utilization 56.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Austin Dr & Springfield Rd (SR 2009)

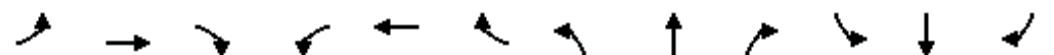


HCM 6th Edition methodology does not support Non-NEMA phasing.

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022
AM Peak

	↑	→	↓	↗	↖	↙	↖	↑	↗	↙	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	427	133	56	490	161	100	185	1	64	155	27
Future Volume (vph)	72	427	133	56	490	161	100	185	1	64	155	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	11	11	11	11	11	11	10	10	10
Grade (%)	-4%				4%			-4%			-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00				1.00			1.00		1.00	
Frt		0.972				0.969					0.985	
Flt Protected		0.994				0.996			0.983		0.987	
Satd. Flow (prot)	0	1925	0	0	1549	0	0	1648	0	0	1659	0
Flt Permitted		0.876				0.922			0.812		0.867	
Satd. Flow (perm)	0	1697	0	0	1434	0	0	1361	0	0	1458	0
Right Turn on Red			No			No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		352			391			332			125	
Travel Time (s)		6.9			7.6			9.1			3.4	
Confl. Peds. (#/hr)	1		1	1		1	2				2	
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%	4%	6%	0%	5%	10%	13%	2%	0%	0%	1%	0%
Parking (#/hr)		0							0		0	
Adj. Flow (vph)	74	440	137	58	505	166	103	191	1	66	160	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	651	0	0	729	0	0	295	0	0	254	0
Enter Blocked Intersection	Yes	No	No									
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		24			16			35			16	
Two way Left Turn Lane												
Headway Factor	0.89	0.89	0.89	1.15	1.15	1.15	1.09	1.09	1.09	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	25.0		25.0	25.0	
Total Split (%)	58.3%	58.3%		58.3%	58.3%		41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	30.0	30.0		30.0	30.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		31.0			31.0			21.0			21.0	
Actuated g/C Ratio		0.52			0.52			0.35			0.35	
v/c Ratio		0.74			0.99			0.62			0.50	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		18.1			47.6			23.0			19.5	
Queue Delay		4.5			0.0			0.0			0.0	
Total Delay		22.6			47.6			23.0			19.5	
LOS		C			D			C			B	
Approach Delay		22.6			47.6			23.0			19.5	
Approach LOS		C			D			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 31.7

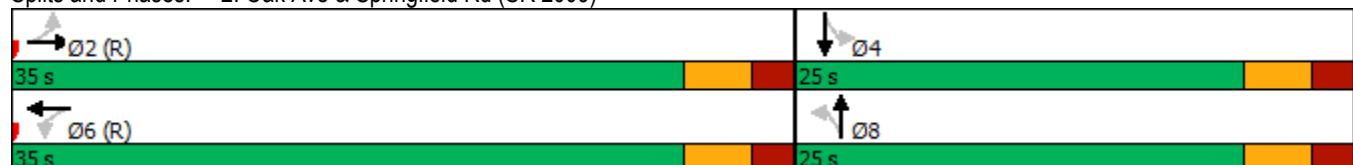
Intersection LOS: C

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15

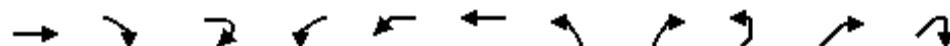
Splits and Phases: 2: Oak Ave & Springfield Rd (SR 2009)



HCM 6th Signalized Intersection Summary
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022
AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	427	133	56	490	161	100	185	1	64	155	27
Future Volume (veh/h)	72	427	133	56	490	161	100	185	1	64	155	27
Initial Q (Q _b), 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	0.90	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1968	1968	1968	1641	1641	1641	1921	1921	1921	1972	1972	1972
Adj Flow Rate, veh/h	74	440	137	58	505	166	103	191	1	66	160	28
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, %	4	4	4	5	5	5	2	2	2	1	1	1
Cap, veh/h	117	514	150	101	545	172	232	392	2	181	402	63
Arrive On Green	0.50	0.52	0.50	0.50	0.52	0.50	0.33	0.35	0.35	0.33	0.35	0.33
Sat Flow, veh/h	97	995	291	70	1056	332	433	1119	5	301	1150	180
Grp Volume(v), veh/h	651	0	0	729	0	0	295	0	0	254	0	0
Grp Sat Flow(s), veh/h/ln	1383	0	0	1458	0	0	1557	0	0	1631	0	0
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	25.8	0.0	0.0	30.0	0.0	0.0	8.5	0.0	0.0	6.8	0.0	0.0
Prop In Lane	0.11		0.21	0.08		0.23	0.35		0.00	0.26		0.11
Lane Grp Cap(c), veh/h	758	0	0	794	0	0	600	0	0	619	0	0
V/C Ratio(X)	0.86	0.00	0.00	0.92	0.00	0.00	0.49	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	758	0	0	794	0	0	600	0	0	619	0	0
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	14.0	0.0	0.0	15.5	0.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	12.1	0.0	0.0	17.3	0.0	0.0	2.9	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	8.5	0.0	0.0	11.5	0.0	0.0	3.5	0.0	0.0	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.6	0.0	0.0	31.4	0.0	0.0	18.4	0.0	0.0	17.0	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h	651			729			295			254		
Approach Delay, s/veh	24.6			31.4			18.4			17.0		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	35.0		25.0		35.0		25.0					
Change Period (Y+R _c), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		20.0		30.0		20.0					
Max Q Clear Time (g_c+l1), s	0.0		0.0		0.0		0.0					
Green Ext Time (p_c), s	0.0		0.0		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			25.2									
HCM 6th LOS			C									



Lane Group	EBT	EBR	EBR2	WBL2	WBL	WBT	NBL	NBR	NEL	NER	NER2
Lane Configurations											
Traffic Volume (vph)	495	5	1	11	11	690	17	9	0	12	5
Future Volume (vph)	495	5	1	11	11	690	17	9	0	12	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	12	11	12	11	11	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor											
Frt	0.998						0.953		0.865		
Flt Protected							0.998	0.968			
Satd. Flow (prot)	1687	0	0	0	0	1672	1661	0	1263	0	0
Flt Permitted							0.998	0.968			
Satd. Flow (perm)	1687	0	0	0	0	1672	1661	0	1263	0	0
Link Speed (mph)	35					35	30		20		
Link Distance (ft)	384					185	498		604		
Travel Time (s)	7.5					3.6	11.3		20.6		
Confl. Peds. (#/hr)									2		
Confl. Bikes (#/hr)					1						
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
Heavy Vehicles (%)	3%	0%	0%	0%	0%	4%	0%	0%	0%	8%	60%
Adj. Flow (vph)	505	5	1	11	11	704	17	9	0	12	5
Shared Lane Traffic (%)											
Lane Group Flow (vph)	511	0	0	0	0	726	26	0	17	0	0
Enter Blocked Intersection	2 veh	No	No	No	No	2 veh	1 veh	No	No	1 veh	1 veh
Lane Alignment	Left	Right	Right	Left	Left	Left	Left	Right	Left	Right	Right
Median Width(ft)	0					0	12		12		
Link Offset(ft)	0					0	60		10		
Crosswalk Width(ft)	16					16	16		16		
Two way Left Turn Lane											
Headway Factor	1.12	1.07	1.12	1.07	1.12	1.12	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)		9	9	15	15		15	9	15	9	9
Sign Control	Free					Free	Stop		Stop		
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	74.4%					ICU Level of Service D					
Analysis Period (min)	15										

Lanes, Volumes, Timings

Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak

Lane Group	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	14	21	475	1	572	27	4	7	4	1	5	1
Future Volume (vph)	14	21	475	1	572	27	4	7	4	1	5	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	15	15	15	15	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	0	1921	0	1866	0	0	0	1553	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	0	1810	0	1866	0	0	0	1380	0	0	0
Right Turn on Red					No			Yes				Yes
Satd. Flow (RTOR)						1			5			
Link Speed (mph)					35	35			20			
Link Distance (ft)					256	605			483			
Travel Time (s)					5.0	11.8			16.5			
Confl. Peds. (#/hr)	5	4				5	4	4		4		4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	3%	0%	5%	11%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	15	22	495	1	596	28	4	7	4	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	533	0	628	0	0	0	17	0	0	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Left	Right	Left	Right	Right	Left	Left	Right	Right	Left
Median Width(ft)					0	0			0			
Link Offset(ft)					10	10			0			
Crosswalk Width(ft)					16	16			16			
Two way Left Turn Lane												
Headway Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	15		9		9	9	15		9	9	15
Number of Detectors	1	1	0		0			1	1			1
Detector Template	Left	Left						Left				Left
Leading Detector (ft)	20	20	0		0			20	45			20
Trailing Detector (ft)	0	0	0		0			0	-5			0
Detector 1 Position(ft)	0	0	0		0			0	-5			0
Detector 1 Size(ft)	20	20	6		6			20	50			20
Detector 1 Type	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
Detector 1 Queue (s)	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
Turn Type	Perm	Perm	NA		NA			Perm	NA			Perm
Protected Phases			2		6				8			
Permitted Phases	2	2						8				4
Detector Phase	2	2	2		6			8	8			4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0			5.0	5.0			5.0
Minimum Split (s)	10.0	10.0	10.0		10.0			10.0	10.0			10.0



Lane Group	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	148	0	125
Future Volume (vph)	148	0	125
Ideal Flow (vphpl)	1800	1800	1800
Lane Width (ft)	10	10	10
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor	0.99		
Frt	0.938		
Flt Protected	0.974		
Satd. Flow (prot)	0	1443	0
Flt Permitted	0.821		
Satd. Flow (perm)	0	1212	0
Right Turn on Red		No	
Satd. Flow (RTOR)			
Link Speed (mph)	20		
Link Distance (ft)	324		
Travel Time (s)	11.0		
Confl. Peds. (#/hr)		4	
Peak Hour Factor	0.96	0.96	0.96
Heavy Vehicles (%)	7%	0%	3%
Adj. Flow (vph)	154	0	130
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0	285	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)	0		
Link Offset(ft)	25		
Crosswalk Width(ft)	30		
Two way Left Turn Lane			
Headway Factor	1.17	1.17	1.17
Turning Speed (mph)	15		9
Number of Detectors	1	1	
Detector Template	Left		
Leading Detector (ft)	20	45	
Trailing Detector (ft)	0	-5	
Detector 1 Position(ft)	0	-5	
Detector 1 Size(ft)	20	50	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Turn Type	Perm	NA	
Protected Phases		4	
Permitted Phases	4		
Detector Phase	4	4	
Switch Phase			
Minimum Initial (s)	5.0	5.0	
Minimum Split (s)	10.0	10.0	

Lanes, Volumes, Timings

Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak



Lane Group	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Total Split (s)	35.0	35.0	35.0		35.0			25.0	25.0			25.0
Total Split (%)	58.3%	58.3%	58.3%		58.3%			41.7%	41.7%			41.7%
Maximum Green (s)	30.0	30.0	30.0		30.0			20.0	20.0			20.0
Yellow Time (s)	3.0	3.0	3.0		3.0			3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0		2.0			2.0	2.0			2.0
Lost Time Adjust (s)				-1.0		-1.0			-1.0			
Total Lost Time (s)				4.0		4.0			4.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2	0.2		0.2			0.2	0.2			0.2
Recall Mode	Max	Max	Max		Max			None	None			None
Act Effect Green (s)			31.2		31.2							8.8
Actuated g/C Ratio			0.56		0.56							0.16
v/c Ratio			0.52		0.60							0.08
Control Delay			10.9		12.1							16.2
Queue Delay			0.0		0.0							0.0
Total Delay			10.9		12.1							16.2
LOS			B		B							B
Approach Delay			10.9		12.1							16.2
Approach LOS			B		B							B

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 55.3

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 16.6

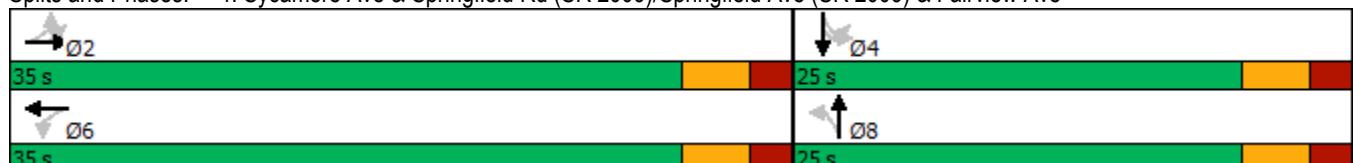
Intersection LOS: B

Intersection Capacity Utilization 87.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave





Lane Group	SBL	SBT	SBR
Total Split (s)	25.0	25.0	
Total Split (%)	41.7%	41.7%	
Maximum Green (s)	20.0	20.0	
Yellow Time (s)	3.0	3.0	
All-Red Time (s)	2.0	2.0	
Lost Time Adjust (s)	-1.0		
Total Lost Time (s)	4.0		
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	0.2	0.2	
Recall Mode	None	None	
Act Effect Green (s)	16.0		
Actuated g/C Ratio	0.29		
v/c Ratio	0.81		
Control Delay	37.4		
Queue Delay	0.0		
Total Delay	37.4		
LOS	D		
Approach Delay	37.4		
Approach LOS	D		
Intersection Summary			

HCM 6th Edition methodology does not support more than 4 approaches.

Lanes, Volumes, Timings
5: Oak Ave & Wyncliffe Ave

Build 2022
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	39	15	45	9	165	6	1	267	9
Future Volume (vph)	0	0	0	39	15	45	9	165	6	1	267	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.939			0.995			0.996
Flt Protected						0.981			0.998			
Satd. Flow (prot)	0	0	0	0	1658	0	0	1686	0	0	1759	0
Flt Permitted						0.981			0.998			
Satd. Flow (perm)	0	0	0	0	1658	0	0	1686	0	0	1759	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		262			804			362			552	
Travel Time (s)		7.1			21.9			9.9			15.1	
Confl. Peds. (#/hr)				1		6	1					1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	11%	6%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	44	17	51	10	185	7	1	300	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	112	0	0	202	0	0	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	30.9%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 9.6
Intersection LOS A

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	39	15	45	9	165	6	1	267	9
Future Vol, veh/h	0	0	0	39	15	45	9	165	6	1	267	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	11	6	0	0	2	0
Mvmt Flow	0	0	0	44	17	51	10	185	7	1	300	10
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0
Approach												
				WB			NB			SB		
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left					NB					WB		
Conflicting Lanes Left					1			0		1		
Conflicting Approach Right					SB			WB				
Conflicting Lanes Right					1			1		0		
HCM Control Delay					8.8			9.4			10.1	
HCM LOS					A			A			B	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	5%	39%	0%
Vol Thru, %	92%	15%	96%
Vol Right, %	3%	45%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	180	99	277
LT Vol	9	39	1
Through Vol	165	15	267
RT Vol	6	45	9
Lane Flow Rate	202	111	311
Geometry Grp	1	1	1
Degree of Util (X)	0.263	0.15	0.379
Departure Headway (Hd)	4.683	4.852	4.386
Convergence, Y/N	Yes	Yes	Yes
Cap	767	737	822
Service Time	2.714	2.89	2.413
HCM Lane V/C Ratio	0.263	0.151	0.378
HCM Control Delay	9.4	8.8	10.1
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.5	1.8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	13	4	93	0	4	65
Future Volume (vph)	13	4	93	0	4	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966					
Flt Protected	0.964					0.997
Satd. Flow (prot)	1676	0	1600	0	0	1600
Flt Permitted	0.964					0.997
Satd. Flow (perm)	1676	0	1600	0	0	1600
Link Speed (mph)	25		25			25
Link Distance (ft)	311		153			433
Travel Time (s)	8.5		4.2			11.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	15	5	106	0	5	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	106	0	0	79
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	17.1%					
Analysis Period (min)	15					

Intersection

Intersection Delay, s/veh 7.6
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	4	93	0	4	65
Future Vol, veh/h	13	4	93	0	4	65
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	15	5	106	0	5	74
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB				WB	
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.4		7.7		7.4	
HCM LOS	A		A		A	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	76%	6%
Vol Thru, %	100%	0%	94%
Vol Right, %	0%	24%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	93	17	69
LT Vol	0	13	4
Through Vol	93	0	65
RT Vol	0	4	0
Lane Flow Rate	106	19	78
Geometry Grp	1	1	1
Degree of Util (X)	0.12	0.023	0.088
Departure Headway (Hd)	4.077	4.228	4.024
Convergence, Y/N	Yes	Yes	Yes
Cap	878	835	888
Service Time	2.105	2.311	2.058
HCM Lane V/C Ratio	0.121	0.023	0.088
HCM Control Delay	7.7	7.4	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.1	0.3

Lanes, Volumes, Timings
7: Sycamore Ave & Wyncliffe Ave

Build 2022
AM Peak

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	7	9	1	23	21	47	51	6	6	51	12
Future Volume (vph)	6	7	9	1	23	21	47	51	6	6	51	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.936			0.992			0.976	
Flt Protected		0.986			0.999			0.978			0.996	
Satd. Flow (prot)	0	1679	0	0	1633	0	0	1576	0	0	1462	0
Flt Permitted		0.986			0.999			0.978			0.996	
Satd. Flow (perm)	0	1679	0	0	1633	0	0	1576	0	0	1462	0
Link Speed (mph)		25			25			20			20	
Link Distance (ft)		463			400			433			329	
Travel Time (s)		12.6			10.9			14.8			11.2	
Confl. Peds. (#/hr)	3		4	4		3	3		2	2		3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	0%	7%	0%	0%	8%	33%
Adj. Flow (vph)	7	8	10	1	26	24	53	58	7	7	58	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	51	0	0	118	0	0	79	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	25.4%											
Analysis Period (min)	15											
ICU Level of Service	A											

Intersection

Intersection Delay, s/veh 7.6

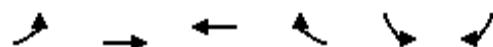
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	7	9	1	23	21	47	51	6	6	51	12
Future Vol, veh/h	6	7	9	1	23	21	47	51	6	6	51	12
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	6	0	0	7	0	0	8	33
Mvmt Flow	7	8	10	1	26	24	53	58	7	7	58	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach												
Opposing Approach	WB			EB			NB			SB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.3			7.3			7.9			7.5		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	45%	27%	2%	9%
Vol Thru, %	49%	32%	51%	74%
Vol Right, %	6%	41%	47%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	22	45	69
LT Vol	47	6	1	6
Through Vol	51	7	23	51
RT Vol	6	9	21	12
Lane Flow Rate	118	25	51	78
Geometry Grp	1	1	1	1
Degree of Util (X)	0.136	0.029	0.057	0.088
Departure Headway (Hd)	4.147	4.193	3.982	4.034
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	859	859	883	880
Service Time	2.2	2.193	2.081	2.099
HCM Lane V/C Ratio	0.137	0.029	0.058	0.089
HCM Control Delay	7.9	7.3	7.3	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.2	0.3

Lanes, Volumes, Timings
8: Springfield Rd (SR 2009) & Bus Exit Dwy

Build 2022
AM Peak

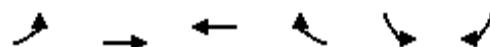


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	
Traffic Volume (vph)	0	492	703	0	4	4
Future Volume (vph)	0	492	703	0	4	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	1765	1680	0	819	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	1765	1680	0	819	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		391	384		147	
Travel Time (s)		7.6	7.5		3.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	5%	0%	100%	100%
Adj. Flow (vph)	0	535	764	0	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	535	764	0	8	0
Enter Blocked Intersection	No	No	No	No	Yes	Yes
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.10	1.10	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.1%				ICU Level of Service A	
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		Y	
Traffic Vol, veh/h	0	492	703	0	4	4
Future Vol, veh/h	0	492	703	0	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	5	0	100	100
Mvmt Flow	0	535	764	0	4	4
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	1299	764
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	-	-	7.4	7.2
Critical Hdwy Stg 1	-	-	-	-	6.4	-
Critical Hdwy Stg 2	-	-	-	-	6.4	-
Follow-up Hdwy	-	-	-	-	4.4	4.2
Pot Cap-1 Maneuver	0	-	-	0	113	281
Stage 1	0	-	-	0	324	-
Stage 2	0	-	-	0	431	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	113	281
Mov Cap-2 Maneuver	-	-	-	-	113	-
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	431	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	28.6			
HCM LOS			D			
Minor Lane/Major Mvmt	EBT	WBT	SBLn1			
Capacity (veh/h)	-	-	161			
HCM Lane V/C Ratio	-	-	0.054			
HCM Control Delay (s)	-	-	28.6			
HCM Lane LOS	-	-	D			
HCM 95th %tile Q(veh)	-	-	0.2			

Lanes, Volumes, Timings
9: Springfield Rd (SR 2009) & Bus Enter Dwy

Build 2022
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	492	703	4	0	0
Future Volume (vph)	4	492	703	4	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.999				
Flt Protected						
Satd. Flow (prot)	0	1752	1737	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1752	1737	0	0	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		185	256		182	
Travel Time (s)		3.6	5.0		4.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	100%	2%	3%	100%	0%	0%
Adj. Flow (vph)	4	535	764	4	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	539	768	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 42.6% ICU Level of Service A

Analysis Period (min) 15



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑		↓	↑
Traffic Volume (vph)	0	0	185	232	66	246
Future Volume (vph)	0	0	185	232	66	246
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%		0%		-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.925			
Flt Protected						0.989
Satd. Flow (prot)	0	0	1622	0	0	1810
Flt Permitted						0.989
Satd. Flow (perm)	0	0	1622	0	0	1810
Link Speed (mph)	30		25			25
Link Distance (ft)	261		125			362
Travel Time (s)	5.9		3.4			9.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	6%	0%	0%	1%
Adj. Flow (vph)	0	0	201	252	72	267
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	453	0	0	339
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.5%				ICU Level of Service A	
Analysis Period (min)	15					



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	197	0	37	78	0
Future Volume (vph)	56	197	0	37	78	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.895					
Flt Protected	0.989					
Satd. Flow (prot)	1593	0	0	1579	1714	0
Flt Permitted	0.989					
Satd. Flow (perm)	1593	0	0	1579	1714	0
Link Speed (mph)	30			25	20	
Link Distance (ft)	382			324	153	
Travel Time (s)	8.7			8.8	5.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	14%	5%	0%
Adj. Flow (vph)	61	214	0	40	85	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	275	0	0	40	85	0
Enter Blocked Intersection	Yes	1 veh	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 27.1% ICU Level of Service A

Analysis Period (min) 15

Intersection									
Int Delay, s/veh	7.1								
Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	W			↑	↑				
Traffic Vol, veh/h	56	197	0	37	78	0			
Future Vol, veh/h	56	197	0	37	78	0			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Stop	Stop	Free	Free	Free	Free			
RT Channelized	-	None	-	None	-	None			
Storage Length	0	-	-	-	-	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	92	92	92	92	92	92			
Heavy Vehicles, %	0	0	0	14	5	0			
Mvmt Flow	61	214	0	40	85	0			
Major/Minor	Minor2	Major1		Major2					
Conflicting Flow All	125	85	-	0	-	0			
Stage 1	85	-	-	-	-	-			
Stage 2	40	-	-	-	-	-			
Critical Hdwy	6.4	6.2	-	-	-	-			
Critical Hdwy Stg 1	5.4	-	-	-	-	-			
Critical Hdwy Stg 2	5.4	-	-	-	-	-			
Follow-up Hdwy	3.5	3.3	-	-	-	-			
Pot Cap-1 Maneuver	875	980	0	-	-	0			
Stage 1	943	-	0	-	-	0			
Stage 2	988	-	0	-	-	0			
Platoon blocked, %				-	-	-			
Mov Cap-1 Maneuver	875	980	-	-	-	-			
Mov Cap-2 Maneuver	875	-	-	-	-	-			
Stage 1	943	-	-	-	-	-			
Stage 2	988	-	-	-	-	-			
Approach	EB	NB		SB					
HCM Control Delay, s	10.3	0		0					
HCM LOS	B								
Minor Lane/Major Mvmt	NBT	EBLn1	SBT						
Capacity (veh/h)	-	955	-						
HCM Lane V/C Ratio	-	0.288	-						
HCM Control Delay (s)	-	10.3	-						
HCM Lane LOS	-	B	-						
HCM 95th %tile Q(veh)	-	1.2	-						

Intersection: 1: Austin Dr & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NB	SB
Directions Served	TR	LT	L	R	LTR
Maximum Queue (ft)	294	198	30	54	58
Average Queue (ft)	79	46	4	5	23
95th Queue (ft)	286	132	22	29	51
Link Distance (ft)	735	269	150	150	92
Upstream Blk Time (%)	2	0			0
Queuing Penalty (veh)	0	0			0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Oak Ave & Springfield Rd (SR 2009)

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	50	282	376	376	80
Average Queue (ft)	33	182	324	157	52
95th Queue (ft)	62	292	421	339	67
Link Distance (ft)		269	323	684	47
Upstream Blk Time (%)		6	37	2	48
Queuing Penalty (veh)		36	260	0	117
Storage Bay Dist (ft)	25				
Storage Blk Time (%)	33	37			
Queuing Penalty (veh)	185	26			

Intersection: 3: Prospect Ave & Church St & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NE
Directions Served	TR>	<LT	<LR	LR>
Maximum Queue (ft)	238	144	72	49
Average Queue (ft)	37	96	23	10
95th Queue (ft)	168	173	59	35
Link Distance (ft)	317	60	422	553
Upstream Blk Time (%)	3	54		
Queuing Penalty (veh)	14	378		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave

Movement	EB	WB	NB	SB
Directions Served	<LTR	LTR>	LTR>	<LTR
Maximum Queue (ft)	233	779	53	217
Average Queue (ft)	141	542	15	116
95th Queue (ft)	249	1152	44	216
Link Distance (ft)	174	889	441	208
Upstream Blk Time (%)	10	39		8
Queuing Penalty (veh)	51	0		21
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak Ave & Wyncliffe Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	49	79	178
Average Queue (ft)	23	42	64
95th Queue (ft)	47	69	172
Link Distance (ft)	747	316	523
Upstream Blk Time (%)		1	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Sycamore Ave & Arch St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	38	55	88
Average Queue (ft)	12	32	35
95th Queue (ft)	35	53	94
Link Distance (ft)	280	91	383
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Sycamore Ave & Wyncliffe Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	18	50	57	63
Average Queue (ft)	7	24	31	31
95th Queue (ft)	19	46	49	55
Link Distance (ft)	384	372	383	278
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Springfield Rd (SR 2009) & Bus Exit Dwy

Movement	EB	WB	SB
Directions Served	T	T	LR
Maximum Queue (ft)	41	347	59
Average Queue (ft)	10	273	11
95th Queue (ft)	106	459	45
Link Distance (ft)	323	317	116
Upstream Blk Time (%)	3	20	
Queuing Penalty (veh)	12	138	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Springfield Rd (SR 2009) & Bus Enter Dwy

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	82	184
Average Queue (ft)	21	128
95th Queue (ft)	71	256
Link Distance (ft)	60	174
Upstream Blk Time (%)	7	16
Queuing Penalty (veh)	35	109
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Oak Ave & Enter Dwy

Movement	NB	SB
Directions Served	TR	LT
Maximum Queue (ft)	34	299
Average Queue (ft)	2	134
95th Queue (ft)	15	295
Link Distance (ft)	47	316
Upstream Blk Time (%)	0	5
Queuing Penalty (veh)	0	15
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Sycamore Ave & Exit Dwy

Movement	EB	SB
Directions Served	LR	T
Maximum Queue (ft)	143	40
Average Queue (ft)	56	7
95th Queue (ft)	142	43
Link Distance (ft)	352	91
Upstream Blk Time (%)	2	3
Queuing Penalty (veh)	0	2
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1401

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Build 2022
PM Peak

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	575	17	21	613	0	35	0	25	7	1	23
Future Volume (vph)	0	575	17	21	613	0	35	0	25	7	1	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	11	11	10	10	10	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00		0.99		0.97		0.98	
Frt		0.996							0.850		0.899	
Flt Protected					0.998		0.950				0.989	
Satd. Flow (prot)	0	1709	0	0	1704	0	1596	0	1373	0	1775	0
Flt Permitted					0.977		0.741				0.989	
Satd. Flow (perm)	0	1709	0	0	1668	0	1231	0	1326	0	1769	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		4							35		24	
Link Speed (mph)		35			35			20			20	
Link Distance (ft)		555			352			184			157	
Travel Time (s)		10.8			6.9			6.3			5.4	
Confl. Peds. (#/hr)	3		10	10		3	8		10	10		6
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%	1%	12%	0%	2%	0%	0%	0%	4%	0%	0%	0%
Parking (#/hr)			0						0			
Adj. Flow (vph)	0	593	18	22	632	0	36	0	26	7	1	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	611	0	0	654	0	36	0	26	0	32	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)	0			0			10			10		
Link Offset(ft)	0			0			0			0		
Crosswalk Width(ft)	16			16			16			16		
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.17	1.17	1.17	0.91	0.91	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0		1		1	1	1	
Detector Template			Left						Left			
Leading Detector (ft)	0		20	0		35		35	20		35	
Trailing Detector (ft)	0		0	0		-5		-5	0		-5	
Detector 1 Position(ft)	0		0	0		-5		-5	0		-5	
Detector 1 Size(ft)	6		20	6		40		40	20		40	
Detector 1 Type	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	NA		Perm	NA		Perm		Perm	Perm	Perm	NA	
Protected Phases	2			6							4	
Permitted Phases			6			8		8		4		
Detector Phase	2		6	6		8		8		4		4
Switch Phase												
Minimum Initial (s)	32.0		32.0	32.0		5.0		5.0	5.0	5.0		

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Build 2022
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	37.0			37.0	37.0		10.0		10.0	10.0		10.0
Total Split (s)		37.0		37.0	37.0		25.0		25.0	25.0		25.0
Total Split (%)	59.7%			59.7%	59.7%		40.3%		40.3%	40.3%		40.3%
Maximum Green (s)	32.0			32.0	32.0		20.0		20.0	20.0		20.0
Yellow Time (s)	3.0			3.0	3.0		3.0		3.0	3.0		3.0
All-Red Time (s)	2.0			2.0	2.0		2.0		2.0	2.0		2.0
Lost Time Adjust (s)	-1.0			-1.0	-1.0		-1.0		-1.0	-1.0		-1.0
Total Lost Time (s)	4.0				4.0		4.0		4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0		2.0	2.0		2.0
Recall Mode	Max			Max	Max		None		None	None		None
Act Effect Green (s)	40.4				40.4		7.3		7.3		6.8	
Actuated g/C Ratio	0.80				0.80		0.15		0.15		0.14	
v/c Ratio	0.44				0.49		0.20		0.12		0.12	
Control Delay	4.6				5.1		20.7		7.6		11.4	
Queue Delay	0.0				0.3		0.0		0.0		0.0	
Total Delay	4.6				5.4		20.7		7.6		11.4	
LOS	A				A		C		A		B	
Approach Delay	4.6				5.4			15.2			11.4	
Approach LOS	A				A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 62

Actuated Cycle Length: 50.3

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 5.6

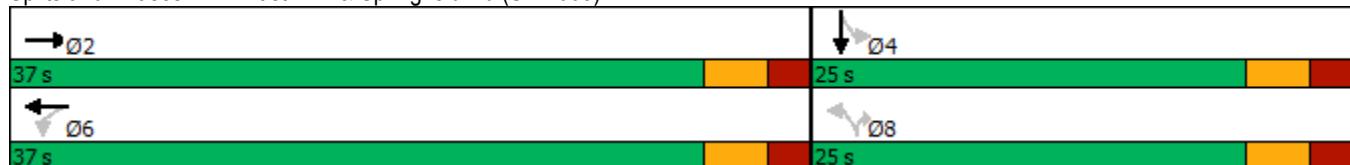
Intersection LOS: A

Intersection Capacity Utilization 67.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Austin Dr & Springfield Rd (SR 2009)



HCM 6th Edition methodology does not support Non-NEMA phasing.

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022
PM Peak

	↑	→	↓	↗	↖	↙	↖	↑	↗	↘	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	376	169	29	461	79	134	214	17	48	178	24
Future Volume (vph)	57	376	169	29	461	79	134	214	17	48	178	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	11	11	11	11	11	11	10	10	10
Grade (%)	-4%				4%			-4%			-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99				1.00			1.00			1.00	
Frt		0.962				0.981			0.994			0.987
Flt Protected		0.995				0.997			0.982			0.991
Satd. Flow (prot)	0	1937	0	0	1638	0	0	1712	0	0	1662	0
Flt Permitted		0.912				0.957			0.767			0.891
Satd. Flow (perm)	0	1775	0	0	1572	0	0	1336	0	0	1494	0
Right Turn on Red			No			No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		352			401			332			134	
Travel Time (s)		6.9			7.8			9.1			3.7	
Confl. Peds. (#/hr)	2		4	4		2	3		1	1		3
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%	3%	1%	14%	1%	0%	3%	0%	0%	0%	1%	4%
Parking (#/hr)			0						0			0
Adj. Flow (vph)	59	388	174	30	475	81	138	221	18	49	184	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	621	0	0	586	0	0	377	0	0	258	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		24			16			30			16	
Two way Left Turn Lane												
Headway Factor	0.89	0.89	0.89	1.15	1.15	1.15	1.09	1.09	1.09	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA										
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	11.0	11.0		11.0	11.0		10.0	10.0		10.0	10.0	
Total Split (s)	35.0	35.0		35.0	35.0		25.0	25.0		25.0	25.0	
Total Split (%)	58.3%	58.3%		58.3%	58.3%		41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	30.0	30.0		30.0	30.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		31.0			31.0			21.0			21.0	
Actuated g/C Ratio		0.52			0.52			0.35			0.35	
v/c Ratio		0.68			0.72			0.81			0.49	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		15.5			17.7			34.2			19.3	
Queue Delay		2.9			0.0			0.0			0.0	
Total Delay		18.4			17.7			34.2			19.3	
LOS		B			B			C			B	
Approach Delay		18.4			17.7			34.2			19.3	
Approach LOS		B			B			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 50

Control Type: Pretimed

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 21.5

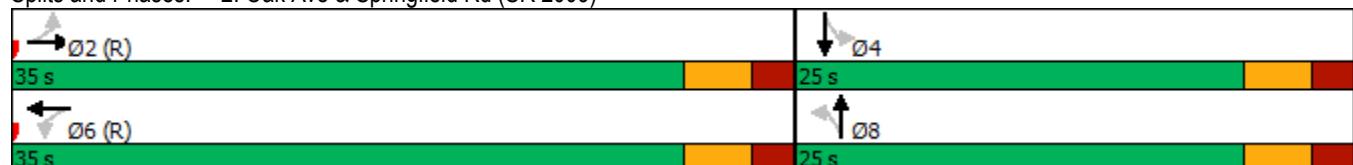
Intersection LOS: C

Intersection Capacity Utilization 97.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Oak Ave & Springfield Rd (SR 2009)



HCM 6th Signalized Intersection Summary
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022
PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	376	169	29	461	79	134	214	17	48	178	24
Future Volume (veh/h)	57	376	169	29	461	79	134	214	17	48	178	24
Initial Q (Q _b), 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	0.90	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1983	1983	1983	1697	1697	1697	1949	1949	1949	1972	1972	1972
Adj Flow Rate, veh/h	59	388	174	30	475	81	138	221	18	49	184	25
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, %	3	3	3	1	1	1	0	0	0	1	1	1
Cap, veh/h	116	556	236	84	701	116	250	347	26	139	459	57
Arrive On Green	0.50	0.52	0.50	0.50	0.52	0.50	0.33	0.35	0.35	0.33	0.35	0.33
Sat Flow, veh/h	97	1076	456	40	1357	224	480	990	74	194	1311	161
Grp Volume(v), veh/h	621	0	0	586	0	0	377	0	0	258	0	0
Grp Sat Flow(s), veh/h/ln	1629	0	0	1621	0	0	1543	0	0	1667	0	0
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	17.3	0.0	0.0	16.2	0.0	0.0	12.3	0.0	0.0	6.9	0.0	0.0
Prop In Lane	0.10		0.28	0.05		0.14	0.37		0.05	0.19		0.10
Lane Grp Cap(c), veh/h	880	0	0	873	0	0	596	0	0	627	0	0
V/C Ratio(X)	0.71	0.00	0.00	0.67	0.00	0.00	0.63	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	880	0	0	873	0	0	596	0	0	627	0	0
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.3	0.0	0.0	11.0	0.0	0.0	16.6	0.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	4.7	0.0	0.0	4.1	0.0	0.0	5.0	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	6.4	0.0	0.0	5.8	0.0	0.0	5.0	0.0	0.0	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.0	0.0	0.0	15.1	0.0	0.0	21.7	0.0	0.0	17.0	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h	621			586			377			258		
Approach Delay, s/veh	16.0			15.1			21.7			17.0		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	35.0		25.0		35.0		25.0					
Change Period (Y+R _c), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		20.0		30.0		20.0					
Max Q Clear Time (g_c+l1), s	0.0		0.0		0.0		0.0					
Green Ext Time (p_c), s	0.0		0.0		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			17.0									
HCM 6th LOS			B									

3: Prospect Ave & Church St & Springfield Rd (SR 2009)



Lane Group	EBT	EBR	EBR2	WBL2	WBL	WBT	NBL	NBR	NEL	NER
Lane Configurations										
Traffic Volume (vph)	454	0	24	6	7	556	17	13	4	15
Future Volume (vph)	454	0	24	6	7	556	17	13	4	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	12	11	12	11	11	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor										
Frt	0.993						0.941		0.892	
Flt Protected							0.999	0.973		0.990
Satd. Flow (prot)	1680	0	0	0	0	1673	1594	0	1590	0
Flt Permitted							0.999	0.973		0.990
Satd. Flow (perm)	1680	0	0	0	0	1673	1594	0	1590	0
Link Speed (mph)	35					35	30		20	
Link Distance (ft)	363					207	498		607	
Travel Time (s)	7.1					4.0	11.3		20.7	
Confl. Peds. (#/hr)		3		3				3		3
Confl. Bikes (#/hr)			1							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	0%	4%	6%	0%	0%	0%
Adj. Flow (vph)	473	0	25	6	7	579	18	14	4	16
Shared Lane Traffic (%)										
Lane Group Flow (vph)	498	0	0	0	0	592	32	0	20	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Left	Left	Left	Left	Right	Left	Right
Median Width(ft)	0					0	12		12	
Link Offset(ft)	0					0	70		10	
Crosswalk Width(ft)	16					16	16		16	
Two way Left Turn Lane										
Headway Factor	1.12	1.07	1.12	1.07	1.12	1.12	1.07	1.07	1.07	1.07
Turning Speed (mph)		9	9	15	15		15	9	15	9
Sign Control	Free					Free	Stop		Stop	
Intersection Summary										
Area Type:	Other									
Control Type:	Unsignalized									
Intersection Capacity Utilization	60.5%						ICU Level of Service B			
Analysis Period (min)	15									

Lanes, Volumes, Timings

Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Traffic Volume (vph)	16	49	426	501	34	12	7	1	1	3	1	64
Future Volume (vph)	16	49	426	501	34	12	7	1	1	3	1	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	15	15	15	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	1.00			0.98			
Frt						0.989			0.955			
Flt Protected					0.993				0.972			
Satd. Flow (prot)	0	0	1862	1914	0	0	0	1537	0	0	0	0
Flt Permitted					0.891				0.866			
Satd. Flow (perm)	0	0	1669	1914	0	0	0	1365	0	0	0	0
Right Turn on Red							Yes			Yes		
Satd. Flow (RTOR)					3				3			
Link Speed (mph)				35	35				20			
Link Distance (ft)				241	605				483			
Travel Time (s)				4.7	11.8				16.5			
Confl. Peds. (#/hr)	5	10			5	10	5		10	6	10	6
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 (%)	6%	2%	6%	2%	3%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	16	50	435	511	35	12	7	1	1	3	1	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	501	558	0	0	0	12	0	0	0	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Left	Right	Right	Left	Left
Median Width(ft)				0	0				0			
Link Offset(ft)				0	20				12			
Crosswalk Width(ft)				16	16				16			
Two way Left Turn Lane												
Headway Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	15			9	9	15		9	9	15	15
Number of Detectors	1	1	0	0			1	1			1	1
Detector Template	Left	Left					Left				Left	Left
Leading Detector (ft)	20	20	0	0			20	45			20	20
Trailing Detector (ft)	0	0	0	0			0	-5			0	0
Detector 1 Position(ft)	0	0	0	0			0	-5			0	0
Detector 1 Size(ft)	20	20	6	6			20	50			20	20
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	Perm	NA	NA			Perm	NA			Perm	Perm
Protected Phases			2	6				8				
Permitted Phases	2	2						8			4	4
Detector Phase	2	2	2	6			8	8			4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0			5.0	5.0			5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0			10.0	10.0			10.0	10.0



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	59
Future Volume (vph)	0	59
Ideal Flow (vphpl)	1800	1800
Lane Width (ft)	10	10
Lane Util. Factor	1.00	1.00
Ped Bike Factor	0.98	
Frt	0.936	
Flt Protected	0.974	
Satd. Flow (prot)	1484	0
Flt Permitted	0.829	
Satd. Flow (perm)	1248	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	20	
Link Distance (ft)	334	
Travel Time (s)	11.4	
Confl. Peds. (#/hr)		5
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	0%	4%
Adj. Flow (vph)	0	60
Shared Lane Traffic (%)		
Lane Group Flow (vph)	126	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	0	
Link Offset(ft)	20	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.17	1.17
Turning Speed (mph)		9
Number of Detectors	1	
Detector Template		
Leading Detector (ft)	45	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	50	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	10.0	

Lanes, Volumes, Timings

Build 2022

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBL
Total Split (s)	35.0	35.0	35.0	35.0			25.0	25.0			25.0	25.0
Total Split (%)	58.3%	58.3%	58.3%	58.3%			41.7%	41.7%			41.7%	41.7%
Maximum Green (s)	30.0	30.0	30.0	30.0			20.0	20.0			20.0	20.0
Yellow Time (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0			2.0	2.0			2.0	2.0
Lost Time Adjust (s)				-1.0	-1.0				-1.0			
Total Lost Time (s)				4.0	4.0				4.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2	0.2	0.2			0.2	0.2			0.2	0.2
Recall Mode	Max	Max	Max	Max			None	None			None	None
Act Effect Green (s)			34.8	34.8					7.4			
Actuated g/C Ratio			0.71	0.71					0.15			
v/c Ratio			0.42	0.41					0.06			
Control Delay			6.0	5.6					15.6			
Queue Delay			0.0	0.0					0.0			
Total Delay			6.0	5.6					15.6			
LOS			A	A					B			
Approach Delay			6.0	5.6					15.6			
Approach LOS			A	A					B			

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 48.9

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 8.2

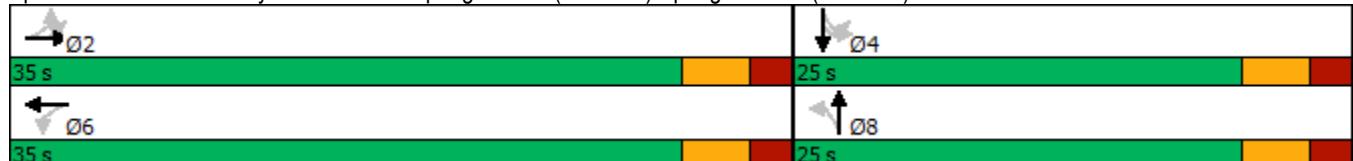
Intersection LOS: A

Intersection Capacity Utilization 77.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave





Lane Group	SBT	SBR
Total Split (s)	25.0	
Total Split (%)	41.7%	
Maximum Green (s)	20.0	
Yellow Time (s)	3.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	-1.0	
Total Lost Time (s)	4.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	0.2	
Recall Mode	None	
Act Effect Green (s)	8.9	
Actuated g/C Ratio	0.18	
v/c Ratio	0.56	
Control Delay	27.6	
Queue Delay	0.0	
Total Delay	27.6	
LOS	C	
Approach Delay	27.6	
Approach LOS	C	
Intersection Summary		

HCM 6th Edition methodology does not support more than 4 approaches.

Lanes, Volumes, Timings
5: Oak Ave & Wyncliffe Ave

Build 2022
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	17	10	24	13	220	43	10	243	8
Future Volume (vph)	0	0	0	17	10	24	13	220	43	10	243	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.937			0.979			0.996
Flt Protected						0.983			0.998			0.998
Satd. Flow (prot)	0	0	0	0	1551	0	0	1745	0	0	1789	0
Flt Permitted						0.983			0.998			0.998
Satd. Flow (perm)	0	0	0	0	1551	0	0	1745	0	0	1789	0
Link Speed (mph)		25				25			25			25
Link Distance (ft)		262				804			352			552
Travel Time (s)		7.1				21.9			9.6			15.1
Confl. Peds. (#/hr)	2		2	2		2	1		1	1		1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	8%	0%	9%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	19	11	26	14	242	47	11	267	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	56	0	0	303	0	0	287	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0				0			0			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Stop			Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	37.2%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 9.5
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	17	10	24	13	220	43	10	243	8
Future Vol, veh/h	0	0	0	17	10	24	13	220	43	10	243	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	8	0	9	0	1	0	0	0	0
Mvmt Flow	0	0	0	19	11	26	14	242	47	11	267	9
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0
Approach												
				WB			NB			SB		
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left					NB					WB		
Conflicting Lanes Left					1			0		1		
Conflicting Approach Right					SB			WB				
Conflicting Lanes Right					1			1		0		
HCM Control Delay					8.5			9.6		9.6		
HCM LOS					A			A		A		

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	5%	33%	4%
Vol Thru, %	80%	20%	93%
Vol Right, %	16%	47%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	276	51	261
LT Vol	13	17	10
Through Vol	220	10	243
RT Vol	43	24	8
Lane Flow Rate	303	56	287
Geometry Grp	1	1	1
Degree of Util (X)	0.358	0.079	0.346
Departure Headway (Hd)	4.254	5.075	4.338
Convergence, Y/N	Yes	Yes	Yes
Cap	846	706	832
Service Time	2.271	3.11	2.355
HCM Lane V/C Ratio	0.358	0.079	0.345
HCM Control Delay	9.6	8.5	9.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.6	0.3	1.6



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	1	80	2	2	76
Future Volume (vph)	8	1	80	2	2	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.988		0.997			
Flt Protected	0.957					0.999
Satd. Flow (prot)	1702	0	1643	0	0	1662
Flt Permitted	0.957					0.999
Satd. Flow (perm)	1702	0	1643	0	0	1662
Link Speed (mph)	25		25			25
Link Distance (ft)	311		153			433
Travel Time (s)	8.5		4.2			11.8
Confl. Peds. (#/hr)	1	2		5	5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%
Adj. Flow (vph)	10	1	95	2	2	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	97	0	0	92
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.6%					ICU Level of Service A
Analysis Period (min)	15					

Intersection

Intersection Delay, s/veh 7.5
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	1	80	2	2	76
Future Vol, veh/h	8	1	80	2	2	76
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	10	1	95	2	2	90
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB			WB		
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.5		7.5		7.5	
HCM LOS	A		A		A	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	89%	3%
Vol Thru, %	98%	0%	97%
Vol Right, %	2%	11%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	82	9	78
LT Vol	0	8	2
Through Vol	80	0	76
RT Vol	2	1	0
Lane Flow Rate	98	11	93
Geometry Grp	1	1	1
Degree of Util (X)	0.109	0.013	0.103
Departure Headway (Hd)	4.009	4.339	3.998
Convergence, Y/N	Yes	Yes	Yes
Cap	894	815	896
Service Time	2.031	2.418	2.022
HCM Lane V/C Ratio	0.11	0.013	0.104
HCM Control Delay	7.5	7.5	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0	0.3

Lanes, Volumes, Timings
7: Sycamore Ave & Wyncliffe Ave

Build 2022
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	16	8	0	27	22	19	51	4	15	62	11
Future Volume (vph)	9	16	8	0	27	22	19	51	4	15	62	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.967				0.940			0.992			0.982
Flt Protected		0.987							0.987			0.992
Satd. Flow (prot)	0	1718	0	0	1692	0	0	1544	0	0	1592	0
Flt Permitted		0.987						0.987				0.992
Satd. Flow (perm)	0	1718	0	0	1692	0	0	1544	0	0	1592	0
Link Speed (mph)		25			25			20			20	
Link Distance (ft)		463			400			433			329	
Travel Time (s)		12.6			10.9			14.8			11.2	
Confl. Peds. (#/hr)	3		4	4		3	7		3	3		7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	20%	2%	0%	0%	2%	11%
Adj. Flow (vph)	10	18	9	0	31	25	22	58	5	17	70	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	56	0	0	85	0	0	100	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	23.5%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 7.7

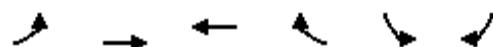
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	16	8	0	27	22	19	51	4	15	62	11
Future Vol, veh/h	9	16	8	0	27	22	19	51	4	15	62	11
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	20	2	0	0	2	11
Mvmt Flow	10	18	9	0	31	25	22	58	5	17	70	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB		SB			NB		
Opposing Lanes	1				1		1			1		
Conflicting Approach Left	SB				NB		EB			WB		
Conflicting Lanes Left	1				1		1			1		
Conflicting Approach Right	NB				SB		WB			EB		
Conflicting Lanes Right	1				1		1			1		
HCM Control Delay	7.5				7.4		8.1			7.7		
HCM LOS	A				A		A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	27%	0%	17%
Vol Thru, %	69%	48%	55%	70%
Vol Right, %	5%	24%	45%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	33	49	88
LT Vol	19	9	0	15
Through Vol	51	16	27	62
RT Vol	4	8	22	11
Lane Flow Rate	84	38	56	100
Geometry Grp	1	1	1	1
Degree of Util (X)	0.105	0.045	0.063	0.113
Departure Headway (Hd)	4.497	4.286	4.089	4.084
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	789	840	881	867
Service Time	2.569	2.287	2.091	2.161
HCM Lane V/C Ratio	0.106	0.045	0.064	0.115
HCM Control Delay	8.1	7.5	7.4	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.1	0.2	0.4

Lanes, Volumes, Timings
8: Springfield Rd (SR 2009) & Bus Exit Only

Build 2022
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	
Traffic Volume (vph)	0	441	565	0	4	4
Future Volume (vph)	0	441	565	0	4	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	1765	1747	0	819	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	1765	1747	0	819	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		401	363		199	
Travel Time (s)		7.8	7.1		4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	1%	0%	100%	100%
Adj. Flow (vph)	0	479	614	0	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	479	614	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.10	1.10	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	41.4%				ICU Level of Service A	
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	441	565	0	4	4
Future Vol, veh/h	0	441	565	0	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	100	100
Mvmt Flow	0	479	614	0	4	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	614
Stage 2	-	-	479
Critical Hdwy	-	-	7.4 7.2
Critical Hdwy Stg 1	-	-	6.4
Critical Hdwy Stg 2	-	-	6.4
Follow-up Hdwy	-	-	4.4 4.2
Pot Cap-1 Maneuver	0	-	0 157 352
Stage 1	0	-	0 390
Stage 2	0	-	0 461
Platoon blocked, %	-	-	
Mov Cap-1 Maneuver	-	-	157 352
Mov Cap-2 Maneuver	-	-	157
Stage 1	-	-	390
Stage 2	-	-	461

Approach EB WB SB

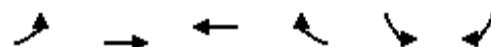
HCM Control Delay, s 0 0 22.3

HCM LOS C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	217
HCM Lane V/C Ratio	-	-	0.04
HCM Control Delay (s)	-	-	22.3
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.1

Lanes, Volumes, Timings
9: Springfield Rd (SR 2009) & Bus Enter Dwy

Build 2022
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	441	565	4	0	0
Future Volume (vph)	4	441	565	4	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.999			
Flt Protected						
Satd. Flow (prot)	0	1751	1769	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1751	1769	0	0	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		207	241		158	
Travel Time (s)		4.0	4.7		3.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	100%	2%	1%	100%	0%	0%
Adj. Flow (vph)	4	479	614	4	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	483	618	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 35.0% ICU Level of Service A

Analysis Period (min) 15



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑		↓	↑
Traffic Volume (vph)	0	0	289	62	17	250
Future Volume (vph)	0	0	289	62	17	250
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%		0%		-5%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.976			
Flt Protected						0.997
Satd. Flow (prot)	0	0	1742	0	0	1839
Flt Permitted						0.997
Satd. Flow (perm)	0	0	1742	0	0	1839
Link Speed (mph)	30		25			25
Link Distance (ft)	246		134			352
Travel Time (s)	5.6		3.7			9.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Adj. Flow (vph)	0	0	314	67	18	272
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	381	0	0	290
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	32.0%				ICU Level of Service A	
Analysis Period (min)	15					



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	65	0	64	84	0
Future Volume (vph)	18	65	0	64	84	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.895					
Flt Protected	0.989					
Satd. Flow (prot)	1593	0	0	1765	1782	0
Flt Permitted	0.989					
Satd. Flow (perm)	1593	0	0	1765	1782	0
Link Speed (mph)	30			25	20	
Link Distance (ft)	359			334	153	
Travel Time (s)	8.2			9.1	5.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Adj. Flow (vph)	20	71	0	70	91	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	91	0	0	70	91	0
Enter Blocked Intersection	Yes	1 veh	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 16.6% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	18	65	0	64	84	0
Future Vol, veh/h	18	65	0	64	84	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	1	0
Mvmt Flow	20	71	0	70	91	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	161	91	-	0	-	0
Stage 1	91	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	835	972	0	-	-	0
Stage 1	938	-	0	-	-	0
Stage 2	958	-	0	-	-	0
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	835	972	-	-	-	-
Mov Cap-2 Maneuver	835	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	9.2	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT			
Capacity (veh/h)	-	939	-			
HCM Lane V/C Ratio	-	0.096	-			
HCM Control Delay (s)	-	9.2	-			
HCM Lane LOS	-	A	-			
HCM 95th %tile Q(veh)	-	0.3	-			

Intersection: 1: Austin Dr & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NB	SB
Directions Served	TR	LT	L	R	LTR
Maximum Queue (ft)	153	254	63	54	53
Average Queue (ft)	59	89	24	20	22
95th Queue (ft)	121	206	54	48	50
Link Distance (ft)	516	271	145	145	90
Upstream Blk Time (%)		0		0	
Queuing Penalty (veh)		1		0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Oak Ave & Springfield Rd (SR 2009)

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	LTR	LTR
Maximum Queue (ft)	50	259	334	294	93
Average Queue (ft)	27	153	192	222	67
95th Queue (ft)	57	247	330	345	85
Link Distance (ft)		271	335	264	56
Upstream Blk Time (%)		0	1	38	41
Queuing Penalty (veh)		2	7	0	104
Storage Bay Dist (ft)	25				
Storage Blk Time (%)	22	32			
Queuing Penalty (veh)	121	18			

Intersection: 3: Prospect Ave & Church St & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NE
Directions Served	TR>	<LT	<LR	LR
Maximum Queue (ft)	140	120	70	39
Average Queue (ft)	13	15	23	11
95th Queue (ft)	81	65	56	32
Link Distance (ft)	304	70	413	571
Upstream Blk Time (%)	0	1		
Queuing Penalty (veh)	0	5		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave

Movement	EB	WB	NB	SB
Directions Served	<LTR	LTR>	LTR>	<LTR
Maximum Queue (ft)	224	157	36	96
Average Queue (ft)	124	62	11	36
95th Queue (ft)	227	126	35	75
Link Distance (ft)	162	533	442	235
Upstream Blk Time (%)	8			
Queuing Penalty (veh)	37			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak Ave & Wyncliffe Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	53	100	117
Average Queue (ft)	23	52	52
95th Queue (ft)	50	81	104
Link Distance (ft)	747	304	523
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Sycamore Ave & Arch St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	29	57	48
Average Queue (ft)	7	31	30
95th Queue (ft)	26	49	46
Link Distance (ft)	280	90	383
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Sycamore Ave & Wyncliffe Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	22	49	54	58
Average Queue (ft)	10	24	30	30
95th Queue (ft)	22	46	51	51
Link Distance (ft)	384	372	383	278
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Springfield Rd (SR 2009) & Bus Exit Only

Movement	EB	WB	SB
Directions Served	T	T	LR
Maximum Queue (ft)	9	95	55
Average Queue (ft)	0	8	12
95th Queue (ft)	9	59	46
Link Distance (ft)	335	304	166
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Springfield Rd (SR 2009) & Bus Enter Dwy

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	88	49
Average Queue (ft)	14	2
95th Queue (ft)	61	21
Link Distance (ft)	70	162
Upstream Blk Time (%)	2	
Queuing Penalty (veh)	10	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Oak Ave & Enter Dwy

Movement	NB	SB
Directions Served	TR	LT
Maximum Queue (ft)	19	274
Average Queue (ft)	1	105
95th Queue (ft)	11	255
Link Distance (ft)	56	304
Upstream Blk Time (%)	0	2
Queuing Penalty (veh)	0	6
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Sycamore Ave & Exit Dwy

Movement	EB
Directions Served	LR
Maximum Queue (ft)	53
Average Queue (ft)	29
95th Queue (ft)	44
Link Distance (ft)	328
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 312

APPENDIX M

BUILD WITH IMPROVEMENTS CAPACITY ANALYSIS AND QUEUE WORKSHEETS

CLIFTON HEIGHTS MIDDLE SCHOOL
CLIFTON HEIGHTS, DELAWARE COUNTY, PENNSYLVANIA

UDSDX19002



Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Build 2022 with Imp
AM Peak

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	620	9	8	610	0	5	0	3	8	2	27
Future Volume (vph)	0	620	9	8	610	0	5	0	3	8	2	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	11	11	10	10	10	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99			0.98		
Frt		0.998							0.850		0.901	
Flt Protected					0.999			0.950			0.989	
Satd. Flow (prot)	0	1687	0	0	1639	0	1596	0	1074	0	1735	0
Flt Permitted					0.994						0.989	
Satd. Flow (perm)	0	1687	0	0	1630	0	1666	0	1074	0	1735	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		2							35		27	
Link Speed (mph)		35			35			20			20	
Link Distance (ft)		702			352			184			157	
Travel Time (s)		13.7			6.9			6.3			5.4	
Confl. Peds. (#/hr)							6				6	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	0%	3%	0%	12%	6%	0%	0%	0%	33%	12%	0%	0%
Parking (#/hr)			0							0		
Adj. Flow (vph)	0	626	9	8	616	0	5	0	3	8	2	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	635	0	0	624	0	5	0	3	0	37	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.17	1.17	1.17	0.91	0.91	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0		1		1	1	1	
Detector Template			Left						Left			
Leading Detector (ft)	0		20	0		35		35	20		35	
Trailing Detector (ft)	0		0	0		-5		-5	0		-5	
Detector 1 Position(ft)	0		0	0		-5		-5	0		-5	
Detector 1 Size(ft)	6		20	6		40		40	20		40	
Detector 1 Type	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	NA		Perm	NA		Perm		Perm	Perm	Perm	NA	
Protected Phases	2			6							4	
Permitted Phases			6			8		8	4			
Detector Phase	2		6	6		8		8	4	4		
Switch Phase												
Minimum Initial (s)	32.0		32.0	32.0		5.0		5.0	5.0	5.0		

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Build 2022 with Imp
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	37.0			37.0	37.0		10.0		10.0	10.0		10.0
Total Split (s)		37.0		37.0	37.0		25.0		25.0	25.0		25.0
Total Split (%)	59.7%			59.7%	59.7%		40.3%		40.3%	40.3%		40.3%
Maximum Green (s)	32.0			32.0	32.0		20.0		20.0	20.0		20.0
Yellow Time (s)	3.0			3.0	3.0		3.0		3.0	3.0		3.0
All-Red Time (s)	2.0			2.0	2.0		2.0		2.0	2.0		2.0
Lost Time Adjust (s)	-1.0			-1.0	-1.0		-1.0		-1.0	-1.0		-1.0
Total Lost Time (s)	4.0				4.0		4.0		4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0		2.0	2.0		2.0
Recall Mode	Max			Max	Max		None		None	None		None
Act Effect Green (s)	44.1				44.1		6.4		6.4			6.4
Actuated g/C Ratio	0.88				0.88		0.13		0.13			0.13
v/c Ratio	0.43				0.44		0.02		0.02			0.15
Control Delay	3.4				3.5		18.2		0.3			11.9
Queue Delay	0.0				0.0		0.0		0.0			0.0
Total Delay	3.4				3.6		18.2		0.3			11.9
LOS	A				A		B		A			B
Approach Delay	3.4				3.6			11.5				11.9
Approach LOS	A				A			B				B

Intersection Summary

Area Type: Other

Cycle Length: 62

Actuated Cycle Length: 50.4

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 3.8

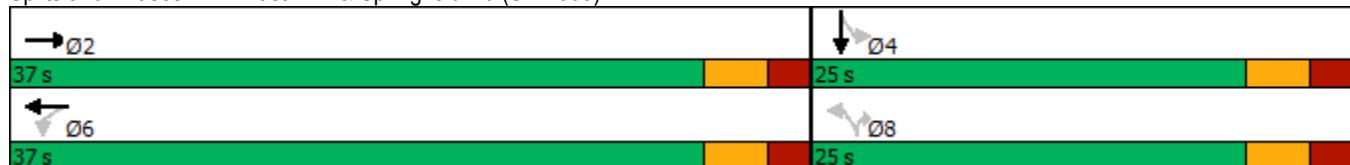
Intersection LOS: A

Intersection Capacity Utilization 56.8%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 1: Austin Dr & Springfield Rd (SR 2009)



HCM 6th Edition methodology does not support Non-NEMA phasing.

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022 with Imp
AM Peak

	↑	→	↓	↗	↖	↙	↖	↗	↑	↗	↖	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↑	↓		↑	↑	↑	↑	↑		↑	↑		
Traffic Volume (vph)	72	427	133	56	490	161	100	185	1	64	155	27	
Future Volume (vph)	72	427	133	56	490	161	100	185	1	64	155	27	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	
Lane Width (ft)	11	12	16	11	11	12	11	11	11	10	10	10	
Grade (%)	-4%				4%				-4%			-5%	
Storage Length (ft)	75		0	75		200	100		0	0		0	
Storage Lanes	1		0	1		1	1		0	1		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor	1.00	1.00			1.00		0.98	1.00				1.00	
Fr _t		0.964				0.850		0.999			0.978		
Flt Protected	0.950			0.950			0.950			0.950		0.950	
Satd. Flow (prot)	1686	1686	0	1620	1624	1363	1492	1738	0	1636	1664	0	
Flt Permitted	0.362			0.303			0.622			0.616			
Satd. Flow (perm)	642	1686	0	516	1624	1334	975	1738	0	1061	1664	0	
Right Turn on Red			No			No			No			No	
Satd. Flow (RTOR)													
Link Speed (mph)		35			35			25			25		
Link Distance (ft)		352			391			688			158		
Travel Time (s)		6.9			7.6			18.8			4.3		
Confl. Peds. (#/hr)	1		1	1		1	2				2		
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%	4%	6%	0%	5%	10%	13%	2%	0%	0%	1%	0%	
Parking (#/hr)			0						0		0		
Adj. Flow (vph)	74	440	137	58	505	166	103	191	1	66	160	28	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	74	577	0	58	505	166	103	192	0	66	188	0	
Enter Blocked Intersection	Yes	No	No										
Lane Alignment	Left	Left	Right										
Median Width(ft)		11			11			11			11		
Link Offset(ft)		0			0			0			0		
Crosswalk Width(ft)		24			16			35			16		
Two way Left Turn Lane													
Headway Factor	1.09	1.05	0.89	1.15	1.15	1.10	1.09	1.09	1.09	1.09	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9	9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA		
Protected Phases		2			6			8			4		
Permitted Phases	2			6		6	8			4			
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0		
Total Split (s)	35.0	35.0		35.0	35.0	35.0	25.0	25.0		25.0	25.0		
Total Split (%)	58.3%	58.3%		58.3%	58.3%	58.3%	41.7%	41.7%		41.7%	41.7%		
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	20.0	20.0		20.0	20.0		
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0		
Lost Time Adjust (s)	0.0	-1.0		0.0	-1.0	0.0	0.0	-1.0		0.0	-1.0		
Total Lost Time (s)	5.0	4.0		5.0	4.0	5.0	5.0	4.0		5.0	4.0		
Lead/Lag													
Lead-Lag Optimize?													

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022 with Imp
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	30.0	31.0		30.0	31.0	30.0	20.0	21.0		20.0	21.0	
Actuated g/C Ratio	0.50	0.52		0.50	0.52	0.50	0.33	0.35		0.33	0.35	
v/c Ratio	0.23	0.66		0.22	0.60	0.25	0.32	0.32		0.19	0.32	
Control Delay	10.9	15.3		11.3	14.0	9.8	18.3	16.1		16.0	16.3	
Queue Delay	0.0	2.1		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	10.9	17.4		11.3	14.0	9.8	18.3	16.1		16.0	16.3	
LOS	B	B		B	B	A	B	B		B	B	
Approach Delay		16.6				12.8			16.9		16.2	
Approach LOS		B				B			B		B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 15.2

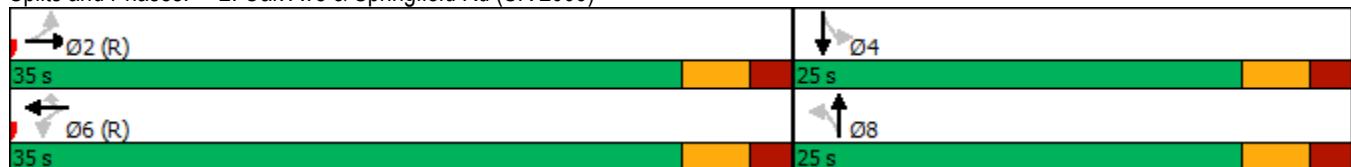
Intersection LOS: B

Intersection Capacity Utilization 67.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Oak Ave & Springfield Rd (SR 2009)



HCM 6th Signalized Intersection Summary
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022 with Imp
AM Peak

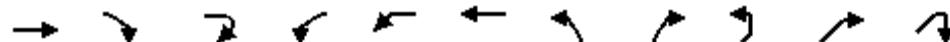
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↑	↑	↑	↑		↑	↑	
Traffic Volume (veh/h)	72	427	133	56	490	161	100	185	1	64	155	27
Future Volume (veh/h)	72	427	133	56	490	161	100	185	1	64	155	27
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1949	1892	1968	1711	1641	1570	1764	1921	1921	1986	1972	1972
Adj Flow Rate, veh/h	74	440	137	58	505	166	103	191	1	66	160	28
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	4	4	0	5	10	13	2	2	0	1	1
Cap, veh/h	360	643	200	310	848	665	421	601	3	456	515	90
Arrive On Green	0.50	0.52	0.50	0.50	0.52	0.50	0.33	0.35	0.35	0.33	0.35	0.33
Sat Flow, veh/h	843	1245	388	807	1641	1329	1188	1718	9	1332	1470	257
Grp Volume(v), veh/h	74	0	577	58	505	166	103	0	192	66	0	188
Grp Sat Flow(s), veh/h/ln	843	0	1633	807	1641	1329	1188	0	1727	1332	0	1728
Q Serve(g_s), s	4.1	0.0	15.9	3.6	12.9	4.3	4.3	0.0	4.9	2.3	0.0	4.8
Cycle Q Clear(g_c), s	17.0	0.0	15.9	19.5	12.9	4.3	9.0	0.0	4.9	7.2	0.0	4.8
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.01	1.00		0.15
Lane Grp Cap(c), veh/h	360	0	844	310	848	665	421	0	604	456	0	605
V/C Ratio(X)	0.21	0.00	0.68	0.19	0.60	0.25	0.24	0.00	0.32	0.14	0.00	0.31
Avail Cap(c_a), veh/h	360	0	844	310	848	665	421	0	604	456	0	605
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(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	10.9	18.9	10.1	8.6	18.3	0.0	14.3	17.7	0.0	14.3
Incr Delay (d2), s/veh	1.3	0.0	4.5	1.3	3.1	0.9	1.4	0.0	1.4	0.7	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.8	0.0	5.5	0.7	4.3	1.2	1.3	0.0	2.0	0.8	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.1	0.0	15.4	20.3	13.2	9.5	19.7	0.0	15.6	18.3	0.0	15.6
LnGrp LOS	B	A	B	C	B	A	B	A	B	B	A	B
Approach Vol, veh/h		651			729			295			254	
Approach Delay, s/veh		15.7			12.9			17.0			16.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+R _c), s		35.0		25.0		35.0		25.0				
Change Period (Y+R _c), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		30.0		20.0		30.0		20.0				
Max Q Clear Time (g_c+l1), s		19.0		9.2		21.5		11.0				
Green Ext Time (p_c), s		0.1		0.1		0.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									

Lanes, Volumes, Timings

Build 2022 with Imp

3: Prospect Ave & Church St & Springfield Rd (SR 2009)

AM Peak



Lane Group	EBT	EBR	EBR2	WBL2	WBL	WBT	NBL	NBR	NEL	NER	NER2
Lane Configurations											
Traffic Volume (vph)	495	5	1	11	11	690	17	9	0	12	5
Future Volume (vph)	495	5	1	11	11	690	17	9	0	12	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	12	11	12	11	11	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor											
Frt	0.998						0.953		0.865		
Flt Protected							0.998	0.968			
Satd. Flow (prot)	1687	0	0	0	0	1672	1661	0	1263	0	0
Flt Permitted							0.998	0.968			
Satd. Flow (perm)	1687	0	0	0	0	1672	1661	0	1263	0	0
Link Speed (mph)	35					35	30		20		
Link Distance (ft)	384					185	498		604		
Travel Time (s)	7.5					3.6	11.3		20.6		
Confl. Peds. (#/hr)									2		
Confl. Bikes (#/hr)					1						
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
Heavy Vehicles (%)	3%	0%	0%	0%	0%	4%	0%	0%	0%	8%	60%
Adj. Flow (vph)	505	5	1	11	11	704	17	9	0	12	5
Shared Lane Traffic (%)											
Lane Group Flow (vph)	511	0	0	0	0	726	26	0	17	0	0
Enter Blocked Intersection	2 veh	No	No	No	No	2 veh	1 veh	No	No	1 veh	1 veh
Lane Alignment	Left	Right	Right	Left	Left	Left	Left	Right	Left	Right	Right
Median Width(ft)	0					0	12		12		
Link Offset(ft)	0					0	60		10		
Crosswalk Width(ft)	16					16	16		16		
Two way Left Turn Lane											
Headway Factor	1.12	1.07	1.12	1.07	1.12	1.12	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)		9	9	15	15		15	9	15	9	9
Sign Control	Free					Free	Stop		Stop		
Intersection Summary											
Area Type:	Other										
Control Type:	Unsignalized										
Intersection Capacity Utilization	74.4%					ICU Level of Service D					
Analysis Period (min)	15										

Lanes, Volumes, Timings

Build 2022 with Imp

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak

Lane Group	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	14	21	475	1	572	27	4	7	4	1	5	1
Future Volume (vph)	14	21	475	1	572	27	4	7	4	1	5	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	15	15	15	15	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	0	1921	0	1866	0	0	0	1553	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	0	1810	0	1866	0	0	0	1380	0	0	0
Right Turn on Red					No			Yes				Yes
Satd. Flow (RTOR)									1			5
Link Speed (mph)					35				35			20
Link Distance (ft)					256				964			483
Travel Time (s)					5.0				18.8			16.5
Confl. Peds. (#/hr)	5	4				5	4	4		4		4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	3%	0%	5%	11%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	15	22	495	1	596	28	4	7	4	1	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	533	0	628	0	0	0	17	0	0	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Left	Right	Left	Right	Right	Left	Left	Right	Right	Left
Median Width(ft)					0				0			
Link Offset(ft)					10				10			0
Crosswalk Width(ft)					16				16			
Two way Left Turn Lane												
Headway Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	15		9		9	9	15		9	9	15
Number of Detectors	1	1	0		0			1	1			1
Detector Template	Left	Left						Left				Left
Leading Detector (ft)	20	20	0		0			20	45			20
Trailing Detector (ft)	0	0	0		0			0	-5			0
Detector 1 Position(ft)	0	0	0		0			0	-5			0
Detector 1 Size(ft)	20	20	6		6			20	50			20
Detector 1 Type	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
Detector 1 Queue (s)	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
Turn Type	Perm	Perm	NA		NA			Perm	NA			Perm
Protected Phases			2		6				8			
Permitted Phases	2	2						8				4
Detector Phase	2	2	2		6			8	8			4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0			5.0	5.0			5.0
Minimum Split (s)	10.0	10.0	10.0		10.0			10.0	10.0			10.0



Lane Group	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	148	0	125
Future Volume (vph)	148	0	125
Ideal Flow (vphpl)	1800	1800	1800
Lane Width (ft)	10	10	10
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor		0.99	
Frt		0.938	
Flt Protected		0.974	
Satd. Flow (prot)	0	1443	0
Flt Permitted		0.821	
Satd. Flow (perm)	0	1212	0
Right Turn on Red		No	
Satd. Flow (RTOR)			
Link Speed (mph)		20	
Link Distance (ft)		324	
Travel Time (s)		11.0	
Confl. Peds. (#/hr)		4	
Peak Hour Factor	0.96	0.96	0.96
Heavy Vehicles (%)	7%	0%	3%
Adj. Flow (vph)	154	0	130
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0	285	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)		0	
Link Offset(ft)		25	
Crosswalk Width(ft)		30	
Two way Left Turn Lane			
Headway Factor	1.17	1.17	1.17
Turning Speed (mph)	15		9
Number of Detectors	1	1	
Detector Template	Left		
Leading Detector (ft)	20	45	
Trailing Detector (ft)	0	-5	
Detector 1 Position(ft)	0	-5	
Detector 1 Size(ft)	20	50	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Turn Type	Perm	NA	
Protected Phases		4	
Permitted Phases		4	
Detector Phase	4	4	
Switch Phase			
Minimum Initial (s)	5.0	5.0	
Minimum Split (s)	10.0	10.0	

Lanes, Volumes, Timings

Build 2022 with Imp

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak



Lane Group	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2
Total Split (s)	35.0	35.0	35.0		35.0			25.0	25.0			25.0
Total Split (%)	58.3%	58.3%	58.3%		58.3%			41.7%	41.7%			41.7%
Maximum Green (s)	30.0	30.0	30.0		30.0			20.0	20.0			20.0
Yellow Time (s)	3.0	3.0	3.0		3.0			3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0		2.0			2.0	2.0			2.0
Lost Time Adjust (s)				-1.0		-1.0			-1.0			
Total Lost Time (s)				4.0		4.0			4.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2	0.2		0.2			0.2	0.2			0.2
Recall Mode	Max	Max	Max		Max			None	None			None
Act Effect Green (s)			31.2		31.2							8.8
Actuated g/C Ratio			0.56		0.56							0.16
v/c Ratio			0.52		0.60							0.08
Control Delay			10.9		12.1							16.2
Queue Delay			0.0		0.0							0.0
Total Delay			10.9		12.1							16.2
LOS			B		B							B
Approach Delay			10.9		12.1							16.2
Approach LOS			B		B							B

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 55.3

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 16.6

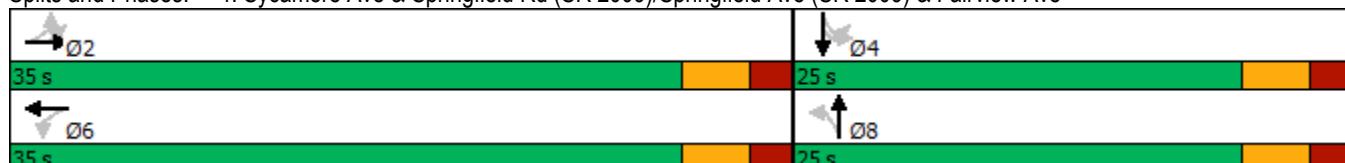
Intersection LOS: B

Intersection Capacity Utilization 87.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave



Lanes, Volumes, Timings

Build 2022 with Imp

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave AM Peak



Lane Group	SBL	SBT	SBR
Total Split (s)	25.0	25.0	
Total Split (%)	41.7%	41.7%	
Maximum Green (s)	20.0	20.0	
Yellow Time (s)	3.0	3.0	
All-Red Time (s)	2.0	2.0	
Lost Time Adjust (s)	-1.0		
Total Lost Time (s)	4.0		
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	0.2	0.2	
Recall Mode	None	None	
Act Effect Green (s)	16.0		
Actuated g/C Ratio	0.29		
v/c Ratio	0.81		
Control Delay	37.4		
Queue Delay	0.0		
Total Delay	37.4		
LOS	D		
Approach Delay	37.4		
Approach LOS	D		
Intersection Summary			

HCM 6th Edition methodology does not support more than 4 approaches.

Lanes, Volumes, Timings
5: Oak Ave & Wyncliffe Ave

Build 2022 with Imp
AM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	39	15	45	9	165	6	1	267	9
Future Volume (vph)	0	0	0	39	15	45	9	165	6	1	267	9
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.939			0.995			0.996
Flt Protected						0.981			0.998			
Satd. Flow (prot)	0	0	0	0	1658	0	0	1686	0	0	1759	0
Flt Permitted						0.981			0.998			
Satd. Flow (perm)	0	0	0	0	1658	0	0	1686	0	0	1759	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		262			804			328			552	
Travel Time (s)		7.1			21.9			8.9			15.1	
Confl. Peds. (#/hr)				1		6	1					1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	11%	6%	0%	0%	2%	0%
Adj. Flow (vph)	0	0	0	44	17	51	10	185	7	1	300	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	112	0	0	202	0	0	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	30.9%					ICU Level of Service A						
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 9.6
Intersection LOS A

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	39	15	45	9	165	6	1	267	9
Future Vol, veh/h	0	0	0	39	15	45	9	165	6	1	267	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	11	6	0	0	2	0
Mvmt Flow	0	0	0	44	17	51	10	185	7	1	300	10
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0
Approach												
				WB			NB			SB		
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left					NB						WB	
Conflicting Lanes Left					1			0			1	
Conflicting Approach Right					SB			WB				
Conflicting Lanes Right					1			1			0	
HCM Control Delay					8.8			9.4			10.1	
HCM LOS					A			A			B	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	5%	39%	0%
Vol Thru, %	92%	15%	96%
Vol Right, %	3%	45%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	180	99	277
LT Vol	9	39	1
Through Vol	165	15	267
RT Vol	6	45	9
Lane Flow Rate	202	111	311
Geometry Grp	1	1	1
Degree of Util (X)	0.263	0.15	0.379
Departure Headway (Hd)	4.683	4.852	4.386
Convergence, Y/N	Yes	Yes	Yes
Cap	767	737	822
Service Time	2.714	2.89	2.413
HCM Lane V/C Ratio	0.263	0.151	0.378
HCM Control Delay	9.4	8.8	10.1
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.5	1.8

Lanes, Volumes, Timings
6: Sycamore Ave & Arch St

Build 2022 with Imp
AM Peak



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	4	93	0	4	65
Future Volume (vph)	13	4	93	0	4	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966					
Flt Protected	0.964					0.997
Satd. Flow (prot)	1676	0	1600	0	0	1600
Flt Permitted	0.964					0.997
Satd. Flow (perm)	1676	0	1600	0	0	1600
Link Speed (mph)	25		25			25
Link Distance (ft)	311		153			433
Travel Time (s)	8.5		4.2			11.8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	5%	0%	0%	5%
Adj. Flow (vph)	15	5	106	0	5	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	106	0	0	79
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 17.1%

ICU Level of Service A

Analysis Period (min) 15

Intersection

Intersection Delay, s/veh 7.6
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	4	93	0	4	65
Future Vol, veh/h	13	4	93	0	4	65
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	5	0	0	5
Mvmt Flow	15	5	106	0	5	74
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB			WB		
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.4		7.7		7.4	
HCM LOS	A		A		A	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	76%	6%
Vol Thru, %	100%	0%	94%
Vol Right, %	0%	24%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	93	17	69
LT Vol	0	13	4
Through Vol	93	0	65
RT Vol	0	4	0
Lane Flow Rate	106	19	78
Geometry Grp	1	1	1
Degree of Util (X)	0.12	0.023	0.088
Departure Headway (Hd)	4.077	4.228	4.024
Convergence, Y/N	Yes	Yes	Yes
Cap	878	835	888
Service Time	2.105	2.311	2.058
HCM Lane V/C Ratio	0.121	0.023	0.088
HCM Control Delay	7.7	7.4	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.1	0.3

Lanes, Volumes, Timings
7: Sycamore Ave & Wyncliffe Ave

Build 2022 with Imp
AM Peak

	↙	→	↘	↖	←	↗	↖	↑	↗	↘	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	7	9	1	23	21	47	51	6	6	51	12
Future Volume (vph)	6	7	9	1	23	21	47	51	6	6	51	12
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.936			0.992			0.976	
Flt Protected		0.986			0.999			0.978			0.996	
Satd. Flow (prot)	0	1679	0	0	1633	0	0	1576	0	0	1462	0
Flt Permitted		0.986			0.999			0.978			0.996	
Satd. Flow (perm)	0	1679	0	0	1633	0	0	1576	0	0	1462	0
Link Speed (mph)		25			25			20			20	
Link Distance (ft)		463			400			433			329	
Travel Time (s)		12.6			10.9			14.8			11.2	
Confl. Peds. (#/hr)	3		4	4		3	3		2	2		3
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	0%	7%	0%	0%	8%	33%
Adj. Flow (vph)	7	8	10	1	26	24	53	58	7	7	58	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	51	0	0	118	0	0	79	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	25.4%											
Analysis Period (min)	15											
ICU Level of Service	A											

Intersection

Intersection Delay, s/veh 7.6

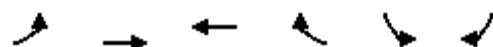
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖			↖			↖	
Traffic Vol, veh/h	6	7	9	1	23	21	47	51	6	6	51	12
Future Vol, veh/h	6	7	9	1	23	21	47	51	6	6	51	12
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	6	0	0	7	0	0	8	33
Mvmt Flow	7	8	10	1	26	24	53	58	7	7	58	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	7.3			7.3			7.9			7.5		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	45%	27%	2%	9%
Vol Thru, %	49%	32%	51%	74%
Vol Right, %	6%	41%	47%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	22	45	69
LT Vol	47	6	1	6
Through Vol	51	7	23	51
RT Vol	6	9	21	12
Lane Flow Rate	118	25	51	78
Geometry Grp	1	1	1	1
Degree of Util (X)	0.136	0.029	0.057	0.088
Departure Headway (Hd)	4.147	4.193	3.982	4.034
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	859	859	883	880
Service Time	2.2	2.193	2.081	2.099
HCM Lane V/C Ratio	0.137	0.029	0.058	0.089
HCM Control Delay	7.9	7.3	7.3	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.2	0.3

Lanes, Volumes, Timings
8: Springfield Rd (SR 2009) & Bus Exit Dwy

Build 2022 with Imp
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	492	703	0	4	4
Future Volume (vph)	0	492	703	0	4	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	1765	1680	0	819	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	1765	1680	0	819	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		391	384		147	
Travel Time (s)		7.6	7.5		3.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	5%	0%	100%	100%
Adj. Flow (vph)	0	535	764	0	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	535	764	0	8	0
Enter Blocked Intersection	No	No	No	No	Yes	Yes
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.10	1.10	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 49.1%

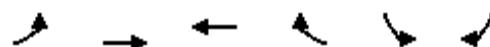
ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		Y	
Traffic Vol, veh/h	0	492	703	0	4	4
Future Vol, veh/h	0	492	703	0	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	5	0	100	100
Mvmt Flow	0	535	764	0	4	4
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	1299	764
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	-	-	7.4	7.2
Critical Hdwy Stg 1	-	-	-	-	6.4	-
Critical Hdwy Stg 2	-	-	-	-	6.4	-
Follow-up Hdwy	-	-	-	-	4.4	4.2
Pot Cap-1 Maneuver	0	-	-	0	113	281
Stage 1	0	-	-	0	324	-
Stage 2	0	-	-	0	431	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	113	281
Mov Cap-2 Maneuver	-	-	-	-	113	-
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	431	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	28.6			
HCM LOS			D			
Minor Lane/Major Mvmt	EBT	WBT	SBLn1			
Capacity (veh/h)	-	-	161			
HCM Lane V/C Ratio	-	-	0.054			
HCM Control Delay (s)	-	-	28.6			
HCM Lane LOS	-	-	D			
HCM 95th %tile Q(veh)	-	-	0.2			

Lanes, Volumes, Timings
9: Springfield Rd (SR 2009) & Bus Enter Dwy

Build 2022 with Imp
AM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	492	703	4	0	0
Future Volume (vph)	4	492	703	4	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.999				
Flt Protected						
Satd. Flow (prot)	0	1752	1737	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1752	1737	0	0	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		185	256		182	
Travel Time (s)		3.6	5.0		4.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	100%	2%	3%	100%	0%	0%
Adj. Flow (vph)	4	535	764	4	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	539	768	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 42.6% ICU Level of Service A

Analysis Period (min) 15



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑	↑	↑	↑
Traffic Volume (vph)	0	0	185	232	66	246
Future Volume (vph)	0	0	185	232	66	246
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%		0%		-5%	
Storage Length (ft)	0	0		50	100	
Storage Lanes	0	0		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			
Flt Protected				0.950		
Satd. Flow (prot)	0	0	1698	1530	1753	1827
Flt Permitted				0.950		
Satd. Flow (perm)	0	0	1698	1530	1753	1827
Link Speed (mph)	30		25		25	
Link Distance (ft)	261		158		328	
Travel Time (s)	5.9		4.3		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	6%	0%	0%	1%
Adj. Flow (vph)	0	0	201	252	72	267
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	201	252	72	267
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	25.7%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
11: Sycamore Ave & Exit Dwy

Build 2022 with Imp
AM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	56	197	0	37	78	0
Future Volume (vph)	56	197	0	37	78	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.895					
Flt Protected	0.989					
Satd. Flow (prot)	1593	0	0	1579	1714	0
Flt Permitted	0.989					
Satd. Flow (perm)	1593	0	0	1579	1714	0
Link Speed (mph)	30			25	20	
Link Distance (ft)	382			324	153	
Travel Time (s)	8.7			8.8	5.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	14%	5%	0%
Adj. Flow (vph)	61	214	0	40	85	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	275	0	0	40	85	0
Enter Blocked Intersection	Yes	1 veh	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 27.1% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	7.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	56	197	0	37	78	0
Future Vol, veh/h	56	197	0	37	78	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	14	5	0
Mvmt Flow	61	214	0	40	85	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	125	85	-	0	-	0
Stage 1	85	-	-	-	-	-
Stage 2	40	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	875	980	0	-	-	0
Stage 1	943	-	0	-	-	0
Stage 2	988	-	0	-	-	0
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	875	980	-	-	-	-
Mov Cap-2 Maneuver	875	-	-	-	-	-
Stage 1	943	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	10.3	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT			
Capacity (veh/h)	-	955	-			
HCM Lane V/C Ratio	-	0.288	-			
HCM Control Delay (s)	-	10.3	-			
HCM Lane LOS	-	B	-			
HCM 95th %tile Q(veh)	-	1.2	-			

Intersection: 1: Austin Dr & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NB	SB
Directions Served	TR	LT	L	R	LTR
Maximum Queue (ft)	158	177	31	37	54
Average Queue (ft)	45	50	5	3	24
95th Queue (ft)	117	136	23	20	50
Link Distance (ft)	662	260	154	154	97
Upstream Blk Time (%)	0			0	
Queuing Penalty (veh)	0			0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Oak Ave & Springfield Rd (SR 2009)

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	142	248	106	210	91	136	162	83	96
Average Queue (ft)	40	130	29	99	33	55	79	34	68
95th Queue (ft)	98	219	73	176	74	109	138	72	103
Link Distance (ft)		260		324			623	78	78
Upstream Blk Time (%)	0						1	7	
Queuing Penalty (veh)	2						1	9	
Storage Bay Dist (ft)	75		75		200	100			
Storage Blk Time (%)	1	15	1	9		3	4		
Queuing Penalty (veh)	3	10	5	19		6	4		

Intersection: 3: Prospect Ave & Church St & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NE
Directions Served	TR>	<LT	<LR	LR>
Maximum Queue (ft)	267	121	64	37
Average Queue (ft)	36	30	22	9
95th Queue (ft)	172	100	53	29
Link Distance (ft)	309	60	422	553
Upstream Blk Time (%)	1	3		
Queuing Penalty (veh)	6	20		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave

Movement	EB	WB	NB	SB
Directions Served	<LTR	LTR>	LTR>	<LTR
Maximum Queue (ft)	234	263	52	174
Average Queue (ft)	138	101	14	88
95th Queue (ft)	244	201	42	155
Link Distance (ft)	174	890	440	207
Upstream Blk Time (%)	12		0	
Queuing Penalty (veh)	61		1	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak Ave & Wyncliffe Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	44	83	111
Average Queue (ft)	25	44	53
95th Queue (ft)	47	67	84
Link Distance (ft)	741	282	522
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Sycamore Ave & Arch St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	31	58	52
Average Queue (ft)	10	33	29
95th Queue (ft)	32	51	49
Link Distance (ft)	280	91	383
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Sycamore Ave & Wyncliffe Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	18	52	58	60
Average Queue (ft)	8	25	33	31
95th Queue (ft)	19	49	49	54
Link Distance (ft)	384	372	383	278
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Springfield Rd (SR 2009) & Bus Exit Dwy

Movement	EB	SB
Directions Served	T	LR
Maximum Queue (ft)	83	61
Average Queue (ft)	6	15
95th Queue (ft)	62	53
Link Distance (ft)	324	116
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Springfield Rd (SR 2009) & Bus Enter Dwy

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	84	122
Average Queue (ft)	18	11
95th Queue (ft)	68	69
Link Distance (ft)	60	174
Upstream Blk Time (%)	5	0
Queuing Penalty (veh)	25	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Oak Ave & Enter Dwy

Movement	NB	NB	SB	SB
Directions Served	T	R	L	T
Maximum Queue (ft)	10	39	55	94
Average Queue (ft)	0	4	21	14
95th Queue (ft)	7	22	49	58
Link Distance (ft)	78			282
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	50	100		
Storage Blk Time (%)	0	0	0	
Queuing Penalty (veh)	0	0	0	

Intersection: 11: Sycamore Ave & Exit Dwy

Movement	EB	SB
Directions Served	LR	T
Maximum Queue (ft)	98	8
Average Queue (ft)	47	0
95th Queue (ft)	82	6
Link Distance (ft)	352	91
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 173

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Build 2022 with Imp
PM Peak

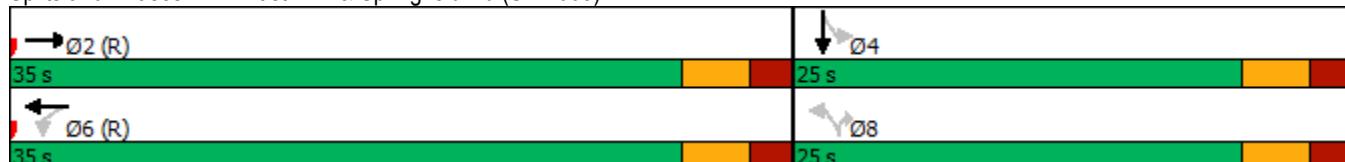
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	575	17	21	613	0	35	0	25	7	1	23
Future Volume (vph)	0	575	17	21	613	0	35	0	25	7	1	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	11	11	11	11	11	10	10	10	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00		0.99		0.97		0.98	
Frt		0.996							0.850		0.899	
Flt Protected					0.998		0.950				0.989	
Satd. Flow (prot)	0	1709	0	0	1704	0	1596	0	1373	0	1775	0
Flt Permitted					0.977		0.736				0.989	
Satd. Flow (perm)	0	1709	0	0	1668	0	1223	0	1326	0	1770	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		4							36		24	
Link Speed (mph)		35			35			20			20	
Link Distance (ft)		555			352			184			157	
Travel Time (s)		10.8			6.9			6.3			5.4	
Confl. Peds. (#/hr)	3		10	10		3	8		10	10		6
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%	1%	12%	0%	2%	0%	0%	0%	4%	0%	0%	0%
Parking (#/hr)			0						0			
Adj. Flow (vph)	0	593	18	22	632	0	36	0	26	7	1	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	611	0	0	654	0	36	0	26	0	32	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		16			16			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.17	1.17	1.17	0.91	0.91	0.91
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		0		1	0		1		1	1	1	
Detector Template			Left						Left			
Leading Detector (ft)	0		20	0		35		35	20		35	
Trailing Detector (ft)	0		0	0		-5		-5	0		-5	
Detector 1 Position(ft)	0		0	0		-5		-5	0		-5	
Detector 1 Size(ft)	6		20	6		40		40	20		40	
Detector 1 Type	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	NA		Perm	NA		Perm		Perm	Perm	Perm	NA	
Protected Phases	2			6							4	
Permitted Phases			6			8		8	4			
Detector Phase	2		6	6		8		8	4	4	4	
Switch Phase												
Minimum Initial (s)	32.0		32.0	32.0		5.0		5.0	5.0	5.0	5.0	

Lanes, Volumes, Timings
1: Austin Dr & Springfield Rd (SR 2009)

Build 2022 with Imp
PM Peak

	→	→	→	←	←	↑	↑	↓	↓	←		
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	37.0		37.0	37.0		10.0		10.0	10.0	10.0		10.0
Total Split (s)	35.0		35.0	35.0		25.0		25.0	25.0	25.0		25.0
Total Split (%)	58.3%		58.3%	58.3%		41.7%		41.7%	41.7%	41.7%		41.7%
Maximum Green (s)	30.0		30.0	30.0		20.0		20.0	20.0	20.0		20.0
Yellow Time (s)	3.0		3.0	3.0		3.0		3.0	3.0	3.0		3.0
All-Red Time (s)	2.0		2.0	2.0		2.0		2.0	2.0	2.0		2.0
Lost Time Adjust (s)	-1.0		-1.0	-1.0		-1.0		-1.0	-1.0	-1.0		-1.0
Total Lost Time (s)	4.0			4.0			4.0		4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0		2.0	2.0		2.0		2.0	2.0	2.0		2.0
Recall Mode	C-Max		C-Max	C-Max		None		None	None	None		None
Act Effect Green (s)	50.0			50.0		7.7		7.7				7.4
Actuated g/C Ratio	0.83			0.83		0.13		0.13				0.12
v/c Ratio	0.43			0.47		0.23		0.13				0.13
Control Delay	4.0			3.0		26.4		8.5				13.5
Queue Delay	0.0			0.0		0.0		0.0				0.0
Total Delay	4.0			3.0		26.4		8.5				13.5
LOS	A			A		C		A				B
Approach Delay	4.0			3.0			18.9					13.5
Approach LOS	A			A			B					B
Intersection Summary												
Area Type:	Other											
Cycle Length:	60											
Actuated Cycle Length:	60											
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green												
Natural Cycle: 50												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.47												
Intersection Signal Delay: 4.5						Intersection LOS: A						
Intersection Capacity Utilization 67.7%							ICU Level of Service C					
Analysis Period (min) 15												

Splits and Phases: 1: Austin Dr & Springfield Rd (SR 2009)



HCM 6th Edition methodology does not support Non-NEMA phasing.

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022 with Imp
PM Peak

	↑	→	↓	↗	↖	↙	↖	↑	↗	↘	↓	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↑	↑	↑	↑		↑	↑	
Traffic Volume (vph)	57	376	169	29	461	79	134	214	17	48	178	24
Future Volume (vph)	57	376	169	29	461	79	134	214	17	48	178	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	16	16	16	11	11	11	11	11	11	10	10	10
Grade (%)	-4%				4%				-4%			-5%
Storage Length (ft)	75		0	75		200	100		0	0		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		1.00		0.98	1.00	1.00		1.00	1.00	
Fr _t		0.954				0.850		0.989			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1977	1925	0	1421	1688	1449	1637	1752	0	1636	1664	0
Flt Permitted	0.387			0.315			0.592			0.550		
Satd. Flow (perm)	805	1925	0	470	1688	1418	1017	1752	0	946	1664	0
Right Turn on Red			No			No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		352			401			827			156	
Travel Time (s)		6.9			7.8			22.6			4.3	
Confl. Peds. (#/hr)	2		4	4		2	3		1	1		3
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%	3%	1%	14%	1%	0%	3%	0%	0%	0%	1%	4%
Parking (#/hr)			0						0		0	
Adj. Flow (vph)	59	388	174	30	475	81	138	221	18	49	184	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	562	0	30	475	81	138	239	0	49	209	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		16			16			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		24			16			30			16	
Two way Left Turn Lane												
Headway Factor	0.89	0.89	0.89	1.15	1.15	1.15	1.09	1.09	1.09	1.13	1.13	1.13
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6		6	8			4	
Permitted Phases	2			6		6	8			4		
Minimum Split (s)	11.0	11.0		11.0	11.0	11.0	10.0	10.0		10.0	10.0	
Total Split (s)	35.0	35.0		35.0	35.0	35.0	25.0	25.0		25.0	25.0	
Total Split (%)	58.3%	58.3%		58.3%	58.3%	58.3%	41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	30.0	30.0		30.0	30.0	30.0	20.0	20.0		20.0	20.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	-1.0		0.0	-1.0	0.0	0.0	-1.0		0.0	-1.0	
Total Lost Time (s)	5.0	4.0		5.0	4.0	5.0	5.0	4.0		5.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022 with Imp
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	30.0	31.0		30.0	31.0	30.0	20.0	21.0		20.0	21.0	
Actuated g/C Ratio	0.50	0.52		0.50	0.52	0.50	0.33	0.35		0.33	0.35	
v/c Ratio	0.15	0.57		0.13	0.54	0.11	0.41	0.39		0.16	0.36	
Control Delay	5.9	9.8		9.8	12.7	8.5	20.0	17.0		15.7	16.7	
Queue Delay	0.0	0.3		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	5.9	10.1		9.8	12.7	8.5	20.0	17.0		15.7	16.7	
LOS	A	B		A	B	A	B	B		B	B	
Approach Delay		9.7				12.0			18.1		16.5	
Approach LOS		A				B			B		B	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

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

Natural Cycle: 40

Control Type: Pretimed

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 13.1

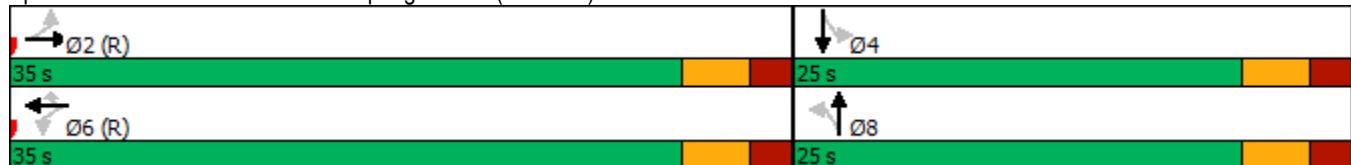
Intersection LOS: B

Intersection Capacity Utilization 70.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Oak Ave & Springfield Rd (SR 2009)



HCM 6th Signalized Intersection Summary
2: Oak Ave & Springfield Rd (SR 2009)

Build 2022 with Imp
PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↑	↑	↑	↑		↑	↑	
Traffic Volume (veh/h)	57	376	169	29	461	79	134	214	17	48	178	24
Future Volume (veh/h)	57	376	169	29	461	79	134	214	17	48	178	24
Initial Q (Q _b), 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	0.90	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	2027	1983	1983	1514	1697	1711	1906	1949	1949	1986	1972	1972
Adj Flow Rate, veh/h	59	388	174	30	475	81	138	221	18	49	184	25
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	3	3	14	1	0	3	0	0	0	1	1
Cap, veh/h	424	602	270	482	877	722	427	560	46	412	535	73
Arrive On Green	1.00	1.00	1.00	0.50	0.52	0.50	0.33	0.35	0.35	0.33	0.35	0.33
Sat Flow, veh/h	974	1165	523	723	1697	1444	1258	1600	130	1276	1529	208
Grp Volume(v), veh/h	59	0	562	30	475	81	138	0	239	49	0	209
Grp Sat Flow(s), veh/h/ln	974	0	1688	723	1697	1444	1258	0	1730	1276	0	1736
Q Serve(g_s), s	1.6	0.0	0.0	1.3	11.3	1.8	5.6	0.0	6.3	1.8	0.0	5.3
Cycle Q Clear(g_c), s	12.8	0.0	0.0	1.3	11.3	1.8	10.9	0.0	6.3	8.1	0.0	5.3
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.08	1.00		0.12
Lane Grp Cap(c), veh/h	424	0	872	482	877	722	427	0	606	412	0	608
V/C Ratio(X)	0.14	0.00	0.64	0.06	0.54	0.11	0.32	0.00	0.39	0.12	0.00	0.34
Avail Cap(c_a), veh/h	424	0	872	482	877	722	427	0	606	412	0	608
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	2.4	0.0	0.0	7.8	9.7	7.9	19.2	0.0	14.7	18.5	0.0	14.5
Incr Delay (d2), s/veh	0.7	0.0	3.7	0.2	2.4	0.3	2.0	0.0	1.9	0.6	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.1	0.0	0.9	0.2	3.8	0.5	1.8	0.0	2.6	0.6	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	3.1	0.0	3.7	8.1	12.1	8.3	21.2	0.0	16.6	19.1	0.0	16.0
LnGrp LOS	A	A	A	A	B	A	C	A	B	B	A	B
Approach Vol, veh/h	621				586			377			258	
Approach Delay, s/veh	3.6				11.4			18.3			16.6	
Approach LOS	A				B			B			B	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	35.0		25.0		35.0		25.0					
Change Period (Y+Rc), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	30.0		20.0		30.0		20.0					
Max Q Clear Time (g_c+l1), s	14.8		10.1		3.8		12.9					
Green Ext Time (p_c), s	0.1		0.0		0.1		0.1					
Intersection Summary												
HCM 6th Ctrl Delay			10.9									
HCM 6th LOS			B									

Lanes, Volumes, Timings

Build 2022 with Imp

3: Prospect Ave & Church St & Springfield Rd (SR 2009)

PM Peak



Lane Group	EBT	EBR	EBR2	WBL2	WBL	WBT	NBL	NBR	NEL	NER
Lane Configurations										
Traffic Volume (vph)	454	0	24	6	7	556	17	13	4	15
Future Volume (vph)	454	0	24	6	7	556	17	13	4	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	11	12	11	12	11	11	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor										
Frt	0.993						0.941		0.892	
Flt Protected							0.999	0.973		0.990
Satd. Flow (prot)	1680	0	0	0	0	1673	1594	0	1590	0
Flt Permitted							0.999	0.973		0.990
Satd. Flow (perm)	1680	0	0	0	0	1673	1594	0	1590	0
Link Speed (mph)	35					35	30		20	
Link Distance (ft)	363					207	498		607	
Travel Time (s)	7.1					4.0	11.3		20.7	
Confl. Peds. (#/hr)		3		3				3		3
Confl. Bikes (#/hr)			1							
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	0%	0%	4%	6%	0%	0%	0%
Adj. Flow (vph)	473	0	25	6	7	579	18	14	4	16
Shared Lane Traffic (%)										
Lane Group Flow (vph)	498	0	0	0	0	592	32	0	20	0
Enter Blocked Intersection	No	No	No	No	No	No	1 veh	1 veh	1 veh	1 veh
Lane Alignment	Left	Right	Right	Left	Left	Left	Left	Right	Left	Right
Median Width(ft)	0					0	12		12	
Link Offset(ft)	0					0	70		10	
Crosswalk Width(ft)	16					16	16		16	
Two way Left Turn Lane										
Headway Factor	1.12	1.07	1.12	1.07	1.12	1.12	1.07	1.07	1.07	1.07
Turning Speed (mph)		9	9	15	15		15	9	15	9
Sign Control	Free					Free	Stop		Stop	
Intersection Summary										
Area Type:	Other									
Control Type:	Unsignalized									
Intersection Capacity Utilization	60.5%					ICU Level of Service B				
Analysis Period (min)	15									

Lanes, Volumes, Timings

Build 2022 with Imp

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Traffic Volume (vph)	16	49	426	501	34	12	7	1	1	3	1	64
Future Volume (vph)	16	49	426	501	34	12	7	1	1	3	1	64
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	15	15	15	15	15	15	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00	1.00			0.98			
Frt						0.989			0.955			
Flt Protected					0.993				0.972			
Satd. Flow (prot)	0	0	1862	1914	0	0	0	1537	0	0	0	0
Flt Permitted					0.891				0.866			
Satd. Flow (perm)	0	0	1669	1914	0	0	0	1365	0	0	0	0
Right Turn on Red							Yes			Yes		
Satd. Flow (RTOR)					3				3			
Link Speed (mph)			35	35					20			
Link Distance (ft)			241	950					483			
Travel Time (s)			4.7	18.5					16.5			
Confl. Peds. (#/hr)	5	10			5	10	5		10	6	10	6
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 (%)	6%	2%	6%	2%	3%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	16	50	435	511	35	12	7	1	1	3	1	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	501	558	0	0	0	12	0	0	0	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Left	Left	Right	Right	Left	Left	Right	Right	Left	Left
Median Width(ft)			0	0					0			
Link Offset(ft)			0	20					12			
Crosswalk Width(ft)			16	16					16			
Two way Left Turn Lane												
Headway Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	15			9	9	15		9	9	15	15
Number of Detectors	1	1	0	0			1	1			1	1
Detector Template	Left	Left					Left				Left	Left
Leading Detector (ft)	20	20	0	0			20	45			20	20
Trailing Detector (ft)	0	0	0	0			0	-5			0	0
Detector 1 Position(ft)	0	0	0	0			0	-5			0	0
Detector 1 Size(ft)	20	20	6	6			20	50			20	20
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	Perm	NA	NA			Perm	NA			Perm	Perm
Protected Phases			2	6				8				
Permitted Phases	2	2						8			4	4
Detector Phase	2	2	2	6			8	8			4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0			5.0	5.0			5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	10.0			10.0	10.0			10.0	10.0



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	0	59
Future Volume (vph)	0	59
Ideal Flow (vphpl)	1800	1800
Lane Width (ft)	10	10
Lane Util. Factor	1.00	1.00
Ped Bike Factor	0.98	
Frt	0.936	
Flt Protected	0.974	
Satd. Flow (prot)	1484	0
Flt Permitted	0.829	
Satd. Flow (perm)	1248	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	20	
Link Distance (ft)	334	
Travel Time (s)	11.4	
Confl. Peds. (#/hr)		5
Peak Hour Factor	0.98	0.98
Heavy Vehicles (%)	0%	4%
Adj. Flow (vph)	0	60
Shared Lane Traffic (%)		
Lane Group Flow (vph)	126	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	0	
Link Offset(ft)	20	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.17	1.17
Turning Speed (mph)		9
Number of Detectors	1	
Detector Template		
Leading Detector (ft)	45	
Trailing Detector (ft)	-5	
Detector 1 Position(ft)	-5	
Detector 1 Size(ft)	50	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	5.0	
Minimum Split (s)	10.0	

Lanes, Volumes, Timings

Build 2022 with Imp

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	EBL2	EBL	EBT	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2	SBL2	SBL
Total Split (s)	35.0	35.0	35.0	35.0			25.0	25.0			25.0	25.0
Total Split (%)	58.3%	58.3%	58.3%	58.3%			41.7%	41.7%			41.7%	41.7%
Maximum Green (s)	30.0	30.0	30.0	30.0			20.0	20.0			20.0	20.0
Yellow Time (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0			2.0	2.0			2.0	2.0
Lost Time Adjust (s)				-1.0	-1.0				-1.0			
Total Lost Time (s)				4.0	4.0				4.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2	0.2	0.2			0.2	0.2			0.2	0.2
Recall Mode	Max	Max	Max	Max			None	None			None	None
Act Effect Green (s)			34.8	34.8					7.4			
Actuated g/C Ratio			0.71	0.71					0.15			
v/c Ratio			0.42	0.41					0.06			
Control Delay			6.0	5.6					15.6			
Queue Delay			0.0	0.0					0.0			
Total Delay			6.0	5.6					15.6			
LOS			A	A					B			
Approach Delay			6.0	5.6					15.6			
Approach LOS			A	A					B			

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 48.9

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 8.2

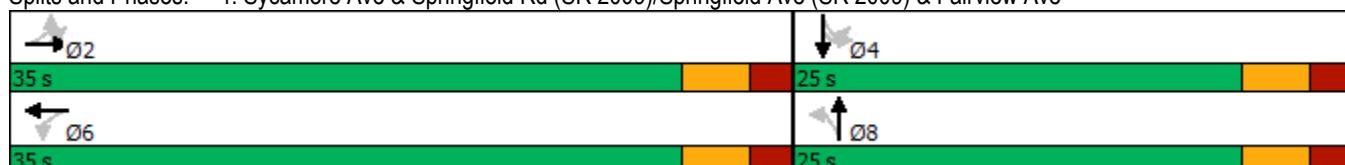
Intersection LOS: A

Intersection Capacity Utilization 77.5%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave



Lanes, Volumes, Timings

Build 2022 with Imp

4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave PM Peak



Lane Group	SBT	SBR
Total Split (s)	25.0	
Total Split (%)	41.7%	
Maximum Green (s)	20.0	
Yellow Time (s)	3.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	-1.0	
Total Lost Time (s)	4.0	
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	0.2	
Recall Mode	None	
Act Effect Green (s)	8.9	
Actuated g/C Ratio	0.18	
v/c Ratio	0.56	
Control Delay	27.6	
Queue Delay	0.0	
Total Delay	27.6	
LOS	C	
Approach Delay	27.6	
Approach LOS	C	
Intersection Summary		

HCM 6th Edition methodology does not support more than 4 approaches.

Lanes, Volumes, Timings
5: Oak Ave & Wyncliffe Ave

Build 2022 with Imp
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	17	10	25	13	220	43	10	243	8
Future Volume (vph)	0	0	0	17	10	25	13	220	43	10	243	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.936			0.979			0.996
Flt Protected						0.984			0.998			0.998
Satd. Flow (prot)	0	0	0	0	1550	0	0	1745	0	0	1789	0
Flt Permitted						0.984			0.998			0.998
Satd. Flow (perm)	0	0	0	0	1550	0	0	1745	0	0	1789	0
Link Speed (mph)		25				25			25			25
Link Distance (ft)		262				804			331			552
Travel Time (s)		7.1				21.9			9.0			15.1
Confl. Peds. (#/hr)	2		2	2		2	1		1	1		1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	8%	0%	9%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	19	11	27	14	242	47	11	267	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	57	0	0	303	0	0	287	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0				0			12			0
Link Offset(ft)		0				0			0			0
Crosswalk Width(ft)		16				16			16			16
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop				Stop			Stop			Stop
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	37.3%							ICU Level of Service A				
Analysis Period (min)	15											

Intersection

Intersection Delay, s/veh 9.5
Intersection LOS A

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	17	10	25	13	220	43	10	243	8
Future Vol, veh/h	0	0	0	17	10	25	13	220	43	10	243	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	8	0	9	0	1	0	0	0	0
Mvmt Flow	0	0	0	19	11	27	14	242	47	11	267	9
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0
Approach												
				WB			NB			SB		
Opposing Approach							SB			NB		
Opposing Lanes				0			1			1		
Conflicting Approach Left					NB					WB		
Conflicting Lanes Left					1			0		1		
Conflicting Approach Right					SB			WB				
Conflicting Lanes Right					1			1		0		
HCM Control Delay					8.5			9.6		9.6		
HCM LOS					A			A		A		

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	5%	33%	4%
Vol Thru, %	80%	19%	93%
Vol Right, %	16%	48%	3%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	276	52	261
LT Vol	13	17	10
Through Vol	220	10	243
RT Vol	43	25	8
Lane Flow Rate	303	57	287
Geometry Grp	1	1	1
Degree of Util (X)	0.359	0.08	0.346
Departure Headway (Hd)	4.256	5.068	4.34
Convergence, Y/N	Yes	Yes	Yes
Cap	846	706	832
Service Time	2.273	3.104	2.358
HCM Lane V/C Ratio	0.358	0.081	0.345
HCM Control Delay	9.6	8.5	9.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.6	0.3	1.6

Lanes, Volumes, Timings
6: Sycamore Ave & Arch St

Build 2022 with Imp
PM Peak



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	8	1	80	2	2	76
Future Volume (vph)	8	1	80	2	2	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.988		0.997			
Flt Protected	0.957				0.999	
Satd. Flow (prot)	1702	0	1643	0	0	1662
Flt Permitted	0.957				0.999	
Satd. Flow (perm)	1702	0	1643	0	0	1662
Link Speed (mph)	25		25		25	
Link Distance (ft)	311		153		433	
Travel Time (s)	8.5		4.2		11.8	
Confl. Peds. (#/hr)	1	2		5	5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	2%	0%	0%	1%
Adj. Flow (vph)	10	1	95	2	2	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	97	0	0	92
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0		0	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.17	1.17	1.17	1.17
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.6%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Intersection Delay, s/veh 7.5
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	1	80	2	2	76
Future Vol, veh/h	8	1	80	2	2	76
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	10	1	95	2	2	90
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB			WB		
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.5		7.5		7.5	
HCM LOS	A		A		A	

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	89%	3%
Vol Thru, %	98%	0%	97%
Vol Right, %	2%	11%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	82	9	78
LT Vol	0	8	2
Through Vol	80	0	76
RT Vol	2	1	0
Lane Flow Rate	98	11	93
Geometry Grp	1	1	1
Degree of Util (X)	0.109	0.013	0.103
Departure Headway (Hd)	4.009	4.339	3.998
Convergence, Y/N	Yes	Yes	Yes
Cap	894	815	896
Service Time	2.031	2.418	2.022
HCM Lane V/C Ratio	0.11	0.013	0.104
HCM Control Delay	7.5	7.5	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0	0.3

Lanes, Volumes, Timings
7: Sycamore Ave & Wyncliffe Ave

Build 2022 with Imp
PM Peak

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	16	8	0	27	22	19	51	4	15	62	11
Future Volume (vph)	9	16	8	0	27	22	19	51	4	15	62	11
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	12	12	12	12	12	10	10	10	10	10	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.967			0.940			0.992			0.982	
Flt Protected		0.987						0.987			0.992	
Satd. Flow (prot)	0	1718	0	0	1692	0	0	1544	0	0	1592	0
Flt Permitted		0.987						0.987			0.992	
Satd. Flow (perm)	0	1718	0	0	1692	0	0	1544	0	0	1592	0
Link Speed (mph)		25			25			20			20	
Link Distance (ft)		463			400			433			329	
Travel Time (s)		12.6			10.9			14.8			11.2	
Confl. Peds. (#/hr)	3		4	4		3	7		3	3		7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	20%	2%	0%	0%	2%	11%
Adj. Flow (vph)	10	18	9	0	31	25	22	58	5	17	70	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	56	0	0	85	0	0	100	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.17	1.17	1.17	1.17	1.17	1.17
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	23.5%											
Analysis Period (min)	15											
ICU Level of Service	A											

Intersection

Intersection Delay, s/veh 7.7

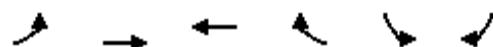
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	16	8	0	27	22	19	51	4	15	62	11
Future Vol, veh/h	9	16	8	0	27	22	19	51	4	15	62	11
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	0	0	0	0	20	2	0	0	2	11
Mvmt Flow	10	18	9	0	31	25	22	58	5	17	70	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB		SB			NB		
Opposing Lanes	1				1		1			1		
Conflicting Approach Left	SB				NB		EB			WB		
Conflicting Lanes Left	1				1		1			1		
Conflicting Approach Right	NB				SB		WB			EB		
Conflicting Lanes Right	1				1		1			1		
HCM Control Delay	7.5				7.4		8.1			7.7		
HCM LOS	A				A		A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	27%	0%	17%
Vol Thru, %	69%	48%	55%	70%
Vol Right, %	5%	24%	45%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	33	49	88
LT Vol	19	9	0	15
Through Vol	51	16	27	62
RT Vol	4	8	22	11
Lane Flow Rate	84	38	56	100
Geometry Grp	1	1	1	1
Degree of Util (X)	0.105	0.045	0.063	0.113
Departure Headway (Hd)	4.497	4.286	4.089	4.084
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	789	840	881	867
Service Time	2.569	2.287	2.091	2.161
HCM Lane V/C Ratio	0.106	0.045	0.064	0.115
HCM Control Delay	8.1	7.5	7.4	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.1	0.2	0.4

Lanes, Volumes, Timings
8: Springfield Rd (SR 2009) & Bus Exit Only

Build 2022 with Imp
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	
Traffic Volume (vph)	0	441	565	0	4	4
Future Volume (vph)	0	441	565	0	4	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)		0%	4%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.932	
Flt Protected					0.976	
Satd. Flow (prot)	0	1765	1747	0	819	0
Flt Permitted					0.976	
Satd. Flow (perm)	0	1765	1747	0	819	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		401	363		199	
Travel Time (s)		7.8	7.1		4.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	1%	0%	100%	100%
Adj. Flow (vph)	0	479	614	0	4	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	479	614	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	11		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.10	1.10	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 41.4%

ICU Level of Service A

Analysis Period (min) 15

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	441	565	0	4	4
Future Vol, veh/h	0	441	565	0	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	4	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	2	1	0	100	100
Mvmt Flow	0	479	614	0	4	4

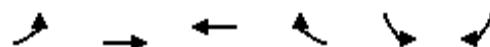
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	614
Stage 2	-	-	479
Critical Hdwy	-	-	7.4 7.2
Critical Hdwy Stg 1	-	-	6.4
Critical Hdwy Stg 2	-	-	6.4
Follow-up Hdwy	-	-	4.4 4.2
Pot Cap-1 Maneuver	0	-	0 157 352
Stage 1	0	-	0 390
Stage 2	0	-	0 461
Platoon blocked, %	-	-	
Mov Cap-1 Maneuver	-	-	157 352
Mov Cap-2 Maneuver	-	-	157
Stage 1	-	-	390
Stage 2	-	-	461

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22.3
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	217
HCM Lane V/C Ratio	-	-	0.04
HCM Control Delay (s)	-	-	22.3
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.1

Lanes, Volumes, Timings
9: Springfield Rd (SR 2009) & Bus Enter Dwy

Build 2022 with Imp
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	441	565	4	0	0
Future Volume (vph)	4	441	565	4	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.999				
Flt Protected						
Satd. Flow (prot)	0	1751	1769	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1751	1769	0	0	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		207	241		158	
Travel Time (s)		4.0	4.7		3.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	100%	2%	1%	100%	0%	0%
Adj. Flow (vph)	4	479	614	4	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	483	618	0	0	0
Enter Blocked Intersection	No	2 veh	2 veh	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 35.0% ICU Level of Service A

Analysis Period (min) 15



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑	↑	↑	↑
Traffic Volume (vph)	0	0	289	62	17	250
Future Volume (vph)	0	0	289	62	17	250
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Grade (%)	0%		0%		-5%	
Storage Length (ft)	0	0		50	100	
Storage Lanes	0	0		1	1	
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			
Flt Protected				0.950		
Satd. Flow (prot)	0	0	1782	1530	1753	1845
Flt Permitted				0.950		
Satd. Flow (perm)	0	0	1782	1530	1753	1845
Link Speed (mph)	30		25		25	
Link Distance (ft)	246		156		331	
Travel Time (s)	5.6		4.3		9.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Adj. Flow (vph)	0	0	314	67	18	272
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	314	67	18	272
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	19.4%			ICU Level of Service A		
Analysis Period (min)	15					

Lanes, Volumes, Timings
11: Sycamore Ave & Exit Dwy

Build 2022 with Imp
PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	65	0	64	84	0
Future Volume (vph)	18	65	0	64	84	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.895					
Flt Protected	0.989					
Satd. Flow (prot)	1593	0	0	1765	1782	0
Flt Permitted	0.989					
Satd. Flow (perm)	1593	0	0	1765	1782	0
Link Speed (mph)	30			25	20	
Link Distance (ft)	359			334	153	
Travel Time (s)	8.2			9.1	5.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Adj. Flow (vph)	20	71	0	70	91	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	91	0	0	70	91	0
Enter Blocked Intersection	Yes	1 veh	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.07	1.07	1.07	1.07	1.07	1.07
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 16.6% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	18	65	0	64	84	0
Future Vol, veh/h	18	65	0	64	84	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	1	0
Mvmt Flow	20	71	0	70	91	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	161	91	-	0	-	0
Stage 1	91	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	835	972	0	-	-	0
Stage 1	938	-	0	-	-	0
Stage 2	958	-	0	-	-	0
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	835	972	-	-	-	-
Mov Cap-2 Maneuver	835	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	9.2	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT			
Capacity (veh/h)	-	939	-			
HCM Lane V/C Ratio	-	0.096	-			
HCM Control Delay (s)	-	9.2	-			
HCM Lane LOS	-	A	-			
HCM 95th %tile Q(veh)	-	0.3	-			

Intersection: 1: Austin Dr & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NB	SB
Directions Served	TR	LT	L	R	LTR
Maximum Queue (ft)	146	225	76	56	55
Average Queue (ft)	47	59	27	19	23
95th Queue (ft)	115	154	62	47	50
Link Distance (ft)	516	261	154	154	98
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		2			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Oak Ave & Springfield Rd (SR 2009)

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	111	206	58	204	46	174	324	79	97
Average Queue (ft)	26	95	15	91	11	86	120	29	70
95th Queue (ft)	72	169	43	169	34	166	264	64	101
Link Distance (ft)		261		325			762	76	76
Upstream Blk Time (%)		0		0			1	12	
Queuing Penalty (veh)		0		0			1	15	
Storage Bay Dist (ft)	75		75		200	100			
Storage Blk Time (%)	0	7	0	7		18	7		
Queuing Penalty (veh)	1	4	0	7		41	9		

Intersection: 3: Prospect Ave & Church St & Springfield Rd (SR 2009)

Movement	EB	WB	NB	NE
Directions Served	TR>	<LT	<LR	LR
Maximum Queue (ft)	114	100	62	39
Average Queue (ft)	10	13	21	11
95th Queue (ft)	64	61	50	31
Link Distance (ft)	304	70	413	570
Upstream Blk Time (%)		1		
Queuing Penalty (veh)		5		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Sycamore Ave & Springfield Rd (SR 2009)/Springfield Ave (SR 2009) & Fairview Ave

Movement	EB	WB	NB	SB
Directions Served	<LTR	LTR>	LTR>	<LTR
Maximum Queue (ft)	226	160	37	90
Average Queue (ft)	122	61	10	34
95th Queue (ft)	226	125	34	74
Link Distance (ft)	162	881	441	234
Upstream Blk Time (%)	8			
Queuing Penalty (veh)	35			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Oak Ave & Wyncliffe Ave

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	50	93	76
Average Queue (ft)	20	55	48
95th Queue (ft)	43	83	70
Link Distance (ft)	732	290	472
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Sycamore Ave & Arch St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	27	56	50
Average Queue (ft)	7	32	29
95th Queue (ft)	26	50	45
Link Distance (ft)	280	90	383
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Sycamore Ave & Wyncliffe Ave

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	23	40	56	58
Average Queue (ft)	10	25	31	30
95th Queue (ft)	22	43	51	51
Link Distance (ft)	384	372	383	278
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Springfield Rd (SR 2009) & Bus Exit Only

Movement	WB	SB
Directions Served	T	LR
Maximum Queue (ft)	5	59
Average Queue (ft)	0	11
95th Queue (ft)	5	44
Link Distance (ft)	304	165
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Springfield Rd (SR 2009) & Bus Enter Dwy

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	79	32
Average Queue (ft)	13	2
95th Queue (ft)	58	25
Link Distance (ft)	70	162
Upstream Blk Time (%)	2	0
Queuing Penalty (veh)	9	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Oak Ave & Enter Dwy

Movement	NB	NB	SB	SB
Directions Served	T	R	L	T
Maximum Queue (ft)	3	6	33	120
Average Queue (ft)	0	0	6	23
95th Queue (ft)	4	6	25	82
Link Distance (ft)	76		290	
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)	50	100		
Storage Blk Time (%)	0		1	
Queuing Penalty (veh)	0		0	

Intersection: 11: Sycamore Ave & Exit Dwy

Movement	EB	SB
Directions Served	LR	T
Maximum Queue (ft)	57	3
Average Queue (ft)	30	0
95th Queue (ft)	47	0
Link Distance (ft)	328	90
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 130