

June 26, 2020
Revised September 16, 2020
Revised January 7, 2021

Borough of Tinton Falls
Planning Board
556 Tinton Avenue
Tinton Falls, NJ 07724

**Re: Traffic Evaluation
1251 Jumping Brook Road
Proposed Delivery Station
Borough of Tinton Falls, Monmouth County, NJ
Langan Project No.: 100775501**

Dear Board Members:

Langan Engineering & Environmental Services has prepared this traffic statement for the proposed redevelopment of the Twin Brooks Golf Center in the Borough of Tinton Falls, Monmouth County, New Jersey. The applicant proposes to redevelop the golf center into a delivery station. Specifically, we performed the following major tasks:

- reviewed the redevelopment proposal,
- reviewed the projected operations and associated site trip generation,
- assesses traffic impact, and
- reviewed the site plan for access and circulation adequacy.

We expect area traffic operations will not significantly change because of the proposed delivery station, particularly during commuting periods. Moreover, the site design is consistent with current standards and provides adequate access and circulation.

REDEVELOPMENT PROPOSAL

The Twin Brooks Golf Center is located on the west side of Jumping Brook Road between Essex Road and Green Grove Road. The golf center includes a clubhouse and a variety of golf-related activities. Two formal driveways and a dirt maintenance driveway provide site access along Jumping Brook Road. Figure 1 (attached) shows the site location.

The applicant proposes to redevelop the site and construct an approximate 113,016 square foot delivery station. The delivery station will operate seven days a week and will use delivery vans and cars to deliver packages to end customers. "Last mile" is the common description of that last leg of the delivery process. Site changes to accommodate the delivery station include the construction of vehicle staging and loading spaces, vehicle parking spaces and site driveways.

The applicant proposes to close the existing driveways and construct three new driveways along Jumping Brook Road. The proposed site driveways will be full-access and stop controlled. Delivery vans will use the north driveway (Driveway 1). Delivery vans, delivery cars, employee vehicles, and tractor-trailers will use the center driveway (Driveway 2). Delivery vans and employee vehicles will use the south driveway (Driveway 3).

EXISTING CONDITIONS

Study Intersections

Jumping Brook Road is an undivided road that provides one lane and a shoulder for each travel direction near the site. The Jumping Brook Road corridor will accommodate all site-generated traffic. Accordingly, we focused this traffic evaluation on the following intersections:

- NJ Route 66 and Jumping Brook Road,
- Asbury Avenue (County Route 16) and Green Grove Road,
- Jumping Brook Road and Essex Road,
- Jumping Brook Road and Walmart North Driveway / Site Driveway 1,
- Jumping Brook Road and Site Driveway 2, and
- Jumping Brook Road and Site Driveway 3.

Aerial images of each existing intersection are part of the attached analysis printouts along with the traffic signal timing for the NJ Route 66 and Jumping Brook Road intersection. We used field timings for the Jumping Brook Road and Asbury Avenue intersection analysis.

Existing Traffic Volumes

Langan arranged for traffic counts conducted at the Jumping Brook Road intersections with NJ Route 66 and Asbury Avenue on Tuesday, September 17, 2019, from 6:00 AM to 6:00 PM. Additionally, we had an automatic traffic recorder (ATR) installed along Jumping Brook Road in front of the site to continuously record hourly traffic volumes. The ATR recorded hourly traffic volumes from Monday, September 16, 2019 to Monday, September 23, 2019. We also obtained traffic counts collected at the intersection of Jumping Brook Road and Essex Road on Tuesday, July 16, 2019 by another consultant.

Based on the traffic counts, the common weekday morning network peak hour occurred from 7:45 AM to 8:45 AM and the common weekday evening network peak hour occurred from 4:30 PM to 5:30 PM. We also identified traffic volumes for the weekday delivery station peak hour of 10:00 AM to 11:00 AM.

We compared the July traffic counts to the September traffic counts and found the July counts were slightly higher. Accordingly, we increased the September counts by 8% to account for summer peak conditions and to derive the existing peak hour traffic volumes. We also estimated traffic volumes at Walmart's north driveway intersection with Jumping Brook Road since we do not have traffic counts at that intersection.

Attached are the traffic counts and a figure that shows the existing peak hour traffic volumes.

Accident Analysis

We obtained copies of New Jersey Police Crash Investigation Reports from the Tinton Falls and Neptune Township police departments for the adjacent roadway and intersections for the years 2017 through August 2020. Table 1 summarizes the number of accidents per year at each study intersection and site driveway.

Table 1 – Accident Reports By Year

Intersection	2017	2018	2019	2020
NJ Route 66 and Jumping Brook Road	5	17	21	12
Jumping Brook Road and Essex Road	0	1	5	0
Jumping Brook Road and Golf Center Driveways	0	1	1	0
Jumping Brook Road and North Walmart Driveway	0	0	1	1
Asbury Avenue (CR 16) and Green Grove Road	6	0	1	1

The accident history at each intersection is consistent with our expectations for these types of intersections. The majority of accidents at the NJ Route 66 and Jumping Brook Road intersection consisted of rear-end accidents, which are inherent to intersections controlled by a traffic signal.

Attached is a figure summarizing the accident data for the study area.

TRIP GENERATION

We expect the delivery station will have the attached tenant-provided trip projections. The delivery station's finite operating capacity dictates those trip projections. The operating capacity is primarily a function of the sorting equipment inside the building and the vehicle loading spaces.

The delivery station will use the following approximate core employee shifts:

- Shift 1 – 2:00 AM to 12:30 PM – 93 employees,
- Shift 2 – 6:00 AM to 2:30 PM – 28 employees,
- Shift 3 – 1:30 PM to 10:00 PM – 28 employees,
- Shift 4 – 2:00 PM to 6:00 PM – 23 employees, and
- Shift 5 – 12:00 PM to 10:30 PM – 5 employees

Outside the above core shifts, there will be a limited amount of employees inside the building doing small tasks such as equipment maintenance or janitorial services.

The tenant expects some of their employees will carpool, take area mass transit, or use other means (e.g. walking or biking) to commute to and from the delivery station. Bus service is within walking distance of the site. To be conservative, the attached trip projections assume all employees will commute using their own vehicle.

The delivery station will receive approximately 19 tractor-trailers each day. Approximately 15 tractor-trailers will arrive to and depart from the site between 6:00 PM and 7:30 AM and

approximately four tractor trailers will arrive to and depart from the site between 8:00 AM and 5:30 PM. Tractor-trailer arrivals and departures will be spread evenly over those timeframes and amount to approximately 1-2 tractor trailer trips in any single hour. Employees inside the building will empty the tractor-trailers and sort the packages into individual delivery routes. Delivery vehicle drivers will then transfer and load the sorted packages into delivery vehicles as described below.

From 9:00 AM to 11:30 AM, approximately 195 delivery van drivers will drive to the site in their personal vehicle. The delivery van drivers will park their personal vehicles, get into delivery vans and drive to the staging/loading area. The delivery van drivers will load their delivery vans with packages. Once the delivery van drivers are finished loading their delivery vans, they will exit the site and make their deliveries over the course of their workday. The delivery van drivers will start returning to the site at 7:00 PM at the end of their workday. They will then leave the site in their personal vehicles. Delivery Service Partner (DSP) is the descriptor for the delivery van drivers.

From 4:00 PM to 5:30 PM, approximately 54 drivers with their personal vehicles will enter the site, drive to the staging/loading area, load their vehicles with packages, and then exit the site to make their deliveries. The majority of these drivers will not return to the site. Flex is the descriptor for the personal vehicle delivery drivers.

Given the unique operation, the delivery station will generate little traffic during weekday peak commuting periods from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. Table 2 below shows the delivery station estimated trip generation for various hours of a typical day.

Table 2 - Trip Generation Estimates

Time Period	Trips
Weekday Morning Network Peak Hour (7:45 AM to 8:45 AM)	
Enter	0
<u>Exit</u>	<u>1</u>
Total	1
Weekday Morning Delivery Station Peak Hour (10:00 AM to 11:00 AM)	
Enter	95
<u>Exit</u>	<u>181</u>
Total	276
Weekday Evening Network Peak Hour (4:30 PM to 5:30 PM)	
Enter	1
<u>Exit</u>	<u>55</u>
Total	56
Weekday Evening Delivery Station Peak Hour (7:30 PM to 8:30 PM)	
Enter	125
<u>Exit</u>	<u>125</u>
Total	250

We have not taken credit for the golf center traffic generated during the traffic counts. Consequently, the net difference in site-generated traffic will be less than the trip generation estimates shown in Table 1.

TRIP DISTRIBUTION AND ASSIGNMENT

We used published journey-to-work census data to prepare trip distribution models for the delivery station traffic. We assigned site-generated traffic based on the likely routes motorists would use to travel to and from the site.

We anticipate trucks will be arriving from and departing to tenant-managed facilities located to the north and west of the proposed delivery station. We are aware of such facilities in Robbinsville, Cranbury, Carteret, Edison, and Staten Island. The likely routes trucks would use between the proposed delivery station and these area facilities would consist of the Garden State Parkway, NJ Route 66, NJ Route 34, and NJ Route 18 to the north of the NJ Route 34 intersection. Accordingly, we do not anticipate any trucks using the Asbury Avenue and Green Grove Road intersection.

Table 3 on shows the trip distribution for the delivery station.

Table 3 –Trip Distribution

Direction (To/From)	Arrival & Departure Distributions	
	Cars & Vans	Trucks
NJ Route 66 (West)	42%	100%
NJ Route 66 (East)	2%	-
Asbury Avenue (CR 16) (West)	32%	-
Asbury Avenue (CR 16) (East)	8%	-
Jumping Brook Road (South)	6%	-
Green Grove Road (North)	10%	-
Total	100%	100%

Attached are trip distribution and site-generated traffic volume figures.

FUTURE TRAFFIC VOLUMES

For analysis purposes, we assumed a 2021 build year. We increased the existing traffic volumes by an annual 2.5% growth rate to account for background traffic growth and derive the 2021 base traffic volumes. The New Jersey Department of Transportation has published that growth rate for Monmouth County. We then added traffic volumes for an adjacent development to develop the 2021 no-build traffic volumes. That adjacent development will be located on the northwest corner of the Jumping Brook Road and Essex Road intersection and is a shopping center consisting of 9,007 sf of retail space and a 2,250 sf restaurant with a drive-thru window. Finally, we added site-generated traffic to the 2021 no-build traffic volumes to derive the 2021 build traffic volumes. Attached are the traffic volume worksheets.

OPERATIONAL ANALYSIS

We conducted a capacity analysis of the study intersections using Synchro software. The Synchro software uses methodologies contained in the Highway Capacity Manual published by the Transportation Research Board. Level of Service (LOS) is the term used to denote the

operating condition of a road segment or intersection under prevailing conditions and reflects several factors such as number of travel lanes, traffic volume, speed, and motorist delay. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing poor operating conditions.

LOS designations are different for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection. For unsignalized intersections, the analysis considers the operation of all movements that conflict with other movements, such as main-line left turns and traffic exiting a side street.

The HCM defines LOS for signalized intersections as follows:

<u>LOS</u>	<u>Delay Range (sec/veh)</u>
A	<10 sec
B	≥10 and ≤20 sec
C	≥20 and ≤35 sec
D	≥35 and ≤55 sec
E	≥55 and ≤80 sec
F	>80 sec

The HCM defines LOS for unsignalized intersections as follows:

<u>LOS</u>	<u>Delay Range (sec/veh)</u>
A	<10 sec
B	≥10 and ≤15 sec
C	≥15 and ≤25 sec
D	≥25 and ≤35 sec
E	≥35 and ≤50 sec
F	>50 sec

Capacity Analysis

Attached are the capacity analysis printouts. Tables 4 through 6 on the following pages summarize the levels of service and delays, anticipated queues, and volume-capacity ratios for the weekday morning network peak hour, weekday morning delivery station peak hour and weekday evening network peak hour. We did not analyze the weekday evening delivery station peak hour (7:30 PM to 8:30 PM). The attached ATR data along Jumping Brook Road and NJ Route 66 indicate that traffic volumes in the study area from 7:30 PM to 8:30 PM are approximately 50 percent lower than the volumes during the weekday evening peak hour (4:30 PM to 5:30 PM) that we analyzed. Moreover, the traffic volumes in the study area from 7:30 PM to 8:30 PM are approximately 20 percent lower than the traffic volumes from 10:00 AM to 11:00 AM. Therefore, the delivery station will not significantly impact the study area during any hour including the weekday evening delivery station peak hour (7:30 PM to 8:30 PM).

As the tables show, the proposed delivery station will not significantly affect area traffic operations during peak hours. We note the Essex Road eastbound approach to the Jumping Brook Road intersection will operate with delay during the evening peak hour in the no-build condition and will continue to do so in the build condition. In the build condition, the 95th percentile queues for the Essex Road eastbound approach will increase by one vehicle or less during all peak hours compared to the no-build condition. We accounted for improvements proposed by others at the Jumping Brook Road and Essex Road intersection. We note that those intersection improvements will better-align turning vehicles at the intersection; however, those improvements will not result in better traffic operations.

Table 4 – Intersection Capacity Analysis Summary

Location	Movement		2021 No-Build Condition			2021 Build Condition		
			AM Net	AM Gen	PM Net	AM Net	AM Gen	PM Net
Signalized Intersections								
NJ Route 66 and Jumping Brook Road	EB	L	C (29.1)	B (10.6)	B (19.9)	C (29.2)	B (11.7)	B (19.9)
		T	C (26.1)	B (18.9)	D (36.4)	C (26.1)	B (19.3)	D (36.5)
		R	A (4.8)	A (3.5)	A (6.0)	A (4.8)	A (3.6)	A (6.0)
	WB	L	B (13.7)	A (9.2)	B (16.1)	B (13.7)	A (9.5)	B (16.1)
		T,R	D (40.4)	B (19.5)	E (68.4)	D (40.4)	B (20.9)	E (70.1)
	NB	L	C (29.6)	C (24.4)	C (33.1)	C (29.6)	C (24.1)	C (33.5)
		T	D (39.6)	D (43.1)	D (43.7)	D (39.6)	D (43.0)	D (43.6)
		R	A (5.2)	A (4.7)	A (2.8)	A (5.2)	A (4.6)	A (2.8)
	SB	L	C (23.0)	C (22.4)	C (22.0)	C (23.0)	C (22.3)	C (22.0)
		T	D (40.3)	D (40.7)	D (41.8)	D (40.3)	D (41.0)	D (42.0)
		R	B (11.3)	A (9.9)	D (49.5)	B (11.3)	A (9.8)	E (63.0)
	Overall		C (27.5)	B (19.8)	D (40.9)	C (27.5)	B (20.0)	D (43.6)
Asbury Avenue (CR 16) and Green Grove Road	EB	L	B (19.1)	B (10.5)	C (26.1)	B (19.1)	B (12.6)	C (26.1)
		T,R	D (51.2)	B (11.8)	C (30.1)	A (51.2)	B (15.2)	C (30.1)
	WB	L	D (48.6)	B (10.3)	F (95.6)	D (48.6)	B (15.3)	F (95.6)
		T,R	D (37.7)	B (11.6)	B (18.8)	D (37.7)	B (13.1)	B (18.8)
	NB	L	B (10.9)	B (10.9)	F (103.8)	B (10.9)	B (15.2)	F (138.5)
		T	B (17.6)	B (11.8)	B (17.7)	B (17.6)	B (14.2)	B (17.9)
		R	A (2.8)	A (4.2)	A (3.8)	A (2.8)	A (3.8)	A (3.9)
	SB	L	A (9.6)	B (10.3)	B (15.7)	A (9.6)	B (10.9)	B (15.9)
		T	A (10.2)	B (11.4)	C (25.9)	B (10.2)	B (13.0)	C (25.9)
		R	A (5.3)	A (4.3)	A (3.5)	A (5.3)	A (4.0)	A (3.5)
	Overall		C (30.6)	B (10.8)	C (28.7)	C (30.6)	B (13.0)	C (31.2)
Unsignalized Intersections								
Jumping Brook Road and Essex Road	EB	L,R	B (10.2)	A (9.9)	F (110.5)	B (10.2)	B (10.7)	F (129.7)
	NB	L	A (8.3)	A (8.1)	B (10.8)	A (8.3)	A (8.4)	B (11.0)
Jumping Brook Road and Walmart / Site Driveway 1	EB	L,T,R	-	-	-	C (21.8)	C (17.5)	D (34.8)
	WB	L,R	C (16.5)	B (11.7)	C (21.8)	-	-	-
		L,T,R	-	-	-	C (17.8)	B (13.7)	D (28.0)
	NB	L	-	-	-	A (7.9)	A (8.0)	A (9.3)
Jumping Brook Road and Site Driveway 2	SB	L	A (9.2)	A (8.0)	A (8.6)	A (9.2)	A (8.3)	A (8.7)
	EB	L,R	-	-	-	C (19.5)	B (11.6)	C (19.2)
Jumping Brook Road and Site Driveway 3	NB	L	-	-	-	A (9.3)	A (8.0)	B (12.2)
		R	-	-	-	C (19.5)	C (17.0)	D (31.5)
	EB	L	-	-	-	B (10.0)	B (10.6)	C (15.5)
		R	-	-	-	A (7.9)	A (7.9)	A (9.5)

Based on Synchro Software *Level of Service (Average vehicle delay [seconds per vehicle])

Table 5 – Volume-Capacity Ratio Summary

Location	Movement	2021 No-Build Condition			2021 Build Condition			
		AM Net	AM Gen	PM Net	AM Net	AM Gen	PM Net	
Signalized Intersections								
NJ Route 66 and Jumping Brook Road	EB	L	0.840	0.380	0.590	0.840	0.450	0.590
		T	0.730	0.370	0.740	0.730	0.370	0.740
		R	0.170	0.130	0.190	0.170	0.130	0.190
	WB	L	0.330	0.170	0.470	0.330	0.170	0.470
		T,R	0.740	0.350	1.010	0.740	0.370	1.010
	NB	L	0.470	0.360	0.730	0.470	0.350	0.740
		T	0.500	0.590	0.710	0.500	0.600	0.710
		R	0.140	0.170	0.200	0.140	0.170	0.200
	SB	L	0.150	0.240	0.440	0.150	0.250	0.450
		T	0.460	0.490	0.680	0.460	0.520	0.690
		R	0.530	0.390	0.980	0.530	0.520	1.030
Asbury Avenue (CR 16) and Green Grove Road	EB	L	0.310	0.230	0.510	0.310	0.310	0.510
		T,R	0.990	0.590	0.880	0.990	0.670	0.880
	WB	L	0.720	0.210	0.940	0.720	0.370	0.940
		T,R	0.920	0.560	0.670	0.920	0.600	0.670
	NB	L	0.320	0.210	1.030	0.320	0.440	1.140
		T	0.720	0.400	0.570	0.720	0.510	0.580
		R	0.140	0.200	0.260	0.140	0.200	0.270
	SB	L	0.160	0.140	0.300	0.160	0.170	0.310
		T	0.320	0.360	0.790	0.320	0.440	0.790
		R	0.200	0.200	0.150	0.200	0.170	0.150
Unsignalized Intersections								
Jumping Brook Road and Essex Road	EB	L,R	0.129	0.119	1.069	0.130	0.136	1.122
	NB	L	0.122	0.068	0.202	0.122	0.074	0.208
Jumping Brook Road and Walmart / Site Driveway 1	EB	L,T,R	-	-	-	0.005	0.004	0.009
	WB	L,R	0.094	0.057	0.331	-	-	-
		L,T,R	-	-	-	0.104	0.073	0.406
	NB	L	-	-	-	0.001	0.012	0.001
	SB	L	0.019	0.014	0.045	0.019	0.015	0.047
Jumping Brook Road and Site Driveway 2	EB	L,R	-	-	-	0.004	0.002	0.004
	NB	L	-	-	-	0.001	0.030	0.002
Jumping Brook Road and Site Driveway 3	EB	L	-	-	-	0.004	0.246	0.178
		R	-	-	-	0.002	0.133	0.079
	NB	L	-	-	-	0.001	0.001	0.001

Based on Synchro Software

Table 6 – 50th and 95th Percentile Queue Summary

Location	Movement		2021 No-Build Condition			2021 Build Condition		
			AM Net	AM Gen	PM Net	AM Net	AM Gen	PM Net
Signalized Intersections								
NJ Route 66 and Jumping Brook Road	EB	L	224/491	46/98	81/183	225/492	58/118	81/184
		T	283/559	111/217	241/508	283/559	113/219	241/508
		R	6/43	0/28	0/41	6/43	0/28	0/41
	WB	L	22/50	22/54	53/107	22/50	23/54	53/107
		T,R	157/225	96/180	263/497	157/225	100/189	263/498
	NB	L	63/102	53/85	105/146	63/102	53/84	105/146
		T	88/143	99/156	144/206	88/143	103/161	144/206
		R	0/29	0/31	0/29	0/29	0/31	0/29
	SB	L	20/41	36/62	63/95	20/41	38/64	64/96
		T	58/98	68/108	130/183	58/98	73/115	132/184
		R	0/55	0/45	143/320	0/55	0/55	196/357
Asbury Avenue (CR 16) and Green Grove Road	EB	L	9/40	9/35	23/77	9/40	9/38	23/77
		T,R	123/362	44/123	195/368	123/362	52/170	195/368
	WB	L	23/109	7/31	37/126	23/109	9/40	37/126
		T,R	114/314	43/110	128/204	114/314	45/113	128/204
	NB	L	22/49	10/33	65/174	22/49	21/54	84/193
		T	94/167	33/81	116/196	94/167	42/87	118/199
		R	0/16	0/18	3/36	0/16	0/20	4/37
	SB	L	6/20	6/23	22/54	6/20	7/23	22/55
		T	33/65	29/73	184/347	33/65	36/76	184/347
		R	9/30	0/18	0/24	9/30	0/18	0/24
Unsignalized Intersections								
Jumping Brook Road and Essex Road	EB	L,R	10	10	308	10	13	333
	NB	L	10	5	20	10	5	20
Jumping Brook Road and Walmart / Site Driveway 1	EB	L,T,R	-	-	-	0	0	0
	WB	L,R	8	5	35	-	-	-
		L,T,R	-	-	-	8	5	48
	NB	L	-	-	-	0	0	0
	SB	L	3	0	3	3	0	3
Jumping Brook Road and Site Driveway 2	EB	L,R	-	-	-	0	0	0
	NB	L	-	-	-	0	3	0
Jumping Brook Road and Site Driveway 3	EB	L	-	-	-	0	25	15
	EB	R	-	-	-	0	13	8
	NB	L	-	-	-	0	0	0

Based on Synchro Software *50th/95th Percentile Queues (in feet).

For unsignalized intersections, only 95th Percentile Queues are calculated.

SITE PLAN REVIEW

We have reviewed the site plan for the proposed delivery station. In particular, we focused our review on access, circulation and parking design, which the following items address:

The site plan proposes three full-access and stop-controlled site driveways along Jumping Brook Road. We expect the site driveways will allow vehicles to turn into and out of the site efficiently.

The proposed passenger car parking supply provides perpendicular parking. Those perpendicular parking spaces will be 9.0 feet wide and 20.0 feet deep served by two-way

aisles with a minimum width of 24.0 feet. These parking space dimensions and aisle widths are consistent with current car parking design standards.

The proposed van parking supply also provides perpendicular parking. Those perpendicular parking spaces will be 11.0 feet wide and 27.0 feet deep served by two-way aisles with a minimum width of 30.0 feet. These parking space dimensions and aisle widths are consistent with current van parking design standards.

Based on our review, we believe the site plan provides convenient access and circulation throughout the site.

CONCLUSIONS

We expect area traffic operations will not significantly change because of the proposed delivery station. In addition, the site design is consistent with current standards and provides adequate access and circulation.

Should you have any questions or comments concerning this traffic evaluation, please do not hesitate to contact our office.

Sincerely,

Langan Engineering and Environmental Services, Inc.



Daniel D. Disario, P.E., PTOE
Principal



Jon E. Gaskill
Staff Engineer

DDD:jeg

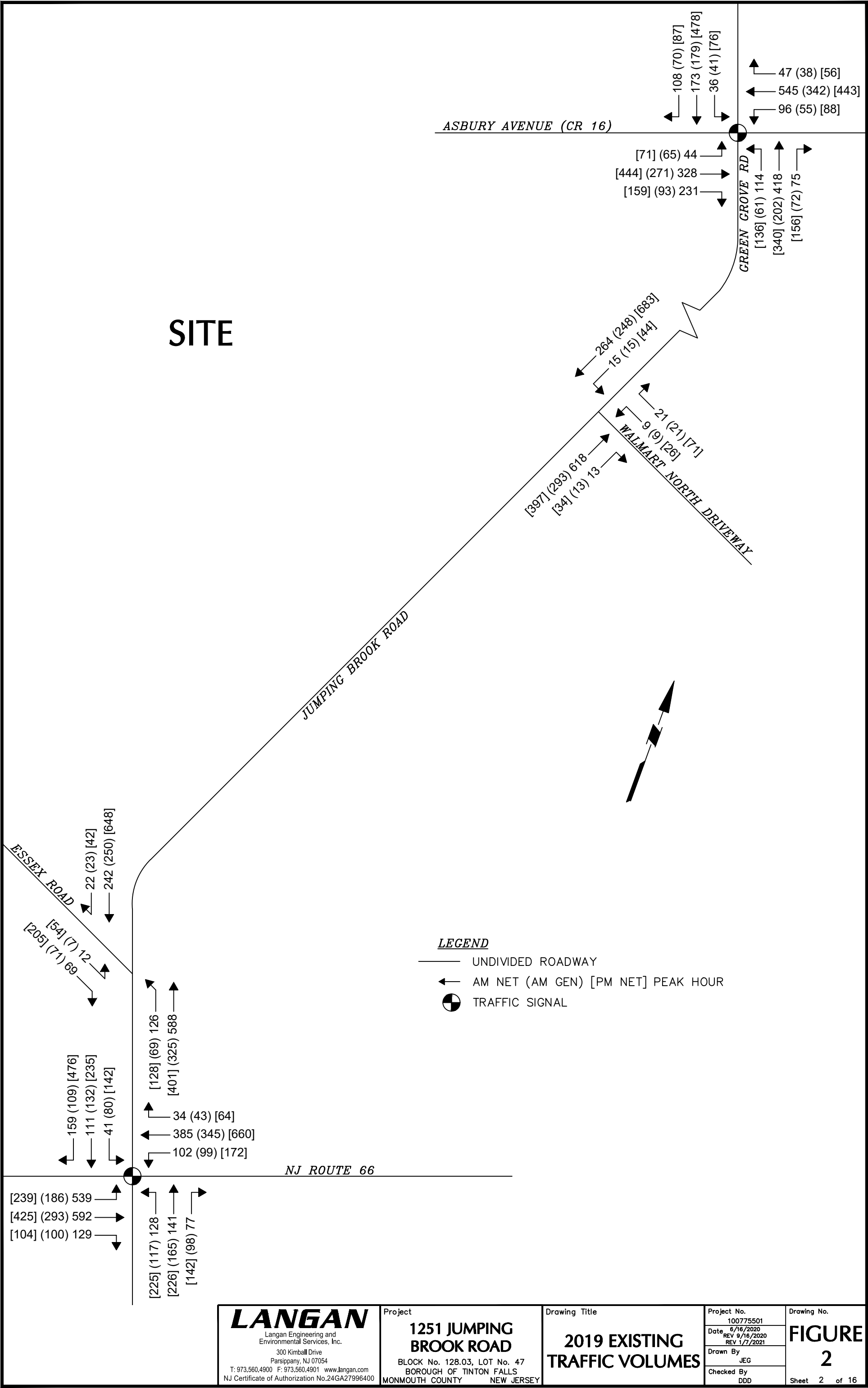
NJ Certificate of Authorization No. 24GA27996400

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**SITE LOCATION MAP
&
TRAFFIC VOLUME FIGURES**



LANGAN Langan Engineering and Environmental Services, Inc. 300 Kimball Drive Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901 www.langan.com NJ Certificate of Authorization No.24GA27996400 Project 1251 JUMPING BROOK ROAD BLOCK No. 128.03, LOT No. 47 BOROUGH OF TINTON FALLS MONMOUTH COUNTY NEW JERSEY		Drawing Title SITE LOCATION MAP	Project No. 100775501 Date 6/16/2020 REV 9/16/2020 REV 1/7/2021 Drawn By JEG Checked By DDD	Drawing No. FIGURE 1 Sheet 1 of 16
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LANGAN

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NJ Certificate of Authorization No.24GA27996400

Project

**1251 JUMPING
BROOK ROAD**

BLOCK No. 128.03, LOT No. 47
BOROUGH OF TINTON FALLS
MONMOUTH COUNTY NEW JERSEY

Drawing Title

**2019 EXISTING
TRAFFIC VOLUMES**

Project No.

100775501

Date 6/16/2020

REV 9/16/2020

REV 1/7/2021

Drawn By JEG

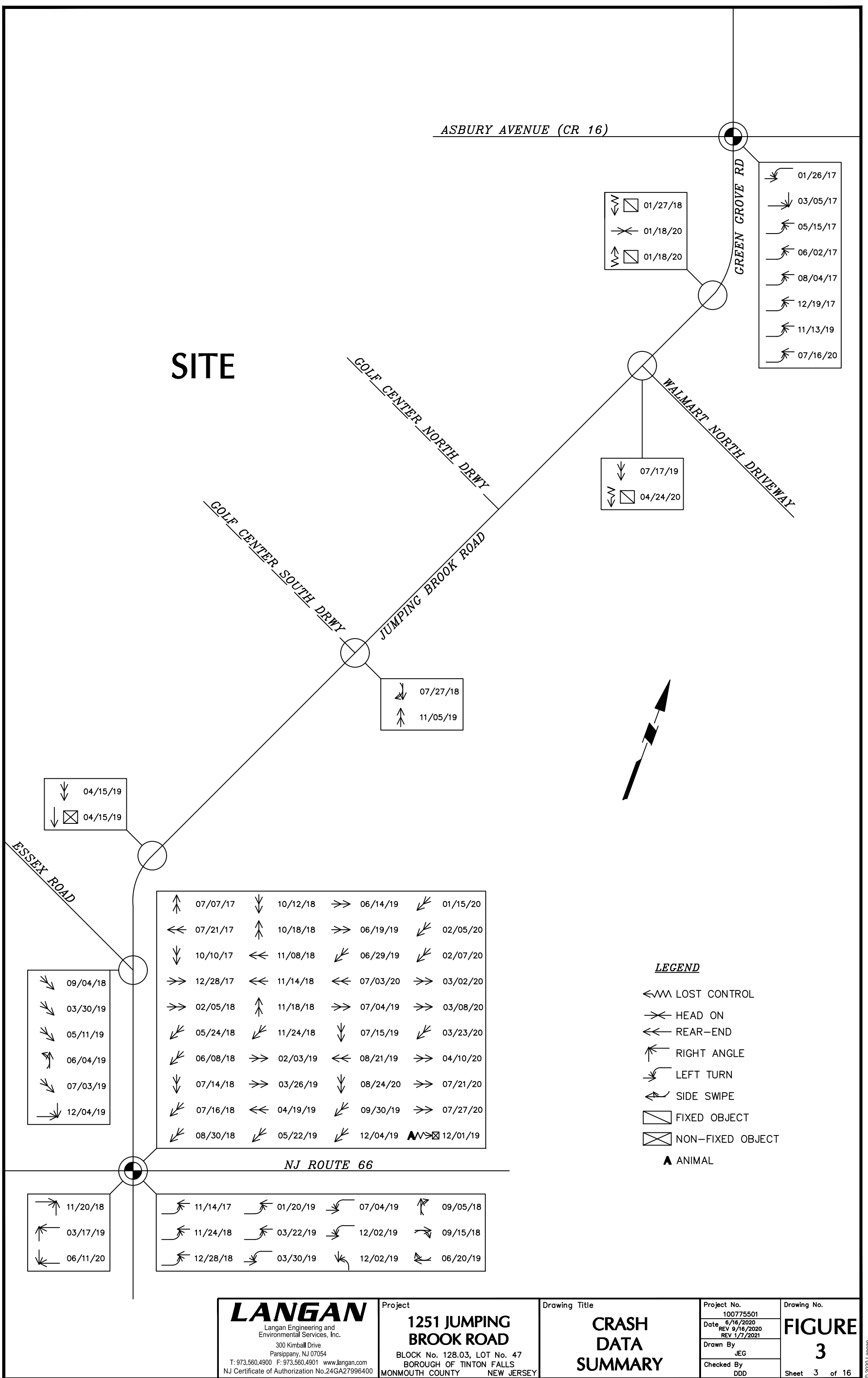
Checked By DDD

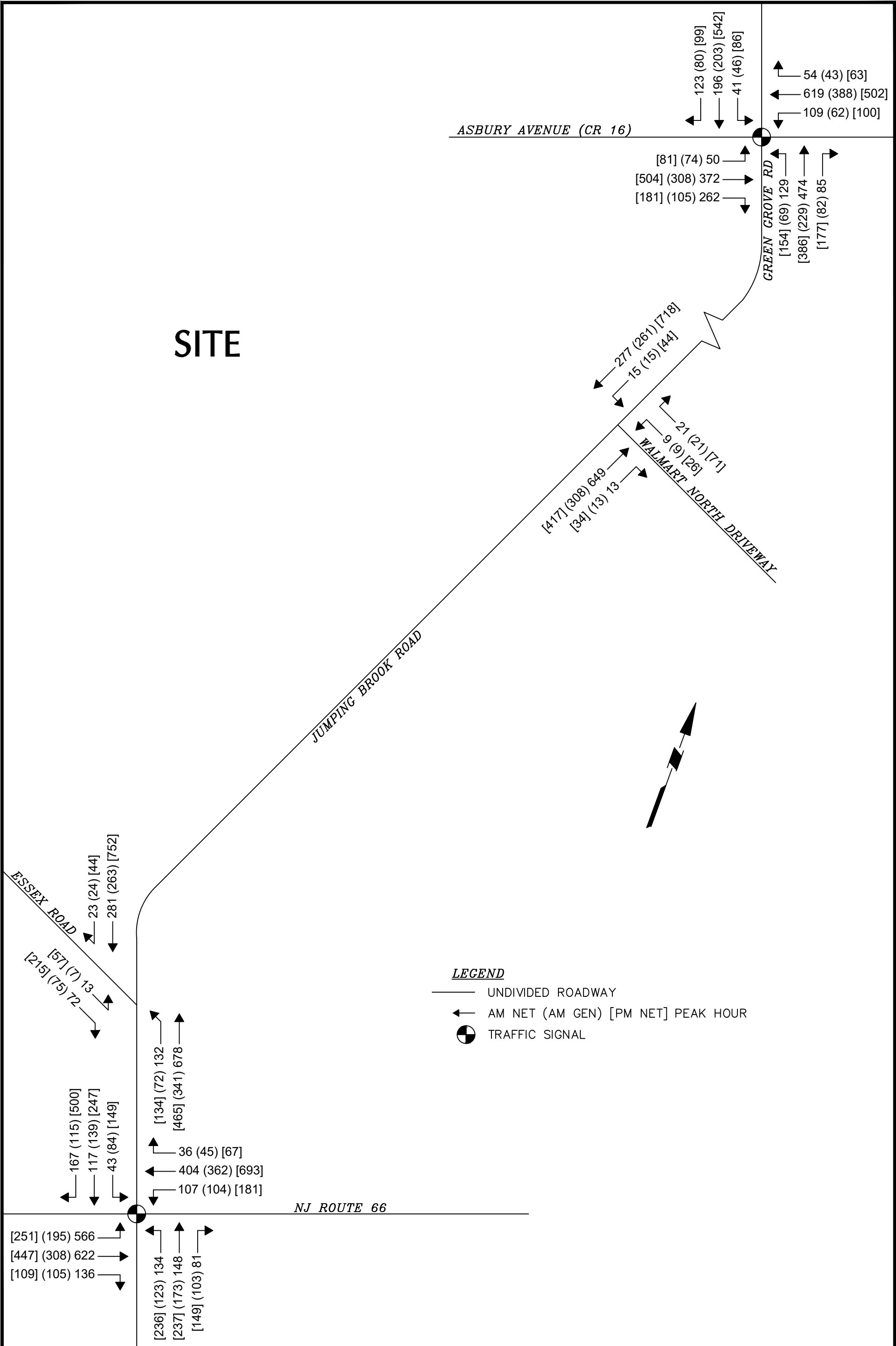
Drawing No.

**FIGURE
2**

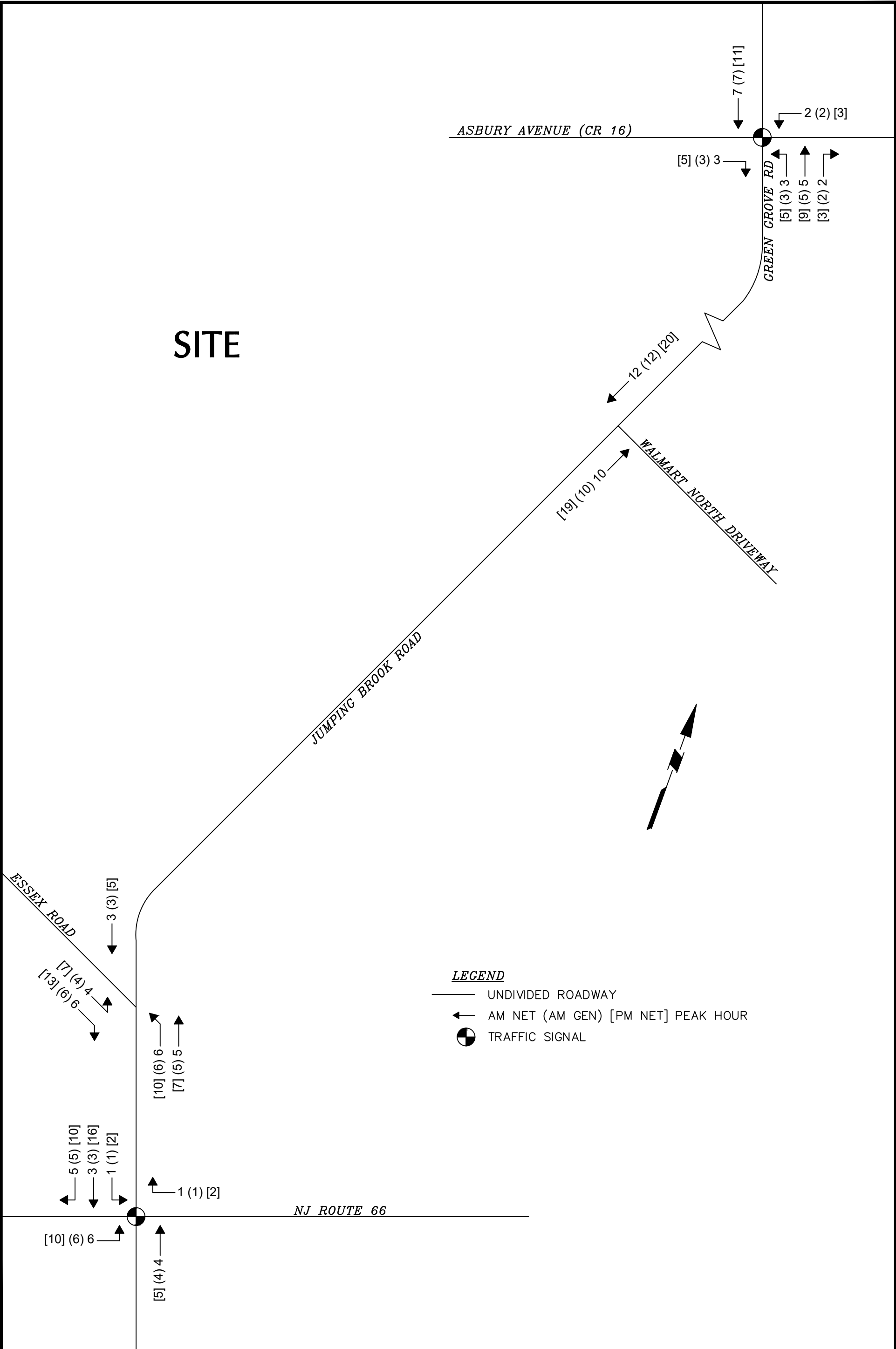
Sheet 2 of 16

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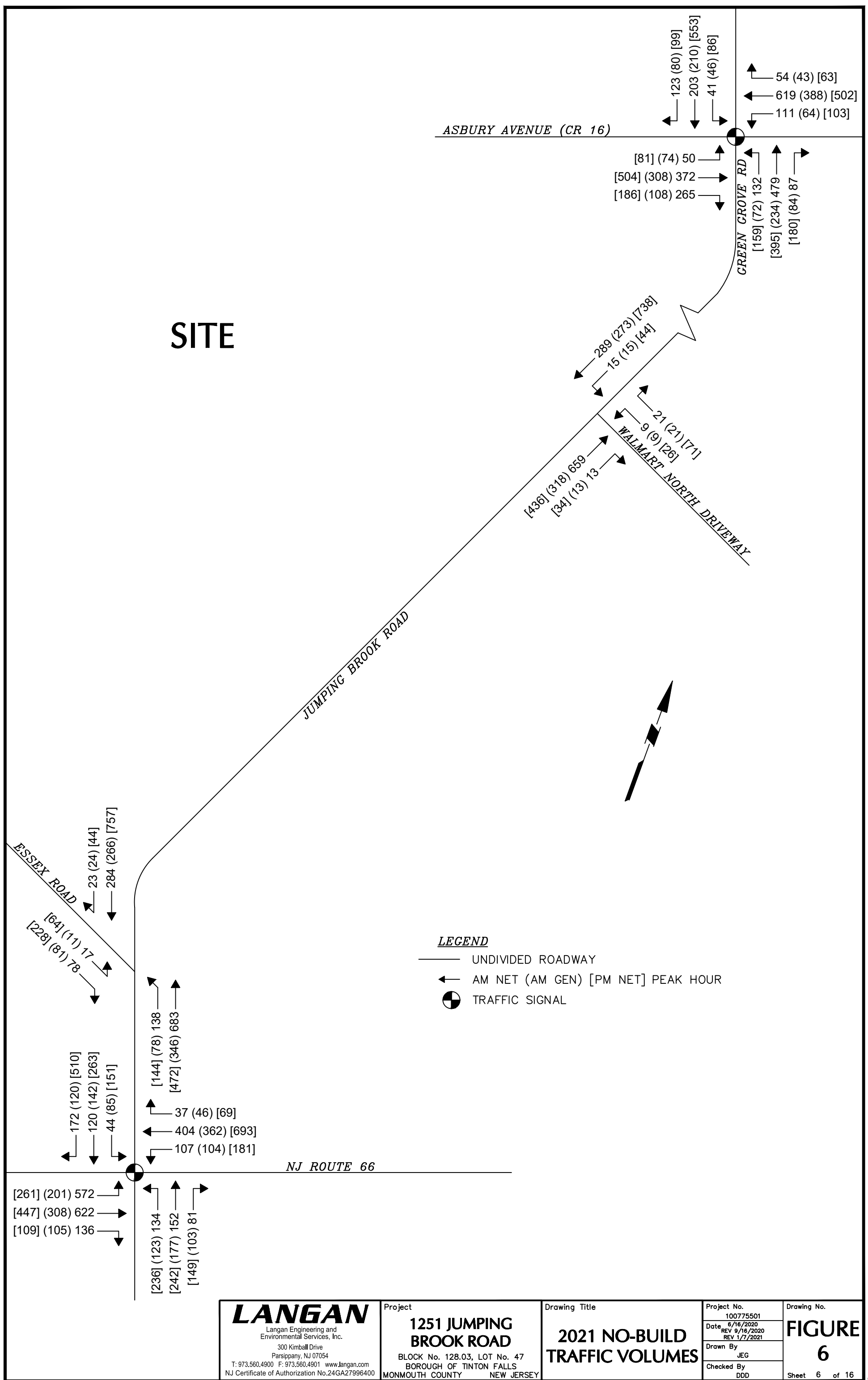


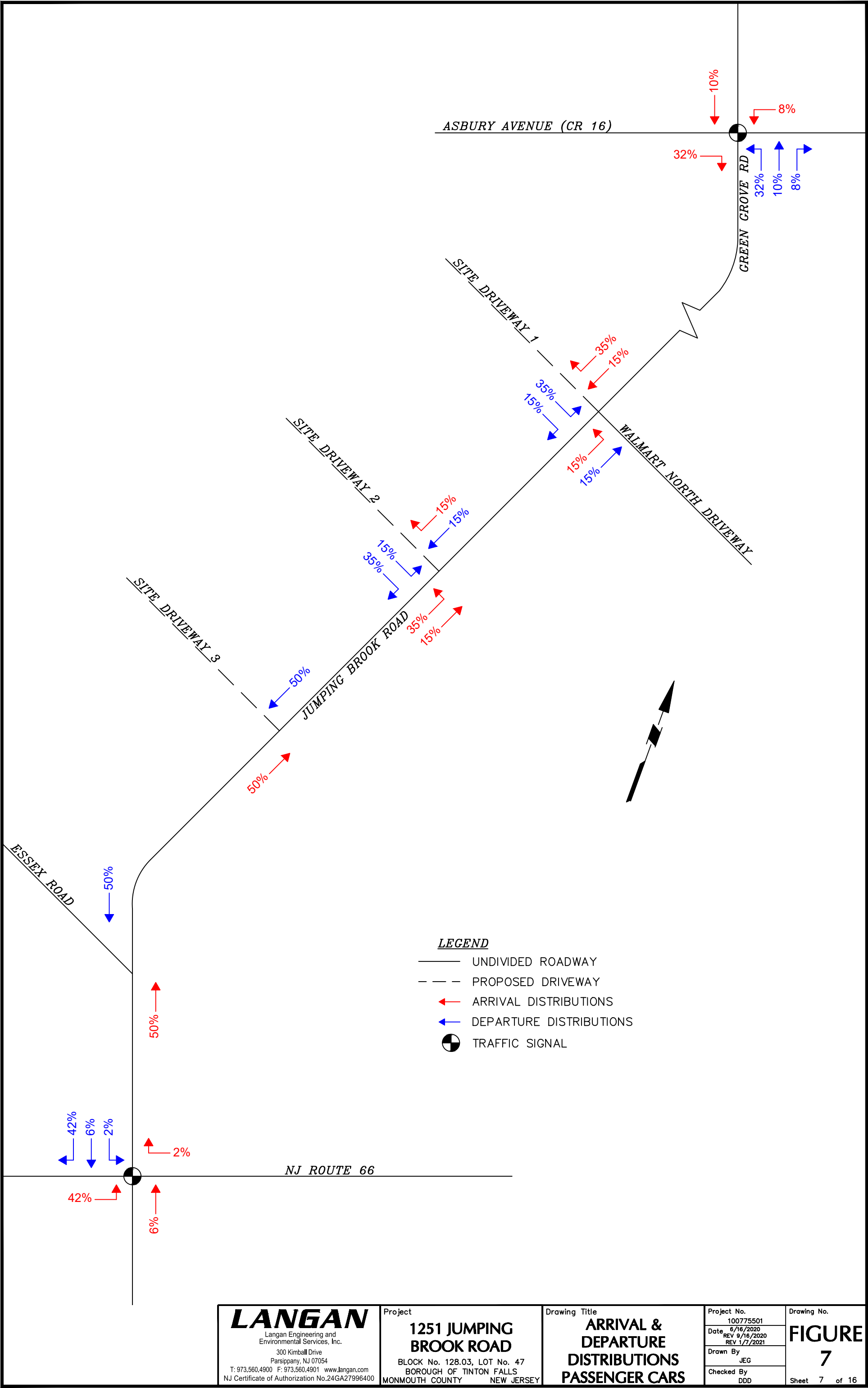


LANGAN Langan Engineering and Environmental Services, Inc. 300 Kimball Drive Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901 www.langan.com NJ Certificate of Authorization No.24GA27996400	Project 1251 JUMPING BROOK ROAD BLOCK No. 128.03, LOT No. 47 BOROUGH OF TINTON FALLS MONMOUTH COUNTY NEW JERSEY	Drawing Title 2021 BASE TRAFFIC VOLUMES	Project No. 100775501	FIGURE 4 Sheet 4 of 16
			Date 6/16/2020 REV 9/16/2020 REV 1/7/2021	
			Drawn By JEG	
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			Date 6/16/2020	
			Drawn By JEG	
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Project

1251 JUMPING BROOK ROAD

BLOCK No. 128.03, LOT No. 47
BOROUGH OF TINTON FALLS
MONMOUTH COUNTY NEW JERSEY

Drawing Title

ARRIVAL & DEPARTURE DISTRIBUTIONS
PASSENGER CARS

Project No.
100775501

Date
6/16/2020
REV 9/16/2020
REV 1/7/2021

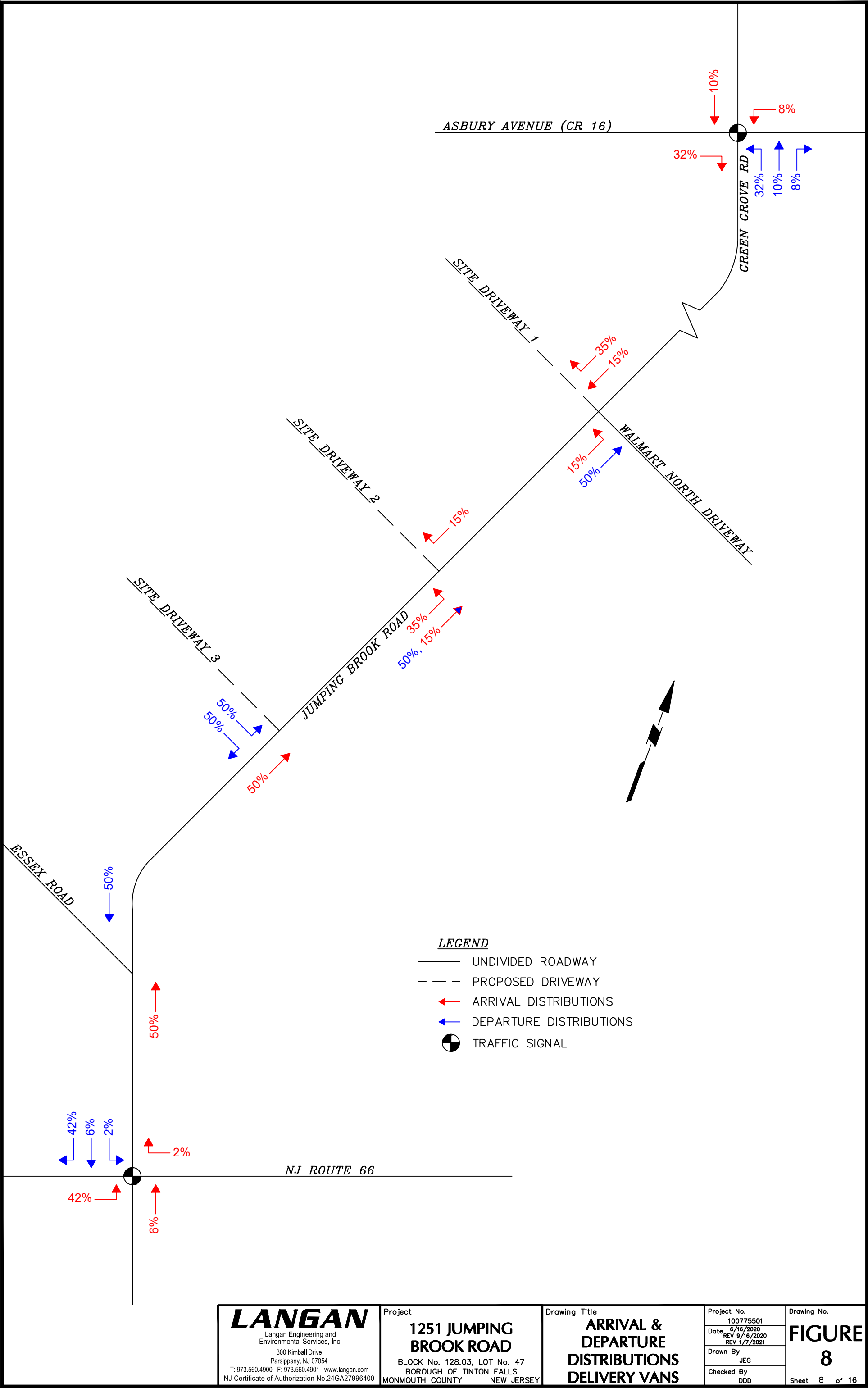
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Drawing No.

FIGURE 7

Sheet 7 of 16



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Project

1251 JUMPING
BROOK ROAD

BLOCK No. 128.03, LOT No. 47
BOROUGH OF TINTON FALLS
MONMOUTH COUNTY NEW JERSEY

Drawing Title

ARRIVAL &
DEPARTURE
DISTRIBUTIONS
DELIVERY VANS

Project No.
100775501

Date
6/16/2020
REV 9/16/2020
REV 1/7/2021

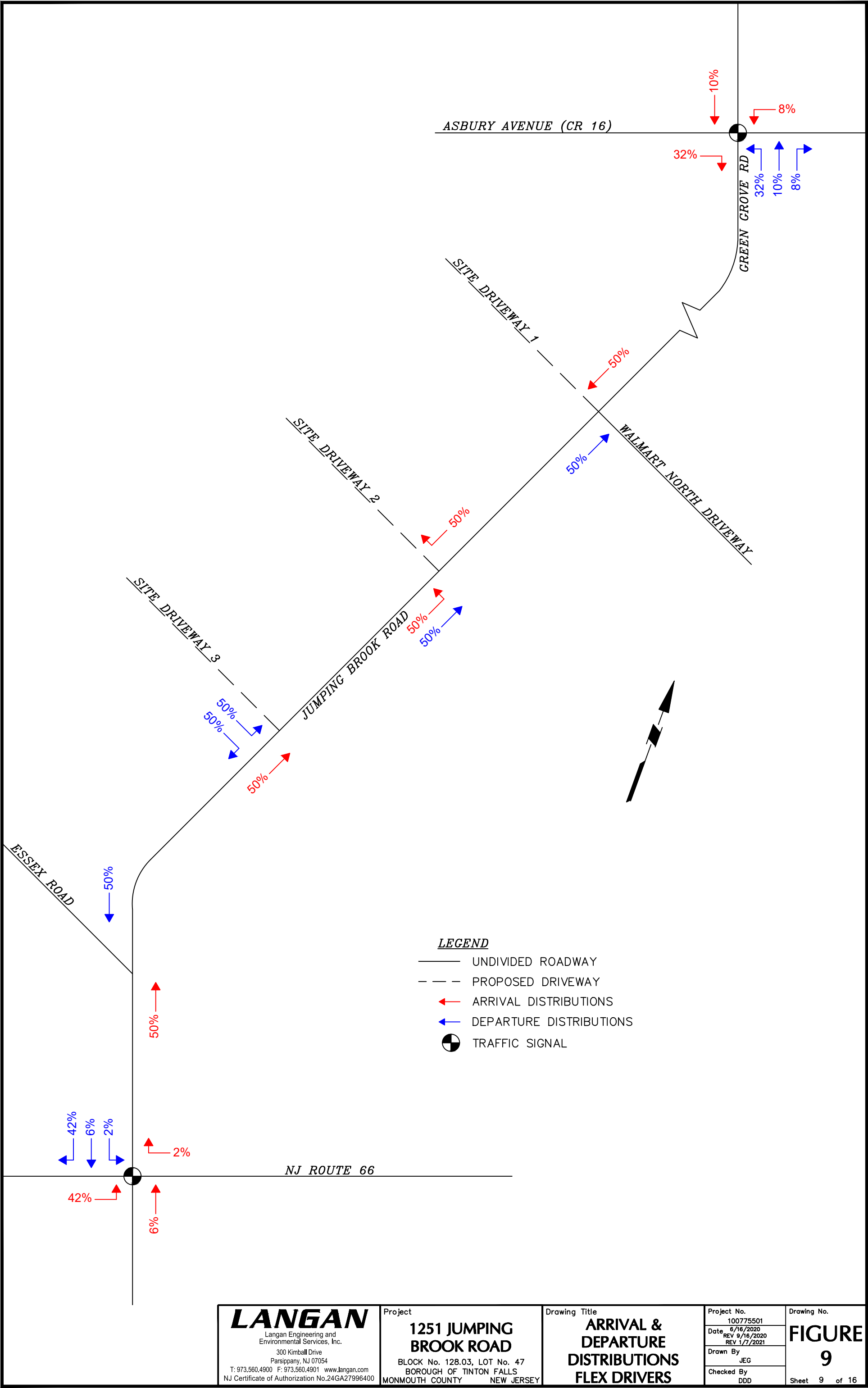
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Drawing No.

FIGURE
8

Sheet 8 of 16



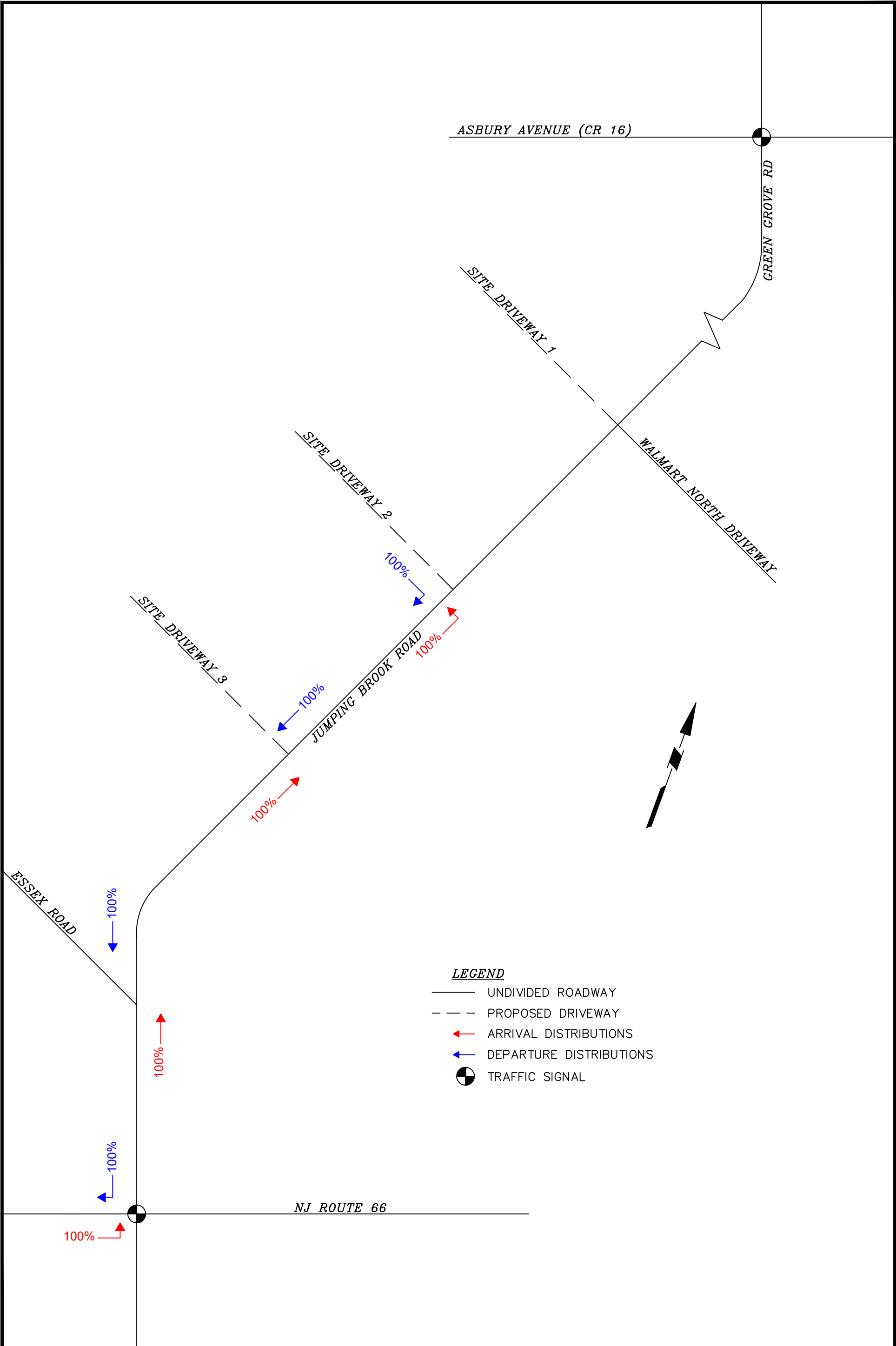
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Project
1251 JUMPING BROOK ROAD
BLOCK No. 128.03, LOT No. 47
BOROUGH OF TINTON FALLS
MONMOUTH COUNTY NEW JERSEY

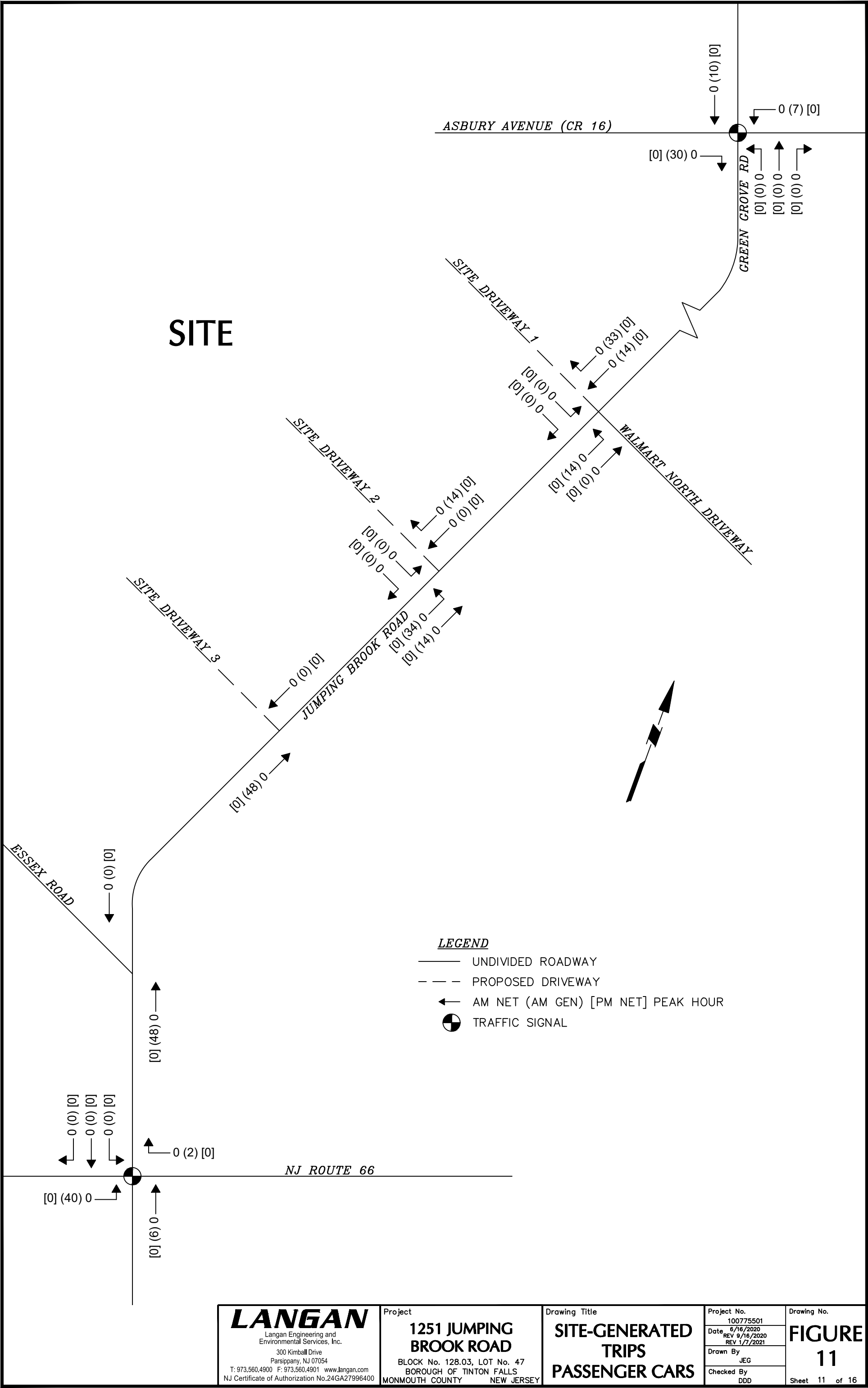
Drawing Title
ARRIVAL & DEPARTURE DISTRIBUTIONS FLEX DRIVERS

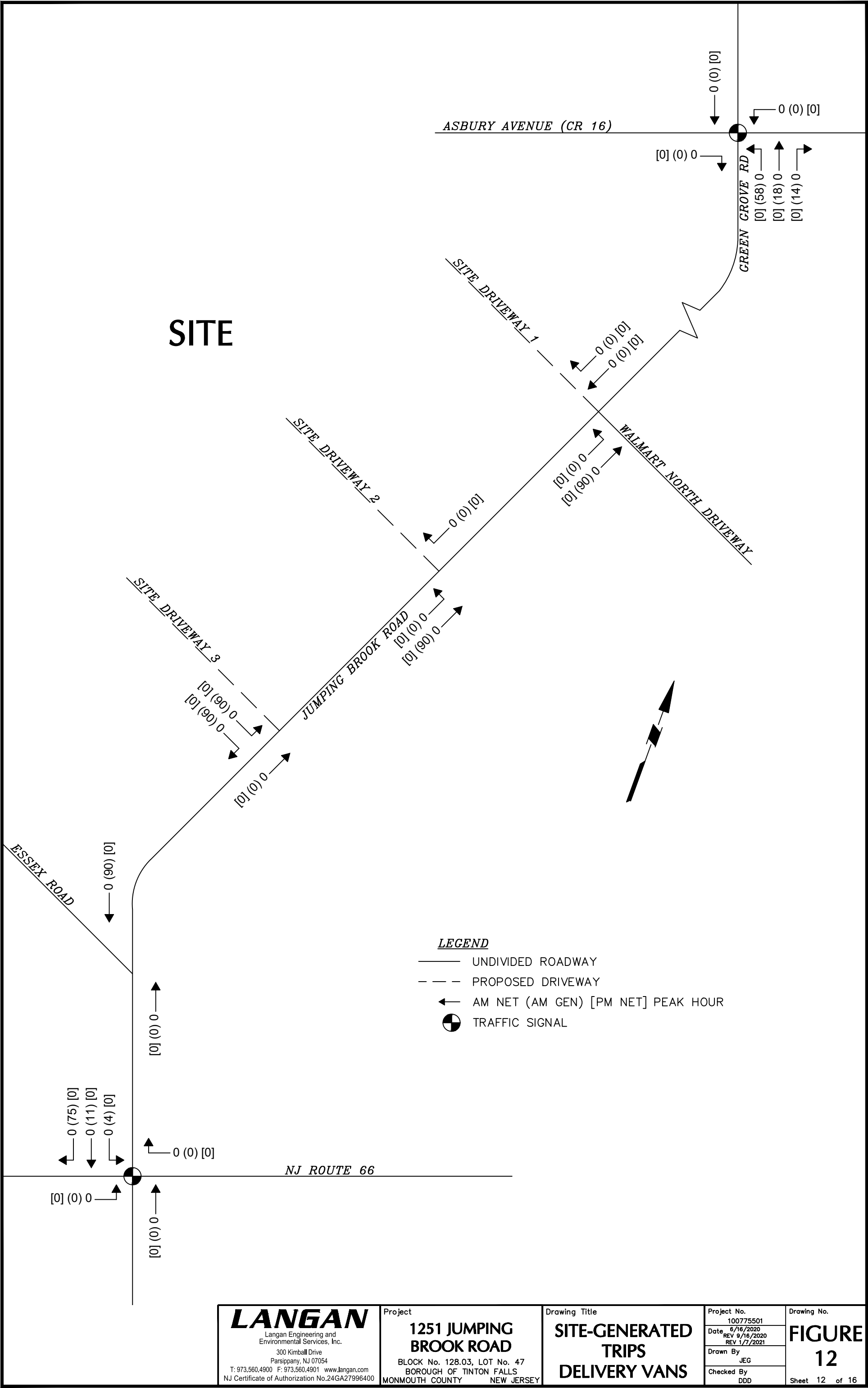
Project No. 100775501
Date 6/16/2020 REV 9/16/2020 REV 1/7/2021
Drawn By JEG
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Drawing No.
FIGURE 9
Sheet 9 of 16



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			Date 6/16/2020	
			REV 9/16/2020	
			REV 1/7/2021	
			Drawn By JEG	
			Checked By DDD	





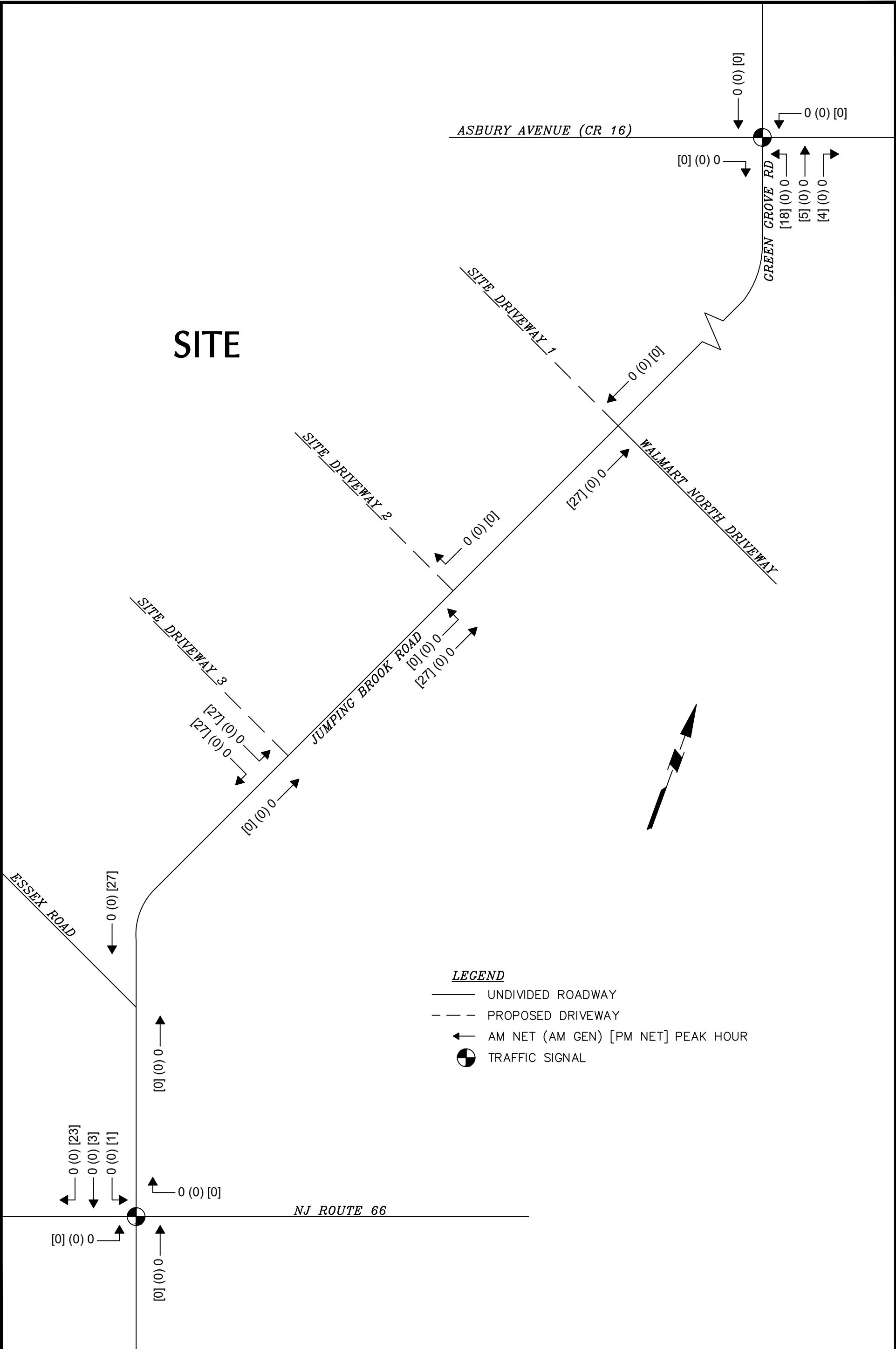
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Project
**1251 JUMPING
BROOK ROAD**
BLOCK No. 128.03, LOT No. 47
BOROUGH OF TINTON FALLS
MONMOUTH COUNTY NEW JERSEY

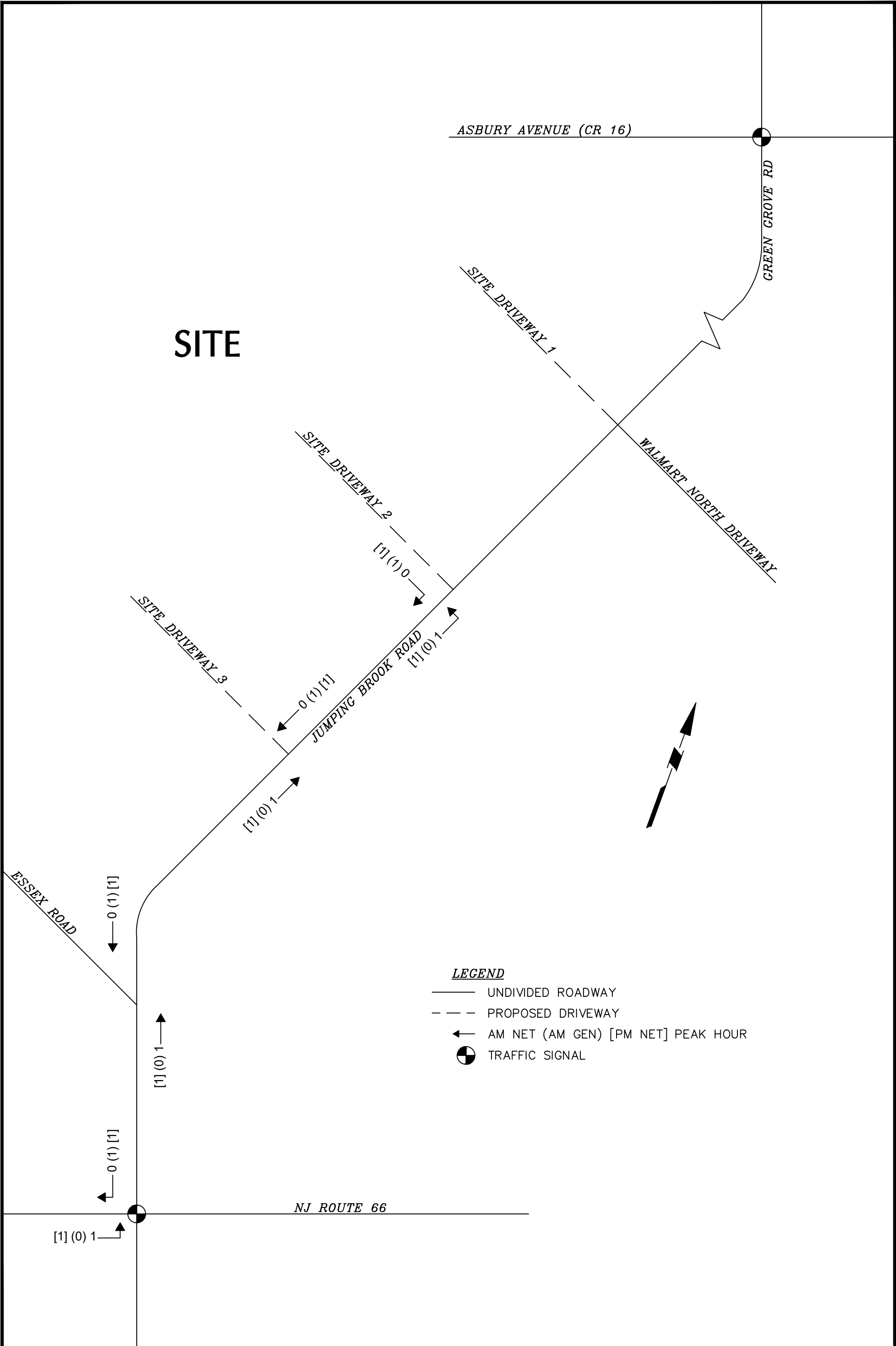
Drawing Title
**SITE-GENERATED
TRIPS
DELIVERY VANS**

Project No.
100775501
Date 6/16/2020
REV 9/16/2020
REV 1/7/2021
Drawn By
JEG
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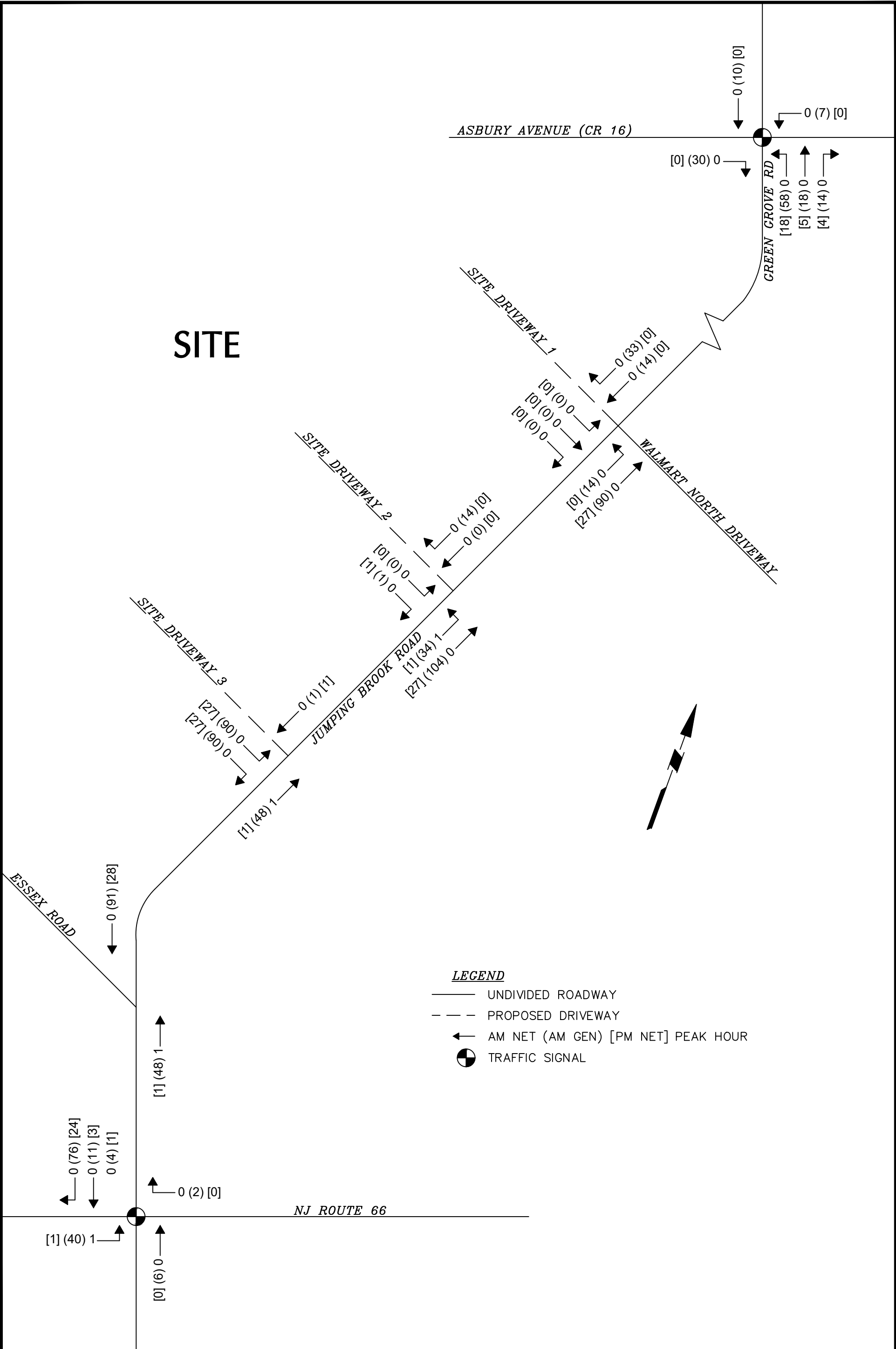
Drawing No.
**FIGURE
12**
Sheet 12 of 16



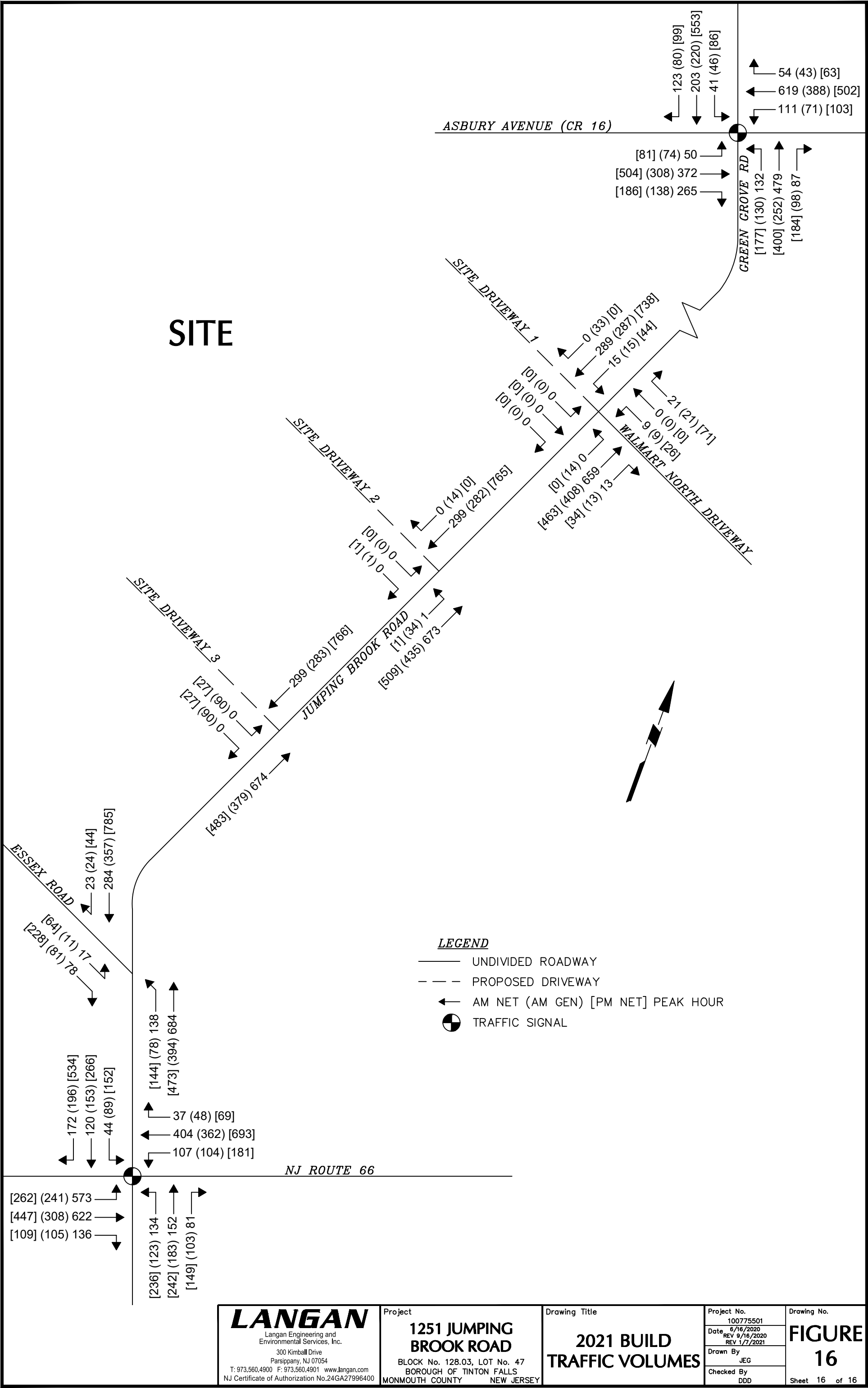
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			Date 6/16/2020 REV 9/16/2020 REV 1/7/2021	
			Drawn By JEG	
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			Date 6/16/2020 REV 9/16/2020 REV 1/7/2021	
			Drawn By JEG	
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			Date 6/16/2020 REV 9/16/2020 REV 1/7/2021	
			Drawn By JEG	
			Checked By DDD	



TRAFFIC COUNT DATA



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NJ Route 66 & Jumping Brook Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 1 NJ Route 66 & Jumping Brook Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 1

Groups Printed- Lights - Trucks - Buses

	JUMPING BROOK ROAD Southbound				NJ ROUTE 66 Westbound				JUMPING BROOK ROAD Northbound				NJ ROUTE 66 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	3	10	15	4	51	1	56	6	7	6	19	19	35	3	57	147
06:15 AM	3	3	9	15	6	73	3	82	8	15	6	29	36	46	2	84	210
06:30 AM	5	10	23	38	3	75	10	88	17	19	10	46	74	75	13	162	334
06:45 AM	6	13	29	48	13	108	22	143	14	26	10	50	95	90	7	192	433
Total	16	29	71	116	26	307	36	369	45	67	32	144	224	246	25	495	1124
07:00 AM	6	15	32	53	13	98	5	116	22	20	21	63	80	115	10	205	437
07:15 AM	7	19	26	52	19	82	7	108	28	41	24	93	112	125	17	254	507
07:30 AM	8	15	28	51	17	120	4	141	28	35	17	80	127	140	14	281	553
07:45 AM	13	33	41	87	31	110	6	147	33	44	21	98	130	163	27	320	652
Total	34	82	127	243	80	410	22	512	111	140	83	334	449	543	68	1060	2149
08:00 AM	10	22	38	70	24	88	13	125	25	32	9	66	148	148	31	327	588
08:15 AM	9	24	34	67	26	93	7	126	33	37	18	88	130	143	38	311	592
08:30 AM	9	32	46	87	21	94	8	123	37	28	29	94	131	138	33	302	606
08:45 AM	13	29	36	78	31	89	12	132	29	45	22	96	107	145	28	280	586
Total	41	107	154	302	102	364	40	506	124	142	78	344	516	574	130	1220	2372
09:00 AM	21	26	31	78	24	101	16	141	37	48	26	111	85	115	26	226	556
09:15 AM	28	25	18	71	13	89	14	116	36	30	20	86	69	104	32	205	478
09:30 AM	30	34	25	89	25	81	10	116	42	57	31	130	53	91	31	175	510
09:45 AM	15	32	23	70	26	83	15	124	35	51	25	111	66	71	27	164	469
Total	94	117	97	308	88	354	55	497	150	186	102	438	273	381	116	770	2013
10:00 AM	16	36	35	87	28	84	9	121	23	36	26	85	44	86	29	159	452
10:15 AM	18	27	25	70	26	94	7	127	31	34	24	89	50	64	22	136	422
10:30 AM	22	37	25	84	24	74	11	109	33	45	27	105	53	75	29	157	455
10:45 AM	24	32	24	80	21	93	16	130	30	50	21	101	39	68	20	127	438
Total	80	132	109	321	99	345	43	487	117	165	98	380	186	293	100	579	1767
11:00 AM	26	26	24	76	23	95	15	133	30	44	34	108	41	59	20	120	437
11:15 AM	24	31	37	92	37	65	14	116	35	38	35	108	46	74	25	145	461
11:30 AM	29	46	33	108	27	83	14	124	38	40	32	110	48	83	20	151	493
11:45 AM	32	39	44	115	23	76	13	112	28	41	32	101	51	86	21	158	486
Total	111	142	138	391	110	319	56	485	131	163	133	427	186	302	86	574	1877



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NJ Route 66 & Jumping Brook Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 1 NJ Route 66 & Jumping Brook Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 2

Groups Printed- Lights - Trucks - Buses

	JUMPING BROOK ROAD Southbound				NJ ROUTE 66 Westbound				JUMPING BROOK ROAD Northbound				NJ ROUTE 66 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	36	40	35	111	24	90	23	137	47	57	35	139	49	89	28	166	553
12:15 PM	34	42	35	111	29	109	24	162	37	52	23	112	59	91	20	170	555
12:30 PM	31	46	30	107	33	140	21	194	42	51	28	121	56	89	28	173	595
12:45 PM	35	49	30	114	35	112	14	161	28	57	36	121	49	75	21	145	541
Total	136	177	130	443	121	451	82	654	154	217	122	493	213	344	97	654	2244
01:00 PM	41	39	43	123	38	119	21	178	43	55	46	144	51	91	22	164	609
01:15 PM	39	55	42	136	47	102	16	165	40	42	26	108	57	86	32	175	584
01:30 PM	35	47	31	113	42	124	17	183	46	50	29	125	43	80	30	153	574
01:45 PM	42	53	53	148	41	121	21	183	30	46	28	104	44	81	32	157	592
Total	157	194	169	520	168	466	75	709	159	193	129	481	195	338	116	649	2359
02:00 PM	38	47	40	125	34	134	6	174	49	53	20	122	57	93	26	176	597
02:15 PM	32	34	47	113	41	116	16	173	38	50	26	114	54	73	19	146	546
02:30 PM	35	43	73	151	29	114	19	162	42	50	26	118	58	74	24	156	587
02:45 PM	34	45	69	148	40	141	17	198	38	45	23	106	59	76	28	163	615
Total	139	169	229	537	144	505	58	707	167	198	95	460	228	316	97	641	2345
03:00 PM	26	48	82	156	37	148	14	199	50	48	19	117	37	87	14	138	610
03:15 PM	34	40	73	147	40	144	14	198	40	36	16	92	48	86	17	151	588
03:30 PM	37	66	82	185	33	168	19	220	33	50	21	104	52	97	16	165	674
03:45 PM	26	54	76	156	41	130	16	187	36	55	27	118	69	93	24	186	647
Total	123	208	313	644	151	590	63	804	159	189	83	431	206	363	71	640	2519
04:00 PM	35	60	91	186	32	175	11	218	56	52	25	133	54	84	20	158	695
04:15 PM	31	52	105	188	30	137	25	192	40	57	31	128	67	97	22	186	694
04:30 PM	41	53	105	199	45	170	14	229	59	51	34	144	62	97	25	184	756
04:45 PM	34	50	107	191	48	147	19	214	58	51	36	145	59	98	32	189	739
Total	141	215	408	764	155	629	69	853	213	211	126	550	242	376	99	717	2884
05:00 PM	43	68	147	258	43	180	22	245	56	64	39	159	57	116	20	193	855
05:15 PM	24	64	117	205	36	163	9	208	52	60	33	145	61	114	27	202	760
05:30 PM	31	46	85	162	50	175	20	245	59	37	37	133	57	104	13	174	714
05:45 PM	31	50	79	160	47	126	19	192	36	55	28	119	68	79	20	167	638
Total	129	228	428	785	176	644	70	890	203	216	137	556	243	413	80	736	2967
Grand Total	1201	1800	2373	5374	1420	5384	669	7473	1733	2087	1218	5038	3161	4489	1085	8735	26620
Apprch %	22.3	33.5	44.2		19	72	9		34.4	41.4	24.2		36.2	51.4	12.4		
Total %	4.5	6.8	8.9	20.2	5.3	20.2	2.5	28.1	6.5	7.8	4.6	18.9	11.9	16.9	4.1	32.8	



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Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 1 NJ Route 66 & Jumping Brook Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 3

Groups Printed- Lights - Trucks - Buses

	JUMPING BROOK ROAD Southbound				NJ ROUTE 66 Westbound				JUMPING BROOK ROAD Northbound				NJ ROUTE 66 Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Lights	1174	1776	2257	5207	1396	5173	646	7215	1677	2062	1192	4931	3011	4313	1057	8381	25734
% Lights	97.8	98.7	95.1	96.9	98.3	96.1	96.6	96.5	96.8	98.8	97.9	97.9	95.3	96.1	97.4	95.9	96.7
Trucks	26	18	59	103	18	161	16	195	49	19	19	87	68	143	27	238	623
% Trucks	2.2	1	2.5	1.9	1.3	3	2.4	2.6	2.8	0.9	1.6	1.7	2.2	3.2	2.5	2.7	2.3
Buses	1	6	57	64	6	50	7	63	7	6	7	20	82	33	1	116	263
% Buses	0.1	0.3	2.4	1.2	0.4	0.9	1	0.8	0.4	0.3	0.6	0.4	2.6	0.7	0.1	1.3	1

NJ Route 66 & Jumping Brook Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 1 NJ Route 66 & Jumping Brook Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 4

	JUMPING BROOK ROAD Southbound				NJ ROUTE 66 Westbound				JUMPING BROOK ROAD Northbound				NJ ROUTE 66 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	13	33	41	87	31	110	6	147	33	44	21	98	130	163	27	320	652
08:00 AM	10	22	38	70	24	88	13	125	25	32	9	66	148	148	31	327	588
08:15 AM	9	24	34	67	26	93	7	126	33	37	18	88	130	143	38	311	592
08:30 AM	9	32	46	87	21	94	8	123	37	28	29	94	131	138	33	302	606
Total Volume	41	111	159	311	102	385	34	521	128	141	77	346	539	592	129	1260	2438
% App. Total	13.2	35.7	51.1		19.6	73.9	6.5		37	40.8	22.3		42.8	47	10.2		
PHF	.788	.841	.864	.894	.823	.875	.654	.886	.865	.801	.664	.883	.910	.908	.849	.963	.935
Lights	39	109	138	286	102	369	32	503	122	139	74	335	514	570	127	1211	2335
% Lights	95.1	98.2	86.8	92.0	100	95.8	94.1	96.5	95.3	98.6	96.1	96.8	95.4	96.3	98.4	96.1	95.8
Trucks	2	1	10	13	0	11	1	12	5	1	2	8	6	19	2	27	60
% Trucks	4.9	0.9	6.3	4.2	0	2.9	2.9	2.3	3.9	0.7	2.6	2.3	1.1	3.2	1.6	2.1	2.5
Buses	0	1	11	12	0	5	1	6	1	1	1	3	19	3	0	22	43
% Buses	0	0.9	6.9	3.9	0	1.3	2.9	1.2	0.8	0.7	1.3	0.9	3.5	0.5	0	1.7	1.8
Peak Hour Analysis From 10:00 AM to 10:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:00 AM																	
10:00 AM	16	36	35	87	28	84	9	121	23	36	26	85	44	86	29	159	452
10:15 AM	18	27	25	70	26	94	7	127	31	34	24	89	50	64	22	136	422
10:30 AM	22	37	25	84	24	74	11	109	33	45	27	105	53	75	29	157	455
10:45 AM	24	32	24	80	21	93	16	130	30	50	21	101	39	68	20	127	438
Total Volume	80	132	109	321	99	345	43	487	117	165	98	380	186	293	100	579	1767
% App. Total	24.9	41.1	34		20.3	70.8	8.8		30.8	43.4	25.8		32.1	50.6	17.3		
PHF	.833	.892	.779	.922	.884	.918	.672	.937	.886	.825	.907	.905	.877	.852	.862	.910	.971
Lights	78	131	105	314	96	322	41	459	114	163	93	370	174	283	99	556	1699
% Lights	97.5	99.2	96.3	97.8	97.0	93.3	95.3	94.3	97.4	98.8	94.9	97.4	93.5	96.6	99.0	96.0	96.2
Trucks	2	1	4	7	2	20	1	23	2	2	2	6	8	9	1	18	54
% Trucks	2.5	0.8	3.7	2.2	2.0	5.8	2.3	4.7	1.7	1.2	2.0	1.6	4.3	3.1	1.0	3.1	3.1
Buses	0	0	0	0	1	3	1	5	1	0	3	4	4	1	0	5	14
% Buses	0	0	0	0	1.0	0.9	2.3	1.0	0.9	0	3.1	1.1	2.2	0.3	0	0.9	0.8



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NJ Route 66 & Jumping Brook Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 1 NJ Route 66 & Jumping Brook Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 5

	JUMPING BROOK ROAD Southbound				NJ ROUTE 66 Westbound				JUMPING BROOK ROAD Northbound				NJ ROUTE 66 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1 Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	41	53	105	199	45	170	14	229	59	51	34	144	62	97	25	184	756
04:45 PM	34	50	107	191	48	147	19	214	58	51	36	145	59	98	32	189	739
05:00 PM	43	68	147	258	43	180	22	245	56	64	39	159	57	116	20	193	855
05:15 PM	24	64	117	205	36	163	9	208	52	60	33	145	61	114	27	202	760
Total Volume	142	235	476	853	172	660	64	896	225	226	142	593	239	425	104	768	3110
% App. Total	16.6	27.5	55.8		19.2	73.7	7.1		37.9	38.1	23.9		31.1	55.3	13.5		
PHF	.826	.864	.810	.827	.896	.917	.727	.914	.953	.883	.910	.932	.964	.916	.813	.950	.909
Lights	142	234	466	842	170	651	64	885	223	226	142	591	235	415	103	753	3071
% Lights	100	99.6	97.9	98.7	98.8	98.6	100	98.8	99.1	100	100	99.7	98.3	97.6	99.0	98.0	98.7
Trucks	0	1	9	10	2	8	0	10	2	0	0	2	1	8	1	10	32
% Trucks	0	0.4	1.9	1.2	1.2	1.2	0	1.1	0.9	0	0	0.3	0.4	1.9	1.0	1.3	1.0
Buses	0	0	1	1	0	1	0	1	0	0	0	0	3	2	0	5	7
% Buses	0	0	0.2	0.1	0	0.2	0	0.1	0	0	0	0	1.3	0.5	0	0.7	0.2



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Asbury Avenue & Green Grove Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 2 Asbury Avenue & Green Grove Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 1

Groups Printed- Lights - Trucks - Buses

	GREEN GROVE ROAD Southbound				ASBURY AVENUE (CR 16) Westbound				GREEN GROVE ROAD Northbound				ASBURY AVENUE (CR 16) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	5	12	17	6	83	5	94	6	20	6	32	2	17	6	25	168
06:15 AM	2	11	13	26	3	85	4	92	11	28	4	43	1	29	6	36	197
06:30 AM	7	18	10	35	15	108	3	126	18	60	13	91	9	50	13	72	324
06:45 AM	3	33	16	52	12	136	3	151	16	80	9	105	7	51	22	80	388
Total	12	67	51	130	36	412	15	463	51	188	32	271	19	147	47	213	1077
07:00 AM	6	29	16	51	16	126	6	148	28	74	11	113	14	53	25	92	404
07:15 AM	5	34	24	63	16	142	8	166	31	101	15	147	9	79	24	112	488
07:30 AM	3	39	24	66	13	148	13	174	30	106	19	155	11	63	36	110	505
07:45 AM	7	50	27	84	22	148	16	186	28	106	22	156	12	73	55	140	566
Total	21	152	91	264	67	564	43	674	117	387	67	571	46	268	140	454	1963
08:00 AM	8	34	28	70	23	130	6	159	30	113	19	162	12	92	40	144	535
08:15 AM	9	37	30	76	22	137	15	174	22	102	14	138	12	74	68	154	542
08:30 AM	12	52	23	87	29	130	10	169	34	97	20	151	8	89	68	165	572
08:45 AM	7	46	22	75	16	107	8	131	42	87	26	155	13	66	57	136	497
Total	36	169	103	308	90	504	39	633	128	399	79	606	45	321	233	599	2146
09:00 AM	7	47	11	65	23	100	16	139	28	91	23	142	8	67	39	114	460
09:15 AM	15	45	19	79	17	89	8	114	25	61	18	104	14	60	21	95	392
09:30 AM	7	37	13	57	15	78	12	105	19	65	24	108	13	78	39	130	400
09:45 AM	11	45	19	75	17	72	4	93	24	76	19	119	13	73	26	112	399
Total	40	174	62	276	72	339	40	451	96	293	84	473	48	278	125	451	1651
10:00 AM	16	45	15	76	13	80	11	104	13	44	21	78	14	55	17	86	344
10:15 AM	6	43	18	67	10	95	5	110	11	51	9	71	16	67	26	109	357
10:30 AM	8	46	24	78	15	85	11	111	16	62	18	96	13	69	26	108	393
10:45 AM	11	45	13	69	17	82	11	110	21	45	24	90	22	80	24	126	395
Total	41	179	70	290	55	342	38	435	61	202	72	335	65	271	93	429	1489
11:00 AM	10	33	13	56	21	74	14	109	22	55	14	91	16	85	20	121	377
11:15 AM	8	44	23	75	13	93	12	118	22	45	21	88	9	83	25	117	398
11:30 AM	14	45	19	78	16	79	15	110	29	53	22	104	11	79	26	116	408
11:45 AM	11	47	19	77	11	89	15	115	19	52	19	90	18	91	36	145	427
Total	43	169	74	286	61	335	56	452	92	205	76	373	54	338	107	499	1610

Asbury Avenue & Green Grove Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 2 Asbury Avenue & Green Grove Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 2

Groups Printed- Lights - Trucks - Buses

	GREEN GROVE ROAD Southbound				ASBURY AVENUE (CR 16) Westbound				GREEN GROVE ROAD Northbound				ASBURY AVENUE (CR 16) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
12:00 PM	11	46	11	68	23	106	12	141	29	51	32	112	5	64	28	97	418
12:15 PM	12	60	14	86	16	87	10	113	39	61	21	121	17	92	37	146	466
12:30 PM	21	49	16	86	13	82	12	107	23	59	34	116	16	76	32	124	433
12:45 PM	11	55	16	82	15	85	14	114	27	67	26	120	10	75	43	128	444
Total	55	210	57	322	67	360	48	475	118	238	113	469	48	307	140	495	1761
01:00 PM	14	57	19	90	20	90	12	122	29	57	25	111	22	71	24	117	440
01:15 PM	9	55	19	83	15	97	15	127	32	54	22	108	23	64	36	123	441
01:30 PM	16	61	15	92	18	85	6	109	33	57	29	119	25	54	30	109	429
01:45 PM	9	51	14	74	16	89	15	120	32	41	28	101	22	81	39	142	437
Total	48	224	67	339	69	361	48	478	126	209	104	439	92	270	129	491	1747
02:00 PM	13	64	16	93	13	92	12	117	23	64	23	110	23	78	46	147	467
02:15 PM	9	49	21	79	14	105	7	126	33	78	24	135	16	63	41	120	460
02:30 PM	10	56	25	91	22	110	8	140	65	72	19	156	13	80	53	146	533
02:45 PM	11	68	18	97	21	111	13	145	42	66	27	135	16	83	31	130	507
Total	43	237	80	360	70	418	40	528	163	280	93	536	68	304	171	543	1967
03:00 PM	17	68	22	107	22	109	18	149	39	81	40	160	14	84	28	126	542
03:15 PM	19	80	20	119	16	112	13	141	28	57	28	113	14	89	41	144	517
03:30 PM	10	94	22	126	34	114	17	165	25	67	35	127	13	81	42	136	554
03:45 PM	11	92	19	122	20	100	14	134	30	86	37	153	13	93	35	141	550
Total	57	334	83	474	92	435	62	589	122	291	140	553	54	347	146	547	2163
04:00 PM	18	89	18	125	25	121	19	165	21	79	30	130	18	115	46	179	599
04:15 PM	12	118	22	152	20	106	12	138	31	89	25	145	17	91	32	140	575
04:30 PM	9	105	14	128	27	136	15	178	35	71	40	146	21	97	44	162	614
04:45 PM	16	109	16	141	25	117	13	155	35	61	31	127	12	96	40	148	571
Total	55	421	70	546	97	480	59	636	122	300	126	548	68	399	162	629	2359
05:00 PM	14	144	20	178	25	95	17	137	38	90	49	177	11	106	43	160	652
05:15 PM	16	127	24	167	27	121	20	168	36	96	40	172	16	125	39	180	687
05:30 PM	29	97	24	150	18	126	12	156	30	74	34	138	15	110	40	165	609
05:45 PM	17	110	19	146	18	101	7	126	32	80	33	145	29	103	37	169	586
Total	76	478	87	641	88	443	56	587	136	340	156	632	71	444	159	674	2534
Grand Total	527	2814	895	4236	864	4993	544	6401	1332	3332	1142	5806	678	3694	1652	6024	22467
Apprch %	12.4	66.4	21.1		13.5	78	8.5		22.9	57.4	19.7		11.3	61.3	27.4		
Total %	2.3	12.5	4	18.9	3.8	22.2	2.4	28.5	5.9	14.8	5.1	25.8	3	16.4	7.4	26.8	



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Asbury Avenue & Green Grove Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 2 Asbury Avenue & Green Grove Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 3

Groups Printed- Lights - Trucks - Buses

	GREEN GROVE ROAD Southbound				ASBURY AVENUE (CR 16) Westbound				GREEN GROVE ROAD Northbound				ASBURY AVENUE (CR 16) Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Lights	510	2740	857	4107	840	4809	528	6177	1268	3234	1118	5620	657	3556	1581	5794	21698
% Lights	96.8	97.4	95.8	97	97.2	96.3	97.1	96.5	95.2	97.1	97.9	96.8	96.9	96.3	95.7	96.2	96.6
Trucks	13	38	28	79	13	122	9	144	24	41	13	78	16	104	24	144	445
% Trucks	2.5	1.4	3.1	1.9	1.5	2.4	1.7	2.2	1.8	1.2	1.1	1.3	2.4	2.8	1.5	2.4	2
Buses	4	36	10	50	11	62	7	80	40	57	11	108	5	34	47	86	324
% Buses	0.8	1.3	1.1	1.2	1.3	1.2	1.3	1.2	3	1.7	1	1.9	0.7	0.9	2.8	1.4	1.4

Asbury Avenue & Green Grove Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 2 Asbury Avenue & Green Grove Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 4

	GREEN GROVE ROAD Southbound				ASBURY AVENUE (CR 16) Westbound				GREEN GROVE ROAD Northbound				ASBURY AVENUE (CR 16) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	7	50	27	84	22	148	16	186	28	106	22	156	12	73	55	140	566
08:00 AM	8	34	28	70	23	130	6	159	30	113	19	162	12	92	40	144	535
08:15 AM	9	37	30	76	22	137	15	174	22	102	14	138	12	74	68	154	542
08:30 AM	12	52	23	87	29	130	10	169	34	97	20	151	8	89	68	165	572
Total Volume	36	173	108	317	96	545	47	688	114	418	75	607	44	328	231	603	2215
% App. Total	11.4	54.6	34.1		14	79.2	6.8		18.8	68.9	12.4		7.3	54.4	38.3		
PHF	.750	.832	.900	.911	.828	.921	.734	.925	.838	.925	.852	.937	.917	.891	.849	.914	.968
Lights	36	158	106	300	90	526	45	661	110	401	73	584	41	310	220	571	2116
% Lights	100	91.3	98.1	94.6	93.8	96.5	95.7	96.1	96.5	95.9	97.3	96.2	93.2	94.5	95.2	94.7	95.5
Trucks	0	6	1	7	6	14	1	21	2	7	1	10	3	17	3	23	61
% Trucks	0	3.5	0.9	2.2	6.3	2.6	2.1	3.1	1.8	1.7	1.3	1.6	6.8	5.2	1.3	3.8	2.8
Buses	0	9	1	10	0	5	1	6	2	10	1	13	0	1	8	9	38
% Buses	0	5.2	0.9	3.2	0	0.9	2.1	0.9	1.8	2.4	1.3	2.1	0	0.3	3.5	1.5	1.7
Peak Hour Analysis From 10:00 AM to 10:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:00 AM																	
10:00 AM	16	45	15	76	13	80	11	104	13	44	21	78	14	55	17	86	344
10:15 AM	6	43	18	67	10	95	5	110	11	51	9	71	16	67	26	109	357
10:30 AM	8	46	24	78	15	85	11	111	16	62	18	96	13	69	26	108	393
10:45 AM	11	45	13	69	17	82	11	110	21	45	24	90	22	80	24	126	395
Total Volume	41	179	70	290	55	342	38	435	61	202	72	335	65	271	93	429	1489
% App. Total	14.1	61.7	24.1		12.6	78.6	8.7		18.2	60.3	21.5		15.2	63.2	21.7		
PHF	.641	.973	.729	.929	.809	.900	.864	.980	.726	.815	.750	.872	.739	.847	.894	.851	.942
Lights	37	177	65	279	54	318	36	408	58	198	72	328	63	251	92	406	1421
% Lights	90.2	98.9	92.9	96.2	98.2	93.0	94.7	93.8	95.1	98.0	100	97.9	96.9	92.6	98.9	94.6	95.4
Trucks	4	1	5	10	1	19	2	22	0	2	0	2	2	15	1	18	52
% Trucks	9.8	0.6	7.1	3.4	1.8	5.6	5.3	5.1	0	1.0	0	0.6	3.1	5.5	1.1	4.2	3.5
Buses	0	1	0	1	0	5	0	5	3	2	0	5	0	5	0	5	16
% Buses	0	0.6	0	0.3	0	1.5	0	1.1	4.9	1.0	0	1.5	0	1.8	0	1.2	1.1



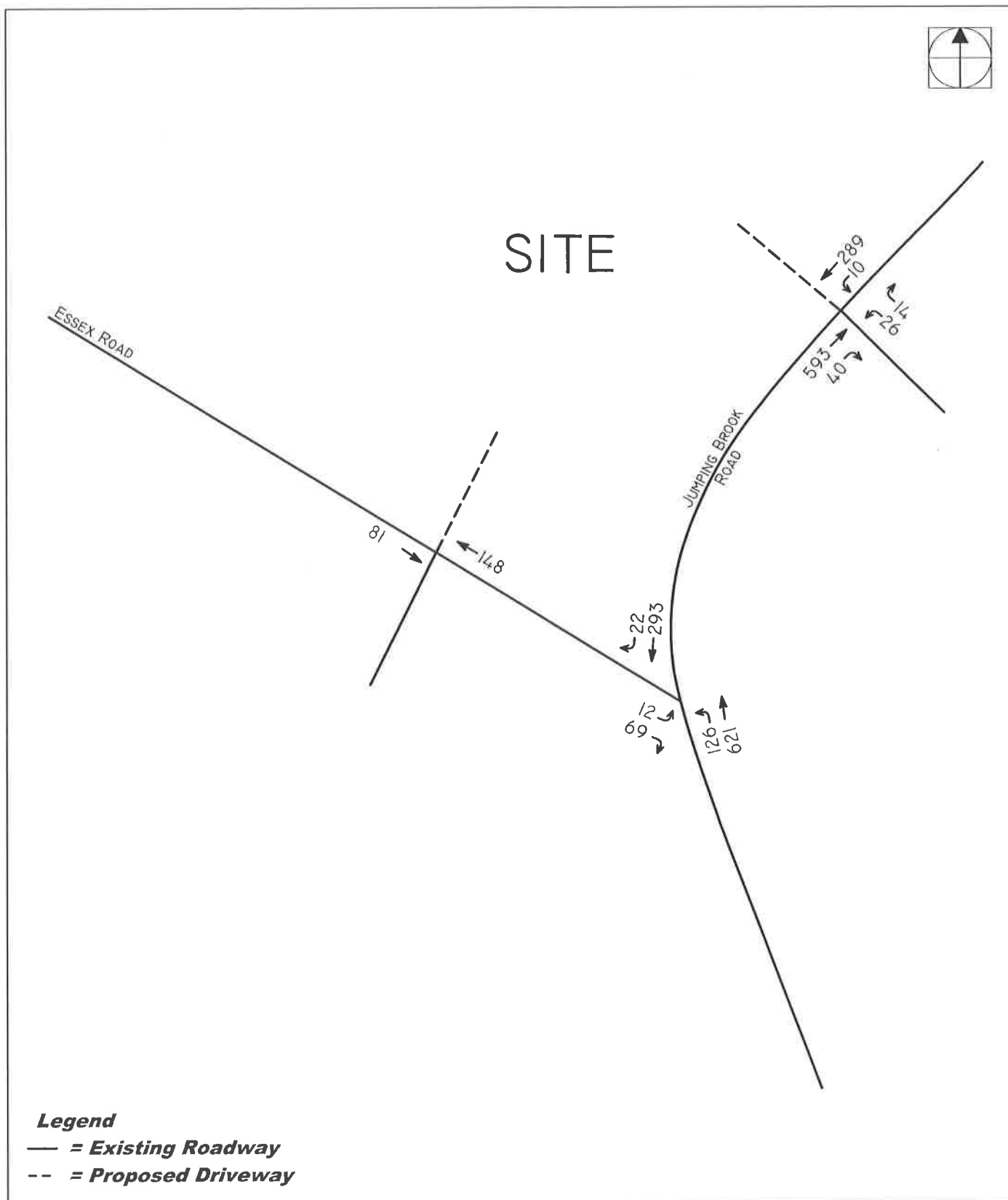
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Asbury Avenue & Green Grove Road
Turning Movement Count
Weekday Peak Hours
Tuesday, 17 September, 2019

File Name : 2 Asbury Avenue & Green Grove Road
Site Code : 00000000
Start Date : 9/17/2019
Page No : 5

	GREEN GROVE ROAD Southbound				ASBURY AVENUE (CR 16) Westbound				GREEN GROVE ROAD Northbound				ASBURY AVENUE (CR 16) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1 Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	14	144	20	178	25	95	17	137	38	90	49	177	11	106	43	160	652
05:15 PM	16	127	24	167	27	121	20	168	36	96	40	172	16	125	39	180	687
05:30 PM	29	97	24	150	18	126	12	156	30	74	34	138	15	110	40	165	609
05:45 PM	17	110	19	146	18	101	7	126	32	80	33	145	29	103	37	169	586
Total Volume	76	478	87	641	88	443	56	587	136	340	156	632	71	444	159	674	2534
% App. Total	11.9	74.6	13.6		15	75.5	9.5		21.5	53.8	24.7		10.5	65.9	23.6		
PHF	.655	.830	.906	.900	.815	.879	.700	.874	.895	.885	.796	.893	.612	.888	.924	.936	.922
Lights	76	476	86	638	88	441	55	584	135	333	155	623	71	442	154	667	2512
% Lights	100	99.6	98.9	99.5	100	99.5	98.2	99.5	99.3	97.9	99.4	98.6	100	99.5	96.9	99.0	99.1
Trucks	0	2	1	3	0	2	1	3	1	3	0	4	0	2	5	7	17
% Trucks	0	0.4	1.1	0.5	0	0.5	1.8	0.5	0.7	0.9	0	0.6	0	0.5	3.1	1.0	0.7
Buses	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	5
% Buses	0	0	0	0	0	0	0	0	0	1.2	0.6	0.8	0	0	0	0	0.2



PROPOSED RETAIL BUILDING
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NEW JERSEY

FIGURE 2



SITE

ESSEX ROAD

JUMPING BROOK ROAD

259
170

42
720

54
205

128
420

684
29
47
78
371
103

Legend

- = Existing Roadway
- = Proposed Driveway

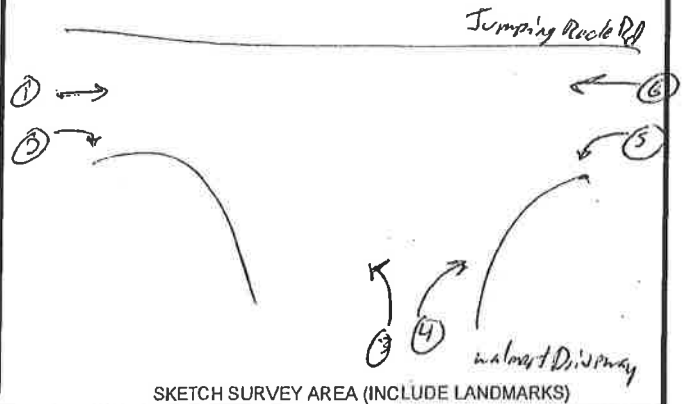
PROPOSED RETAIL BUILDING
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NEW JERSEY

FIGURE 3



2019 EXISTING TRAFFIC VOLUMES
EVENING PEAK HOUR (4:30 TO 5:30 PM)

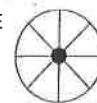
INDICATE
NORTH
BY
ARROW

[illegible]

**DOLAN
& DEAN**
CONSULTING ENGINEERS

908-927-0100
908-927-0181 fax

INDICATE
NORTH
BY
ARROW



TIME from 7:00AM to 9:00AM S M T W T F S
(CIRCLE DAY)

Jumping
Rockers

Essex Rd.

SKETCH SURVEY AREA (INCLUDE LANDMARKS)

[illegible]

[illegible]

[illegible]

Tri-State Traffic Data, Inc.
610-466-1469
TSTData.com

Road: Jumping Brook Rd
Location: 870 ft N of Essex Rd
Counter: 35341

Site Code: 1
Station ID:
A to B NB

Latitude: 40° 22574.0000 North

Start Time	Monday, September 16, 2019		Tuesday, September 17, 2019		Wednesday, September 18, 2019		Thursday, September 19, 2019		Friday, September 20, 2019		Saturday, September 21, 2019		Sunday, September 22, 2019		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	11	13	12	13	20	14	16	16	25	12	27	26	18	16
01:00	*	*	10	8	5	7	12	7	8	10	18	7	18	11	12	8
02:00	*	*	9	12	8	7	9	7	3	2	11	7	18	15	10	8
03:00	*	*	12	4	9	7	10	2	7	1	11	4	9	3	10	4
04:00	*	*	22	10	24	6	31	13	15	12	12	4	7	2	18	8
05:00	*	*	62	37	48	25	64	33	57	40	15	14	12	9	43	26
06:00	*	*	204	111	202	109	213	120	180	107	47	42	27	31	146	87
07:00	*	*	455	209	474	281	474	249	433	211	97	94	62	56	332	183
08:00	*	*	531	241	514	282	521	267	470	260	174	158	120	120	388	221
09:00	*	*	335	232	325	211	308	211	322	234	199	193	165	184	276	211
10:00	*	*	234	233	231	223	228	224	234	244	252	251	253	214	239	232
11:00	*	*	214	247	245	293	264	243	235	285	291	257	287	273	256	266
12:00 PM	*	*	307	286	306	297	310	319	317	354	333	329	329	304	317	315
01:00	*	*	274	287	318	276	328	340	315	346	269	277	284	282	298	301
02:00	*	*	311	331	295	357	303	355	341	403	248	279	241	241	290	328
03:00	322	416	314	431	320	408	332	496	358	461	284	254	271	214	314	383
04:00	313	502	341	526	338	527	333	552	365	562	272	239	251	179	316	441
05:00	328	551	341	559	334	596	342	630	320	558	257	210	231	176	308	469
06:00	227	324	272	319	259	335	262	352	246	308	239	202	208	154	245	285
07:00	177	180	177	206	161	186	178	212	167	181	177	156	155	130	170	179
08:00	134	115	122	126	131	124	140	125	134	127	124	116	105	81	127	116
09:00	93	73	81	113	74	79	76	93	114	94	116	104	54	54	87	87
10:00	56	47	65	44	65	45	83	42	75	68	71	68	65	32	69	49
11:00	30	24	21	29	25	22	44	33	39	42	49	62	19	27	32	34
Total	1680	2232	4725	4614	4723	4716	4885	4939	4771	4926	3591	3339	3218	2818	4321	4257
Day	3912		9339		9439		9824		9697		6930		6036		8578	
AM Peak	-	-	08:00	11:00	08:00	11:00	08:00	08:00	08:00	11:00	11:00	11:00	11:00	11:00	08:00	11:00
Vol.	-	-	531	247	514	293	521	267	470	285	291	257	287	273	388	266
PM Peak	17:00	17:00	16:00	17:00	16:00	17:00	17:00	17:00	16:00	16:00	12:00	12:00	12:00	12:00	12:00	17:00
Vol.	328	551	341	559	338	596	342	630	365	562	333	329	329	304	317	469

Tri-State Traffic Data, Inc.
610-466-1469
TSTData.com

Page 2

Road: Jumping Brook Rd
Location: 870 ft N of Essex Rd
Counter: 35341

Site Code: 1
Station ID:
A to B NB

Latitude: 40° 22574.0000 North

Start Time	Monday, September 23, 2019		Tuesday, September 24, 2019		Wednesday, September 25, 2019		Thursday, September 26, 2019		Friday, September 27, 2019		Saturday, September 28, 2019		Sunday, September 29, 2019		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	17	5	*	*	*	*	*	*	*	*	*	*	*	*	17	5
01:00	9	9	*	*	*	*	*	*	*	*	*	*	*	*	9	9
02:00	9	5	*	*	*	*	*	*	*	*	*	*	*	*	9	5
03:00	6	6	*	*	*	*	*	*	*	*	*	*	*	*	6	6
04:00	21	8	*	*	*	*	*	*	*	*	*	*	*	*	21	8
05:00	63	35	*	*	*	*	*	*	*	*	*	*	*	*	63	35
06:00	185	110	*	*	*	*	*	*	*	*	*	*	*	*	185	110
07:00	421	212	*	*	*	*	*	*	*	*	*	*	*	*	421	212
08:00	458	277	*	*	*	*	*	*	*	*	*	*	*	*	458	277
09:00	352	179	*	*	*	*	*	*	*	*	*	*	*	*	352	179
10:00	228	198	*	*	*	*	*	*	*	*	*	*	*	*	228	198
11:00	234	196	*	*	*	*	*	*	*	*	*	*	*	*	234	196
12:00 PM	305	273	*	*	*	*	*	*	*	*	*	*	*	*	305	273
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total Day	2308	1513	0	0	0	0	0	0	0	0	0	0	0	0	2308	1513
	3821		0		0		0		0		0		0		3821	
AM Peak	08:00	08:00	-	-	-	-	-	-	-	-	-	-	-	-	08:00	08:00
Vol.	458	277	-	-	-	-	-	-	-	-	-	-	-	-	458	277
PM Peak	12:00	12:00	-	-	-	-	-	-	-	-	-	-	-	-	12:00	12:00
Vol.	305	273	-	-	-	-	-	-	-	-	-	-	-	-	305	273

Comb. Total	7733	9339	9439	9824	9697	6930	6036	12399
ADT	ADT 8,597	AADT 8,597						

Hourly Volume Report

County: MONMOUTH
Municip: Neptune Twp
Street: NJ 66
Location: Bet Garden State Parkway and
Jumping Brook Road

Group Type Group Name Factor
Axle RG4_FC14 1.119
Seasonal RG4_FC14 .492

Site ID: 091326
Route/MP: NJ 66-.71
SRI #: 00000066__
Func Cls Urban Principal Arterial - Other

Sun 12/02/12		Mon 12/03/12		Tue 12/04/12		Wed 12/05/12		Thu 12/06/12		Fri 12/07/12		Sat 12/08/12		Average Weekday		
S	N	S	N	S	N	S	N	S	N	S	N	S	N	S	N	Road
00:00				60	62	73	63	61	50					65	58	123
01:00				48	30	41	29	36	30					42	30	72
02:00				28	43	26	41	44	38					33	41	74
03:00				31	40	26	34	26	38					29	37	66
04:00				67	67	61	64	61	69					64	67	131
05:00				153	149	148	176	106	164					136	163	299
06:00				371	462	388	428	342	473					367	454	821
07:00				624	1162	626	1025	555	1021					602	1069	1671
08:00				642	1500	651	1378	608	1541					634	1473	2107
09:00				495	860	460	843							478	852	1330
10:00				495	738	497	782							496	760	1256
11:00				635	761	589	784							612	773	1385
12:00		746	918	770	893	746	918							758	906	1664
13:00		847	823	886	757	796	840							843	807	1650
14:00		902	762	1000	737	877	786							926	762	1688
15:00		1116	765	1073	851	1013	877							1067	831	1898
16:00		1221	824	1229	832	1163	802							1204	819	2023
17:00		1289	793	1268	886	1281	805							1279	828	2107
18:00		769	560	740	624	744	583							751	589	1340
19:00		478	401	510	418	504	378							497	399	896
20:00		363	278	455	262	411	244							410	261	671
21:00		370	187	406	235	390	183							389	202	591
22:00		165	131	192	138	201	137							186	135	321
23:00		111	91	91	96	82	102							95	96	191
Total		8377	6533	12269	12603	11794	12302	1839	3424					11963	12412	24375
10-18		6121	4885	7356	6455	6962	6594							7185	6486	13671

Collected by: NJDOT
Report Printed 10/26/2004
DV04 Page 1 of 1

In Cooperation With
U.S. Department of Transportation
Federal Highway Administration

AADT: 13163 13670 26833
K Factor: .08 D Factor: .589

New Jersey Department of Transportation

Short-term Hourly Traffic Volume for 01/15/2019 to 01/17/2019

Site names: c18331,JUMPING BROOK ROAD 0.66,13341416__
 County: MONMOUTH
 Funct Class: Urban Major Collector
 Location: BET TOOMIN DR & 66

Seasonal Factor Grp: rg4_5U
 Daily Factor Grp: rg4_5U
 Axle Factor Grp: rg4_5U
 Growth Factor Grp: rg4_5U

	Sun, Jan 13, 2019			Mon, Jan 14, 2019			Tue, Jan 15, 2019			Wed, Jan 16, 2019			Thu, Jan 17, 2019			Fri, Jan 18, 2019			Sat, Jan 19, 2019		
	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S	Road	N	S
00:00										34	15	19	28	13	15						
01:00										17	10	7	16	7	9						
02:00										10	7	3	7	5	2						
03:00										8	5	3	12	10	2						
04:00										14	12	2	14	11	3						
05:00										48	32	16	50	30	20						
06:00										190	129	61	168	112	56						
07:00										337	225	112	372	249	123						
08:00										511	297	214	487	273	214						
09:00										439	271	168	472	280	192						
10:00										456	248	208	510	265	245						
11:00										515	274	241	568	315	253						
12:00										591	296	295	734	384	350						
13:00							642	332	310	636	304	332									
14:00							571	258	313	590	299	291									
15:00							630	320	310	686	324	362									
16:00							675	303	372	789	333	456									
17:00							723	302	421	724	292	432									
18:00							461	182	279	502	200	302									
19:00							326	143	183	336	140	196									
20:00							251	95	156	235	109	126									
21:00							167	62	105	192	71	121									
22:00							115	45	70	89	32	57									
23:00							61	23	38	52	20	32									
Total							4,622	2,065	2,557	8,001	3,945	4,056	3,438	1,954	1,484						
AM Peak Vol										528	309	241	568	315	253						
AM Peak Fct										.767	.931	.603	.724	.736	.711						
AM Peak Hr										8: 15	8: 30	11: 00	11: 00	11: 00	11: 00						
PM Peak Vol										791	351	473	0	0	0						
PM Peak Fct										.951	.878	.938									
PM Peak Hr										16: 30	15: 45	16: 45	0: 00	0: 00	0: 00						
Seasonal Fct							1.286	1.286	1.286	1.286	1.286	1.286	1.286	1.286	1.286						
Daily Fct							.996	.996	.996	.936	.936	.936	.916	.916	.916						
Axle Fct							.494	.494	.494	.494	.494	.494	.494	.494	.494						
Pulse Fct							2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000						

TRIP PROJECTIONS

DNJ4 in Tinton Falls, NJ - Site Specific

	Associates			Trucks			DSP Drivers			DSP Vans			Flex			Total		
Time	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
00:00	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1	1	2
00:30	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
01:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
01:30	93	0	93	0	1	1	0	0	0	0	0	0	0	0	0	93	1	94
02:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
02:30	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
03:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
03:30	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
04:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
04:30	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1	1	2
05:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
05:30	28	0	28	1	0	1	0	0	0	0	0	0	0	0	0	29	0	29
06:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
06:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
07:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
09:00	0	0	0	0	1	1	20	0	20	0	0	0	0	0	0	20	1	21
09:30	0	0	0	1	0	1	80	0	80	0	0	0	0	0	0	81	0	81
10:00	0	0	0	0	1	1	85	0	85	0	60	60	0	0	0	85	61	146
10:30	0	0	0	0	0	0	10	0	10	0	120	120	0	0	0	10	120	130
11:00	0	0	0	1	0	1	0	0	0	0	15	15	0	0	0	1	15	16
11:30	5	0	5	0	1	1	0	0	0	0	0	0	0	0	0	5	1	6
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	93	93	0	0	0	0	0	0	0	0	0	0	0	0	0	93	93
13:00	28	0	28	0	0	0	0	0	0	0	0	0	0	0	0	28	0	28
13:30	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	23	0	23
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	28	28
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	54	0	54	54	0	54
16:30	0	0	0	1	0	1	0	0	0	0	0	0	0	28	28	1	28	29
17:00	0	0	0	0	1	1	0	0	0	0	0	0	0	26	26	0	27	27
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0	23	23
18:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
19:00	0	0	0	1	1	2	0	15	15	15	0	15	0	0	0	16	16	32
19:30	0	0	0	0	1	1	0	30	30	75	0	75	0	0	0	75	31	106
20:00	0	0	0	1	0	1	0	94	94	49	0	49	0	0	0	50	94	144
20:30	0	0	0	0	1	1	0	34	34	53	0	53	0	0	0	53	35	88
21:00	0	0	0	1	0	1	0	22	22	3	0	3	0	0	0	4	22	26
21:30	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1	1	2
22:00	0	28	28	0	1	1	0	0	0	0	0	0	0	0	0	0	29	29
22:30	0	5	5	1	0	1	0	0	0	0	0	0	0	0	0	1	5	6
23:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
23:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
Total	177	177	354	19	19	38	195	195	390	195	195	390	54	54	109	640	640	1,281

1st Shift:	2:00 AM	12:30 PM	93	Assoc.	25%
2nd Shift:	6:00 AM	2:30 PM	28	Assoc.	8%
3rd Shift:	1:30 PM	10:00 PM	28	Assoc.	8%
PFSO Shift:	2:00 PM	6:00 PM	23	Assoc.	6%
RTS Shift:	12:00 PM	10:30 PM	5	Assoc.	1%
Drivers:	9:20 AM	9:10 PM	195	Drivers	52%

CAPACITY ANALYSIS PRINTOUTS



NJ ROUTE 66 and JUMPING BROOK ROAD INTERSECTION

90 – SECOND BACKGROUND CYCLE

<u>Phase</u>	<u>Signal Indications</u>							<u>Time (Seconds)</u>		
	<u>1,2</u>	<u>4,5</u>	<u>3,6, 14,15</u>	<u>7,8</u>	<u>9,10</u>	<u>11,12</u>	<u>13, 16,17</u>	<u>I</u>	<u>II</u>	<u>III</u>
VEHICLE ACTUATION										
A) Route 66 Lead Lefts Change	<G-/R <Y-/R	<G-/R <Y-/R	R R	R R	R/-G> R/-Y>	R R	R R	5 – 12 3	5 – 7 3	5 – 10 3
B) Route 66 ROW Change Clearance	G Y R	G Y R	G Y R	R R R	R R R	R R R	R R R	53 – 20 5* 2	53 – 16 5* 2	53 – 23 5* 2
C) Jumping Brook Road Lead Lefts Change	R R	R R	R R	<G-/R <Y-/R	R R	<G-/R <Y-/R	R R	5 – 7 3	5 – 10 3	5 – 10 3
D) Jumping Brook Road ROW Change Clearance	R R R	R R R	R R R	G Y R	G Y R	G Y R	G Y R	7 – 31 3 4	7 – 37 3 4	7 – 27 3 4
Emergency Flash	Y	Y	Y	R	R	R	R	-	-	-

NOTES:

1. The memory circuits are to be disconnected.
2. The vehicle extension shall be set at 2 seconds.
3. The manual control is to be disconnected.
4. Actuation of pedestrian push button shall call Phase D and guarantee a minimum of 30 seconds of green time.
5. The left-turn lanes on Route 66 are to be wired separately but concurrently timed if actuation occurs on both approaches. Each left-turn lane shall have the capability of extending or terminating independently of the other. If one of the left-turn lanes terminates, the non-conflicting through movement shall be initiated and the conflicting right-turn overlap shall be terminated prior to Phase B for Route 66.
6. The left-turn lanes on Jumping Brook Road are to be wired separately but concurrently timed if actuation occurs on both approaches. Each left-turn lane shall have the capability of extending or terminating independently of the other, thereby reverting the timing to the non-conflicting through movement.
7. *An offset of 58 seconds is to be measured from the beginning of yellow for Route 66 traffic at the Asbury Avenue intersection to the beginning of yellow for Route 66 traffic at this intersection.
8. Phase D must follow Phase C actuation.
9. Phase A can only follow Phase D.

HOURS OF OPERATION:

I	- A.M. Peak	/ 6:00 A.M. – 9:00 A.M., Monday – Friday
II	- P.M. / Sat. Peak	/ 3:00 P.M. – 7:00 P.M., Monday – Friday and All Day Saturday
III	- Off Peak	/ All Other Times

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 No-Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	572	622	136	107	404	37	134	152	81	44	120	172
Future Volume (vph)	572	622	136	107	404	37	134	152	81	44	120	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	15	12	12	12
Storage Length (ft)	250		0	230		0	165		150	170		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	160			100			35			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	*0.78	0.95	1.00	1.00	1.00	1.00	*0.58	1.00
Fr _t			0.850		0.988				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1827	1583	1805	2811	0	1719	1863	1708	1719	2161	1429
Fl _t Permitted	0.230			0.413			0.510			0.654		
Satd. Flow (perm)	416	1827	1583	785	2811	0	923	1863	1708	1183	2161	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			124		8				86			183
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		668			485			415			363	
Travel Time (s)		9.1			6.6			11.3			9.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	4%	2%	0%	4%	6%	5%	2%	4%	5%	2%	13%
Adj. Flow (vph)	609	662	145	114	430	39	143	162	86	47	128	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	609	662	145	114	469	0	143	162	86	47	128	183
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		30			40			40			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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	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	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	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 No-Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0		5.0	7.0	5.0	5.0	7.0	7.0
Minimum Split (s)	8.0	27.0	27.0	8.0	27.0		8.0	14.0	8.0	8.0	14.0	14.0
Total Split (s)	15.0	27.0	27.0	15.0	27.0		10.0	38.0	15.0	10.0	38.0	38.0
Total Split (%)	16.7%	30.0%	30.0%	16.7%	30.0%		11.1%	42.2%	16.7%	11.1%	42.2%	42.2%
Maximum Green (s)	12.0	20.0	20.0	12.0	20.0		7.0	31.0	12.0	7.0	31.0	31.0
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	4.0	0.0	0.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0		3.0	7.0	3.0	3.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	Min	None	None	None	None
Act Effct Green (s)	58.4	44.6	44.6	30.8	20.0		24.0	15.8	29.6	21.8	11.7	11.7
Actuated g/C Ratio	0.65	0.50	0.50	0.34	0.22		0.27	0.18	0.33	0.24	0.13	0.13
v/c Ratio	0.84	0.73	0.17	0.33	0.74		0.47	0.50	0.14	0.15	0.46	0.53
Control Delay	29.1	26.1	4.8	13.7	40.4		29.6	39.6	5.2	23.0	40.3	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	26.1	4.8	13.7	40.4		29.6	39.6	5.2	23.0	40.3	11.3
LOS	C	C	A	B	D		C	D	A	C	D	B
Approach Delay		25.2			35.2			28.4			23.2	
Approach LOS		C			D			C			C	
90th %ile Green (s)	25.6	36.4	36.4	9.2	20.0		7.0	17.4	9.2	7.0	17.4	17.4
90th %ile Term Code	Max	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
70th %ile Green (s)	28.7	41.2	41.2	7.5	20.0		7.0	14.3	7.5	7.0	14.3	14.3
70th %ile Term Code	Max	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	31.4	44.8	44.8	6.6	20.0		7.0	12.3	6.6	6.3	11.6	11.6
50th %ile Term Code	Max	Coord	Coord	Gap	Coord		Max	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	34.8	49.1	49.1	5.7	20.0		7.0	18.2	5.7	0.0	8.2	8.2
30th %ile Term Code	Max	Coord	Coord	Gap	Coord		Max	Hold	Gap	Skip	Gap	Gap
10th %ile Green (s)	36.4	51.4	51.4	5.0	20.0		6.6	16.6	5.0	0.0	7.0	7.0
10th %ile Term Code	Max	Coord	Coord	Min	Coord		Gap	Hold	Min	Skip	Min	Min
Stops (vph)	333	458	23	68	390		103	135	12	33	106	27
Fuel Used(gal)	11	13	1	2	12		2	2	0	0	2	1
CO Emissions (g/hr)	763	906	74	137	852		117	159	29	33	123	72
NOx Emissions (g/hr)	149	176	14	27	166		23	31	6	6	24	14
VOC Emissions (g/hr)	177	210	17	32	197		27	37	7	8	29	17
Dilemma Vehicles (#)	0	33	0	0	24		0	0	0	0	0	0
Queue Length 50th (ft)	224	283	6	22	157		63	88	0	20	58	0
Queue Length 95th (ft)	#491	#559	43	50	225		102	143	29	41	98	55
Internal Link Dist (ft)		588			405			335			283	
Turn Bay Length (ft)	250			230			165		150	170		100
Base Capacity (vph)	724	904	846	450	630		307	641	712	340	744	344
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 No-Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.73	0.17	0.25	0.74		0.47	0.25	0.12	0.14	0.17	0.53

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 27.5

Intersection LOS: C

Intersection Capacity Utilization 79.9%

ICU Level of Service D

Analysis Period (min) 15

* User Entered Value

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Jumping Brook Road & NJ Route 66

 Ø1	 Ø2 (R)	 Ø3	 Ø4
15 s	27 s	10 s	38 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
15 s	27 s	10 s	38 s

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

Weekday AM Generator Peak Hour
2021 No-Build Condition

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	308	105	104	362	46	123	177	103	85	142	120
Future Volume (vph)	201	308	105	104	362	46	123	177	103	85	142	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	15	12	12	12
Storage Length (ft)	250		0	230		0	165		150	170		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	160			100			35			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	*0.77	0.95	1.00	1.00	1.00	1.00	*0.58	1.00
Frt			0.850		0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1845	1599	1752	2699	0	1752	1881	1692	1752	2182	1553
Flt Permitted	0.407			0.558			0.522			0.643		
Satd. Flow (perm)	723	1845	1599	1029	2699	0	963	1881	1692	1186	2182	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121		11				106			124
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		668			485			415			363	
Travel Time (s)		9.1			6.6			11.3			9.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	7%	3%	1%	3%	7%	3%	3%	1%	5%	3%	1%	4%
Adj. Flow (vph)	207	318	108	107	373	47	127	182	106	88	146	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	207	318	108	107	420	0	127	182	106	88	146	124
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		30			40			40			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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	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	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	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

Weekday AM Generator Peak Hour
2021 No-Build Condition

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	5.0	23.0	23.0	5.0	23.0		5.0	7.0	5.0	5.0	7.0	7.0
Minimum Split (s)	8.0	30.0	30.0	8.0	30.0		8.0	14.0	8.0	8.0	14.0	14.0
Total Split (s)	13.0	30.0	30.0	13.0	30.0		13.0	34.0	13.0	13.0	34.0	34.0
Total Split (%)	14.4%	33.3%	33.3%	14.4%	33.3%		14.4%	37.8%	14.4%	14.4%	37.8%	37.8%
Maximum Green (s)	10.0	23.0	23.0	10.0	23.0		10.0	27.0	10.0	10.0	27.0	27.0
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	4.0	0.0	0.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0		3.0	7.0	3.0	3.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	55.3	42.2	42.2	50.4	39.5		26.2	14.8	28.7	23.9	12.2	12.2
Actuated g/C Ratio	0.61	0.47	0.47	0.56	0.44		0.29	0.16	0.32	0.27	0.14	0.14
v/c Ratio	0.38	0.37	0.13	0.17	0.35		0.36	0.59	0.17	0.24	0.49	0.39
Control Delay	10.6	18.9	3.5	9.2	19.5		24.4	43.1	4.7	22.4	40.7	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	18.9	3.5	9.2	19.5		24.4	43.1	4.7	22.4	40.7	9.9
LOS	B	B	A	A	B		C	D	A	C	D	A
Approach Delay		13.6			17.4			27.6			25.6	
Approach LOS		B			B			C			C	
90th %ile Green (s)	14.3	32.1	32.1	9.5	27.3		10.0	18.4	9.5	10.0	18.4	18.4
90th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
70th %ile Green (s)	11.1	38.0	38.0	7.7	34.6		10.0	15.3	7.7	9.0	14.3	14.3
70th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Gap	Hold	Hold
50th %ile Green (s)	9.2	42.3	42.3	6.7	39.8		9.3	13.1	6.7	7.9	11.7	11.7
50th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Gap	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	7.6	46.5	46.5	5.8	44.7		8.0	11.0	5.8	6.7	9.7	9.7
30th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Gap	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	5.9	51.9	51.9	5.0	51.0		6.1	16.1	5.0	0.0	7.0	7.0
10th %ile Term Code	Gap	Coord	Coord	Min	Coord		Gap	Hold	Min	Skip	Min	Min
Stops (vph)	86	200	11	48	266		85	160	14	58	125	20
Fuel Used(gal)	3	6	1	2	8		1	3	1	1	2	1
CO Emissions (g/hr)	182	389	48	107	564		96	195	36	61	146	48
NOx Emissions (g/hr)	35	76	9	21	110		19	38	7	12	28	9
VOC Emissions (g/hr)	42	90	11	25	131		22	45	8	14	34	11
Dilemma Vehicles (#)	0	17	0	0	23		0	0	0	0	0	0
Queue Length 50th (ft)	46	111	0	22	96		53	99	0	36	68	0
Queue Length 95th (ft)	98	217	28	54	180		85	156	31	62	108	45
Internal Link Dist (ft)		588			405			335			283	
Turn Bay Length (ft)	250			230			165		150	170		100
Base Capacity (vph)	569	864	813	689	1190		373	564	666	405	654	318
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

Weekday AM Generator Peak Hour
2021 No-Build Condition

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.37	0.13	0.16	0.35		0.34	0.32	0.16	0.22	0.22	0.39

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 19.8

Intersection LOS: B

Intersection Capacity Utilization 62.7%

ICU Level of Service B

Analysis Period (min) 15

* User Entered Value

Splits and Phases: 1: Jumping Brook Road & NJ Route 66

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	30 s	13 s	34 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
13 s	30 s	13 s	34 s

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 No-Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	261	447	109	181	693	69	236	242	149	151	263	510
Future Volume (vph)	261	447	109	181	693	69	236	242	149	151	263	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	15	12	12	12
Storage Length (ft)	250		0	230		0	165		150	170		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	160			100			35			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	*0.87	0.95	1.00	1.00	1.00	1.00	*0.59	1.00
Fr _t			0.850		0.986				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1599	1787	3230	0	1787	1900	1777	1805	2220	1583
Fl _t Permitted	0.154			0.368			0.345			0.429		
Satd. Flow (perm)	287	1863	1599	692	3230	0	649	1900	1777	815	2220	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121		9				164			331
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		668			485			415			363	
Travel Time (s)		9.1			6.6			11.3			9.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	1%	1%	1%	0%	1%	0%	0%	0%	1%	2%
Adj. Flow (vph)	287	491	120	199	762	76	259	266	164	166	289	560
Shared Lane Traffic (%)												
Lane Group Flow (vph)	287	491	120	199	838	0	259	266	164	166	289	560
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		30			40			40			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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	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	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	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 No-Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	5.0	16.0	16.0	5.0	16.0		5.0	7.0	5.0	5.0	7.0	7.0
Minimum Split (s)	8.0	23.0	23.0	8.0	23.0		8.0	14.0	8.0	8.0	14.0	14.0
Total Split (s)	10.0	23.0	23.0	10.0	23.0		13.0	44.0	10.0	13.0	44.0	44.0
Total Split (%)	11.1%	25.6%	25.6%	11.1%	25.6%		14.4%	48.9%	11.1%	14.4%	48.9%	48.9%
Maximum Green (s)	7.0	16.0	16.0	7.0	16.0		10.0	37.0	7.0	10.0	37.0	37.0
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	4.0	0.0	0.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0		3.0	7.0	3.0	3.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	50.0	32.1	32.1	37.8	23.0		31.8	17.9	35.7	30.3	17.1	17.1
Actuated g/C Ratio	0.56	0.36	0.36	0.42	0.26		0.35	0.20	0.40	0.34	0.19	0.19
v/c Ratio	0.59	0.74	0.19	0.47	1.01		0.73	0.71	0.20	0.44	0.68	0.98
Control Delay	19.9	36.4	6.0	16.1	68.4		33.1	43.7	2.8	22.0	41.8	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	36.4	6.0	16.1	68.4		33.1	43.7	2.8	22.0	41.8	49.5
LOS	B	D	A	B	E		C	D	A	C	D	D
Approach Delay		27.1			58.4			30.0			42.8	
Approach LOS		C			E			C			D	
90th %ile Green (s)	19.2	21.7	21.7	14.4	16.9		10.0	23.9	14.4	10.0	23.9	23.9
90th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
70th %ile Green (s)	17.7	27.7	27.7	12.3	22.3		10.0	20.0	12.3	10.0	20.0	20.0
70th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	18.0	32.0	32.0	10.9	24.9		10.0	17.1	10.9	10.0	17.1	17.1
50th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	19.7	36.8	36.8	9.2	26.3		10.0	15.0	9.2	9.0	14.0	14.0
30th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Hold	Gap	Gap	Gap	Gap
10th %ile Green (s)	25.3	42.5	42.5	7.4	24.6		9.5	13.3	7.4	6.8	10.6	10.6
10th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Gap	Hold	Gap	Gap	Gap	Gap
Stops (vph)	151	340	17	107	608		169	217	15	98	235	220
Fuel Used(gal)	4	10	1	3	24		3	4	1	2	4	8
CO Emissions (g/hr)	313	729	60	230	1706		215	269	47	106	276	529
NOx Emissions (g/hr)	61	142	12	45	332		42	52	9	21	54	103
VOC Emissions (g/hr)	73	169	14	53	395		50	62	11	25	64	123
Dilemma Vehicles (#)	0	22	0	0	37		0	0	0	0	0	0
Queue Length 50th (ft)	81	241	0	53	263		105	144	0	63	130	143
Queue Length 95th (ft)	183	#508	41	107	#497		146	206	29	95	183	#320
Internal Link Dist (ft)		588			405			335			283	
Turn Bay Length (ft)	250			230			165		150	170		100
Base Capacity (vph)	488	665	648	422	832		355	781	803	391	912	569
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 No-Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.74	0.19	0.47	1.01		0.73	0.34	0.20	0.42	0.32	0.98

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 40.9

Intersection LOS: D

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

* User Entered Value

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Jumping Brook Road & NJ Route 66

 Ø1	 Ø2 (R)	 Ø3	 Ø4
10 s	23 s	13 s	44 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
10 s	23 s	13 s	44 s

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	573	622	136	107	404	37	134	152	81	44	120	172
Future Volume (vph)	573	622	136	107	404	37	134	152	81	44	120	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	15	12	12	12
Storage Length (ft)	250		0	230		0	165		150	170		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	160			100			35			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	*0.78	0.95	1.00	1.00	1.00	1.00	*0.58	1.00
Fr't			0.850		0.988				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1827	1583	1805	2811	0	1719	1863	1708	1719	2161	1429
Flt Permitted	0.230			0.413			0.510			0.654		
Satd. Flow (perm)	416	1827	1583	785	2811	0	923	1863	1708	1183	2161	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			124		8				86			183
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		668			485			415			363	
Travel Time (s)		9.1			6.6			11.3			9.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	4%	2%	0%	4%	6%	5%	2%	4%	5%	2%	13%
Adj. Flow (vph)	610	662	145	114	430	39	143	162	86	47	128	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	610	662	145	114	469	0	143	162	86	47	128	183
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		30			40			40			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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	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	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	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0		5.0	7.0	5.0	5.0	7.0	7.0
Minimum Split (s)	8.0	27.0	27.0	8.0	27.0		8.0	14.0	8.0	8.0	14.0	14.0
Total Split (s)	15.0	27.0	27.0	15.0	27.0		10.0	38.0	15.0	10.0	38.0	38.0
Total Split (%)	16.7%	30.0%	30.0%	16.7%	30.0%		11.1%	42.2%	16.7%	11.1%	42.2%	42.2%
Maximum Green (s)	12.0	20.0	20.0	12.0	20.0		7.0	31.0	12.0	7.0	31.0	31.0
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	4.0	0.0	0.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0		3.0	7.0	3.0	3.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	58.4	44.6	44.6	30.8	20.0		24.0	15.8	29.6	21.8	11.7	11.7
Actuated g/C Ratio	0.65	0.50	0.50	0.34	0.22		0.27	0.18	0.33	0.24	0.13	0.13
v/c Ratio	0.84	0.73	0.17	0.33	0.74		0.47	0.50	0.14	0.15	0.46	0.53
Control Delay	29.2	26.1	4.8	13.7	40.4		29.6	39.6	5.2	23.0	40.3	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	26.1	4.8	13.7	40.4		29.6	39.6	5.2	23.0	40.3	11.3
LOS	C	C	A	B	D		C	D	A	C	D	B
Approach Delay		25.2			35.2			28.4			23.2	
Approach LOS		C			D			C			C	
90th %ile Green (s)	25.6	36.4	36.4	9.2	20.0		7.0	17.4	9.2	7.0	17.4	17.4
90th %ile Term Code	Max	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
70th %ile Green (s)	28.7	41.2	41.2	7.5	20.0		7.0	14.3	7.5	7.0	14.3	14.3
70th %ile Term Code	Max	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	31.4	44.8	44.8	6.6	20.0		7.0	12.3	6.6	6.3	11.6	11.6
50th %ile Term Code	Max	Coord	Coord	Gap	Coord		Max	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	34.8	49.1	49.1	5.7	20.0		7.0	18.2	5.7	0.0	8.2	8.2
30th %ile Term Code	Max	Coord	Coord	Gap	Coord		Max	Hold	Gap	Skip	Gap	Gap
10th %ile Green (s)	36.4	51.4	51.4	5.0	20.0		6.6	16.6	5.0	0.0	7.0	7.0
10th %ile Term Code	Max	Coord	Coord	Min	Coord		Gap	Hold	Min	Skip	Min	Min
Stops (vph)	335	458	23	68	390		103	135	12	33	106	27
Fuel Used(gal)	11	13	1	2	12		2	2	0	0	2	1
CO Emissions (g/hr)	767	906	74	137	852		117	159	29	33	123	72
NOx Emissions (g/hr)	149	176	14	27	166		23	31	6	6	24	14
VOC Emissions (g/hr)	178	210	17	32	197		27	37	7	8	29	17
Dilemma Vehicles (#)	0	33	0	0	24		0	0	0	0	0	0
Queue Length 50th (ft)	225	283	6	22	157		63	88	0	20	58	0
Queue Length 95th (ft)	#492	#559	43	50	225		102	143	29	41	98	55
Internal Link Dist (ft)		588			405			335			283	
Turn Bay Length (ft)	250			230			165		150	170		100
Base Capacity (vph)	724	904	846	450	630		307	641	712	340	744	344
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.73	0.17	0.25	0.74		0.47	0.25	0.12	0.14	0.17	0.53

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 27.5

Intersection LOS: C

Intersection Capacity Utilization 80.0%

ICU Level of Service D

Analysis Period (min) 15

* User Entered Value

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Jumping Brook Road & NJ Route 66

 Ø1	 Ø2 (R)	 Ø3	 Ø4
15 s	27 s	10 s	38 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
15 s	27 s	10 s	38 s

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday AM Generator Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	241	308	105	104	362	48	123	183	103	89	153	196
Future Volume (vph)	241	308	105	104	362	48	123	183	103	89	153	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	15	12	12	12
Storage Length (ft)	250		0	230		0	165		150	170		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	160			100			35			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	*0.77	0.95	1.00	1.00	1.00	1.00	*0.58	1.00
Fr't			0.850		0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1845	1599	1752	2700	0	1752	1881	1692	1752	2182	1553
Flt Permitted	0.397			0.568			0.517			0.639		
Satd. Flow (perm)	705	1845	1599	1048	2700	0	954	1881	1692	1179	2182	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121		12				106			202
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		668			485			415			363	
Travel Time (s)		9.1			6.6			11.3			9.9	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	7%	3%	1%	3%	7%	3%	3%	1%	5%	3%	1%	4%
Adj. Flow (vph)	248	318	108	107	373	49	127	189	106	92	158	202
Shared Lane Traffic (%)												
Lane Group Flow (vph)	248	318	108	107	422	0	127	189	106	92	158	202
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		30			40			40			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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	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	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	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday AM Generator Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	5.0	23.0	23.0	5.0	23.0		5.0	7.0	5.0	5.0	7.0	7.0
Minimum Split (s)	8.0	30.0	30.0	8.0	30.0		8.0	14.0	8.0	8.0	14.0	14.0
Total Split (s)	13.0	30.0	30.0	13.0	30.0		13.0	34.0	13.0	13.0	34.0	34.0
Total Split (%)	14.4%	33.3%	33.3%	14.4%	33.3%		14.4%	37.8%	14.4%	14.4%	37.8%	37.8%
Maximum Green (s)	10.0	23.0	23.0	10.0	23.0		10.0	27.0	10.0	10.0	27.0	27.0
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	4.0	0.0	0.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0		3.0	7.0	3.0	3.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	55.4	41.8	41.8	48.9	37.9		26.5	15.1	29.1	24.4	12.6	12.6
Actuated g/C Ratio	0.62	0.46	0.46	0.54	0.42		0.29	0.17	0.32	0.27	0.14	0.14
v/c Ratio	0.45	0.37	0.13	0.17	0.37		0.35	0.60	0.17	0.25	0.52	0.52
Control Delay	11.7	19.3	3.6	9.5	20.9		24.1	43.0	4.6	22.3	41.0	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	19.3	3.6	9.5	20.9		24.1	43.0	4.6	22.3	41.0	9.8
LOS	B	B	A	A	C		C	D	A	C	D	A
Approach Delay		14.0			18.6			27.7			23.3	
Approach LOS		B			B			C			C	
90th %ile Green (s)	16.4	31.6	31.6	9.6	24.8		10.0	18.8	9.6	10.0	18.8	18.8
90th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
70th %ile Green (s)	12.6	37.4	37.4	7.8	32.6		10.0	15.7	7.8	9.1	14.8	14.8
70th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Gap	Hold	Hold
50th %ile Green (s)	10.4	41.8	41.8	6.7	38.1		9.3	13.5	6.7	8.0	12.2	12.2
50th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Gap	Gap	Gap	Gap	Hold	Hold
30th %ile Green (s)	8.5	46.1	46.1	5.8	43.4		8.0	11.3	5.8	6.8	10.1	10.1
30th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Gap	Gap	Gap	Gap	Hold	Hold
10th %ile Green (s)	6.4	51.9	51.9	5.0	50.5		6.1	16.1	5.0	0.0	7.0	7.0
10th %ile Term Code	Gap	Coord	Coord	Min	Coord		Gap	Hold	Min	Skip	Min	Min
Stops (vph)	108	202	11	50	277		84	166	14	61	135	27
Fuel Used(gal)	3	6	1	2	8		1	3	1	1	2	1
CO Emissions (g/hr)	227	393	48	110	586		95	202	36	64	159	77
NOx Emissions (g/hr)	44	76	9	21	114		19	39	7	12	31	15
VOC Emissions (g/hr)	53	91	11	26	136		22	47	8	15	37	18
Dilemma Vehicles (#)	0	17	0	0	23		0	0	0	0	0	0
Queue Length 50th (ft)	58	113	0	23	100		53	103	0	38	73	0
Queue Length 95th (ft)	118	219	28	54	189		84	161	31	64	115	55
Internal Link Dist (ft)		588			405			335			283	
Turn Bay Length (ft)	250			230			165		150	170		100
Base Capacity (vph)	566	855	806	680	1143		375	564	671	409	654	391
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday AM Generator Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.37	0.13	0.16	0.37		0.34	0.34	0.16	0.22	0.24	0.52

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 20.0

Intersection LOS: B

Intersection Capacity Utilization 65.4%

ICU Level of Service C

Analysis Period (min) 15

* User Entered Value

Splits and Phases: 1: Jumping Brook Road & NJ Route 66

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	30 s	13 s	34 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
13 s	30 s	13 s	34 s

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	262	447	109	181	693	69	236	242	149	152	266	534
Future Volume (vph)	262	447	109	181	693	69	236	242	149	152	266	534
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	15	12	12	12
Storage Length (ft)	250		0	230		0	165		150	170		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	160			100			35			40		
Lane Util. Factor	1.00	1.00	1.00	1.00	*0.87	0.95	1.00	1.00	1.00	1.00	*0.59	1.00
Fr't			0.850		0.986				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1599	1787	3230	0	1787	1900	1777	1805	2220	1583
Flt Permitted	0.155			0.369			0.339			0.429		
Satd. Flow (perm)	289	1863	1599	694	3230	0	638	1900	1777	815	2220	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			121		9				164			330
Link Speed (mph)		50			50			25			25	
Link Distance (ft)		668			485			415			363	
Travel Time (s)		9.1			6.6			11.3			9.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	1%	1%	1%	0%	1%	0%	0%	0%	1%	2%
Adj. Flow (vph)	288	491	120	199	762	76	259	266	164	167	292	587
Shared Lane Traffic (%)												
Lane Group Flow (vph)	288	491	120	199	838	0	259	266	164	167	292	587
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		15			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		30			40			40			35	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	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	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	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	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2		1	6		7	4	1	3	8	
Permitted Phases	2		2	6			4		4	8		8
Detector Phase	5	2	2	1	6		7	4	1	3	8	
Switch Phase												
Minimum Initial (s)	5.0	16.0	16.0	5.0	16.0		5.0	7.0	5.0	5.0	7.0	7.0
Minimum Split (s)	8.0	23.0	23.0	8.0	23.0		8.0	14.0	8.0	8.0	14.0	14.0
Total Split (s)	10.0	23.0	23.0	10.0	23.0		13.0	44.0	10.0	13.0	44.0	44.0
Total Split (%)	11.1%	25.6%	25.6%	11.1%	25.6%		14.4%	48.9%	11.1%	14.4%	48.9%	48.9%
Maximum Green (s)	7.0	16.0	16.0	7.0	16.0		10.0	37.0	7.0	10.0	37.0	37.0
Yellow Time (s)	3.0	5.0	5.0	3.0	5.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	4.0	0.0	0.0	4.0	4.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	7.0	7.0	3.0	7.0		3.0	7.0	3.0	3.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	None
Act Effct Green (s)	49.9	32.1	32.1	37.7	22.8		31.8	17.9	35.7	30.3	17.2	17.2
Actuated g/C Ratio	0.55	0.36	0.36	0.42	0.25		0.35	0.20	0.40	0.34	0.19	0.19
v/c Ratio	0.59	0.74	0.19	0.47	1.01		0.74	0.71	0.20	0.45	0.69	1.03
Control Delay	19.9	36.5	6.0	16.1	70.1		33.5	43.6	2.8	22.0	42.0	63.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	36.5	6.0	16.1	70.1		33.5	43.6	2.8	22.0	42.0	63.0
LOS	B	D	A	B	E		C	D	A	C	D	E
Approach Delay		27.1			59.8			30.1			50.6	
Approach LOS		C			E			C			D	
90th %ile Green (s)	19.3	21.7	21.7	14.4	16.8		10.0	23.9	14.4	10.0	23.9	23.9
90th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
70th %ile Green (s)	17.7	27.7	27.7	12.3	22.3		10.0	20.0	12.3	10.0	20.0	20.0
70th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	18.1	32.0	32.0	10.9	24.8		10.0	17.1	10.9	10.0	17.1	17.1
50th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	19.8	36.7	36.7	9.2	26.1		10.0	15.0	9.2	9.1	14.1	14.1
30th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Max	Hold	Gap	Gap	Gap	Gap
10th %ile Green (s)	25.6	42.4	42.4	7.4	24.2		9.5	13.4	7.4	6.8	10.7	10.7
10th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Gap	Hold	Gap	Gap	Gap	Gap
Stops (vph)	152	340	17	108	611		169	217	15	99	238	237
Fuel Used(gal)	5	10	1	3	25		3	4	1	2	4	9
CO Emissions (g/hr)	315	729	60	231	1728		216	268	47	107	280	657
NOx Emissions (g/hr)	61	142	12	45	336		42	52	9	21	55	128
VOC Emissions (g/hr)	73	169	14	54	401		50	62	11	25	65	152
Dilemma Vehicles (#)	0	22	0	0	37		0	0	0	0	0	0
Queue Length 50th (ft)	81	241	0	53	263		105	144	0	64	132	~196
Queue Length 95th (ft)	184	#508	41	107	#498		146	206	29	96	184	#357
Internal Link Dist (ft)		588			405			335			283	
Turn Bay Length (ft)	250			230			165		150	170		100
Base Capacity (vph)	491	664	648	422	826		353	781	804	392	912	568
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
1: Jumping Brook Road & NJ Route 66

2021 Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.74	0.19	0.47	1.01		0.73	0.34	0.20	0.43	0.32	1.03

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 43.6

Intersection LOS: D

Intersection Capacity Utilization 82.5%

ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Jumping Brook Road & NJ Route 66

 Ø1	 Ø2 (R)	 Ø3	 Ø4
10 s	23 s	13 s	44 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
10 s	23 s	13 s	44 s



ASBURY AVENUE (CR 16) and GREEN GROVE ROAD INTERSECTION

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 No-Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	372	265	111	619	54	132	479	87	41	203	123
Future Volume (vph)	50	372	265	111	619	54	132	479	87	41	203	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	11	12	12	12	12	12	12
Storage Length (ft)	110		0	120		0	155		100	75		175
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			25			50		
Lane Util. Factor	1.00	*0.54	0.95	1.00	*0.66	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.938			0.988				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1823	0	1589	2227	0	1736	1827	1568	1805	1743	1583
Flt Permitted	0.282			0.282			0.627			0.364		
Satd. Flow (perm)	501	1823	0	472	2227	0	1145	1827	1568	692	1743	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		81			12				90			65
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		273			299			321			368	
Travel Time (s)		4.1			4.5			8.8			10.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	7%	6%	5%	6%	4%	2%	4%	4%	3%	0%	9%	2%
Adj. Flow (vph)	52	384	273	114	638	56	136	494	90	42	209	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	657	0	114	694	0	136	494	90	42	209	127
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			32			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		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	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		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	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 No-Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	20.0	20.0		20.0	20.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	14.0	14.0		14.0	14.0		24.0	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None		None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)	14.2	14.2		14.2	14.2		15.9	15.9	15.9	15.9	15.9	15.9
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.38	0.38	0.38	0.38	0.38	0.38
v/c Ratio	0.31	0.99		0.72	0.92		0.32	0.72	0.14	0.16	0.32	0.20
Control Delay	19.1	51.2		48.6	37.7		10.9	17.6	2.8	9.6	10.2	5.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	51.2		48.6	37.7		10.9	17.6	2.8	9.6	10.2	5.3
LOS	B	D		D	D		B	B	A	A	B	A
Approach Delay	48.9			39.2			14.5			8.5		
Approach LOS	D			D			B			A		
90th %ile Green (s)	14.0	14.0		14.0	14.0		24.0	24.0	24.0	24.0	24.0	24.0
90th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Hold	Hold	Hold
70th %ile Green (s)	14.0	14.0		14.0	14.0		20.1	20.1	20.1	20.1	20.1	20.1
70th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
50th %ile Green (s)	14.0	14.0		14.0	14.0		16.0	16.0	16.0	16.0	16.0	16.0
50th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
30th %ile Green (s)	14.0	14.0		14.0	14.0		12.3	12.3	12.3	12.3	12.3	12.3
30th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
10th %ile Green (s)	14.0	14.0		14.0	14.0		9.0	9.0	9.0	9.0	9.0	9.0
10th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
Stops (vph)	43	410		78	482		80	361	15	25	120	39
Fuel Used(gal)	1	14		2	13		1	6	1	0	2	1
CO Emissions (g/hr)	62	966		166	909		101	432	47	21	106	47
NOx Emissions (g/hr)	12	188		32	177		20	84	9	4	21	9
VOC Emissions (g/hr)	14	224		38	211		23	100	11	5	25	11
Dilemma Vehicles (#)	0	63		0	68		0	0	0	0	0	0
Queue Length 50th (ft)	9	123		23	114		22	94	0	6	33	9
Queue Length 95th (ft)	40	#362		#109	#314		49	167	16	20	65	30
Internal Link Dist (ft)	193			219			241			288		
Turn Bay Length (ft)	110			120			155		100	75		175
Base Capacity (vph)	168	667		158	757		660	1053	644	399	1005	634
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 No-Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.99		0.72	0.92		0.21	0.47	0.14	0.11	0.21	0.20

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 42.3

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 30.6

Intersection LOS: C

Intersection Capacity Utilization 74.3%

ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 50

70th %ile Actuated Cycle: 46.1

50th %ile Actuated Cycle: 42

30th %ile Actuated Cycle: 38.3

10th %ile Actuated Cycle: 35

* User Entered Value

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

Queue shown is maximum after two cycles.

Splits and Phases: 2: Green Grove Road & Asbury Avenue (CR 16)

 Ø2	 Ø4
20 s	30 s
 Ø6	 Ø8
20 s	30 s

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

Weekday AM Generator Peak Hour
2021 No-Build Condition

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	308	108	64	388	43	72	234	84	46	210	80
Future Volume (vph)	74	308	108	64	388	43	72	234	84	46	210	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	11	12	12	12	12	12	12
Storage Length (ft)	110		0	120		0	155		100	75		175
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			25			50		
Lane Util. Factor	1.00	*0.55	0.95	1.00	*0.65	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.961			0.985				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1905	0	1652	2126	0	1719	1863	1615	1641	1881	1509
Flt Permitted	0.500			0.500			0.619			0.605		
Satd. Flow (perm)	922	1905	0	869	2126	0	1120	1863	1615	1045	1881	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			21				89			85
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		273			299			321			368	
Travel Time (s)		4.1			4.5			8.8			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	7%	1%	2%	7%	5%	5%	2%	0%	10%	1%	7%
Adj. Flow (vph)	79	328	115	68	413	46	77	249	89	49	223	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	443	0	68	459	0	77	249	89	49	223	85
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			32			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		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	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		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	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

Weekday AM Generator Peak Hour
2021 No-Build Condition

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	2				6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	14.0	14.0		14.0	14.0		14.0	14.0	14.0	14.0	14.0	14.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None		None	None		None	None	None	None	None	None
Act Effect Green (s)	11.0	11.0		11.0	11.0		9.6	9.6	6.7	9.6	9.6	6.7
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.33	0.33	0.23	0.33	0.33	0.23
v/c Ratio	0.23	0.59		0.21	0.56		0.21	0.40	0.20	0.14	0.36	0.20
Control Delay	10.5	11.8		10.3	11.6		10.9	11.8	4.2	10.3	11.4	4.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.5	11.8		10.3	11.6		10.9	11.8	4.2	10.3	11.4	4.3
LOS	B	B		B	B		B	B	A	B	B	A
Approach Delay	11.6			11.5			10.0			9.5		
Approach LOS	B			B			B			A		
90th %ile Green (s)	14.0	14.0		14.0	14.0		14.0	14.0	14.0	14.0	14.0	14.0
90th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Hold	Hold	Hold
70th %ile Green (s)	13.5	13.5		13.5	13.5		10.5	10.5	10.5	10.5	10.5	10.5
70th %ile Term Code	Gap	Gap		Hold	Hold		Gap	Gap	Gap	Hold	Hold	Hold
50th %ile Green (s)	10.6	10.6		10.6	10.6		8.5	8.5	8.5	8.5	8.5	8.5
50th %ile Term Code	Gap	Gap		Gap	Gap		Gap	Gap	Gap	Hold	Hold	Hold
30th %ile Green (s)	8.5	8.5		8.5	8.5		6.9	6.9	6.9	6.9	6.9	6.9
30th %ile Term Code	Hold	Hold		Gap	Gap		Gap	Gap	Gap	Hold	Hold	Hold
10th %ile Green (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
10th %ile Term Code	Skip	Skip		Skip	Skip		Skip	Skip	Skip	Skip	Skip	Skip
Stops (vph)	52	269		46	293		52	166	19	36	148	19
Fuel Used(gal)	1	6		1	6		1	3	1	0	2	0
CO Emissions (g/hr)	73	398		62	409		58	189	48	26	120	28
NOx Emissions (g/hr)	14	78		12	80		11	37	9	5	23	5
VOC Emissions (g/hr)	17	92		14	95		13	44	11	6	28	6
Dilemma Vehicles (#)	0	62		0	64		0	0	0	0	0	0
Queue Length 50th (ft)	9	44		7	43		10	33	0	6	29	0
Queue Length 95th (ft)	35	123		31	110		33	81	18	23	73	18
Internal Link Dist (ft)	193			219			241			288		
Turn Bay Length (ft)	110			120			155		100	75		175
Base Capacity (vph)	498	1054		469	1157		605	1006	445	564	1015	417
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

Weekday AM Generator Peak Hour
2021 No-Build Condition

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.42		0.14	0.40		0.13	0.25	0.20	0.09	0.22	0.20

Intersection Summary

Area Type: Other

Cycle Length: 40

Actuated Cycle Length: 28.9

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 10.8

Intersection LOS: B

Intersection Capacity Utilization 52.7%

ICU Level of Service A

Analysis Period (min) 15

90th %ile Actuated Cycle: 40

70th %ile Actuated Cycle: 36

50th %ile Actuated Cycle: 31.1

30th %ile Actuated Cycle: 27.4

10th %ile Actuated Cycle: 10

* User Entered Value

Splits and Phases: 2: Green Grove Road & Asbury Avenue (CR 16)

 Ø2	 Ø4
20 s	20 s
 Ø6	 Ø8
20 s	20 s

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 No-Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	504	186	103	502	63	159	395	180	86	553	99
Future Volume (vph)	81	504	186	103	502	63	159	395	180	86	553	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	11	12	12	12	12	12	12
Storage Length (ft)	110		0	120		0	155		100	75		175
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			25			50		
Lane Util. Factor	1.00	*0.58	0.95	1.00	*0.66	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.960			0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	2084	0	1685	2276	0	1787	1863	1599	1805	1881	1599
Flt Permitted	0.232			0.169			0.222			0.403		
Satd. Flow (perm)	441	2084	0	300	2276	0	418	1863	1599	766	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			17				181			108
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		273			299			321			368	
Travel Time (s)		4.1			4.5			8.8			10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	3%	0%	1%	2%	1%	2%	1%	0%	1%	1%
Adj. Flow (vph)	88	548	202	112	546	68	173	429	196	93	601	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	750	0	112	614	0	173	429	196	93	601	108
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			32			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		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	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		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	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 No-Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	None
Act Effct Green (s)	23.6	23.6		23.6	23.6		24.0	24.0	24.0	24.0	24.0	24.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.51	0.88		0.94	0.67		1.03	0.57	0.26	0.30	0.79	0.15
Control Delay	26.1	30.1		95.6	18.8		103.8	17.7	3.8	15.7	25.9	3.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	30.1		95.6	18.8		103.8	17.7	3.8	15.7	25.9	3.5
LOS	C	C		F	B		F	B	A	B	C	A
Approach Delay	29.7			30.7			32.9			21.7		
Approach LOS	C			C			C			C		
90th %ile Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
90th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Max	Max	Max
70th %ile Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
70th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Max	Max	Max
50th %ile Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
50th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Max	Max	Max
30th %ile Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
30th %ile Term Code	Hold	Hold		Max	Max		Max	Max	Max	Hold	Hold	Hold
10th %ile Green (s)	22.2	22.2		22.2	22.2		24.0	24.0	24.0	24.0	24.0	24.0
10th %ile Term Code	Hold	Hold		Gap	Gap		Max	Max	Max	Hold	Hold	Hold
Stops (vph)	64	543		74	432		117	295	28	59	445	16
Fuel Used(gal)	1	13		3	9		5	5	1	1	6	0
CO Emissions (g/hr)	104	925		224	635		338	357	98	54	444	31
NOx Emissions (g/hr)	20	180		44	124		66	69	19	10	86	6
VOC Emissions (g/hr)	24	214		52	147		78	83	23	13	103	7
Dilemma Vehicles (#)	0	52		0	46		0	0	0	0	0	0
Queue Length 50th (ft)	23	195		37	128		~65	116	3	22	184	0
Queue Length 95th (ft)	#77	#368		#126	204		#174	196	36	54	#347	24
Internal Link Dist (ft)	193			219			241			288		
Turn Bay Length (ft)	110			120			155		100	75		175
Base Capacity (vph)	177	865		121	926		168	750	751	308	757	708
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 No-Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.87		0.93	0.66		1.03	0.57	0.26	0.30	0.79	0.15

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 59.6

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 28.7

Intersection LOS: C

Intersection Capacity Utilization 83.5%

ICU Level of Service E

Analysis Period (min) 15

90th %ile Actuated Cycle: 60

70th %ile Actuated Cycle: 60

50th %ile Actuated Cycle: 60

30th %ile Actuated Cycle: 60

10th %ile Actuated Cycle: 58.2

* User Entered Value

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 2: Green Grove Road & Asbury Avenue (CR 16)

 Ø2	 Ø4
30 s	30 s
 Ø6	 Ø8
30 s	30 s

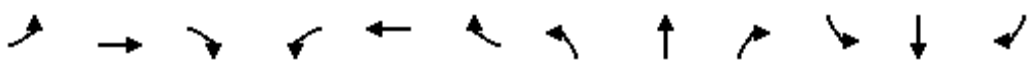
Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	372	265	111	619	54	132	479	87	41	203	123
Future Volume (vph)	50	372	265	111	619	54	132	479	87	41	203	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	11	12	12	12	12	12	12
Storage Length (ft)	110		0	120		0	155		100	75		175
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			25			50		
Lane Util. Factor	1.00	*0.54	0.95	1.00	*0.66	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.938			0.988				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1823	0	1589	2227	0	1736	1827	1568	1805	1743	1583
Flt Permitted	0.282			0.282			0.627			0.364		
Satd. Flow (perm)	501	1823	0	472	2227	0	1145	1827	1568	692	1743	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		81			12				90			65
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		273			299			321			368	
Travel Time (s)		4.1			4.5			8.8			10.0	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	7%	6%	5%	6%	4%	2%	4%	4%	3%	0%	9%	2%
Adj. Flow (vph)	52	384	273	114	638	56	136	494	90	42	209	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	657	0	114	694	0	136	494	90	42	209	127
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			32			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		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	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		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	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	20.0	20.0		20.0	20.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	14.0	14.0		14.0	14.0		24.0	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None		None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)	14.2	14.2		14.2	14.2		15.9	15.9	15.9	15.9	15.9	15.9
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.38	0.38	0.38	0.38	0.38	0.38
v/c Ratio	0.31	0.99		0.72	0.92		0.32	0.72	0.14	0.16	0.32	0.20
Control Delay	19.1	51.2		48.6	37.7		10.9	17.6	2.8	9.6	10.2	5.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	51.2		48.6	37.7		10.9	17.6	2.8	9.6	10.2	5.3
LOS	B	D		D	D		B	B	A	A	B	A
Approach Delay	48.9			39.2			14.5			8.5		
Approach LOS	D			D			B			A		
90th %ile Green (s)	14.0	14.0		14.0	14.0		24.0	24.0	24.0	24.0	24.0	24.0
90th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Hold	Hold	Hold
70th %ile Green (s)	14.0	14.0		14.0	14.0		20.1	20.1	20.1	20.1	20.1	20.1
70th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
50th %ile Green (s)	14.0	14.0		14.0	14.0		16.0	16.0	16.0	16.0	16.0	16.0
50th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
30th %ile Green (s)	14.0	14.0		14.0	14.0		12.3	12.3	12.3	12.3	12.3	12.3
30th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
10th %ile Green (s)	14.0	14.0		14.0	14.0		9.0	9.0	9.0	9.0	9.0	9.0
10th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
Stops (vph)	43	410		78	482		80	361	15	25	120	39
Fuel Used(gal)	1	14		2	13		1	6	1	0	2	1
CO Emissions (g/hr)	62	966		166	909		101	432	47	21	106	47
NOx Emissions (g/hr)	12	188		32	177		20	84	9	4	21	9
VOC Emissions (g/hr)	14	224		38	211		23	100	11	5	25	11
Dilemma Vehicles (#)	0	63		0	68		0	0	0	0	0	0
Queue Length 50th (ft)	9	123		23	114		22	94	0	6	33	9
Queue Length 95th (ft)	40	#362		#109	#314		49	167	16	20	65	30
Internal Link Dist (ft)	193			219			241			288		
Turn Bay Length (ft)	110			120			155		100	75		175
Base Capacity (vph)	168	667		158	757		660	1053	644	399	1005	634
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday AM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.99		0.72	0.92		0.21	0.47	0.14	0.11	0.21	0.20

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 42.3

Natural Cycle: 45

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 30.6

Intersection LOS: C

Intersection Capacity Utilization 74.3%

ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 50

70th %ile Actuated Cycle: 46.1

50th %ile Actuated Cycle: 42

30th %ile Actuated Cycle: 38.3

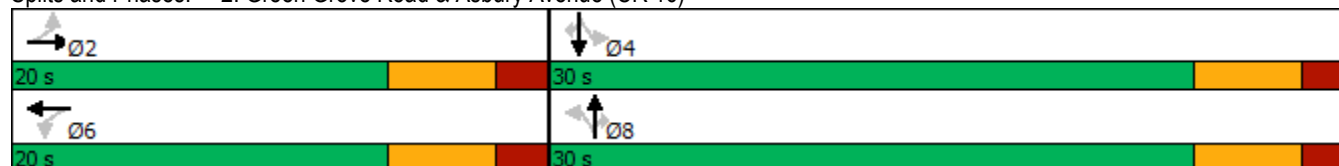
10th %ile Actuated Cycle: 35

* User Entered Value

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

Queue shown is maximum after two cycles.

Splits and Phases: 2: Green Grove Road & Asbury Avenue (CR 16)



Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday AM Generator Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	308	138	71	388	43	130	252	98	46	220	80
Future Volume (vph)	74	308	138	71	388	43	130	252	98	46	220	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	11	12	12	12	12	12	12
Storage Length (ft)	110		0	120		0	155		100	75		175
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			25			50		
Lane Util. Factor	1.00	*0.55	0.95	1.00	*0.65	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.954			0.985				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1896	0	1652	2126	0	1719	1863	1615	1641	1881	1509
Flt Permitted	0.397			0.333			0.613			0.594		
Satd. Flow (perm)	732	1896	0	579	2126	0	1109	1863	1615	1026	1881	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52			15				104			85
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		273			299			321			368	
Travel Time (s)		4.1			4.5			8.8			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	7%	1%	2%	7%	5%	5%	2%	0%	10%	1%	7%
Adj. Flow (vph)	79	328	147	76	413	46	138	268	104	49	234	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	475	0	76	459	0	138	268	104	49	234	85
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			32			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		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	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		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	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday AM Generator Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	20.0	20.0		20.0	20.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Maximum Green (s)	14.0	14.0		14.0	14.0		24.0	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	None		None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)	12.0	12.0		12.0	12.0		9.5	9.5	9.5	9.5	9.5	9.5
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.28	0.28	0.28	0.28	0.28	0.28
v/c Ratio	0.31	0.67		0.37	0.60		0.44	0.51	0.20	0.17	0.44	0.17
Control Delay	12.6	15.2		15.3	13.1		15.2	14.2	3.8	10.9	13.0	4.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.6	15.2		15.3	13.1		15.2	14.2	3.8	10.9	13.0	4.0
LOS	B	B		B	B		B	B	A	B	B	A
Approach Delay	14.8			13.4			12.3			10.7		
Approach LOS	B			B			B			B		
90th %ile Green (s)	14.0	14.0		14.0	14.0		14.4	14.4	14.4	14.4	14.4	14.4
90th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
70th %ile Green (s)	14.0	14.0		14.0	14.0		11.8	11.8	11.8	11.8	11.8	11.8
70th %ile Term Code	Max	Max		Max	Max		Gap	Gap	Gap	Hold	Hold	Hold
50th %ile Green (s)	13.2	13.2		13.2	13.2		9.2	9.2	9.2	9.2	9.2	9.2
50th %ile Term Code	Gap	Gap		Hold	Hold		Gap	Gap	Gap	Hold	Hold	Hold
30th %ile Green (s)	10.9	10.9		10.9	10.9		7.8	7.8	7.8	7.8	7.8	7.8
30th %ile Term Code	Gap	Gap		Hold	Hold		Gap	Gap	Gap	Hold	Hold	Hold
10th %ile Green (s)	8.2	8.2		8.2	8.2		5.7	5.7	5.7	5.7	5.7	5.7
10th %ile Term Code	Gap	Gap		Hold	Hold		Gap	Gap	Gap	Hold	Hold	Hold
Stops (vph)	54	301		58	312		98	189	20	36	161	19
Fuel Used(gal)	1	7		1	6		2	3	1	0	2	0
CO Emissions (g/hr)	77	460		80	434		113	215	55	27	132	27
NOx Emissions (g/hr)	15	89		15	85		22	42	11	5	26	5
VOC Emissions (g/hr)	18	107		18	101		26	50	13	6	31	6
Dilemma Vehicles (#)	0	56		0	55		0	0	0	0	0	0
Queue Length 50th (ft)	9	52		9	45		21	42	0	7	36	0
Queue Length 95th (ft)	38	#170		40	113		54	87	20	23	76	18
Internal Link Dist (ft)	193			219			241			288		
Turn Bay Length (ft)	110			120			155		100	75		175
Base Capacity (vph)	310	833		245	910		806	1354	530	745	1367	486
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday AM Generator Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.57		0.31	0.50		0.17	0.20	0.20	0.07	0.17	0.17

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 33.8

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 13.0

Intersection LOS: B

Intersection Capacity Utilization 55.9%

ICU Level of Service B

Analysis Period (min) 15

90th %ile Actuated Cycle: 40.4

70th %ile Actuated Cycle: 37.8

50th %ile Actuated Cycle: 34.4

30th %ile Actuated Cycle: 30.7

10th %ile Actuated Cycle: 25.9

* User Entered Value

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

Queue shown is maximum after two cycles.

Splits and Phases: 2: Green Grove Road & Asbury Avenue (CR 16)

					
20 s			30 s		
					
20 s			30 s		

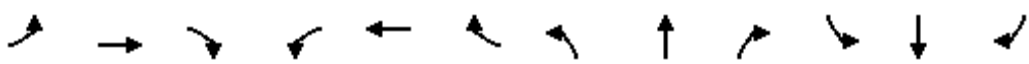
Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	504	186	103	502	63	177	400	184	86	553	99
Future Volume (vph)	81	504	186	103	502	63	177	400	184	86	553	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	11	12	12	12	12	12	12
Storage Length (ft)	110		0	120		0	155		100	75		175
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	80			80			25			50		
Lane Util. Factor	1.00	*0.58	0.95	1.00	*0.66	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr't		0.960			0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	2084	0	1685	2276	0	1787	1863	1599	1805	1881	1599
Flt Permitted	0.232			0.169			0.222			0.396		
Satd. Flow (perm)	441	2084	0	300	2276	0	418	1863	1599	752	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			17				181			108
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		273			299			321			368	
Travel Time (s)		4.1			4.5			8.8			10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	3%	0%	1%	2%	1%	2%	1%	0%	1%	1%
Adj. Flow (vph)	88	548	202	112	546	68	192	435	200	93	601	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	750	0	112	614	0	192	435	200	93	601	108
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			32			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.09	1.09	1.04	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		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	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		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	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8		8	4		4
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	30.0	30.0		30.0	30.0		30.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	None
Act Effct Green (s)	23.6	23.6		23.6	23.6		24.0	24.0	24.0	24.0	24.0	24.0
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.51	0.88		0.94	0.67		1.14	0.58	0.27	0.31	0.79	0.15
Control Delay	26.1	30.1		95.6	18.8		138.5	17.9	3.9	15.9	25.9	3.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	30.1		95.6	18.8		138.5	17.9	3.9	15.9	25.9	3.5
LOS	C	C		F	B		F	B	A	B	C	A
Approach Delay		29.7			30.7			42.5			21.7	
Approach LOS		C			C			D			C	
90th %ile Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
90th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Max	Max	Max
70th %ile Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
70th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Max	Max	Max
50th %ile Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
50th %ile Term Code	Max	Max		Max	Max		Max	Max	Max	Max	Max	Max
30th %ile Green (s)	24.0	24.0		24.0	24.0		24.0	24.0	24.0	24.0	24.0	24.0
30th %ile Term Code	Hold	Hold		Max	Max		Max	Max	Max	Hold	Hold	Hold
10th %ile Green (s)	22.2	22.2		22.2	22.2		24.0	24.0	24.0	24.0	24.0	24.0
10th %ile Term Code	Hold	Hold		Gap	Gap		Max	Max	Max	Hold	Hold	Hold
Stops (vph)	64	543		74	432		126	301	29	59	445	16
Fuel Used(gal)	1	13		3	9		7	5	1	1	6	0
CO Emissions (g/hr)	104	925		224	635		463	363	101	54	444	31
NOx Emissions (g/hr)	20	180		44	124		90	71	20	11	86	6
VOC Emissions (g/hr)	24	214		52	147		107	84	23	13	103	7
Dilemma Vehicles (#)	0	52		0	46		0	0	0	0	0	0
Queue Length 50th (ft)	23	195		37	128		~84	118	4	22	184	0
Queue Length 95th (ft)	#77	#368		#126	204		#193	199	37	55	#347	24
Internal Link Dist (ft)		193			219			241			288	
Turn Bay Length (ft)	110			120			155		100	75		175
Base Capacity (vph)	177	865		121	926		168	750	751	302	757	708
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0

Lanes, Volumes, Timings
2: Green Grove Road & Asbury Avenue (CR 16)

2021 Build Condition
Weekday PM Network Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.87		0.93	0.66		1.14	0.58	0.27	0.31	0.79	0.15

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 59.6

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 31.2

Intersection LOS: C

Intersection Capacity Utilization 84.5%

ICU Level of Service E

Analysis Period (min) 15

90th %ile Actuated Cycle: 60

70th %ile Actuated Cycle: 60

50th %ile Actuated Cycle: 60

30th %ile Actuated Cycle: 60

10th %ile Actuated Cycle: 58.2

* User Entered Value

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 2: Green Grove Road & Asbury Avenue (CR 16)

 Ø2	 Ø4
30 s	30 s
 Ø6	 Ø8
30 s	30 s



JUMPING BROOK ROAD and ESSEX ROAD INTERSECTION

HCM 6th TWSC
3: Jumping Brook Road & Essex Road

2021 No-Build Condition
Weekday AM Network Peak Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	78	138	683	284	23
Future Vol, veh/h	17	78	138	683	284	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	-	30	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	3	2	4	5	2
Mvmt Flow	18	85	150	742	309	25
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1364	322	334	0	-	0
Stage 1	322	-	-	-	-	-
Stage 2	1042	-	-	-	-	-
Critical Hdwy	6.42	6.23	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	2.218	-	-	-
Pot Cap-1 Maneuver	163	717	1225	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	143	717	1225	-	-	-
Mov Cap-2 Maneuver	143	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.2	1.4		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1225	-	799	-	-	
HCM Lane V/C Ratio	0.122	-	0.129	-	-	
HCM Control Delay (s)	8.3	-	10.2	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.4	-	-	

HCM 6th TWSC
3: Jumping Brook Road & Essex Road

Weekday AM Generator Peak Hour
2021 No-Build Condition

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	81	78	346	266	24
Future Vol, veh/h	11	81	78	346	266	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	-	30	-	-	-
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	4	2	2
Mvmt Flow	12	88	85	376	289	26
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	848	302	315	0	-	0
Stage 1	302	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	332	738	1245	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	309	738	1245	-	-	-
Mov Cap-2 Maneuver	309	-	-	-	-	-
Stage 1	699	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	9.9	1.5	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1245	-	838	-	-	
HCM Lane V/C Ratio	0.068	-	0.119	-	-	
HCM Control Delay (s)	8.1	-	9.9	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-	

HCM 6th TWSC
3: Jumping Brook Road & Essex Road

2021 No-Build Condition
Weekday PM Network Peak Hour

Intersection						
Int Delay, s/veh	19.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	228	144	472	757	44
Future Vol, veh/h	64	228	144	472	757	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	-	30	-	-	-
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	70	248	157	513	823	48
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1674	847	871	0	-	0
Stage 1	847	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	105	362	774	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	84	362	774	-	-	-
Mov Cap-2 Maneuver	84	-	-	-	-	-
Stage 1	335	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	110.5	2.5		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	774	-	297	-	-	
HCM Lane V/C Ratio	0.202	-	1.069	-	-	
HCM Control Delay (s)	10.8	-	110.5	-	-	
HCM Lane LOS	B	-	F	-	-	
HCM 95th %tile Q(veh)	0.8	-	12.3	-	-	

HCM 6th TWSC
3: Jumping Brook Road & Essex Road

2021 Build Condition
Weekday AM Network Peak Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	78	138	684	284	23
Future Vol, veh/h	17	78	138	684	284	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	-	30	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	3	2	4	5	2
Mvmt Flow	18	85	150	743	309	25
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1365	322	334	0	-	0
Stage 1	322	-	-	-	-	-
Stage 2	1043	-	-	-	-	-
Critical Hdwy	6.42	6.23	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.327	2.218	-	-	-
Pot Cap-1 Maneuver	162	717	1225	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	339	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	142	717	1225	-	-	-
Mov Cap-2 Maneuver	142	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	339	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.2	1.4		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1225	-	794	-	-	
HCM Lane V/C Ratio	0.122	-	0.13	-	-	
HCM Control Delay (s)	8.3	-	10.2	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.4	-	-	

HCM 6th TWSC
3: Jumping Brook Road & Essex Road

2021 Build Condition
Weekday AM Generator Peak Hour

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	81	78	394	357	24
Future Vol, veh/h	11	81	78	394	357	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	-	30	-	-	-
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	4	2	2
Mvmt Flow	12	88	85	428	388	26
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	999	401	414	0	-	0
Stage 1	401	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	270	649	1145	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	250	649	1145	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.7	1.4		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1145	-	737	-	-	
HCM Lane V/C Ratio	0.074	-	0.136	-	-	
HCM Control Delay (s)	8.4	-	10.7	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-	

HCM 6th TWSC
3: Jumping Brook Road & Essex Road

2021 Build Condition
Weekday PM Network Peak Hour

Intersection						
Int Delay, s/veh	22.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	228	144	473	785	44
Future Vol, veh/h	64	228	144	473	785	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	-	30	-	-	-
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	70	248	157	514	853	48
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1705	877	901	0	-	0
Stage 1	877	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	101	348	754	-	-	-
Stage 1	407	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	80	348	754	-	-	-
Mov Cap-2 Maneuver	80	-	-	-	-	-
Stage 1	322	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	129.7		2.6		0	
HCM LOS	F					
Minor Lane/Major Mvmt	NBL		NBT	EBLn1	SBT	SBR
Capacity (veh/h)	754		-	283	-	-
HCM Lane V/C Ratio	0.208		-	1.122	-	-
HCM Control Delay (s)	11		-	129.7	-	-
HCM Lane LOS	B		-	F	-	-
HCM 95th %tile Q(veh)	0.8		-	13.3	-	-



JUMPING BROOK ROAD and WALMART DRIVEWAY INTERSECTION

HCM 6th TWSC
4: Jumping Brook Road & Walmart

2021 No-Build Condition
Weekday AM Network Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	21	659	13	15	289
Future Vol, veh/h	9	21	659	13	15	289
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	5
Mvmt Flow	10	23	716	14	16	314
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1069	723	0	0	730	0
Stage 1	723	-	-	-	-	-
Stage 2	346	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	245	426	-	-	874	-
Stage 1	481	-	-	-	-	-
Stage 2	716	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	240	426	-	-	874	-
Mov Cap-2 Maneuver	240	-	-	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16.5	0	0.5			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	346	874	-	
HCM Lane V/C Ratio	-	-	0.094	0.019	-	
HCM Control Delay (s)	-	-	16.5	9.2	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-	

HCM 6th TWSC
4: Jumping Brook Road & Walmart

Weekday AM Generator Peak Hour
2021 No-Build Condition

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	21	318	13	15	273
Future Vol, veh/h	9	21	318	13	15	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	10	23	346	14	16	297
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	682	353	0	0	360	0
Stage 1	353	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	415	691	-	-	1199	-
Stage 1	711	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	408	691	-	-	1199	-
Mov Cap-2 Maneuver	408	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.7	0	0.4			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	572	1199	-	
HCM Lane V/C Ratio	-	-	0.057	0.014	-	
HCM Control Delay (s)	-	-	11.7	8	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

HCM 6th TWSC
4: Jumping Brook Road & Walmart

2021 No-Build Condition
Weekday PM Network Peak Hour

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	71	436	34	44	738
Future Vol, veh/h	26	71	436	34	44	738
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	77	474	37	48	802
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1391	493	0	0	511	0
Stage 1	493	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	157	576	-	-	1054	-
Stage 1	614	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	144	576	-	-	1054	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	21.8	0	0.5			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	319	1054	-	
HCM Lane V/C Ratio	-	-	0.331	0.045	-	
HCM Control Delay (s)	-	-	21.8	8.6	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1.4	0.1	-	

HCM 6th TWSC
4: Jumping Brook Road & Site Driveway 1/Walmart

2021 Build Condition
Weekday AM Network Peak Hour

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	0	9	0	21	1	659	13	15	289	0
Future Vol, veh/h	0	1	0	9	0	21	1	659	13	15	289	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	0	2	0	4	2	2	5	0
Mvmt Flow	0	1	0	10	0	23	1	716	14	16	314	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1083	1078	314	1072	1071	723	314	0	0	730	0	0
Stage 1	346	346	-	725	725	-	-	-	-	-	-	-
Stage 2	737	732	-	347	346	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	197	220	731	198	223	426	1258	-	-	874	-	-
Stage 1	674	639	-	416	433	-	-	-	-	-	-	-
Stage 2	413	430	-	669	639	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	183	215	731	194	218	426	1258	-	-	874	-	-
Mov Cap-2 Maneuver	183	215	-	194	218	-	-	-	-	-	-	-
Stage 1	673	625	-	416	433	-	-	-	-	-	-	-
Stage 2	390	430	-	653	625	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	21.8		17.8		0		0.5					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1258	-	-	215	314	874	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.005	0.104	0.019	-	-				
HCM Control Delay (s)	7.9	0	-	21.8	17.8	9.2	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-				

HCM 6th TWSC
4: Jumping Brook Road & Site Driveway 1/Walmart

2021 Build Condition
Weekday AM Generator Peak Hour

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	0	9	0	21	14	408	13	15	287	33
Future Vol, veh/h	0	1	0	9	0	21	14	408	13	15	287	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	0	2	0	4	2	2	2	0
Mvmt Flow	0	1	0	10	0	23	15	443	14	16	312	36

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	854	849	330	843	860	450	348	0	0	457	0	0
Stage 1	362	362	-	480	480	-	-	-	-	-	-	-
Stage 2	492	487	-	363	380	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	281	300	716	284	296	609	1222	-	-	1104	-	-
Stage 1	661	629	-	567	558	-	-	-	-	-	-	-
Stage 2	562	554	-	656	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	264	290	716	276	286	609	1222	-	-	1104	-	-
Mov Cap-2 Maneuver	264	290	-	276	286	-	-	-	-	-	-	-
Stage 1	650	618	-	558	549	-	-	-	-	-	-	-
Stage 2	532	545	-	643	606	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	17.5		13.7		0.3		0.4	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1222	-	-	290	447	1104	-
HCM Lane V/C Ratio	0.012	-	-	0.004	0.073	0.015	-
HCM Control Delay (s)	8	0	-	17.5	13.7	8.3	0
HCM Lane LOS	A	A	-	C	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-

HCM 6th TWSC
4: Jumping Brook Road & Site Driveway 1/Walmart

2021 Build Condition
Weekday PM Network Peak Hour

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	1	0	26	0	71	1	463	34	44	738	0
Future Vol, veh/h	0	1	0	26	0	71	1	463	34	44	738	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	0	2	0	2	2	2	2	0
Mvmt Flow	0	1	0	28	0	77	1	503	37	48	802	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1460	1440	802	1423	1422	522	802	0	0	540	0	0
Stage 1	898	898	-	524	524	-	-	-	-	-	-	-
Stage 2	562	542	-	899	898	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.22	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.318	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	108	134	387	114	137	555	830	-	-	1028	-	-
Stage 1	337	361	-	537	533	-	-	-	-	-	-	-
Stage 2	515	523	-	334	361	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	87	122	387	106	125	555	830	-	-	1028	-	-
Mov Cap-2 Maneuver	87	122	-	106	125	-	-	-	-	-	-	-
Stage 1	336	331	-	536	532	-	-	-	-	-	-	-
Stage 2	443	522	-	305	331	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	34.8		28		0		0.5					
HCM LOS	D		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	830	-	-	122	260	1028	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.009	0.406	0.047	-	-				
HCM Control Delay (s)	9.3	0	-	34.8	28	8.7	0	-				
HCM Lane LOS	A	A	-	D	D	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	1.9	0.1	-	-				

HCM 6th TWSC
5: Jumping Brook Road & Site Driveway 2

2021 Build Condition
Weekday AM Network Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	1	673	299	0
Future Vol, veh/h	1	0	1	673	299	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	100	4	5	0
Mvmt Flow	1	0	1	732	325	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1059	325	325	0	-	0
Stage 1	325	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Critical Hdwy	6.4	6.2	5.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	3.1	-	-	-
Pot Cap-1 Maneuver	251	721	840	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	250	721	840	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	19.5	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	840	-	250	-	-	
HCM Lane V/C Ratio	0.001	-	0.004	-	-	
HCM Control Delay (s)	9.3	0	19.5	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th TWSC
5: Jumping Brook Road & Site Driveway 2

2021 Build Condition
Weekday AM Generator Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	34	435	282	14
Future Vol, veh/h	0	1	34	435	282	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	100	0	4	2	0
Mvmt Flow	0	1	37	473	307	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	862	315	322	0	-	0
Stage 1	315	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Critical Hdwy	6.4	7.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	4.2	2.2	-	-	-
Pot Cap-1 Maneuver	328	546	1249	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	315	546	1249	-	-	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.6	0.6		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1249	-	546	-	-	
HCM Lane V/C Ratio	0.03	-	0.002	-	-	
HCM Control Delay (s)	8	0	11.6	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0	-	-	

HCM 6th TWSC
5: Jumping Brook Road & Site Driveway 2

2021 Build Condition
Weekday PM Network Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	1	509	765	0
Future Vol, veh/h	0	1	1	509	765	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	100	100	2	2	0
Mvmt Flow	0	1	1	553	832	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1387	832	832	0	-	0
Stage 1	832	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Critical Hdwy	6.4	7.2	5.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	4.2	3.1	-	-	-
Pot Cap-1 Maneuver	159	254	500	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	159	254	500	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	430	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	19.2	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	500	-	254	-	-	
HCM Lane V/C Ratio	0.002	-	0.004	-	-	
HCM Control Delay (s)	12.2	0	19.2	-	-	
HCM Lane LOS	B	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th TWSC
6: Jumping Brook Road & Site Driveway 3

2021 Build Condition
Weekday AM Network Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	674	299	0
Future Vol, veh/h	1	1	1	674	299	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	4	5	2
Mvmt Flow	1	1	1	733	325	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1060	325	325	0	-	0
Stage 1	325	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	250	721	1235	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	250	721	1235	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	14.7	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1235	-	250	721	-	-
HCM Lane V/C Ratio	0.001	-	0.004	0.002	-	-
HCM Control Delay (s)	7.9	0	19.5	10	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-

HCM 6th TWSC
6: Jumping Brook Road & Site Driveway 3

2021 Build Condition
Weekday AM Generator Peak Hour

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	90	90	1	379	283	0
Future Vol, veh/h	90	90	1	379	283	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	4	2	2
Mvmt Flow	98	98	1	412	308	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	722	308	308	0	-	0
Stage 1	308	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	397	737	1253	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	397	737	1253	-	-	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.8	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1253	-	397	737	-	-
HCM Lane V/C Ratio	0.001	-	0.246	0.133	-	-
HCM Control Delay (s)	7.9	0	17	10.6	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0	-	1	0.5	-	-

HCM 6th TWSC
6: Jumping Brook Road & Site Driveway 3

2021 Build Condition
Weekday PM Network Peak Hour

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	27	1	483	766	0
Future Vol, veh/h	27	27	1	483	766	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	29	29	1	525	833	0
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1360	833	833	0	-	0
Stage 1	833	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	165	372	800	-	-	-
Stage 1	430	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	165	372	800	-	-	-
Mov Cap-2 Maneuver	165	-	-	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	23.5	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	800	-	165	372	-	-
HCM Lane V/C Ratio	0.001	-	0.178	0.079	-	-
HCM Control Delay (s)	9.5	0	31.5	15.5	-	-
HCM Lane LOS	A	A	D	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	0.3	-	-