

HYBRID ADULT USE CANNABIS AND MEDICAL MARIJUANA DISPENSARY STAMFORD, CT

Traffic Impact Study

Prepared for:

Curaleaf

SLR #141.21293.00001

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Traffic Impact Study

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This document has been prepared by SLR International Corporation (SLR). The material and data in this report were prepared under the supervision and direction of the undersigned.



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1. INTRODUCTION

SLR has prepared this Traffic Impact Study to evaluate the impact of the proposed hybrid adult use cannabis retailer and medical marijuana dispensary on the surrounding roadway network. This facility currently operates exclusively as a medical marijuana dispensary and is located at 814 East Main Street in Stamford, Connecticut. A Locus Map of the site is provided in **Figure 1**.

The existing medical marijuana dispensary at 814 East Main Street is located within a plaza with four driveways. Two driveways connect the site to East Main Street. The east driveway is a one-way entrance into the site. The west driveway is a one-way exit onto East Main Street from the site. The other two driveways are two-way enter and exit and provide access to the site via Lafayette Street.

This traffic impact study includes a summary of roadway characteristics, traffic counts, parking counts, crash history, trip generation, trip distribution, background growth, intersection capacity analysis, and recommendations to mitigate consequential impacts (if any) and improve roadway safety. For this study, the intersection of East Main Street and Lafayette Street as well as all four site driveways were evaluated during weekday peak period of 4:00 PM to 6:00 PM and Saturday peak period of 11:00 AM to 1:00 PM. Parking counts were conducted before and after each peak period and an estimate of new parking demands developed to determine the adequacy of the existing parking lot. Complete traffic and parking counts can be found in **Appendix A**.

2. STUDY AREA INFORMATION

The study area information discussed in this section includes existing roadway characteristics, number of lanes and configuration, speed limit, roadway functional classification, turning movement counts, and Connecticut Crash Data Repository crash history. Site location and adjacent roadway network are shown on **Figure 1**.

2.1 ROADWAY NETWORK

East Main Street is classified as a principle arterial roadway with a posted speed limit of 30 miles per hour (MPH). East Main Street has four lanes of travel and sidewalks on both sides of the road. Two of the site driveways are located on East Main Street. The east driveway is entrance only and the west driveway is exit only, both driveways operate under stop-sign control. The East Main Street approaches at the driveway intersections are free. East Main Street intersects with Lafayette Street just east of the project site.

Lafayette Street is classified as a local urban collector with sidewalks on both sides of the road. Lafayette Street has two lanes of travel south of East Main Street and one, one-way (southbound) lane of travel north of East Main Street. Two of the site driveways are located on Lafayette and operate under stop control. The Lafayette Street approaches at the driveway intersections are free. The intersection of Lafayette Street at East Main Street is signalized.

At the intersection of East Main Street and Lafayette Street, East Main Street has a through lane and a shared through/right lane on the eastbound approach. The westbound approach has a shared left/through lane and designated through lane. Lafayette Street on the northbound approach has a shared left/right lane and the southbound approach has a designated left-turn lane and a shared through/right lane.

2.2 TURNING MOVEMENT COUNTS

SLR International Corporation (SLR) conducted turning movement counts at the intersection of East Main Street and Lafayette Street as well as all four site driveways. Peak period counts were conducted during weekday peak period of 4:00 PM to 6:00 PM on Thursday October 27, 2022, and Saturday peak period of 11:00 AM to 1:00 PM on November 5, 2022. The existing/baseline peak-hour traffic volumes are shown in **Figures 2 & 3**. Complete turning movement counts can be found in **Appendix B**.

Lafayette Street south of East Main Street was closed due to construction when traffic counts were collected. After review of available data, traffic volumes from another traffic study in the area and counts collected by the city of Stamford in 2017 were used to supplement the counts collected by SLR and reflect more typical conditions.

2.3 CRASH HISTORY

Crash data was obtained from the Connecticut Crash Data Repository for the most recent 3-year period (2019 to 2021) for the study intersections, as summarized in **Table 1**. In this 3-year period, no crashes were reported at the site driveways. At the other study intersection, an average of 7 crashes per year were reported, 65% of which resulted in property damage only. No fatal crashes were reported. The most common type of crashes were angle collisions, followed by rear-end and sideswipe collisions. There is no clear pattern of collision type, severity, or frequency to suggest safety risk mitigation is required.

Table 1: Crash Data Summary

Criteria	East Main Street at Lafayette Street
2019	6
2020	10
2021	4
Total	20
Angle	7
Head-On	1
Rear-End	4
Sideswipe	4

Criteria	East Main Street at Lafayette Street
Single Vehicle	0
Unknown/Other	4
Total	20
Property Damage Only	13
Injury of any type (Serious, Minor, Possible)	7
Fatality	0
Unknown/Other	0
Total	20

3. EXISTING CONDITIONS

Intersection capacity analysis was performed at the study intersections under Existing Conditions to evaluate the intersection's ability to process traffic volumes. Intersection capacity results are expressed as a level of service (LOS) letter. LOS is used to provide a qualitative evaluation of the efficiency of operations of an intersection in terms of delay and inconvenience based on certain quantitative calculations. LOS A describes operations with very low average control delay per vehicle while LOS F describes operations with long average delays. The study intersections were evaluated using *Synchro 11* (*Trafficware*) traffic analysis software package.

It is important to note that LOS A to LOS D are generally considered acceptable conditions. However, in some areas, LOS E during peak hours is often deemed acceptable and can indicate an efficient tradeoff between traffic flow and the amount of land devoted to the movement of motor vehicles.

3.1 INTERSECTION CAPACITY ANALYSIS – EXISTING

Table 2 summarizes the capacity analysis findings under Existing (2022) Conditions for weekday afternoon and Saturday peak hours. The *Synchro* analysis worksheets are included in **Appendix B**. Based on this analysis, all movements at the study intersections currently operate at a LOS D or better, with the exception of the northbound approach at the intersection of East Main Street at Lafayette Street. No LOS is reported for this approach due to the road closure during traffic count data collection.

Table 2: Intersection Capacity Analysis – Existing 2022 Conditions

Intersection / Lane Group	Level of Service	
	Weekday Afternoon Peak Hour	Saturday Peak Hour
	Existing (2022)	Existing (2022)
East Main Street at Lafayette Street (signalized)		
Eastbound Through/Right	A	A
Westbound Left/Through	A	A
Northbound Left	-	-
Northbound Right	-	-
Southbound Left	D	D
Southbound Through/Right	A	B
East Main Street at West Site Drive, Exit (unsignalized)		
Eastbound Left/Through	A	A
Westbound Through/Right	A	A
Southbound Left/Right	B	C
Lafayette Street at South Site Driveway (unsignalized)		
Eastbound Right	A	A
Southbound Through/Right	A	A
Lafayette Street at North Site Driveway (unsignalized)		
Eastbound Right	A	A
Southbound Through/Right	A	A

4. BACKGROUND CONDITIONS

The background traffic scenario is reflective of Future Conditions if the proposed development was not built. Background Conditions include traffic associated with other nearby, expected, upcoming developments, as well as traffic volumes adjusted using a calculated annual growth rate. Currently, a mixed-use development is under construction at 819 East Main Street, southeast of the proposed hybrid adult use cannabis retailer and medical marijuana dispensary. Estimated trip generation from the 819 East Main Street Traffic Access Impact Study was reviewed and compared against the statistical data published by the latest edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. The background trips estimated from the ITE *Trip Generation Manual* were slightly higher than the number of trips estimated in the background development Traffic Impact Study. Therefore, to be conservative, the

background development trips estimated by ITE were used. **Table 3** summarizes the site-generated traffic estimated for the background development during the weekday afternoon and Saturday peak hours.

Table 3: Background Trip Generation Summary

Location	Type	Use	ITE Land Use Code	Size	Units	PM Peak Hour			SAT Peak Hour		
						In	Out	Total	In	Out	Total
Stamford	Background	Multifamily Housing (Mid-Rise)	221	130	Dwellings	34	23	57	26	26	52
Stamford	Background	Strip Retail Plaza	822	2,900	Square Feet	20	18	38	10	9	19
Total						54	41	95	36	35	71

Background development trips are added to future traffic volumes to represent the no-build future condition. To calculate future (2023) traffic volumes, an annual growth rate of 0.7% was applied to the collected count data. Due to the road closure on Lafayette Street south of East Main Street, existing count data was supplemented with count data from the 819 East Main Street Traffic Access Impact Study and counts collected by the city of Stamford in 2017. 2024 was used as the future build year for the 819 East Main Street Traffic Access Impact Study. To be conservative, the 2024 volumes were used for the 2023 future analysis where traffic counts were unavailable due to the road closure. Since the referenced Traffic Access Impact Study did not analyze the Saturday peak period, 2017 counts were projected to 2023 at an annual growth rate of 0.7%. Supplemental traffic volume data is included in **Appendix C**. The Background (2023) Conditions peak-hour traffic volumes are shown on **Figures 4 & 5**.

4.1 INTERSECTION CAPACITY ANALYSIS – BACKGROUND

Table 4 summarizes the capacity analysis findings under Background (2023) Conditions for weekday afternoon and Saturday peak hours. The *Synchro* analysis worksheets are included in **Appendix B**.

Table 4: Intersection Capacity Analysis - Background 2023 Conditions

Intersection / Lane Group	Level of Service	
	Weekday Afternoon Peak Hour	Saturday Peak Hour
	Background (2023)	Background (2023)
East Main Street at Lafayette Street (signalized)		
Eastbound Through/Right	A	A
Westbound Left/Through	A	A
Northbound Left	D	C
Northbound Right	A	A

Intersection / Lane Group	Level of Service	
	Weekday Afternoon Peak Hour	Saturday Peak Hour
	Background (2023)	Background (2023)
Southbound Left	D	D
Southbound Through/Right	B	B
East Main Street at West Site Drive, Exit (unsignalized)		
Eastbound Left/Through	A	A
Westbound Through/Right	A	A
Southbound Left/Right	B	C
Lafayette Street at South Site Driveway (unsignalized)		
Eastbound Right	A	A
Southbound Through/Right	A	A
Lafayette Street at North Site Driveway (unsignalized)		
Eastbound Right	A	A
Southbound Through/Right	A	A

5. SITE DEVELOPMENT

The proposed hybrid adult use cannabis retailer and medical marijuana dispensary has a gross floor area of 4,873 square feet. The existing driveway traffic flow patterns connecting the site to Lafayette Street and East Main Street are to remain.

5.1 TRIP GENERATION

The proposed site-generated peak-hour trips were estimated using statistical data published by the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. **Table 5** summarizes the site-generated traffic estimated for the proposed development during the weekday afternoon and Saturday peak hours.

Table 5: Trip Generation Summary

Location	Type	Use	ITE Land Use Code	Size	Units	PM Peak Hour			SAT Peak Hour		
						In	Out	Total	In	Out	Total
Stamford	Proposed	Marijuana Dispensary	882	4,873	SF	59	61	120	70	70	140

As shown in Table 5, the proposed project is estimated to generate a total of 120 new vehicle trips during the weekday PM peak hour (59 vehicles entering and 61 vehicles exiting) and 140 total new vehicle trips during the Saturday peak hour (70 vehicles entering and 70 vehicles exiting). It should be noted that ITE defines “Marijuana Dispensary” as a facility that sells cannabis to both patients and retail consumers. The proposed development is currently operating as an exclusively medical cannabis dispensary, the new trips are a conservative estimate of additional trips for the proposed hybrid adult use cannabis retailer and medical marijuana dispensary. Therefore, the medical trips are double counted.

5.2 TRIP DISTRIBUTION

The distribution of the site-generated traffic was estimated based on review of the roadway traffic patterns in the vicinity of the site. Roadway traffic patterns were determined based on turning movement counts collected by SLR, and the supplemental traffic volume data used for the background condition. The site trip distribution percentages projected from this data are shown in **Table 6** and presented graphically in **Figure 6**.

Table 6: Trip Distribution Summary

To/From	via	Enter / Exit
East	East Main Street	40%
West	East Main Street	45%
North	Lafayette Street	10%
South	Lafayette Street	5%
		100%

5.3 TRIP ASSIGNMENT

Based on the proposed development trip generation and trip distribution calculations, the site-generated trips were assigned to the study area intersections accordingly during the weekday afternoon and Saturday peak hours as shown on **Figures 7 and 8**, respectively.

6. COMBINED CONDITIONS

The combined traffic scenario is reflective of Future (2023) Conditions once the proposed development is opened. Future (2023) Conditions peak-hour traffic volumes were estimated by adding the calculated development trip assignment (shown on Figures 7 and 8) to the Background Conditions traffic volumes (shown on Figures 4 and 5). The resultant Future (2023) Conditions peak-hour traffic volumes are shown on **Figures 9 and 10**.

6.1 INTERSECTION CAPACITY ANALYSIS – COMBINED

Intersection capacity analysis was performed at the study intersections under Future (2023) Conditions to evaluate the intersection's ability to process traffic volumes after the proposed development is opened. These evaluations were used to determine possible traffic impacts from the proposed facility based on a comparison of background and future traffic operations. **Table 7** summarizes the capacity analysis output under Future (2023) Conditions (background and combined) for weekday afternoon and Saturday peak hours. The *Synchro* analysis worksheets are included in **Appendix B**.

Table 7: Intersection Capacity Analysis – Future 2023 Conditions

Intersection / Lane Group	Level of Service			
	Weekday Afternoon Peak Hour	Saturday Peak Hour	Weekday Afternoon Peak Hour	Saturday Peak Hour
	Background (2023)	Background (2023)	Combined (2023)	Combined (2023)
East Main Street at Lafayette Street (signalized)				
Eastbound Through/Right	A	A	A	A
Westbound Left/Through	A	A	A	A
Northbound Left	D	C	D	C
Northbound Right	A	A	A	A
Southbound Left	D	D	D	D
Southbound Through/Right	B	B	B	B
East Main Street at West Site Drive, Exit (unsignalized)				
Eastbound Left/Through	A	A	A	A
Westbound Through/Right	A	A	A	A
Southbound Left/Right	B	C	C	D
Lafayette Street at South Site Driveway (unsignalized)				
Eastbound Right	A	A	A	A
Southbound Through/Right	A	A	A	A
Lafayette Street at North Site Driveway (unsignalized)				
Eastbound Right	A	A	A	A
Southbound Through/Right	A	A	A	A

As shown in Table 7, it is expected that all movements at the study intersections will continue to operate at a LOS of D or better. It is important to note that LOS A to LOS D is generally considered acceptable conditions and, in some cases, LOS E during peak hours is deemed acceptable and can indicate an efficient tradeoff between traffic flow exiting a site, traffic flow on the main artery, and the amount of land devoted to the movement of motor vehicles.

7. PARKING ANALYSIS

The parking analysis for the proposed dispensary was performed to generally estimate the parking supply and demand on the subject parcel. Based on review of the existing survey there are 94 shared parking spaces provided on-site. Parking counts were collected at the start and end of the weekday PM and Saturday peak hours in the shared lot at 814 East Main Street. This data is shown in **Table 8**, and included in Appendix B. This data suggests the businesses currently at 814 East Main Street utilize a maximum of 56 parking spaces during the Saturday period, leaving 38 available parking spaces. A maximum of 41 parking spaces are expected to be occupied during the weekday afternoon peak period, leaving 53 available parking spaces available for patrons of the proposed dispensary.

Table 8: Trip Distribution Summary

Time		Occupied Parking Spaces
Weekday Afternoon	Before 4:00 pm	41
	After 6:00 pm	35
Saturday	Before 11:00 am	52
	After 1:00 pm	56

ITE Parking Generation Manual would suggest a facility of this size would, on average, have a parking demand of some 35 spaces. A closer look at the data indicates that regardless of the size of the facility, no more than 20 parked vehicles were observed. Further, this data accounts for sales of both medical and retail cannabis when this facility already operates as a medical cannabis dispensary. One additional reference point is that the expectation for peak operations is 35 to 40 transactions per hour. Since the average transaction takes less than 15 minutes from entering the site to exiting the site, there would likely be no more than 10 or so patron cars on site at any one time. For these reasons, we feel that even during the peak times, the 35 spaces available should adequately handle parking demands for the retail cannabis transactions once the facility becomes established. Some novelty peaks may materialize in the early weeks of operations, and proper planning for potential overflow should be done.

CONCLUSIONS AND RECOMMENDATIONS

This traffic impact study was conducted to evaluate the impact of the proposed hybrid adult use cannabis retailer and medical marijuana dispensary on the adjacent roadway network and study intersections. Based on our review of existing, background, and future condition traffic analysis, we offer the following:

1. Data collection and traffic volumes were obtained by SLR within the study area. Turning movement counts were conducted at the study intersections during weekday peak period of 4:00 PM to 6:00 PM on Thursday October 27, 2022, and Saturday peak period of 11:00 AM to 1:00 PM on November 5, 2022.
2. The proposed project is estimated to generate a total of 120 new vehicle trips during the weekday PM peak hour (59 vehicles entering and 61 vehicles exiting) and 140 total new vehicle trips during the Saturday peak hour (70 vehicles entering and 70 vehicles exiting) based on ITE statistics. This is conservative since the facility currently is open for medical cannabis transactions which are included in the ITE estimate. The ITE-estimated trip generation is also higher than the 35 to 40 trips projected by the operator during peak hours.
3. The proposed development is expected to occur by 2023; therefore, 2023 was used for the future background and combined conditions. There is one development currently under construction within the vicinity of the site. The future analysis includes anticipated trips generated by this development.
4. Intersection capacity analysis was completed for the existing and future conditions at the study intersections during the weekday afternoon and Saturday peak hours. In the existing conditions, all movements operate at a LOS of D or better. In the future Background and Combined conditions, it is expected that all of movements at the study intersections will continue to operate at a LOS of D or better.
5. Based on the parking analysis results, it is expected that the shared 94 parking spaces located at 814 East Main Street will provide adequate parking for the patrons of the proposed hybrid adult use cannabis retailer and medical marijuana dispensary.
6. We suggest that actual future traffic conditions be monitored after this proposed development has opened and that the City of Stamford work with CTDOT if deemed appropriate to do the following:
 - i. Adjust signal timings to optimize traffic flow at the study intersections.
 - ii. Consider alternate sources of nearby parking to accommodate any initial parking shortfall and deploy Curaleaf team members at the site to assist in directing parking during the early weeks of opening.

FIGURES

Figure 1: Locus Map

Figure 2: Existing 2022 PM Peak Hour Traffic Volumes

Figure 3: Existing 2022 SAT Peak Hour Traffic Volumes

Figure 4: Background 2023 PM Peak Hour Traffic Volumes

Figure 5: Background 2023 SAT Peak Hour Traffic Volumes

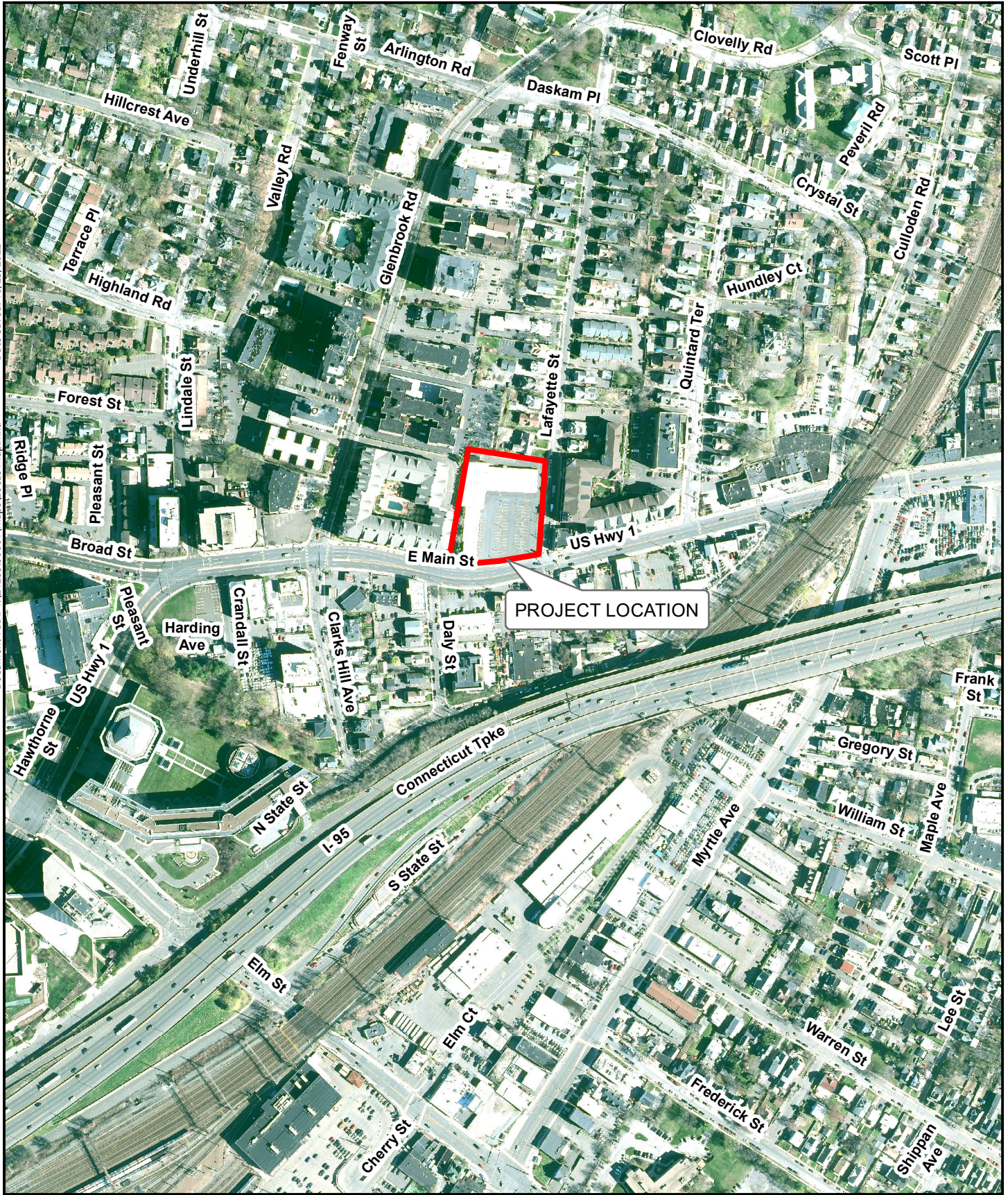
Figure 6: Traffic Distribution

Figure 7: Site Generated Trip Assignment – PM Peak Hour

Figure 8: Site Generated Trip Assignment – SAT Peak Hour

Figure 9: Future 2023 PM Peak Hour Traffic Volumes

Figure 10: Future 2023 SAT Peak Hour Traffic Volumes



195 CHURCH STREET
7TH FLOOR
NEW HAVEN, CT 06511
203.344.7887

LOCUS MAP

MEDICAL TO HYBRID CANABIC LICENSE
CURALEAF

814 EAST MAIN STREET
STAMFORD, CONNECTICUT



0 500
Feet

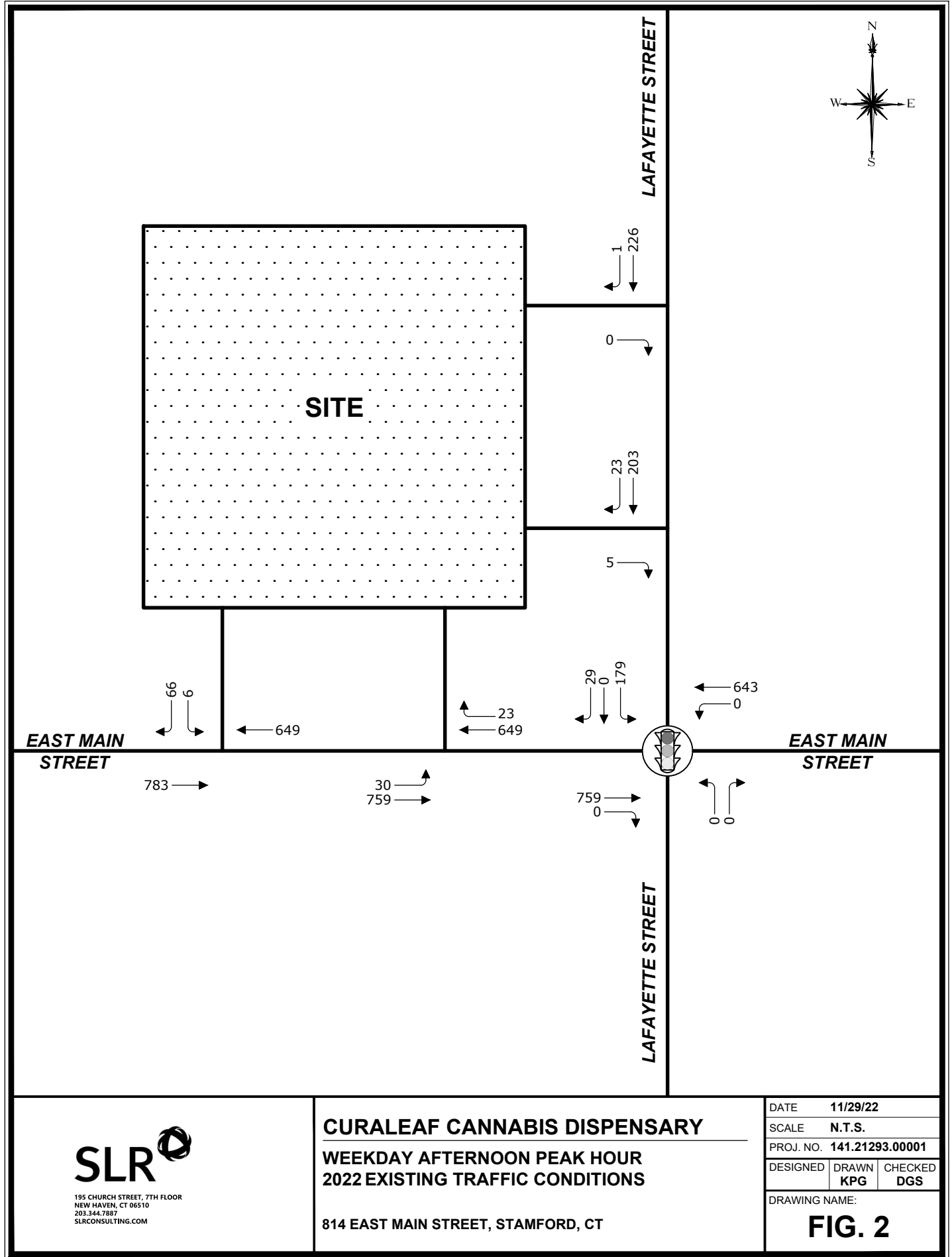
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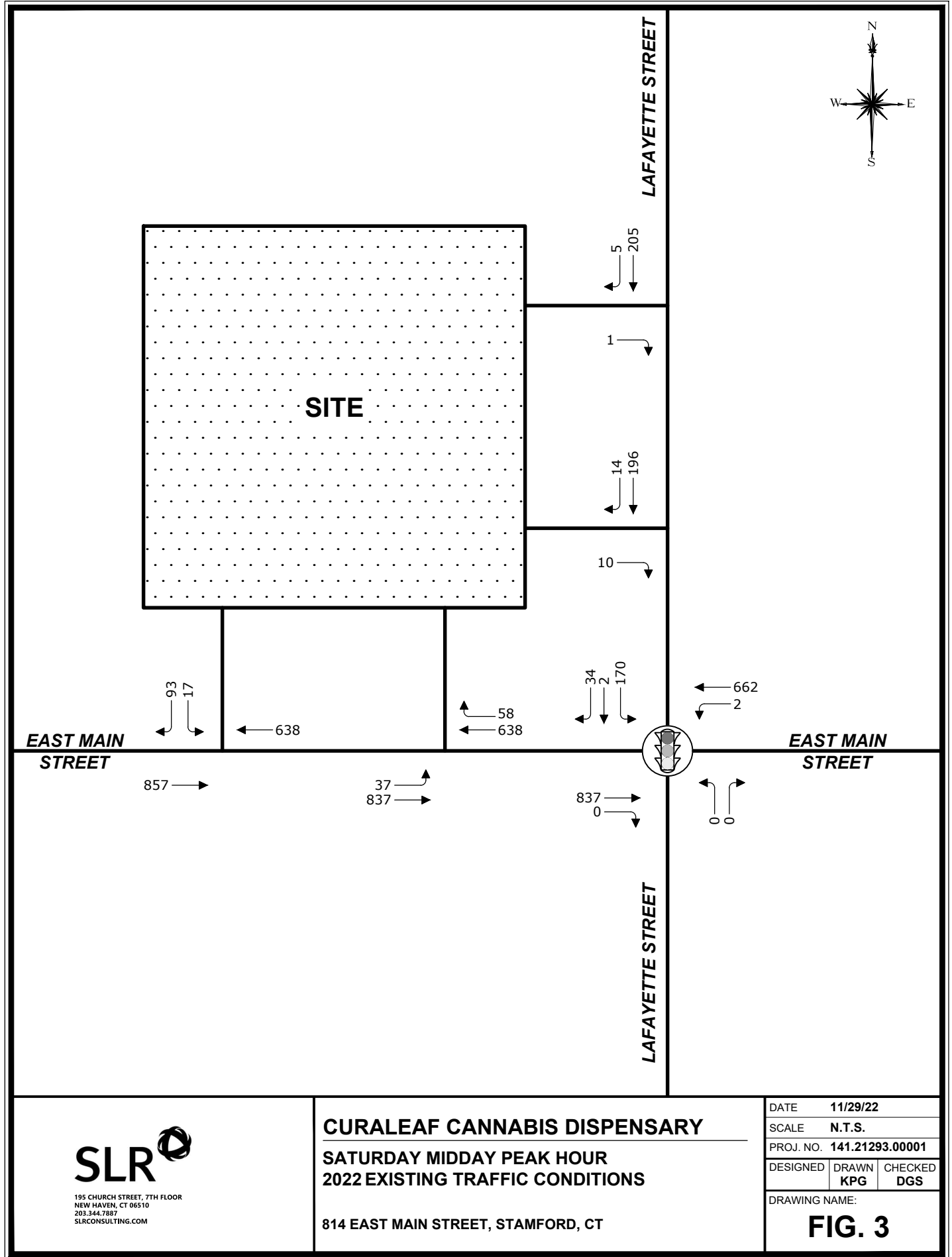
DATE 10/25/2022

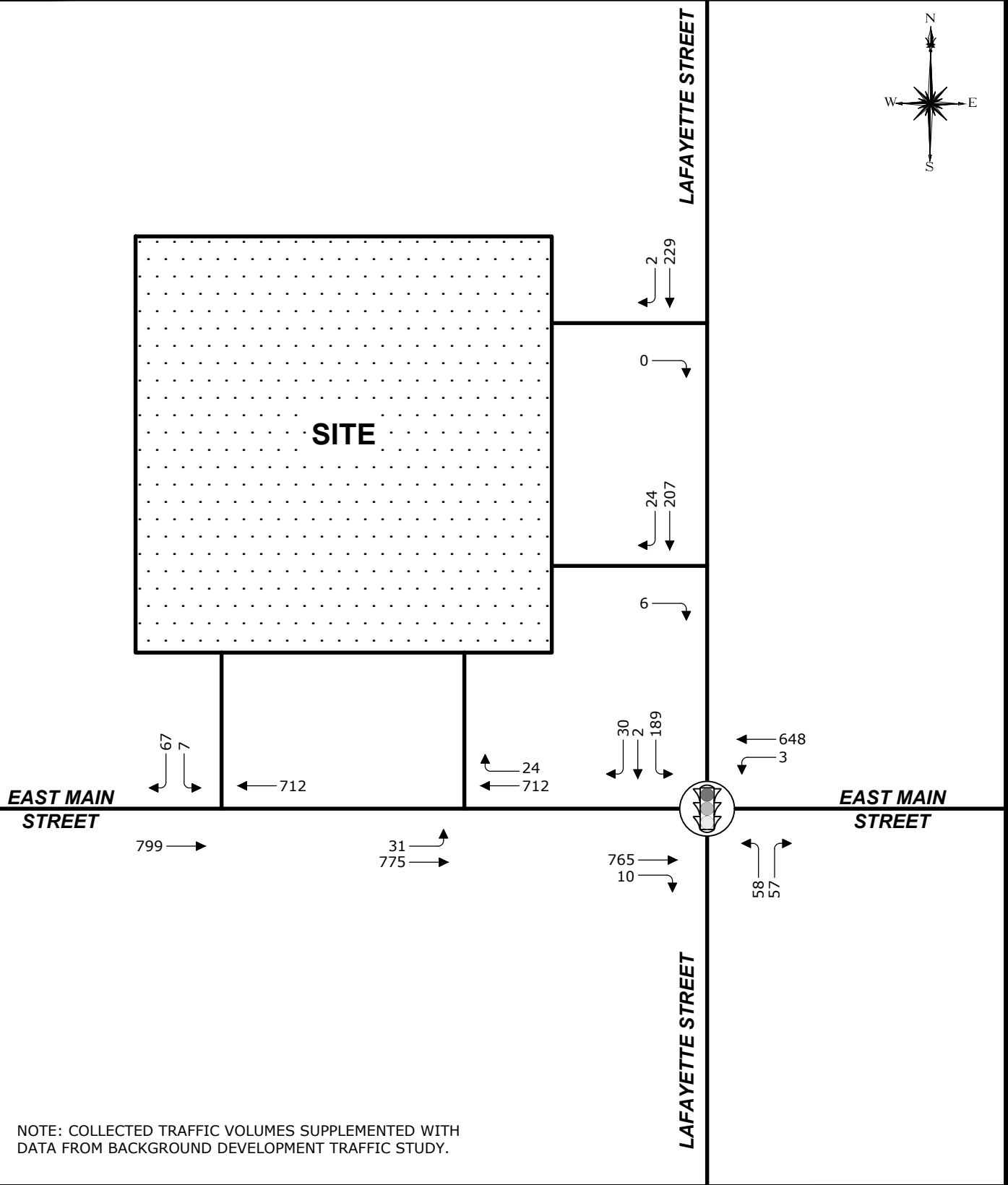
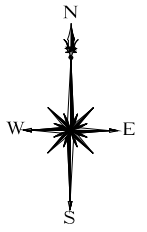
141.21293.00001

PROJ. NO.

FIG. 1







NOTE: COLLECTED TRAFFIC VOLUMES SUPPLEMENTED WITH DATA FROM BACKGROUND DEVELOPMENT TRAFFIC STUDY.

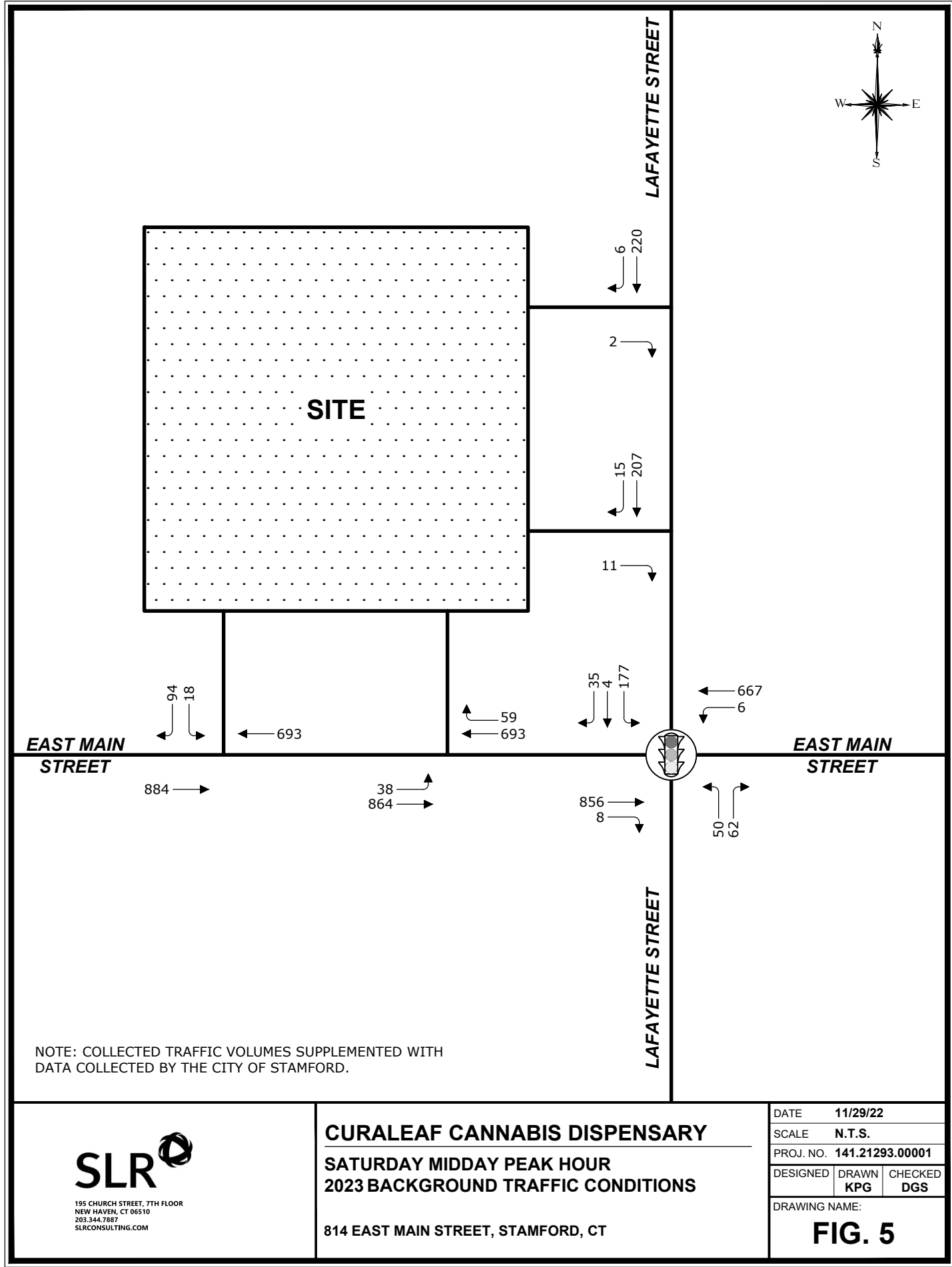


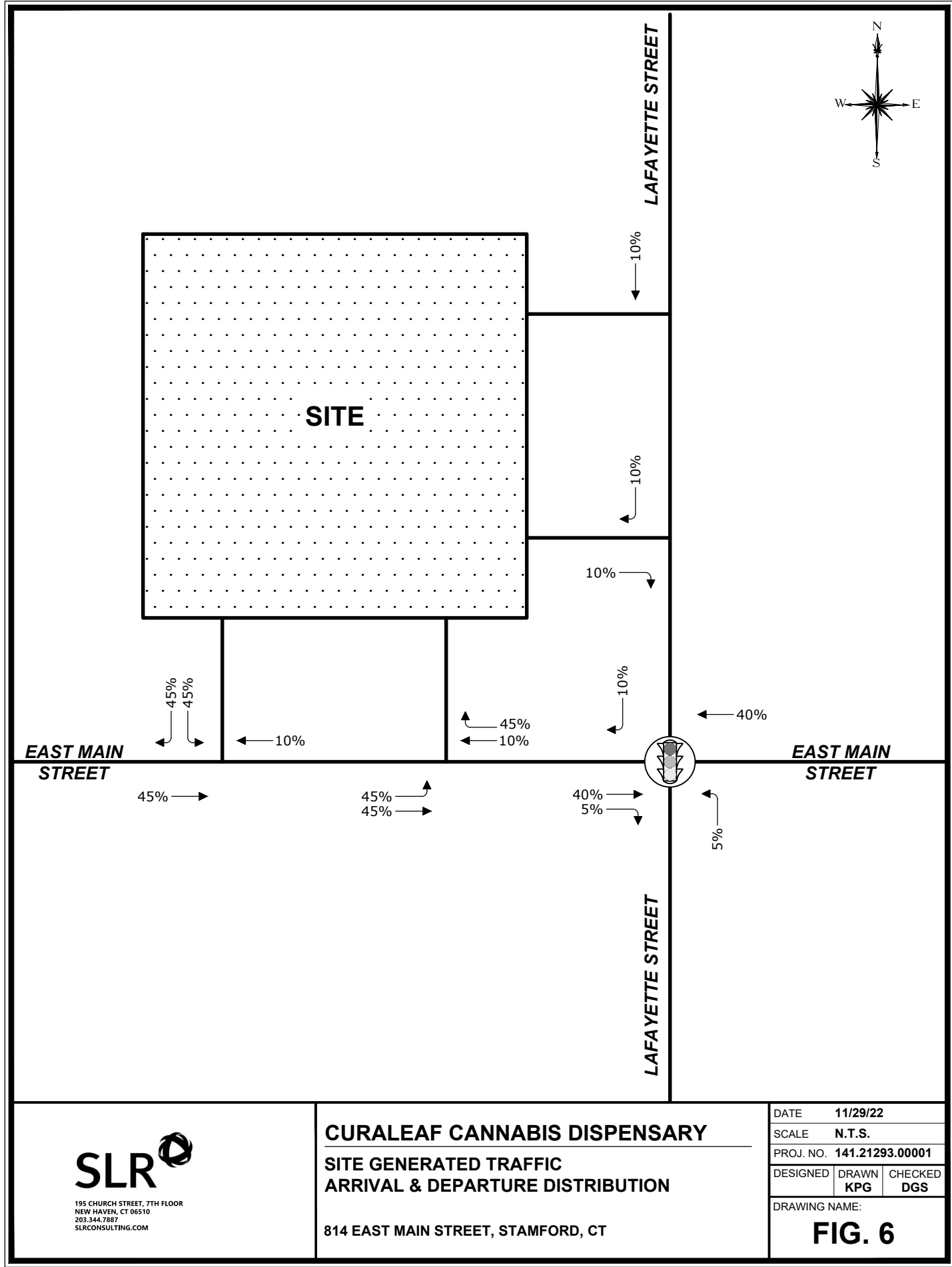
CURALEAF CANNABIS DISPENSARY

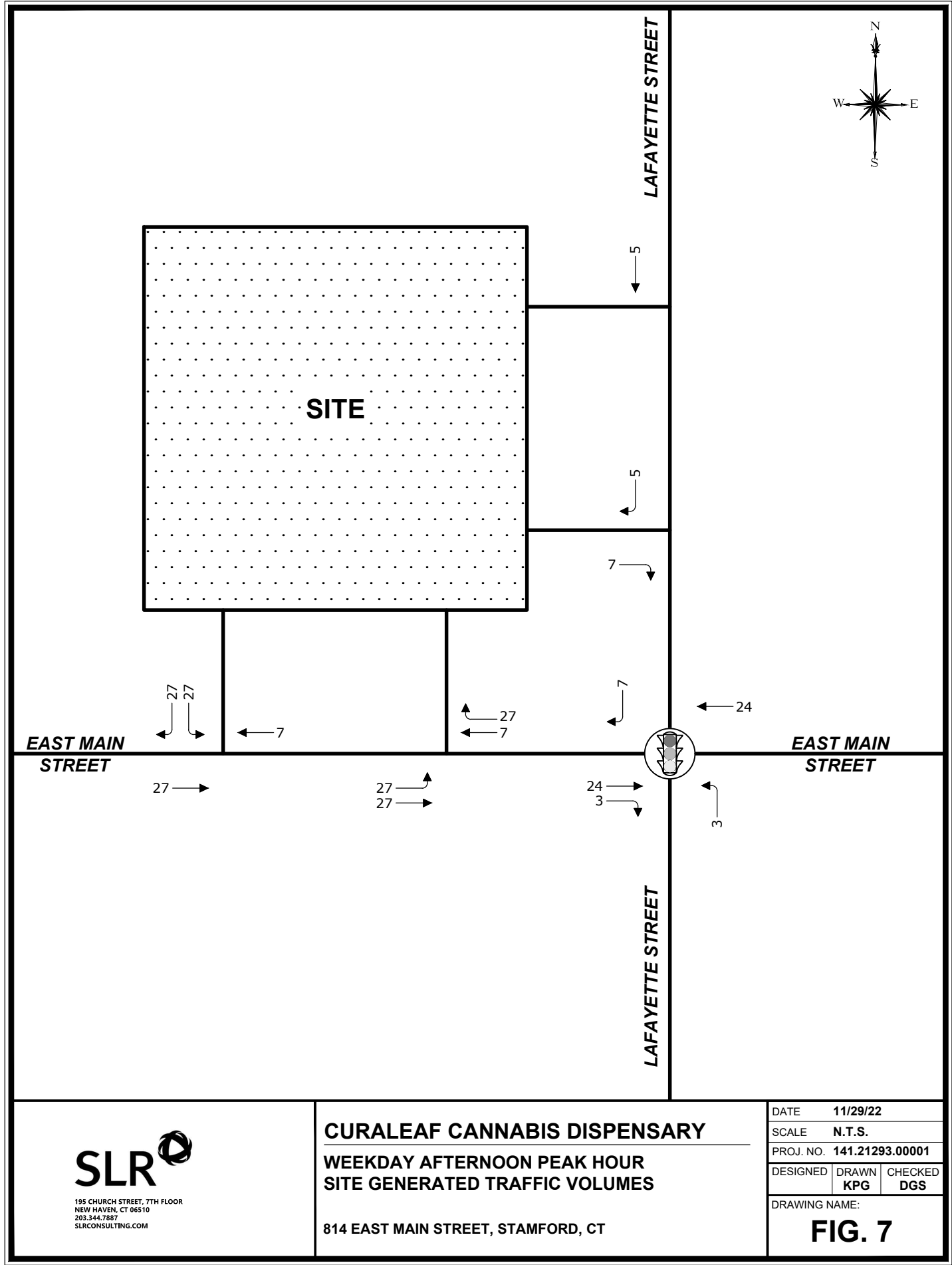
WEEKDAY AFTERNOON PEAK HOUR
2023 BACKGROUND TRAFFIC CONDITIONS

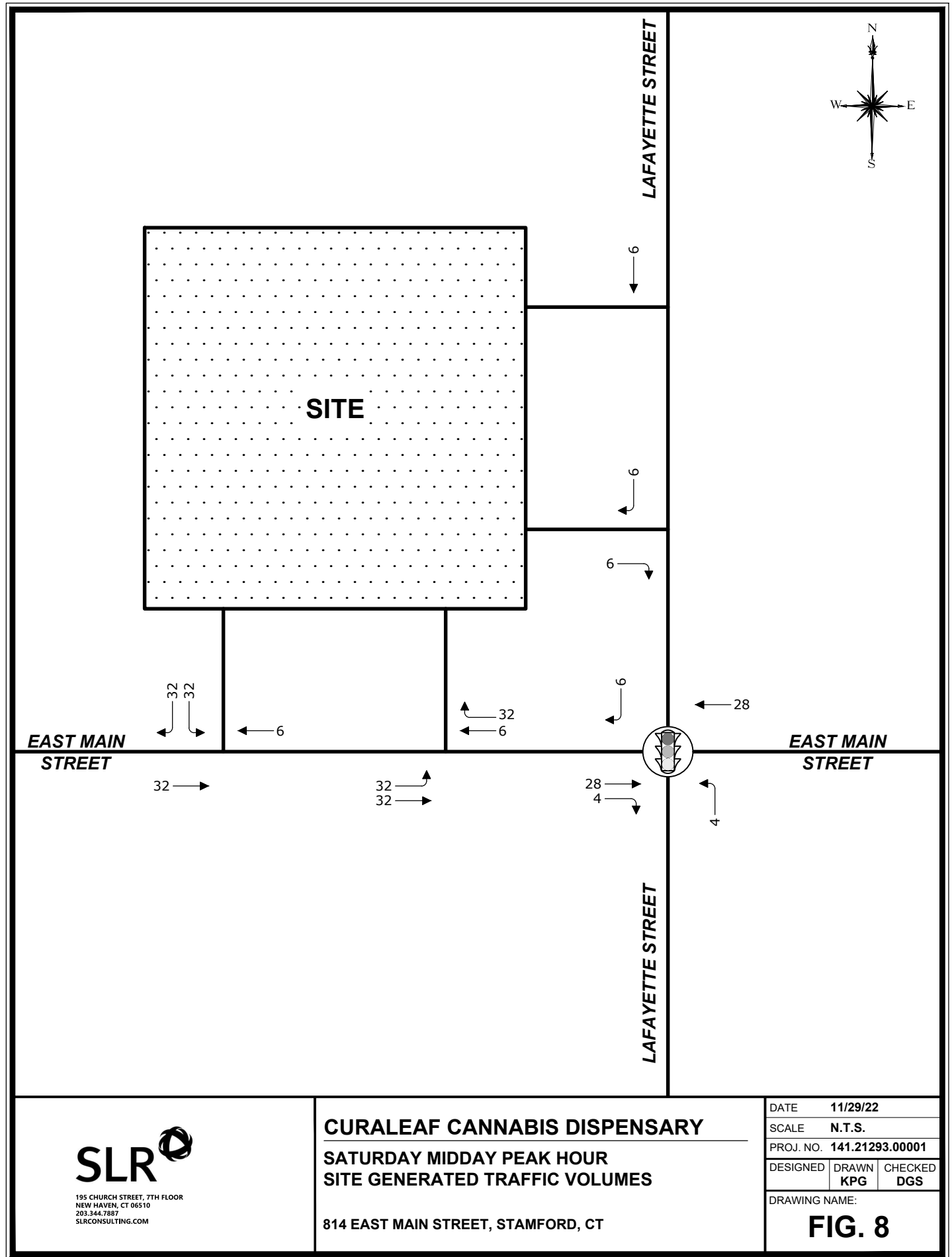
814 EAST MAIN STREET, STAMFORD, CT

DATE		11/29/22	
SCALE		N.T.S.	
PROJ. NO.		141.21293.00001	
DESIGNED	DRAWN	CHECKED	
	KPG	DGS	
DRAWING NAME:			
FIG. 4			









SLR

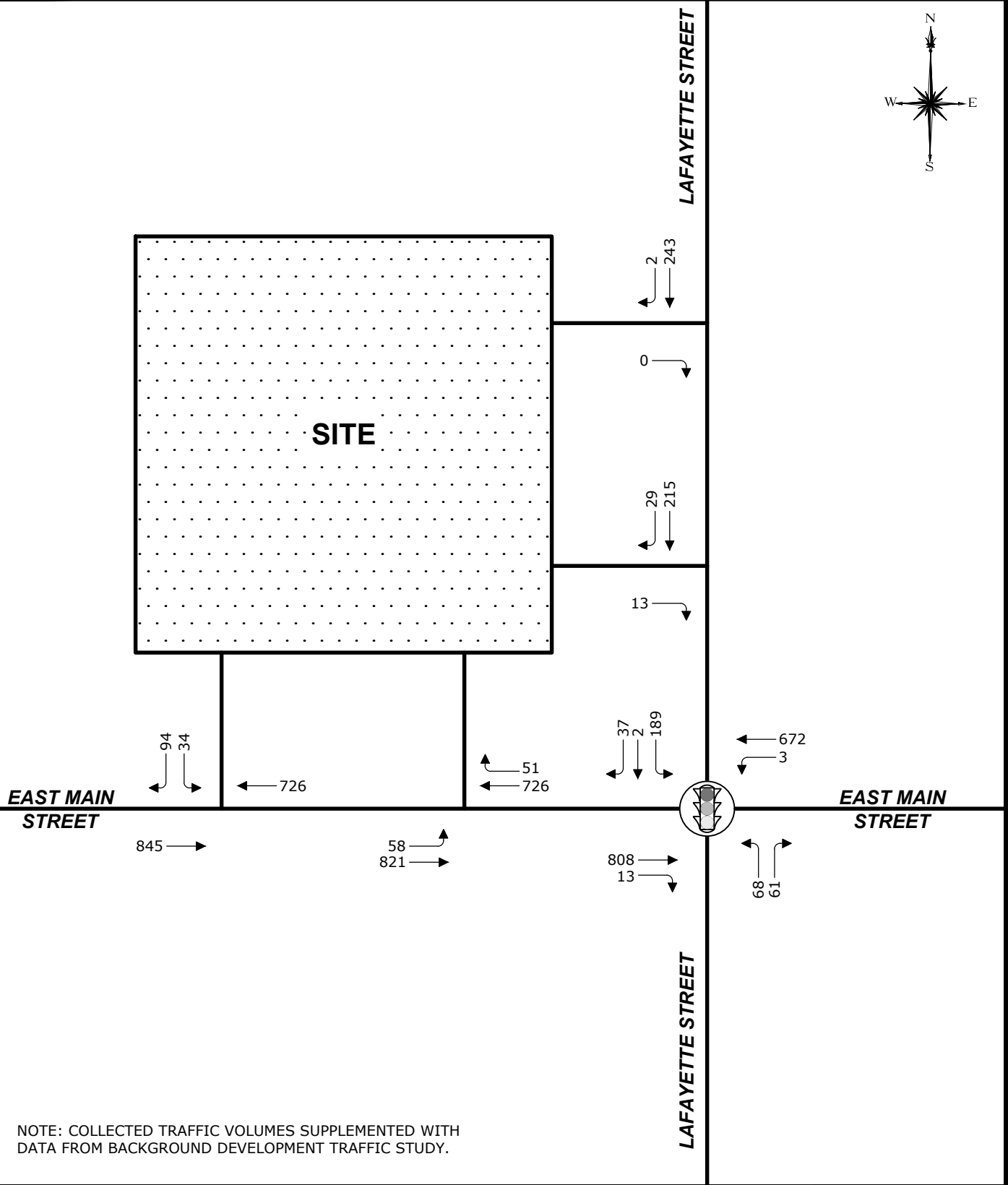
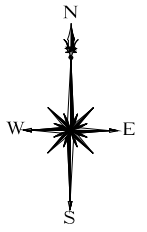
195 CHURCH STREET, 7TH FLOOR
NEW HAVEN, CT 06510
203.344.7887
SLRCONSULTING.COM

CURALEAF CANNABIS DISPENSARY

**SATURDAY MIDDAY PEAK HOUR
SITE GENERATED TRAFFIC VOLUMES**

814 EAST MAIN STREET, STAMFORD, CT

DATE 11/29/22		
SCALE N.T.S.		
PROJ. NO. 141.21293.00001		
DESIGNED	DRAWN	CHECKED
	KPG	DGS
DRAWING NAME:		
FIG. 8		



NOTE: COLLECTED TRAFFIC VOLUMES SUPPLEMENTED WITH DATA FROM BACKGROUND DEVELOPMENT TRAFFIC STUDY.

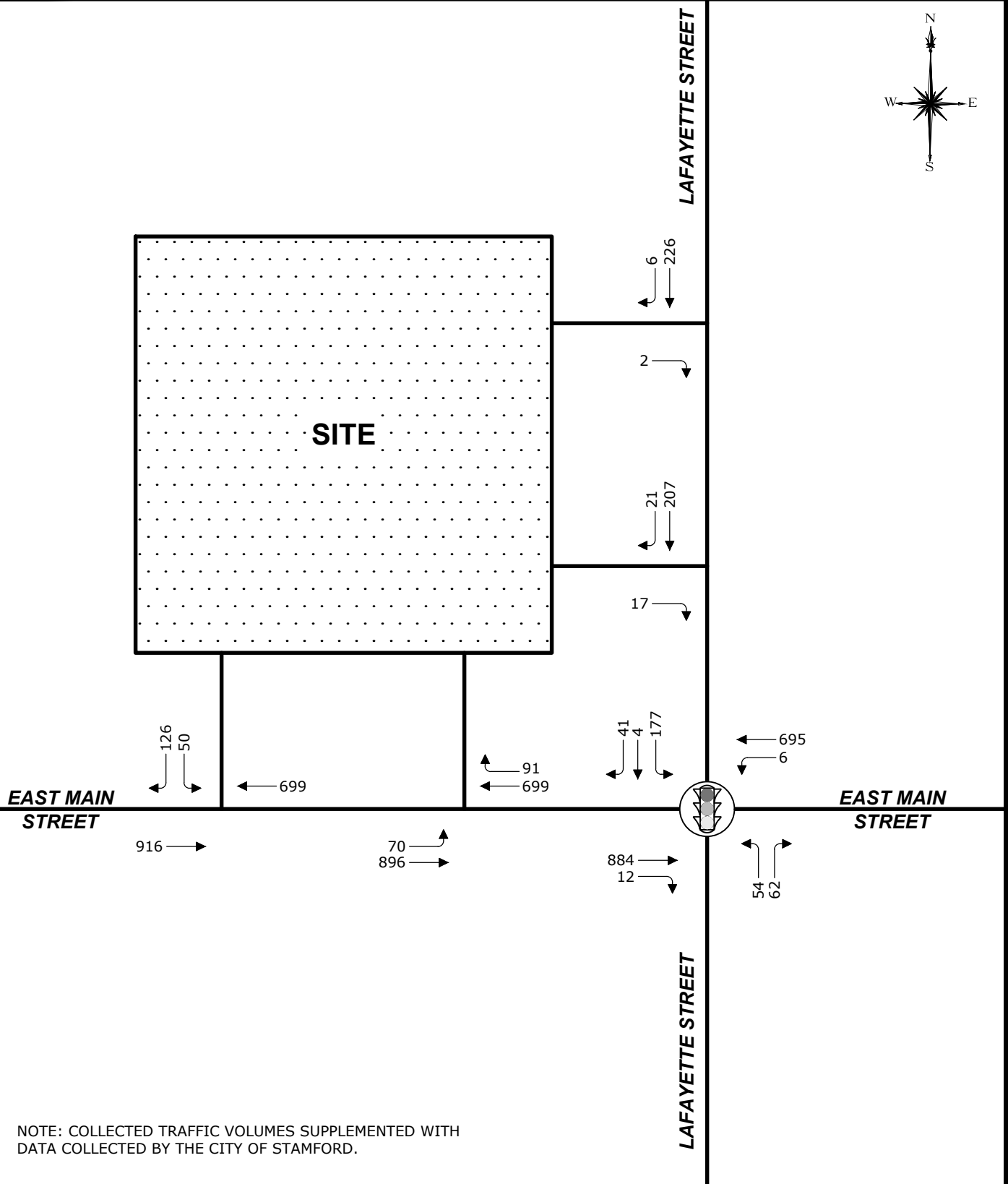
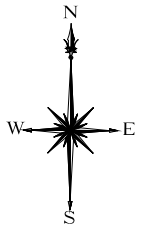


CURALEAF CANNABIS DISPENSARY

WEEKDAY AFTERNOON PEAK HOUR
2023 COMBINED TRAFFIC CONDITIONS

814 EAST MAIN STREET, STAMFORD, CT

DATE		11/29/22	
SCALE		N.T.S.	
PROJ. NO.		141.21293.00001	
DESIGNED	DRAWN	CHECKED	
	KPG	DGS	
DRAWING NAME:			
FIG. 9			



NOTE: COLLECTED TRAFFIC VOLUMES SUPPLEMENTED WITH DATA COLLECTED BY THE CITY OF STAMFORD.



CURALEAF CANNABIS DISPENSARY

**SATURDAY MIDDAY PEAK HOUR
2023 COMBINED TRAFFIC CONDITIONS**

814 EAST MAIN STREET, STAMFORD, CT

DATE	11/29/22		
SCALE	N.T.S.		
PROJ. NO.	141.21293.00001		
DESIGNED	DRAWN	CHECKED	
	KPG	DGS	
DRAWING NAME:			
FIG. 10			

APPENDIX A

DATA COLLECTION

File Name: G:\RTC ALL COUNTS 2016\JAN 2022\1410-1TH.ppd

Start Date: 10/27/2022

Start Time: 4:00:00 PM

Site Code: 00000001

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 5:00 TO 6:00 P.M.

Comment 4: CARS

Start Time	LAFAYETTE ST. SOUTHBOUND					E. MAIN ST. WESTBOUND					CLOSED NORTHBOUND					E. MAIN ST. EASTBOUND					
	Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		
4:00:00 PM	7	0	33	15		0	118	0	1		0	0	1	0		0	166	0	3		
4:15:00 PM	11	0	37	23		0	115	0	0		0	0	0	1		0	175	0	9		
4:30:00 PM	7	0	43	19		0	155	0	1		0	0	0	0		0	170	0	4		
4:45:00 PM	7	0	29	25		0	130	0	2		0	0	0	1		0	180	0	1		
5:00:00 PM	10	0	38	21		0	145	0	1		0	0	0	3		0	190	0	2		
5:15:00 PM	5	0	51	13		0	174	0	0		0	0	0	2		0	174	0	8		
5:30:00 PM	5	0	39	24		0	166	0	0		0	0	0	5		0	200	0	2		
5:45:00 PM	9	0	51	21		0	152	0	1		0	0	0	8		0	190	0	6		

Comment 4: TRUCKS

[illegible]

File Name: G:\RTC ALL COUNTS 2016\JAN 2022\1410-1TH.ppd

Start Date: 10/27/2022

Start Time: 4:00:00 PM

Site Code: 00000001

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 5:00 TO 6:00 P.M.

Comment 4: BUSES

	LAFAYETTE ST. SOUTHBOUND				E. MAIN ST. WESTBOUND				CLOSED NORTHBOUND				E. MAIN ST. EASTBOUND				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
4:00:00 PM	1	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	
4:15:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	
4:30:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	
4:45:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	
5:00:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	
5:15:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
5:45:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	

File Name: G:\RTC ALL COUNTS 2016\JAN 2022\1410-1TH.ppd

Start Date: 10/27/2022

Start Time: 4:00:00 PM

Site Code: 00000001

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 5:00 TO 6:00 P.M.

Comment 4: TOTAL

Start Time	LAFAYETTE ST. SOUTHBOUND					E. MAIN ST. WESTBOUND					CLOSED NORTHBOUND					E. MAIN ST. EASTBOUND					
	Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		
4:00:00 PM	8	0	34	15		0	120	0	1		0	0	1	0		0	169	0	3		
4:15:00 PM	11	0	38	23		0	116	0	0		0	0	0	1		0	177	0	9		
4:30:00 PM	7	0	43	19		0	158	0	1		0	0	0	0		0	173	0	4		
4:45:00 PM	7	0	29	25		0	133	0	2		0	0	0	1		0	181	0	1		
5:00:00 PM	10	0	38	21		0	146	0	1		0	0	0	3		0	192	0	2		
5:15:00 PM	5	0	51	13		0	177	0	0		0	0	0	2		0	175	0	8		
5:30:00 PM	5	0	39	24		0	166	0	0		0	0	0	5		0	201	0	2		
5:45:00 PM	9	0	51	21		0	154	0	1		0	0	0	8		0	191	0	6		

File Name: g:\rtc all counts 2016\jan 2022\1410-23th.ppd

Start Date: 10/27/2022

Start Time: 4:00:00 PM

Site Code: 00000023

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 4:00 TO 5:00 P.M.

Comment 4: CARS

Start Time	PLAZA DRIVEWAYS 2 & 3 SOUTHBOUND					E. MAIN ST. WESTBOUND				NORTHBOUND					E. MAIN ST. EASTBOUND				
	Right	Thru	Left	Peds		Right	Thru	Left	Peds	Right	Thru	Left	Peds		Right	Thru	Left	Peds	
4:00:00 PM	13	0	6	4		13	0	0	0	0	0	0	0		0	0	9	0	
4:15:00 PM	17	0	3	0		7	0	0	0	0	0	0	0		0	0	11	0	
4:30:00 PM	25	0	2	10		10	0	0	0	0	0	0	0		0	0	9	0	
4:45:00 PM	20	0	2	7		8	0	0	0	0	0	0	0		0	0	5	0	
5:00:00 PM	17	0	1	10		4	0	0	0	0	0	0	0		0	0	10	0	
5:15:00 PM	15	0	1	11		7	0	0	0	0	0	0	0		0	0	6	0	
5:30:00 PM	18	0	3	14		4	0	0	0	0	0	0	0		0	0	3	0	
5:45:00 PM	16	0	1	10		8	0	0	0	0	0	0	0		0	0	11	0	

Comment 4: TRUCKS

[illegible]

Comment 4: BUSES

[illegible]

File Name: g:\rtc all counts 2016\jan 2022\1410-23th.ppd

Start Date: 10/27/2022

Start Time: 4:00:00 PM

Site Code: 00000023

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 4:00 TO 5:00 P.M.

Comment 4: TOTAL

Start Time	PLAZA DRIVEWAYS 2 & 3 SOUTHBOUND					E. MAIN ST. WESTBOUND				NORTHBOUND					E. MAIN ST. EASTBOUND				
	Right	Thru	Left	Peds		Right	Thru	Left	Peds	Right	Thru	Left	Peds		Right	Thru	Left	Peds	
4:00:00 PM	13	0	6	4		13	0	0	0	0	0	0	0		0	0	9	0	
4:15:00 PM	17	0	3	0		7	0	0	0	0	0	0	0		0	0	11	0	
4:30:00 PM	25	0	2	10		10	0	0	0	0	0	0	0		0	0	9	0	
4:45:00 PM	20	0	2	7		8	0	0	0	0	0	0	0		0	0	5	0	
5:00:00 PM	17	0	1	10		4	0	0	0	0	0	0	0		0	0	10	0	
5:15:00 PM	15	0	1	11		7	0	0	0	0	0	0	0		0	0	6	0	
5:30:00 PM	18	0	3	14		4	0	0	0	0	0	0	0		0	0	3	0	
5:45:00 PM	16	0	1	10		8	0	0	0	0	0	0	0		0	0	11	0	

File Name: G:\RTC ALL COUNTS 2016\JAN 2022\1410-45TH.ppd

Start Date: 10/27/2022

Start Time: 4:00:00 PM

Site Code: 00000034

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 4:00 TO 5:00 P.M.

Comment 4: SOUTH DRIVEWAY

Start Time	LAFAYETTE ST. SOUTHBOUND					WESTBOUND					LAFAYETTE ST. NORTHBOUND					PLAZA DRIVEWAYS 4 & 5 EASTBOUND					
	Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		
4:00:00 PM	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	
4:15:00 PM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	
4:30:00 PM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	
4:45:00 PM	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
5:00:00 PM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
5:15:00 PM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
5:30:00 PM	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	
5:45:00 PM	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	

Comment 4: NORTH DRIVEWAY

[illegible]

File Name: g:\rtc all counts 2016\jan 2022\1410-1s.ppd

Start Date: 11/5/2022

Start Time: 11:00:00 AM

Site Code: 00000002

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 12:00 TO 1:00 P.M.

Comment 4: CARS

Start Time	LAFAYETTE ST. SOUTHBOUND					E. MAIN ST. WESTBOUND					STREET CLOSED NORTHBOUND					E. MAIN ST. EASTBOUND					
	Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		
11:00:00 AM	5	0	56	0		0	139	0	0		0	0	0	0		0	144	0	0		
11:15:00 AM	12	1	49	0		0	157	0	0		0	0	0	0		0	147	0	0		
11:30:00 AM	11	0	40	0		0	168	1	0		0	0	0	0		0	198	0	0		
11:45:00 AM	3	3	41	0		0	164	0	0		0	0	0	0		0	174	0	0		
12:00:00 PM	9	2	36	0		0	150	1	0		0	0	0	0		0	170	0	0		
12:15:00 PM	6	0	39	0		0	163	0	0		0	0	0	0		0	225	1	0		
12:30:00 PM	11	0	44	0		0	176	0	0		0	0	0	0		0	201	1	0		
12:45:00 PM	8	0	51	0		0	173	1	0		0	0	0	0		0	237	0	0		

[illegible]

Comment 4: BUSES

[illegible]

File Name: g:\rtc all counts 2016\jan 2022\1410-1s.ppd

Start Date: 11/5/2022

Start Time: 11:00:00 AM

Site Code: 00000002

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 12:00 TO 1:00 P.M.

Comment 4: TOTAL

Start Time	LAFAYETTE ST. SOUTHBOUND					E. MAIN ST. WESTBOUND					STREET CLOSED NORTHBOUND					E. MAIN ST. EASTBOUND					
	Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		
11:00:00 AM	5	0	56	0		0	139	0	0		0	0	0	0		0	144	0	0		
11:15:00 AM	12	1	50	0		0	158	0	0		0	0	0	0		0	147	0	0		
11:30:00 AM	11	0	40	0		0	169	1	0		0	0	0	0		0	199	0	0		
11:45:00 AM	3	3	41	0		0	166	0	0		0	0	0	0		0	175	0	0		
12:00:00 PM	9	2	36	0		0	150	1	0		0	0	0	0		0	171	0	0		
12:15:00 PM	6	0	39	0		0	163	0	0		0	0	0	0		0	227	1	0		
12:30:00 PM	11	0	44	0		0	176	0	0		0	0	0	0		0	202	1	0		
12:45:00 PM	8	0	51	0		0	173	1	0		0	0	0	0		0	237	0	0		

File Name: g:\rtc all counts 2016\jan 2022\1410-23s.ppd

Start Date: 11/5/2022

Start Time: 11:00:00 AM

Site Code: 00000023

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 12:00 TO 1:00 ,P.M.

Comment 4: CARS

Start Time	PLAZA DRIVEWAYS 2 & 3 SOUTHBOUND					E. MAIN ST. WESTBOUND					NORTHBOUND					E. MAIN ST. EASTBOUND					
	Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		
11:00:00 AM	15	0	4	0		8	0	0	0		0	0	0	0		0	0	6	0		
11:15:00 AM	20	0	5	0		10	0	0	0		0	0	0	0		0	0	10	0		
11:30:00 AM	12	0	4	0		15	0	0	0		0	0	0	0		0	0	13	0		
11:45:00 AM	14	0	3	0		12	0	0	0		0	0	0	0		0	0	14	0		
12:00:00 PM	16	0	2	0		17	0	0	0		0	0	0	0		0	0	7	0		
12:15:00 PM	32	0	5	0		16	0	0	0		0	0	0	0		0	0	9	0		
12:30:00 PM	24	0	7	1		9	0	0	0		0	0	0	1		0	0	15	1		
12:45:00 PM	21	0	3	0		16	0	0	0		0	0	0	0		0	0	6	0		

Comment 4: TRUCKS

[illegible]

Comment 4: BUSES

[illegible]

File Name: g:\rtc all counts 2016\jan 2022\1410-23s.ppd

Start Date: 11/5/2022

Start Time: 11:00:00 AM

Site Code: 00000023

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 12:00 TO 1:00 ,P.M.

Comment 4: TOTAL

Start Time	PLAZA DRIVEWAYS 2 & 3 SOUTHBOUND					E. MAIN ST. WESTBOUND				NORTHBOUND					E. MAIN ST. EASTBOUND				
	Right	Thru	Left	Peds		Right	Thru	Left	Peds	Right	Thru	Left	Peds		Right	Thru	Left	Peds	
11:00:00 AM	15	0	4	0		8	0	0	0	0	0	0	0		0	0	6	0	
11:15:00 AM	20	0	5	0		10	0	0	0	0	0	0	0		0	0	10	0	
11:30:00 AM	12	0	4	0		15	0	0	0	0	0	0	0		0	0	13	0	
11:45:00 AM	14	0	3	0		12	0	0	0	0	0	0	0		0	0	14	0	
12:00:00 PM	16	0	2	0		17	0	0	0	0	0	0	0		0	0	7	0	
12:15:00 PM	32	0	5	0		16	0	0	0	0	0	0	0		0	0	9	0	
12:30:00 PM	24	0	7	1		9	0	0	0	0	0	0	1		0	0	15	1	
12:45:00 PM	21	0	3	0		16	0	0	0	0	0	0	0		0	0	6	0	

File Name: g:\rtc all counts 2016\jan 2022\1410-45s.ppd

Start Date: 11/5/2022

Start Time: 11:00:00 AM

Site Code: 00000045

Comment 1: TRAFFIC COUNTS

Comment 2: PEAK HOUR

Comment 3: 11:00 TO 12:00 NOON

Comment 4: SOUTH DRIVEWAY

Start Time	LAFAYETTE ST. SOUTHBOUND					WESTBOUND					LAFAYETTE ST. NORTHBOUND					PLAZA DRIVEWAYS 4 & 5 EASTBOUND					
	Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		Right	Thru	Left	Peds		
11:00:00 AM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	
11:15:00 AM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	
11:30:00 AM	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	
11:45:00 AM	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	
12:00:00 PM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	
12:15:00 PM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	
12:30:00 PM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	
12:45:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	

Comment 4: NORTH DRIVEWAY

[illegible]

Table 1
PARKING OBSERVATIONS
Stamford Plaza
 October 27, 2022
 Stamford, CT

	Stamford Plaza
TIME	87 Available Spaces
<i>Before 4:00 p.m.</i>	41
After 6:00 p.m.	35

*Source: Reliable Traffic Counts, LLC field observations
 conducted on Thursday October 27, 2022*

Table 2
PARKING OBSERVATIONS
Stamford Plaza
 Saturday November 5, 2022
 Stamford, CT

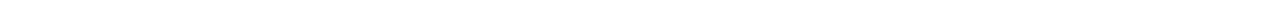
	Stamford Plaza
TIME	87 Available Spaces
<i>Before 11:00 a.m.</i>	52
<i>After 1:00 p.m.</i>	56

*Source: Reliable Traffic Counts, LLC field observations
 conducted on Saturday November 5, 2022*

APPENDIX B




















SYNCHRO ANALYSIS WORKSHEETS

2022 EXISTING CONDITIONS




Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/22/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	759	0	0	643	0	0	0	0	179	0	29
Future Volume (vph)	0	759	0	0	643	0	0	0	0	179	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												0.850
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	0	0	3539	0	1863	0	1863	1770	1583	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	3539	0	0	3539	0	1863	0	1863	1770	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												232
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		64			385			314			148	
Travel Time (s)		1.5			8.8			7.1			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	825	0	0	699	0	0	0	0	195	0	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	825	0	0	699	0	0	0	0	195	32	0
Number of Detectors	1	0		1	0		1		0	0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	0		20	0		7		0	0	15	
Trailing Detector (ft)	0	0		0	0		0		0	0	0	
Detector 1 Position(ft)	0	0		0	0		0		0	0	0	
Detector 1 Size(ft)	20	6		20	6		7		20	20	15	
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			NA		D.Pm		Prot	Perm	NA	
Protected Phases		2			2				4		4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4		4	4	4	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		7.0		7.0	7.0	7.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		20.0		20.0	20.0	20.0	
Total Split (s)	60.0	60.0		60.0	60.0		35.0		35.0	35.0	35.0	
Total Split (%)	63.2%	63.2%		63.2%	63.2%		36.8%		36.8%	36.8%	36.8%	
Maximum Green (s)	56.0	56.0		56.0	56.0		31.0		31.0	31.0	31.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0	4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/22/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0		3.0	3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None		None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		9.0		9.0	9.0	9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	0	
Act Effct Green (s)		71.2			71.2					15.8	15.8	
Actuated g/C Ratio		0.75			0.75					0.17	0.17	
v/c Ratio		0.31			0.26					0.66	0.07	
Control Delay		4.7			4.4					47.5	0.3	
Queue Delay		0.0			0.0					0.0	0.0	
Total Delay		4.7			4.4					47.5	0.3	
LOS		A			A					D	A	
Approach Delay		4.7			4.4						40.8	
Approach LOS		A			A						D	
Queue Length 50th (ft)		70			56					112	0	
Queue Length 95th (ft)		121			100					170	0	
Internal Link Dist (ft)		1			305			234			68	
Turn Bay Length (ft)												
Base Capacity (vph)		2651			2651					577	672	
Starvation Cap Reductn		0			0					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.31			0.26					0.34	0.05	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 70 (74%), Referenced to phase 2:EBWB, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 9.3

Intersection LOS: A

Intersection Capacity Utilization 37.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Lafayette St & E Main St





HCM 6th TWSC
3: E Main St & Site Driveway, Exit

11/22/2022

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↓	
Traffic Vol, veh/h	0	783	649	0	6	66
Future Vol, veh/h	0	783	649	0	6	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	851	705	0	7	72
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	1131	353
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	426	-
Critical Hdwy	-	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	0	-	-	0	197	643
Stage 1	0	-	-	0	451	-
Stage 2	0	-	-	0	627	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	197	643
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	627	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		12.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	SBLn1			
Capacity (veh/h)	-	-	541			
HCM Lane V/C Ratio	-	-	0.145			
HCM Control Delay (s)	-	-	12.8			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.5			



HCM 6th TWSC
4: Lafayette St & South Site Driveway

11/22/2022

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	0	0	203	23
Future Vol, veh/h	0	5	0	0	203	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	0	0	221	25
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	234	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	805	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	805	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	9.5		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	805	-	-			
HCM Lane V/C Ratio	0.007	-	-			
HCM Control Delay (s)	9.5	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			




















HCM 6th TWSC
5: Lafayette St & North Site Driveway

11/22/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	226	1
Future Vol, veh/h	0	0	0	0	226	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	246	1
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	247	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	792	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	792	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	0		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Control Delay (s)	0	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	-	-	-			













Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/22/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	837	0	2	662	0	0	0	0	170	2	34
Future Volume (vph)	0	837	0	2	662	0	0	0	0	170	2	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												0.858
Flt Protected										0.950		
Satd. Flow (prot)	0	3539	0	0	3539	0	1863	0	1863	1770	1598	0
Flt Permitted					0.954					0.950		
Satd. Flow (perm)	0	3539	0	0	3376	0	1863	0	1863	1770	1598	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												37
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		64			385			314			148	
Travel Time (s)		1.5			8.8			7.1			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	910	0	2	720	0	0	0	0	185	2	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	910	0	0	722	0	0	0	0	185	39	0
Number of Detectors	1	0		1	0		1		0	0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	0		20	0		7		0	0	15	
Trailing Detector (ft)	0	0		0	0		0		0	0	0	
Detector 1 Position(ft)	0	0		0	0		0		0	0	0	
Detector 1 Size(ft)	20	6		20	6		7		20	20	15	
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		D.Pm		Prot	Perm	NA	
Protected Phases		2			2				4		4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4		4	4	4	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		7.0		7.0	7.0	7.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		20.0		20.0	20.0	20.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0		35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%		38.9%	38.9%	38.9%	
Maximum Green (s)	51.0	51.0		51.0	51.0		31.0		31.0	31.0	31.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0	4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/22/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0		3.0	3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None		None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		9.0		9.0	9.0	9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	0	
Act Effct Green (s)		67.2			67.2					14.8	14.8	
Actuated g/C Ratio		0.75			0.75					0.16	0.16	
v/c Ratio		0.34			0.29					0.64	0.13	
Control Delay		4.7			4.4					44.5	11.7	
Queue Delay		0.0			0.0					0.0	0.0	
Total Delay		4.7			4.4					44.5	11.7	
LOS		A			A					D	B	
Approach Delay		4.7			4.4						38.8	
Approach LOS		A			A						D	
Queue Length 50th (ft)		75			56					99	1	
Queue Length 95th (ft)		131			100					156	26	
Internal Link Dist (ft)		1			305			234			68	
Turn Bay Length (ft)												
Base Capacity (vph)		2642			2520					609	574	
Starvation Cap Reductn		0			0					0	0	
Spillback Cap Reductn		0			0					0	0	
Storage Cap Reductn		0			0					0	0	
Reduced v/c Ratio		0.34			0.29					0.30	0.07	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 57 (63%), Referenced to phase 2:EBWB, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 8.7

Intersection LOS: A

Intersection Capacity Utilization 39.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Lafayette St & E Main St



HCM 6th TWSC
3: E Main St & Site Driveway, Exit

11/22/2022

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	0	857	638	0	17	93
Future Vol, veh/h	0	857	638	0	17	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	932	693	0	18	101



Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0 1159 347
Stage 1	-	-	- 693 -
Stage 2	-	-	- 466 -
Critical Hdwy	-	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	-	-	- 3.52 3.32
Pot Cap-1 Maneuver	0	-	0 189 649
Stage 1	0	-	0 457 -
Stage 2	0	-	0 598 -
Platoon blocked, %	-	-	
Mov Cap-1 Maneuver	-	-	- 189 649
Mov Cap-2 Maneuver	-	-	- 189 -
Stage 1	-	-	- 457 -
Stage 2	-	-	- 598 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	472
HCM Lane V/C Ratio	-	-	0.253
HCM Control Delay (s)	-	-	15.2
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	1

HCM 6th TWSC
4: Lafayette St & South Site Driveway

11/22/2022

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	0	196	14
Future Vol, veh/h	0	10	0	0	196	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	0	0	213	15
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	221	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	819	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	819	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	9.5		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	819	-	-			
HCM Lane V/C Ratio	0.013	-	-			
HCM Control Delay (s)	9.5	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			

HCM 6th TWSC
5: Lafayette St & North Site Driveway

11/22/2022

Intersection

Int Delay, s/veh 0

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations  

Traffic Vol, veh/h 0 1 0 0 209 5

Future Vol, veh/h 0 1 0 0 209 5

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Stop Stop Free Free

RT Channelized - None - None - None

Storage Length - 0 - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 0 1 0 0 227 5

Major/Minor Minor2 Major2

Conflicting Flow All - 230 - 0

Stage 1 - - - -

Stage 2 - - - -

Critical Hdwy - 6.22 - -

Critical Hdwy Stg 1 - - - -

Critical Hdwy Stg 2 - - - -

Follow-up Hdwy - 3.318 - -

Pot Cap-1 Maneuver 0 809 - -

Stage 1 0 - - -

Stage 2 0 - - -

Platoon blocked, % - - - -

Mov Cap-1 Maneuver - 809 - -

Mov Cap-2 Maneuver - - - -

Stage 1 - - - -

Stage 2 - - - -

Approach EB SB

HCM Control Delay, s 9.5 0

HCM LOS A

Minor Lane/Major Mvmt EBLn1 SBT SBR

Capacity (veh/h) 809 - -

HCM Lane V/C Ratio 0.001 - -

HCM Control Delay (s) 9.5 - -



















HCM Lane LOS A - -

HCM 95th %tile Q(veh) 0 - -

2023 BACKGROUND CONDITIONS













Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/22/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	784	10	3	648	0	65	0	61	189	2	30
Future Volume (vph)	0	784	10	3	648	0	65	0	61	189	2	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998							0.850		0.859	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	3532	0	0	3539	0	1770	0	1583	1770	1600	0
Flt Permitted					0.953		0.734			0.950		
Satd. Flow (perm)	0	3532	0	0	3373	0	1367	0	1583	1770	1600	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2							66		33	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		64			385			314			148	
Travel Time (s)		1.5			8.8			7.1			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	852	11	3	704	0	71	0	66	205	2	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	863	0	0	707	0	71	0	66	205	35	0
Number of Detectors	1	0		1	0		1		0	0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	0		20	0		7		0	0	15	
Trailing Detector (ft)	0	0		0	0		0		0	0	0	
Detector 1 Position(ft)	0	0		0	0		0		0	0	0	
Detector 1 Size(ft)	20	6		20	6		7		20	20	15	
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		D.Pm		Prot	Perm	NA	
Protected Phases		2			2				4		4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4		4	4	4	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		7.0		7.0	7.0	7.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		20.0		20.0	20.0	20.0	
Total Split (s)	60.0	60.0		60.0	60.0		35.0		35.0	35.0	35.0	
Total Split (%)	63.2%	63.2%		63.2%	63.2%		36.8%		36.8%	36.8%	36.8%	
Maximum Green (s)	56.0	56.0		56.0	56.0		31.0		31.0	31.0	31.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0	4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/22/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0		3.0	3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None		None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		9.0		9.0	9.0	9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	0	
Act Effct Green (s)		70.6			70.6		16.4		16.4	16.4	16.4	
Actuated g/C Ratio		0.74			0.74		0.17		0.17	0.17	0.17	
v/c Ratio		0.33			0.28		0.30		0.20	0.67	0.12	
Control Delay		5.0			4.8		36.0		9.4	47.3	12.1	
Queue Delay		0.0			0.0		0.0		0.0	0.0	0.0	
Total Delay		5.0			4.8		36.0		9.4	47.3	12.1	
LOS		A			A		D		A	D	B	
Approach Delay		5.0			4.8			23.2			42.2	
Approach LOS		A			A			C			D	
Queue Length 50th (ft)		76			60		38		0	117	1	
Queue Length 95th (ft)		132			105		72		32	177	25	
Internal Link Dist (ft)		1			305			234			68	
Turn Bay Length (ft)									50			
Base Capacity (vph)		2626			2507		446		561	577	544	
Starvation Cap Reductn		0			0		0		0	0	0	
Spillback Cap Reductn		0			0		0		0	0	0	
Storage Cap Reductn		0			0		0		0	0	0	
Reduced v/c Ratio		0.33			0.28		0.16		0.12	0.36	0.06	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 70 (74%), Referenced to phase 2:EBWB, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 10.8

Intersection LOS: B

Intersection Capacity Utilization 48.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Lafayette St & E Main St





HCM 6th TWSC
3: E Main St & Site Driveway, Exit

11/22/2022

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↓	
Traffic Vol, veh/h	0	818	719	0	7	67
Future Vol, veh/h	0	818	719	0	7	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	889	782	0	8	73
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	1227	391
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	445	-
Critical Hdwy	-	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	0	-	-	0	171	608
Stage 1	0	-	-	0	411	-
Stage 2	0	-	-	0	613	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	171	608
Mov Cap-2 Maneuver	-	-	-	-	171	-
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	613	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		13.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	SBLn1			
Capacity (veh/h)	-	-	490			
HCM Lane V/C Ratio	-	-	0.164			
HCM Control Delay (s)	-	-	13.8			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.6			



HCM 6th TWSC
4: Lafayette St & South Site Driveway

11/22/2022

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	0	0	215	24
Future Vol, veh/h	0	6	0	0	215	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	0	0	234	26
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	247	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	792	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	792	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	9.6		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	792	-	-			
HCM Lane V/C Ratio	0.008	-	-			
HCM Control Delay (s)	9.6	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			



















HCM 6th TWSC
5: Lafayette St & North Site Driveway

11/22/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	238	2
Future Vol, veh/h	0	0	0	0	238	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	259	2
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	260	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	779	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	779	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	0		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Control Delay (s)	0	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	-	-	-			













Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/22/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	856	8	6	667	0	50	0	62	177	4	35
Future Volume (vph)	0	856	8	6	667	0	50	0	62	177	4	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999							0.850		0.864	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	3536	0	0	3539	0	1770	0	1583	1770	1609	0
Flt Permitted					0.948		0.730			0.950		
Satd. Flow (perm)	0	3536	0	0	3355	0	1360	0	1583	1770	1609	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2							67		38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		64			385			314			148	
Travel Time (s)		1.5			8.8			7.1			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	930	9	7	725	0	54	0	67	192	4	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	939	0	0	732	0	54	0	67	192	42	0
Number of Detectors	1	0		1	0		1		0	0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	0		20	0		7		0	0	15	
Trailing Detector (ft)	0	0		0	0		0		0	0	0	
Detector 1 Position(ft)	0	0		0	0		0		0	0	0	
Detector 1 Size(ft)	20	6		20	6		7		20	20	15	
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		D.Pm		Prot	Perm	NA	
Protected Phases		2			2				4		4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4		4	4	4	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		7.0		7.0	7.0	7.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		20.0		20.0	20.0	20.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0		35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%		38.9%	38.9%	38.9%	
Maximum Green (s)	51.0	51.0		51.0	51.0		31.0		31.0	31.0	31.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0	4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/22/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0		3.0	3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None		None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		9.0		9.0	9.0	9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	0	
Act Effct Green (s)		66.9			66.9		15.1		15.1	15.1	15.1	
Actuated g/C Ratio		0.74			0.74		0.17		0.17	0.17	0.17	
v/c Ratio		0.36			0.29		0.24		0.21	0.65	0.14	
Control Delay		4.9			4.6		33.2		9.3	44.5	12.1	
Queue Delay		0.0			0.0		0.0		0.0	0.0	0.0	
Total Delay		4.9			4.6		33.2		9.3	44.5	12.1	
LOS		A			A		C		A	D	B	
Approach Delay		4.9			4.6			20.0				38.7
Approach LOS		A			A			B				D
Queue Length 50th (ft)		80			58		27		0	103	2	
Queue Length 95th (ft)		138			104		56		32	160	27	
Internal Link Dist (ft)		1			305			234				68
Turn Bay Length (ft)									50			
Base Capacity (vph)		2627			2492		468		589	609	579	
Starvation Cap Reductn		0			0		0		0	0	0	
Spillback Cap Reductn		0			0		0		0	0	0	
Storage Cap Reductn		0			0		0		0	0	0	
Reduced v/c Ratio		0.36			0.29		0.12		0.11	0.32	0.07	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 57 (63%), Referenced to phase 2:EBWB, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 9.6

Intersection LOS: A

Intersection Capacity Utilization 49.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Lafayette St & E Main St



HCM 6th TWSC
3: E Main St & Site Driveway, Exit

11/22/2022

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	0	884	693	0	18	94
Future Vol, veh/h	0	884	693	0	18	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	961	753	0	20	102



Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1234 377
Stage 1	-	-	-	-	753 -
Stage 2	-	-	-	-	481 -
Critical Hdwy	-	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	-	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	0	-	-	0	169 621
Stage 1	0	-	-	0	426 -
Stage 2	0	-	-	0	588 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	169 621
Mov Cap-2 Maneuver	-	-	-	-	169 -
Stage 1	-	-	-	-	426 -
Stage 2	-	-	-	-	588 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	434
HCM Lane V/C Ratio	-	-	0.281
HCM Control Delay (s)	-	-	16.5
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	1.1



HCM 6th TWSC
4: Lafayette St & South Site Driveway

11/22/2022

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	11	0	0	207	15
Future Vol, veh/h	0	11	0	0	207	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	0	0	225	16
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	233	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	806	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	806	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	9.5		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	806	-	-			
HCM Lane V/C Ratio	0.015	-	-			
HCM Control Delay (s)	9.5	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			

HCM 6th TWSC
5: Lafayette St & North Site Driveway




















11/22/2022

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	0	220	6
Future Vol, veh/h	0	2	0	0	220	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	0	239	7
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	243	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	796	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	796	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	9.5		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	796	-	-			
HCM Lane V/C Ratio	0.003	-	-			
HCM Control Delay (s)	9.5	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			

2023 FUTURE CONDITIONS













Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	808	13	3	672	0	68	0	61	189	2	37
Future Volume (vph)	0	808	13	3	672	0	68	0	61	189	2	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998							0.850		0.857	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	3532	0	0	3539	0	1770	0	1583	1770	1596	0
Flt Permitted					0.953		0.730			0.950		
Satd. Flow (perm)	0	3532	0	0	3373	0	1360	0	1583	1770	1596	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3							66		40	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		64			385			314			148	
Travel Time (s)		1.5			8.8			7.1			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	878	14	3	730	0	74	0	66	205	2	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	892	0	0	733	0	74	0	66	205	42	0
Number of Detectors	1	0		1	0		1		0	0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	0		20	0		7		0	0	15	
Trailing Detector (ft)	0	0		0	0		0		0	0	0	
Detector 1 Position(ft)	0	0		0	0		0		0	0	0	
Detector 1 Size(ft)	20	6		20	6		7		20	20	15	
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		D.Pm		Prot	Perm	NA	
Protected Phases		2			2				4		4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4		4	4	4	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		7.0		7.0	7.0	7.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		20.0		20.0	20.0	20.0	
Total Split (s)	60.0	60.0		60.0	60.0		35.0		35.0	35.0	35.0	
Total Split (%)	63.2%	63.2%		63.2%	63.2%		36.8%		36.8%	36.8%	36.8%	
Maximum Green (s)	56.0	56.0		56.0	56.0		31.0		31.0	31.0	31.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0	4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0		3.0	3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None		None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		9.0		9.0	9.0	9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	0	
Act Effct Green (s)		70.6			70.6		16.4		16.4	16.4	16.4	
Actuated g/C Ratio		0.74			0.74		0.17		0.17	0.17	0.17	
v/c Ratio		0.34			0.29		0.32		0.20	0.67	0.14	
Control Delay		5.0			4.8		36.4		9.4	47.3	11.4	
Queue Delay		0.0			0.0		0.0		0.0	0.0	0.0	
Total Delay		5.0			4.8		36.4		9.4	47.3	11.4	
LOS		A			A		D		A	D	B	
Approach Delay		5.0			4.8			23.7				41.2
Approach LOS		A			A			C				D
Queue Length 50th (ft)		80			63		40		0	117	1	
Queue Length 95th (ft)		137			110		75		32	177	27	
Internal Link Dist (ft)		1			305			234				68
Turn Bay Length (ft)									50			
Base Capacity (vph)		2626			2507		443		561	577	547	
Starvation Cap Reductn		0			0		0		0	0	0	
Spillback Cap Reductn		0			0		0		0	0	0	
Storage Cap Reductn		0			0		0		0	0	0	
Reduced v/c Ratio		0.34			0.29		0.17		0.12	0.36	0.08	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 70 (74%), Referenced to phase 2:EBWB, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization 49.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Lafayette St & E Main St



HCM 6th TWSC
3: E Main St & Site Driveway, Exit

11/28/2022

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	0	845	726	0	34	94
Future Vol, veh/h	0	845	726	0	34	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	918	789	0	37	102



Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0 1248 395
Stage 1	-	-	- 789 -
Stage 2	-	-	- 459 -
Critical Hdwy	-	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	-	-	- 3.52 3.32
Pot Cap-1 Maneuver	0	-	0 165 604
Stage 1	0	-	0 408 -
Stage 2	0	-	0 603 -
Platoon blocked, %	-	-	
Mov Cap-1 Maneuver	-	-	- 165 604
Mov Cap-2 Maneuver	-	-	- 165 -
Stage 1	-	-	- 408 -
Stage 2	-	-	- 603 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	21.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	354
HCM Lane V/C Ratio	-	-	0.393
HCM Control Delay (s)	-	-	21.6
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	1.8



HCM 6th TWSC
4: Lafayette St & South Site Driveway

11/28/2022

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	13	0	0	215	29
Future Vol, veh/h	0	13	0	0	215	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	0	0	234	32
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	250	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	789	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	789	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	9.6		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	789	-	-			
HCM Lane V/C Ratio	0.018	-	-			
HCM Control Delay (s)	9.6	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0.1	-	-			




















HCM 6th TWSC
5: Lafayette St & North Site Driveway

11/28/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	243	2
Future Vol, veh/h	0	0	0	0	243	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	264	2
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	265	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	774	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	774	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	0		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	-	-	-			
HCM Lane V/C Ratio	-	-	-			
HCM Control Delay (s)	0	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	-	-	-			













Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	884	12	6	695	0	54	0	62	177	4	41
Future Volume (vph)	0	884	12	6	695	0	54	0	62	177	4	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998							0.850		0.862	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	3532	0	0	3539	0	1770	0	1583	1770	1606	0
Flt Permitted					0.947		0.725			0.950		
Satd. Flow (perm)	0	3532	0	0	3352	0	1350	0	1583	1770	1606	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2							67		45	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		64			385			314			148	
Travel Time (s)		1.5			8.8			7.1			3.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	961	13	7	755	0	59	0	67	192	4	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	974	0	0	762	0	59	0	67	192	49	0
Number of Detectors	1	0		1	0		1		0	0	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	0		20	0		7		0	0	15	
Trailing Detector (ft)	0	0		0	0		0		0	0	0	
Detector 1 Position(ft)	0	0		0	0		0		0	0	0	
Detector 1 Size(ft)	20	6		20	6		7		20	20	15	
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		D.Pm		Prot	Perm	NA	
Protected Phases		2			2				4		4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4		4	4	4	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		7.0		7.0	7.0	7.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		20.0		20.0	20.0	20.0	
Total Split (s)	55.0	55.0		55.0	55.0		35.0		35.0	35.0	35.0	
Total Split (%)	61.1%	61.1%		61.1%	61.1%		38.9%		38.9%	38.9%	38.9%	
Maximum Green (s)	51.0	51.0		51.0	51.0		31.0		31.0	31.0	31.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0	4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												

Lanes, Volumes, Timings
1: Lafayette St & E Main St

11/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0		3.0	3.0	3.0	
Recall Mode	C-Min	C-Min		C-Min	C-Min		None		None	None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	6.0	6.0		6.0	6.0		9.0		9.0	9.0	9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0		0	0	0	
Act Effct Green (s)		66.9			66.9		15.1		15.1	15.1	15.1	
Actuated g/C Ratio		0.74			0.74		0.17		0.17	0.17	0.17	
v/c Ratio		0.37			0.31		0.26		0.21	0.65	0.16	
Control Delay		5.0			4.7		33.7		9.3	44.5	11.4	
Queue Delay		0.0			0.0		0.0		0.0	0.0	0.0	
Total Delay		5.0			4.7		33.7		9.3	44.5	11.4	
LOS		A			A		C		A	D	B	
Approach Delay		5.0			4.7			20.7				37.8
Approach LOS		A			A			C				D
Queue Length 50th (ft)		83			61		30		0	103	2	
Queue Length 95th (ft)		146			110		60		32	160	30	
Internal Link Dist (ft)		1			305			234				68
Turn Bay Length (ft)									50			
Base Capacity (vph)		2624			2490		465		589	609	582	
Starvation Cap Reductn		0			0		0		0	0	0	
Spillback Cap Reductn		0			0		0		0	0	0	
Storage Cap Reductn		0			0		0		0	0	0	
Reduced v/c Ratio		0.37			0.31		0.13		0.11	0.32	0.08	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 57 (63%), Referenced to phase 2:EBWB, Start of Green

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 9.6

Intersection LOS: A

Intersection Capacity Utilization 50.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Lafayette St & E Main St



HCM 6th TWSC
3: E Main St & Site Driveway, Exit

11/28/2022

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	0	916	699	0	50	126
Future Vol, veh/h	0	916	699	0	50	126
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	996	760	0	54	137



Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0 1258 380
Stage 1	-	-	- 760 -
Stage 2	-	-	- 498 -
Critical Hdwy	-	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	-	-	- 3.52 3.32
Pot Cap-1 Maneuver	0	-	0 163 618
Stage 1	0	-	0 422 -
Stage 2	0	-	0 576 -
Platoon blocked, %	-	-	
Mov Cap-1 Maneuver	-	-	- 163 618
Mov Cap-2 Maneuver	-	-	- 163 -
Stage 1	-	-	- 422 -
Stage 2	-	-	- 576 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	27.7
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	345
HCM Lane V/C Ratio	-	-	0.555
HCM Control Delay (s)	-	-	27.7
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	3.2



HCM 6th TWSC
4: Lafayette St & South Site Driveway

11/28/2022

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	17	0	0	207	21
Future Vol, veh/h	0	17	0	0	207	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	0	0	225	23
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	237	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	802	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	802	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	9.6		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	802	-	-			
HCM Lane V/C Ratio	0.023	-	-			
HCM Control Delay (s)	9.6	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0.1	-	-			

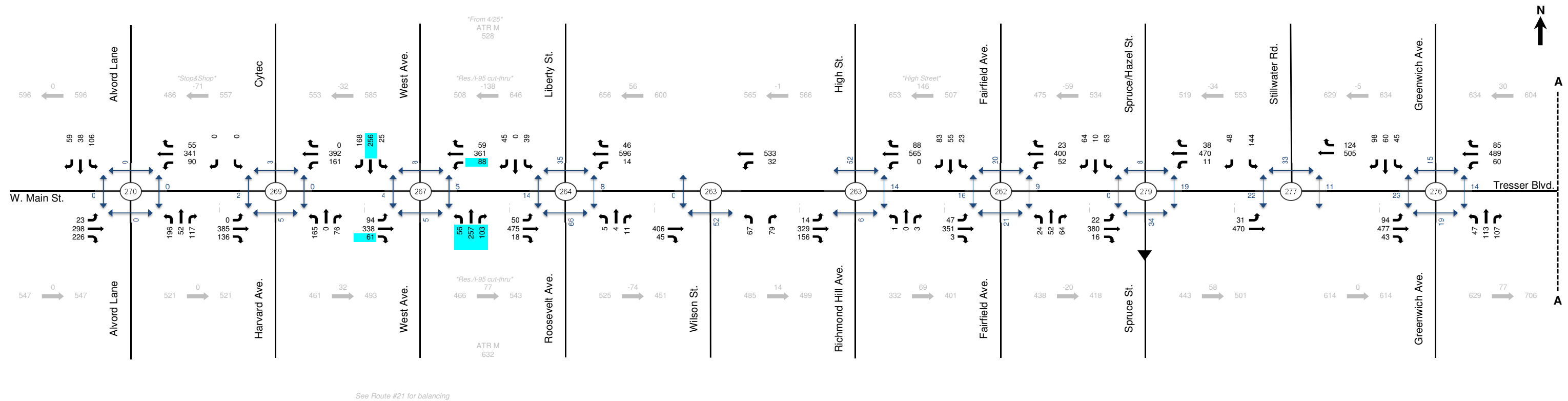
HCM 6th TWSC
5: Lafayette St & North Site Driveway

11/28/2022

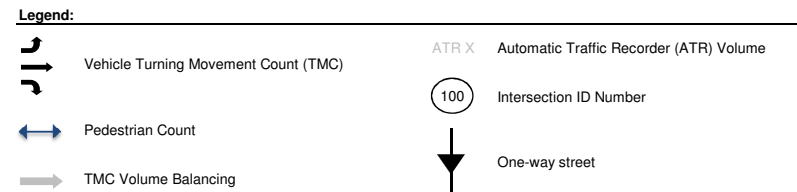
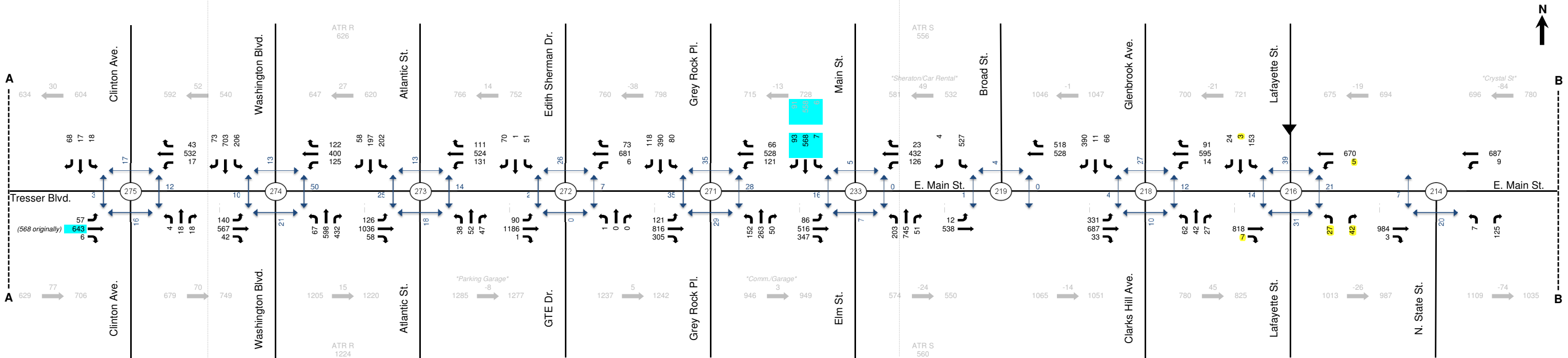
Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	0	226	6
Future Vol, veh/h	0	2	0	0	226	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	0	246	7
Major/Minor	Minor2		Major2			
Conflicting Flow All	-	250	-	-	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	789	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	789	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		SB			
HCM Control Delay, s	9.6		0			
HCM LOS	A					
Minor Lane/Major Mvmt	EBLn1	SBT	SBR			
Capacity (veh/h)	789	-	-			
HCM Lane V/C Ratio	0.003	-	-			
HCM Control Delay (s)	9.6	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			

APPENDIX C

SUPPLEMENTAL DATA



See Route #21 for balancing



Peak Hours:				
	Count Performed:	Saturday, April 22, 2017	Peak Hour:	12:00 PM - 1:00 PM
	Count Performed:	Saturday, April 29, 2017	Peak Hour:	11:45 AM - 12:45 PM
	Count Performed:	Saturday, June 17, 2017	Peak Hour:	1:30 PM - 2:30 PM

Not to Scale

Stamford Traffic Signal Optimization - Data Collection

Route 2: E. Main St./ Tresser Blvd./ W. Main St. (US 1)

SAT Peak Hour Volumes - Balanced





TRAFFIC ACCESS AND IMPACT STUDY

Mixed-Use Development 819 East Main Street Stamford, Connecticut



**Prepared for:
Wellbuilt**

January 2022

January 14, 2022

Mr. Scott Lumby
Wellbuilt Company
2 Armonk Street
Greenwich, Connecticut 06830

Dear Mr. Lumby:

As requested, we are pleased to submit this Traffic Study for submission to the City of Stamford, Connecticut Department of Transportation (CTDOT) and the Office of the State Traffic Administration (OSTA). The proposal is to redevelop several properties located at the intersection of East Main Street, Lafayette Street and North State Street. The development comprises 130-units of multi-family housing and 2,950 square feet of commercial space. Previously, a portion of this site was approved for a 85-unit residential development in September 2021, with 2,900 square feet of commercial space. For this proposal, the access to a parking garage and at-grade parking will be from North State Street, with pedestrian access mainly from East Main Street.

The full development will generate 55 and 70 vehicle trip ends during the typical weekday morning and weekday afternoon peak hours, respectively. The previously approved development of this property would have generated 38 and 52 vehicle trip ends during the same two peak hours. Therefore, for comparison purposes only, the net increase in site traffic generation will be 17 and 18 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. To be conservative, this traffic analysis does not take any credit for existing traffic generated by the several different land uses located on the Subject Property.

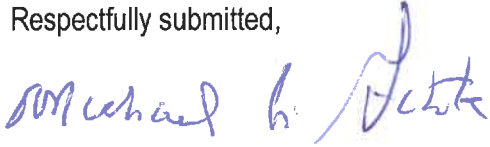
The analysis includes the signalized intersections of East Main Street at Lafayette Street and East Main Street at North State Street and the unsignalized intersections of Lafayette Street at North State Street/South Main Street, as well as the proposed site access drive to North State Street. Results of the analyses indicate that under a build condition all locations will continue to operate at very acceptable Levels of Service during the two peak hours. At the east Main Street/Lafayette Street signalized intersection it will maintain an overall Level of Service "C." At the signalized intersection of East Main Street/North State Street intersection it will maintain a Level of Service "A." For the unsignalized intersections of Lafayette Street intersections of North State Street and South Street and the site access drive all will operate at Level of Service "A," with little, if any delays.

Based on the results of the analyses, off-site road improvements or modifications to traffic control are not necessary to accommodate the additional traffic to be generated by this development. Note that this traffic

Mr. Scott Lumby
Page 2
January 14, 2022

analysis is based on the full redevelopment of the site with 130 residential units and 2,950 square feet of commercial space.

Respectfully submitted,



Michael A. Galante
Director of Traffic
Hardesty & Hanover, LLC

Enclosure

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SUMMARY

This Traffic Access and Impact Study was prepared to provide the City of Stamford, the Connecticut Department of Transportation (CTDOT) and the Office of the State Traffic Administration (OSTA) with a detailed analysis to determine potential traffic impacts from the proposed mixed-use development located at 819 East Main Street. The proposal is to construct 130-units of multifamily housing (mid-rise) and 2,950 square feet of commercial space. The site has a previous approval for 85-units of multifamily housing (mid-rise) and 2,900 square feet of commercial space from September 2021. Site access is proposed via right turn in/right turn out to North State Street.

This Study addresses traffic conditions for the 2021 existing, 2024 no-build and 2024 build conditions during the weekday morning and weekday afternoon peak hours. Traffic counts were conducted at the Study Area intersections by Hardesty & Hanover, LLC in December 2021. Based on discussions CTDOT Planning Division, no COVID adjustments are needed.

The 2024 future projected traffic volumes, without the proposed development, employed a 0.6 percent annual growth rate, as per discussions with CTDOT Planning Division. Based on discussions with CTDOT Planning Division and the City of Stamford, no other nearby developments were identified.

Based on trip rates from "Trip Generation," 11th Edition, published by ITE, 2021, it is estimated that the proposed 130-units will generate a total of 48 and 51 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed 2,950 square feet of commercial space is estimated to generate a total of 7 and 19 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. Therefore, the total proposed site will generate a total of 55 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. To be conservative no pass-by credit was applied to the commercial space.

This site received an approval for 85-units of multifamily housing and 2,900 square feet of commercial space in September 2021. For comparison purposes, that approved development would generate a total of 38 and 52 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed site will generate a total of 17 and 18 additional vehicle trip ends during the weekday

morning and weekday afternoon peak hours, respectively, when compared to the approved development. However, this traffic analysis is based on the full proposal.

A review of current traffic patterns at the Study Area intersections and in the vicinity of the project influence area was conducted to determine trip distribution for the proposed development. For arriving site traffic, it was found that 40 percent will arrive from the east on U.S. Route 1, 35 percent will arrive from the west on U.S. Route 1, 15 percent will arrive from the north on Lafayette Street and 10 percent will arrive from the south on South State Street. For departing site traffic, it was found that 40 percent will depart to the east on U.S. Route 1 and 60 percent will depart to the west on U.S. Route 1.

SYNCHRO 10 capacity analyses were conducted for 2021 existing, 2024 no-build and 2024 build conditions to identify incremental impacts and needs that the proposed development will generate. Results of the analyses indicate that the signalized intersection of U.S. Route 1 at Lafayette Street will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. The westbound and northbound lane groups and approaches will have an acceptable change in Level of Service from "A" to "B" and "B" to "C," respectively, during the weekday morning peak hour. The eastbound lane group and approach will have an acceptable change in Level of Service from "A" to "B" during the weekday afternoon peak hour. The southbound left turn lane group and approach will maintain a Level of Service "E" during both peak hours.

The signalized intersection of U.S. Route 1 and North State Street will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. All lane groups and approaches will maintain the same Levels of Service during both peak hours. At the all-way STOP-controlled intersection of North State Street and Lafayette Street/South State Street, all critical lanes and the intersection overall will maintain the same Level of Service during both peak hours. The proposed site driveway will operate at Level of Service "A" during both peak hours.

INTRODUCTION

This report has been prepared to address the potential impacts related to the proposed mixed-use development. An analysis was completed for area roadways and key nearby intersections for the typical weekday morning and weekday afternoon peak hours for existing, no-build and build conditions. An assessment of the results of these analyses indicate impacts and any need for mitigation. In this report there is a discussion of area roadways, accident history, site access considerations, current and future traffic volumes, site traffic generation and assignment, capacity analysis procedures and the results of these analyses. Based on the results of the analysis any mitigation necessary is described.

Project Understanding

The proposal is to construct 130-units of multifamily housing (mid-rise) and 2,950 square feet of commercial space. The site has a previous approval for 85-units of multifamily housing (mid-rise) and 2,900 square feet of commercial space. Site access is proposed via right turn in/right turn out to North State Street. It is assumed that the proposal will be built and fully occupied by the end of 2024.

EXISTING CONDITIONS

In this section of the report there is a description of the existing traffic volumes obtained on area roadways near the site for the weekday morning and weekday afternoon peak hours. It also includes a description of area roads, current traffic control and accident history.

Roadways

As noted above, the development is located at 819 East Main Street and adjacent properties.

1. East Main Street – This is generally an east-west, two to four-lane, State-maintained roadway, also designated U.S. Route 1. It begins as a continuation of Tresser Boulevard, also designated U.S. Route 1, to the west at the signalized intersection with Elm Street. It continues east past the site to the Darien Town Line, where it continues as Post Road, also designated U.S. Route 1. In the Study Area this roadway provides a double yellow centerline, curbing and sidewalks along both sides of the road. Currently there is two-hour meter parking from 9 A.M. to 8 P.M. with NO PARKING 4 P.M. to 7 P.M. TOW AWAY ZONE along the south side of the road and NO PARKING 7 A.M. to 9 A.M. TOW AWAY ZONE along the north side of the road between Lafayette Street and Quintard Terrace. The section between Lafayette Street and Quintard Terrace operates as one-lane eastbound during the weekday morning peak hour and one-lane westbound during the weekday afternoon peak hour. NO PARKING ANYTIME is posted everywhere else along East Main Street in the Study Area. The roadway width is 40 feet and the land use is residential and commercial.
2. Lafayette Street – This is a north-south, City-maintained roadway. It begins to the north at the signalized intersection of Daskam Place/Crystal Street as a continuation of Daskam Place. It continues south as a one-way southbound roadway to the signalized intersection with East Main Street, also designated U.S. Route 1. To the north of East Main Street this roadway provides curbing and sidewalks along both sides of the road. There is NO PARKING along the easterly side of the road, as well as along the westerly side of the road along the shopping center frontage. The roadway width is generally 23 feet with a mix of residential and commercial uses.

South of East Main Street, this roadway provides two lanes, with one lane in each directions to the intersection of North State Street. To the south of East Main Street this roadway provides a double

yellow centerline, curbing and sidewalks along both sides of the road. There is NO PARKING along the westerly side of the road for the entire length. The roadway width is generally 27 feet with a mix of residential and commercial uses.

3. North State Street – This is an east-west, City-maintained roadway. From East Main Street to South State Street this roadway is a two-lane, two-way roadway with a double yellow centerline, curbing along both sides of the road and a sidewalk along the northerly side of the road. For a short section between South State Street and Lafayette Street, this roadway is one-way westbound with curbing along both sides of the road, a sidewalk along the northerly side of the road and NO PARKING ANYTIME. West of Lafayette Street, this roadway is a two-lane, two-way roadway with a double yellow centerline, curbing along both sides of the road and a sidewalk along the northerly side of the road. The roadway terminates with access to a large office building. Land use is generally commercial.

Figure 1 provides a summary of current street system characteristics. Photographs of the Study Area intersections are provided in the Appendix of this report.

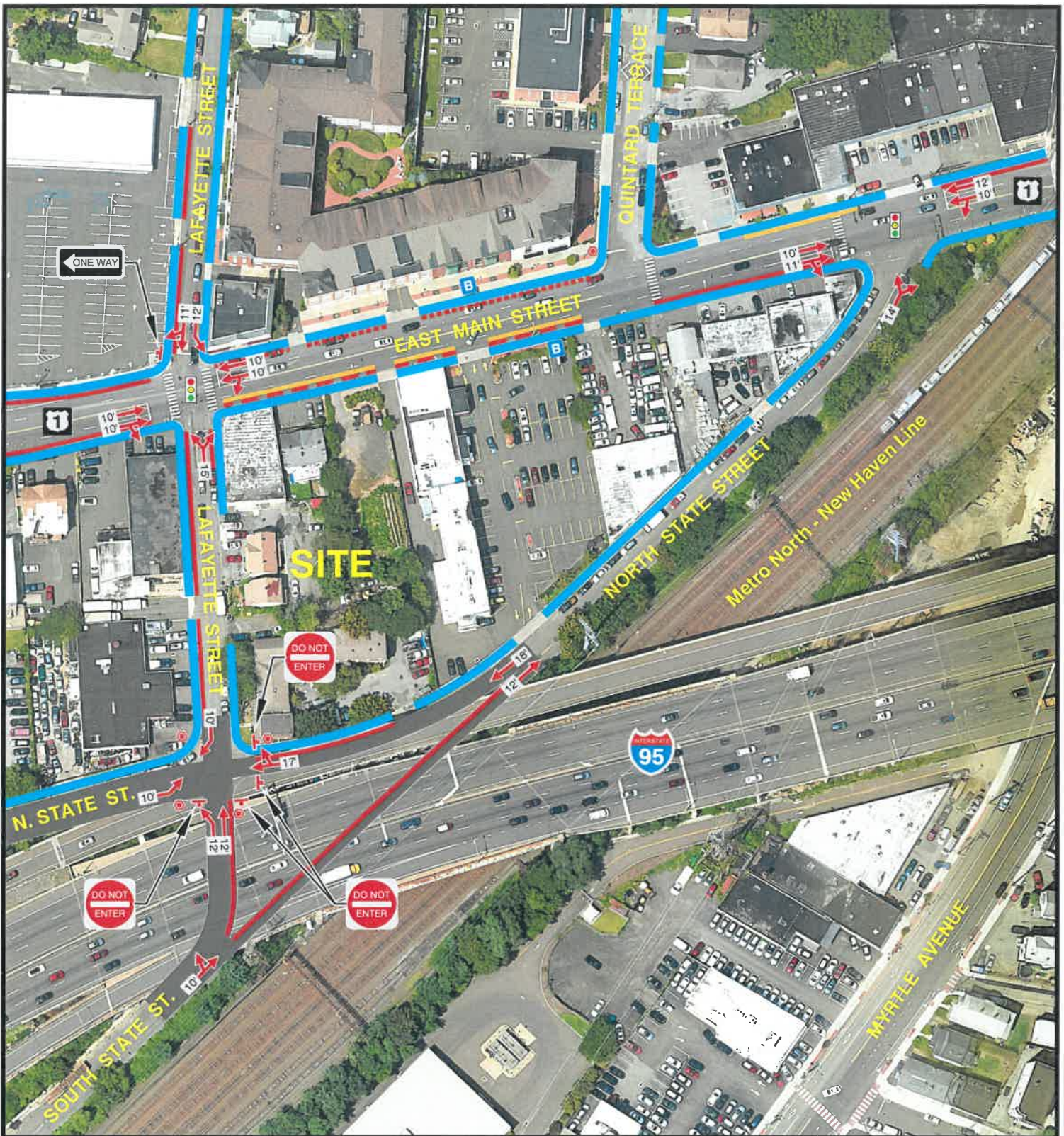
Traffic Volumes

To develop baseline traffic volumes for the Study Area intersections and roadways, turning movement counts were conducted at the following intersections:

- U.S. Route 1 at Lafayette Street;
- U.S. Route 1 at North State Street;
- North State Street at Lafayette Street/South State Street, and,
- At the South State Street Split.

The turning movement counts were conducted during the following times:

- Wednesday, December 15, 2021 – 7:00 to 9:00 A.M.; and,
- Tuesday, December 14, 2021 – 4:00 to 6:00 P.M.



LEGEND:

- Traffic Lane
- Traffic Signal
- Stop Sign
- Sidewalk
- Pedestrian Crosswalk
- Bus Stop
- No Parking Anytime
- No Parking 4 to 7 PM, 2 Hr. Meter Parking 9 AM to 8 PM
- No Parking 7 to 9 AM, 2 Hr. Meter Parking 9 AM to 8 PM
- 2 Hr. Metered Parking

**CURRENT
STREET SYSTEM CHARACTERISTICS**

MIXED-USE DEVELOPMENT
819 East Main Street
Stamford, Connecticut



Scale in Feet

125 0 75 50 25 0 125



1

1/10/22

Based on the results of the traffic counting program the following peak hours were identified at the Study Area intersections:

- Weekday morning – 7:15 to 8:15 A.M.; and,
- Weekday afternoon – 4:00 to 5:00 P.M.

Figures 2 and 3 graphically illustrates the 2021 existing traffic volumes for the weekday morning and weekday afternoon peak hours, respectively. Raw and summarized turning movement count data collected by Hardesty & Hanover, LLC for all Study peak periods can be found in the Appendix of this report.

Based on the results of the traffic counting program the traffic volumes were identified for area roadways and includes U.S. Route 1, west of Lafayette Street, which had a two-way volume of 1,325 and 1,411 vehicles during the weekday morning and weekday afternoon peak hours, respectively. U.S. Route 1, east of Lafayette Street, had a two-way volume of 1,499 and 1,546 vehicles during the same two peak hours noted above, respectively. Lafayette Street, north of U.S. Route 1, had a one-way volume of 276 and 205 vehicles during the two peak hours noted above, respectively. Lafayette Street, south of U.S. Route 1, had a two-way volume of 44 and 94 vehicles during the two peak hours noted above, respectively.

U.S. Route 1, west of North State Street, had a two-way volume of 1,519 and 1,597 vehicles during the weekday morning and weekday afternoon peak hours, respectively. U.S. Route 1, east of North State Street, had a two-way volume of 1,573 and 1,735 vehicles during the same two peak hours noted above, respectively. North State Street, south of U.S. Route 1, had a two-way volume of 76 and 148 vehicles during the two peak hours noted above, respectively.

North State Street, west of Lafayette Street, had a two-way volume of 36 and 101 vehicles during the weekday morning and weekday afternoon peak hours, respectively. North State Street, east of Lafayette Street, had a one-way volume of 9 and 21 vehicles during the same two peak hours noted above, respectively. South State Street, south of North State Street, had a one-way volume of 47 and 124 vehicles during the two peak hours noted above, respectively. Table 1 provides a summary of the recorded two-way volumes.

Table 1
2021 TRAFFIC VOLUMES – PEAK HOURS
Mixed-Use Development
819 East Main Street
Stamford, Connecticut

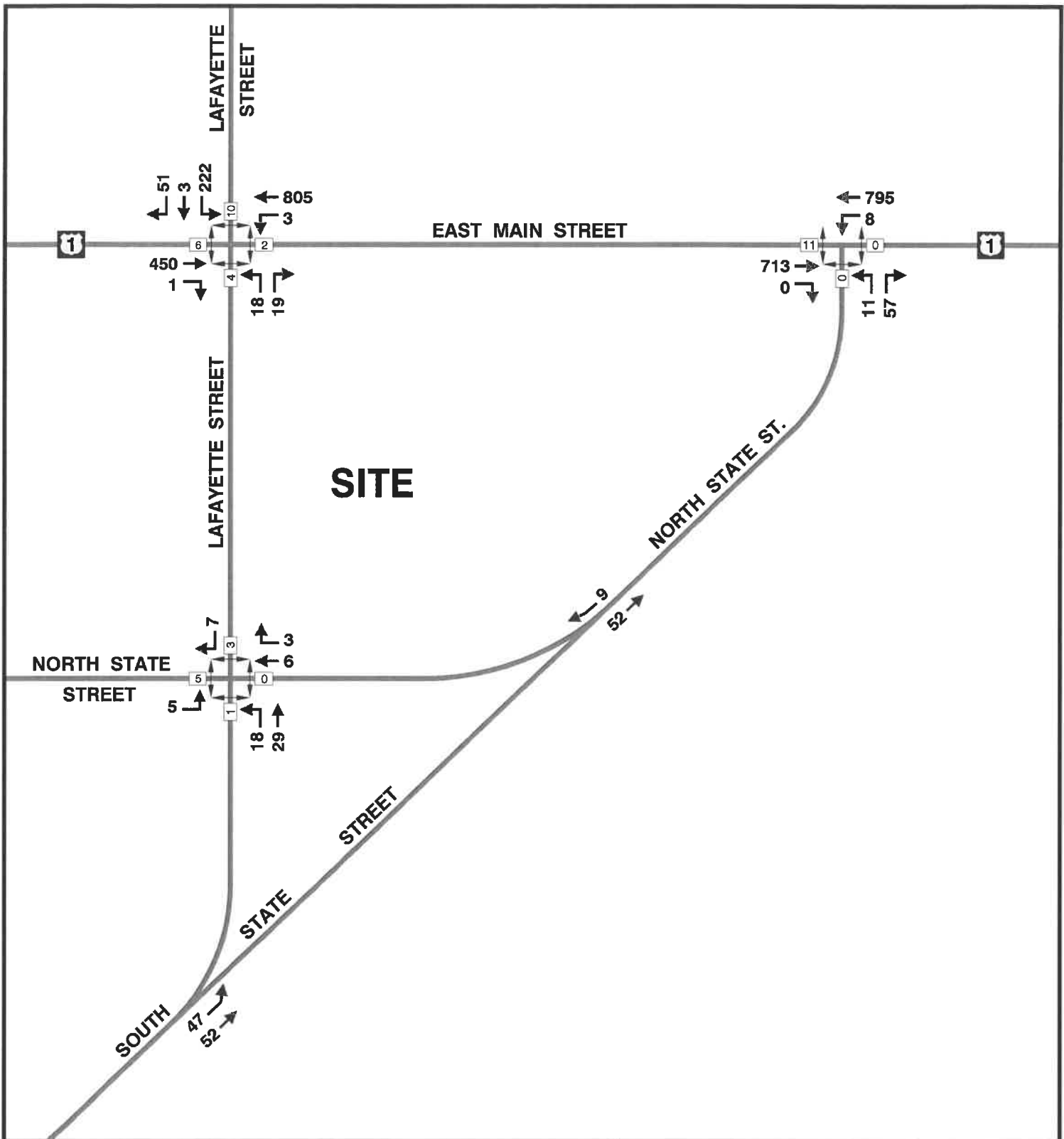
LOCATION	VEHICLES	
	Weekday Morning	Weekday Afternoon
U.S. Route 1, West of Lafayette Street	1,325	1,411
U.S. Route 1, East of Lafayette Street	1,499	1,546
Lafayette Street, North of U.S. Route 1	276	205
Lafayette Street, South of U.S. Route 1	44	94
U.S. Route 1, West of North State Street	1,519	1,597
U.S. Route 1, East of North State Street	1,573	1,735
North State Street, South of U.S. Route 1	76	148
North State Street, West of Lafayette Street/South State Street	36	101
North State Street, East of Lafayette Street/South State Street	9	21
Lafayette Street, North of North State Street	44	94
South State Street, South of North State Street	47	124

Sources: Turning movement counts conducted by Hardesty & Hanover on Tuesday, December 14 and Wednesday, December 15, 2021.

Notes: Based on discussions with CTDOT Planning Division, no COVID adjustments were needed.

Hardesty & Hanover

Y:\Shared\Projects\05498-819 East Main St Stamford\500-Technical\501-Traffic Study\Word\22-001.rt.docx
1/6/2022



LEGEND:

← [] Pedestrians

NOTES:

1. Turning movement counts conducted by Hardesty & Hanover, LLC on Wednesday, December 15, 2021 from 7:00 to 9:00 A.M.
2. Based on discussions with CTDOT Planning Division, no COVID adjustment is needed.

2021 EXISTING TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR
(7:15 to 8:15 A.M.)

MIXED-USE DEVELOPMENT
819 East Main Street
Stamford, Connecticut

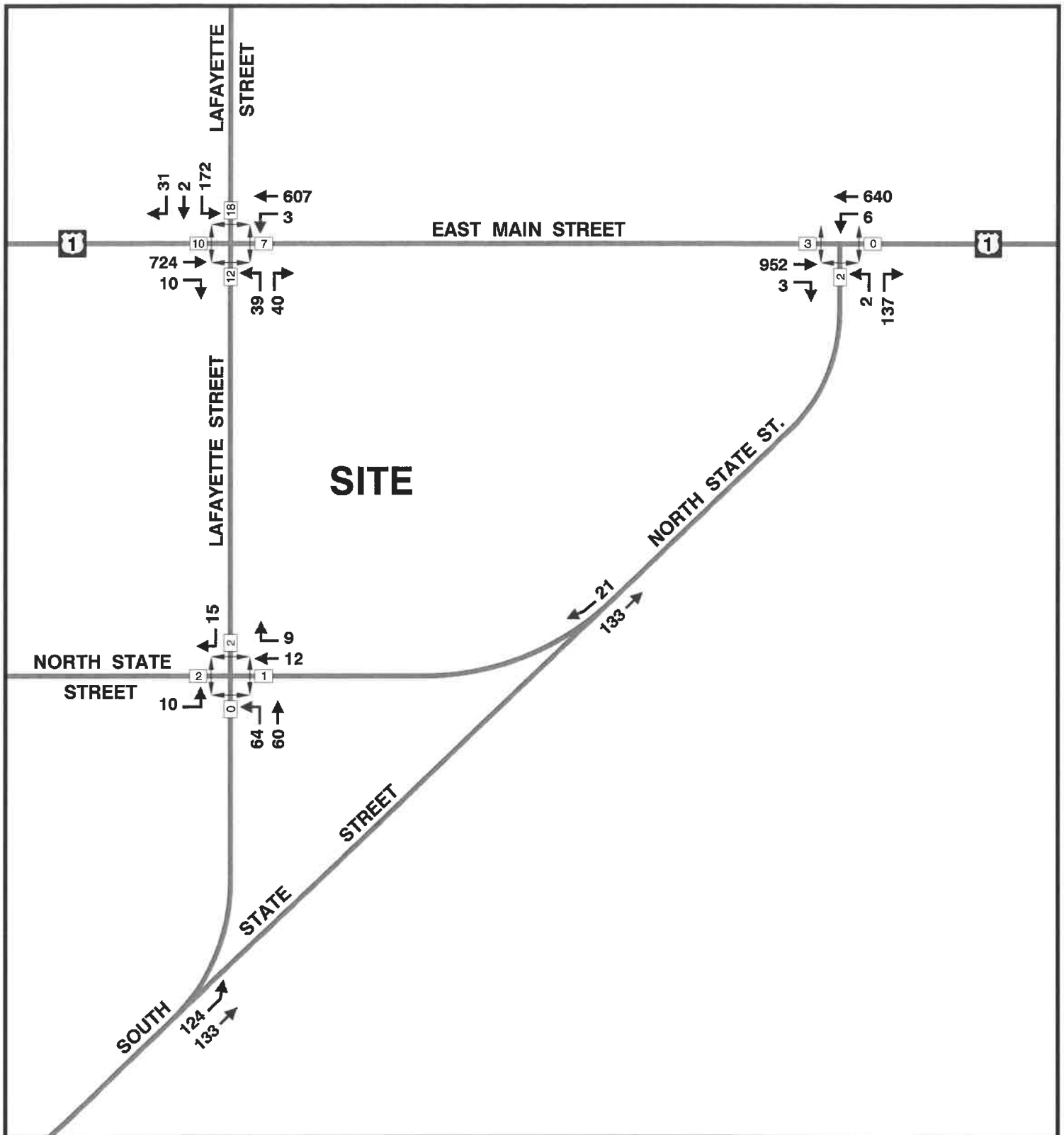


Not to Scale



2

1/10/22



LEGEND:

→ [] Pedestrians

NOTES:

1. Turning movement counts conducted by Hardesty & Hanover, LLC on Tuesday, December 14, 2021 from 4:00 to 6:00 P.M.
2. Based on discussions with CTDOT Planning Division, no COVID adjustment is needed.

2021 EXISTING TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR
(4:00 to 5:00 P.M.)

MIXED-USE DEVELOPMENT
819 East Main Street
Stamford, Connecticut



Not to Scale



3

1/10/22

Accident Experience

The latest available accident data was obtained from the Connecticut Crash Data Repository (CTCDR) for a period beginning October 1, 2018 to September 30, 2021 for U.S. Route 1, which is the latest three years available at this time. Accident data from 2020 was included and was during COVID-19 conditions. At the intersection of U.S. Route 1 and Lafayette Street, there were a total of 27 accidents recorded during this three-year period. Data indicates that 74 percent of the accidents involved property damage and 26 percent involved injuries. The collision types were 37 percent involving an angle collision, 22 percent involving a rear-end collision, 19 percent involving a sideswipe in the same direction, 11 percent involving a head-on collision, 7 percent involving a single vehicle crash and 4 percent involving other collision. The contribution factors were 25 percent for failure to stay in lane, 22 percent for running a red light, 15 percent for other action, 11 percent for failure to yield right-of-way, 7 percent for unknown and 4 percent for following too closely, ran STOP sign, improper backing, operate in a reckless manner and operator inattentive. It was found that 70 percent of the accidents occurred during daylight hours and 77 percent occurred on dry road conditions.

For the section of U.S. Route 1, between Lafayette Street and Quintard Terrace, there were a total of 37 accidents recorded during this three-year period. Data indicates that 89 percent of the accidents involved property damage and 11 percent involved injuries. The collision types were 38 percent involving an angle collision and a sideswipe in the same direction, 11 percent involving a rear-end collision, 8 percent involving a sideswipe in the opposite direction and 5 percent involving a single vehicle crash. The contribution factors were 27 percent for failure to stay in lane, 24 percent for failure to yield right-of-way, 14 percent for following too closely, 8 percent for other action, unknown and no contributing action, 5 percent for improper passing and 3 percent for improper backing and improper turning. It was found that 62 percent of the accidents occurred during daylight hours and 83 percent occurred on dry road conditions.

At the intersection of U.S. Route 1 and Quintard Terrace, there were a total of 15 accidents recorded during this three-year period. Data indicates that 60 percent of the accidents involved property damage and 40 percent involved injuries. The collision types were 39 percent involving a rear-end collision, 33 percent involving an angle collision and 7 percent involving a sideswipe in the same and in the opposite directions, a single vehicle crash and other collision. The contribution factors were 33 percent for failure to yield right-of-way, 26 percent for following too closely, 13 percent for improper passing and 7 percent for other action, ran

STOP sign, improper backing and improper passing. It was found that 67 percent of the accidents occurred during daylight hours and 73 percent occurred on dry road conditions.

For the section of U.S. Route 1, between Quintard Terrace and North State Street, there were a total of 11 accidents recorded during this three-year period. Data indicates that 82 percent of the accidents involved property damage and 18 percent involved injuries. The collision types were 46 percent involving a rear-end collision, 27 percent involving a sideswipe in the same direction, 18 percent involving an angle collision and 9 percent involving a sideswipe in the opposite direction. The contribution factors were 28 percent for failure to stay in lane, 18 percent for following too closely, other action and improper backing and 9 percent for failure to yield right-of-way and unknown. It was found that 64 percent of the accidents occurred during daylight hours and 91 percent occurred on dry road conditions.

At the intersection of U.S. Route 1 and North State Street, there were a total of 10 accidents recorded during this three-year period. Data indicates that 70 percent of the accidents involved property damage and 30 percent involved injuries. The collision types were 80 percent involving an angle collision and 10 percent involving a rear-end collision and a sideswipe in the same direction. The contribution factors were 40 percent for failure to yield right-of-way, 20 percent for improper turning and 10 percent for following too closely, failure to stay in lane, no contributing action and wrong side/way. It was found that 80 percent of the accidents occurred during daylight hours and 70 percent occurred on dry road conditions. Table 2 provides a more detailed summary of the accident data. The accident data from the CTCDR is included in the Appendix of this report.

The latest available accident data was requested from the City of Stamford Police Department for a period beginning January 1, 2018 through December 31, 2020 for North State Street, South State Street and Lafayette Street. Once this data is received, it will be summarized in Table 3.

Table 2
ACCIDENT EXPERIENCE SUMMARY – U.S. ROUTE 1
Mixed-Use Development
819 East Main Street
Stamford, Connecticut

ACCIDENT CHARACTERISTICS	U.S. ROUTE 1									
	At Lafayette Street (7.85)		Between Lafayette Street and Quintard Terrace (7.86-7.92)		At Quintard Terrace (7.93)		Between Quintard Terrace and North State Street (7.94-7.97)		At North Street (7.98)	
	Total	%	Total	%	Total	%	Total	%	Total	%
Year										
▪ 2018/2019	11	41	11	30	7	47	3	28	5	50
▪ 2019/2020	12	44	13	35	3	20	4	36	3	30
▪ 2020/2021	4	15	13	35	5	33	4	36	2	20
▪ Total	27	100	37	100	15	100	11	100	10	100
Accident Severity										
▪ Property Damage	20	74	33	89	9	60	9	82	7	70
▪ Injury	7	26	4	11	6	40	2	18	3	30
Collision Type										
▪ Rear End	6	22	4	11	6	39	5	46	1	10
▪ Angle	10	37	14	38	5	33	2	18	8	80
▪ Sideswipe-Same Direction	5	19	14	38	1	7	3	27	1	10
▪ Sideswipe-Opposite Direction	0	0	3	8	1	7	1	9	0	0
▪ Head On	3	11	0	0	0	0	0	0	0	0
▪ Single Vehicle	2	7	2	5	1	7	0	0	0	0
▪ Other	1	4	0	0	1	7	0	0	0	0

Table 2 Cont'd

ACCIDENT CHARACTERISTICS	U.S. ROUTE 1									
	At Lafayette Street (7.85)		Between Lafayette Street and Quintard Terrace (7.86-7.92)		At Quintard Terrace (7.93)		Between Quintard Terrace and North State Street (7.94-7.97)		At North Street (7.98)	
	Total	%	Total	%	Total	%	Total	%	Total	%
Contributing Factor										
▪ Following Too Closely	1	4	5	14	4	26	2	18	1	10
▪ Failure to Yield ROW	3	11	9	24	5	33	1	9	4	40
▪ Failure to Stay in Lane	7	25	10	27	0	0	3	28	1	10
▪ Ran Red Light	6	22	0	0	0	0	0	0	0	0
▪ Other Action	4	15	3	8	1	7	2	18	0	0
▪ Unknown	2	7	3	8	0	0	1	9	0	0
▪ Ran STOP Sign	1	4	0	0	1	7	0	0	0	0
▪ Improper Backing	1	4	1	3	1	7	2	18	0	0
▪ Operate Reckless	1	4	0	0	0	0	0	0	0	0
▪ Operate Inattentive	1	4	0	0	0	0	0	0	0	0
▪ Improper Turn	0	0	1	3	2	13	0	0	2	20
▪ Improper Passing	0	0	2	5	1	7	0	0	0	0
▪ No Contributing Action	0	0	3	8	0	0	0	0	1	10
▪ Wrong Side/Way	0	0	0	0	0	0	0	0	1	10
Light Condition										
▪ Daylight	19	70	23	62	10	67	7	64	8	80
▪ Dark – Lighted	7	26	10	27	5	33	3	27	1	10
▪ Dark – Not Lighted	0	0	2	5	0	0	1	9	0	0
▪ Dusk	1	4	1	3	0	0	0	0	1	10
▪ Other	0	0	1	3	0	0	0	0	0	0
Surface Condition										
▪ Dry	21	77	31	83	11	73	10	91	7	70
▪ Wet	5	19	5	14	3	20	1	9	3	30
▪ Snow	1	4	0	0	0	0	0	0	0	0
▪ Slush	0	0	1	3	0	0	0	0	0	0
▪ Ice/Frost	0	0	0	0	1	7	0	0	0	0

Table 2 Cont'd

ACCIDENT CHARACTERISTICS	U.S. ROUTE 1									
	At Lafayette Street (7.85)		Between Lafayette Street and Quintard Terrace (7.86-7.92)		At Quintard Terrace (7.93)		Between Quintard Terrace and North State Street (7.94-7.97)		At North Street (7.98)	
	Total	%	Total	%	Total	%	Total	%	Total	%
	20	74	30	81	12	80	7	64	9	90
	2	7	3	8	0	0	3	27	0	0
▪ Clear	4	15	4	11	3	20	1	9	1	10
▪ Cloudy	1	4	0	0	0	0	0	0	0	0
▪ Rain										
▪ Snow										

Source: Connecticut Crash Data Repository from October 1, 2018 to September 30, 2021.

Notes:

- 1) October 1, 2018 to September 30, 2021 is the latest three years of accident data available.
- 2) 2018/2019 = October 1, 2018 to September 30, 2019.
- 3) 2019/2020 = October 1, 2019 to September 30, 2020.
- 4) 2020/2021 = October 1, 2020 to September 30, 2021.

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Table 3
 ACCIDENT EXPERIENCE SUMMARY – NORTH STATE STREET/LAFAYETTE STREET
 Mixed-Use Development
 819 East Main Street
 Stamford, Connecticut

ACCIDENT CHARACTERISTICS	NORTH STATE STREET				LAFAYETTE STREET	
	Between U.S. Route 1 and Lafayette Street/South State Street		At Lafayette Street/South State Street		Between North State Street and U.S. Route 1	
	Total	%	Total	%	Total	%
Year						
▪ 2019						
▪ 2020						
▪ 2021						
▪ Total						
Accident Severity	DATA NOT RECEIVED					
▪ Property Damage						
▪ Injury						
Collision Type						
▪ Rear End						
▪ Head On						
▪ Angle						
▪ Sideswipe-Same Direction						
Contributing Factor						
▪ Following Too Closely						
▪ Failure to Yield ROW						
▪ Failure to Stay in Lane						
▪ Ran Off Roadway						
▪ Improper Turn						
▪ Improper Backing						
Light Condition						
▪ Daylight						
▪ Dark – Lighted						
▪ Dark – Not Lighted						
Surface Condition						
▪ Dry						
▪ Wet						
Weather Conditions						
▪ Clear						
▪ Cloudy						
▪ Rain						

Source: Stamford Police Department from January 1, 2019 to December 31, 2021.

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FUTURE TRAFFIC IMPACTS

This section of the report describes the future 2024 traffic conditions for the Study Area. It includes 2024 no-build traffic volumes, estimates for site traffic generation, distribution and assignment of the proposed site traffic, future build traffic volumes and the results of capacity analyses. The capacity analyses are completed for a no-build and build condition, which provides a basis for determining potential impact to area roads and nearby intersections and the need for mitigation, if necessary.

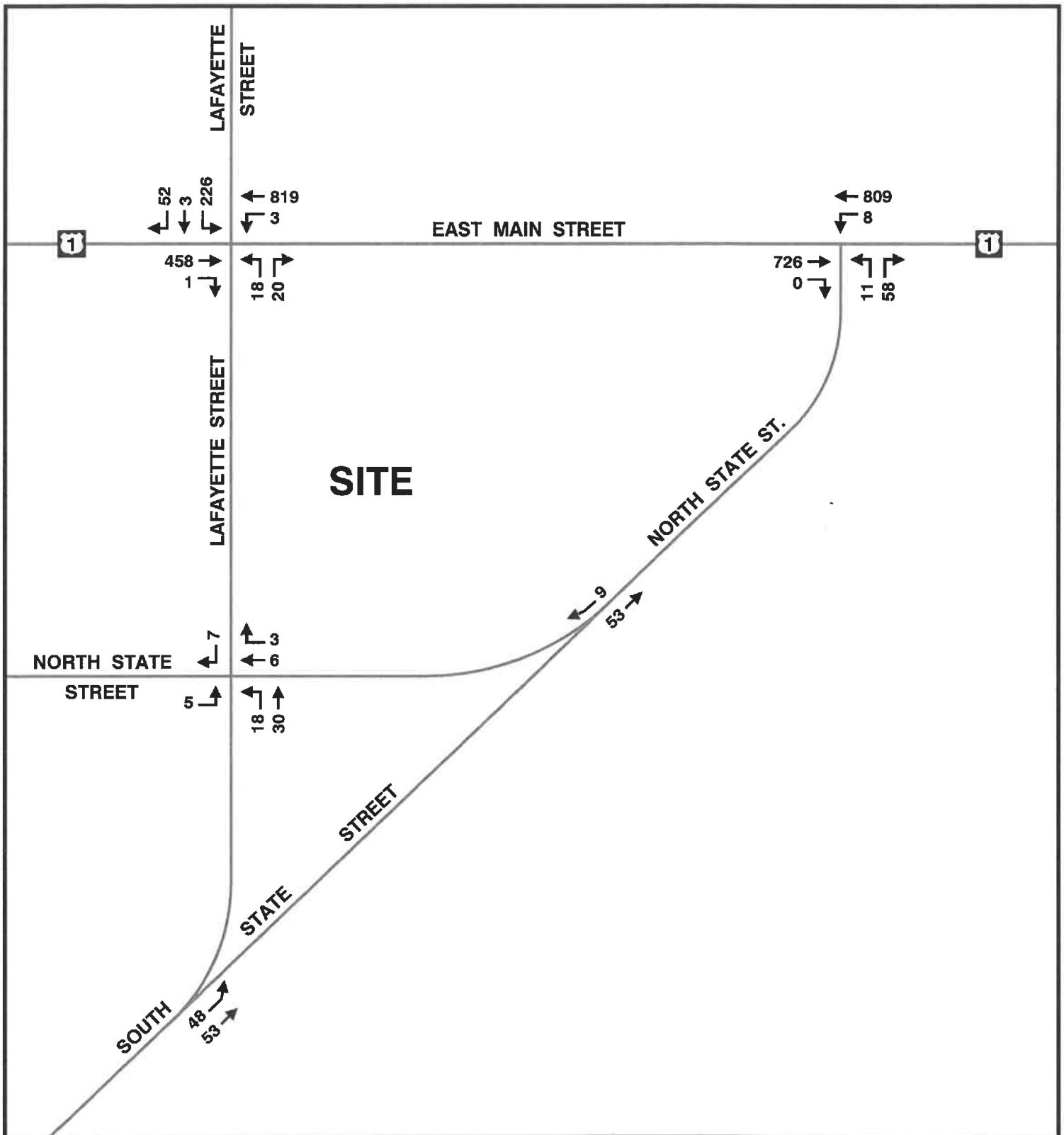
No-Build Traffic Volumes

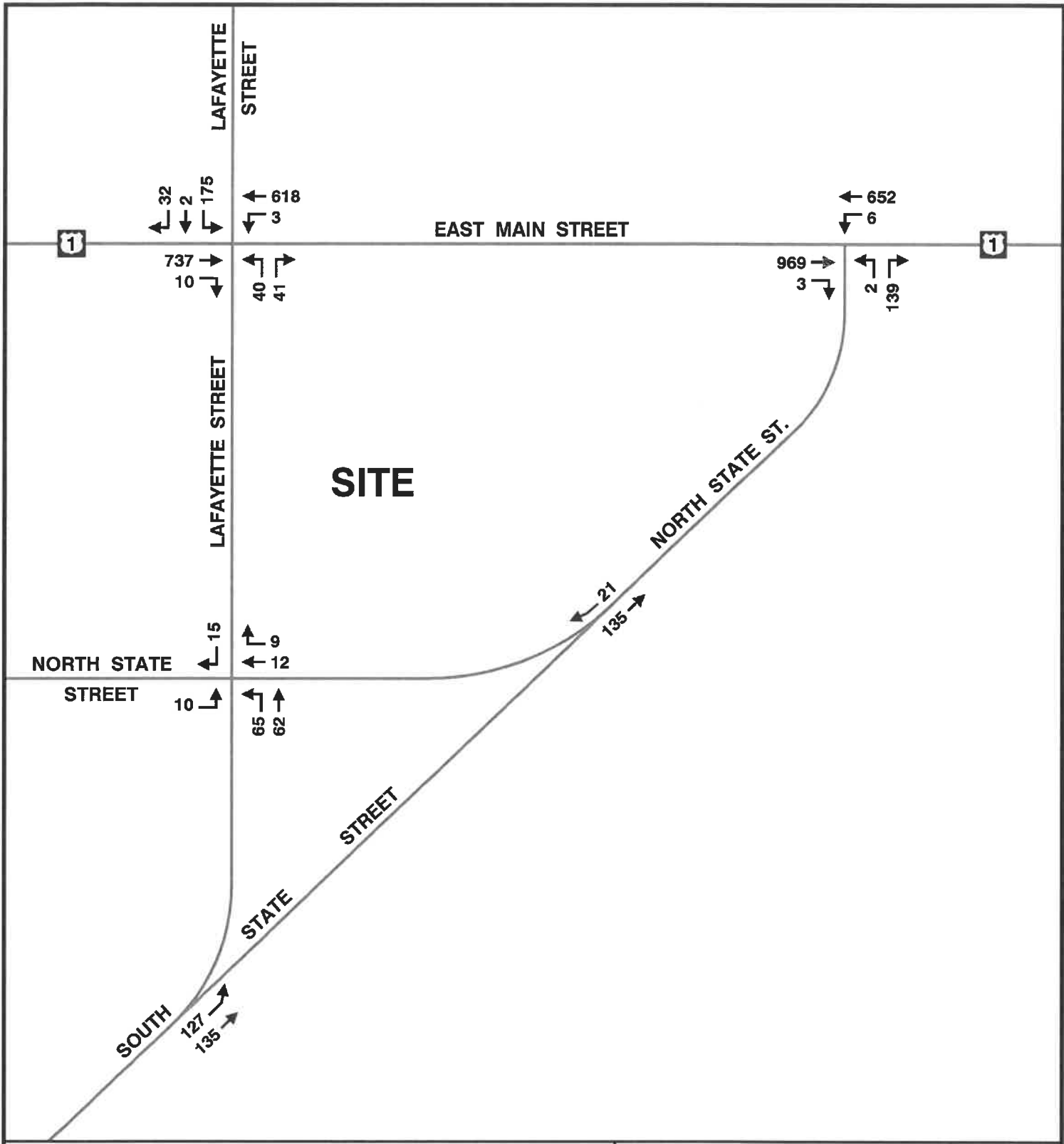
The 2021 existing traffic volumes, which were previously described, were expanded to reflect a 2024 traffic condition for each of the intersections by applying an annual growth rate of 0.6 percent, as per discussions with CTDOT Planning Division, to account for general growth in the immediate vicinity of the surrounding area. Based on discussions with the CTDOT Planning Division and the City of Stamford, no other developments were identified. The 2024 no-build traffic volumes are graphically illustrated in Figures 4 and 5 for the weekday morning and weekday afternoon peak hours, respectively.

Estimation of Site Traffic Generation

The proposal is to construct 130-units of multifamily housing (mid-rise) and 2,950 square feet of commercial space. Based on trip rates from "Trip Generation," 11th Edition, published by ITE, 2021, it is estimated that the proposed 130-units would generate a total of 48 and 51 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed 2,950 square feet of commercial space is estimated to generate a total of 7 and 19 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. It is estimated that the total proposed site will generate a total of 55 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. To be conservative no pass-by credit was applied to the trips generated by the commercial space.

It should be noted that there is a recent approval for 85-units of multifamily housing (mid-rise) and 2,900 square feet of commercial space on the site. For comparison purposes, that approved development would generate a total of 38 and 52 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed site will generate a total of 17 and 18 additional vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively, when compared to the approved





NOTE:
An annual growth rate of 0.6 percent was employed to the horizon year 2024, as per discussions with CTDOT Planning Division.

**2024 NO-BUILD TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR**

**MIXED-USE DEVELOPMENT
819 East Main Street
Stamford, Connecticut**



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development. The traffic analysis is based on the full proposal. Table 4 illustrates the details of the site traffic generation by entering and exiting.

Distribution and Assignment of Site Traffic

A review of current traffic patterns at the Study Area intersections and in the vicinity of the project influence area was conducted to determine trip distribution for the proposed development. For arriving site traffic, it was found that 40 percent will arrive from the east on U.S. Route 1, 35 percent will arrive from the west on U.S. Route 1, 15 percent will arrive from the north on Lafayette Street and 10 percent will arrive from the south on South State Street. For departing site traffic, it was found that 40 percent will depart to the east on U.S. Route 1 and 60 percent will depart to the west on U.S. Route 1.

Figure 6 provides the site traffic distribution of the proposed development. Figures 7 and 8 graphically illustrate the site traffic generation and assignment for the proposed development for the weekday morning and weekday afternoon peak hours, respectively.

Build Traffic Volumes

Build traffic volumes for a 2024 condition are graphically illustrated in Figures 9 and 10 for the weekday morning and weekday afternoon peak hours, respectively. The 2024 build traffic volumes include the 2024 no-build traffic volumes and the site traffic generation volumes for the proposed development for each time period.

Capacity Analysis Procedures

Capacity analysis procedures are provided in the Appendix of this report. The analyses is based on a SYNCHRO computer model and information provided by the Transportation Research Board (TRB) and the Highway Capacity Manual (HCM) 6th Edition.

Capacity Analysis Results – Existing, No-Build and Build Conditions

The following is a summary of the results of analyses for an existing, no-build and build conditions at the Study Area intersections and site access drive for each of the time periods included in this analysis.

Table 4
SITE TRAFFIC GENERATION – PEAK HOURS
Mixed-Use Development
819 East Main Street
Stamford, Connecticut

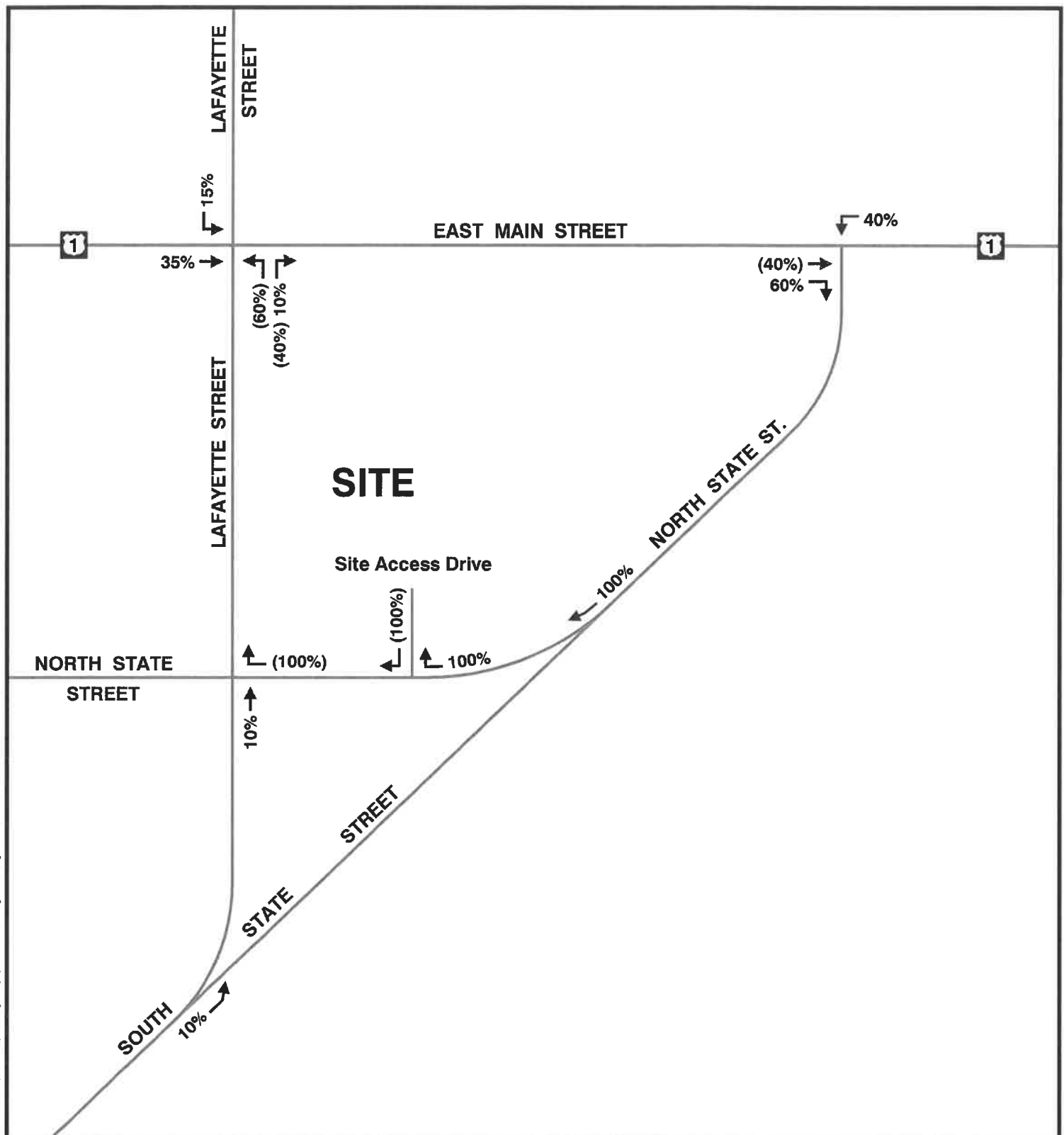
LAND USE	SIZE	TRAFFIC DIRECTION	VEHICLE TRIP ENDS	
			Weekday Morning	Weekday Afternoon
Approved Multifamily Housing (Mid-Rise)	85 Dwelling Units	Enter	7	20
		Exit	<u>24</u>	<u>13</u>
		Total	31	33
Approved Strip Retail Plaza	2,900 S.F.	Enter	4	9
		Exit	<u>3</u>	<u>10</u>
		Total	7	19
1) Approved Total Site Traffic		Enter	11	29
		Exit	<u>27</u>	<u>23</u>
		Total	38	52
Proposed Multifamily Housing (Mid-Rise)	130 Dwelling Units	Enter	11	31
		Exit	<u>37</u>	<u>20</u>
		Total	48	51
Proposed Strip Retail Plaza	2,950 S.F.	Enter	4	9
		Exit	<u>3</u>	<u>10</u>
		Total	7	19
2) Proposed Total Site Traffic		Enter	15	40
		Exit	<u>40</u>	<u>30</u>
		Total	55	70
Net Increase Site Traffic (2-1)		Enter	4	11
		Exit	<u>13</u>	<u>7</u>
		Total	17	18

Sources: "Trip Generation," 11th Edition, published by the Institute of Transportation Engineers (ITE), 2021 using Multifamily Housing (Mid-Rise), Code #221 average rates and Strip Retail Plaza, Code #822 average rates.

Note: No pass-by credit was applied to the commercial space, to be conservative.

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SITE TRAFFIC

SITE TRAFFIC DISTRIBUTION



Not to Scale

MIXED-USE DEVELOPMENT
819 East Main Street
Stamford, Connecticut

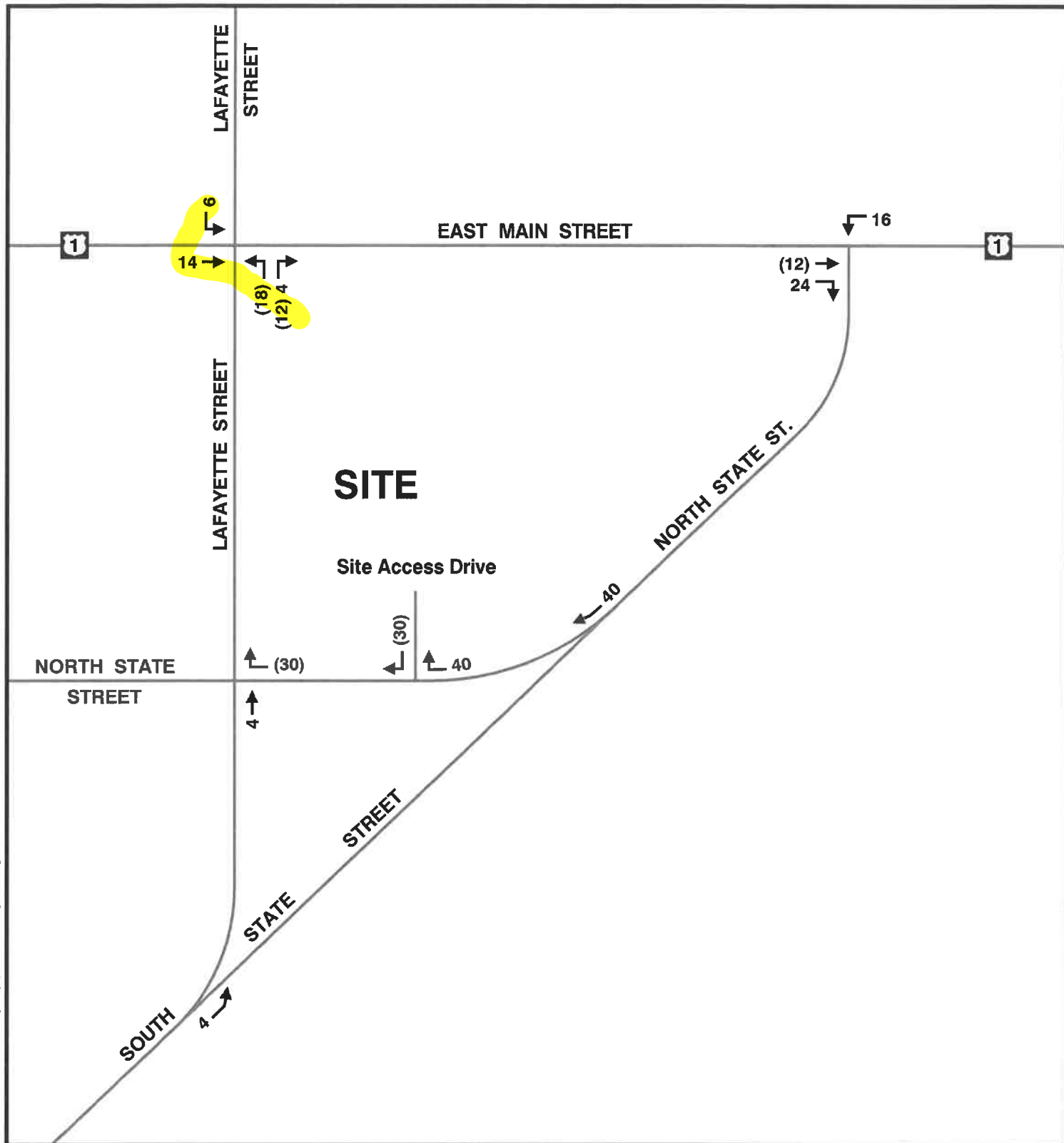


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Enter	15
Exit	(40)
Total	55 Vehicle Trip Ends



TOTAL SITE TRAFFIC:
 Enter 40
 Exit (30)
 Total 70 Vehicle Trip Ends

**SITE TRAFFIC GENERATION & ASSIGNMENT
 WEEKDAY AFTERNOON PEAK HOUR**

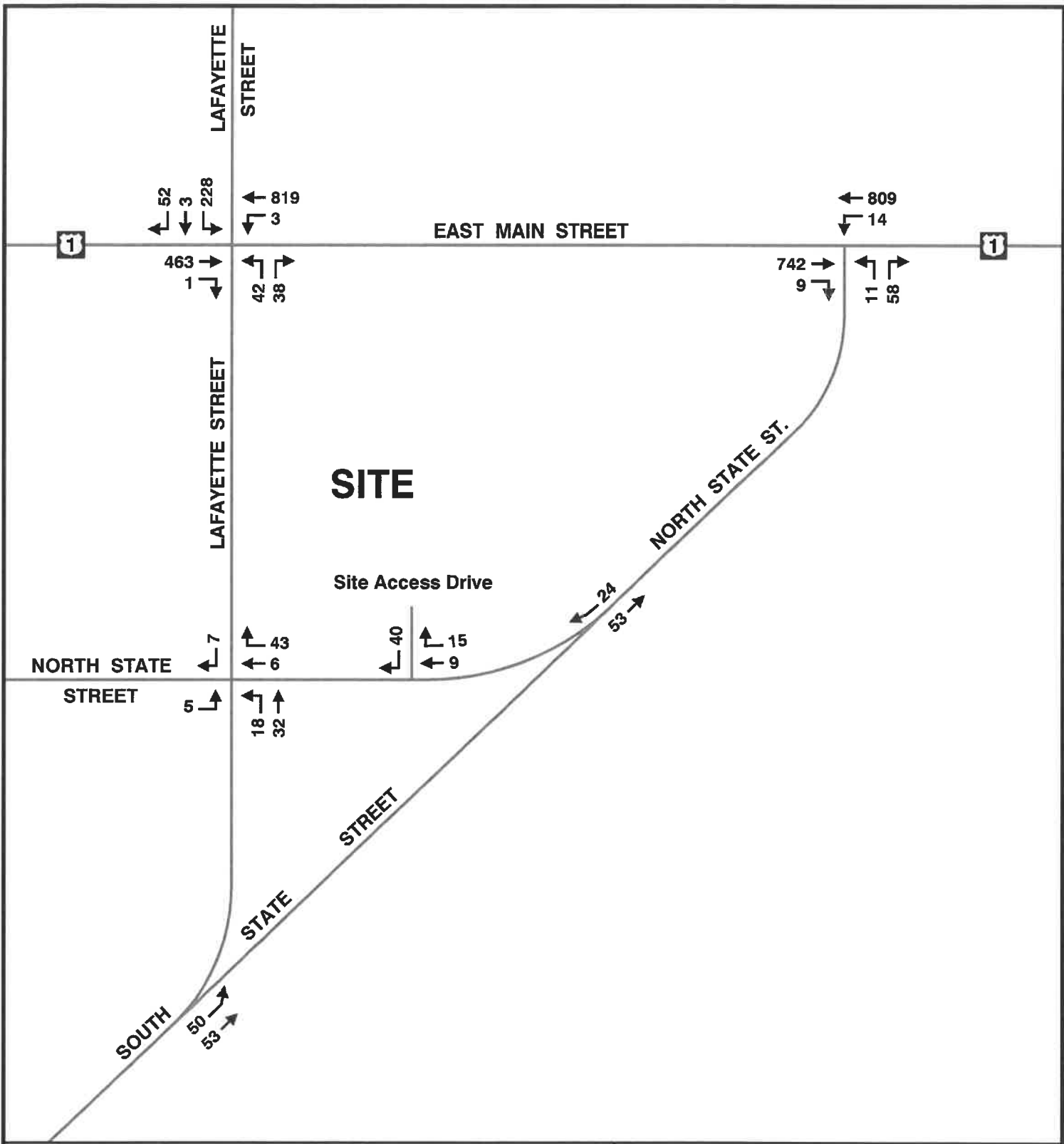
**MIXED-USE DEVELOPMENT
 819 East Main Street
 Stamford, Connecticut**

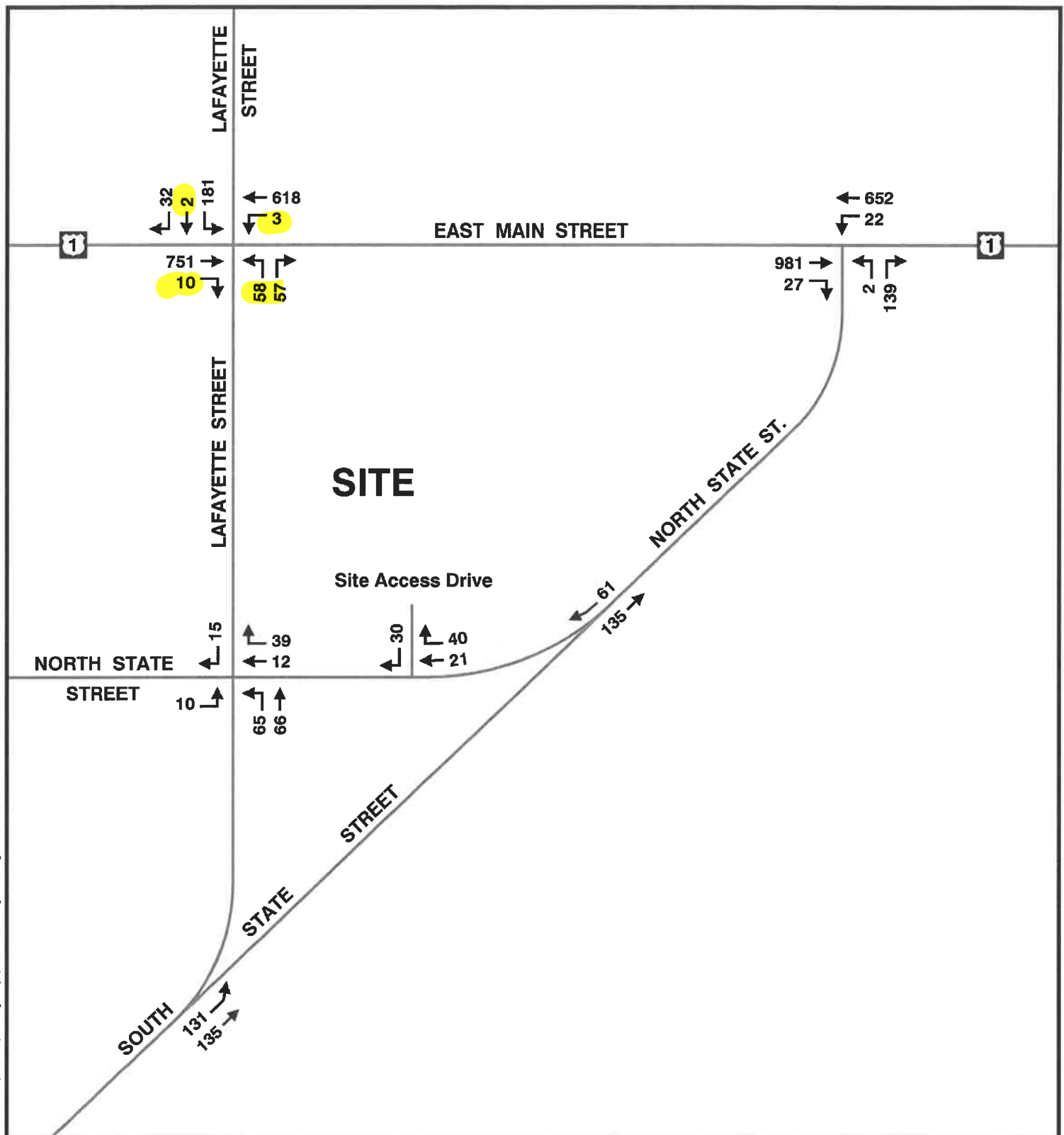


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NOTE:
The 2024 Build Traffic Volumes includes the 2024 No-Build Traffic Volumes and Site Traffic Generation.

MIXED-USE DEVELOPMENT
819 East Main Street
Stamford, Connecticut



Not to Scale

1. U.S. Route 1 at Lafayette Street

Existing – Results of the analysis of this signalized intersection indicate that it currently operates at an overall Level of Service “B” and “C” during the weekday morning and weekday afternoon peak hours, respectively. The southbound left turn lane group and approach operate at a Level of Service “E” during both peak hours.

No-Build – Results of the analysis of this signalized intersection indicate that it will operate at an overall Level of Service “B” and “C” during the weekday morning and weekday afternoon peak hours, respectively. The southbound left turn lane group and approach operate at a Level of Service “E” during both peak hours.

Build – Results of the analysis indicate that with the site-generated traffic added to this signalized intersection it will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. The westbound and northbound lane groups and approaches will have an acceptable change in Level of Service from “A” to “B” and “B” to “C,” respectively, during the weekday morning peak hour. The eastbound lane group and approach will have an acceptable change in Level of Service from “A” to “B” during the weekday afternoon peak hour. All remaining lane groups and approaches will maintain the same Levels of Service during all peak hours.

2. U.S. Route 1 at North State Street

Existing – Results of the analysis of this signalized intersection indicate that it currently operates at an overall Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

No-Build – Results of the analysis of this signalized intersection indicate that it will operate at an overall Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

Build – Results of the analysis indicate that with the site-generated traffic added to this signalized intersection it will continue to operate at the same overall Level of Service during both peak hours. All lane groups and approaches will maintain the same Levels of Service during all peak hours.

3. North State Street at Lafayette Street/South State Street

Existing – Results of the analysis of this all-way STOP-controlled intersection indicate that it currently operates at an overall Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

No-Build – Results of the analysis of this all-way STOP-controlled intersection indicate that it will operate at an overall Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

Build – Results of the analysis indicate that with the site-generated traffic added to this all-way STOP-controlled intersection it will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delays. All lanes will maintain the same Levels of Service during all peak hours.

4. *North State Street at Site Access Drive*

Build – Results of the analysis of this two-way STOP controlled intersection indicate that it will operate at a Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

Table 5 provides a more detailed summary of the results of the capacity analyses for the Study Area intersections, as described above. This table provides Level of Service, average vehicle delay and volume to capacity ratio for each lane group, approach, intersection overall and lane during each of the peak hours for the existing, no-build and build conditions. It also provides a project assessment between the no-build and build conditions, which identifies the potential impact. The results of the Storage/Queue analyses for the Study Area intersections are also provided for each lane group and lane during each of the peak hours for the existing, no-build and build conditions. The capacity worksheets are included in the Appendix of this report.

Findings

This Traffic Access and Impact Study was prepared to provide the City of Stamford, the Connecticut Department of Transportation (CTDOT) and the Office of the State Traffic Administration (OSTA) with a detailed analysis to determine potential traffic impacts from the proposed mixed-use development located at 819 East Main Street. The proposal is to construct 130-units of multifamily housing (mid-rise) and 2,950 square feet of commercial space. The site has a previous approval for 85-units of multifamily housing (mid-rise) and 2,900 square feet of commercial space from September 2021. Site access is proposed via right turn in/right turn out to North State Street.

Table 5
CAPACITY AND STORAGE/QUEUE ANALYSIS RESULTS – MEASURE OF EFFECTIVENESS (MOE) AND IMPACT ASSESSMENT – PEAK HOURS
Mixed-Use Development
819 East Main Street
Stamford, Connecticut

	INTERSECTION	CONTROL TYPE	STORAGE/ LINK LENGTH	2021 EXISTING CONDITIONS (BASELINE)						2024 NO-BUILD CONDITIONS						2024 BUILD CONDITIONS						PROJECT IMPACTS (NO-BUILD TO BUILD)				
				Weekday Morning			Weekday Afternoon			Weekday Morning			Weekday Afternoon			Weekday Morning			Weekday Afternoon			Weekday Morning Project Delay (Seconds)	Weekday Afternoon Deterioration in LOS	Weekday Morning Project Delay (Seconds)	Weekday Afternoon Deterioration in LOS	
				LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)					
U.S. Route 1 at Lafayette Street	Traffic Signal	EB TR	285	A/8.0	0.22	116	A/9.6	0.44	154	A/8.2	0.23	120	A/10.0	0.46	157	A/8.7	0.23	125	B/12.1	0.49	162	No	No	0.5	A – B	2.1
		APP.		A/8.0	–	–	A/9.6	–	–	A/8.2	–	–	A/10.0	–	–	A/8.7	–	–	B/12.1	–	–	No	No	0.5	A – B	2.1
		WB LT	360	A/9.5	0.42	274	C/21.4	0.70	403	A/9.9	0.43	288	C/24.1	0.72	455	B/10.8	0.43	305	C/29.4	0.76	474	A – B	No	0.9	A – B	5.3
		APP.		A/9.5	–	–	C/21.4	–	–	A/9.9	–	–	C/24.1	–	–	B/10.8	–	–	C/29.4	–	–	A – B	No	0.9	A – B	5.3
		NB LR	300	B/16.5	0.11	34	C/25.8	0.29	70	B/16.7	0.11	34	C/26.1	0.29	73	C/21.8	0.23	68	C/30.0	0.37	108	B – C	No	5.1	No	3.9
		APP.		B/16.5	–	–	C/25.8	–	–	B/16.7	–	–	C/26.1	–	–	C/21.8	–	–	C/30.0	–	–	B – C	No	5.1	No	3.9
		SB L	1,230	E/68.0	0.84	255	E/73.7	0.86	212	E/67.7	0.84	260	E/73.0	0.86	217	E/67.7	0.85	261	E/64.0	0.82	249	No	No	0.0	No	-9.0
U.S. Route 1 at North State Street		TR	200	A/10.0	0.16	33	B/12.5	0.12	22	A/9.9	0.16	33	B/12.3	0.13	22	A/9.5	0.15	33	B/11.9	0.11	22	No	No	-0.4	No	-0.4
		APP.		E/56.7	–	–	E/63.9	–	–	E/56.5	–	–	E/63.1	–	–	E/56.5	–	–	E/55.7	–	–	No	No	0.0	No	-7.4
		Overall		B/17.5	–	–	C/21.7	–	–	B/17.8	–	–	C/22.8	–	–	B/18.6	–	–	C/25.0	–	–	No	No	0.8	No	2.2
	Traffic Signal	EB TR	160	A/1.2	0.25	37	A/2.6	0.38	127	A/1.2	0.25	37	A/2.7	0.39	131	A/1.2	0.26	38	A/3.3	0.41	129	No	No	0.0	No	0.6
		APP.		A/1.2	–	–	A/2.6	–	–	A/1.2	–	–	A/2.7	–	–	A/1.2	–	–	A/3.3	–	–	No	No	0.0	No	0.6
		WB LT	105	A/2.0	0.29	74	A/2.4	0.27	74	A/2.0	0.30	76	A/2.5	0.28	79	A/2.0	0.31	77	A/2.7	0.31	85	No	No	0.0	No	0.2
		APP.		A/2.0	–	–	A/2.4	–	–	A/2.0	–	–	A/2.5	–	–	A/2.0	–	–	A/2.7	–	–	No	No	0.0	No	0.2
North State Street at Lafayette Street/ South State Street		NB LR	1,915	C/25.7	0.43	55	C/23.9	0.64	74	C/25.5	0.43	55	C/26.3	0.65	81	C/25.5	0.43	55	C/27.1	0.66	84	No	No	0.0	No	0.8
		APP.		C/25.7	–	–	C/23.9	–	–	C/25.5	–	–	C/26.3	–	–	C/25.5	–	–	C/27.1	–	–	No	No	0.0	No	0.8
		Overall		A/2.6	–	–	A/4.2	–	–	A/2.6	–	–	A/4.5	–	–	A/2.6	–	–	A/4.9	–	–	No	No	0.0	No	0.4
	AWSC	EB Ln1	280	A/7.3	0.007	0	A/7.7	0.015	0	A/7.3	0.007	0	A/7.7	0.015	0	A/7.4	0.007	0	A/7.7	0.015	0	No	No	0.1	No	0.0
		WB Ln1	760	A/6.9	0.011	0	A/7.2	0.030	3	A/6.9	0.011	0	A/7.2	0.030	3	A/6.8	0.057	5	A/7.2	0.070	5	No	No	-0.1	No	0.0
		NB Ln1	110	A/7.9	0.030	3	A/8.5	0.114	10	A/7.9	0.030	3	A/8.5	0.115	10	A/8.0	0.030	3	A/8.6	0.117	10	No	No	0.1	No	0.1
		NB Ln2	1,160	A/7.5	0.043	3	A/7.8	0.096	8	A/7.5	0.044	3	A/7.8	0.100	8	A/7.6	0.048	5	A/8.0	0.107	10	No	No	0.1	No	0.2
North State Street at Site Access Drive		SB Ln1	300	A/6.6	0.008	0	A/6.8	0.019	3	A/6.6	0.008	0	A/6.8	0.019	3	A/6.7	0.008	0	A/6.9	0.020	3	No	No	0.1	No	0.1
		Overall		A/7.5	–	–	A/7.9	–	–	A/7.5	–	–	A/7.9	–	–	A/7.2	–	–	A/7.9	–	–	No	No	-0.3	No	0.0
	TWSC	SB Ln1	100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	A/8.5	0.041	3	A/8.6	0.032	3	N/A	N/A	N/A	N/A	N/A

Notes:

- Synchro 10.0/HCM 8th Edition results are used for capacity analysis.
- Level of Service determining parameter is called the service measure.
- For Signalized Intersections: Level of Service/Average Total delay per vehicle (seconds/vehicle).
- For TWSC and AWSC Intersections: Level of Service/Average Control delay per vehicle (seconds/vehicle).
- ITE publication for Traffic Access and Impact Studies for site development "A Recommended Practice" indicated that overall Level of Service ratings of A to D are normally considered acceptable for signalized intersections (Level C or better are considered desirable). Levels of Service E and F are normally undesirable.
- V/C ratio indicates the amount of congestion for each Lane Group, Movement and Lane. Any V/C ratio greater than or equal to one indicates that the Lane Group, Movement and Lane are operating at above capacity.
- The Queue Length rows show the 95th percentile maximum queue length in feet.
- The Queue Length is for each lane. The total queue length is divided by the number of lanes and the lane utilization factor.
- The 95th percentile queue is the maximum back of the queue with the 95th percentile traffic volumes.
- Bolded** 95th percentile queue exceeds the storage available.
- TWSC = Two-Way STOP Control.
- AWSC = All-Way STOP Control.
- N/A = Not Available.
- Physical Units consist of the following:
 - Lane Group and Intersection Overall for Traffic Signal Controlled Intersections.
 - TWSC Intersections: Critical Lane and Critical Movement.
 - AWSC Intersections: Lane and Intersection Overall.

NB = Northbound
L = Left Turn
EB = Eastbound
T = Through
SB = Southbound
R = Right Turn
WB = Westbound
APP. = Approach
Ln = Lane

This Study addresses traffic conditions for the 2021 existing, 2024 no-build and 2024 build conditions during the weekday morning and weekday afternoon peak hours. Traffic counts were conducted at the Study Area intersections by Hardesty & Hanover, LLC in December 2021. Based on discussions CTDOT Planning Division, no COVID adjustments are needed.

The 2024 future projected traffic volumes, without the proposed development, employed a 0.6 percent annual growth rate, as per discussions with CTDOT Planning Division. Based on discussions with CTDOT Planning Division and the City of Stamford, no other nearby developments were identified.

Based on trip rates from "Trip Generation," 11th Edition, published by ITE, 2021, it is estimated that the proposed 130-units will generate a total of 48 and 51 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed 2,950 square feet of commercial space is estimated to generate a total of 7 and 19 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. Therefore, the total proposed site will generate a total of 55 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. To be conservative no pass-by credit was applied to the commercial space.

This site received an approval for 85-units of multifamily housing and 2,900 square feet of commercial space in September 2021. For comparison purposes, that approved development would generate a total of 38 and 52 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed site will generate a total of 17 and 18 additional vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively, when compared to the approved development. However, this traffic analysis is based on the full proposal.

A review of current traffic patterns at the Study Area intersections and in the vicinity of the project influence area was conducted to determine trip distribution for the proposed development. For arriving site traffic, it was found that 40 percent will arrive from the east on U.S. Route 1, 35 percent will arrive from the west on U.S. Route 1, 15 percent will arrive from the north on Lafayette Street and 10 percent will arrive from the south on South State Street. For departing site traffic, it was found that 40 percent will depart to the east on U.S. Route 1 and 60 percent will depart to the west on U.S. Route 1.

SYNCHRO 10 capacity analyses were conducted for 2021 existing, 2024 no-build and 2024 build conditions to identify incremental impacts and needs that the proposed development will generate. Results of the analyses indicate that the signalized intersection of U.S. Route 1 at Lafayette Street will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. The westbound and northbound lane groups and approaches will have an acceptable change in Level of Service from "A" to "B" and "B" to "C," respectively, during the weekday morning peak hour. The eastbound lane group and approach will have an acceptable change in Level of Service from "A" to "B" during the weekday afternoon peak hour. The southbound left turn lane group and approach will maintain a Level of Service "E" during both peak hours.

The signalized intersection of U.S. Route 1 and North State Street will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. All lane groups and approaches will maintain the same Levels of Service during both peak hours. At the all-way STOP-controlled intersection of North State Street and Lafayette Street/South State Street, all critical lanes and the intersection overall will maintain the same Level of Service during both peak hours. The proposed site driveway will operate at Level of Service "A" during both peak hours.

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1/10/2022

APPENDIX

PHOTOGRAPHS



U.S. Route 1 at Lafayette Street Looking East



U.S. Route 1 at Lafayette Street Looking West

January 10, 2022
Hardesty & Hanover, LLC

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Exhibit 1



Lafayette Street at U.S. Route 1 Looking North



Lafayette Street at U.S. Route 1 Looking South

January 10, 2022
Hardesty & Hanover, LLC

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Exhibit 2



U.S. Route 1 at North State Street Looking East



U.S. Route 1 at North State Street Looking West

January 10, 2022
Hardesty & Hanover, LLC

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Exhibit 3



North State Street at U.S. Route 1 Looking South



North State Street at South State Street-Lafayette Street Looking East

January 10, 2022
Hardesty & Hanover, LLC

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Exhibit 4



North State Street at South State Street-Lafayette Street Looking West



Lafayette Street at North State Street Looking North

January 10, 2022
Hardesty & Hanover, LLC

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Exhibit 5



South State Street at North State Street Looking South

January 10, 2022
Hardesty & Hanover, LLC

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Exhibit 6

TURNING MOVEMENT COUNTS

MIXED-USE DEVELOPMENT, 819 EAST MAIN STREET, STAMFORD, CONNECTICUT (#05498.00)
FIELD DATA SUMMARY - U.S. Route 1 (East Main St) at Lafayette St

Wednesday 15-Dec-21	Eastbound - U.S. Route 1				Westbound - U.S. Route 1				Northbound - Lafayette St				Southbound - Lafayette St				Last 4 Quarters	Pedestrians			
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total		EB	WB	NB	SB
7:00 AM	0	75	0	75	0	132	0	132	3	0	2	5	34	1	16	51	263	1	1	1	2
7:15 AM	0	134	1	135	0	183	9	192	2	0	10	12	87	1	14	102	441	5	0	1	5
7:30 AM	0	107	0	107	1	213	0	214	5	0	5	5	42	0	15	57	383	1	0	1	2
7:45 AM	0	101	0	101	1	217	0	218	6	0	2	8	61	0	12	73	400	0	2	2	2
8:00 AM	0	108	0	108	1	183	0	184	5	0	7	12	32	2	10	44	348	0	0	0	0
8:15 AM	0	93	7	100	0	233	0	233	9	0	3	12	46	3	11	60	405	1	1	1	3
8:30 AM	0	86	0	86	0	154	0	154	6	0	1	7	35	2	3	40	287	0	0	0	2
8:45 AM	0	111	3	114	1	196	0	197	10	0	4	14	33	1	8	42	367	1	1	1	2
AM Peak Hour Vol.	0	450	1	451	3	796	9	808	18	0	19	37	222	3	51	276	1,572	6	2	4	10
Peak Hour Factor	0.84				0.93				0.77				0.68								
Tuesday 14-Dec-21	Eastbound - U.S. Route 1				Westbound - U.S. Route 1				Northbound - Lafayette St				Southbound - Lafayette St				Last 4 Quarters	Pedestrians			
Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	EB		WB	NB	SB	
4:00 PM	1	160	4	165	0	132	1	133	8	0	9	17	40	1	6	47	362	3	0	3	2
4:15 PM	0	189	2	191	0	158	1	159	12	0	10	22	33	1	8	42	414	0	2	2	7
4:30 PM	0	260	2	262	2	200	0	202	11	0	13	24	60	0	12	72	560	4	3	4	7
4:45 PM	0	114	2	116	1	115	0	116	8	0	8	16	39	0	5	44	292	3	2	3	2
5:00 PM	0	175	0	175	0	141	0	141	5	0	9	14	38	0	19	57	387	3	2	5	3
5:15 PM	0	169	1	170	0	147	0	147	6	0	9	15	39	1	14	54	386	0	0	2	0
5:30 PM	0	210	1	211	3	195	0	198	15	0	14	29	44	0	11	55	493	5	0	6	3
5:45 PM	0	168	0	168	0	111	0	111	7	0	5	12	52	0	12	64	355	1	1	5	0
PM Peak Hour Vol.	1	723	10	734	3	605	2	610	39	0	40	79	172	2	31	205	1,628	10	7	12	18
Peak Hour Factor	0.70				0.75				0.82				0.71								

MIXED-USE DEVELOPMENT, 819 EAST MAIN STREET, STAMFORD, CONNECTICUT (#05498.00)
FIELD DATA SUMMARY - U.S. Route 1 (East Main St) at N State St

Wednesday 15-Dec-21	Eastbound - U.S. Route 1				Westbound - U.S. Route 1				Northbound - N State St				Southbound - Commercial Driveway				Last 4 Quarters	Pedestrians			
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total		EB	WB	NB	SB
7:00 AM	8	103	0	111	0	134	12	146	0	1	12	13	282	6	0	0	12	3	0	3	2
7:15 AM	3	186	0	189	1	185	11	197	0	1	11	12	417	8	0	11	19	5	0	0	1
7:30 AM	6	150	0	156	2	185	13	200	3	0	17	20	392	12	0	4	16	2	0	0	0
7:45 AM	3	179	0	182	1	197	12	210	1	1	14	16	430	16	1	5	22	3	0	0	0
8:00 AM	4	182	0	186	4	182	10	196	3	2	15	20	418	11	0	5	19	1	0	0	1
8:15 AM	3	146	0	149	2	212	9	223	2	1	21	24	406	5	0	5	10	2	0	0	3
8:30 AM	2	152	2	156	2	151	7	160	1	0	8	9	332	5	0	2	7	1	0	0	0
8:45 AM	6	130	1	137	2	180	2	184	0	0	9	9	338	5	0	3	7	0	0	0	0
AM Peak Hour Vol.	16	697	0	713	8	749	46	803	7	4	57	68	1,657	47	1	25	73	11	0	0	2
Peak Hour Factor				0.94				0.96				0.85	0.83								
Tuesday 14-Dec-21	Eastbound - U.S. Route 1				Westbound - U.S. Route 1				Northbound - N State St				Southbound - Commercial Driveway				Last 4 Quarters	Pedestrians			
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total		EB	WB	NB	SB
4:00 PM	3	224	1	228	3	149	8	160	0	0	38	38	434	3	0	5	8	1	0	0	4
4:15 PM	2	189	2	203	1	147	1	149	0	0	31	31	389	4	0	2	6	0	0	0	8
4:30 PM	5	233	0	238	1	157	2	160	0	0	32	32	436	3	0	3	6	0	0	0	2
4:45 PM	1	285	0	286	1	173	3	177	1	1	36	38	510	7	0	2	9	2	0	2	3
5:00 PM	3	137	0	140	1	146	3	150	4	2	16	22	315	1	0	2	3	0	0	0	1
5:15 PM	5	215	1	221	0	162	8	170	3	0	28	31	433	5	0	6	11	1	0	0	1
5:30 PM	1	252	2	255	1	158	6	165	1	2	52	55	491	7	0	9	16	2	0	0	3
5:45 PM	3	167	2	172	0	154	4	158	0	1	29	30	366	2	0	4	6	2	0	0	2
PM Peak Hour Vol.	11	941	3	955	6	626	14	646	1	1	137	139	1,769	17	0	12	29	3	0	2	17
Peak Hour Factor				0.83				0.91				0.91	0.87				0.81				

MIXED-USE DEVELOPMENT, 819 EAST MAIN STREET, STAMFORD, CONNECTICUT (#05498.00)
FIELD DATA SUMMARY - Lafayette St at N State St

Wednesday 15-Dec-21	Eastbound - N State St				Westbound - N State St				Northbound - Lafayette St				Southbound - Lafayette St				Last 4 Quarters	Pedestrians						
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total		EB	WB	NB	SB			
7:00 AM	2	0	0	2	0	0	0	3	3	1	0	4	0	0	0	2	11	0	0	0	2			
7:15 AM	2	0	0	2	0	3	1	4	4	4	0	8	0	0	0	0	14	2	0	0	0			
7:30 AM	0	2	0	2	0	2	0	2	4	7	3	10	0	0	0	0	16	1	0	0	1			
7:45 AM	0	0	0	0	0	1	0	1	5	5	0	11	0	1	1	1	13	0	0	0	1			
8:00 AM	1	0	0	1	0	0	0	0	2	8	0	10	0	0	1	1	12	2	0	1	1			
8:15 AM	2	0	2	4	2	2	2	4	2	11	0	13	0	1	1	1	20	0	0	0	4			
8:30 AM	2	0	0	2	0	1	0	1	4	5	0	9	0	0	1	1	13	58	0	0	0			
8:45 AM	2	0	0	2	0	1	4	5	6	8	0	14	0	3	3	24	69	0	1	0	1			
AM Peak Hour Vol.	3	2	0	5	0	6	3	9	18	21	0	39	0	2	2	55		5	0	1	3			
Peak Hour Factor	0.63								0.56				0.89				0.50				0.86			
Tuesday 14-Dec-21	Eastbound - N State St				Westbound - N State St				Northbound - Lafayette St				Southbound - Lafayette St				Last 4 Quarters	Pedestrians						
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total		EB	WB	NB	SB			
4:00 PM	1	0	0	1	0	3	1	4	19	10	0	29	0	0	0	0	34	1	1	0	2			
4:15 PM	3	0	0	3	0	4	6	10	13	13	0	26	0	2	2	2	41	0	0	0	0			
4:30 PM	2	1	0	3	0	2	1	3	11	10	0	21	0	0	1	1	28	1	0	0	0			
4:45 PM	3	0	0	3	0	3	1	4	21	18	1	40	0	0	0	0	47	150	0	0	0			
5:00 PM	2	0	0	2	0	3	3	6	9	12	0	21	0	0	0	0	29	145	0	0	0			
5:15 PM	0	0	0	0	0	2	2	4	7	8	0	15	0	0	0	0	19	123	1	0	1			
5:30 PM	1	0	0	1	0	7	3	10	19	23	0	42	0	0	2	2	55	150	3	0	0			
5:45 PM	3	0	0	3	0	0	4	4	5	10	0	15	0	2	2	24	127	1	0	0	1			
PM Peak Hour Vol.	9	1	0	10	0	12	9	21	64	51	1	116	0	3	3	150		2	1	0	2			
Peak Hour Factor	0.83				0.53				0.73				0.38				0.80							

MIXED-USE DEVELOPMENT, 819 EAST MAIN STREET, STAMFORD, CONNECTICUT (#05498.00)
FIELD DATA SUMMARY - Lafayette St at S State St

Wednesday 15-Dec-21	Eastbound - S State St				Westbound				Northbound				Southbound				Last 4 Quarters	Pedestrians						
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total		EB	WB	NB	SB			
7:00 AM	5	2	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	6	6	0	12	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	9	9	0	18	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 AM	11	17	0	28	0	0	1	1	0	0	0	0	0	0	0	1	1	30	69	0	0			
8:00 AM	21	20	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	103	0	0	1			
8:15 AM	9	18	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27	117	0	1			
8:30 AM	15	20	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	35	133	0	0			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103	0	0	0			
AM Peak Hour Vol.	47	52	0	99	0	1	2	3	0	0	0	0	0	0	0	1	1	103	0	0	1			
Peak Hour Factor	0.60				0.75				#DIV/0!								0.63							
Tuesday	Eastbound - S State St				Westbound				Northbound				Southbound				Last 4 Quarters				Pedestrians			
14-Dec-21	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	EB	WB	NB	SB				
4:00 PM	32	27	0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	59	0	0	0			
4:15 PM	21	29	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0			
4:30 PM	22	30	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0	0	0			
4:45 PM	32	47	0	79	0	0	0	0	0	0	0	0	0	0	0	0	0	79	240	0	0			
5:00 PM	24	28	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	52	233	0	0			
5:15 PM	20	43	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	63	246	0	0			
5:30 PM	42	48	0	90	0	0	0	0	0	0	0	0	0	0	0	0	0	90	284	0	0			
5:45 PM	14	35	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0	49	254	0	0			
PM Peak Hour Vol.	107	133	0	240	0	0	0	0	0	0	0	0	0	0	0	0	0	240	0	0	0			
Peak Hour Factor	0.76				#DIV/0!				#DIV/0!				#DIV/0!				0.76							

Connecticut Counts LLC
Kensington, Connecticut 06037
(860) 828-1693

Route 1 at Lafayette Street
 Stamford, Connecticut

File Name : 22487
 Site Code : 22487
 Start Date : 12/15/2021
 Page No : 1

Groups Printed- Lights - Trucks - Buses

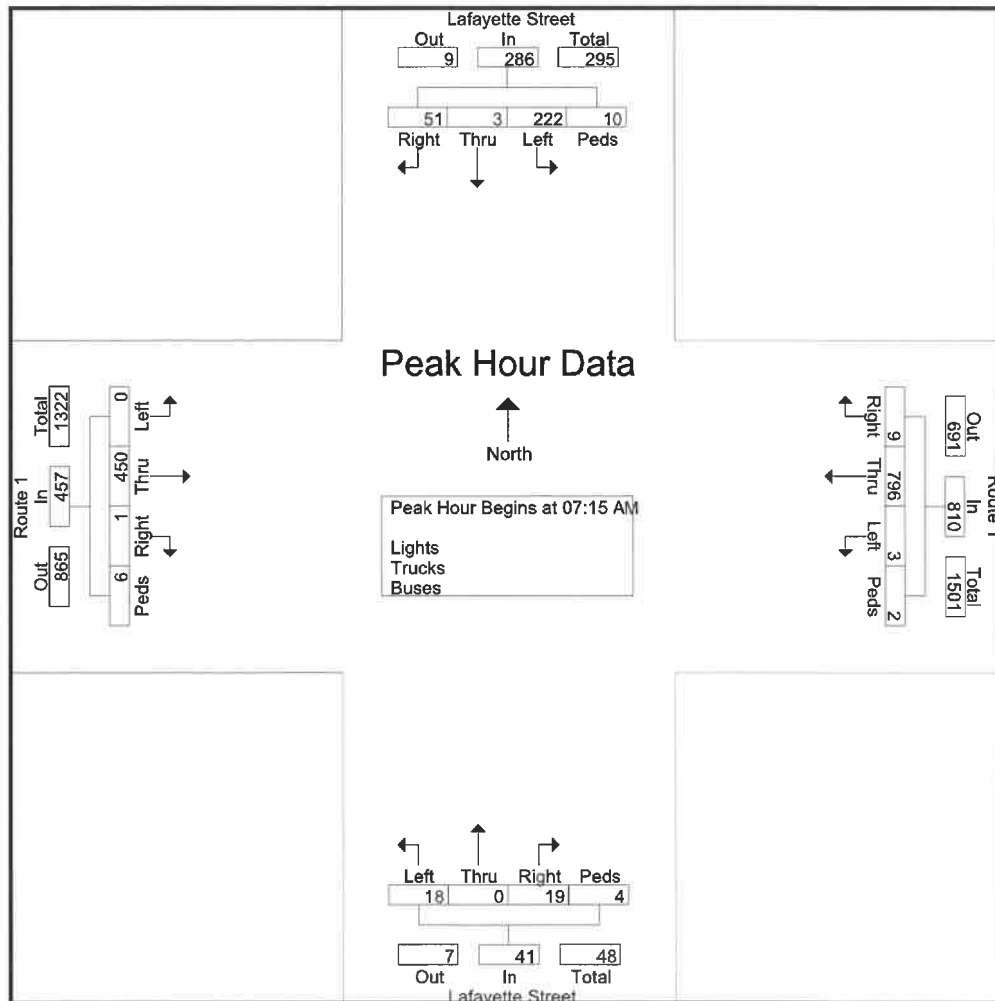
	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	16	1	34	4	55	0	132	0	1	133	2	0	3	2	7	0	75	0	1	76	271
07:15 AM	14	1	87	5	107	9	183	0	0	192	10	0	2	1	13	1	134	0	5	140	452
07:30 AM	15	0	42	2	59	0	213	1	0	214	0	0	5	1	6	0	107	0	1	108	387
07:45 AM	12	0	61	2	75	0	217	1	2	220	2	0	6	2	10	0	101	0	0	101	406
Total	57	2	224	13	296	9	745	2	3	759	14	0	16	6	36	1	417	0	7	425	1516
08:00 AM	10	2	32	1	45	0	183	1	0	184	7	0	5	0	12	0	108	0	0	108	349
08:15 AM	11	3	46	2	62	0	233	0	1	234	3	0	9	3	15	7	93	0	1	101	412
08:30 AM	3	2	35	2	42	0	154	0	0	154	1	0	6	0	7	0	86	0	0	86	289
08:45 AM	8	1	33	3	45	0	196	1	1	198	4	0	10	2	16	3	111	0	1	115	374
Total	32	8	146	8	194	0	766	2	2	770	15	0	30	5	50	10	398	0	2	410	1424
Grand Total	89	10	370	21	490	9	1511	4	5	1529	29	0	46	11	86	11	815	0	9	835	2940
Apprch %	18.2	2	75.5	4.3		0.6	98.8	0.3	0.3		33.7	0	53.5	12.8		1.3	97.6	0	1.1		
Total %	3	0.3	12.6	0.7	16.7	0.3	51.4	0.1	0.2	52	1	0	1.6	0.4	2.9	0.4	27.7	0	0.3	28.4	
Lights	85	7	355	21	468	9	1477														
% Lights	95.5	70	95.9	100	95.5	100	97.7	100	100	97.8	96.6	0	95.7	100	96.5	90.9	95.1	0	100	95.1	96.6
Trucks	0	0	6	0	6	0	18	0	0	18	0	0	2	0	2	0	9	0	0	9	35
% Trucks	0	0	1.6	0	1.2	0	1.2	0	0	1.2	0	0	4.3	0	2.3	0	1.1	0	0	1.1	1.2
Buses	4	3	9	0	16	0	16	0	0	16	1	0	0	0	1	1	31	0	0	32	65
% Buses	4.5	30	2.4	0	3.3	0	1.1	0	0	1	3.4	0	0	0	1.2	9.1	3.8	0	0	3.8	2.2

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File Name : 22487
Site Code : 22487
Start Date : 12/15/2021
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	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	14	1	87	5	107	9	183	0	0	192	10	0	2	1	13	1	134	0	5	140	452
07:30 AM	15	0	42	2	59	0	213	1	0	214	0	0	5	1	6	0	107	0	1	108	387
07:45 AM	12	0	61	2	75	0	217	1	2	220	2	0	6	2	10	0	101	0	0	101	406
08:00 AM	10	2	32	1	45	0	183	1	0	184	7	0	5	0	12	0	108	0	0	108	349
Total Volume	51	3	222	10	286	9	796	3	2	810	19	0	18	4	41	1	450	0	6	457	1594
% App. Total	17.8	1	77.6	3.5		1.1	98.3	0.4	0.2		46.3	0	43.9	9.8		0.2	98.5	0	1.3		
PHF	.850	.375	.638	.500	.668	.250	.917	.750	.250	.920	.475	.000	.750	.500	.788	.250	.840	.000	.300	.816	.882



Connecticut Counts LLC

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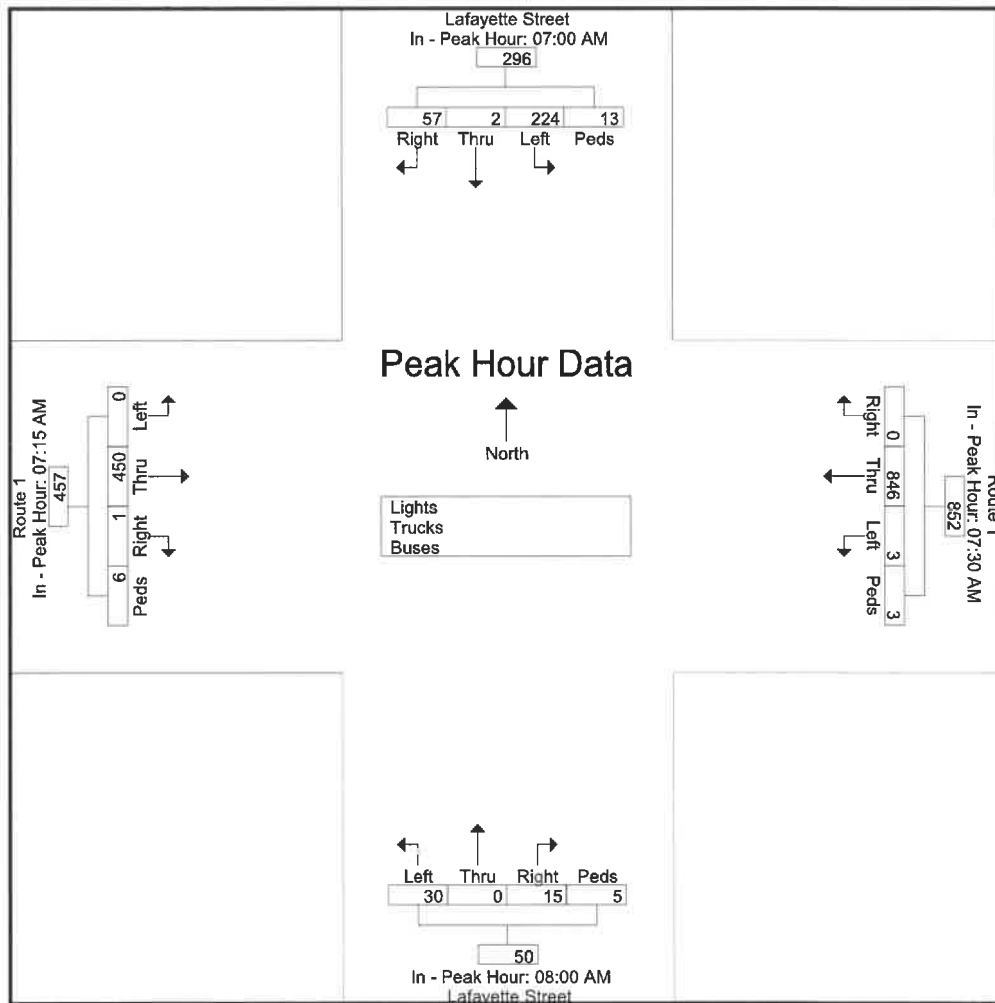
File Name : 22487
Site Code : 22487
Start Date : 12/15/2021
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Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM					07:30 AM					08:00 AM					07:15 AM				
+0 mins.	16	1	34	4	55	0	213	1	0	214	7	0	5	0	12	1	134	0	5	140
+15 mins.	14	1	87	5	107	0	217	1	2	220	3	0	9	3	15	0	107	0	1	108
+30 mins.	15	0	42	2	59	0	183	1	0	184	1	0	6	0	7	0	101	0	0	101
+45 mins.	12	0	61	2	75	0	233	0	1	234	4	0	10	2	16	0	108	0	0	108
Total Volume	57	2	224	13	296	0	846	3	3	852	15	0	30	5	50	1	450	0	6	457
% App. Total	19.3	0.7	75.7	4.4		0	99.3	0.4	0.4		30	0	60	10		0.2	98.5	0	1.3	
PHF	.891	.500	.644	.650	.692	.000	.908	.750	.375	.910	.536	.000	.750	.417	.781	.250	.840	.000	.300	.816



Connecticut Counts LLC
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Route 1 at Lafayette Street
 Stamford, Connecticut

File Name : 22488
 Site Code : 22488
 Start Date : 12/14/2021
 Page No : 1

Groups Printed- Lights - Trucks - Buses

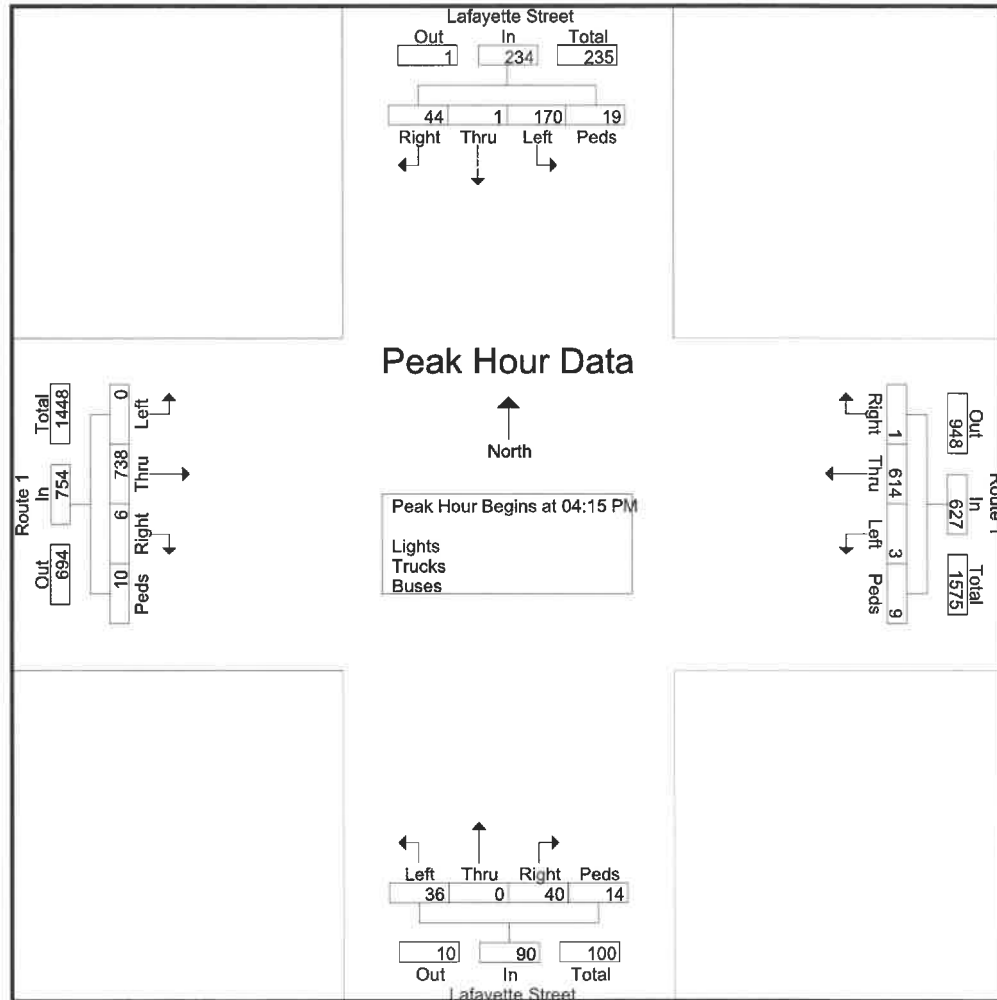
	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	6	1	40	2	49	1	132	0	0	133	9	0	8	3	20	4	160	1	3	168	370
04:15 PM	8	1	33	7	49	1	158	0	2	161	10	0	12	2	24	2	189	0	0	191	425
04:30 PM	12	0	60	7	79	0	200	2	3	205	13	0	11	4	28	2	260	0	4	266	578
04:45 PM	5	0	39	2	46	0	115	1	2	118	8	0	8	3	19	2	114	0	3	119	302
Total	31	2	172	18	223	2	605	3	7	617	40	0	39	12	91	10	723	1	10	744	1675
05:00 PM	19	0	38	3	60	0	141	0	2	143	9	0	5	5	19	0	175	0	3	178	400
05:15 PM	14	1	39	0	54	0	147	0	0	147	9	0	6	2	17	1	169	0	0	170	388
05:30 PM	11	0	44	3	58	0	195	3	0	198	14	0	15	6	35	1	210	0	5	216	507
05:45 PM	12	0	52	0	64	0	111	0	1	112	5	0	7	5	17	0	168	0	1	169	362
Total	56	1	173	6	236	0	594	3	3	600	37	0	33	18	88	2	722	0	9	733	1657
Grand Total	87	3	345	24	459	2	1199	6	10	1217	77	0	72	30	179	12	1445	1	19	1477	3332
Apprch %	19	0.7	75.2	5.2		0.2	98.5	0.5	0.8		43	0	40.2	16.8		0.8	97.8	0.1	1.3		
Total %	2.6	0.1	10.4	0.7	13.8	0.1	36	0.2	0.3	36.5	2.3	0	2.2	0.9	5.4	0.4	43.4	0	0.6	44.3	
Lights	85	3	339	24	451	1	1186										1427				
% Lights	97.7	100	98.3	100	98.3	50	98.9	100	100	98.8	100	0	100	100	100	100	98.8	100	100	98.8	98.8
Trucks	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	9
% Trucks	0	0	1.2	0	0.9	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0.3	0.3
Buses	2	0	2	0	4	1	13	0	0	14	0	0	0	0	0	0	13	0	0	13	31
% Buses	2.3	0	0.6	0	0.9	50	1.1	0	0	1.2	0	0	0	0	0	0	0.9	0	0	0.9	0.9

Connecticut Counts LLC

Kensington, Connecticut 06037
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File Name : 22488
Site Code : 22488
Start Date : 12/14/2021
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Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	8	1	33	7	49	1	158	0	2	161	10	0	12	2	24	2	189	0	0	191	425
04:30 PM	12	0	60	7	79	0	200	2	3	205	13	0	11	4	28	2	260	0	4	266	578
04:45 PM	5	0	39	2	46	0	115	1	2	118	8	0	8	3	19	2	114	0	3	119	302
05:00 PM	19	0	38	3	60	0	141	0	2	143	9	0	5	5	19	0	175	0	3	178	400
Total Volume	44	1	170	19	234	1	614	3	9	627	40	0	36	14	90	6	738	0	10	754	1705
% App. Total	18.8	0.4	72.6	8.1		0.2	97.9	0.5	1.4		44.4	0	40	15.6		0.8	97.9	0	1.3		
PHF	.579	.250	.708	.679	.741	.250	.768	.375	.750	.765	.769	.000	.750	.700	.804	.750	.710	.000	.625	.709	.737



Connecticut Counts LLC

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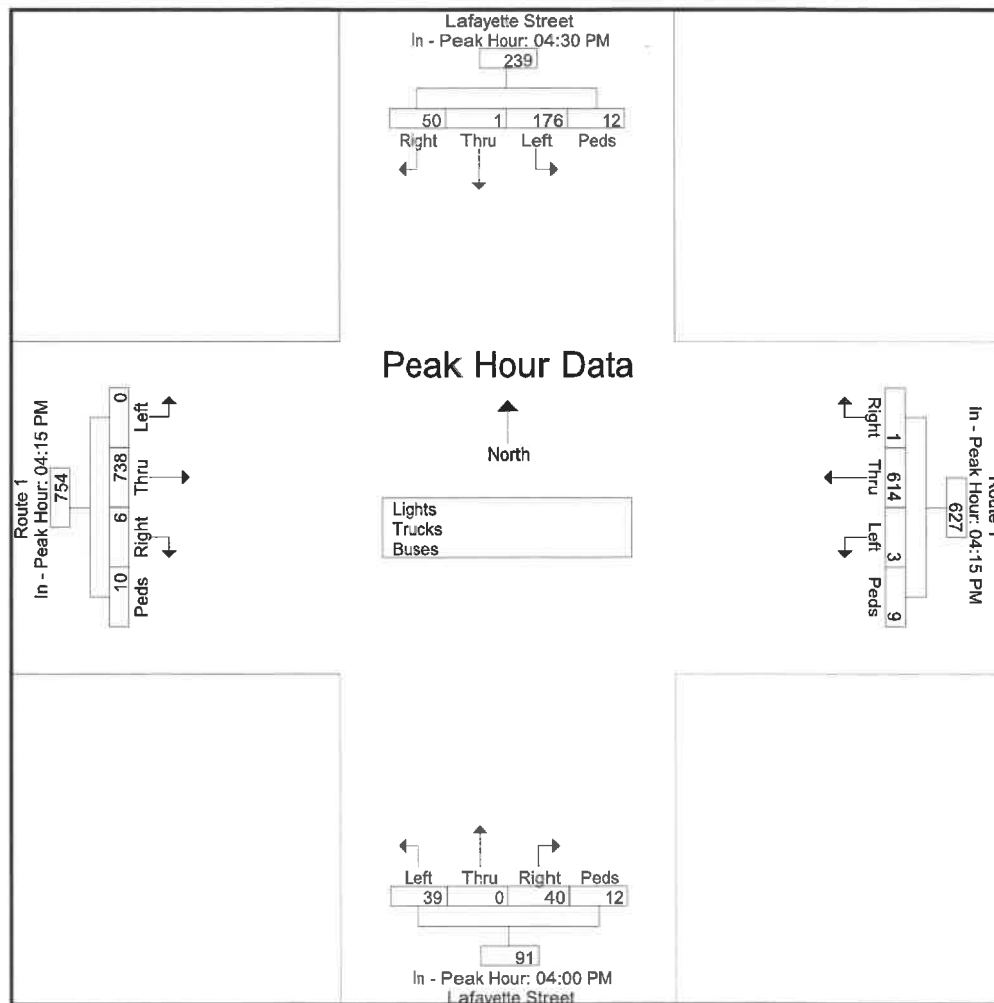
File Name : 22488
Site Code : 22488
Start Date : 12/14/2021
Page No : 3

Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM					04:15 PM					04:00 PM					04:15 PM				
+0 mins.	12	0	60	7	79	1	158	0	2	161	9	0	8	3	20	2	189	0	0	191
+15 mins.	5	0	39	2	46	0	200	2	3	205	10	0	12	2	24	2	260	0	4	266
+30 mins.	19	0	38	3	60	0	115	1	2	118	13	0	11	4	28	2	114	0	3	119
+45 mins.	14	1	39	0	54	0	141	0	2	143	8	0	8	3	19	0	175	0	3	178
Total Volume	50	1	176	12	239	1	614	3	9	627	40	0	39	12	91	6	738	0	10	754
% App. Total	20.9	0.4	73.6	5		0.2	97.9	0.5	1.4		44	0	42.9	13.2		0.8	97.9	0	1.3	
PHF	.658	.250	.733	.429	.756	.250	.768	.375	.750	.765	.769	.000	.813	.750	.813	.750	.710	.000	.625	.709



Connecticut Counts LLC
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Route 1 at N. State St/Private Dr
 Stamford, Connecticut

File Name : 22489
 Site Code : 22489
 Start Date : 12/15/2021
 Page No : 1

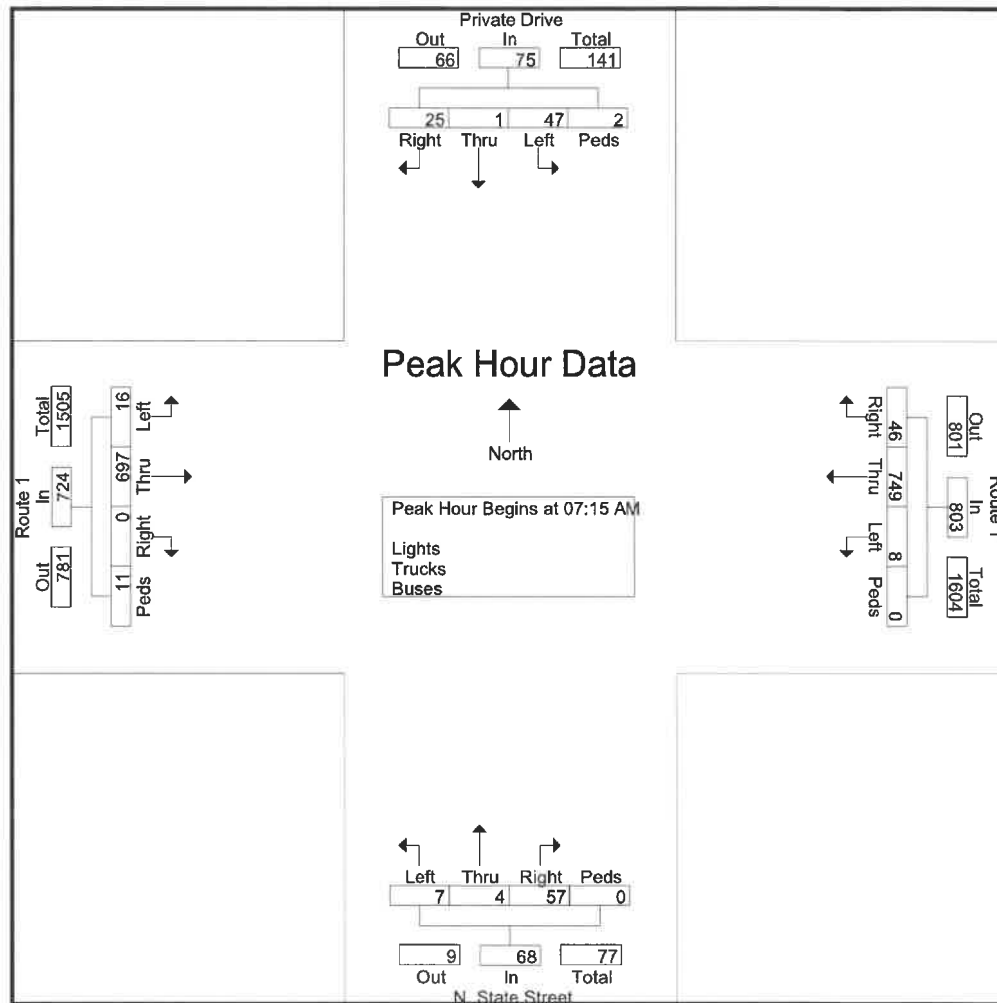
Groups Printed- Lights - Trucks - Buses

	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Inc. Total
07:00 AM	6	0	6	2	14	12	134	0	0	146	12	1	0	3	16	0	103	8	3	114	290
07:15 AM	11	0	8	1	20	11	185	1	0	197	11	1	0	0	12	0	186	3	5	194	423
07:30 AM	4	0	12	0	16	13	185	2	0	200	17	0	3	0	20	0	150	6	2	158	394
07:45 AM	5	1	16	0	22	12	197	1	0	210	14	1	1	0	16	0	179	3	3	185	433
Total	26	1	42	3	72	48	701	4	0	753	54	3	4	3	64	0	618	20	13	651	1540
08:00 AM	5	0	11	1	17	10	182	4	0	196	15	2	3	0	20	0	182	4	1	187	420
08:15 AM	5	0	5	3	13	9	212	2	0	223	21	1	2	0	24	0	146	3	2	151	411
08:30 AM	2	0	5	0	7	7	151	2	0	160	8	0	1	0	9	2	152	2	1	157	333
08:45 AM	3	0	5	0	8	2	180	2	0	184	9	0	0	0	9	1	130	6	0	137	338
Total	15	0	26	4	45	28	725	10	0	763	53	3	6	0	62	3	610	15	4	632	1502
Grand Total	41	1	68	7	117	76	1426	14	0	1516	107	6	10	3	126	3	1228	35	17	1283	3042
Apprch %	35	0.9	58.1	6		5	94.1	0.9	0		84.9	4.8	7.9	2.4		0.2	95.7	2.7	1.3		
Total %	1.3	0	2.2	0.2	3.8	2.5	46.9	0.5	0	49.8	3.5	0.2	0.3	0.1	4.1	0.1	40.4	1.2	0.6	42.2	
Lights	41	1	68	7	117	76	1397										1177				
% Lights	100	100	100	100	100	100	98	85.7	0	98	100	100	90	100	99.2	100	95.8	100	100	96	97.3
Trucks	0	0	0	0	0	0	14	0	0	14	0	0	1	0	1	0	8	0	0	8	23
% Trucks	0	0	0	0	0	0	1	0	0	0.9	0	0	10	0	0.8	0	0.7	0	0	0.6	0.8
Buses	0	0	0	0	0	0	15	2	0	17	0	0	0	0	0	0	43	0	0	43	60
% Buses	0	0	0	0	0	0	1.1	14.3	0	1.1	0	0	0	0	0	0	3.5	0	0	3.4	2

Connecticut Counts LLC
Kensington, Connecticut 06037
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File Name : 22489
 Site Code : 22489
 Start Date : 12/15/2021
 Page No : 2

	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	11	0	8	1	20	11	185	1	0	197	11	1	0	0	12	0	186	3	5	194	423
07:30 AM	4	0	12	0	16	13	185	2	0	200	17	0	3	0	20	0	150	6	2	158	394
07:45 AM	5	1	16	0	22	12	197	1	0	210	14	1	1	0	16	0	179	3	3	185	433
08:00 AM	5	0	11	1	17	10	182	4	0	196	15	2	3	0	20	0	182	4	1	187	420
Total Volume	25	1	47	2	75	46	749	8	0	803	57	4	7	0	68	0	697	16	11	724	1670
% App. Total	33.3	1.3	62.7	2.7		5.7	93.3	1	0		83.8	5.9	10.3	0		0	96.3	2.2	1.5		
PHF	.568	.250	.734	.500	.852	.885	.951	.500	.000	.956	.838	.500	.583	.000	.850	.000	.937	.667	.550	.933	.964



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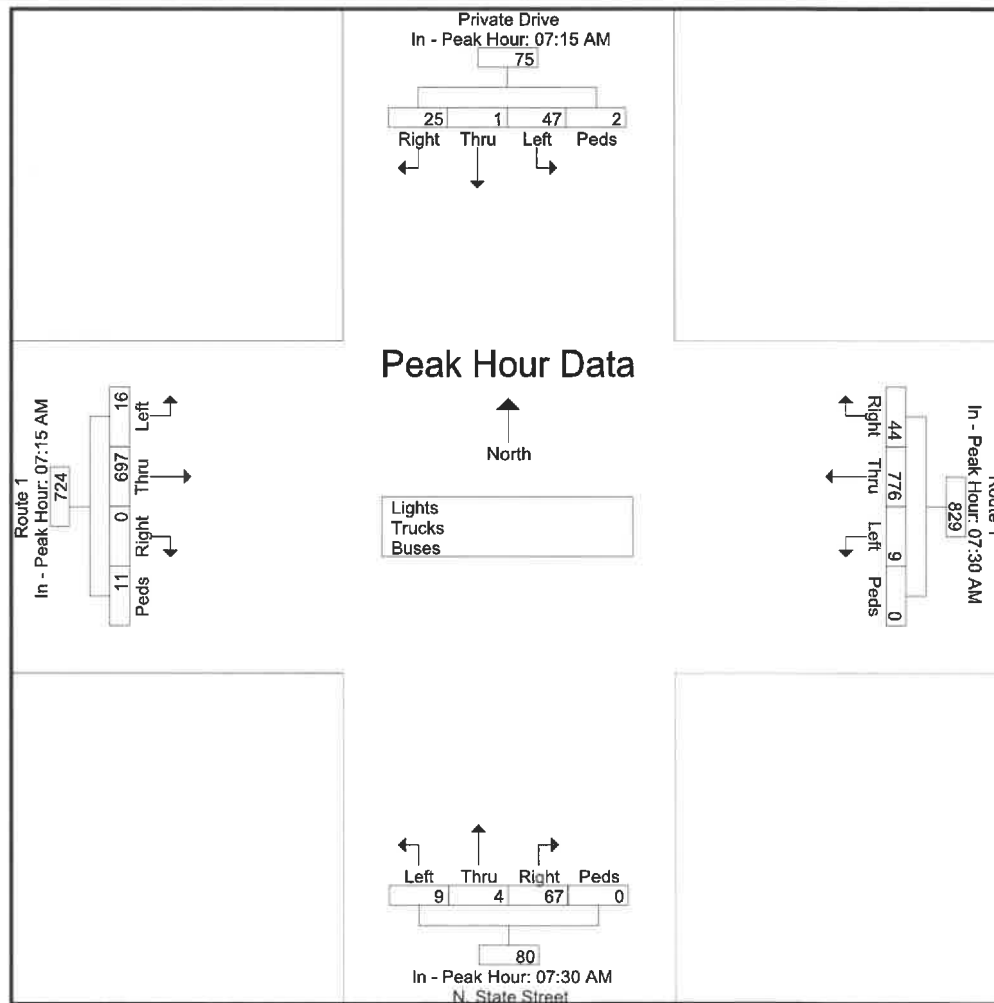
File Name : 22489
Site Code : 22489
Start Date : 12/15/2021
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Start Time	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM					07:30 AM					07:30 AM					07:15 AM				
+0 mins.	11	0	8	1	20	13	185	2	0	200	17	0	3	0	20	0	186	3	5	194
+15 mins.	4	0	12	0	16	12	197	1	0	210	14	1	1	0	16	0	150	6	2	158
+30 mins.	5	1	16	0	22	10	182	4	0	196	15	2	3	0	20	0	179	3	3	185
+45 mins.	5	0	11	1	17	9	212	2	0	223	21	1	2	0	24	0	182	4	1	187
Total Volume	25	1	47	2	75	44	776	9	0	829	67	4	9	0	80	0	697	16	11	724
% App. Total	33.3	1.3	62.7	2.7		5.3	93.6	1.1	0		83.8	5	11.2	0		0	96.3	2.2	1.5	
PHF	.568	.250	.734	.500	.852	.846	.915	.563	.000	.929	.798	.500	.750	.000	.833	.000	.937	.667	.550	.933



Connecticut Counts LLC
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Route 1 at N. State St/Private Dr
 Stamford, Connecticut

File Name : 22490
 Site Code : 22490
 Start Date : 12/14/2021
 Page No : 1

Groups Printed- Lights - Trucks - Buses

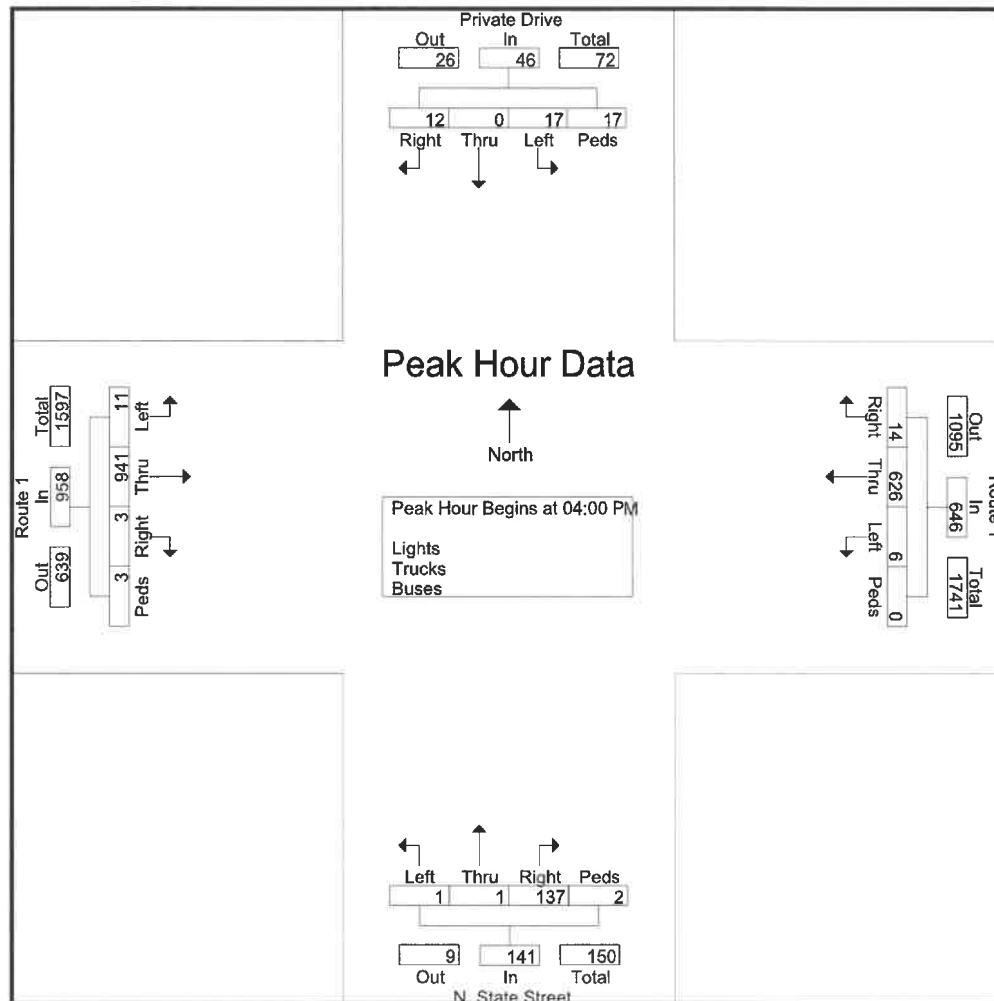
	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	5	0	3	4	12	8	149	3	0	160	38	0	0	0	38	1	224	3	1	229	439
04:15 PM	2	0	4	8	14	1	147	1	0	149	31	0	0	0	31	2	199	2	0	203	397
04:30 PM	3	0	3	2	8	2	157	1	0	160	32	0	0	0	32	0	233	5	0	238	438
04:45 PM	2	0	7	3	12	3	173	1	0	177	36	1	1	2	40	0	285	1	2	288	517
Total	12	0	17	17	46	14	626	6	0	646	137	1	1	2	141	3	941	11	3	958	1791
05:00 PM	2	0	1	1	4	3	146	1	0	150	16	2	4	0	22	0	137	3	0	140	316
05:15 PM	6	0	5	1	12	8	162	0	0	170	28	0	3	0	31	1	215	5	1	222	435
05:30 PM	9	0	7	3	19	6	158	1	0	165	52	2	1	0	55	2	252	1	2	257	496
05:45 PM	4	0	2	2	8	4	154	0	0	158	29	1	0	0	30	2	167	3	2	174	370
Total	21	0	15	7	43	21	620	2	0	643	125	5	8	0	138	5	771	12	5	793	1617
Grand Total	33	0	32	24	89	35	1246	8	0	1289	262	6	9	2	279	8	1712	23	8	1751	3408
Apprch %	37.1	0	36	27		2.7	96.7	0.6	0		93.9	2.2	3.2	0.7		0.5	97.8	1.3	0.5		
Total %	1	0	0.9	0.7	2.6	1	36.6	0.2	0	37.8	7.7	0.2	0.3	0.1	8.2	0.2	50.2	0.7	0.2	51.4	
Lights	33	0	32	24	89	35	1229										1692				
% Lights	100	0	100	100	100	100	98.6	100	0	98.7	100	100	100	100	100	100	98.8	100	100	98.9	98.9
Trucks	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5
% Trucks	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.2	0	0	0.2	0.1
Buses	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	16	0	0	16	32
% Buses	0	0	0	0	0	0	1.3	0	0	1.2	0	0	0	0	0	0	0.9	0	0	0.9	0.9

Connecticut Counts LLC

Kensington, Connecticut 06037
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File Name : 22490
Site Code : 22490
Start Date : 12/14/2021
Page No : 2

	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	5	0	3	4	12	8	149	3	0	160	38	0	0	0	38	1	224	3	1	229	439
04:15 PM	2	0	4	8	14	1	147	1	0	149	31	0	0	0	31	2	199	2	0	203	397
04:30 PM	3	0	3	2	8	2	157	1	0	160	32	0	0	0	32	0	233	5	0	238	438
04:45 PM	2	0	7	3	12	3	173	1	0	177	36	1	1	2	40	0	285	1	2	288	517
Total Volume	12	0	17	17	46	14	626	6	0	646	137	1	1	2	141	3	941	11	3	958	1791
% App. Total	26.1	0	37	37		2.2	96.9	0.9	0		97.2	0.7	0.7	1.4		0.3	98.2	1.1	0.3		
PHF	.600	.000	.607	.531	.821	.438	.905	.500	.000	.912	.901	.250	.250	.250	.881	.375	.825	.550	.375	.832	.866



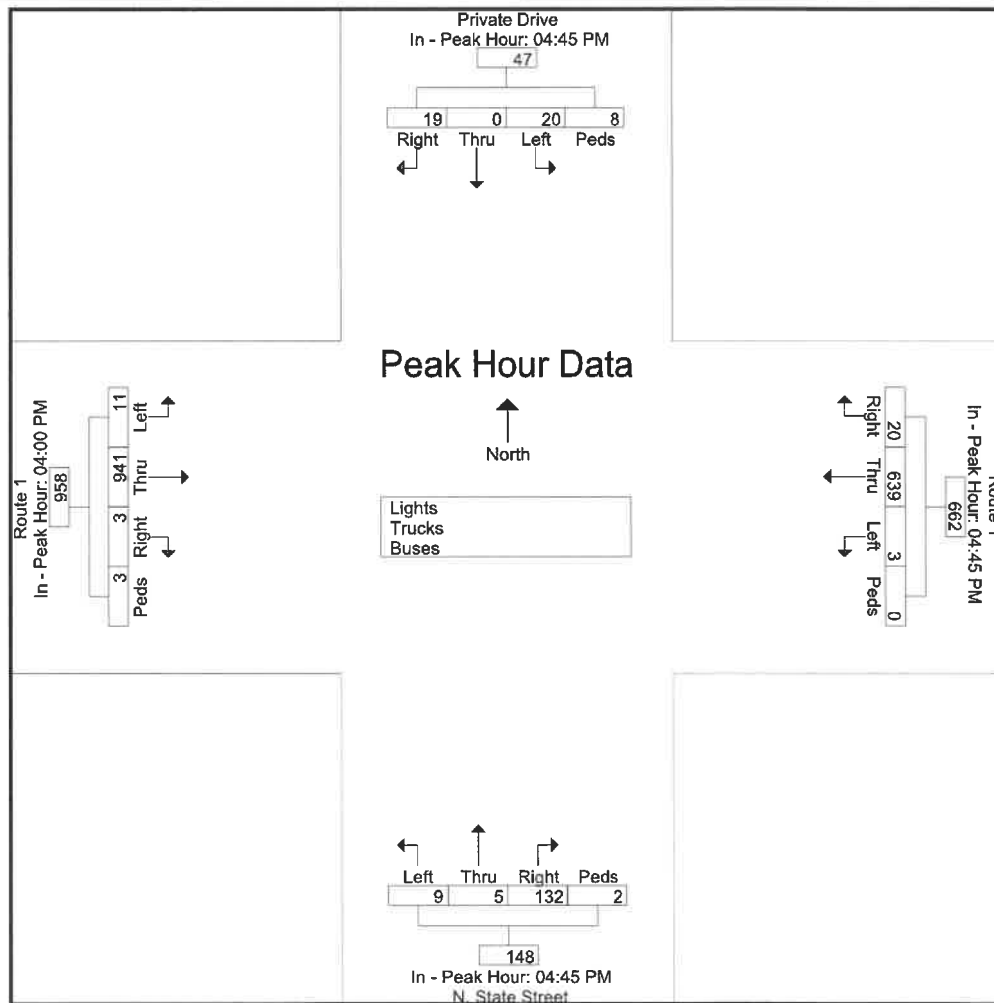
Connecticut Counts LLC
Kensington, Connecticut 06037
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File Name : 22490
 Site Code : 22490
 Start Date : 12/14/2021
 Page No : 3

Start Time	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM					04:45 PM					04:45 PM					04:00 PM				
+0 mins.	2	0	7	3	12	3	173	1	0	177	36	1	1	2	40	1	224	3	1	229
+15 mins.	2	0	1	1	4	3	146	1	0	150	16	2	4	0	22	2	199	2	0	203
+30 mins.	6	0	5	1	12	8	162	0	0	170	28	0	3	0	31	0	233	5	0	238
+45 mins.	9	0	7	3	19	6	158	1	0	165	52	2	1	0	55	0	285	1	2	288
Total Volume	19	0	20	8	47	20	639	3	0	662	132	5	9	2	148	3	941	11	3	958
% App. Total	40.4	0	42.6	17		3	96.5	0.5	0		89.2	3.4	6.1	1.4		0.3	98.2	1.1	0.3	
PHF	.528	.000	.714	.667	.618	.625	.923	.750	.000	.935	.635	.625	.563	.250	.673	.375	.825	.550	.375	.832



Connecticut Counts LLC
Kensington, Connecticut 06037
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Lafayette St at N. State Street
 Stamford, Connecticut

File Name : 22491
 Site Code : 22491
 Start Date : 12/15/2021
 Page No : 1

Groups Printed- Lights - Trucks - Buses

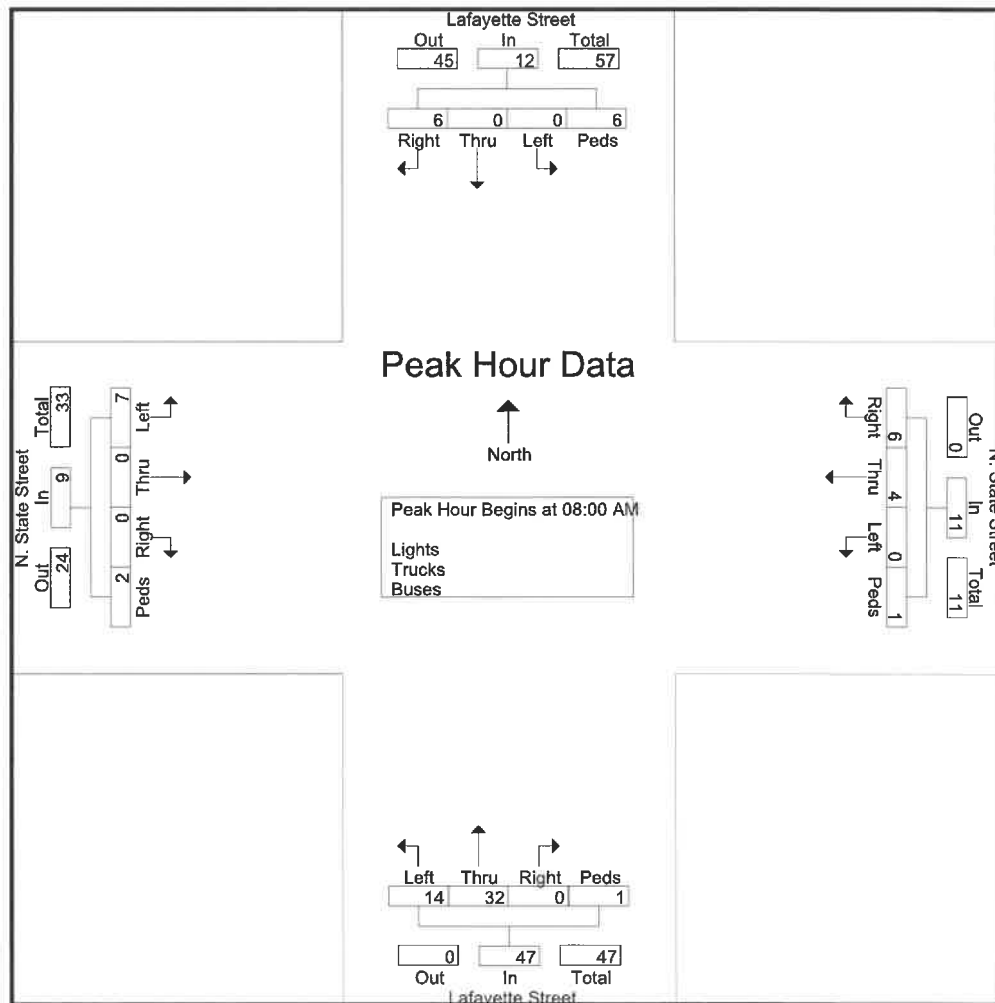
	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	0	0	2	4	3	0	0	0	3	0	1	3	0	4	0	0	2	0	2	13
07:15 AM	0	0	0	0	0	1	3	0	0	4	0	4	4	0	8	0	0	2	2	4	16
07:30 AM	0	0	0	1	1	2	2	0	0	4	0	3	7	0	10	0	2	0	1	3	18
07:45 AM	1	0	0	1	2	0	1	0	0	1	0	6	5	0	11	0	0	0	0	0	14
Total	3	0	0	4	7	6	6	0	0	12	0	14	19	0	33	0	2	4	3	9	61
08:00 AM	1	0	0	1	2	0	0	0	0	0	0	8	2	1	11	0	0	1	2	3	16
08:15 AM	1	0	0	4	5	2	2	0	0	4	0	11	2	0	13	0	0	2	0	2	24
08:30 AM	1	0	0	0	1	0	1	0	0	1	0	5	4	0	9	0	0	2	0	2	13
08:45 AM	3	0	0	1	4	4	1	0	1	6	0	8	6	0	14	0	0	2	0	2	26
Total	6	0	0	6	12	6	4	0	1	11	0	32	14	1	47	0	0	7	2	9	79
Grand Total	9	0	0	10	19	12	10	0	1	23	0	46	33	1	80	0	2	11	5	18	140
Apprch %	47.4	0	0	52.6		52.2	43.5	0	4.3		0	57.5	41.2	1.2		0	11.1	61.1	27.8		
Total %	6.4	0	0	7.1	13.6	8.6	7.1	0	0.7	16.4	0	32.9	23.6	0.7	57.1	0	1.4	7.9	3.6	12.9	
Lights	6	0	0	10	16	12	8	0	1	21	0	46	32	1	79	0	2	10	5	17	133
% Lights	66.7	0	0	100	84.2	100	80	0	100	91.3	0	100	97	100	98.8	0	100	90.9	100	94.4	95
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	3	0	0	0	3	0	2	0	0	2	0	0	1	0	1	0	0	1	0	1	7
% Buses	33.3	0	0	0	15.8	0	20	0	0	8.7	0	0	3	0	1.2	0	0	9.1	0	5.6	5

Connecticut Counts LLC

Kensington, Connecticut 06037
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File Name : 22491
Site Code : 22491
Start Date : 12/15/2021
Page No : 2

	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	0	1	2	0	0	0	0	0	0	8	2	1	11	0	0	1	2	3	16
08:15 AM	1	0	0	4	5	2	2	0	0	4	0	11	2	0	13	0	0	2	0	2	24
08:30 AM	1	0	0	0	1	0	1	0	0	1	0	5	4	0	9	0	0	2	0	2	13
08:45 AM	3	0	0	1	4	4	1	0	1	6	0	8	6	0	14	0	0	2	0	2	26
Total Volume	6	0	0	6	12	6	4	0	1	11	0	32	14	1	47	0	0	7	2	9	79
% App. Total	50	0	0	50		54.5	36.4	0	9.1		0	68.1	29.8	2.1		0	0	77.8	22.2		
PHF	.500	.000	.000	.375	.600	.375	.500	.000	.250	.458	.000	.727	.583	.250	.839	.000	.000	.875	.250	.750	.760



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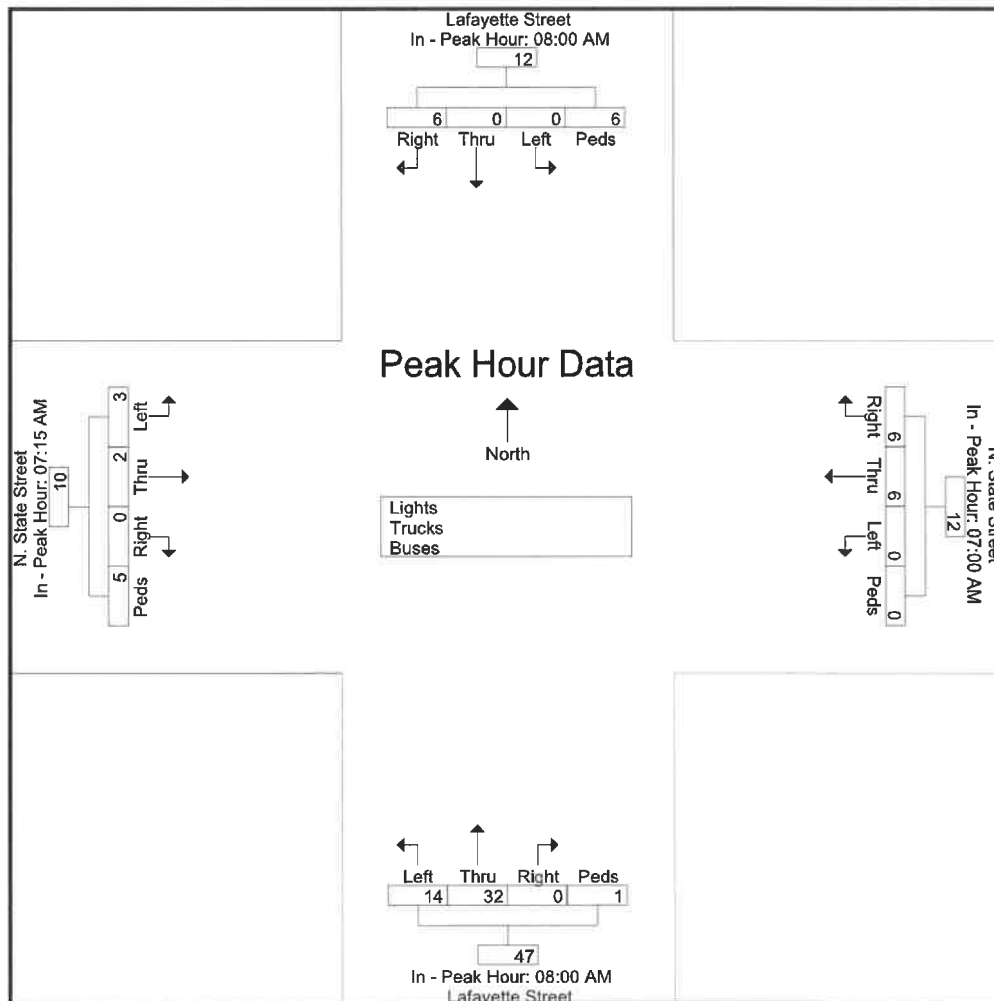
File Name : 22491
 Site Code : 22491
 Start Date : 12/15/2021
 Page No : 3

Start Time	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM					07:00 AM					08:00 AM					07:15 AM				
+0 mins.	1	0	0	1	2	3	0	0	0	3	0	8	2	1	11	0	0	2	2	4
+15 mins.	1	0	0	4	5	1	3	0	0	4	0	11	2	0	13	0	2	0	1	3
+30 mins.	1	0	0	0	1	2	2	0	0	4	0	5	4	0	9	0	0	0	0	0
+45 mins.	3	0	0	1	4	0	1	0	0	1	0	8	6	0	14	0	0	1	2	3
Total Volume	6	0	0	6	12	6	6	0	0	12	0	32	14	1	47	0	2	3	5	10
% App. Total	50	0	0	50		50	50	0	0		0	68.1	29.8	2.1		0	20	30	50	
PHF	.500	.000	.000	.375	.600	.500	.500	.000	.000	.750	.000	.727	.583	.250	.839	.000	.250	.375	.625	.625

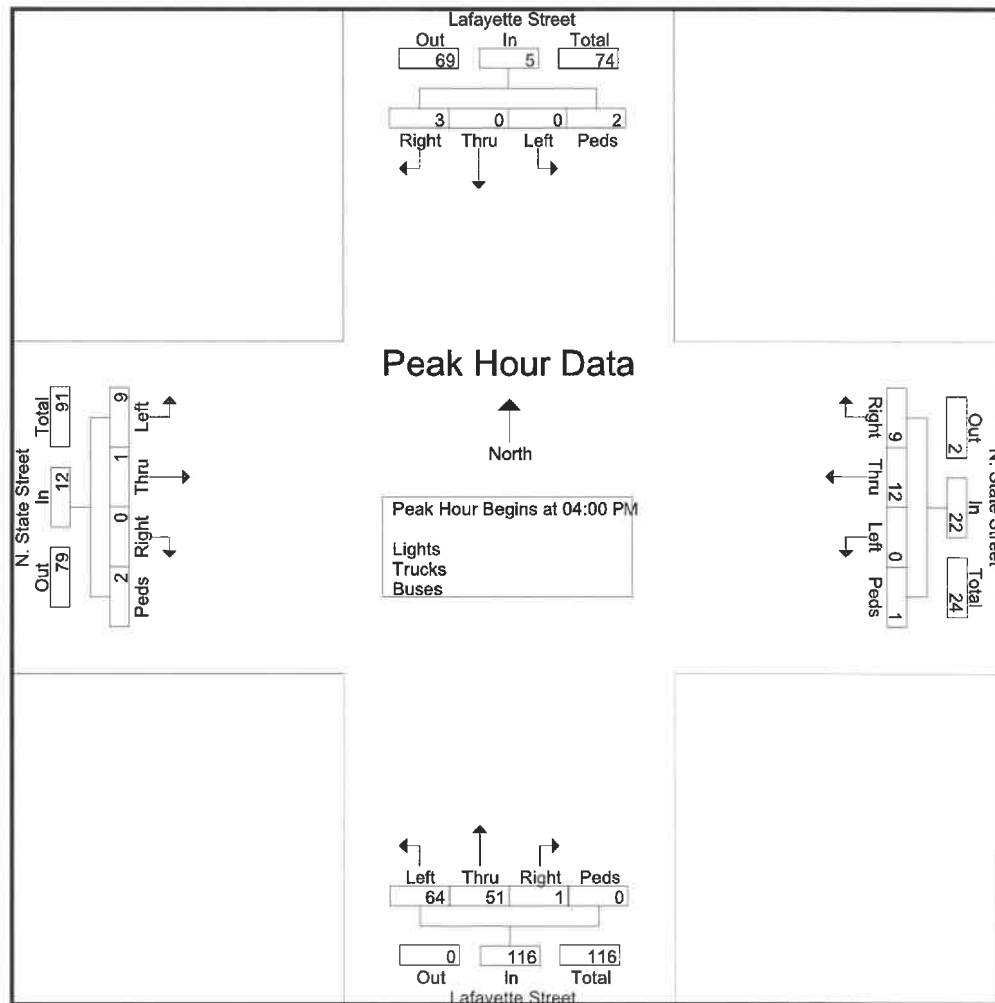


File Name : 22492
Site Code : 22492
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File Name : 22492
 Site Code : 22492
 Start Date : 12/14/2021
 Page No : 2

	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	2	2	1	3	0	1	5	0	10	19	0	29	0	0	1	1	2	38
04:15 PM	2	0	0	0	2	6	4	0	0	10	0	13	13	0	26	0	0	3	0	3	41
04:30 PM	1	0	0	0	1	1	2	0	0	3	0	10	11	0	21	0	1	2	1	4	29
04:45 PM	0	0	0	0	0	1	3	0	0	4	1	18	21	0	40	0	0	3	0	3	47
Total Volume	3	0	0	2	5	9	12	0	1	22	1	51	64	0	116	0	1	9	2	12	155
% App. Total	60	0	0	40		40.9	54.5	0	4.5		0.9	44	55.2	0		0	8.3	75	16.7		
PHF	.375	.000	.000	.250	.625	.375	.750	.000	.250	.550	.250	.708	.762	.000	.725	.000	.250	.750	.500	.750	.824



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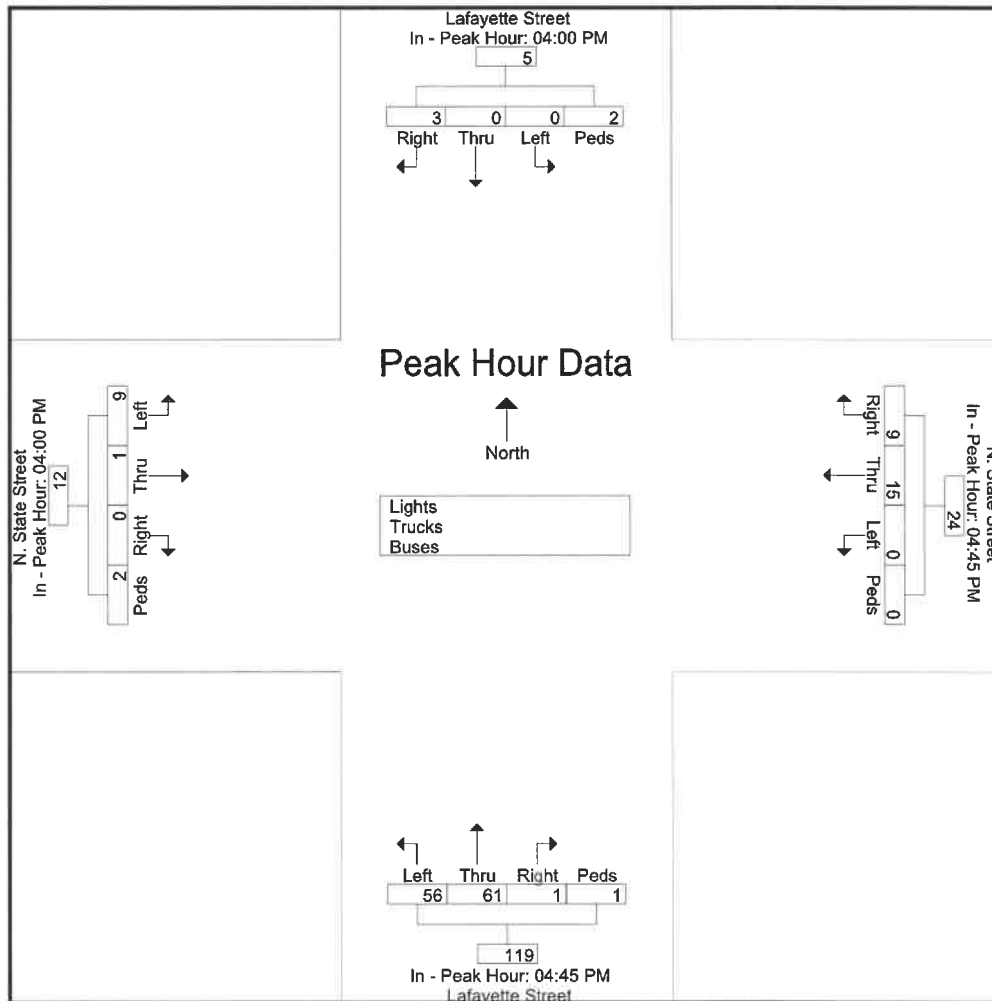
File Name : 22492
 Site Code : 22492
 Start Date : 12/14/2021
 Page No : 3

Start Time	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM					04:45 PM					04:45 PM					04:00 PM				
+0 mins.	0	0	0	2	2	1	3	0	0	4	1	18	21	0	40	0	0	1	1	2
+15 mins.	2	0	0	0	2	3	3	0	0	6	0	12	9	0	21	0	0	3	0	3
+30 mins.	1	0	0	0	1	2	2	0	0	4	0	8	7	1	16	0	1	2	1	4
+45 mins.	0	0	0	0	0	3	7	0	0	10	0	23	19	0	42	0	0	3	0	3
Total Volume	3	0	0	2	5	9	15	0	0	24	1	61	56	1	119	0	1	9	2	12
% App. Total	60	0	0	40		37.5	62.5	0	0		0.8	51.3	47.1	0.8		0	8.3	75	16.7	
PHF	.375	.000	.000	.250	.625	.750	.536	.000	.000	.600	.250	.663	.667	.250	.708	.000	.250	.750	.500	.750



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Lafayette Street at S. State Street
 Stamford, Connecticut

File Name : 22493
 Site Code : 22493
 Start Date : 12/15/2021
 Page No : 1

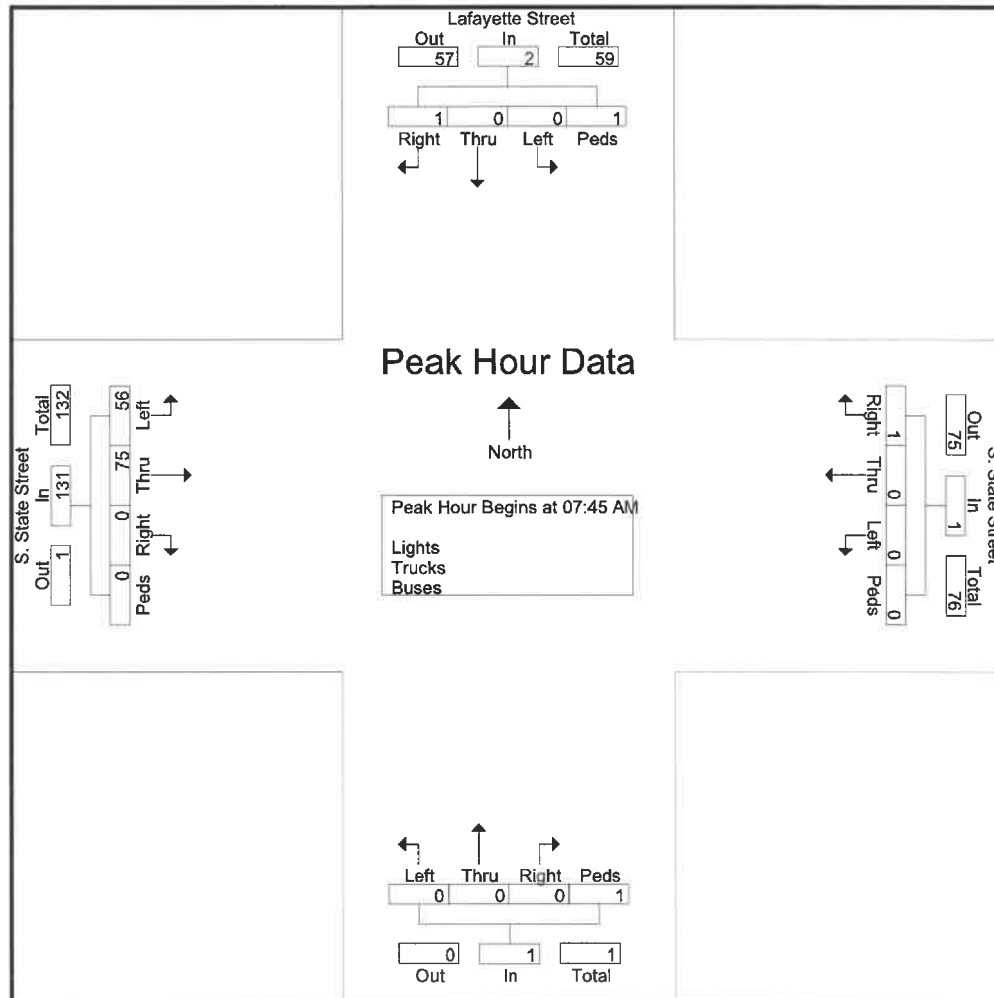
Groups Printed- Lights - Trucks - Buses

Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	7	7
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	6	0	12	13
07:30 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	9	9	0	18	19
07:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	17	11	0	28	30
Total	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	0	34	31	0	65	69
08:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	20	21	0	41	42
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	18	9	0	27	28
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	15	0	35	35
Grand Total	1	0	0	1	2	2	1	0	0	3	0	0	0	1	1	0	92	76	0	168	174
Apprch %	50	0	0	50		66.7	33.3	0	0		0	0	0	100		0	54.8	45.2	0		
Total %	0.6	0	0	0.6	1.1	1.1	0.6	0	0	1.7	0	0	0	0.6	0.6	0	52.9	43.7	0	96.6	
Lights	1	0	0	1	2	2	1	0	0	3	0	0	0	1	1	0	92	75	0	167	173
% Lights	100	0	0	100	100	100	100	0	0	100	0	0	0	100	100	0	100	98.7	0	99.4	99.4
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0.6	0.6

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File Name : 22493
 Site Code : 22493
 Start Date : 12/15/2021
 Page No : 2

	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	17	11	0	28	30
08:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	20	21	0	41	42
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	18	9	0	27	28
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	15	0	35	35
Total Volume	1	0	0	1	2	1	0	0	0	1	0	0	0	1	1	0	75	56	0	131	135
% App. Total	50	0	0	50		100	0	0	0		0	0	0	100		0	57.3	42.7	0		
PHF	.250	.000	.000	.250	.500	.250	.000	.000	.000	.250	.000	.000	.000	.250	.250	.000	.938	.667	.000	.799	.804



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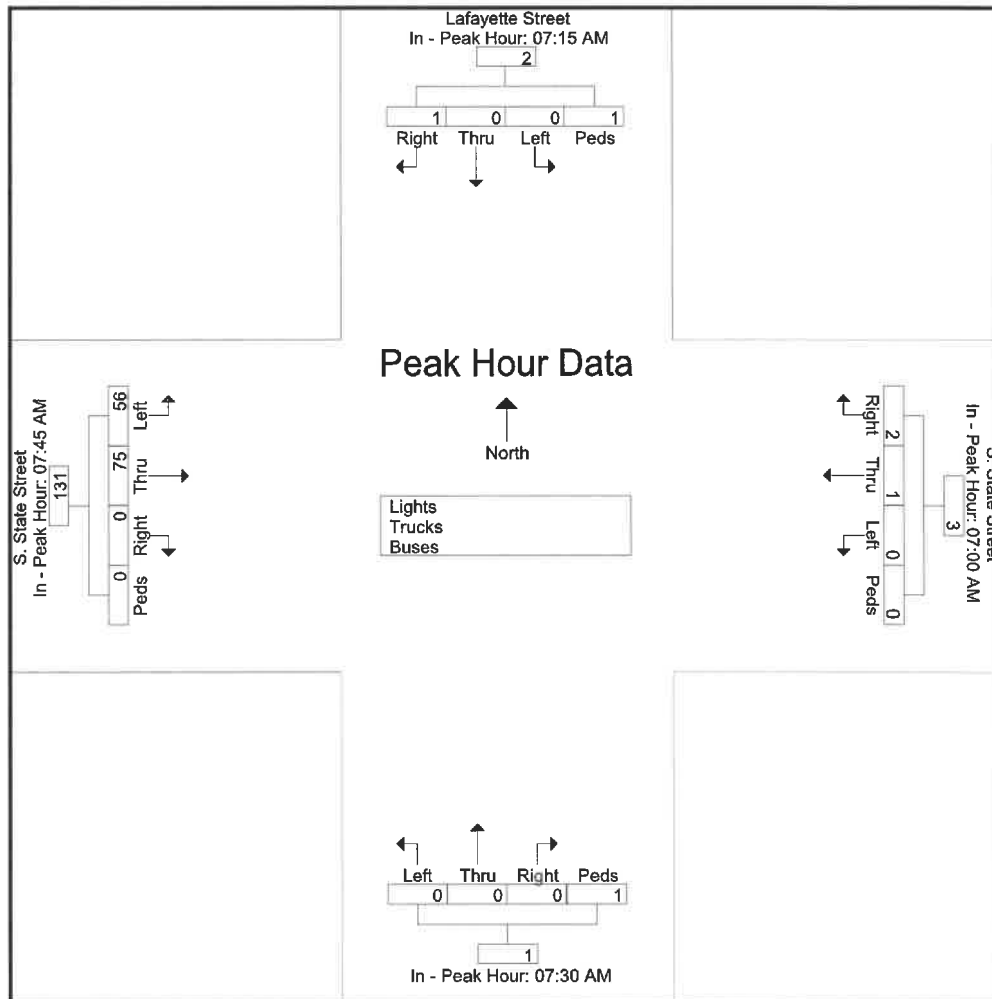
File Name : 22493
 Site Code : 22493
 Start Date : 12/15/2021
 Page No : 3

Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM					07:00 AM					07:30 AM					07:45 AM					
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	11	0	28	
+15 mins.	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	20	21	0	41
+30 mins.	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	18	9	0	27
+45 mins.	0	0	0	1	1	1	0	0	0	1	0	0	0	1	1	0	20	15	0	35	
Total Volume	1	0	0	1	2	2	1	0	0	3	0	0	0	1	1	0	75	56	0	131	
% App. Total	50	0	0	50		66.7	33.3	0	0		0	0	0	100		0	57.3	42.7	0		
PHF	.250	.000	.000	.250	.500	.500	.250	.000	.000	.750	.000	.000	.000	.250	.250	.000	.938	.667	.000	.799	

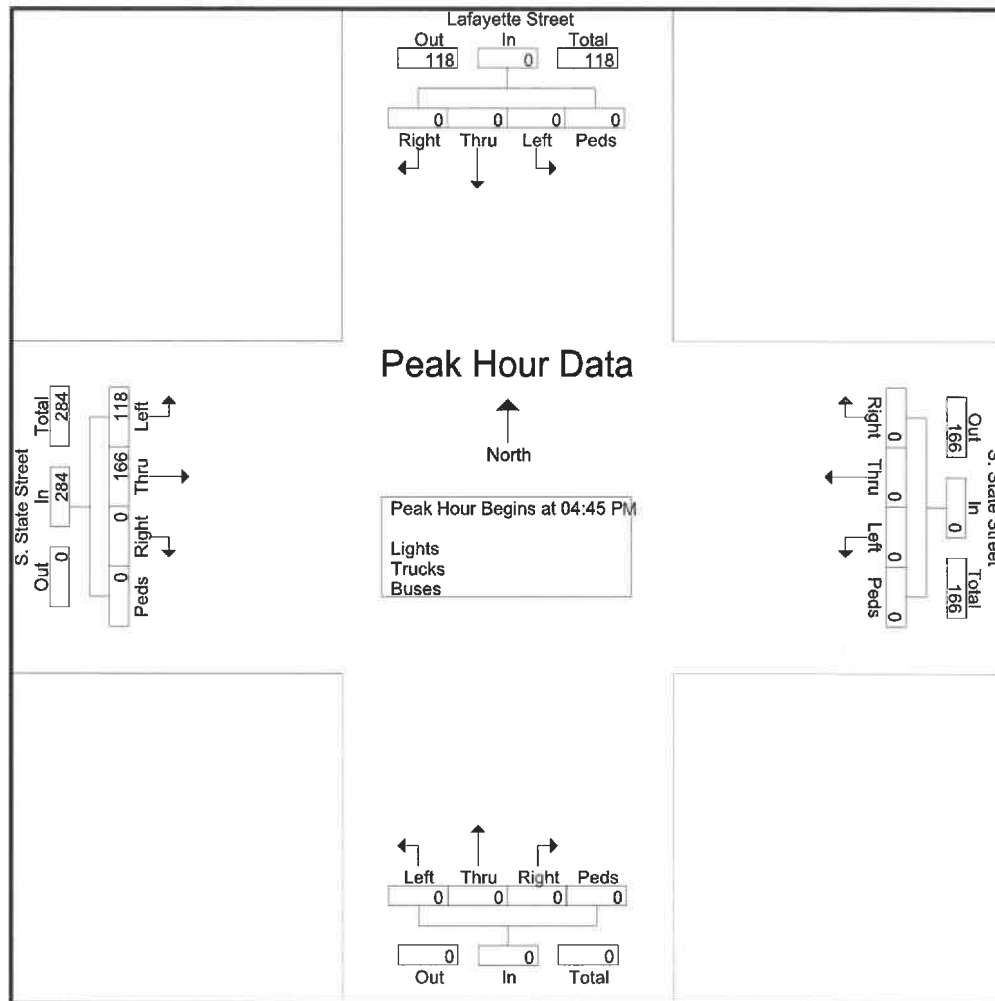


File Name : 22494
Site Code : 22494
Start Date : 12/14/2021
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File Name : 22494
 Site Code : 22494
 Start Date : 12/14/2021
 Page No : 2

	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	32	0	79	79
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	24	0	52	52
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	20	0	63	63
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	42	0	90	90
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166	118	0	284	284
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58.5	41.5	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.865	.702	.000	.789	.789



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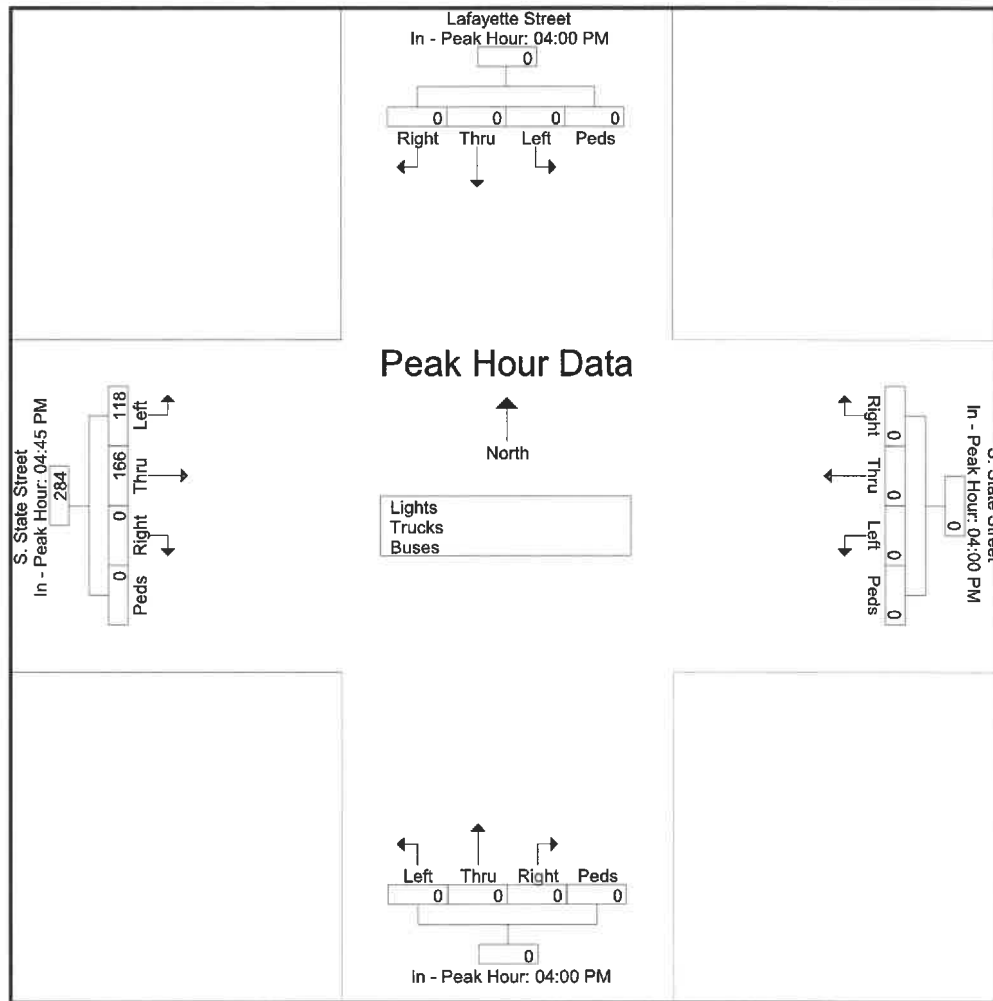
File Name : 22494
 Site Code : 22494
 Start Date : 12/14/2021
 Page No : 3

Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM					04:00 PM					04:00 PM					04:45 PM					
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	32	0	79	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	24	0	52	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	20	0	63	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	42	0	90	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166	118	0	284	
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58.5	41.5	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.865	.702	.000	.789	



ACCIDENT HISTORY

Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: *Stamford*, Date (Year: *All* or 10/1/2018 to 9/30/2021), Severity: *All*, Route Class: *US Route*, Road Number: 1, Local Road Name: *All*, Mile Markers: 7.85 to 7.85

These figures display crash-level data only and provide the totals for crashes involving an injury of that type.

Injury Status of Crashes

Suspected Serious Injury (A)

Suspected Minor Injury (B) 5

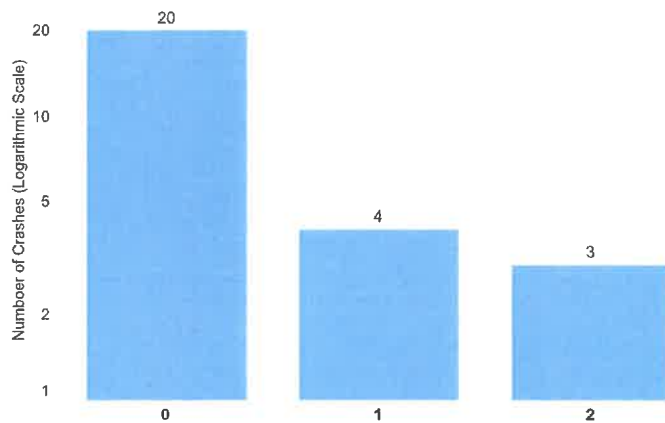
Possible Injury (C)

No Apparent Injuries (O) 20

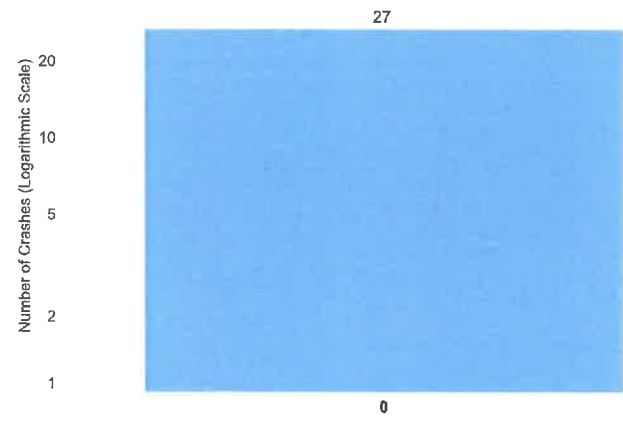
Number of Crashes (Logarithmic Scale)

Crash Severity	Crashes	% of All Crashes
Suspected Serious Injury (A)	1.00	3.70%
Suspected Minor Injury (B)	5.00	18.52%
Possible Injury (C)	1.00	3.70%
No Apparent Injuries (O)	20.00	74.07%
Grand Total	27.00	100.00%

Injuries per Crash



Fatalities per Crash



Injuries per Crash	Crashes	% of All Crashes	Fatalities per Crash	Crashes	% of All Crashes
0	20.00	74.07%	0	27.00	100.00%
1	4.00	14.81%			
2	3.00	11.11%			
Grand Total	27.00	100.00%	Grand Total	27.00	100.00%

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

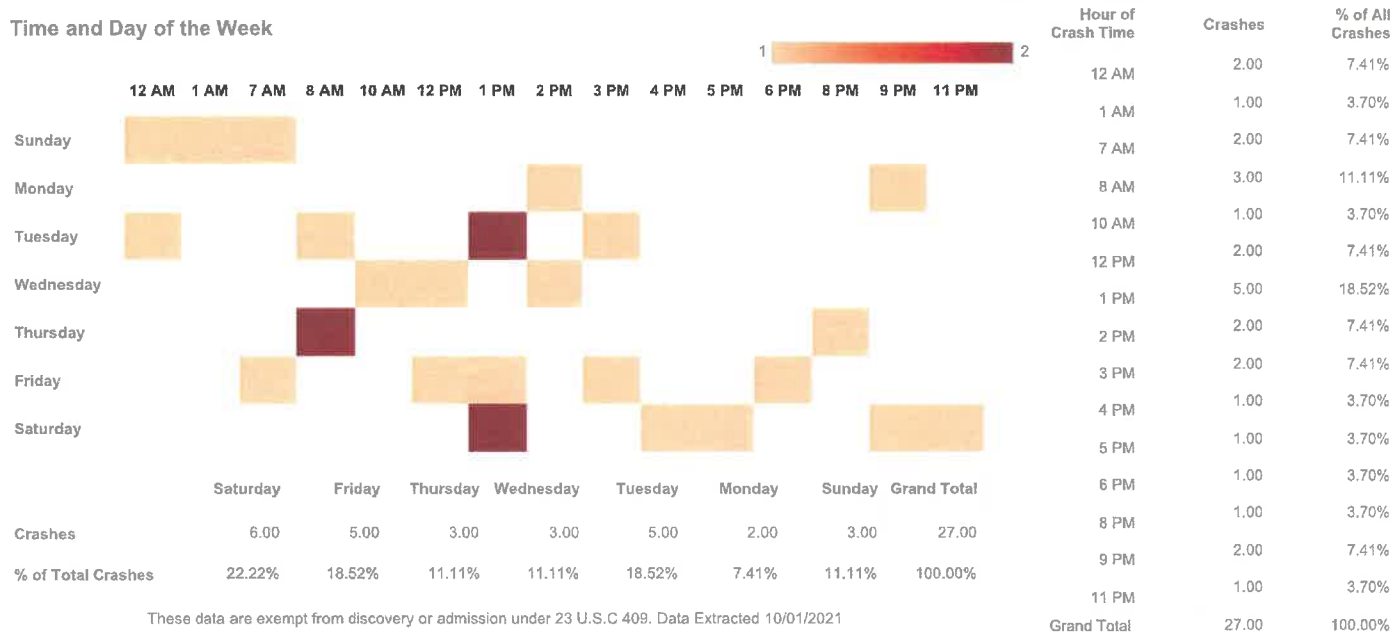
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.85 to 7.85

Month and Date of Crashes



Time and Day of the Week



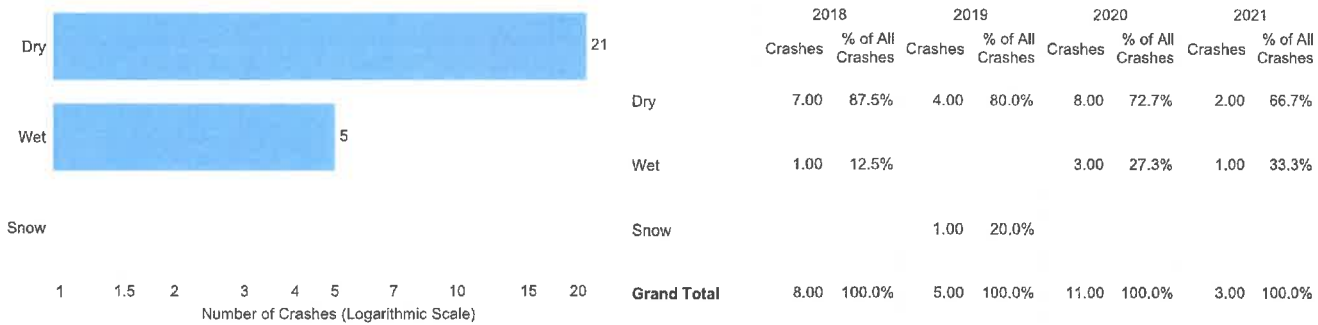
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

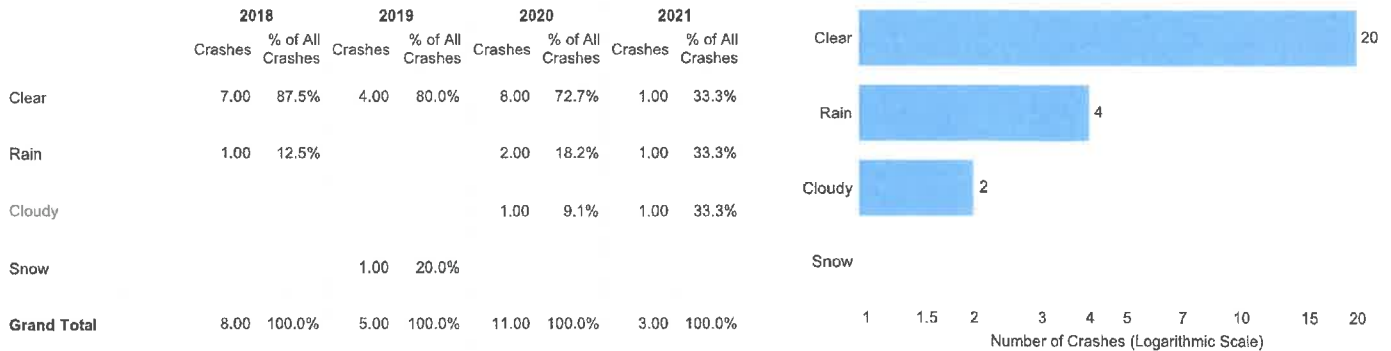
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: *Stamford*, Date (Year:*All* or *10/1/2018* to *9/30/2021*), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.85* to *7.85*

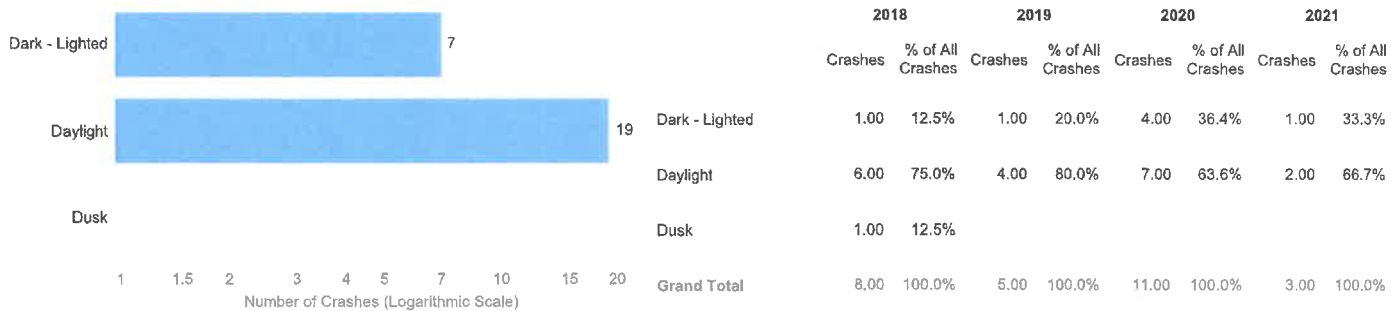
Traffic Surface Conditions



Weather Conditions



Light Conditions



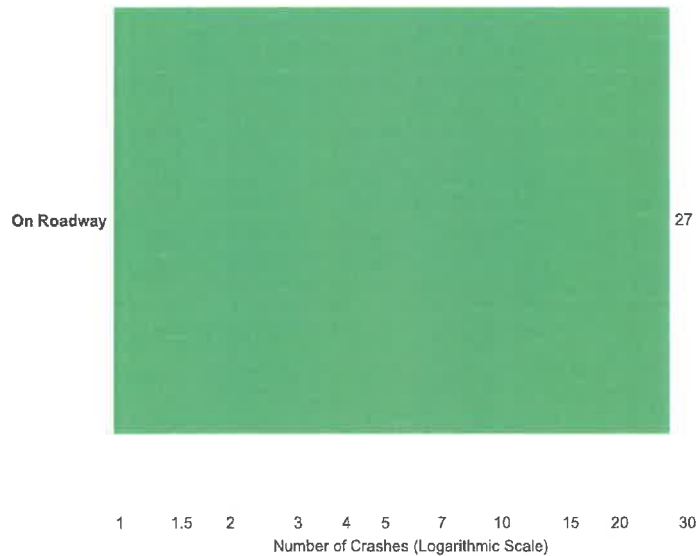
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Collision Analysis Safety Tables

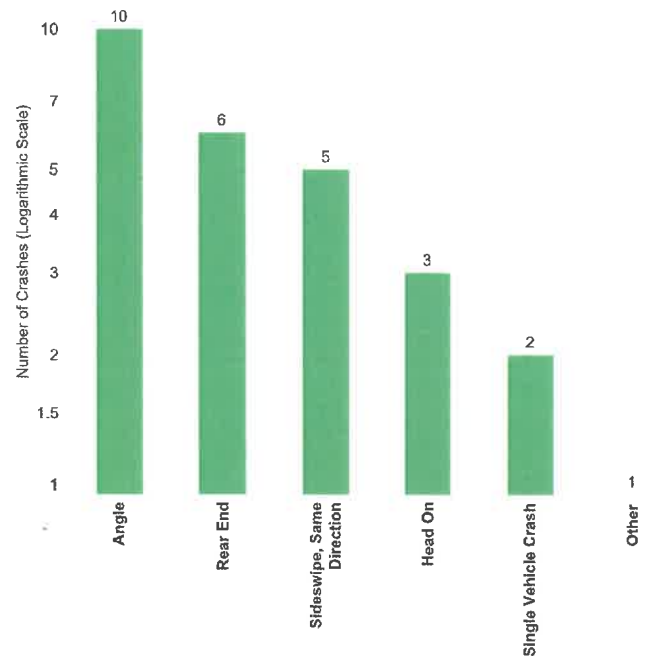
Roadway Features 2	Contributing Factors	Contributing Factors-Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.85 to 7.85

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful..	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	27.00	100.00%	Angle	10.00	37.04%
			Rear End	6.00	22.22%
			Sideswipe, Same Direction	5.00	18.52%
			Head On	3.00	11.11%
			Single Vehicle Crash	2.00	7.41%
Grand Total	27.00	100.00%	Other	1.00	3.70%
			Grand Total	27.00	100.00%

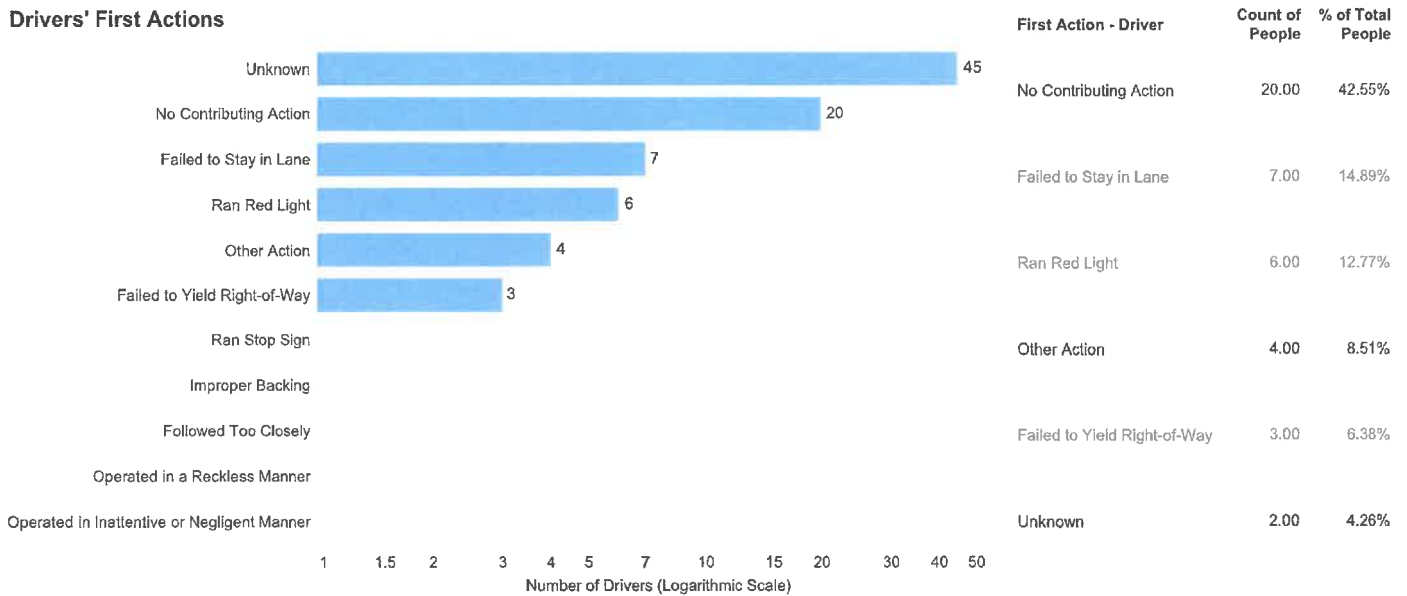
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Collision Analysis Safety Tables

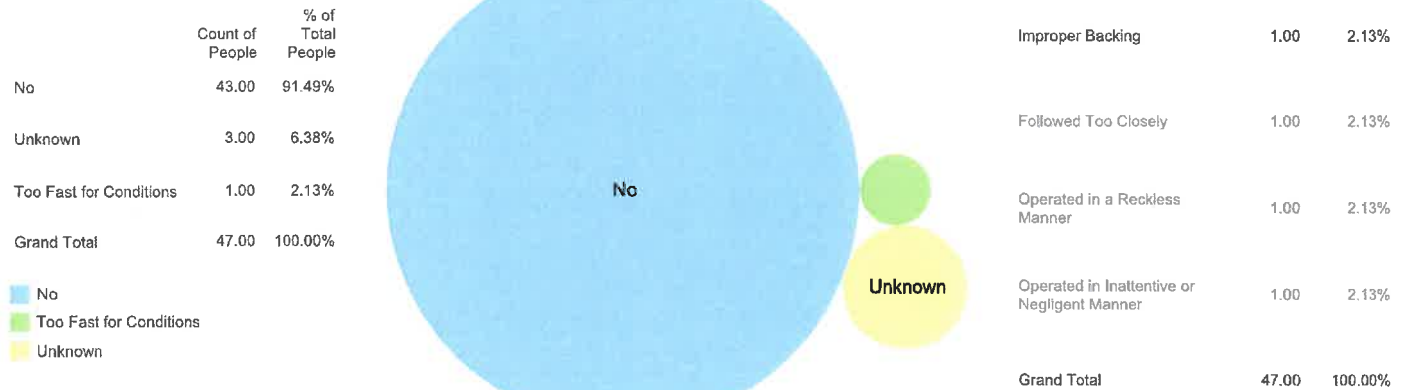
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	Driver Actions	Driver Distraction	Pedestrians	Motorcycle Crashes
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Queries Selected: Town: *Stamford*, Date (Year: *All* or 10/1/2018 to 9/30/2021), Severity: *All*, Route Class: *US Route*, Road Number: 1, Local Road Name: *All*, Mile Markers: 7.85 to 7.85

Drivers' First Actions



Speed Related



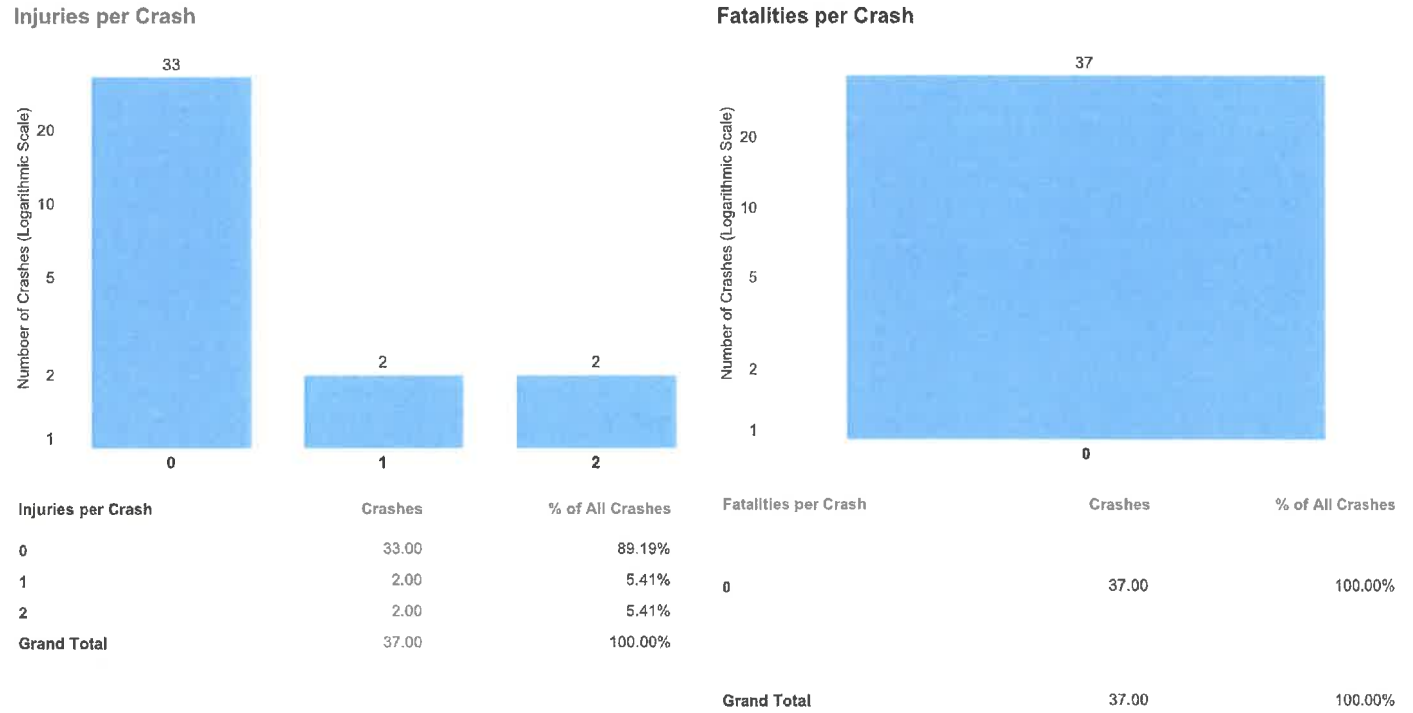
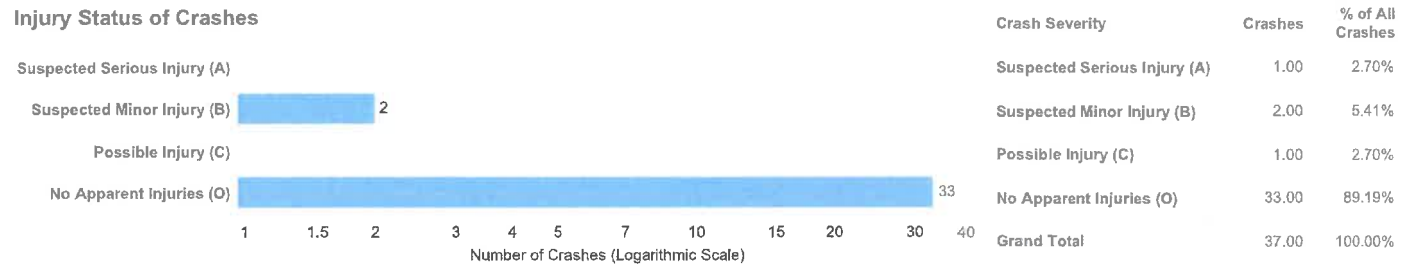
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Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: *Stamford*, Date (Year: *All* or 10/1/2018 to 9/30/2021), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.86* to *7.92*

These figures display crash-level data only and provide the totals for crashes involving an injury of that type.



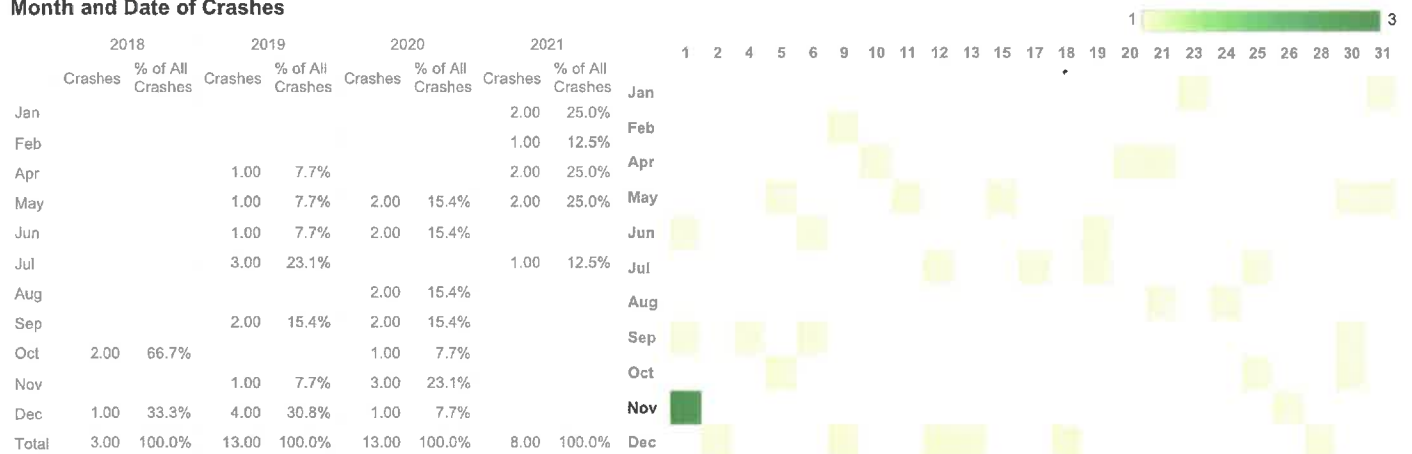
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

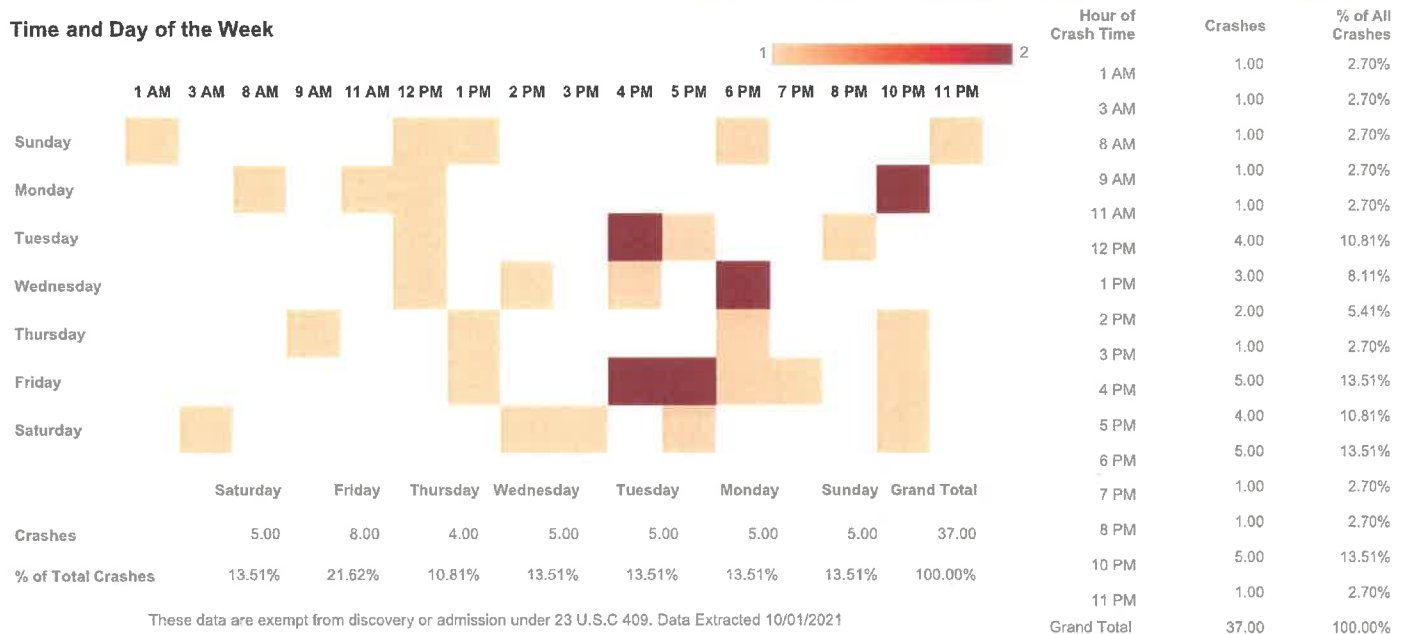
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.86 to 7.92

Month and Date of Crashes



Time and Day of the Week



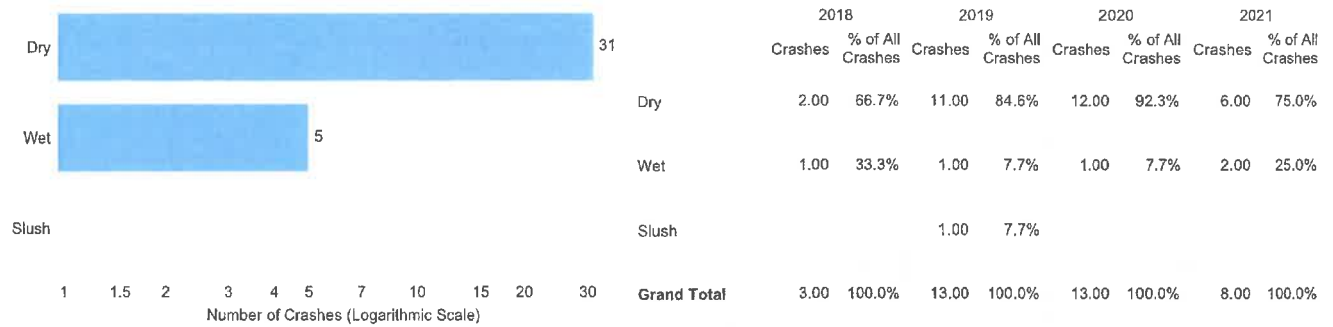
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Collision Analysis Safety Tables

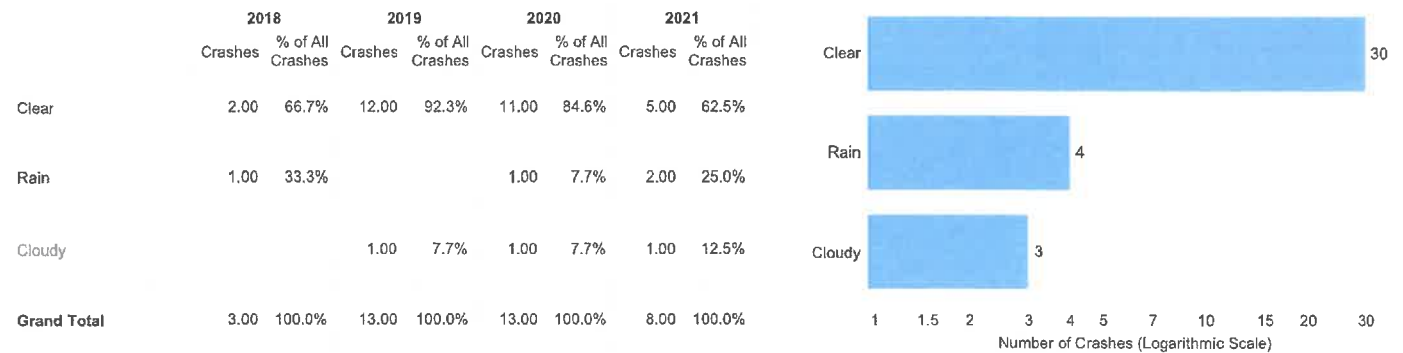
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.86 to 7.92

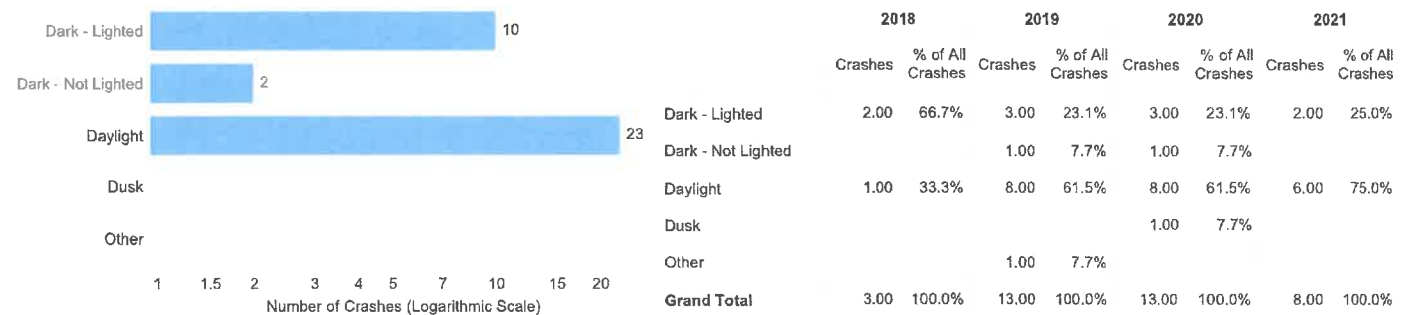
Traffic Surface Conditions



Weather Conditions



Light Conditions



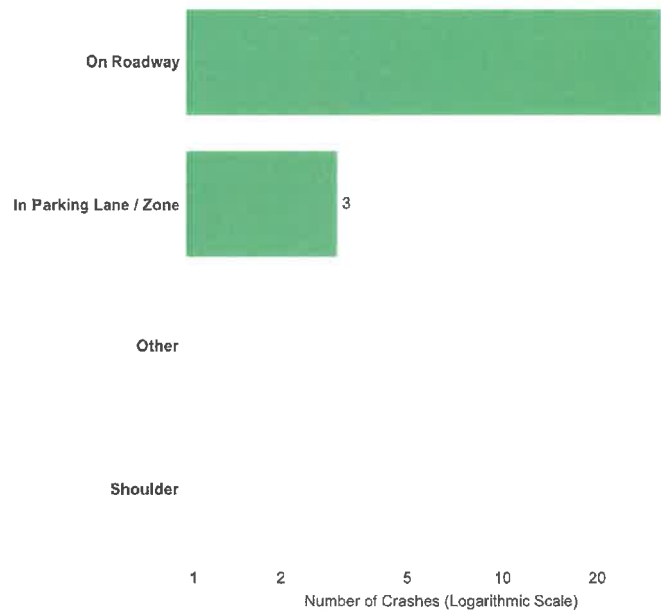
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Collision Analysis Safety Tables

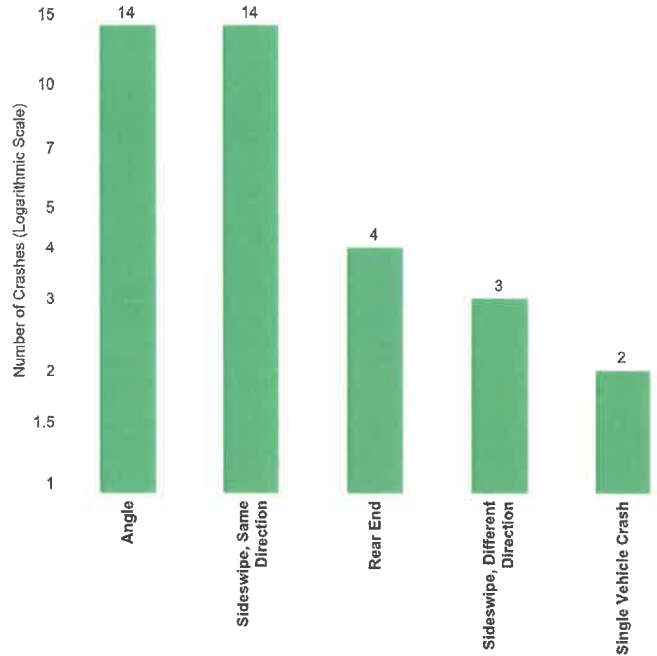
Roadway Features 2	Contributing Factors	Contributing Factors-Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
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Queries Selected: Town: *Stamford*, Date (Year: *All* or *10/1/2018* to *9/30/2021*), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.86* to *7.92*

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful Event	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	32.00	86.49%	Sideswipe, Same Direction	14.00	37.84%
In Parking Lane / Zone	3.00	8.11%	Angle	14.00	37.84%
Shoulder	1.00	2.70%	Rear End	4.00	10.81%
Other	1.00	2.70%	Sideswipe, Different Direction	3.00	8.11%
			Single Vehicle Crash	2.00	5.41%
Grand Total	37.00	100.00%	Grand Total	37.00	100.00%

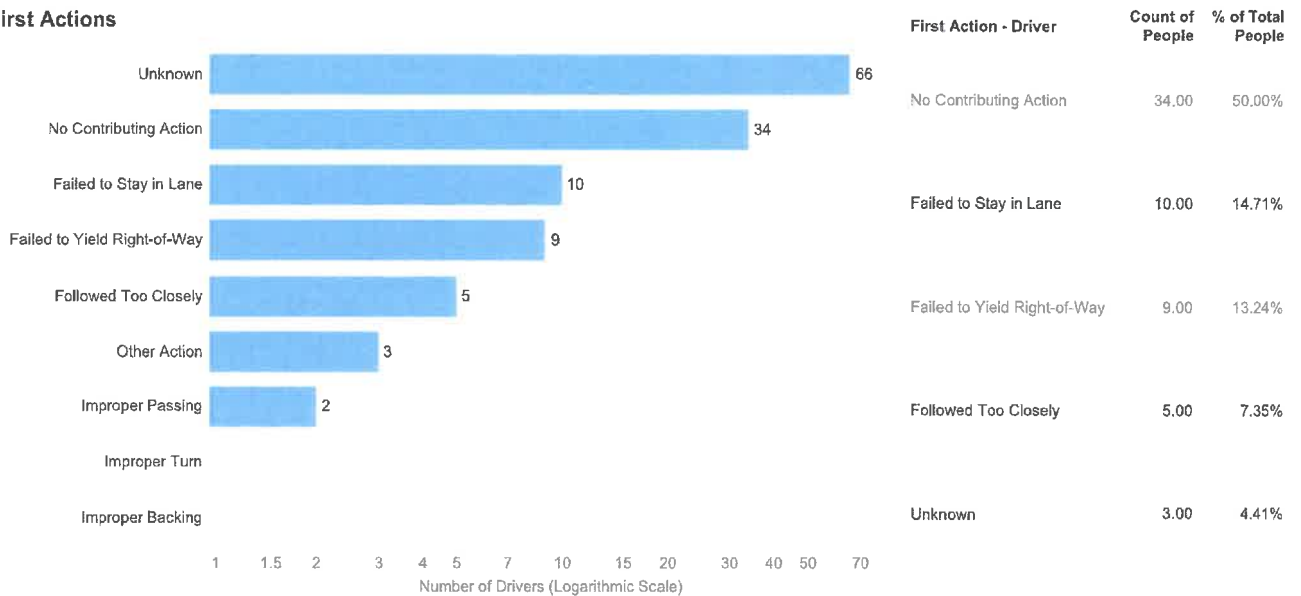
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Collision Analysis Safety Tables

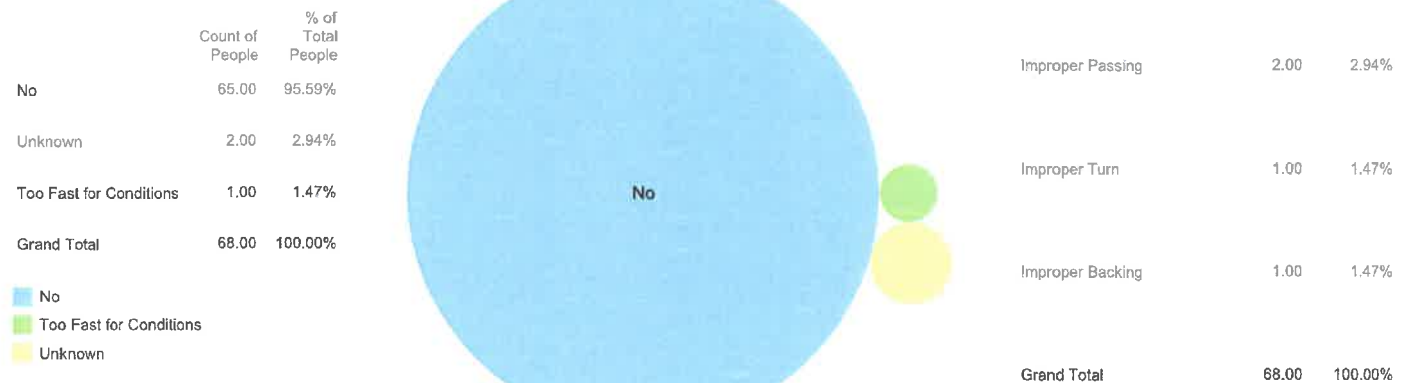
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	Driver Actions	Driver Distraction	Pedestrians	Motorcycle Crashes
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.86 to 7.92

Drivers' First Actions



Speed Related



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.93 to 7.93

These figures display crash-level data only and provide the totals for crashes involving an injury of that type.

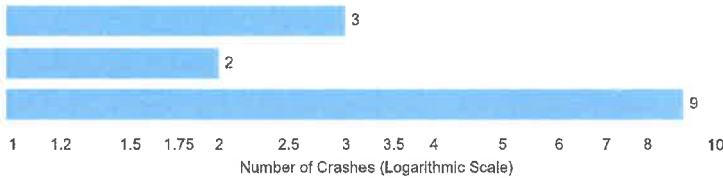
Injury Status of Crashes

Suspected Serious Injury (A)

Suspected Minor Injury (B)

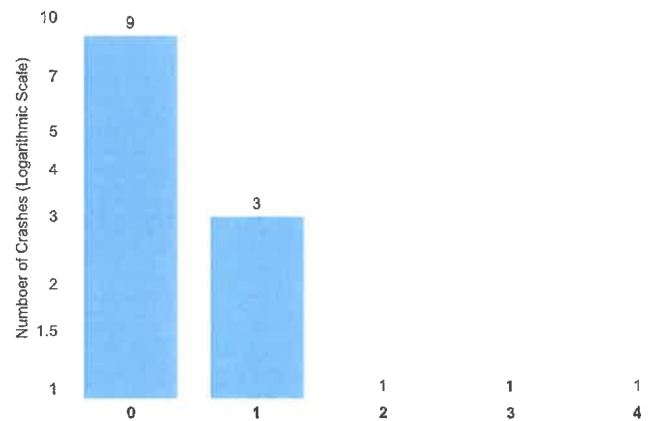
Possible Injury (C)

No Apparent Injuries (O)

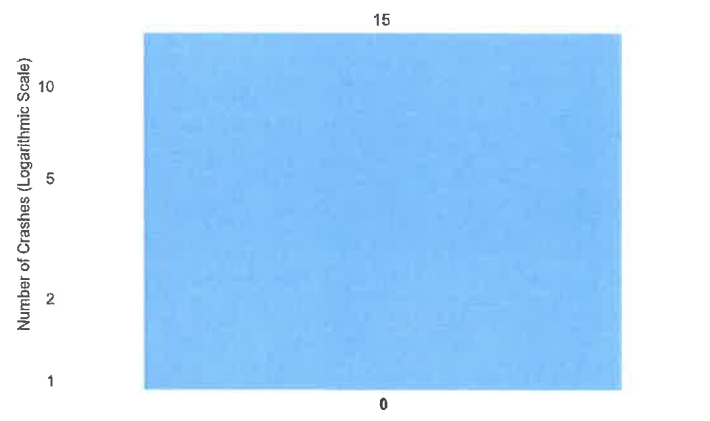


Crash Severity	Crashes	% of All Crashes
Suspected Serious Injury (A)	1.00	6.67%
Suspected Minor Injury (B)	3.00	20.00%
Possible Injury (C)	2.00	13.33%
No Apparent Injuries (O)	9.00	60.00%
Grand Total	15.00	100.00%

Injuries per Crash



Fatalities per Crash



Injuries per Crash	Crashes	% of All Crashes	Fatalities per Crash	Crashes	% of All Crashes
0	9.00	60.00%	0	15.00	100.00%
1	3.00	20.00%			
2	1.00	6.67%			
3	1.00	6.67%			
4	1.00	6.67%			
Grand Total	15.00	100.00%	Grand Total	15.00	100.00%

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.93 to 7.93

Month and Date of Crashes

2018		2019		2020		2021													
Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes	4	5	6	11	12	13	21	24	25	26	30	
Jan		1.000	20.0%					Jan											
Feb		2.000	40.0%	1.000	20.0%	1.000	50.0%	Feb											
Jun		1.000	20.0%			1.000	50.0%	Jun											
Jul				1.000	20.0%			Jul											
Oct	1.000	33.3%		1.000	20.0%			Oct											
Nov	2.000	66.7%		2.000	40.0%			Nov											
Dec		1.000	20.0%					Dec											
Total	3.000	100.0%	5.000	100.0%	5.000	100.0%	2.000	100.0%											

Time and Day of the Week

												Hour of Crash Time	Crashes	% of All Crashes						
								8 AM	9 AM	11 AM	12 PM	1 PM	2 PM	4 PM	5 PM	7 PM	10 PM			
Sunday																		8 AM	1.00	6.67%
Monday																		9 AM	1.00	6.67%
Tuesday																		11 AM	2.00	13.33%
Wednesday																		12 PM	2.00	13.33%
Friday																		1 PM	1.00	6.67%
Saturday																		2 PM	2.00	13.33%
																		4 PM	1.00	6.67%
																		5 PM	3.00	20.00%
																		7 PM	1.00	6.67%
																		10 PM	1.00	6.67%
																		Grand Total	15.00	100.00%
Crashes																				
% of Total Crashes																				
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021																				

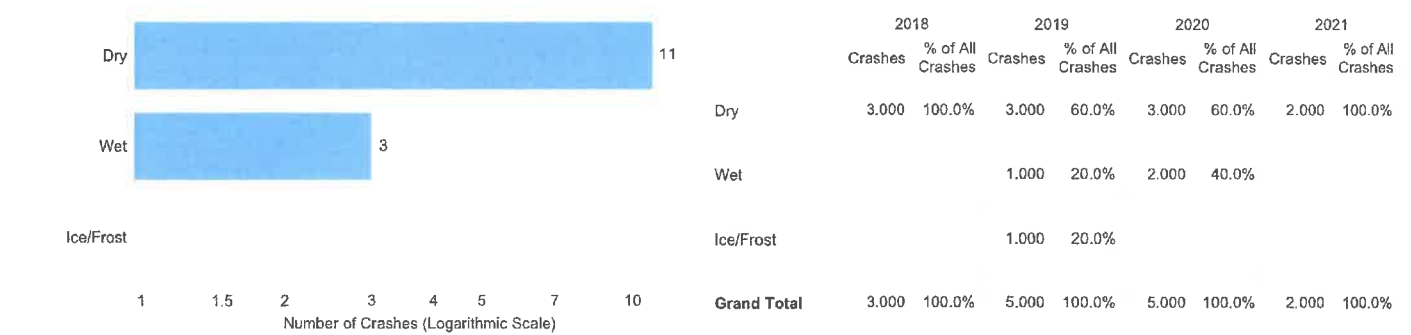
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Collision Analysis Safety Tables

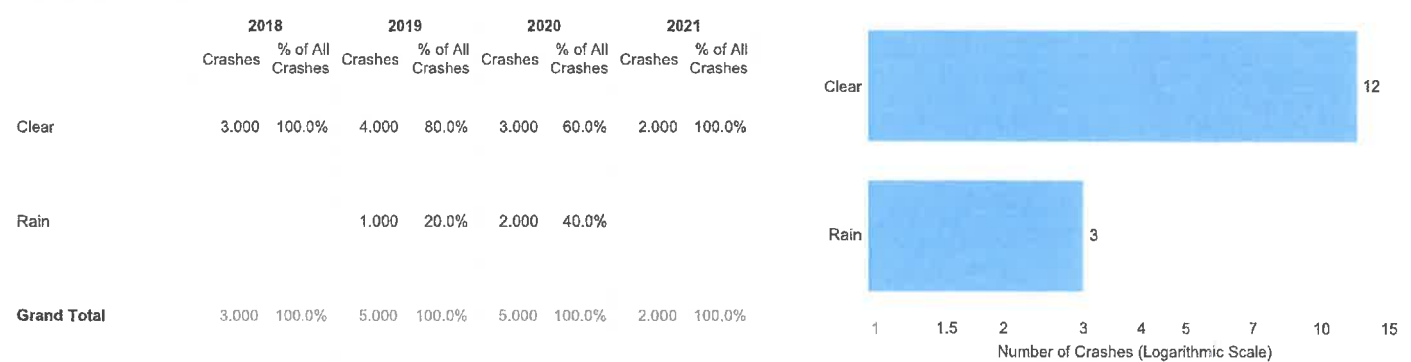
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: *Stamford*, Date (Year:*All* or *10/1/2018* to *9/30/2021*), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.93* to *7.93*

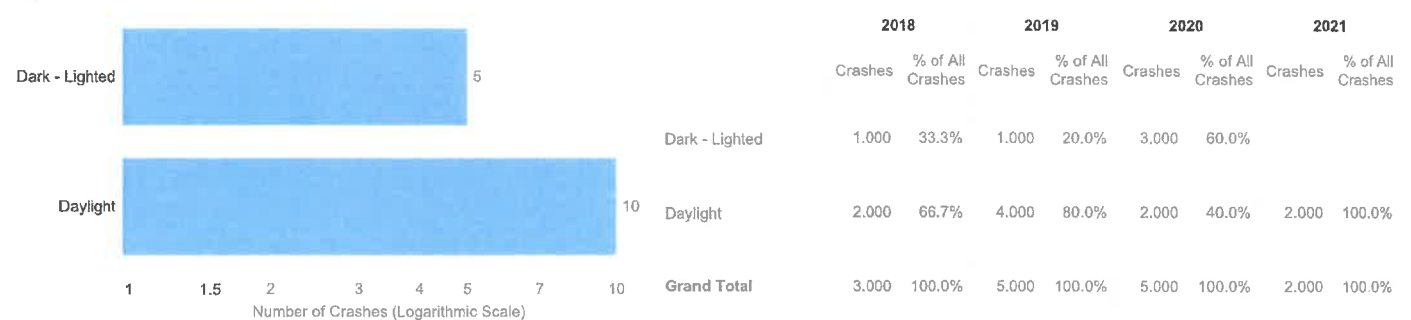
Traffic Surface Conditions



Weather Conditions



Light Conditions



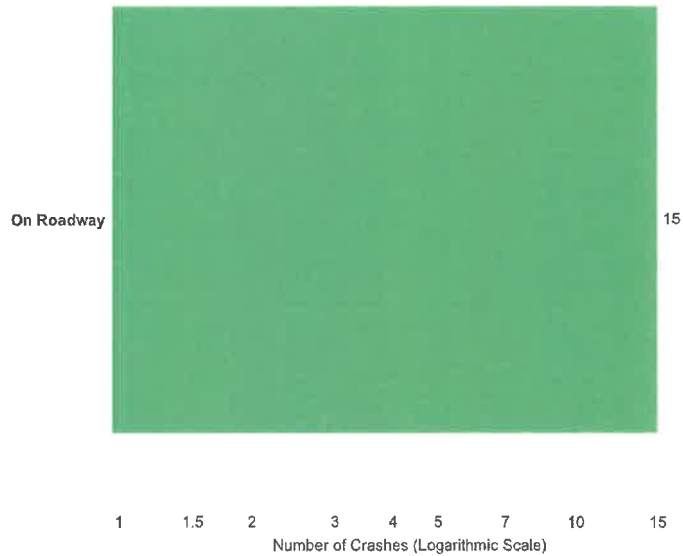
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Collision Analysis Safety Tables

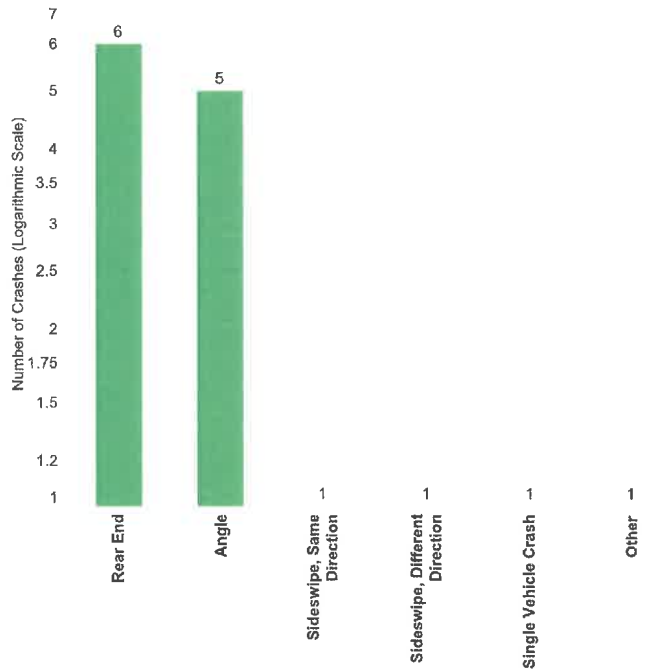
Roadway Features 2	Contributing Factors	Contributing Factors-Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
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Queries Selected: Town: *Stamford*, Date (Year: *All* or *10/1/2018* to *9/30/2021*), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.93* to *7.93*

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful..	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	15.00	100.00%	Rear End	6.00	40.00%
			Angle	5.00	33.33%
			Other	1.00	6.67%
			Single Vehicle Crash	1.00	6.67%
Grand Total	15.00	100.00%	Sideswipe, Different Direction	1.00	6.67%
			Sideswipe, Same Direction	1.00	6.67%
			Grand Total	15.00	100.00%

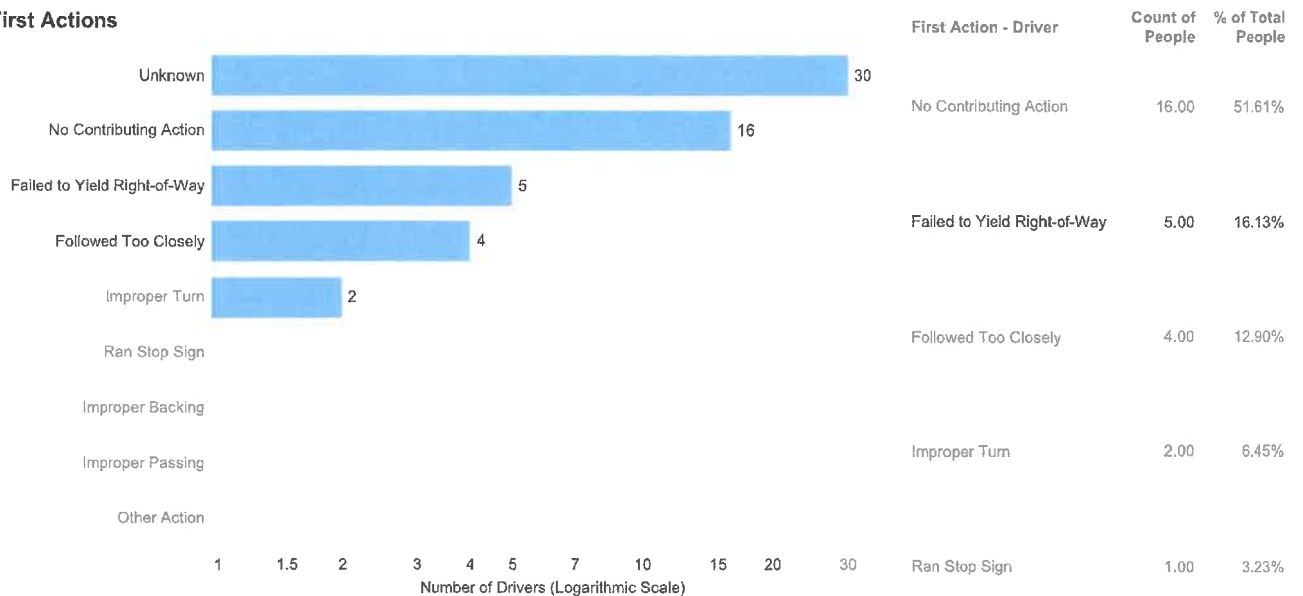
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Collision Analysis Safety Tables

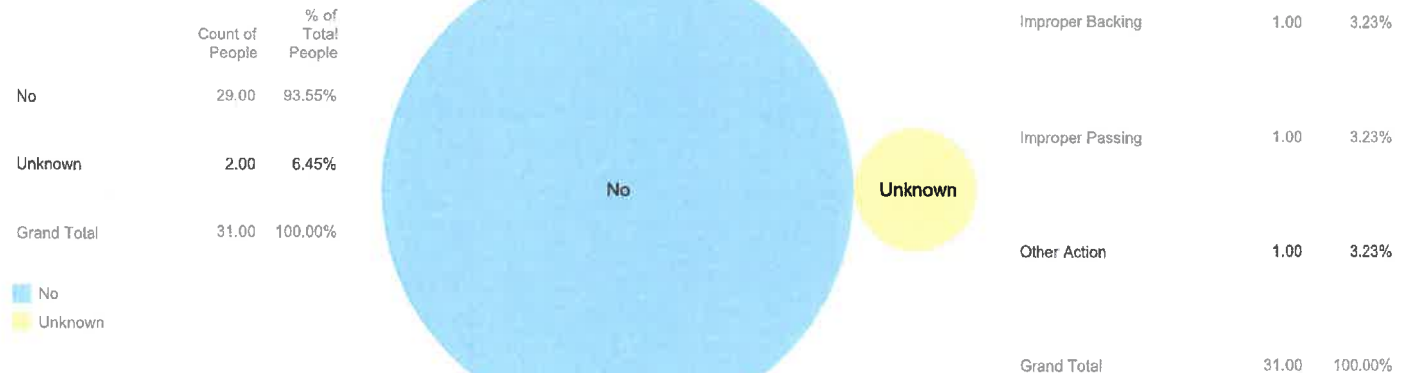
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	Driver Actions	Driver Distraction	Pedestrians	Motorcycle Crashes
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.93 to 7.93

Drivers' First Actions



Speed Related



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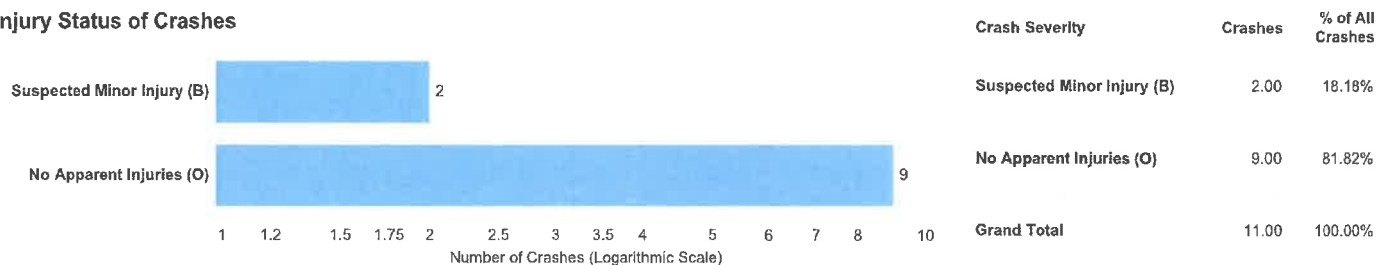
Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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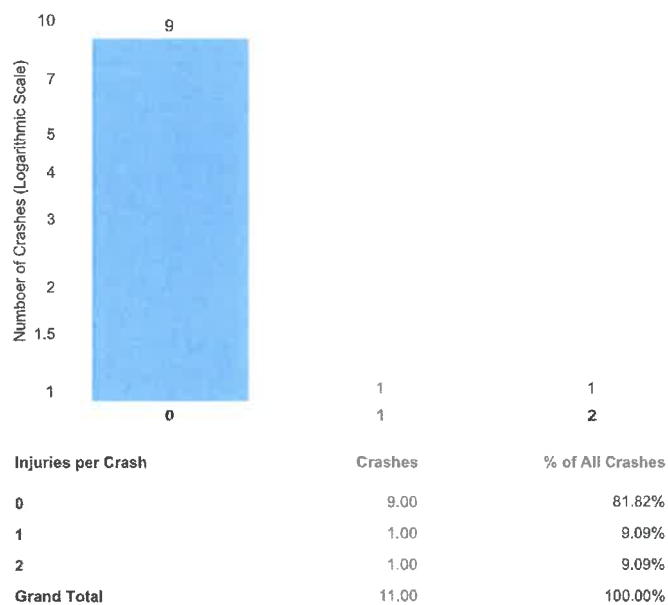
Queries Selected: Town: *Stamford*, Date (Year: *All* or *10/1/2018* to *9/30/2021*), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.94* to *7.97*

These figures display crash-level data only and provide the totals for crashes involving an injury of that type.

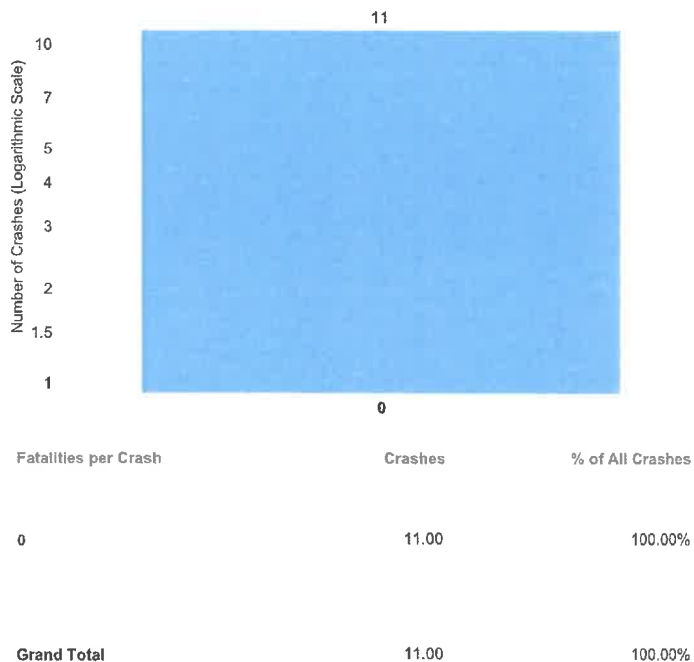
Injury Status of Crashes



Injuries per Crash



Fatalities per Crash



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Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors

Queries Selected: Town: *Stamford*, Date (Year: *All* or 10/1/2018 to 9/30/2021), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.94 to 7.97*

Month and Date of Crashes

	2018		2019		2020		2021											
	Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes		4	6	7	13	14	17	18	28	29
Mar			1.000	25.0%	1.000	33.3%			Mar									
Apr							2.000	66.7%	Apr									
May							1.000	33.3%	May									
Jun					1.000	33.3%			Jun									
Sep			1.000	25.0%					Sep									
Oct	1.000	100.0%	2.000	50.0%	1.000	33.3%			Oct									
Total	1.000	100.0%	4.000	100.0%	3.000	100.0%	3.000	100.0%	Oct									

Time and Day of the Week

[illegible]

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

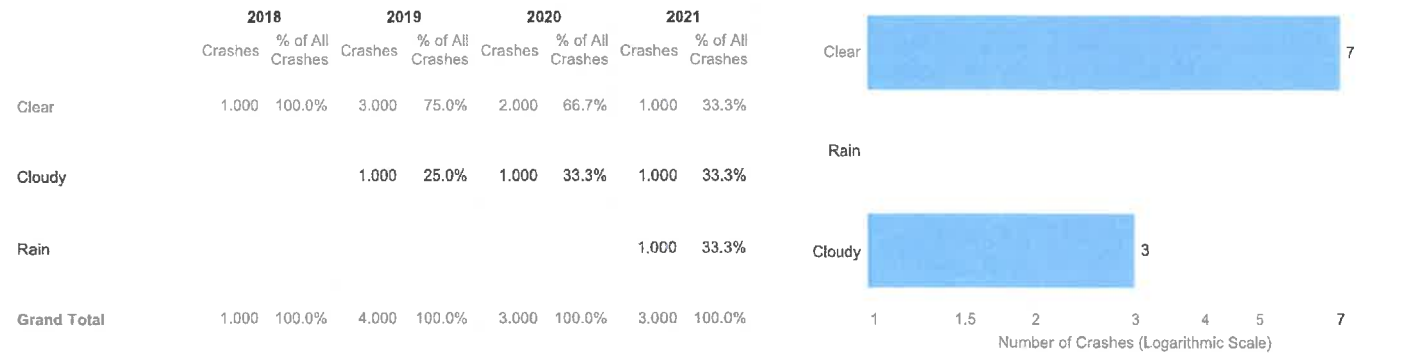
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Traffic Surface Conditions



Weather Conditions



Light Conditions



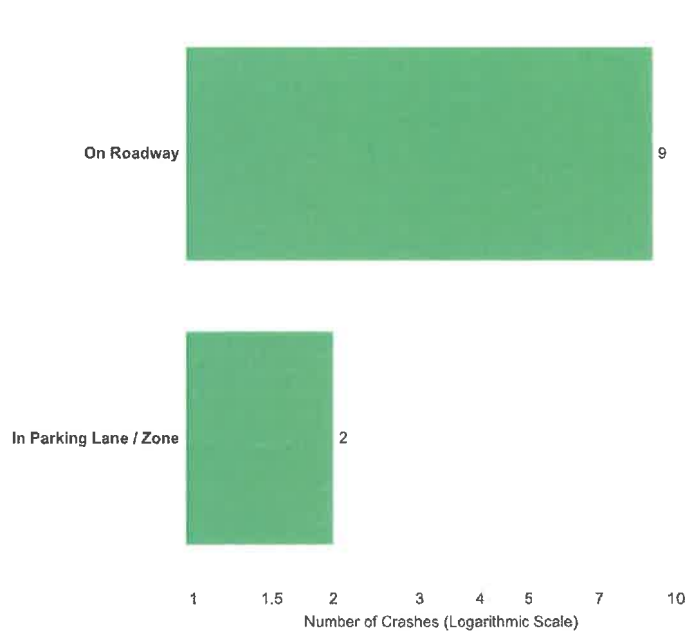
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Collision Analysis Safety Tables

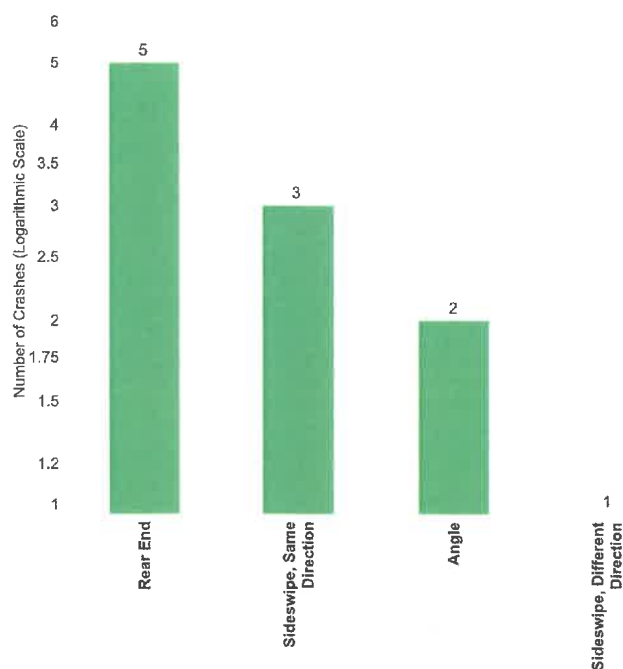
Roadway Features 2	Contributing Factors	Contributing Factors -Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.94 to 7.97

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful Event	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	9.00	81.82%	Rear End	5.00	45.45%
			Sideswipe, Same Direction	3.00	27.27%
In Parking Lane / Zone	2.00	18.18%	Angle	2.00	18.18%
			Sideswipe, Different Direction	1.00	9.09%
Grand Total	11.00	100.00%	Grand Total	11.00	100.00%

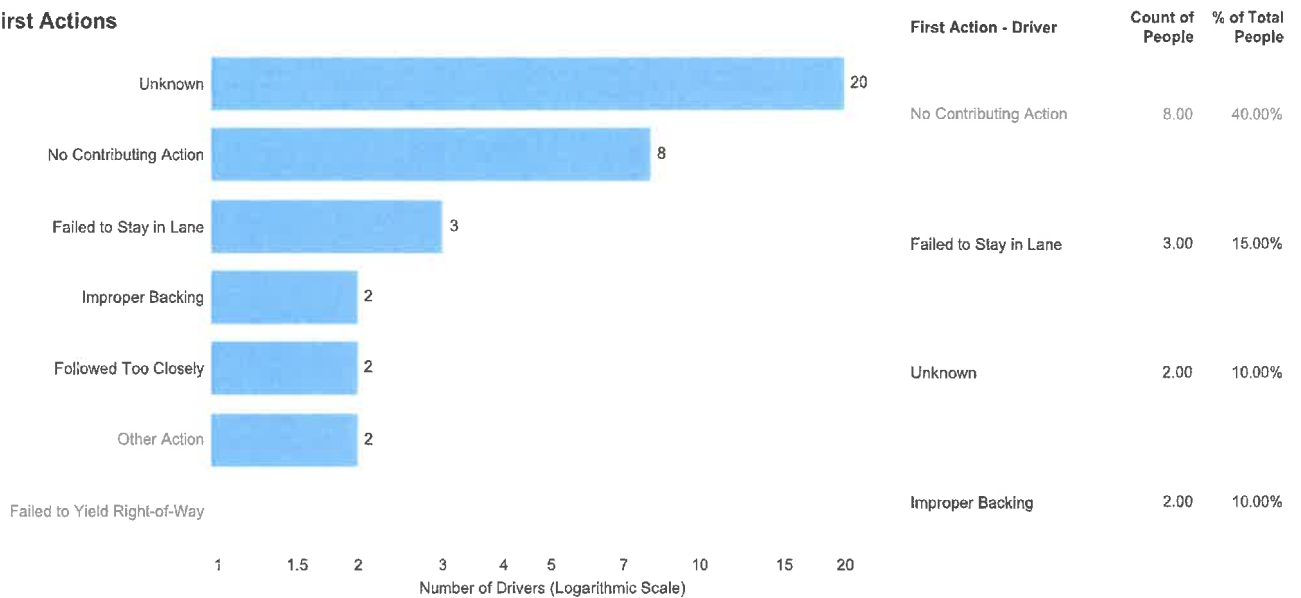
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Collision Analysis Safety Tables

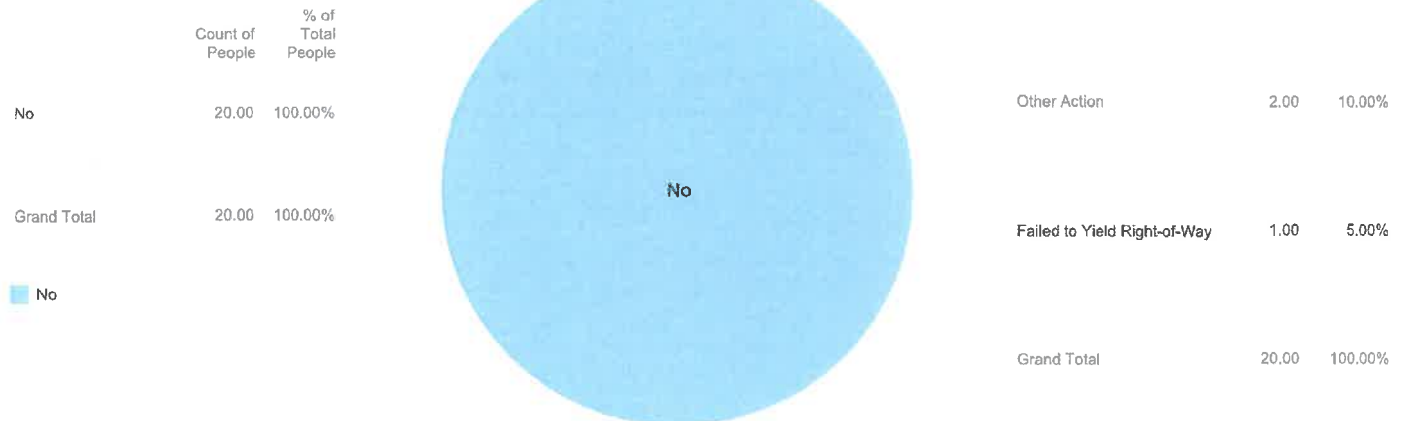
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	Driver Actions	Driver Distraction	Pedestrians	Motorcycle Crashes
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.94 to 7.97

Drivers' First Actions



Speed Related



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: *Stamford*, Date (Year: *All* or 10/1/2018 to 9/30/2021), Severity: *All*, Route Class: *US Route*, Road Number: 1, Local Road Name: *All*, Mile Markers: 7.98 to 7.98

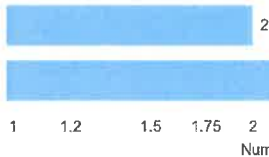
These figures display crash-level data only and provide the totals for crashes involving an injury of that type.

Injury Status of Crashes

Suspected Minor Injury (B)

Possible Injury (C)

No Apparent Injuries (O)



Crash Severity

Crashes

% of All Crashes

Suspected Minor Injury (B)

1.000

10.00%

Possible Injury (C)

2.000

20.00%

No Apparent Injuries (O)

7.000

70.00%

Grand Total

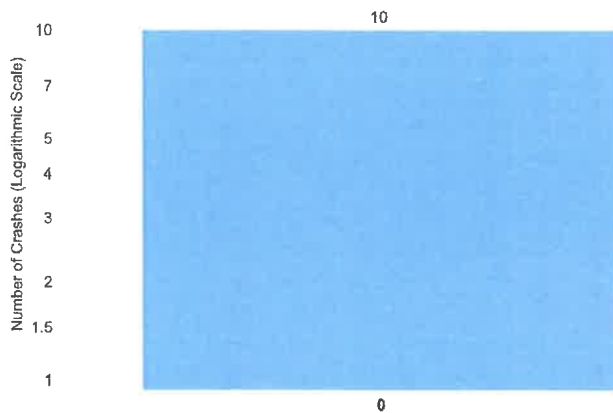
10.000

100.00%

Injuries per Crash



Fatalities per Crash



Injuries per Crash

Crashes

% of All Crashes

0

7.000

70.00%

1

1.000

10.00%

3

2.000

20.00%

Grand Total

10.000

100.00%

Fatalities per Crash

Crashes

% of All Crashes

0

10.000

100.00%

Grand Total

10.000

100.00%

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: Stamford, Date (Year:All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.98 to 7.98

Month and Date of Crashes

2018		2019		2020		2021		6	7	8	15	21	28 ¹	29
Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes	Jan	Feb	Mar	Apr	May	Jul	Nov
Jan		1.000	25.0%					Jan						
Feb				1.000	33.3%			Feb						
Mar		1.000	25.0%					Mar						
Apr						1.000	50.0%	Apr						
May		1.000	25.0%	1.000	33.3%	1.000	50.0%	May						
Jul		1.000	25.0%	1.000	33.3%			Jul						
Nov	1.000	100.0%						Nov						
Total	1.000	100.0%	4.000	100.0%	3.000	100.0%	2.000	100.0%						

Time and Day of the Week

7 AM		11 AM		12 PM		1 PM		4 PM		5 PM		8 PM		10 PM		Hour of Crash Time	Crashes	% of All Crashes
Monday																7 AM	1.000	10.00%
Wednesday																11 AM	1.000	10.00%
Thursday																12 PM	1.000	10.00%
Friday																1 PM	1.000	10.00%
Saturday																4 PM	2.000	20.00%
																5 PM	2.000	20.00%
																8 PM	1.000	10.00%
																10 PM	1.000	10.00%
																Grand Total	10.000	100.00%
Crashes		1.000		1.000		3.000		3.000		2.000		10.000						
% of Total Crashes		10.00%		10.00%		30.00%		30.00%		20.00%		100.00%						

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

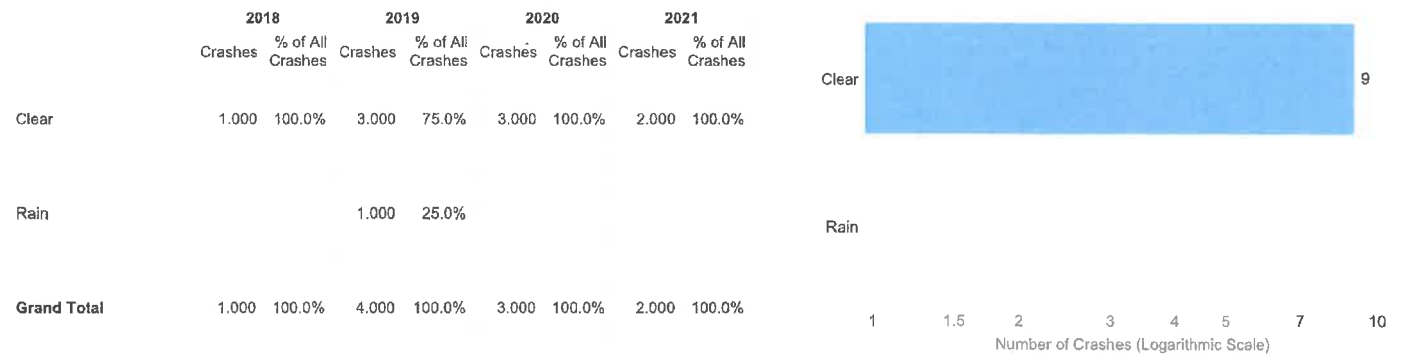
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: *Stamford*, Date (Year: *All* or *10/1/2018* to *9/30/2021*), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.98* to *7.98*

Traffic Surface Conditions



Weather Conditions



Light Conditions



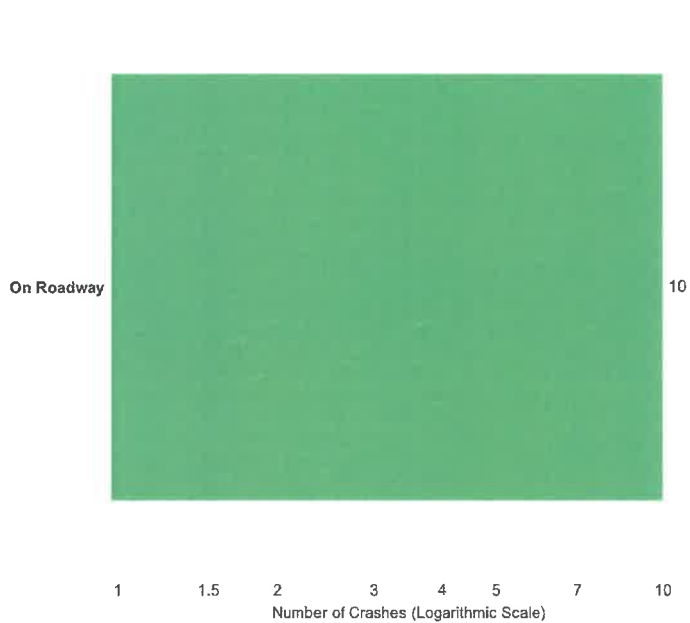
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

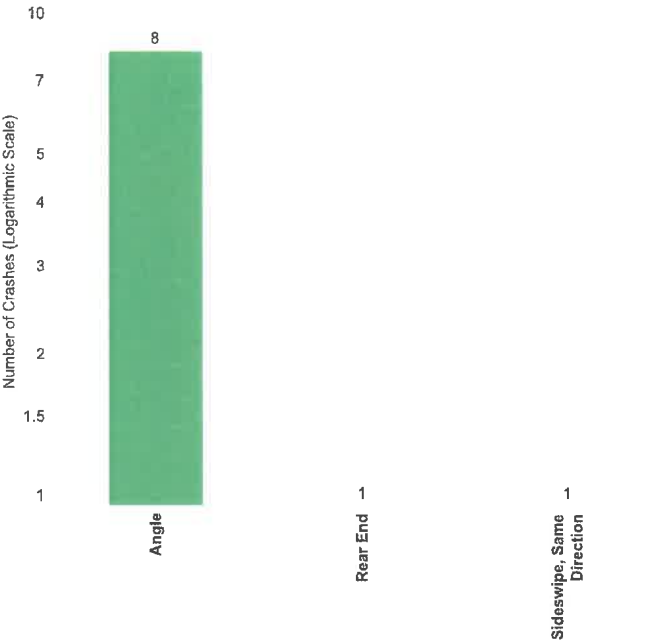
Roadway Features Z	Contributing Factors	Contributing Factors-Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
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Queries Selected: Town: Stamford, Date (Year:All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.98 to 7.98

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful..	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	10.000	100.00%	Angle	8.000	80.00%
			Sideswipe, Same Direction	1.000	10.00%
			Rear End	1.000	10.00%
Grand Total	10.000	100.00%	Grand Total	10.000	100.00%

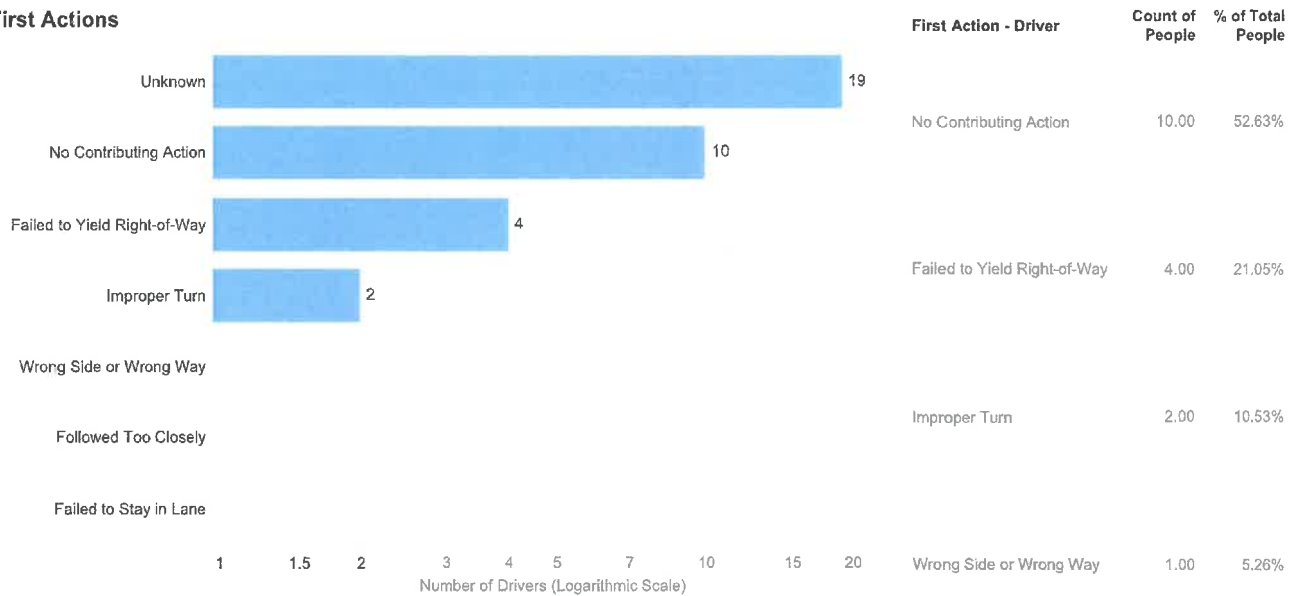
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

Collision Analysis Safety Tables

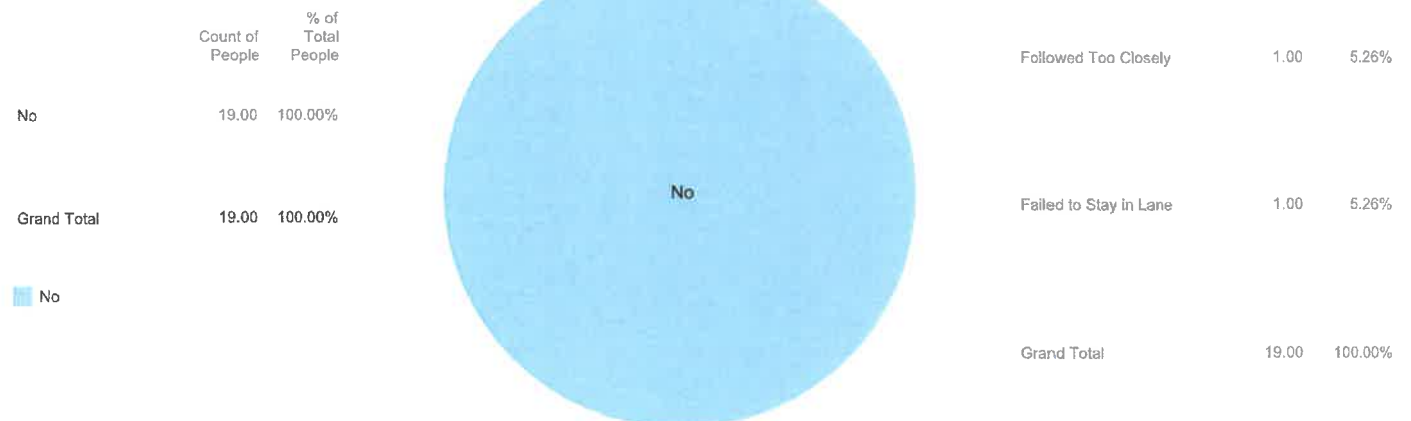
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	Driver Actions	Driver Distraction	Pedestrians	Motorcycle Crashes
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.98 to 7.98

Drivers' First Actions



Speed Related



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

CAPACITY ANALYSIS PROCEDURES

CAPACITY ANALYSIS PROCEDURES

Intersections – Four methods of analysis are needed to evaluate different kinds of intersections. These methods are based on procedures found in the Sixth Edition of the Highway Capacity Manual 2016 and are described below.

Signalized Intersections

This chapter's methodology applies to three-leg and four-leg intersections of two streets or highways where the signalization operates in isolation from nearby intersections.

Performance Measure – An intersection's performance is described by the use of one or more quantitative measures that characterize some aspect of the service provided to a specific road user group. Performance measures include automobile volume-to-capacity ratio, automobile delay, queue storage ratio, pedestrian delay, pedestrian circulation area, pedestrian perception score, bicycle delay, and bicycle perception score. LOS is considered a performance measure. It is computed for the automobile, pedestrian, and bicycle travel modes.

Travel Modes – There are three methodologies that can be used to evaluate intersection performance from the perspective of motorists, pedestrians, and bicyclists. They are referred to as the automobile methodology, the pedestrian methodology, and the bicycle methodology.

Lane Groups and Movement Groups – A separate lane group is established to (a) each lane (or combination of adjacent lanes) that exclusively serves one movement and (b) each lane shared by two or more movements. The concept of movement groups is also established to facilitate data entry. A separate movement group is established for (a) each turn movement with one or more exclusive turn lanes and (b) the through movement (inclusive of any turn movements that share a lane).

LOS Criteria – LOS criteria for the automobile mode are different from those for the non-automobile modes. The automobile-mode criteria are based on performance measures that are field measurable and perceivable by travelers. The criteria for the non-automobile modes are based on scores reported by travelers indicating their perception of service quality.

Automobile Mode – LOS for Automobile Mode can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for entire intersection or an approach. Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. The following describes each LOS.

Level of Service A – It describes operations with a control delay of 10.0 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned

when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

Level of Service B – It describes operations with control delay between 10 to 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicle stop than with LOS A.

Level of Service C – It describes operations with control delay between 20 to 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

Level of Service D – It describes operations with control delay between 35 to 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

Level of Service E – It describes operations with control delay between 55 to 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

Level of Service F – It describes operations with control delay between 55 to 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

The LOS thresholds established for automobile mode at a signalized intersection

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO	
	≤ 1.0	>1.0
≤ 10	A	F
>10 to 20	B	F
>20 to 35	C	F
>35 to 55	D	F
>55 to 80	E	F
>80	F	F

Note: For approach-based and intersection-wide assessments, LOS is defined by control delay.

Two-Way STOP-Controlled Intersections (TWSC)

One typical configuration is a four-leg intersection, where the major street is uncontrolled, while the minor street is controlled by STOP signs. The other typical configuration is a three-leg intersection, where the single minor-street approach is controlled by a STOP sign.

Theoretical Basic – Gap-acceptance models begin with the recognition that TWSC Intersections give no positive indication or control to the driver on the minor street as to when it is appropriate to leave the stop line and enter the major street. The driver must determine when a gap on the major street is large enough to permit entry and when to enter, on the basis of the relative priority of the competing movements. This decision-making process has been formalized analytically into what is commonly known as gap-acceptance theory. Gap-acceptance theory includes three basic elements: the size and distribution (availability) of gaps on the major street, the usefulness of these gaps to the minor-street drivers, and the relative priority of the various movements at the intersection.

Critical Headway and Follow-Up Headway – The *critical headway* is defined as the minimum interval in the major street traffic stream that allows intersection entry for one minor-street vehicle. Thus, the driver's critical headway is the minimum headway that would be acceptable. Critical headway can be estimated on the basis of observations of the largest rejected and smallest accepted headway for a given intersection. The *follow-up headway* is defined as the time between the departure of one vehicle from the minor street and the departure of the next vehicle using the same major-street headway, under a condition of continuous queuing on the minor street.

Base Critical Headways for TWSC Intersections

VEHICLE MOVEMENT	BASE CRITICAL HEADWAY		
	Two Lanes	Four Lanes	Six Lanes
Left turn from major	4.1	4.1	5.3
U-turn from major	N/A	6.4 (wide) 6.9 (narrow)	5.6
Right turn from minor	6.2	6.9	7.1
Through traffic On major	1-stage:6.5 2-stage, stage I: 5.5 2-stage, Stage II: 5.5	1-stage:6.5 2-stage, stage I: 5.5 2-stage, Stage II: 5.5	1-stage:6.5* 2-stage, stage I: 5.5* 2-stage, Stage II: 5.5*
Left turn from minor	1-stage:7.1 2-stage, stage I: 6.1 2-stage, Stage II: 6.1	1-stage:7.5 2-stage, stage I: 6.5 2-stage, Stage II: 6.5	1-stage:6.4 2-stage, stage I: 7.3 2-stage, Stage II: 6.7

*Use caution; values estimated

Base Follow-up Headways for TWSC Intersections

VEHICLE MOVEMENT	BASE FOLLOW-UP HEADWAY		
	Two Lanes	Four Lanes	Six Lanes
Left turn from major	2.2	2.2	3.1
U-turn from major	N/A	2.5 (wide) 3.1 (narrow)	2.3
Right turn from minor	3.3	3.3	3.9
Through traffic on major	4.0	4.0	4.0
Left turn from minor	3.5	3.5	3.8

Level Of Service Criteria – LOS for a TWSC intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turn. LOS is not defined for the intersection as a whole or for major-street approaches. LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

Automobile Mode – The methodology applies to TWSC intersections with up to three lanes (either shared or exclusive) on the major-street approaches and up to three lanes on the minor-street

approaches (with no more than one exclusive lane for each movement on the minor-street approach). Effects from other intersections are accounted for only in situations in which a TWSC intersection is located on an urban street segment between coordinated signalized intersections. In this situation, the intersection can be analyzed by using the procedures in urban street segment.

Level-of Service Criteria for Automobile Mode

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO	
	1.0	>1.0
0- 10	A	F
>10 to 15	B	F
>15 to 25	C	F
>25 to 35	D	F
>35 to 50	E	F
>50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

All-Way STOP-Controlled Intersections

AWSC intersections require every vehicle to stop at the intersection before proceeding. Because each driver must stop, the decision to proceed into the intersection is a function of traffic conditions on the other approaches. If no traffic is present on the other approaches, a driver can proceed immediately after stopping. If there is traffic on one or more of the other approaches, a driver proceeds only after determining that no vehicles are currently in the intersection and that it is the driver's turn to proceed.

Level Of Service Criteria – For the assessment of LOS at the approach and intersection levels, LOS is based solely on control delay. LOS F is assigned if volume-to-capacity ratio of a lane exceeds 1.0, regardless of the control delay.

Level-of Service Criteria for Automobile Mode

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO*	
	$v/c \leq 1.0$	$v/c > 1.0$
0- 10	A	0- 10
>10 to 15	B	>10 to 15
>15 to 25	C	>15 to 25
>25 to 35	D	>25 to 35
>35 to 50	E	>35 to 50
>50	F	>50

Note: * For approaches and intersection wide assessment, LOS is defined solely by control delay.

Automobile Mode – Methodologies in this chapter apply to isolated AWSC intersection with up to three lanes on each approach. They do not account for intersection effects with other intersections. The methodologies do not apply to AWSC intersections with more than four approaches. In addition, the effect of conflicting pedestrians on automobiles is not considered in this procedure.

Pedestrian and Bicycle Modes – The current methodologies for analyzing LOS and delay at AWSC intersections do not extend to pedestrians and bicycles.

Roundabouts – Roundabouts are intersections with a generally circular shape, characterized by yield on entry and circulation around a central island. The analysis boundaries are the roundabout itself, including associated pedestrian crosswalks. The methodology does not account for the effects of adjacent traffic control devices such as nearby traffic signals or signalized pedestrian crossing.

Level of Service Criteria – Assessment of LOS for automobiles in roundabouts at the approach and intersection levels is based solely on control delay. LOS F is assigned if the volume-to-capacity ratio of a lane exceeds 1.0 regardless of the control delay.

Imitation of the Methodology – The methodology applies to isolated roundabouts with up to two entry lanes and up to one bypass lane per approach.

Level-of Service Criteria for Automobile Mode

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO*	
	$v/c \leq 1.0$	$v/c > 1.0$
0- 10	A	0- 10
>10 to 15	B	>10 to 15
>15 to 25	C	>15 to 25
>25 to 35	D	>25 to 35
>35 to 50	E	>35 to 50
>50	F	>50

Note: For approaches and intersection wide assessment, LOS is defined solely by control delay.

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CAPACITY ANALYSIS WORKSHEETS

CAPACITY ANALYSIS WORKSHEETS

Existing Conditions













Lanes, Volumes, Timings
1: LAFAYETTE STREET & U.S. ROUTE 1

MIXED-USE DEVELOPMENT, STAMFORD, CT
2021 EXISTING CONDITIONS, WEEKDAY AM PEAK HOUR

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	450	1	3	805	0	18	0	19	222	3	51
Future Volume (vph)	0	450	1	3	805	0	18	0	19	222	3	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98		0.99	0.98	
Frt								0.931			0.857	
Flt Protected								0.976		0.950		
Satd. Flow (prot)	0	3303	0	0	3303	0	0	1837	0	1770	1510	0
Flt Permitted					0.954			0.874		0.730		
Satd. Flow (perm)	0	3303	0	0	3151	0	0	1637	0	1352	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								28			57	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	10		4	4		10	6		2	2		6
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	506	1	3	904	0	20	0	21	249	3	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	507	0	0	907	0	0	41	0	249	60	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		82.0		82.0	82.0		38.0	38.0		38.0	38.0	
Total Split (%)		68.3%		68.3%	68.3%		31.7%	31.7%		31.7%	31.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)		82.5			82.5			26.3		26.3	26.3	

Lanes, Volumes, Timings
1: LAFAYETTE STREET & U.S. ROUTE 1

MIXED-USE DEVELOPMENT, STAMFORD, CT
2021 EXISTING CONDITIONS, WEEKDAY AM PEAK HOUR

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.69			0.69			0.22		0.22	0.22	
v/c Ratio		0.22			0.42			0.11		0.84	0.16	
Control Delay		8.0			9.5			16.5		68.0	10.0	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		8.0			9.5			16.5		68.0	10.0	
LOS		A			A			B		E	A	
Approach Delay		8.0			9.5			16.5			56.7	
Approach LOS		A			A			B			E	
Queue Length 50th (ft)		69			147			8		186	2	
Queue Length 95th (ft)		116			274			34		255	33	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2284			2179			476		376	461	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.22			0.42			0.09		0.66	0.13	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 27 (23%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 40

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 17.5

Intersection LOS: B










Intersection Capacity Utilization 52.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	713	0	8	795	11	57
Future Volume (vph)	713	0	8	795	11	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor					1.00	
Frt					0.886	
Flt Protected					0.992	
Satd. Flow (prot)	3421	0	0	3421	1746	0
Flt Permitted				0.948	0.992	
Satd. Flow (perm)	3421	0	0	3243	1741	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					59	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)					11	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	743	0	8	828	11	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	743	0	0	836	70	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effect Green (s)	105.3			105.3	7.5	

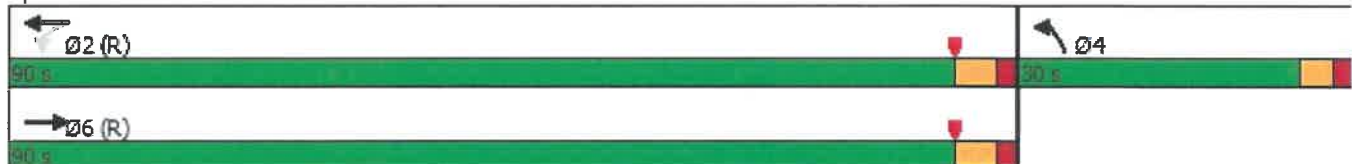
	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.88			0.88	0.06	
v/c Ratio	0.25			0.29	0.43	
Control Delay	1.2			2.0	25.7	
Queue Delay	0.0			0.0	0.0	
Total Delay	1.2			2.0	25.7	
LOS	A			A	C	
Approach Delay	1.2			2.0	25.7	
Approach LOS	A			A	C	
Queue Length 50th (ft)	25			48	8	
Queue Length 95th (ft)	37			74	55	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	3000			2844	410	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.25			0.29	0.17	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 31 (26%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.43
 Intersection Signal Delay: 2.6
 Intersection Capacity Utilization 42.4%
 Analysis Period (min) 15






Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection


















Intersection Delay, s/veh 7.5
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	0	0	6	3	18	29	0	0	0	7
Future Vol, veh/h	5	0	0	0	6	3	18	29	0	0	0	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	0	7	3	21	34	0	0	0	8
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	7.3			6.9			7.7			6.6		
HCM LOS	A			A			A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	67%	0%
Vol Right, %	0%	0%	0%	33%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	29	5	9	7
LT Vol	18	0	5	0	0
Through Vol	0	29	0	6	0
RT Vol	0	0	0	3	7
Lane Flow Rate	21	34	6	10	8
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.029	0.043	0.007	0.011	0.008
Departure Headway (Hd)	5.066	4.565	4.249	3.845	3.501
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	710	788	838	925	1021
Service Time	2.774	2.274	2.296	1.892	1.528
HCM Lane V/C Ratio	0.03	0.043	0.007	0.011	0.008
HCM Control Delay	7.9	7.5	7.3	6.9	6.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0	0













Lanes, Volumes, Timings
1: LAFAYETTE STREET & U.S. ROUTE 1

MIXED-USE DEVELOPMENT, STAMFORD, CT
2021 EXISTING CONDITIONS, WEEKDAY PM PEAK HOUR

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	724	10	3	607	0	39	0	40	172	2	31
Future Volume (vph)	0	724	10	3	607	0	39	0	40	172	2	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	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		0.99	0.97	
Frt		0.998						0.931			0.860	
Flt Protected								0.976		0.950		
Satd. Flow (prot)	0	3294	0	0	1739	0	0	1839	0	1770	1506	0
Flt Permitted					0.996			0.839		0.672		
Satd. Flow (perm)	0	3294	0	0	1732	0	0	1568	0	1240	1506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						40			42	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	18		12	12		18	10		7	7		10
Confl. Bikes (#/hr)												
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	992	14	4	832	0	53	0	55	236	3	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1006	0	0	836	0	0	108	0	236	45	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		88.0		88.0	88.0		32.0	32.0		32.0	32.0	
Total Split (%)		73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effect Green (s)		82.3			82.3			26.5		26.5	26.5	

Lanes, Volumes, Timings
1: LAFAYETTE STREET & U.S. ROUTE 1

MIXED-USE DEVELOPMENT, STAMFORD, CT
2021 EXISTING CONDITIONS, WEEKDAY PM PEAK HOUR

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.69			0.69			0.22		0.22	0.22	
v/c Ratio		0.44			0.70			0.29		0.86	0.12	
Control Delay		9.6			20.8			25.8		73.7	12.5	
Queue Delay		0.0			0.6			0.0		0.0	0.0	
Total Delay		9.6			21.4			25.8		73.7	12.5	
LOS		A			C			C		E	B	
Approach Delay		9.6			21.4			25.8			63.9	
Approach LOS		A			C			C			E	
Queue Length 50th (ft)		181			408			42		172	2	
Queue Length 95th (ft)		154			403			70		212	22	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2302			1210			401		293	388	
Starvation Cap Reductn		0			123			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.44			0.77			0.27		0.81	0.12	













Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 21.7
Intersection Capacity Utilization 60.0%
Analysis Period (min) 15

Intersection LOS: C
ICU Level of Service B

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 	 	
Traffic Volume (vph)	952	3	6	640	2	137
Future Volume (vph)	952	3	6	640	2	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00			1.00	1.00	
Frt					0.867	
Flt Protected					0.999	
Satd. Flow (prot)	3421	0	0	3421	1721	0
Flt Permitted				0.944	0.999	
Satd. Flow (perm)	3421	0	0	3230	1721	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				139	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)		2	2		3	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1094	3	7	736	2	157
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1097	0	0	743	159	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effect Green (s)	100.7			100.7	8.5	

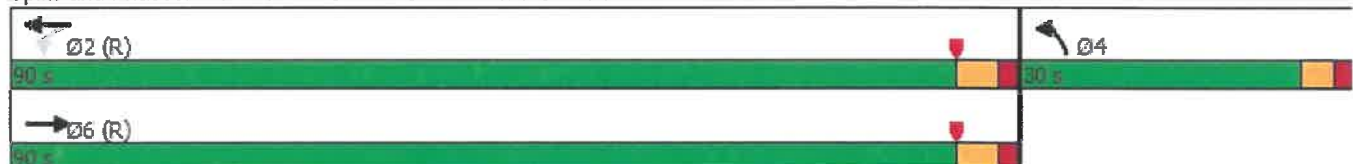
	→	↘	↙	←	↘	↙
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.84			0.84	0.07	
v/c Ratio	0.38			0.27	0.64	
Control Delay	2.5			2.4	23.9	
Queue Delay	0.1			0.0	0.0	
Total Delay	2.6			2.4	23.9	
LOS	A			A	C	
Approach Delay	2.6			2.4	23.9	
Approach LOS	A			A	C	
Queue Length 50th (ft)	50			41	15	
Queue Length 95th (ft)	127			74	74	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	2871			2710	468	
Starvation Cap Reductn	594			0	0	
Spillback Cap Reductn	0			150	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.48			0.29	0.34	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 95 (79%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 4.2
 Intersection Capacity Utilization 44.0%
 Analysis Period (min) 15






Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection


















Intersection Delay, s/veh 7.9
Intersection LOS A













Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	0	0	12	9	64	60	0	0	0	15
Future Vol, veh/h	10	0	0	0	12	9	64	60	0	0	0	15
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	0	0	15	11	80	75	0	0	0	19
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB				WB			NB			SB	
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				1			1			2	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				2			1			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	2				1			1			1	
HCM Control Delay	7.7				7.2			8.2			6.8	
HCM LOS	A				A			A			A	

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	57%	0%
Vol Right, %	0%	0%	0%	43%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	64	60	10	21	15
LT Vol	64	0	10	0	0
Through Vol	0	60	0	12	0
RT Vol	0	0	0	9	15
Lane Flow Rate	80	75	12	26	19
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.114	0.096	0.016	0.03	0.019
Departure Headway (Hd)	5.111	4.61	4.581	4.11	3.611
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	702	778	786	876	976
Service Time	2.836	2.335	2.582	2.111	1.691
HCM Lane V/C Ratio	0.114	0.096	0.015	0.03	0.019
HCM Control Delay	8.5	7.8	7.7	7.2	6.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0	0.1	0.1

CAPACITY ANALYSIS WORKSHEETS

No-Build Conditions

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	458	1	3	819	0	18	0	20	226	3	52
Future Volume (vph)	0	458	1	3	819	0	18	0	20	226	3	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98		0.99	0.98	
Fr _t								0.929			0.857	
Fl _t Protected								0.977		0.950		
Satd. Flow (prot)	0	3303	0	0	3303	0	0	1835	0	1770	1510	0
Fl _t Permitted					0.954			0.877		0.730		
Satd. Flow (perm)	0	3303	0	0	3151	0	0	1639	0	1352	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								28			58	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	10		4	4		10	6		2	2		6
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	515	1	3	920	0	20	0	22	254	3	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	516	0	0	923	0	0	42	0	254	61	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		82.0		82.0	82.0		38.0	38.0		38.0	38.0	
Total Split (%)		68.3%		68.3%	68.3%		31.7%	31.7%		31.7%	31.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)		82.0			82.0			26.8		26.8	26.8	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.68			0.68			0.22		0.22	0.22	
v/c Ratio		0.23			0.43			0.11		0.84	0.16	
Control Delay		8.2			9.9			16.7		67.7	9.9	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		8.2			9.9			16.7		67.7	9.9	
LOS		A			A			B		E	A	
Approach Delay		8.2			9.9			16.7			56.5	
Approach LOS		A			A			B			E	
Queue Length 50th (ft)		72			154			9		189	2	
Queue Length 95th (ft)		120			288			34		260	33	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2274			2169			477		377	463	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.23			0.43			0.09		0.67	0.13	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 27 (23%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 17.8

Intersection LOS: B










Intersection Capacity Utilization 53.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	726	0	8	809	11	58
Future Volume (vph)	726	0	8	809	11	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor					1.00	
Frt					0.886	
Flt Protected					0.992	
Satd. Flow (prot)	3421	0	0	3421	1746	0
Flt Permitted				0.948	0.992	
Satd. Flow (perm)	3421	0	0	3243	1741	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)					11	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	756	0	8	843	11	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	756	0	0	851	71	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effect Green (s)	105.3			105.3	7.5	

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.88			0.88	0.06	
v/c Ratio	0.25			0.30	0.43	
Control Delay	1.2			2.0	25.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	1.2			2.0	25.5	
LOS	A			A	C	
Approach Delay	1.2			2.0	25.5	
Approach LOS	A			A	C	
Queue Length 50th (ft)	25			50	8	
Queue Length 95th (ft)	37			76	55	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	3000			2844	411	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.25			0.30	0.17	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 31 (26%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.43
 Intersection Signal Delay: 2.6
 Intersection Capacity Utilization 42.8%
 Analysis Period (min) 15






Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1
































Intersection

Intersection Delay, s/veh 7.5
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	0	0	6	3	18	30	0	0	0	7
Future Vol, veh/h	5	0	0	0	6	3	18	30	0	0	0	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	0	7	3	21	35	0	0	0	8
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB				WB			NB			SB	
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				1			1			2	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				2			1			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	2				1			1			1	
HCM Control Delay	7.3				6.9			7.7			6.6	
HCM LOS	A				A			A			A	

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	67%	0%
Vol Right, %	0%	0%	0%	33%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	30	5	9	7
LT Vol	18	0	5	0	0
Through Vol	0	30	0	6	0
RT Vol	0	0	0	3	7
Lane Flow Rate	21	35	6	10	8
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.029	0.044	0.007	0.011	0.008
Departure Headway (Hd)	5.066	4.565	4.251	3.847	3.502
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	710	788	838	925	1021
Service Time	2.774	2.274	2.298	1.894	1.528
HCM Lane V/C Ratio	0.03	0.044	0.007	0.011	0.008
HCM Control Delay	7.9	7.5	7.3	6.9	6.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0	0

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	737	10	3	618	0	40	0	41	175	2	32
Future Volume (vph)	0	737	10	3	618	0	40	0	41	175	2	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	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		0.99	0.97	
Frt		0.998						0.932			0.860	
Flt Protected								0.976		0.950		
Satd. Flow (prot)	0	3294	0	0	1739	0	0	1841	0	1770	1506	0
Flt Permitted					0.996			0.836		0.669		
Satd. Flow (perm)	0	3294	0	0	1732	0	0	1564	0	1234	1506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						39			44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	18		12	12		18	10		7	7		10
Confl. Bikes (#/hr)												
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1010	14	4	847	0	55	0	56	240	3	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1024	0	0	851	0	0	111	0	240	47	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		88.0		88.0	88.0		32.0	32.0		32.0	32.0	
Total Split (%)		73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)		81.8			81.8			27.0		27.0	27.0	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.68			0.68			0.22		0.22	0.22	
v/c Ratio		0.46			0.72			0.29		0.86	0.13	
Control Delay		10.0			23.1			26.1		73.0	12.3	
Queue Delay		0.0			1.0			0.0		0.0	0.0	
Total Delay		10.0			24.1			26.1		73.0	12.3	
LOS		A			C			C		E	B	
Approach Delay		10.0			24.1			26.1			63.1	
Approach LOS		A			C			C			E	
Queue Length 50th (ft)		190			455			44		174	2	
Queue Length 95th (ft)		157			455			73		#217	22	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2294			1206			403		295	393	
Starvation Cap Reductn		0			150			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.45			0.81			0.28		0.81	0.12	













Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 79 (66%), Referenced to phase 2:EBWB, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 22.8
 Intersection Capacity Utilization 60.7%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 	 	
Traffic Volume (vph)	969	3	6	652	2	139
Future Volume (vph)	969	3	6	652	2	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00			1.00	1.00	
Frt					0.867	
Flt Protected					0.999	
Satd. Flow (prot)	3421	0	0	3421	1721	0
Flt Permitted				0.944	0.999	
Satd. Flow (perm)	3421	0	0	3230	1721	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				133	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)		2	2		3	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1114	3	7	749	2	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1117	0	0	756	162	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effect Green (s)	100.4			100.4	8.8	

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.84			0.84	0.07	
v/c Ratio	0.39			0.28	0.65	
Control Delay	2.6			2.5	26.3	
Queue Delay	0.1			0.0	0.0	
Total Delay	2.7			2.5	26.3	
LOS	A			A	C	
Approach Delay	2.7			2.5	26.3	
Approach LOS	A			A	C	
Queue Length 50th (ft)	51			42	22	
Queue Length 95th (ft)	131			79	81	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	2862			2702	463	
Starvation Cap Reductn	587			0	0	
Spillback Cap Reductn	0			204	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.49			0.30	0.35	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 95 (79%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 4.5
 Intersection Capacity Utilization 44.6%
 Analysis Period (min) 15






Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection

Intersection Delay, s/veh 7.9
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	0	0	12	9	65	62	0	0	0	15
Future Vol, veh/h	10	0	0	0	12	9	65	62	0	0	0	15
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	0	0	15	11	81	78	0	0	0	19
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	7.7			7.2			8.2			6.8		
HCM LOS	A			A			A			A		


















Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	57%	0%
Vol Right, %	0%	0%	0%	43%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	62	10	21	15
LT Vol	65	0	10	0	0
Through Vol	0	62	0	12	0
RT Vol	0	0	0	9	15
Lane Flow Rate	81	78	12	26	19
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.115	0.099	0.016	0.03	0.019
Departure Headway (Hd)	5.111	4.61	4.588	4.117	3.614
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	702	778	785	875	975
Service Time	2.836	2.335	2.589	2.118	1.694
HCM Lane V/C Ratio	0.115	0.1	0.015	0.03	0.019
HCM Control Delay	8.5	7.8	7.7	7.2	6.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0	0.1	0.1

CAPACITY ANALYSIS WORKSHEETS

Build Conditions













Lanes, Volumes, Timings
1: LAFAYETTE STREET & U.S. ROUTE 1

MIXED-USE DEVELOPMENT, STAMFORD, CT
2024 BUILD CONDITIONS, WEEKDAY AM PEAK HOUR

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	463	1	3	819	0	42	0	38	228	3	52
Future Volume (vph)	0	463	1	3	819	0	42	0	38	228	3	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98		1.00	0.98	
Frt								0.935			0.857	
Flt Protected								0.975		0.950		
Satd. Flow (prot)	0	3303	0	0	3303	0	0	1845	0	1770	1510	0
Flt Permitted					0.954			0.831		0.701		
Satd. Flow (perm)	0	3303	0	0	3151	0	0	1564	0	1299	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								38			58	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	10		4	4		10	6		2	2		6
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	520	1	3	920	0	47	0	43	256	3	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	521	0	0	923	0	0	90	0	256	61	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		82.0		82.0	82.0		38.0	38.0		38.0	38.0	
Total Split (%)		68.3%		68.3%	68.3%		31.7%	31.7%		31.7%	31.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effect Green (s)		80.9			80.9			27.9		27.9	27.9	

Lanes, Volumes, Timings
1: LAFAYETTE STREET & U.S. ROUTE 1

MIXED-USE DEVELOPMENT, STAMFORD, CT
2024 BUILD CONDITIONS, WEEKDAY AM PEAK HOUR

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.67			0.67			0.23		0.23	0.23	
v/c Ratio		0.23			0.43			0.23		0.85	0.15	
Control Delay		8.7			10.8			21.8		67.7	9.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		8.7			10.8			21.8		67.7	9.5	
LOS		A			B			C		E	A	
Approach Delay		8.7			10.8			21.8			56.5	
Approach LOS		A			B			C			E	
Queue Length 50th (ft)		75			160			32		190	2	
Queue Length 95th (ft)		125			305			68		261	33	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2252			2148			468		366	467	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.23			0.43			0.19		0.70	0.13	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 27 (23%), Referenced to phase 2:EBWB, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 18.6
 Intersection Capacity Utilization 53.4%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	
Traffic Volume (vph)	742	9	14	809	11	58
Future Volume (vph)	742	9	14	809	11	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor					1.00	
Frt	0.998				0.886	
Flt Protected				0.999	0.992	
Satd. Flow (prot)	3414	0	0	3418	1746	0
Flt Permitted				0.936	0.992	
Satd. Flow (perm)	3414	0	0	3202	1741	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)					11	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	773	9	15	843	11	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	782	0	0	858	71	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effect Green (s)	105.3			105.3	7.5	

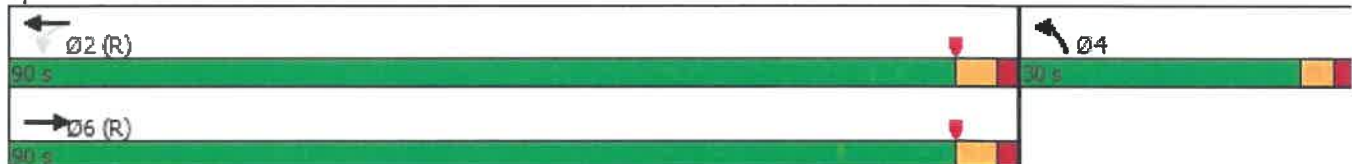
	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.88			0.88	0.06	
v/c Ratio	0.26			0.31	0.43	
Control Delay	1.2			2.0	25.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	1.2			2.0	25.5	
LOS	A			A	C	
Approach Delay	1.2			2.0	25.5	
Approach LOS	A			A	C	
Queue Length 50th (ft)	26			50	8	
Queue Length 95th (ft)	38			77	55	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	2994			2809	411	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.26			0.31	0.17	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 31 (26%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.43
 Intersection Signal Delay: 2.6
 Intersection Capacity Utilization 47.1%
 Analysis Period (min) 15






Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection

Intersection Delay, s/veh 7.2
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	0	0	6	43	18	32	0	0	0	7
Future Vol, veh/h	5	0	0	0	6	43	18	32	0	0	0	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	0	7	50	21	37	0	0	0	8
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB				WB			NB			SB	
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				1			1			2	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				2			1			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	2				1			1			1	
HCM Control Delay	7.4				6.8			7.7			6.7	
HCM LOS	A				A			A			A	

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	12%	0%
Vol Right, %	0%	0%	0%	88%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	32	5	49	7
LT Vol	18	0	5	0	0
Through Vol	0	32	0	6	0
RT Vol	0	0	0	43	7
Lane Flow Rate	21	37	6	57	8
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.03	0.048	0.007	0.056	0.008
Departure Headway (Hd)	5.149	4.648	4.291	3.524	3.587
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	698	772	828	1007	994
Service Time	2.863	2.363	2.346	1.576	1.622
HCM Lane V/C Ratio	0.03	0.048	0.007	0.057	0.008
HCM Control Delay	8	7.6	7.4	6.8	6.7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0	0.2	0

Intersection

Int Delay, s/veh 5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↶			↷
Traffic Vol, veh/h	0	0	9	15	0	40
Future Vol, veh/h	0	0	9	15	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	10	16	0	43


















Major/Minor	Major2	Minor2
Conflicting Flow All	-	0
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	-
Pot Cap-1 Maneuver	-	0
Stage 1	-	0
Stage 2	-	0
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	WB	SB
HCM Control Delay, s	0	8.5
HCM LOS		A

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	1061
HCM Lane V/C Ratio	-	-	0.041
HCM Control Delay (s)	-	-	8.5
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1













Lanes, Volumes, Timings
1: LAFAYETTE STREET & U.S. ROUTE 1

MIXED-USE DEVELOPMENT, STAMFORD, CT
2024 BUILD CONDITIONS, WEEKDAY PM PEAK HOUR

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	751	10	3	618	0	58	0	57	181	2	32
Future Volume (vph)	0	751	10	3	618	0	58	0	57	181	2	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	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		0.99	0.97	
Frt		0.998						0.933			0.860	
Fit Protected								0.975		0.950		
Satd. Flow (prot)	0	3294	0	0	1739	0	0	1841	0	1770	1506	0
Fit Permitted					0.996			0.825		0.629		
Satd. Flow (perm)	0	3294	0	0	1732	0	0	1545	0	1162	1506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						38			44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	18		12	12		18	10		7	7		10
Confl. Bikes (#/hr)												
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1029	14	4	847	0	79	0	78	248	3	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1043	0	0	851	0	0	157	0	248	47	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		88.0		88.0	88.0		32.0	32.0		32.0	32.0	
Total Split (%)		73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)		77.5			77.5			31.3		31.3	31.3	

Lanes, Volumes, Timings
1: LAFAYETTE STREET & U.S. ROUTE 1

MIXED-USE DEVELOPMENT, STAMFORD, CT
2024 BUILD CONDITIONS, WEEKDAY PM PEAK HOUR

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.65			0.65			0.26		0.26	0.26	
v/c Ratio		0.49			0.76			0.37		0.82	0.11	
Control Delay		12.1			27.0			30.0		64.0	11.9	
Queue Delay		0.0			2.4			0.0		0.0	0.0	
Total Delay		12.1			29.4			30.0		64.0	11.9	
LOS		B			C			C		E	B	
Approach Delay		12.1			29.4			30.0			55.7	
Approach LOS		B			C			C			E	
Queue Length 50th (ft)		220			571			72		175	2	
Queue Length 95th (ft)		162			474			108		#249	22	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2248			1182			430		302	424	
Starvation Cap Reductn		0			207			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.46			0.87			0.37		0.82	0.11	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 79 (66%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 25.0

Intersection LOS: C

Intersection Capacity Utilization 60.9%

ICU Level of Service B










Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	981	27	22	652	2	139
Future Volume (vph)	981	27	22	652	2	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00			1.00	1.00	
Frt	0.996				0.867	
Flt Protected				0.998	0.999	
Satd. Flow (prot)	3405	0	0	3414	1721	0
Flt Permitted				0.883	0.999	
Satd. Flow (perm)	3405	0	0	3021	1721	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	5				130	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)		2	2		3	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1128	31	25	749	2	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1159	0	0	774	162	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	100.3			100.3	8.9	

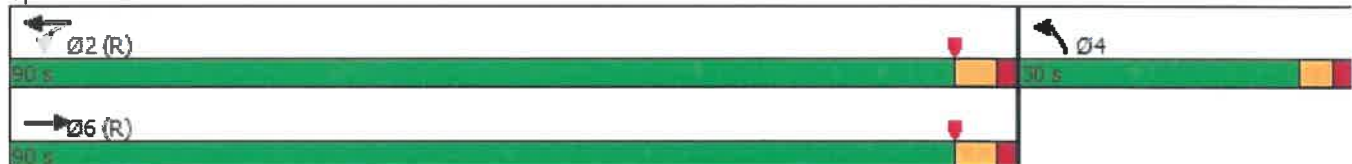
	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.84			0.84	0.07	
v/c Ratio	0.41			0.31	0.66	
Control Delay	3.2			2.7	27.1	
Queue Delay	0.1			0.0	0.0	
Total Delay	3.3			2.7	27.1	
LOS	A			A	C	
Approach Delay	3.3			2.7	27.1	
Approach LOS	A			A	C	
Queue Length 50th (ft)	52			45	24	
Queue Length 95th (ft)	129			85	84	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	2847			2525	461	
Starvation Cap Reductn	605			0	0	
Spillback Cap Reductn	0			293	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.52			0.35	0.35	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 95 (79%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 4.9
 Intersection Capacity Utilization 51.7%
 Analysis Period (min) 15






Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection

Intersection Delay, s/veh 7.9
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	0	0	12	39	65	66	0	0	0	15
Future Vol, veh/h	10	0	0	0	12	39	65	66	0	0	0	15
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	0	0	15	49	81	83	0	0	0	19
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB				WB			NB			SB	
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				1			1			2	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				2			1			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	2				1			1			1	
HCM Control Delay	7.7				7.2			8.3			6.9	
HCM LOS	A				A			A			A	

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	24%	0%
Vol Right, %	0%	0%	0%	76%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	66	10	51	15
LT Vol	65	0	10	0	0
Through Vol	0	66	0	12	0
RT Vol	0	0	0	39	15
Lane Flow Rate	81	82	12	64	19
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.117	0.107	0.016	0.07	0.019
Departure Headway (Hd)	5.178	4.678	4.641	3.932	3.686
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	691	765	775	917	952
Service Time	2.915	2.414	2.644	1.932	1.783
HCM Lane V/C Ratio	0.117	0.107	0.015	0.07	0.02
HCM Control Delay	8.6	8	7.7	7.2	6.9
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.4	0	0.2	0.1

Intersection

Int Delay, s/veh 2.8

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations			↶			↷
Traffic Vol, veh/h	0	0	21	40	0	30
Future Vol, veh/h	0	0	21	40	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	23	43	0	33

Major/Minor Major2 Minor2

Conflicting Flow All	-	0	-	45
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	1025
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Platoon blocked, %	-	-		
Mov Cap-1 Maneuver	-	-	-	1025
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach WB SB

HCM Control Delay, s	0	8.6
HCM LOS		A

Minor Lane/Major Mvmt WBT WBR SBLn1

Capacity (veh/h)	-	-	1025
HCM Lane V/C Ratio	-	-	0.032
HCM Control Delay (s)	-	-	8.6
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1