ATLANTIC
TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

TRAFFIC IMPACT ANALYSIS
for
212 DURHAM URBAN RENEWAL ENTITY, LLC

Proposed Residential Development

Block 37; Lots 5.12, 5.22, 6, 7.01, 7.02, 13, 14, 15.01, 16.02, 16.03, 17.01, 17.02; Block 42, Lots 1-7

212 Durham Avenue

Borough of Metuchen

Middlesex County, New Jersey

JOHN R. HARTER
Professional Engineer
N.J. License No. 41033

DAVID W. FAHIM
Professional Engineer
N.J. License No. 57657

N.J. P.E. Cert. of Authorization No. 24GA27957900

October 19, 2022

K:\2021\ANJ21013\Reports\Current\ANJ21013 TIA 2022-10-19.docx

INTRODUCTION

Atlantic Traffic & Design Engineering, LLC (ATDE) has prepared this Traffic Impact Analysis to examine the future traffic impacts of the proposed residential development. The subject site is located at 212 Durham Avenue in the Borough of Metuchen, Middlesex County, New Jersey, as shown on **Figure 1** in the **Appendix**.

The proposed residential development is part of a Redevelopment Plan in the Borough of Metuchen. Under the Amended Gulton Tract Redevelopment Plan Area, the proposed residential development is considered a permitted use.

The eastern and northern portions of the property are proposed to be transferred to the Borough/County and is known as 'Parcel A'. The proposed residential development is known as 'Parcel B'.

CURRENT CONDITION

The subject property is currently occupied by 3 light industrial buildings that total **118,815** square feet. There are currently 3 full-movement driveways located along westbound Durham Avenue that serve the site. Note that Gulton Street is the driveway located at the western end of the property and is considered a paper street.

The roughly 26-acre property consists of approximately 8.5 acres of developed land while the remaining is undeveloped wooded area with wetlands & Dismal Brook located in the vicinity of the northern property line. Along the eastern property line is the vacant Lehigh Valley Railroad Company corridor. This abandoned railroad track property extends to the north and south through the communities of Metuchen, Edison and Woodbridge. Parcel A is proposed to be transferred to the Borough/County and would and provide a roughly 20-acre expansion to the Peter J. Barnes III Wildlife Preserve located behind the proposed residential development (Parcel B).

PROPOSED CONDITION

Under the development proposal, the existing industrial buildings would be removed, and a 272-unit residential development would be constructed. Access will be provided via 3 full-movement driveways along westbound Durham Avenue:

- The easternmost access point is proposed to be transferred to the Borough and align opposite the SportsPlex driveway (Greenway Avenue). An interconnection is proposed between the residential development and the future open space parking area.
- The central access point is proposed to align opposite Hampton Street.
- The westernmost driveway is proposed to take the place of Gulton Street which is considered a paper street. It is anticipated that the Gulton Street Right-of-Way will be vacated by the Borough.

The subject property is to be subdivided to the north and east of the proposed residential development and will provide a total of 439 parking stalls. Access to the Middlesex County Greenway will be dedicated to the Borough of Metuchen.

SCOPE OF STUDY

This study has been prepared to evaluate potential traffic impacts associated with the proposed residential development. Accordingly, this analysis includes the following:

- A review of existing roadway and traffic conditions in the vicinity of the site, including roadway geometrics and traffic volumes;
- Projection of the volume of traffic expected to be generated by the proposed development;
- An evaluation of the Site Plan focusing on access and parking supply; and
- Recommendations and conclusions.

EXISTING TRAFFIC CONDITIONS

SUBJECT PROPERTY

The subject property is located at 212 Durham Avenue in the Borough of Metuchen, Middlesex County, New Jersey. The subject property has the following characteristics:

- Designated as Lots 5.12, 5.22, 6, 7.01, 7.02, 13, 14, 15.01, 16.02, 16.03, 17.01 and 17.02 in Block 37 and designated as Lots 1 through 7 in Block 42. The various lots have been approved to be consolidated and re-subdivided by the Borough of Metuchen, under Resolution #22-1334E.
- Currently occupied by 118,815 square feet of light industrial buildings.
- Under the Amended Gulton Tract Redevelopment Plan Area where the proposed residential development is a permitted use.
- The Middlesex County Greenway is located along the eastern property border.
- Land uses in the vicinity of the site area are a mix of commercial and residential along the Durham Avenue corridor.
- The Oakite Redevelopment is proposed to be located south of the subject property.

ROADWAY NETWORK

The subject property has frontage along westbound Durham Avenue. The following is a description of the adjacent roadway network:

Durham Avenue

- Classified as an Urban Minor Collector under Borough of Metuchen jurisdiction.
- Designated as an east/west roadway within the vicinity of the subject property.
- Provides 1 lane to accommodate each direction of travel with turn lanes provided at key signalized intersections.

- The posted speed limit is 25 miles per hour within the vicinity of the subject property.
- Sidewalk is provided along both sides of the roadway within the vicinity of the subject property.
- Parking is not permitted within the vicinity of the subject property.

Smith Street

- Classified as an Urban Local Road under Borough of Metuchen jurisdiction.
- Designated as a north/south roadway within the vicinity of the subject property.
- Provides 1 lane to accommodate each direction of travel.
- A speed limit is not posted, but is assumed to be 25 miles per hour.
- Meets its northerly terminus at an unsignalized "T" intersection with Durham Avenue. Meets its southerly terminus approximately 950 feet south of Durham Avenue at a dead-end.

Hampton Street

- Classified as an Urban Local Road under Borough of Metuchen jurisdiction.
- Designated as a north/south roadway within the vicinity of the subject property.
- Provides 1 lane to accommodate each direction of travel.
- The posted speed limit is 25 miles per hour within the vicinity of the subject property.
- Meets its northerly terminus at an unsignalized "T" intersection with Durham Avenue.

EXISTING TRAFFIC VOLUMES

To examine the existing traffic demand at the project site, traffic counts were conducted during the weekday morning, weekday evening and Saturday

midday periods at the intersection of Durham Avenue and the Metuchen SportsPlex driveway.

Specifically, manual turning movement counts were conducted on the following dates and times:

- Thursday, October 8, 2020 from 6:00 am to 9:00 am
- Thursday, October 8, 2020 from 4:00 pm to 6:00 pm
- Saturday, October 10, 2020 from 11:00 am to 2:00 pm

PEAK HOURS

The results of the traffic counts indicate there are distinct hours during the periods of study when site traffic generation experiences its highest levels. Based on the traffic count information, the weekday morning, weekday evening and Saturday midday peak hours occurred respectively:

- 7:30 am to 8:30 am
- 4:45 pm to 5:45 pm
- 12:15 pm to 1:15 pm

The manual turning movement counts summaries are contained in the **Appendix**.

VALIDATION OF DATA

Professional industry standards dictate that when traffic counts are conducted in circumstances that may impact data reliability, those circumstances should be identified and contextualized. The Covid19 pandemic has affected the way that people travel on a national scale. Therefore, the data collected by ATDE was compared to historic and anticipated trip generation traffic data.

The New Jersey Department of Transportation (NJDOT) publishes automatic traffic recorder (ATR) count data, typically consisting of 2 to 3 weekdays of hourly traffic volumes in each direction at a point on a roadway. ATDE

collected 2020 traffic data in connection with an adjacent project (Oakite Redevelopment) at various intersections in the Borough of Metuchen and compared the data to the NJDOT ATR data. ATDE found a 10.5% reduction in the collected 2020 data when compared to the NJDOT data. Therefore, the collected traffic data was increased to adjust for the reduction in traffic volumes due to the Covid19 pandemic.

The site's existing light industrial facility was also affected by Covid19. Therefore, the traffic associated with the existing 118,815 square feet of light industrial buildings were calculated using standard rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*. using ITE Land Use Code (LUC) 110: "*General Light Industrial*" on the basis of building area. Similarly, turning movement counts at Smith Street and Hampton Street were calculated utilizing LUC 210: "*Single-Family Detached Housing*" based on the number of houses. (The trip generation is described in more detail in the next section of the TIA.) The existing traffic volumes adjusted for Covid19 are summarized on **Figure 2** in the **Appendix**.

PROPOSED DEVELOPMENT TRAFFIC CHARACTERISTICS

TRIP GENERATION

Projections of trip generation for the proposed development were prepared using research data compiled by the ITE as contained within the 11th Edition of the *Trip Generation Manual.* Specifically, trip generation projections were prepared using the following ITE trip generation rates:

- LUC 110: "*General Light Industrial*" for the existing approximately 118,815 square feet of industrial buildings;
- LUC 221: "*Multifamily Housing (Mid-Rise)*" for the proposed 272-unit residential development;
- LUC 411: "*Public Park*" for the 20-acre Open Space to be transferred to the Borough/County

The ITE trip generation summary printouts are contained in the **Appendix**. **Table 1** summarizes the ITE trip generation comparison between the existing and proposed developments.

Table 1
ITE Peak Hour Trip Generation
Existing 118,815 SF Light Industrial Facility Vs.
Proposed 272-Unit Mid-Rise Apartments and 20-Acre Park

Land Use		Weekday Morning			Weekday Evening			Saturday Midday		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Existing	General Light Industrial	77	11	88	11	66	77	41	41	82
Proposed	Multifamily Housing (Mid-Rise)	25	83	108	64	42	106	54	52	106
	Public Park	0	1	1	1	1	2	3	3	6
Difference		-52	+73	+21	+54	-23	+31	+16	+14	+30

As shown in **Table 1**, the highest increase in site generated trips is expected during the weekday evening peak hour, with only 31 additional peak hour trips. Based on the ITE trip generation projections, the proposed residential

development would result in minimal traffic increases and would not create a "significant increase" in traffic along the adjacent roadway network during any of the critical peak hours.

ITE defines a "significant increase" in traffic as 100 or more peak hour vehicular trips. The traffic generated as a result of the proposed redevelopment falls well below this threshold, and translates to approximately 1 additional vehicle entering or exiting the site every 2 minutes during the highest peak hour.

The additional site-generated traffic attributed to the proposed development has been oriented to the adjacent roadway network based on the driveway turning movement counts. The distribution of site-generated traffic is shown on **Figure 3** in the **Appendix**. The site-generated traffic volumes are illustrated on **Figure 4** in the **Appendix**.

FUTURE BASE TRAFFIC VOLUMES

It is recognized that traffic routinely fluctuates along various State and County roadways, as well as local streets, and varies not only day-to-day, but also on a monthly and yearly basis. It is expected that as development continues in the vicinity of the site, traffic may be expected to increase on a regular basis.

It is anticipated the proposed residential development will be completed within 2 years. As a result, minimal (if any) additional "background" traffic growth can be anticipated with such a short build-out. However, in order to perform a conservative analysis, the existing traffic volumes on the study roadway system were increased by a 1.00% growth rate per year for Urban Minor Collectors and local roads in accordance with the NJDOT growth factor for Middlesex County to develop the future Base traffic volumes on appended **Figure 5**.

Other Area Developments

The Borough of Metuchen was contacted to determine if there are any proposed or planned developments in the vicinity of the site which could impact traffic conditions on the adjacent roadway network. The Oakite Redevelopment located at 700 Middlesex Avenue (CR 501) is an approved development that includes the existing SportsPlex and Fulton Bank along with an assisted living facility, an independent senior living facility, a daycare and a Starbucks with drive-thru. Additionally, a public street, Greenway Avenue, would be constructed through the development and connect Middlesex Avenue (CR 501) and Durham Avenue.

The Traffic Impact Analysis for the Oakite Redevelopment was prepared by ATDE and revised August 15, 2022. The other development traffic is illustrated on **Figure 6** in the **Appendix**.

ANALYSIS OF FUTURE NO-BUILD TRAFFIC VOLUMES

As part of the future analysis, it was assumed that the Oakite Redevelopment would be fully constructed. Therefore, to account for the proposed Oakite Redevelopment, the traffic volumes estimated using ITE at the existing SportPlex were removed throughout the Durham Avenue roadway network as seen on **Figure 7** in the **Appendix**. The future No-Build traffic volumes were established by combining the future Base traffic volumes and the adjacent area development traffic. The resulting future No-Build traffic volumes are summarized on **Figure 8** in the **Appendix**.

A Volume/Capacity and Level of Service Analysis[1] was conducted for the future No-Build and Build weekday morning, weekday evening and Saturday midday peak hour traffic volumes at the study intersections using the Synchro 11 software. This type of analysis is performed to gauge the operational state of traffic activity, and to identify any areas of excessive delay or congestion. The Synchro 11 summary printouts and are contained in the **Appendix**.

The movements at the unsignalized study intersections are calculated to operate at Level of Service D or better during each of the study peak hours. A Level of Service D translates to a 95th percentile queue of roughly 2 vehicles.

ANALYSIS OF FUTURE BUILD TRAFFIC VOLUMES

To account for the removal of traffic associated with the industrial use along Durham Avenue, site-generated traffic was redistributed throughout the roadway network as shown on **Figure 9** in the **Appendix**. The future Build traffic volumes were established by surcharging the site-generated traffic volumes and redistributed traffic volumes onto the future No-Build traffic volumes. The resulting future Build traffic volumes are summarized on **Figure 10** in the **Appendix**.

[1] See the **Appendix** for Volume/Capacity and Level of Service description.

A Volume/Capacity and Level of Service analysis was conducted for the future Build weekday midday, weekday evening and Saturday midday peak hour traffic volumes at the study intersections. A table comparing the Levels of Service calculated for future No-Build and Build conditions is contained in the **Appendix**.

Under the future Build condition, the study unsignalized intersections and the site driveways were found to continue to operate at a Level Service D or better during each of the study peak hours. A Level of Service D is favorable for peak hour operations and translates to a 95th percentile queue of roughly 2 vehicles which can be accommodated without any impact to on-site circulation.

SITE ACCESS AND CIRCULATION

An evaluation has been made of the Preliminary & Final Major Site Plan for the proposed residential development, prepared by Bohler, last revised October 19, 2022. In particular, the evaluation focuses on site access, on-site circulation, and parking supply. The following items address these design characteristics:

Site Access

- Access to the proposed residential development is proposed via 3 full-movement driveways along westbound Durham Avenue.
- Access to the future Open Space parking lot is proposed via a full-movement driveway aligned with the Metuchen SportsPlex driveway across the street which is proposed to become a dedicated municipal street, known as Greenway Avenue.

Parking

- Under the proposed redevelopment zone, the Borough requires **340** parking stalls for the residential development.
- A total of 439 parking stalls are proposed.
  - 304 surface parking stalls (including 7 ADA stalls).
  - 60 garage/under-story parking stalls for residents (including 3 ADA stalls).
  - 20 parallel parking stalls along the Public Access Drive.
  - 55 future-phase County open space stalls for public use (including 3 ADA stalls) associated with the future Open Space.
- Perpendicular parking stalls are proposed to be 9 feet wide by 18 feet deep and parallel parking stalls are proposed to be 8.5 feet wide by 23 feet deep, which meets the Redevelopment Plan requirements.

Circulation

- The proposed passenger car parking area is served by a minimum 24-foot wide two-way circulation aisle which is in compliance with the Redevelopment Plan requirements and accepted engineering standards.
- The majority of the parking stalls will be accessed via the westernmost driveway.
- Interconnection between the residential development and the parking lot is proposed at the eastern portion of the property.
- Walking paths are provided for residents to access the Future Open Space improvements.

CONCLUSIONS

In summary, it has been determined from a review of future site-generated traffic volumes that the proposed residential development would not significantly impact traffic conditions in the site vicinity.

Under future conditions, the study intersections were calculated to operate at a Level of Service D or better for any movement during each of the study peak hours. A Level of Service D translates to a 95th percentile queue of approximately 2 vehicles which can be accommodated without impact to on-site circulation and parking.

The site will provide a total of 439 parking stalls which exceeds the supply required by the Redevelopment Plan. The proposed parking stall and circulation aisle dimensions will also meet the Redevelopment Plan requirements.

Technical Appendix

A | Figures

ATLANTIC TRAFFIC+DESIGN

Figure 1

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Site Location Map

K:\2021\VAN\21013\ANALYSIS-PERMITTING\FIGURES\VAN\21013 FIGURES-->>LAYOUT: LOCATION MAP

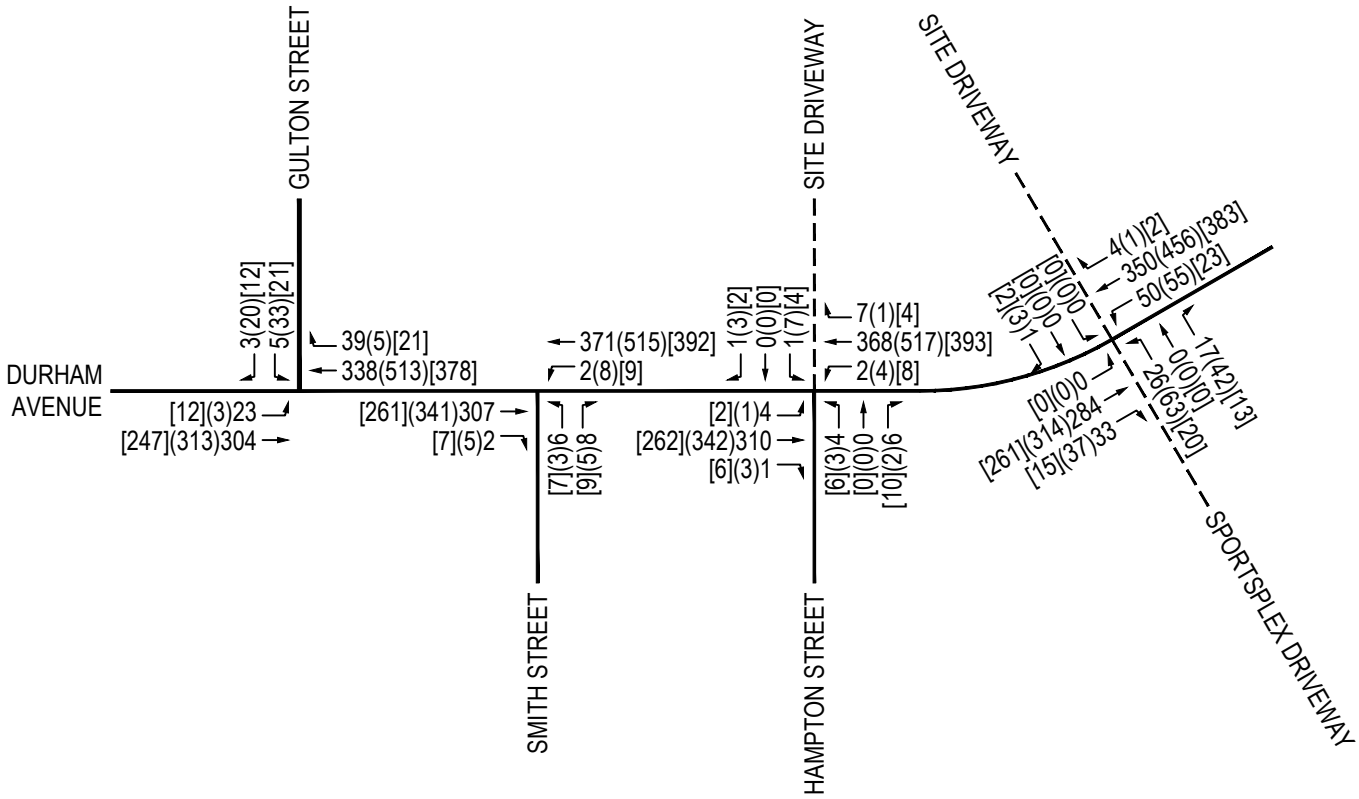
ATLANTIC TRAFFIC+DESIGN

Figure 2

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Existing Traffic Volumes Adjusted for Covid 19

SITE



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL

PEAK HOUR	ENTER	EXIT	TOTAL
AM	77	11	88
PM	11	66	77
SAT	41	41	82

K:\2021\ANJ21013\ANALYSIS-PERMITTING\FIGURES\ANJ21013 FIGURES-->>LAYOUT: EXISTING TRAFFIC VOLUMES

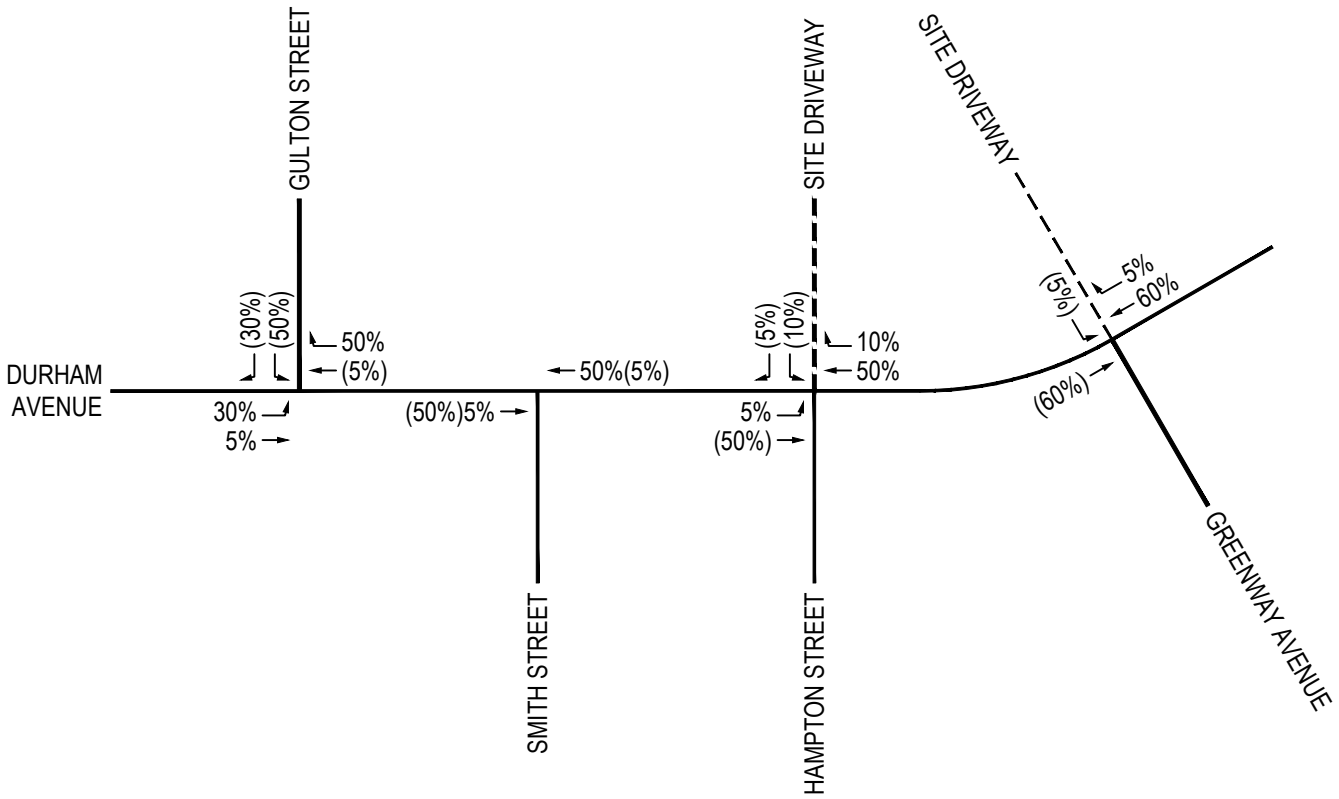
ATLANTIC TRAFFIC+DESIGN

Figure 3

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Distribution of New Project-Generated Trips

SITE



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL
— —	PROPOSED DRIVEWAY

K:\2021\VAN\21013\ANALYSIS-PERMITTING\FIGURES\VAN\21013 FIGURES---->LAYOUT: DISTRIBUTION OF NEW PROJECT-GENERATED TRIPS

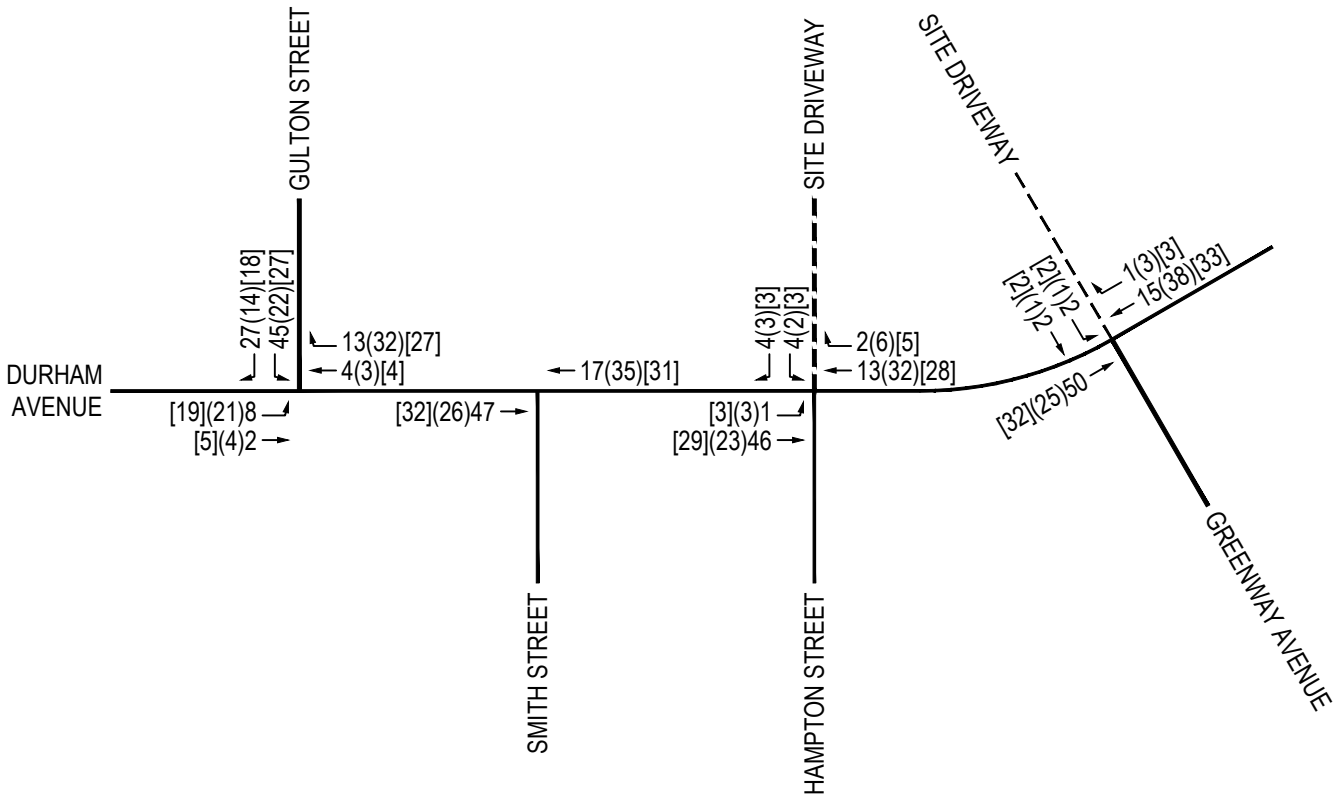
ATLANTIC TRAFFIC+DESIGN

Figure 4

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Project-Generated New Traffic Volumes

SITE



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL
— —	PROPOSED DRIVEWAY

PEAK HOUR	ENTER	EXIT	TOTAL
AM	25	84	109
PM	65	43	108
SAT	57	55	112

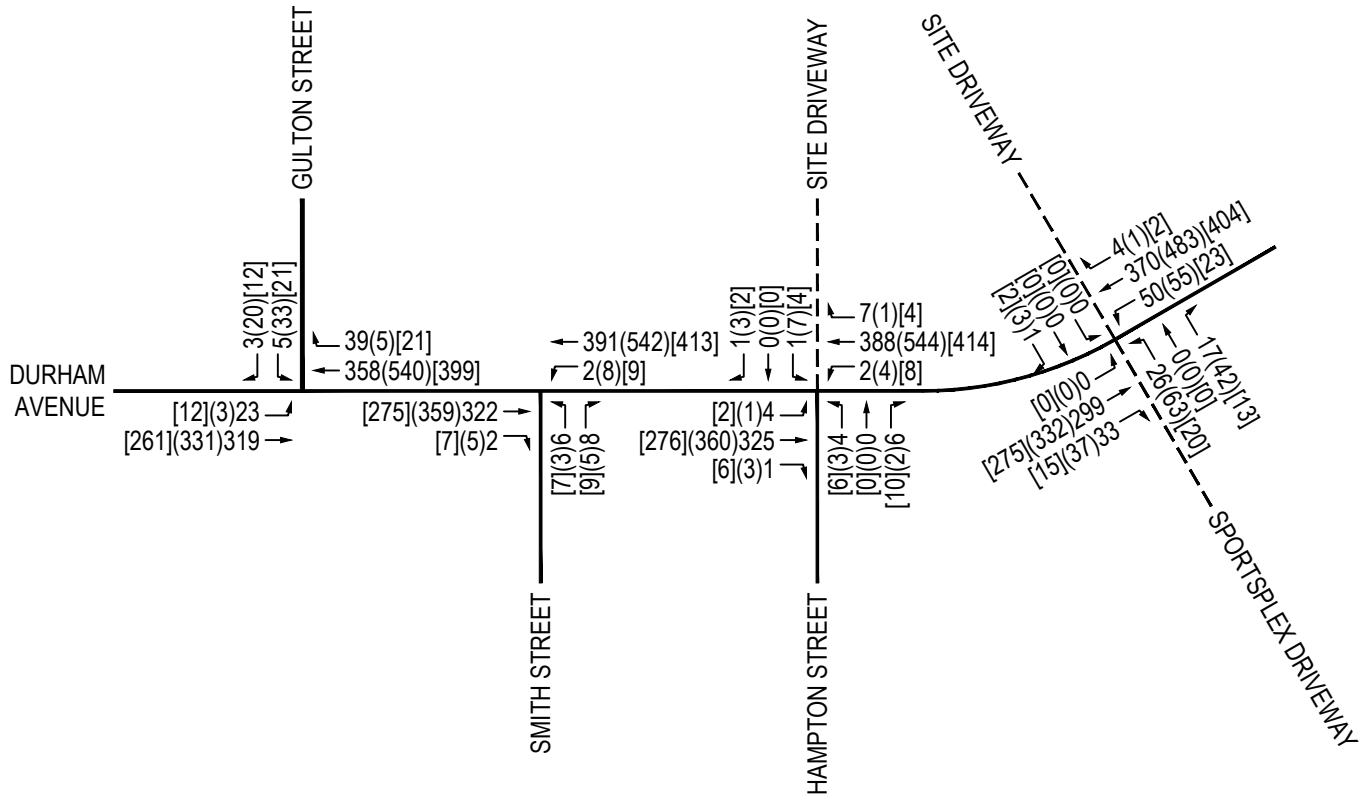
K:\2021\VAN\21013\ANALYSIS-PERMITTING\FIGURES\VAN21013 FIGURES---->LAYOUT: PROJECT-GENERATED NEW TRAFFIC VOLUMES

ATLANTIC TRAFFIC+DESIGN

Figure 5

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Future Base Traffic Volumes



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL

K:\2021\ANJ21013\ANALYSIS-PERMITTING\FIGURES\ANJ21013 FIGURES---->LAYOUT: FUTURE BASE TRAFFIC VOLUMES

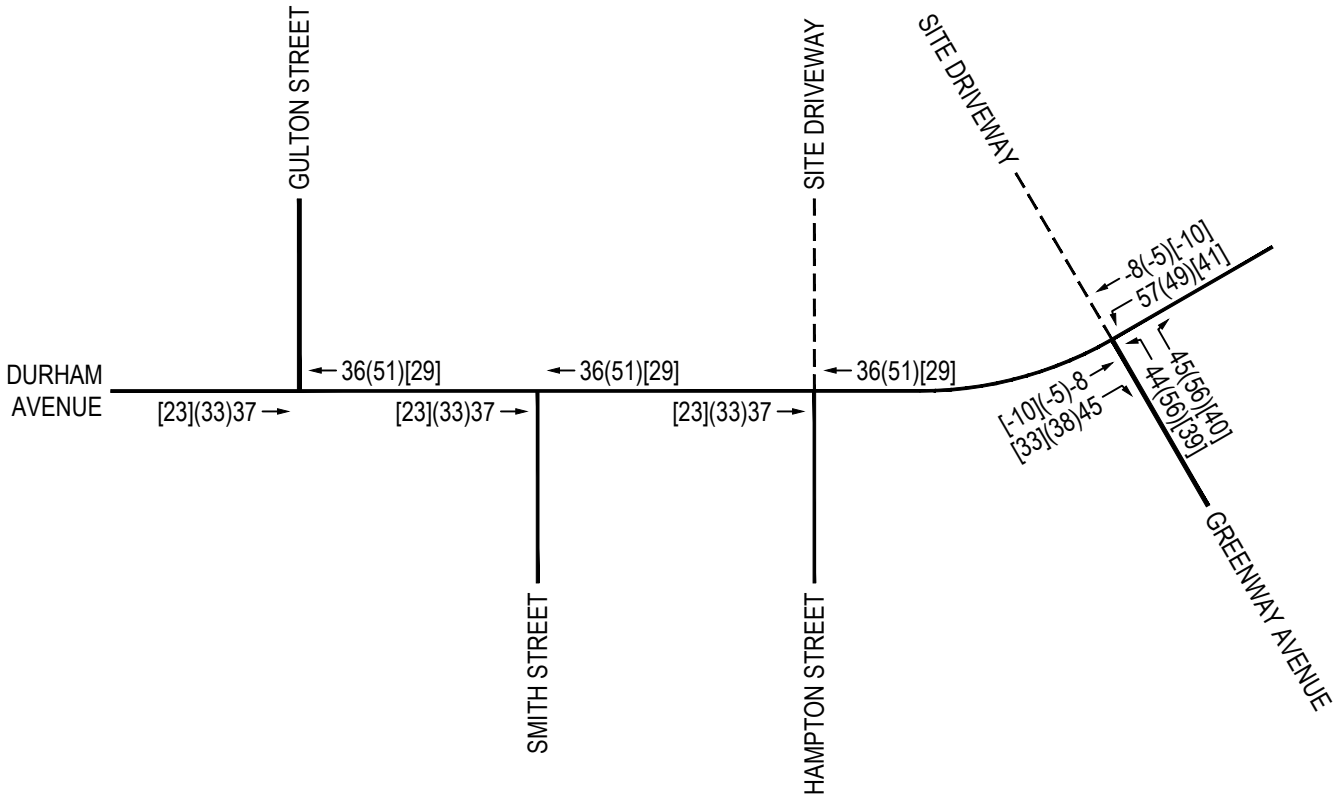
ATLANTIC TRAFFIC+DESIGN

Figure 6

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Other Planned Projects Traffic Volumes

SITE



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL

K:\2021\ANJ21013\ANALYSIS-PERMITTING\FIGURES\ANJ21013 FIGURES---->LAYOUT: OTHER PLANNED PROJECTS TRAFFIC VOLUMES

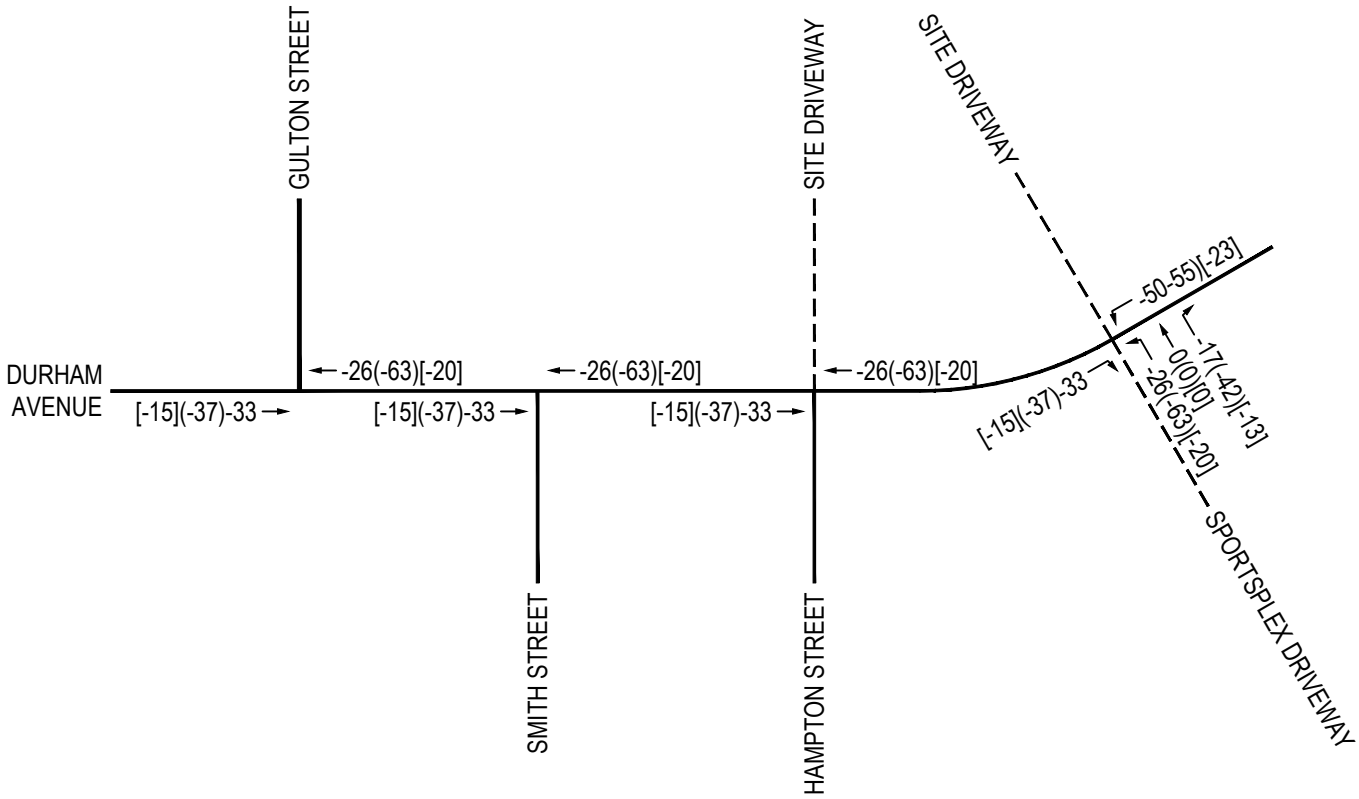
ATLANTIC TRAFFIC+DESIGN

Figure 7

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Removal of Existing Adjacent Area Traffic Volumes

SITE



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL

K:\2021\VAN\21013\ANALYSIS-PERMITTING\FIGURES\VAN21013 FIGURES---->LAYOUT: FUTURE BASE TRAFFIC VOLUMES (2)

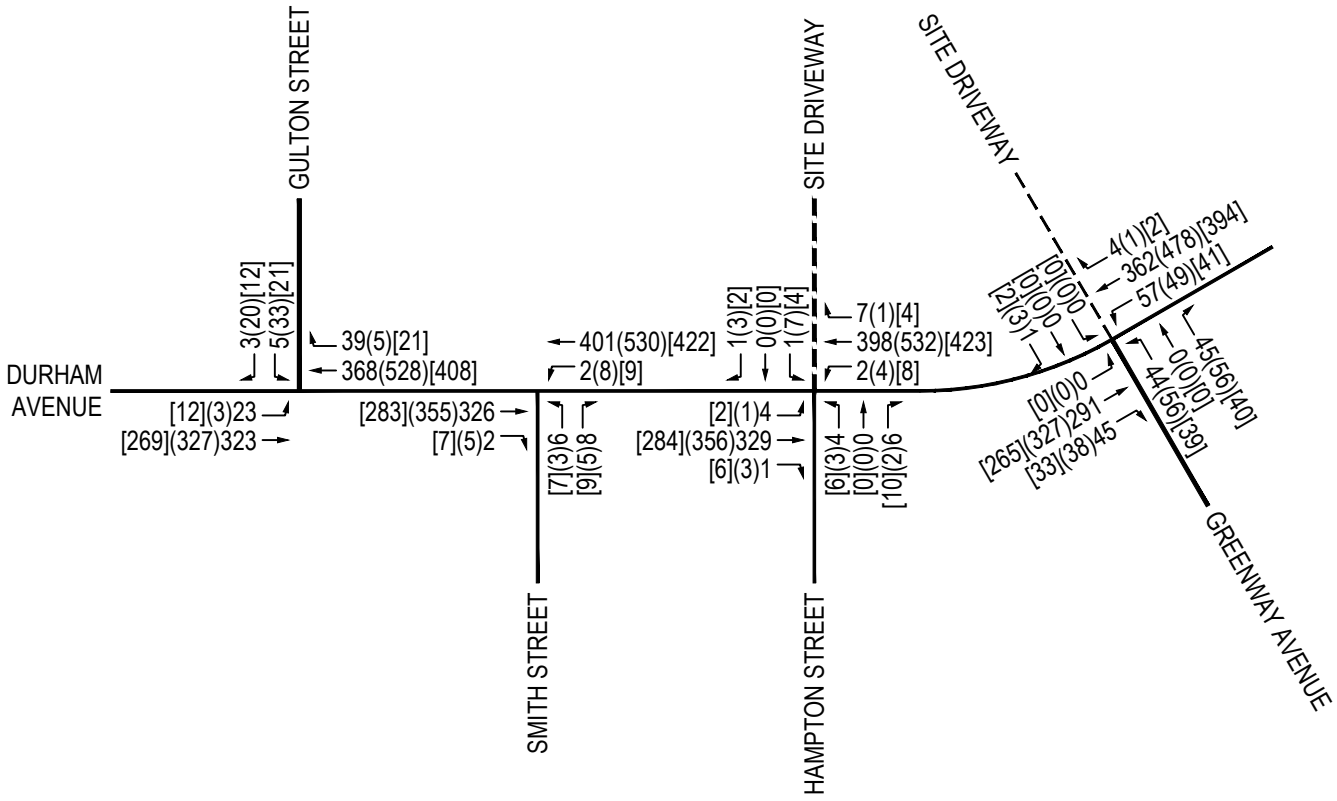
ATLANTIC TRAFFIC+DESIGN

Figure 8

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Future No-Build Traffic Volumes

SITE



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL

K:\2021\ANJ21013\ANALYSIS-PERMITTING\FIGURES\ANJ21013 FIGURES---->LAYOUT: NO-BUILD TRAFFIC VOLUMES

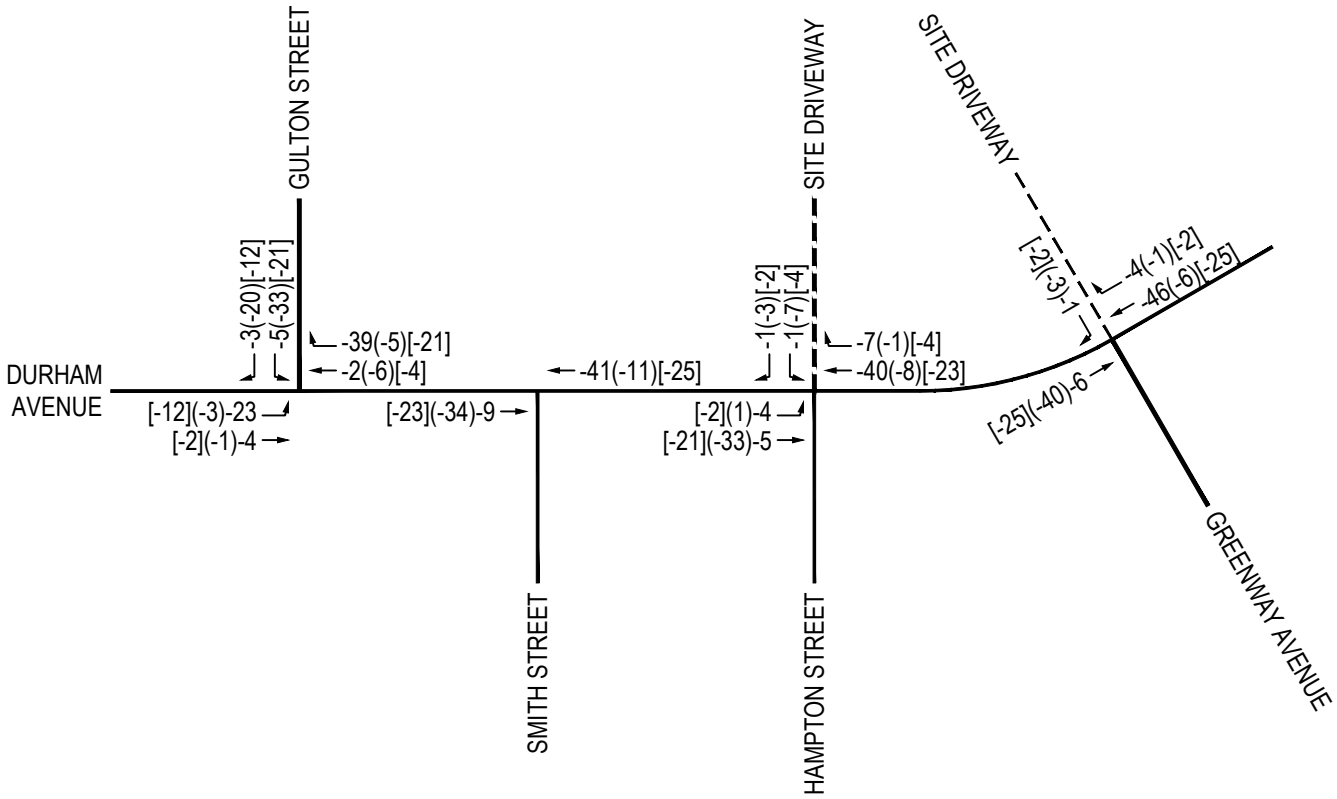
ATLANTIC TRAFFIC+DESIGN

Figure 9

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Removal of Existing Industrial Traffic Volumes

SITE



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL

K:\2021\ANJ21013\ANALYSIS-PERMITTING\FIGURES\ANJ21013 FIGURES-->>LAYOUT: REDISTRIBUTION

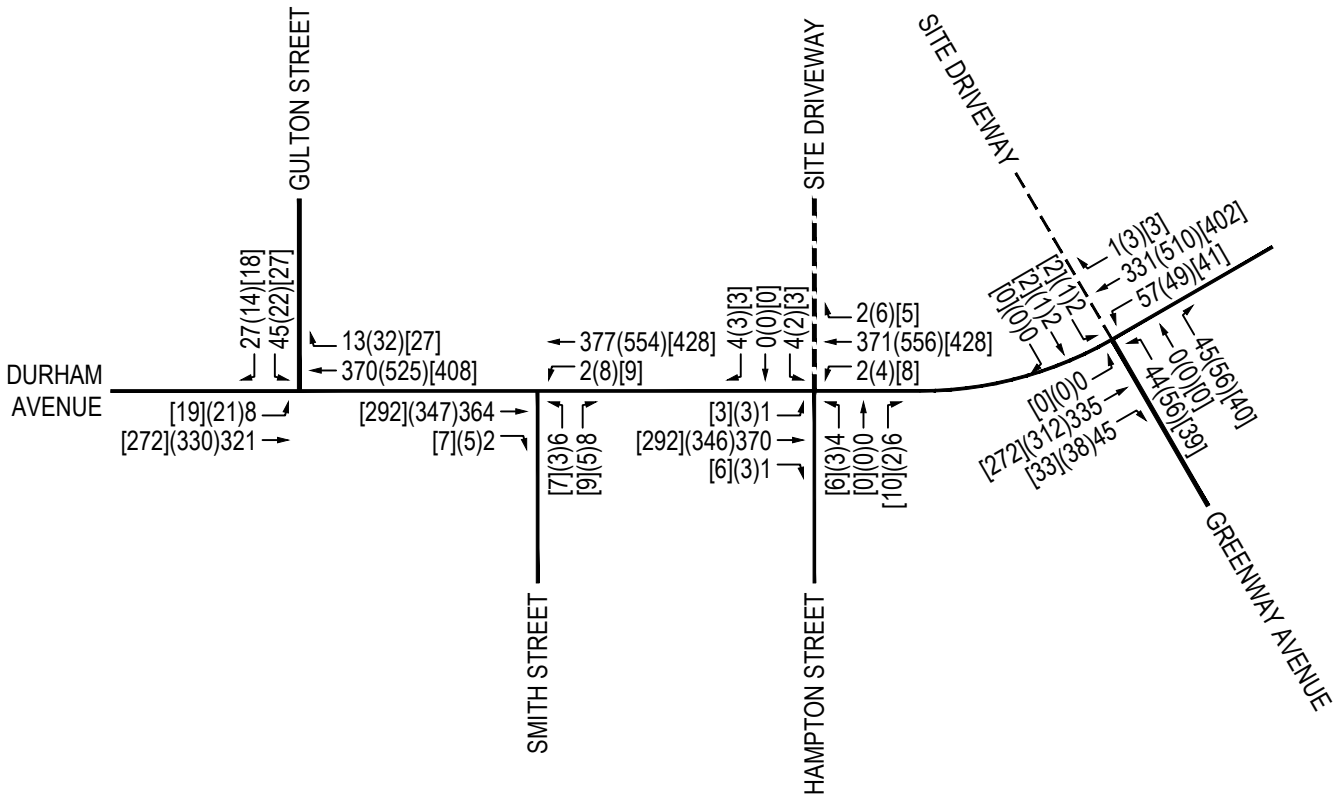
ATLANTIC TRAFFIC+DESIGN

Figure 10

Proposed Residential Development
Borough of Metuchen
Middlesex County, New Jersey

Future Build Traffic Volumes

SITE



LEGEND

AA(BB)[CC]	AM(PM)[SAT] PEAK HOUR VOLUMES
———	EXISTING ROADWAY
– – – –	EXISTING DRIVEWAY
⊕	EXISTING TRAFFIC SIGNAL
— —	PROPOSED DRIVEWAY

PEAK HOUR	ENTER	EXIT	TOTAL
AM	25	84	109
PM	65	43	108
SAT	57	55	112

K:\2021\ANJ21013\ANALYSIS-PERMITTING\FIGURES\ANJ21013 FIGURES---->LAYOUT: BUILD TRAFFIC VOLUMES

B | Manual Turning Movement Count Summary

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

TURNING MOVEMENT COUNTS

Weekday Morning

Thursday, October 8, 2020

		New Durham Road (CR 501) & Bridge Street					New Durham Road (CR 501) & John Street					15-Min
		NB		EB		WB	EB	SB		WB		Sum
Interval	Start	L	R	T	R	L	L	L	R	T	R	
1	6:00 AM	17	5	41	27	15	2	0	6	40	0	153
2	6:15 AM	17	6	42	26	21	4	0	11	51	5	183
3	6:30 AM	34	10	48	37	15	5	0	12	73	3	237
4	6:45 AM	33	11	70	42	21	9	0	18	70	0	274
5	7:00 AM	36	12	61	28	19	12	2	12	74	1	257
6	7:15 AM	36	15	79	32	37	19	1	22	70	2	313
7	7:30 AM	46	10	67	36	52	7	1	42	77	1	339
8	7:45 AM	44	15	78	48	64	9	2	44	78	0	382
9	8:00 AM	60	13	75	38	47	10	0	43	82	0	368
10	8:15 AM	40	9	88	44	37	11	1	37	83	1	351
11	8:30 AM	50	7	63	38	42	4	0	43	92	0	339
12	8:45 AM	57	3	93	56	44	6	0	37	77	0	373

	Peak Hour Summary									
	NB		EB		WB	EB	SB		WB	
	L	R	T	R	L	L	L	R	T	R
Peak Hour Volume	190	47	308	166	200	37	4	166	320	2
% Heavy Vehicles	2%	15%	8%	2%	5%	8%	0%	4%	5%	0%
Peak Hour Factor	0.81		0.90		0.78	0.84	0.92		0.96	

K:\2020\ANJ20055\FieldWork\Summarized\ANJ20055 TMC Summary.xlsx

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & New Durham Road (CR 501)/Memorial Parkway									Middlesex Ave & North Bank Drive		15-Min
		NB			EB		SB		WB		NB	SB	Sum
Interval	Start	L	T	R	L	T	L	R	T	R	L	R	
1	6:00 AM	0	15	0	39	1	0	46	0	1	0	0	102
2	6:15 AM	1	20	0	42	0	1	63	0	0	0	0	127
3	6:30 AM	1	34	0	58	1	1	81	2	2	0	0	180
4	6:45 AM	0	46	0	68	4	0	84	2	0	0	0	204
5	7:00 AM	0	42	1	66	0	1	73	2	3	0	0	188
6	7:15 AM	0	60	1	85	0	1	82	2	4	0	0	235
7	7:30 AM	1	75	0	78	2	6	103	3	7	0	0	275
8	7:45 AM	0	46	1	73	6	5	109	7	10	0	0	257
9	8:00 AM	1	49	0	86	4	0	91	3	4	0	0	238
10	8:15 AM	0	51	0	88	4	6	88	2	5	3	0	247
11	8:30 AM	3	31	0	78	1	1	83	2	6	0	0	205
12	8:45 AM	1	46	1	73	5	3	90	2	5	0	0	226

	Peak Hour Summary										
	NB			EB		SB		WB		NB	SB
	L	T	R	L	T	L	R	T	R	L	R
Peak Hour Volume	2	221	1	325	16	17	391	15	26	3	0
% Heavy Vehicles	0%	2%	0%	9%	25%	0%	5%	7%	0%	0%	0%
Peak Hour Factor		0.73			0.93		0.89		0.60	No Data	No Data

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & East Bank Driveway				Middlesex Avenue (CR 501) & Factory Street						15-Min
		NB	EB		SB	NB		EB		SB		Sum
Interval	Start	L	L	R	R	L	T	L	R	T	R	
1	6:00 AM	0	0	0	0	0	55	0	0	46	0	101
2	6:15 AM	0	0	0	1	0	62	0	0	64	1	128
3	6:30 AM	0	0	1	0	0	94	1	0	82	0	178
4	6:45 AM	0	0	0	0	0	114	0	1	84	0	199
5	7:00 AM	0	0	0	0	0	111	0	0	74	0	185
6	7:15 AM	0	0	0	0	0	149	1	0	83	0	233
7	7:30 AM	0	0	0	0	4	160	1	0	109	0	274
8	7:45 AM	0	0	0	0	2	129	1	2	114	2	250
9	8:00 AM	0	0	0	0	4	139	5	1	91	8	248
10	8:15 AM	0	0	0	0	3	144	8	4	94	7	260
11	8:30 AM	0	0	0	0	0	115	0	2	84	3	204
12	8:45 AM	0	0	0	0	3	124	0	1	93	1	222

	Peak Hour Summary									
	NB	EB		SB	NB		EB		SB	
	L	L	R	R	L	T	L	R	T	R
Peak Hour Volume	0	0	0	0	13	572	15	7	408	17
% Heavy Vehicles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	No Data	No Data		No Data	0.89		0.46		0.92	

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (NJ Route 27) & Main Street (CR 531)												15-Min
		NB			EB			SB			WB			Sum
Interval	Start	L	T	R	L	T	R	L	T	R	L	T	R	
1	6:00 AM	2	10	0	0	40	4	1	8	1	3	45	0	114
2	6:15 AM	1	14	9	3	55	14	3	15	2	6	75	7	204
3	6:30 AM	7	21	7	8	60	9	3	15	1	6	98	11	246
4	6:45 AM	7	27	3	7	89	7	9	13	2	4	84	9	261
5	7:00 AM	11	40	5	10	89	12	4	19	5	5	76	10	286
6	7:15 AM	9	39	4	22	88	12	4	23	2	7	66	9	285
7	7:30 AM	16	64	4	29	74	14	8	29	7	23	82	18	368
8	7:45 AM	22	42	10	22	70	20	15	32	2	30	85	14	364
9	8:00 AM	22	87	17	11	93	12	4	16	6	22	87	17	394
10	8:15 AM	10	75	10	7	95	35	10	28	8	10	75	10	373
11	8:30 AM	19	76	12	4	100	21	11	28	9	19	76	12	387
12	8:45 AM	16	95	3	14	100	16	2	15	4	16	95	3	379

	Peak Hour Summary											
	NB			EB			SB			WB		
	6	T	R	L	T	R	L	T	R	L	T	R
Peak Hour Volume	70	268	41	69	332	81	37	105	23	85	329	59
% Heavy Vehicles	4%	1%	5%	7%	4%	5%	0%	4%	9%	2%	2%	5%
Peak Hour Factor		0.75			0.88			0.84			0.92	

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & Central Avenue (CR 669)										15-Min
		WB			NB		EB			SB		Sum
Interval	Start	L	T	R	L	R	L	T	R	L	R	
1	6:00 AM	2	0	0	10	14	27	12	0	19	2	86
2	6:15 AM	0	5	2	2	34	16	12	7	28	3	109
3	6:30 AM	0	2	0	0	36	41	18	3	64	1	165
4	6:45 AM	0	2	0	8	70	37	40	7	73	0	237
5	7:00 AM	0	8	0	2	50	72	38	10	58	6	244
6	7:15 AM	0	0	0	12	109	78	68	12	99	2	380
7	7:30 AM	0	14	2	2	117	75	100	7	132	1	450
8	7:45 AM	0	22	0	2	89	72	106	17	70	8	386
9	8:00 AM	6	14	1	4	106	51	73	9	53	4	321
10	8:15 AM	6	10	6	0	97	84	67	18	43	3	334
11	8:30 AM	4	16	4	6	54	64	72	4	59	8	291
12	8:45 AM	2	11	6	4	80	70	61	16	56	6	312

	Peak Hour Summary									
	WB			NB		EB			SB	
	6	T	R	L	R	L	T	R	L	R
Peak Hour Volume	12	60	9	8	409	282	346	51	298	16
% Heavy Vehicles	50%	3%	44%	0%	2%	0%	0%	0%	3%	0%
Peak Hour Factor		0.92			0.88		0.87			0.59

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Durham Avenue & SportsPlex				Middlesex Avenue (CR 501) & Lake Avenue (NJ Route 57)						15-Min
		EB	NB		WB	WB		NB	SB			Sum
Interval	Start	R	L	R	L	L	R	R	L	T	R	
1	6:00 AM	1	0	1	0	10	9	20	19	47	0	107
2	6:15 AM	0	0	0	0	8	8	12	18	68	0	114
3	6:30 AM	0	0	0	0	13	8	18	32	79	0	150
4	6:45 AM	0	0	0	0	31	14	13	20	87	0	165
5	7:00 AM	0	0	0	0	25	17	24	22	64	0	152
6	7:15 AM	0	0	2	1	57	10	28	23	76	0	197
7	7:30 AM	0	0	0	1	47	23	21	33	87	0	212
8	7:45 AM	0	0	1	0	49	20	26	32	81	0	209
9	8:00 AM	0	0	0	1	54	20	27	30	82	0	214
10	8:15 AM	0	1	0	2	37	13	26	45	65	0	189
11	8:30 AM	0	0	0	0	37	23	17	32	60	0	169
12	8:45 AM	1	0	1	0	37	7	21	25	84	0	176

	Peak Hour Summary									
	EB	NB		WB	WB		NB	SB		
	R	L	R	L	L	R	R	L	T	R
Peak Hour Volume	0	1	1	4	187	76	100	140	315	0
% Heavy Vehicles	0%	0%	0%	25%	13%	4%	28%	3%	3%	0%
Peak Hour Factor	No Data	0.50		0.50	0.89		0.93	0.95		

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Durham Avenue & Central Avenue (CR 669)									15-Min	Hour
		NB		EB		SB		WB			Sum	Sum
Interval	Start	L	T	L	R	T	R	L	T	R		
1	6:00 AM	1	19	8	4	13	16	1	2	0	64	4493
2	6:15 AM	5	17	10	2	19	8	1	2	0	64	5283
3	6:30 AM	2	38	24	7	24	25	0	6	2	128	6286
4	6:45 AM	2	61	48	3	42	47	1	8	1	213	7261
5	7:00 AM	7	51	46	10	23	61	0	5	2	205	7853
6	7:15 AM	10	76	67	4	59	67	0	3	3	289	8379
7	7:30 AM	9	93	61	16	71	80	1	7	3	341	8456
8	7:45 AM	12	74	65	12	58	59	1	13	3	297	8019
9	8:00 AM	11	65	46	12	59	57	1	5	4	260	7799
10	8:15 AM	7	62	32	14	65	42	7	18	8	255	
11	8:30 AM	5	63	33	10	43	59	1	8	5	227	
12	8:45 AM	8	72	39	15	40	53	2	6	2	237	

	Peak Hour Summary								
	NB		EB		SB		WB		
	6	T	L	R	T	R	L	T	R
Peak Hour Volume	39	294	204	54	253	238	10	43	18
% Heavy Vehicles	0%	2%	0%	2%	2%	0%	0%	0%	0%
Peak Hour Factor	0.82		0.84		0.81		0.54		

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

TURNING MOVEMENT COUNTS

Weekday Evening

Thursday, October 8, 2020

		New Durham Road (CR 501) & Bridge Street					New Durham Road (CR 501) & John Street					15-Min
		NB		EB		WB	EB	SB		WB		Sum
Interval	Start	L	R	T	R	L	L	L	R	T	R	
1	4:00 PM	51	21	88	48	70	13	1	66	102	1	461
2	4:15 PM	57	20	99	69	70	11	1	51	81	0	459
3	4:30 PM	46	18	81	70	66	11	0	40	74	1	407
4	4:45 PM	44	18	88	74	75	12	2	45	104	1	463
5	5:00 PM	57	15	89	63	81	9	0	43	95	2	454
6	5:15 PM	58	16	91	65	86	13	1	55	112	1	498
7	5:30 PM	48	15	75	43	83	14	0	50	91	4	423
8	5:45 PM	43	21	86	74	97	13	4	48	95	1	482

	Peak Hour Summary									
	NB		EB		WB	EB	SB		WB	
	L	R	T	R	L	L	L	R	T	R
Peak Hour Volume	207	64	343	245	325	48	3	193	402	8
% Heavy Vehicles	1%	0%	4%	0%	0%	0%	0%	1%	3%	0%
Peak Hour Factor	0.92		0.91		0.94	0.86	0.88		0.91	

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & New Durham Road (CR 501)/Memorial Parkway									Middlesex Ave & North Bank Drive		15-Min
		NB			EB		SB		WB		NB	SB	Sum
Interval	Start	L	T	R	L	T	L	R	T	R	L	R	
1	4:00 PM	1	56	2	91	3	5	114	1	10	0	0	283
2	4:15 PM	1	65	1	106	4	3	97	5	5	0	0	287
3	4:30 PM	0	52	1	80	5	0	114	4	4	0	0	260
4	4:45 PM	0	62	2	89	6	6	122	8	8	0	0	303
5	5:00 PM	1	67	1	94	6	4	112	3	7	0	0	295
6	5:15 PM	3	46	1	88	7	6	124	4	8	0	0	287
7	5:30 PM	0	65	5	69	5	3	110	4	5	0	0	266
8	5:45 PM	3	54	1	80	4	2	122	5	8	1	0	280

	Peak Hour Summary										
	NB			EB		SB		WB		NB	SB
	L	T	R	L	T	L	R	T	R	L	R
Peak Hour Volume	4	240	9	340	24	19	468	19	28	0	0
% Heavy Vehicles	0%	2%	0%	3%	4%	0%	4%	0%	0%	0%	0%
Peak Hour Factor		0.90			0.91		0.94		0.73	No Data	No Data

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & East Bank Driveway				Middlesex Avenue (CR 501) & Factory Street						15-Min
		NB	EB		SB	NB		EB		SB		Sum
Interval	Start	L	L	R	R	L	T	L	R	T	NB	
1	4:00 PM	0	1	0	0	2	157	2	1	119	0	282
2	4:15 PM	0	1	0	1	0	176	1	0	100	0	279
3	4:30 PM	0	0	0	0	3	136	2	1	114	2	258
4	4:45 PM	0	0	0	0	1	159	0	2	128	3	293
5	5:00 PM	0	0	1	0	2	168	4	0	116	1	292
6	5:15 PM	0	0	1	0	3	142	2	4	130	0	282
7	5:30 PM	0	1	0	0	0	139	2	2	113	2	259
8	5:45 PM	0	0	0	0	0	142	2	3	124	2	273

	Peak Hour Summary									
	NB	EB		W	NB		EB		SB	
	L	L	R	R	L	T	L	R	T	R
Peak Hour Volume	0	1	2	0	6	608	8	8	487	6
% Heavy Vehicles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	No Data	0.75		No Data	0.90		0.67		0.94	

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (NJ Route 27) & Main Street (CR 531)												15-Min
		NB			EB			SB			WB			Sum
Interval	Start	L	T	R	L	T	R	L	T	R	L	T	R	
1	4:00 PM	24	44	7	15	109	22	14	40	9	24	102	13	423
2	4:15 PM	17	54	17	12	113	16	20	34	7	26	101	8	425
3	4:30 PM	24	59	8	9	115	31	25	36	6	29	104	13	459
4	4:45 PM	16	68	11	13	94	13	15	42	5	21	102	11	411
5	5:00 PM	20	62	10	16	108	17	21	48	8	27	83	12	432
6	5:15 PM	28	63	13	9	116	23	15	35	2	26	104	12	446
7	5:30 PM	24	49	12	12	85	26	16	42	7	26	114	10	423
8	5:45 PM	20	45	12	6	133	22	23	34	3	12	113	9	432

	Peak Hour Summary											
	NB			EB			SB			WB		
	6	T	R	L	T	R	L	T	R	L	T	R
Peak Hour Volume	88	242	46	50	403	79	67	167	22	100	403	45
% Heavy Vehicles	1%	0%	0%	8%	0%	0%	1%	1%	0%	1%	1%	2%
Peak Hour Factor		0.90			0.90			0.83			0.91	

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & Central Avenue (CR 669)										15-Min
		WB			NB		EB			SB		Sum
Interval	Start	L	T	R	L	R	L	T	R	L	R	
1	4:00 PM	44	49	7	5	59	7	15	7	42	7	242
2	4:15 PM	30	52	10	7	53	7	17	13	41	14	244
3	4:30 PM	34	46	10	9	47	6	14	9	33	5	213
4	4:45 PM	34	56	11	7	44	7	17	7	53	8	244
5	5:00 PM	33	55	12	9	61	4	16	10	48	8	256
6	5:15 PM	35	49	12	5	53	3	14	15	29	9	224
7	5:30 PM	34	51	8	7	64	8	16	13	26	8	235
8	5:45 PM	35	69	7	11	44	6	16	4	36	9	237

	Peak Hour Summary									
	WB			NB		EB			SB	
	6	T	R	L	R	L	T	R	L	R
Peak Hour Volume	136	211	43	28	222	22	63	45	156	33
% Heavy Vehicles	10%	1%	9%	0%	4%	0%	0%	0%	6%	0%
Peak Hour Factor		0.97			0.88		0.88			0.77

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Durham Avenue & SportsPlex				Middlesex Avenue (CR 501) & Lake Avenue (NJ Route 57)						15-Min
		EB	NB		WB	WB		NB	SB			Sum
Interval	Start	R	L	R	L	L	R	R	L	T	R	
1	4:00 PM	2	0	4	7	60	27	24	43	81	2	250
2	4:15 PM	3	1	1	3	53	19	29	47	61	0	217
3	4:30 PM	2	1	0	3	44	27	26	43	82	0	228
4	4:45 PM	2	1	1	2	52	23	20	41	81	0	223
5	5:00 PM	4	1	1	0	64	22	33	42	72	0	239
6	5:15 PM	1	0	2	1	37	21	36	33	63	1	195
7	5:30 PM	7	0	1	5	60	13	30	51	75	0	242
8	5:45 PM	9	4	3	7	59	16	30	64	76	0	268

	Peak Hour Summary									
	EB	NB		WB	WB		NB	SB		
	R	L	R	L	L	R	R	L	T	R
Peak Hour Volume	14	2	5	8	213	79	119	167	291	1
% Heavy Vehicles	0%	0%	0%	0%	7%	1%	13%	1%	2%	0%
Peak Hour Factor	0.50	0.88		0.40	0.85		0.83	0.91		

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Durham Avenue & Central Avenue (CR 669)									15-Min	Hour
		NB		EB		SB		WB			Sum	Sum
Interval	Start	L	T	L	R	T	R	NB	SB	R		
1	4:00 PM	8	82	39	15	71	73	2	14	2	306	8895
2	4:15 PM	13	82	37	7	59	67	0	13	3	281	8991
3	4:30 PM	7	73	70	8	74	77	4	18	2	333	9087
4	4:45 PM	9	94	63	12	74	85	2	16	6	361	9106
5	5:00 PM	6	102	56	16	96	73	2	22	2	375	9106
6	5:15 PM	7	73	63	15	96	80	2	16	4	356	
7	5:30 PM	11	71	50	14	82	80	1	16	4	329	
8	5:45 PM	9	74	55	15	79	75	2	14	3	326	

	Peak Hour Summary								
	NB		EB		SB		WB		
	L	T	L	R	T	R	L	T	R
Peak Hour Volume	33	340	232	57	348	318	7	70	16
% Heavy Vehicles	24%	0%	0%	0%	3%	0%	0%	0%	0%
Peak Hour Factor	0.86		0.93		0.95		0.89		

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

TURNING MOVEMENT COUNTS

Saturday Midday

Saturday, October 10, 2020

		New Durham Road (CR 501) & Bridge Street					New Durham Road (CR 501) & John Street					15-Min
		NB		EB		WB	EB	SB		WB		Sum
Interval	Start	L	R	T	R	L	L	L	R	T	R	
1	11:00 AM	49	20	90	40	64	8	0	44	94	0	409
2	11:15 AM	37	21	65	56	53	11	0	34	91	0	368
3	11:30 AM	39	26	71	49	68	18	0	46	73	0	390
4	11:45 AM	47	14	69	55	65	12	0	45	86	0	393
5	12:00 PM	39	21	85	46	73	15	2	60	79	1	421
6	12:15 PM	37	20	94	32	81	16	2	44	102	0	428
7	12:30 PM	47	12	84	42	62	5	1	38	79	1	371
8	12:45 PM	45	28	94	66	70	22	0	39	87	0	451
9	1:00 PM	42	30	84	49	74	18	1	43	102	3	446
10	1:15 PM	41	20	69	39	78	17	0	42	87	1	394
11	1:30 PM	54	18	66	31	68	11	1	43	75	3	370
12	1:45 PM	47	16	88	37	81	11	0	39	108	0	427

	Peak Hour Summary									
	NB		EB		WB	EB	SB		WB	
	L	R	T	R	L	L	L	R	T	R
Peak Hour Volume	171	90	356	189	287	61	4	164	370	4
% Heavy Vehicles	1%	0%	1%	1%	0%	0%	0%	0%	1%	0%
Peak Hour Factor	0.89		0.85		0.89	0.69	0.91		0.89	

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & New Durham Road (CR 501)/Memorial Parkway									Middlesex Ave & North Bank Drive		15-Min
		NB			EB		SB		WB		NB	SB	Sum
Interval	Start	L	T	R	L	T	L	R	T	R	L	R	
1	11:00 AM	5	60	0	91	6	0	116	4	2	0	0	284
2	11:15 AM	0	38	0	74	3	3	105	3	5	0	0	231
3	11:30 AM	0	66	1	60	3	3	103	1	2	0	0	239
4	11:45 AM	0	62	0	54	13	4	97	4	5	1	0	240
5	12:00 PM	1	57	1	79	4	5	101	1	5	0	0	254
6	12:15 PM	2	55	2	88	1	3	125	4	3	0	0	283
7	12:30 PM	0	48	0	81	13	3	91	2	2	1	0	241
8	12:45 PM	1	65	3	92	1	1	106	3	5	0	0	277
9	1:00 PM	0	65	0	81	3	4	109	6	6	0	0	274
10	1:15 PM	1	44	1	78	8	4	111	0	6	0	0	253
11	1:30 PM	2	62	0	56	1	1	96	1	1	0	0	220
12	1:45 PM	0	49	0	89	2	5	124	4	2	0	0	275

	Peak Hour Summary										
	NB			EB		SB		WB		NB	SB
	L	T	R	L	T	L	R	T	R	L	R
Peak Hour Volume	3	233	5	342	18	11	431	15	16	1	0
% Heavy Vehicles	0%	0%	0%	1%	0%	0%	1%	0%	6%	0%	0%
Peak Hour Factor		0.86		0.96		0.86		0.65		0.25	No Data

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & East Bank Driveway				Middlesex Avenue (CR 501) & Factory Street						15-Min
		NB	EB		SB	NB		EB		SB		Sum
Interval	Start	L	L	R	R	L	T	L	R	T	R	
1	11:00 AM	0	1	0	0	0	153	0	0	116	0	270
2	11:15 AM	0	0	1	1	0	117	1	2	108	1	231
3	11:30 AM	1	1	1	2	0	128	0	0	106	0	239
4	11:45 AM	1	1	4	1	0	121	2	1	101	2	234
5	12:00 PM	0	1	0	1	0	141	0	1	106	1	251
6	12:15 PM	0	1	1	0	0	146	2	0	128	1	279
7	12:30 PM	0	0	1	0	0	131	1	1	94	3	231
8	12:45 PM	0	0	1	0	0	162	2	1	107	3	276
9	1:00 PM	0	0	0	0	0	152	1	0	113	2	268
10	1:15 PM	0	0	0	0	0	128	0	1	115	0	244
11	1:30 PM	0	0	0	1	0	119	0	5	97	0	222
12	1:45 PM	0	0	1	0	0	140	0	0	129	0	270

	Peak Hour Summary									
	NB	EB		SB	NB		EB		SB	
	L	L	R	R	L	T	L	R	T	R
Peak Hour Volume	0	1	3	0	0	591	6	2	442	9
% Heavy Vehicles	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	No Data	0.50		No Data	0.91		0.67		0.87	

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (NJ Route 27) & Main Street (CR 531)												15-Min
		NB			EB			SB			WB			Sum
Interval	Start	L	T	R	L	T	R	L	T	R	L	T	R	
1	11:00 AM	21	34	21	14	95	24	14	95	24	25	95	18	480
2	11:15 AM	19	32	15	11	111	18	11	111	18	23	87	7	463
3	11:30 AM	23	46	24	10	89	25	10	89	25	19	78	18	456
4	11:45 AM	21	41	16	11	91	26	11	91	26	30	90	12	466
5	12:00 PM	30	41	16	18	90	38	12	25	2	24	74	10	380
6	12:15 PM	23	39	7	11	114	22	13	32	7	20	91	6	385
7	12:30 PM	29	45	20	7	128	22	14	38	8	23	88	10	432
8	12:45 PM	32	45	13	7	115	24	18	28	11	31	111	8	443
9	1:00 PM	30	61	13	7	118	30	16	26	8	18	73	9	409
10	1:15 PM	22	41	11	17	117	24	17	36	7	22	80	7	401
11	1:30 PM	14	34	13	9	112	19	11	31	7	21	90	11	372
12	1:45 PM	24	42	16	4	88	22	19	31	8	19	85	14	372

	Peak Hour Summary											
	NB			EB			SB			WB		
	6	T	R	L	T	R	L	T	R	L	T	R
Peak Hour Volume	114	190	53	32	475	98	61	124	34	92	363	33
% Heavy Vehicles	0%	0%	0%	0%	0%	2%	0%	0%	0%	1%	1%	3%
Peak Hour Factor		0.86			0.96			0.91			0.81	

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Middlesex Avenue (CR 501) & Central Avenue (CR 669)										15-Min
		WB			NB		EB			SB		Sum
Interval	Start	L	T	R	L	R	L	T	R	L	R	
1	11:00 AM	18	33	11	11	40	5	13	8	41	8	188
2	11:15 AM	67	65	17	17	60	3	7	8	39	13	296
3	11:30 AM	20	28	4	5	16	1	7	5	26	4	116
4	11:45 AM	34	39	10	8	44	4	6	9	31	4	189
5	12:00 PM	33	52	6	6	52	4	12	2	29	6	202
6	12:15 PM	36	51	3	13	42	7	13	7	47	6	225
7	12:30 PM	38	56	7	11	35	3	16	4	28	8	206
8	12:45 PM	35	47	10	15	42	6	14	12	33	8	222
9	1:00 PM	39	40	8	13	40	6	16	13	35	9	219
10	1:15 PM	31	47	12	12	44	9	15	10	43	11	234
11	1:30 PM	32	44	9	8	43	6	12	10	38	6	208
12	1:45 PM	30	40	11	11	40	7	14	7	29	9	198

	Peak Hour Summary									
	WB			NB		EB			SB	
	6	T	R	L	R	L	T	R	L	R
Peak Hour Volume	148	194	28	52	159	22	59	36	143	31
% Heavy Vehicles	0%	2%	4%	0%	3%	0%	0%	0%	2%	0%
Peak Hour Factor		0.92			0.93		0.84			0.82

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Durham Avenue & SportsPlex				Middlesex Avenue (CR 501) & Lake Avenue (NJ Route 57)						15-Min
		EB	NB		WB	WB		NB	SB			Sum
Interval	Start	R	L	R	L	L	R	R	L	T	R	
1	11:00 AM	0	4	1	2	47	27	19	45	75	0	220
2	11:15 AM	1	1	1	0	54	35	23	50	88	0	253
3	11:30 AM	2	2	1	0	26	41	18	49	77	0	216
4	11:45 AM	1	3	4	3	50	38	22	65	66	0	252
5	12:00 PM	0	3	2	2	57	33	18	47	78	0	240
6	12:15 PM	0	3	2	0	49	31	25	53	89	3	255
7	12:30 PM	0	0	1	1	48	36	31	51	70	1	239
8	12:45 PM	1	0	0	1	33	32	17	57	83	0	224
9	1:00 PM	1	1	2	0	49	26	29	48	75	0	231
10	1:15 PM	0	0	0	0	49	21	14	45	65	0	194
11	1:30 PM	0	1	0	0	50	38	28	56	75	0	248
12	1:45 PM	2	0	1	0	41	26	18	44	87	0	219

Peak Hour Summary										
	EB	NB		WB	WB		NB	SB		
	R	L	R	L	L	R	R	L	T	R
Peak Hour Volume	2	4	5	2	179	125	102	209	317	4
% Heavy Vehicles	0%	0%	0%	0%	4%	1%	3%	1%	1%	0%
Peak Hour Factor	0.50	0.45		0.50	0.90		0.82	0.91		

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

		Durham Avenue & Central Avenue (CR 669)									15-Min	Hour
		NB		EB		SB		WB			Sum	Sum
Interval	Start	L	T	L	R	T	R	L	T	R		
1	11:00 AM	9	53	50	13	39	40	5	16	3	228	8184
2	11:15 AM	3	57	41	11	66	65	5	9	2	259	8167
3	11:30 AM	4	57	46	16	57	70	4	12	8	274	8169
4	11:45 AM	15	62	56	13	69	57	5	12	11	300	8255
5	12:00 PM	10	59	62	12	81	71	0	14	5	314	8364
6	12:15 PM	10	63	34	14	60	60	2	5	0	248	8429
7	12:30 PM	10	57	37	18	68	81	7	17	1	296	8350
8	12:45 PM	10	60	56	20	70	59	3	10	2	290	8277
9	1:00 PM	9	62	50	11	63	70	2	8	5	280	8153
10	1:15 PM	6	77	50	8	82	70	1	7	3	304	
11	1:30 PM	7	77	53	9	64	70	7	13	3	303	
12	1:45 PM	8	74	49	11	68	68	5	11	4	298	

	Peak Hour Summary								
	NB		EB		SB		WB		
	6	T	L	R	T	R	L	T	R
Peak Hour Volume	39	242	177	63	261	270	14	40	8
% Heavy Vehicles	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.96		0.79		0.89		0.62		

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Maven Group
700 Middlesex Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ20055

TURNING MOVEMENT COUNTS

	New Durham Road (CR 501) & Oliver Street			
	SB		EB	WB
Peak Hour	L	R	L	R
AM	6	4	2	4
PM	6	8	9	2
SAT	4	0	2	4

C | ITE Trip Generation

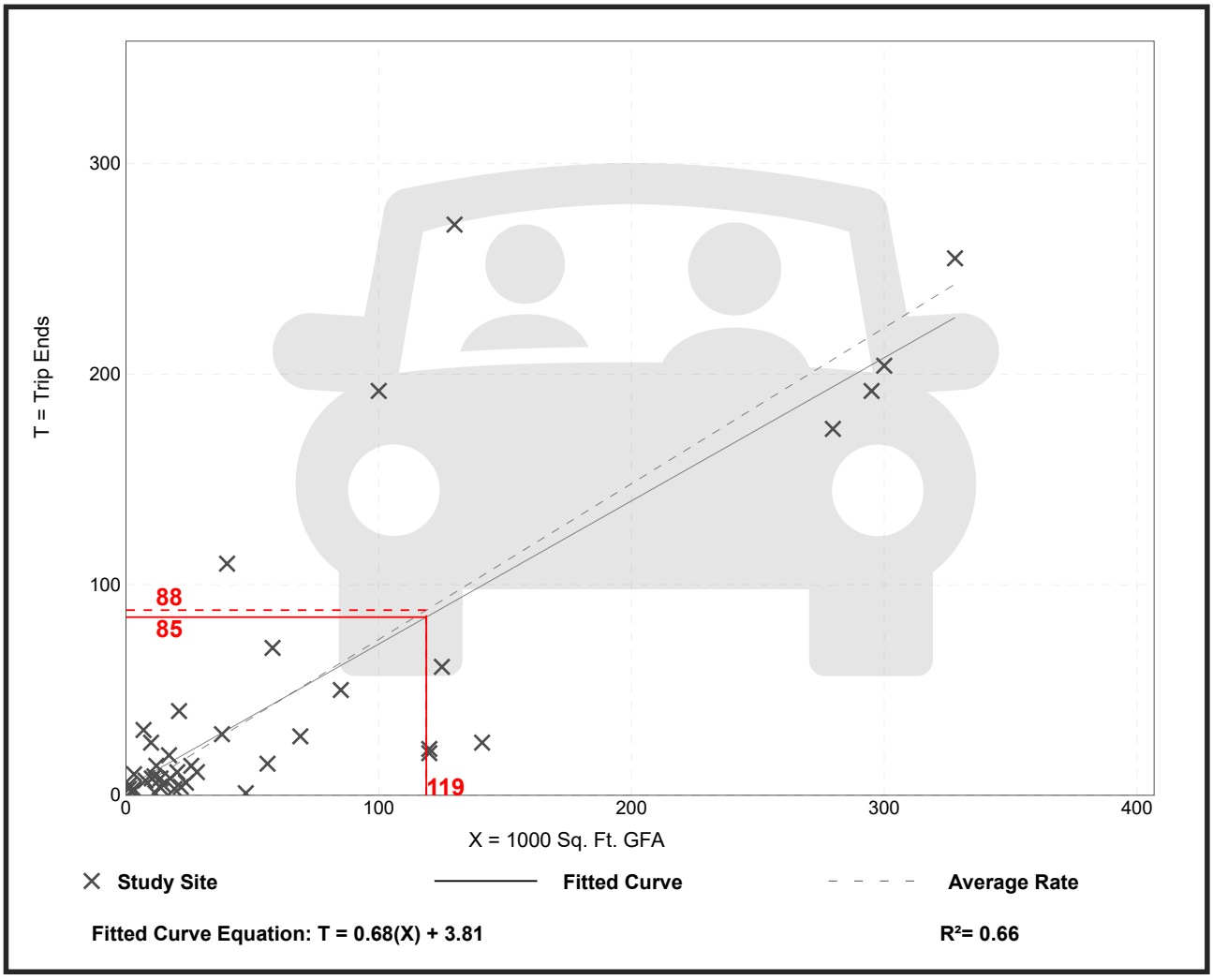
General Light Industrial
(110)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 41
Avg. 1000 Sq. Ft. GFA: 65
Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.74	0.02 - 4.46	0.61

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

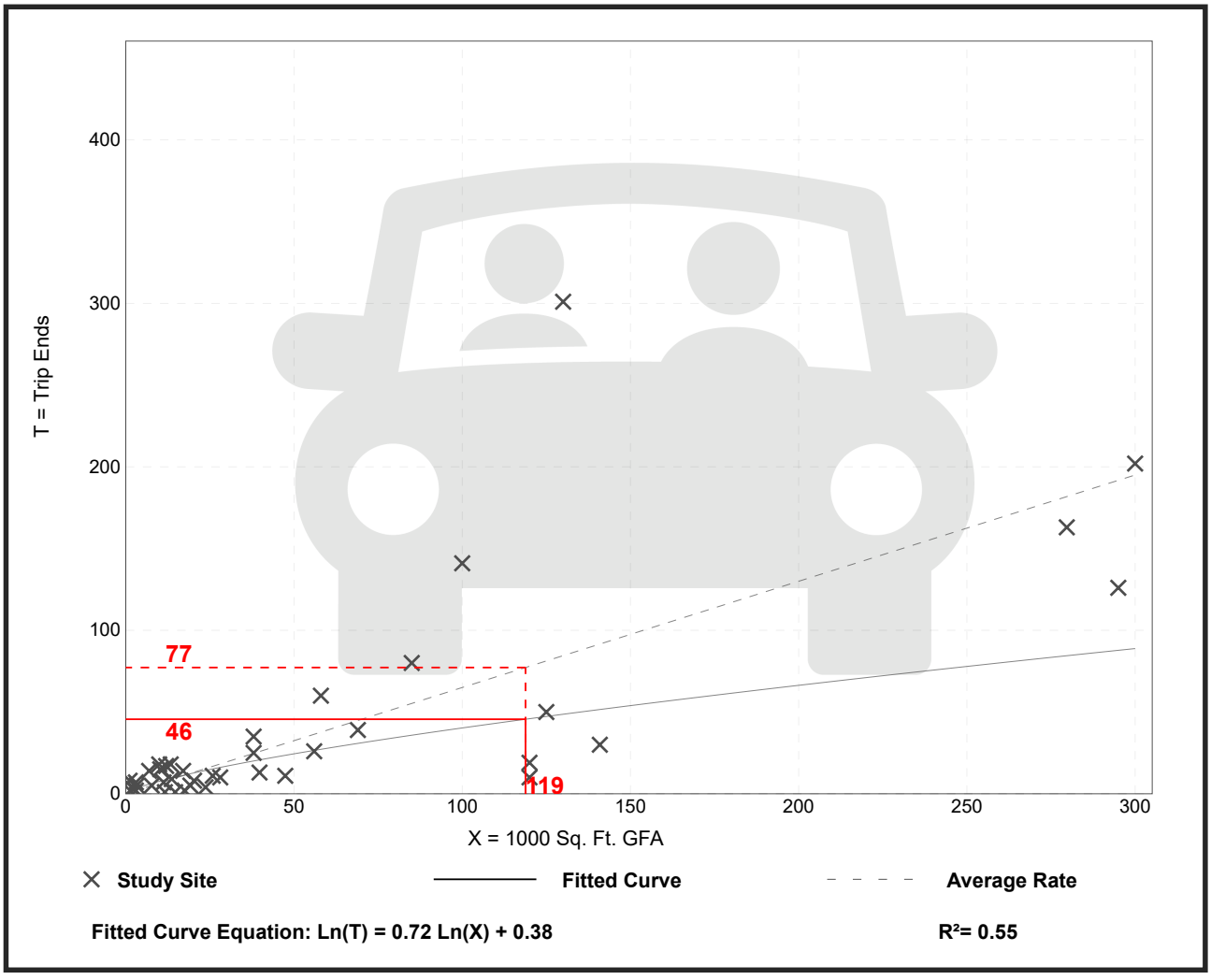
General Light Industrial
(110)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 40
Avg. 1000 Sq. Ft. GFA: 58
Directional Distribution: 14% entering, 86% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.65	0.07 - 7.02	0.56

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday, Peak Hour of Generator**

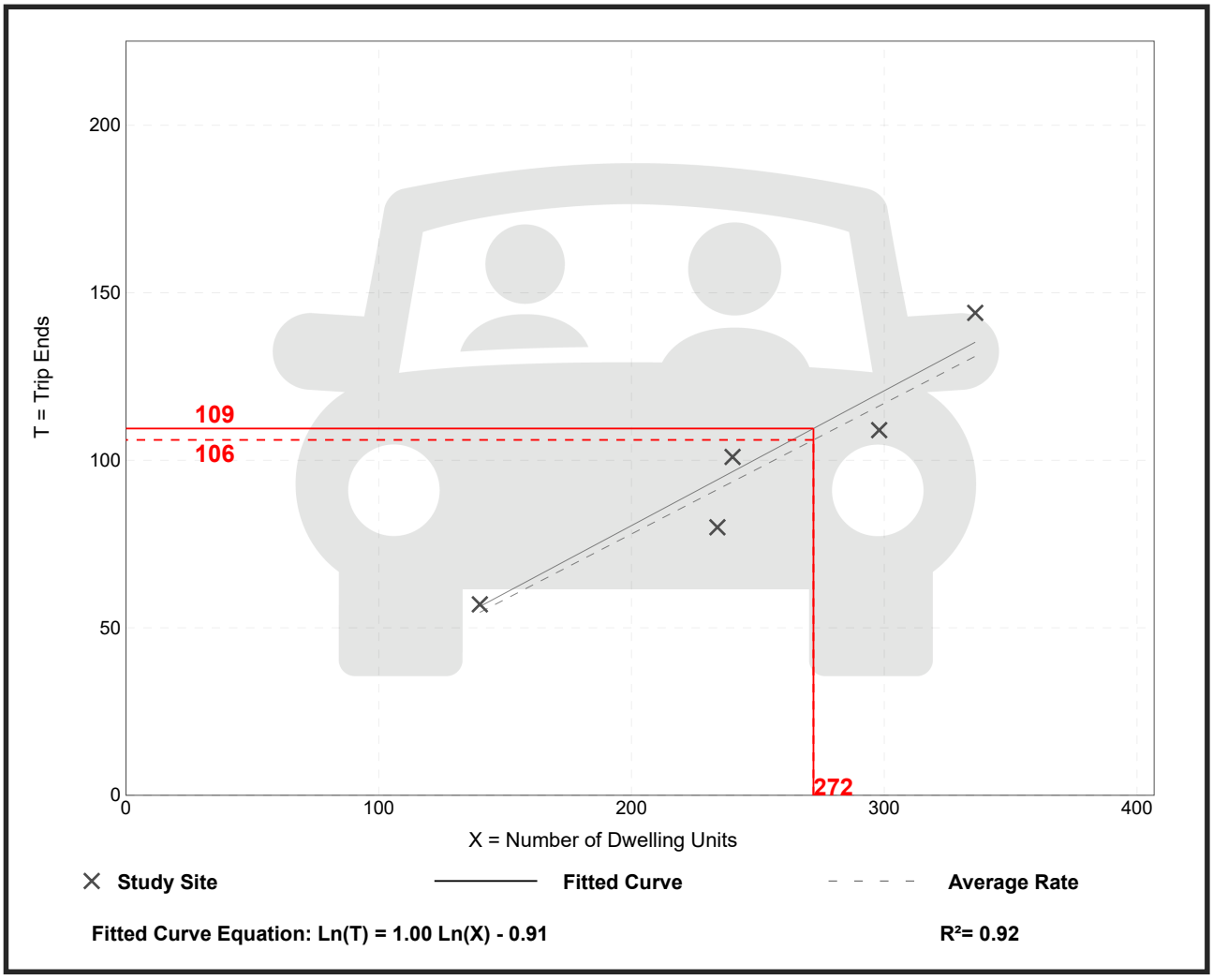
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 250
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.34 - 0.43	0.04

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Ln(T) = 1.00 Ln(X) - 0.91 **R^2= 0.92**

Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

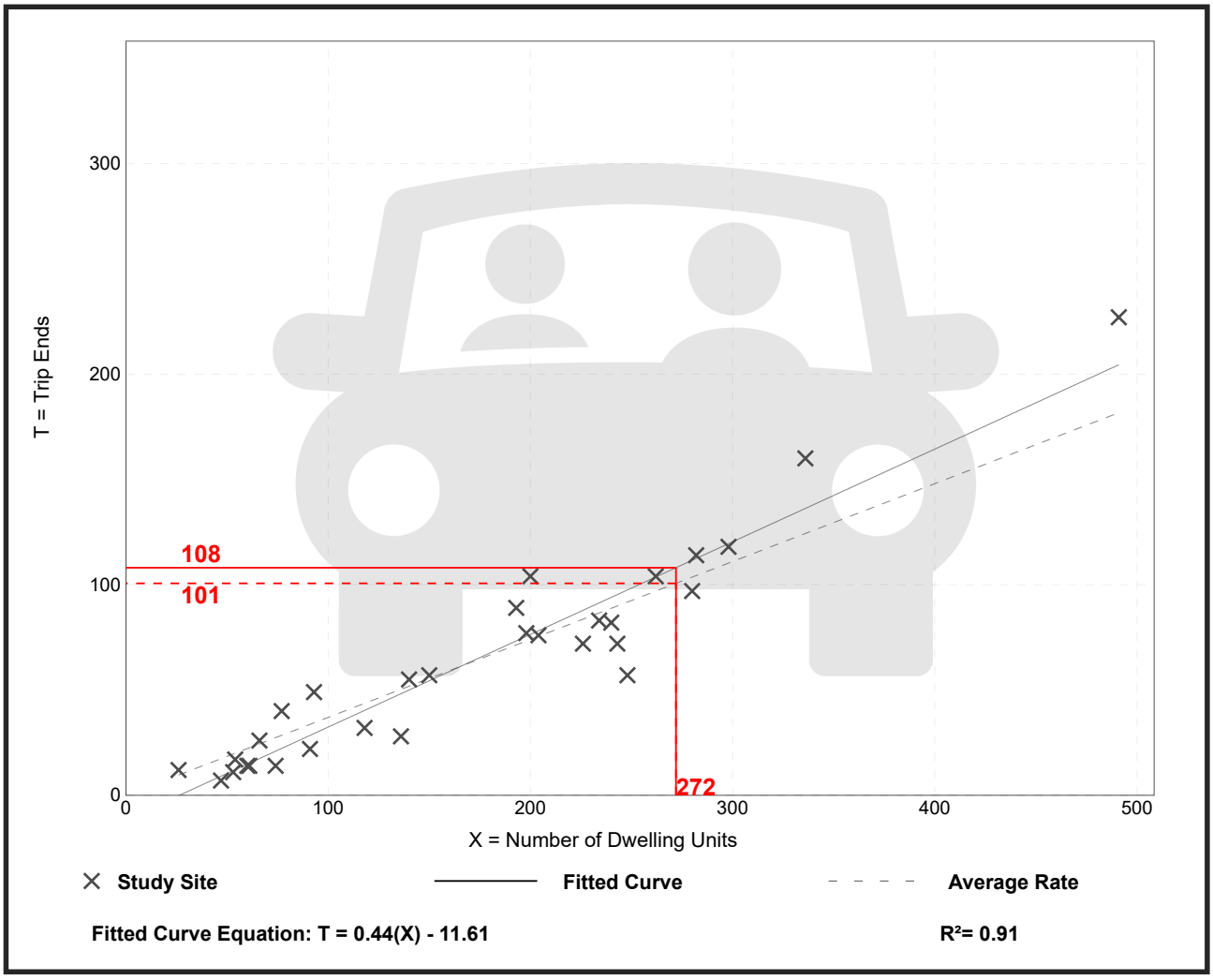
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	30
Avg. Num. of Dwelling Units:	173
Directional Distribution:	23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

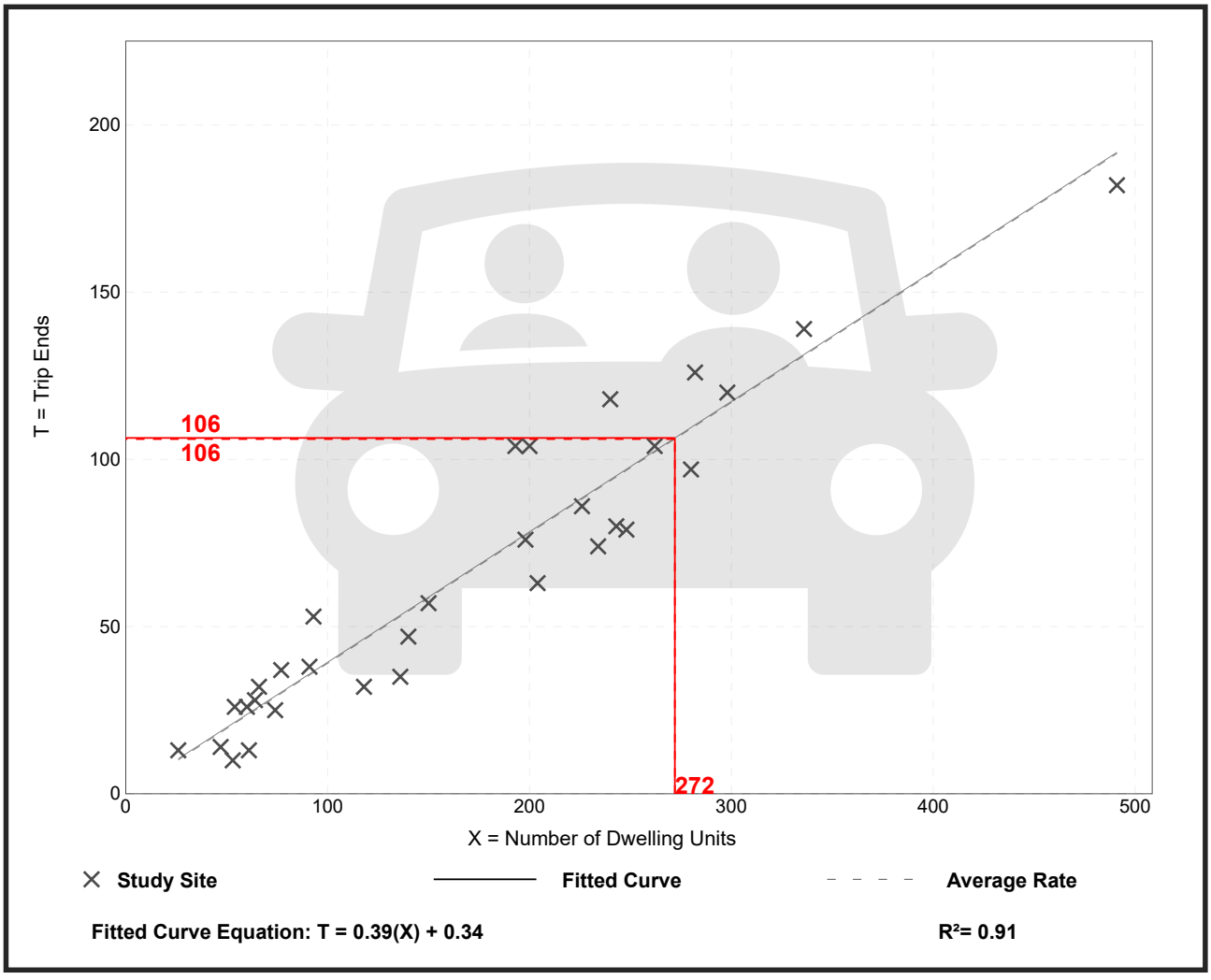
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday, Peak Hour of Generator**

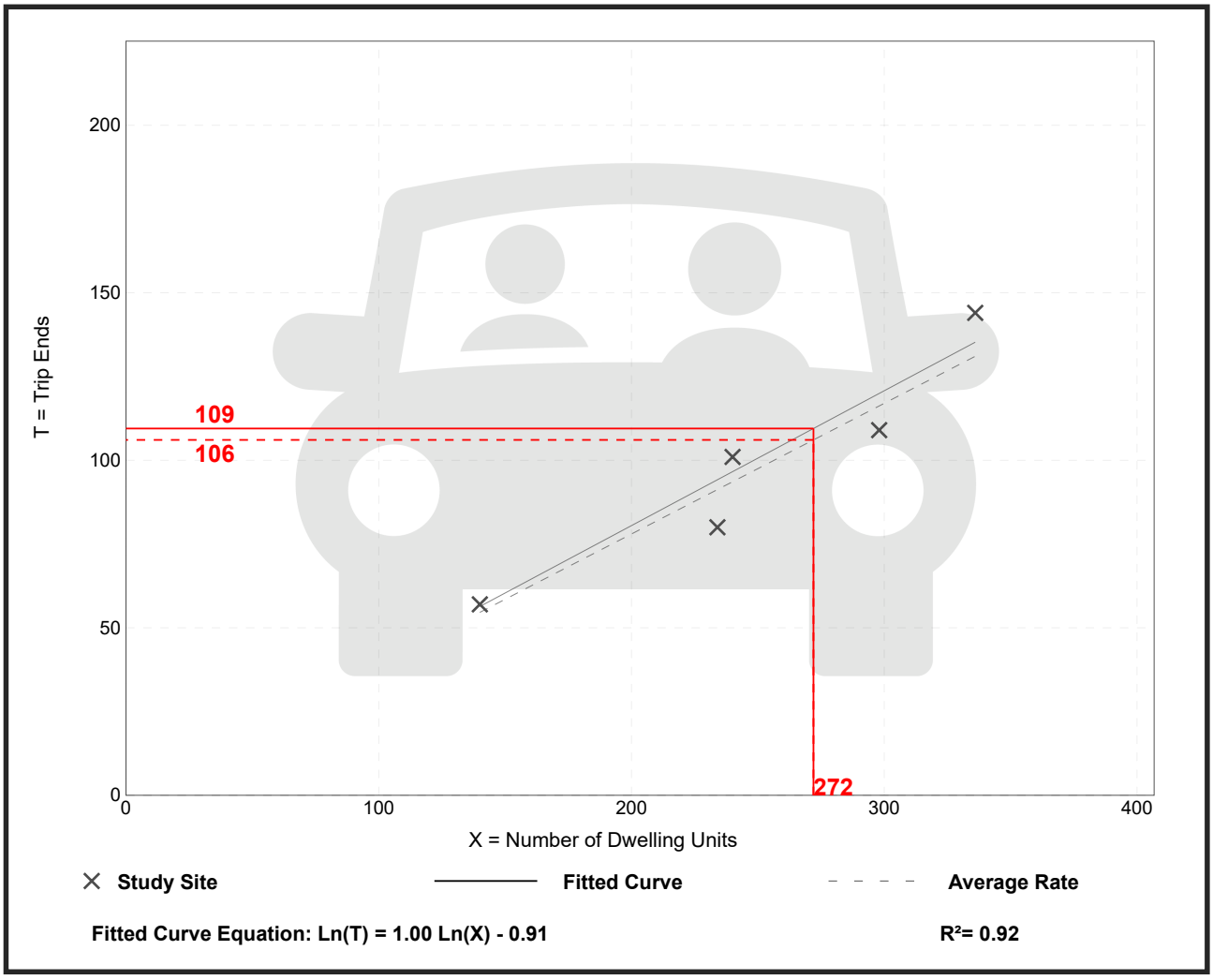
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 250
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.34 - 0.43	0.04

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Ln(T) = 1.00 Ln(X) - 0.91 **R^2= 0.92**

Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Public Park
(411)

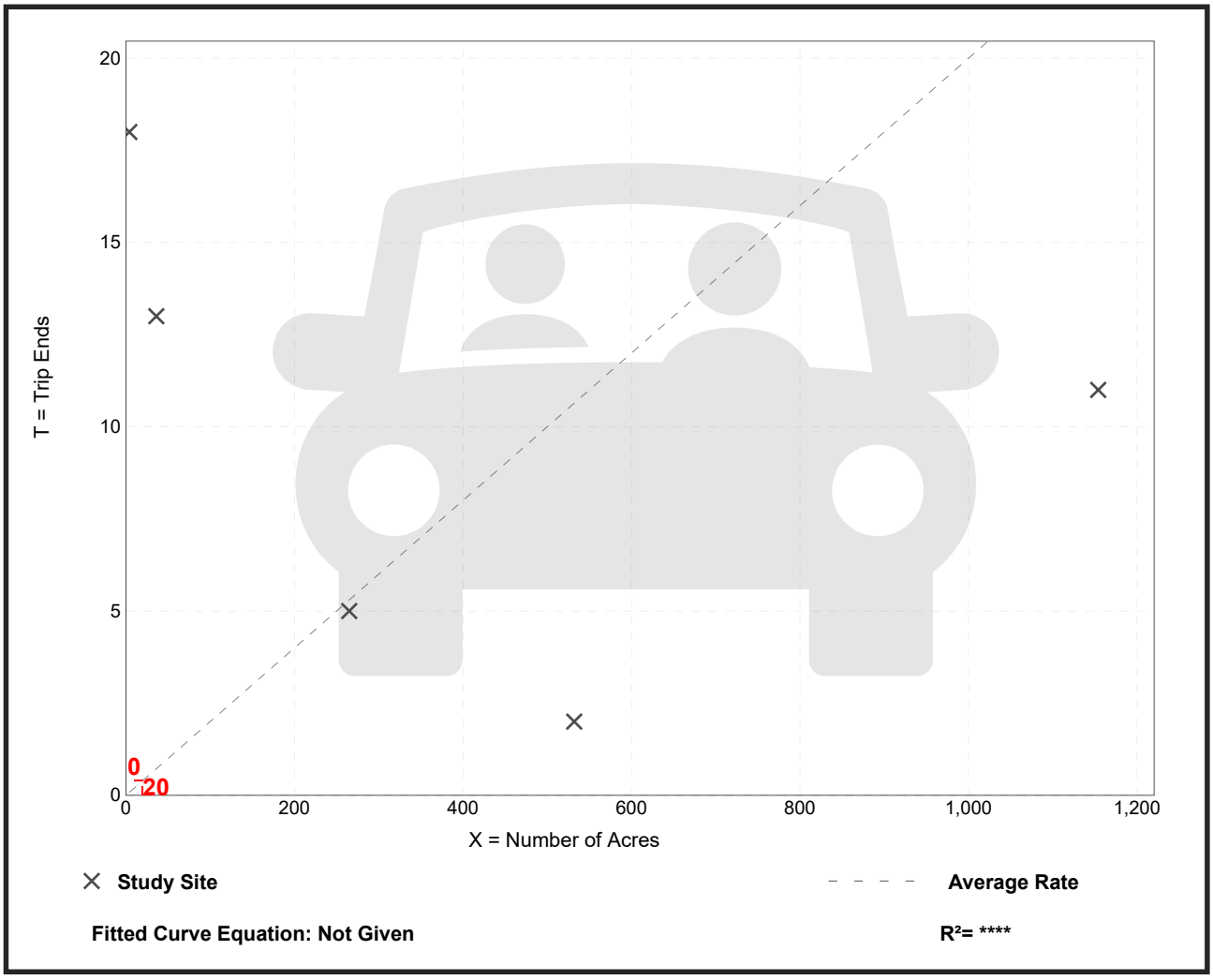
Vehicle Trip Ends vs: **Acres**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Acres: 398
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.02	0.00 - 4.50	0.23

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= **

Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

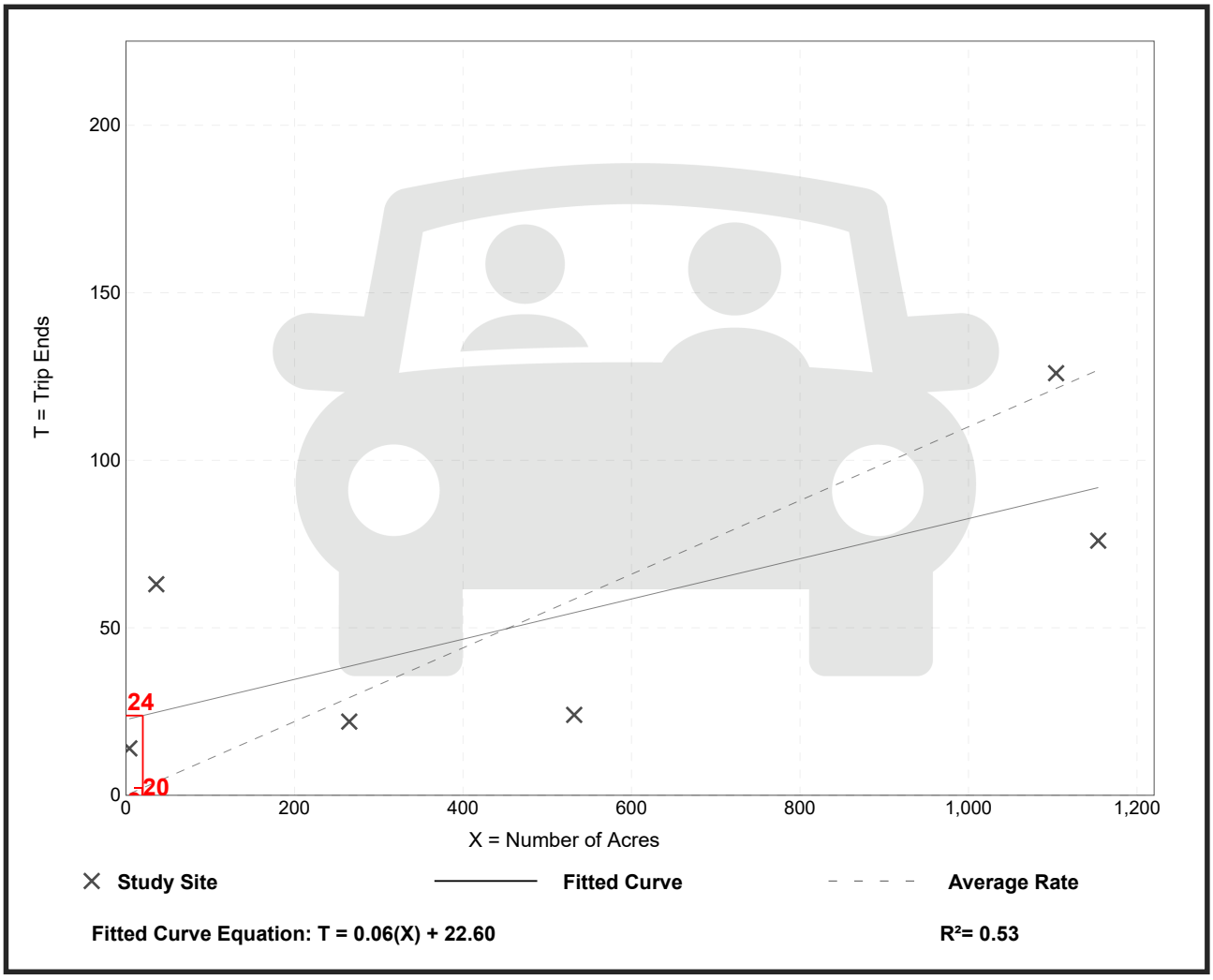
Public Park
(411)

Vehicle Trip Ends vs: **Acres**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Acres: 516
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.11	0.05 - 3.50	0.24

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Public Park
(411)

Vehicle Trip Ends vs: **Acres**
On a: **Saturday, Peak Hour of Generator**

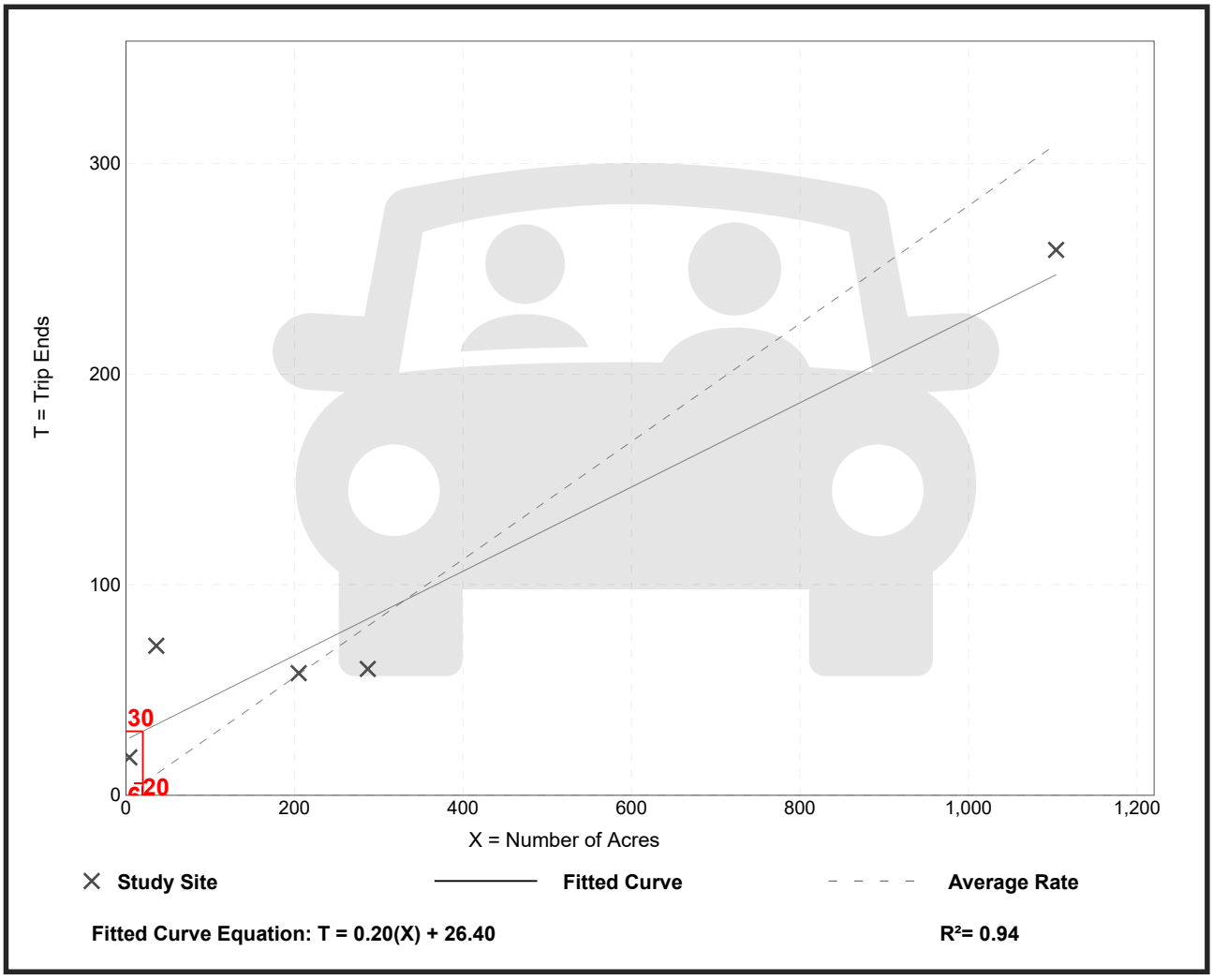
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Acres: 327
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per Acre

Average Rate	Range of Rates	Standard Deviation
0.28	0.21 - 4.50	0.37

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: T = 0.20(X) + 26.40

R^2= 0.94

Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

D | Level of Service Descriptions

Table 1
Level of Service and Average Delay
For Unsignalized Intersections

Level of Service	Average Delay (seconds/vehicle)
A	Up to 10 seconds
B	More than 10 seconds; up to 15 seconds
C	More than 15 seconds; up to 25 seconds
D	More than 25 seconds; up to 35 seconds
E	More than 35 seconds; up to 50 seconds
F	More than 50 seconds

Table 2
Level of Service and Average Delay
For Signalized Intersections

Level of Service	Average Delay (seconds/vehicle)	Description
A	Up to 10 seconds	Very short delay, good progression; most vehicles do not stop at intersection.
B	More than 10 seconds Up to 20 seconds	Generally good signal progression and/or short cycle length; more vehicles stop at intersection than Level of Service A.
C	More than 20 seconds Up to 35 seconds	Fair progression and/or longer cycle length; significant number of vehicles stop at intersection.
D	More than 35 seconds Up to 55 seconds	Congestion becomes noticeable; individual cycle failures; longer delays from unfavorable progression, long cycle length; or high volume/capacity ratios; most vehicles stop at intersection.
E	More than 55 seconds Up to 80 seconds	Usually considered limit of acceptable delay indicative of poor progression long cycle length, or high volume/capacity ratio; frequent individual cycle failures.
F	More than 80 seconds	Could be considered excessive delay in some areas, frequently an indication or over-saturation (i.e., arrival flows exceed capacity), or very long cycle lengths with minimal side street green time. Capacity is not necessarily exceeded under this Level of Service.

Reference: ***Highway Capacity Manual***, (HCM2010), 2010, Transportation Research Board, Washington, D.C.

E | Synchro 11 Printouts

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	291	45	57	362	4	44	0	45	0	0	1
Future Vol, veh/h	0	291	45	57	362	4	44	0	45	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	84	92	65	92	92	65	92	65	92	92	92
Heavy Vehicles, %	2	0	0	0	0	2	0	2	0	2	2	2
Mvmt Flow	0	346	49	88	393	4	68	0	69	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	395	0	0	943	944	371	976	966	395
Stage 1	-	-	-	-	-	-	371	371	-	571	571	-
Stage 2	-	-	-	-	-	-	572	573	-	405	395	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.52	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1162	-	-	1175	-	-	245	262	679	230	255	654
Stage 1	-	-	-	-	-	-	653	620	-	506	505	-
Stage 2	-	-	-	-	-	-	509	504	-	622	605	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1162	-	-	1175	-	-	227	237	679	191	231	654
Mov Cap-2 Maneuver	-	-	-	-	-	-	227	237	-	191	231	-
Stage 1	-	-	-	-	-	-	653	620	-	506	457	-
Stage 2	-	-	-	-	-	-	459	456	-	559	605	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.5	22.4	10.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	342	1162	-	-	1175	-	-	654
HCM Lane V/C Ratio	0.4	-	-	-	0.075	-	-	0.002
HCM Control Delay (s)	22.4	0	-	-	8.3	0	-	10.5
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	1.9	0	-	-	0.2	-	-	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	329	1	2	398	7	4	0	6	1	0	1
Future Vol, veh/h	4	329	1	2	398	7	4	0	6	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	84	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	0	2	2	2	2	2	2	2
Mvmt Flow	4	358	1	2	474	8	4	0	7	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	482	0	0	359	0	0	850	853	359	852	849	478
Stage 1	-	-	-	-	-	-	367	367	-	482	482	-
Stage 2	-	-	-	-	-	-	483	486	-	370	367	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1081	-	-	1200	-	-	280	296	685	280	298	587
Stage 1	-	-	-	-	-	-	653	622	-	565	553	-
Stage 2	-	-	-	-	-	-	565	551	-	650	622	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1081	-	-	1200	-	-	278	294	685	276	296	587
Mov Cap-2 Maneuver	-	-	-	-	-	-	278	294	-	276	296	-
Stage 1	-	-	-	-	-	-	650	619	-	562	552	-
Stage 2	-	-	-	-	-	-	563	550	-	641	619	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	13.5	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	432	1081	-	-	1200	-	-	375
HCM Lane V/C Ratio	0.025	0.004	-	-	0.002	-	-	0.006
HCM Control Delay (s)	13.5	8.3	0	-	8	0	-	14.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	326	2	2	401	6	8
Future Vol, veh/h	326	2	2	401	6	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	84	92	92
Heavy Vehicles, %	2	2	2	0	2	2
Mvmt Flow	354	2	2	477	7	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	356	0	836	355
Stage 1	-	-	-	-	355	-
Stage 2	-	-	-	-	481	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1203	-	337	689
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	622	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1203	-	336	689
Mov Cap-2 Maneuver	-	-	-	-	336	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	621	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	475	-	-	1203	-
HCM Lane V/C Ratio	0.032	-	-	0.002	-
HCM Control Delay (s)	12.8	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	323	368	39	5	3
Future Vol, veh/h	23	323	368	39	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	84	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	25	351	438	42	5	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	480	0	-	0	860	459
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	401	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1082	-	-	-	326	602
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	676	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1082	-	-	-	317	602
Mov Cap-2 Maneuver	-	-	-	-	317	-
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	676	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	14.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1082	-	-	-	385
HCM Lane V/C Ratio	0.023	-	-	-	0.023
HCM Control Delay (s)	8.4	0	-	-	14.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	327	38	49	478	1	46	0	92	0	0	3
Future Vol, veh/h	0	327	38	49	478	1	46	0	92	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	65	65	92	92	88	92	88	92	92	92
Heavy Vehicles, %	2	0	0	0	4	2	0	2	0	2	2	2
Mvmt Flow	0	355	58	75	520	1	52	0	105	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	521	0	0	413	0	0	1056	1055	384	1108	1084	521
Stage 1	-	-	-	-	-	-	384	384	-	671	671	-
Stage 2	-	-	-	-	-	-	672	671	-	437	413	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.52	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1045	-	-	1157	-	-	205	226	668	187	217	555
Stage 1	-	-	-	-	-	-	643	611	-	446	455	-
Stage 2	-	-	-	-	-	-	449	455	-	598	594	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1045	-	-	1157	-	-	190	205	668	147	197	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	190	205	-	147	197	-
Stage 1	-	-	-	-	-	-	643	611	-	446	414	-
Stage 2	-	-	-	-	-	-	406	414	-	504	594	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.1	22.3	11.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	363	1045	-	-	1157	-	-	555
HCM Lane V/C Ratio	0.432	-	-	-	0.065	-	-	0.006
HCM Control Delay (s)	22.3	0	-	-	8.3	0	-	11.5
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	2.1	0	-	-	0.2	-	-	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	356	3	4	532	1	3	0	2	7	0	3
Future Vol, veh/h	1	356	3	4	532	1	3	0	2	7	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	1	387	3	4	578	1	3	0	2	8	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	579	0	0	390	0	0	979	978	389	979	979	579
Stage 1	-	-	-	-	-	-	391	391	-	587	587	-
Stage 2	-	-	-	-	-	-	588	587	-	392	392	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	995	-	-	1169	-	-	229	250	659	229	250	515
Stage 1	-	-	-	-	-	-	633	607	-	496	497	-
Stage 2	-	-	-	-	-	-	495	497	-	633	606	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	995	-	-	1169	-	-	226	249	659	227	249	515
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	249	-	227	249	-
Stage 1	-	-	-	-	-	-	632	606	-	496	495	-
Stage 2	-	-	-	-	-	-	489	495	-	630	605	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	16.9	18.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	307	995	-	-	1169	-	-	273
HCM Lane V/C Ratio	0.018	0.001	-	-	0.004	-	-	0.04
HCM Control Delay (s)	16.9	8.6	0	-	8.1	0	-	18.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	355	5	8	530	3	5
Future Vol, veh/h	355	5	8	530	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	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	4	2	2
Mvmt Flow	386	5	9	576	3	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	391	0	983	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	594	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1168	-	276	659
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	552	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1168	-	273	659
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	546	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	431	-	-	1168	-
HCM Lane V/C Ratio	0.02	-	-	0.007	-
HCM Control Delay (s)	13.5	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	327	528	5	33	20
Future Vol, veh/h	3	327	528	5	33	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	3	355	574	5	36	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	579	0	-	0	938	577
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	995	-	-	-	293	516
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	705	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	995	-	-	-	292	516
Mov Cap-2 Maneuver	-	-	-	-	292	-
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	705	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	995	-	-	-	349
HCM Lane V/C Ratio	0.003	-	-	-	0.165
HCM Control Delay (s)	8.6	0	-	-	17.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	265	33	41	394	2	39	0	40	0	0	2
Future Vol, veh/h	0	265	33	41	394	2	39	0	40	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	79	65	65	65	92	65	92	65	92	92	92
Heavy Vehicles, %	2	0	0	0	0	2	0	2	0	2	2	2
Mvmt Flow	0	335	51	63	606	2	60	0	62	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	608	0	0	386	0	0	1095	1095	361	1125	1119	607
Stage 1	-	-	-	-	-	-	361	361	-	733	733	-
Stage 2	-	-	-	-	-	-	734	734	-	392	386	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.52	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	970	-	-	1184	-	-	193	214	688	182	207	496
Stage 1	-	-	-	-	-	-	662	626	-	412	426	-
Stage 2	-	-	-	-	-	-	415	426	-	633	610	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	970	-	-	1184	-	-	180	197	688	156	190	496
Mov Cap-2 Maneuver	-	-	-	-	-	-	180	197	-	156	190	-
Stage 1	-	-	-	-	-	-	662	626	-	412	392	-
Stage 2	-	-	-	-	-	-	380	392	-	576	610	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	26.5	12.3
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	287	970	-	-	1184	-	-	496
HCM Lane V/C Ratio	0.423	-	-	-	0.053	-	-	0.004
HCM Control Delay (s)	26.5	0	-	-	8.2	0	-	12.3
HCM Lane LOS	D	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	2	0	-	-	0.2	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	284	6	8	423	4	6	0	10	4	0	2
Future Vol, veh/h	2	284	6	8	423	4	6	0	10	4	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	79	92	92	65	92	92	92	92	92	92	92
Heavy Vehicles, %	2	0	2	2	0	2	2	2	2	2	2	2
Mvmt Flow	2	359	7	9	651	4	7	0	11	4	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	655	0	0	366	0	0	1039	1040	363	1043	1041	653
Stage 1	-	-	-	-	-	-	367	367	-	671	671	-
Stage 2	-	-	-	-	-	-	672	673	-	372	370	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	932	-	-	1193	-	-	209	230	682	207	230	467
Stage 1	-	-	-	-	-	-	653	622	-	446	455	-
Stage 2	-	-	-	-	-	-	445	454	-	648	620	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	932	-	-	1193	-	-	206	227	682	201	227	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	206	227	-	201	227	-
Stage 1	-	-	-	-	-	-	651	620	-	445	450	-
Stage 2	-	-	-	-	-	-	438	449	-	636	618	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	15.4	19.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	932	-	-	1193	-	-	248
HCM Lane V/C Ratio	0.048	0.002	-	-	0.007	-	-	0.026
HCM Control Delay (s)	15.4	8.9	0	-	8	0	-	19.9
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	7	9	422	7	9
Future Vol, veh/h	283	7	9	422	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	92	92	65	92	92
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	358	8	10	649	8	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	366	0	1031	362
Stage 1	-	-	-	-	362	-
Stage 2	-	-	-	-	669	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1193	-	258	683
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	509	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1193	-	255	683
Mov Cap-2 Maneuver	-	-	-	-	255	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	394	-	-	1193	-
HCM Lane V/C Ratio	0.044	-	-	0.008	-
HCM Control Delay (s)	14.6	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	269	408	21	13	8
Future Vol, veh/h	12	269	408	21	13	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	79	65	92	92	92
Heavy Vehicles, %	2	0	0	2	2	2
Mvmt Flow	13	341	628	23	14	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	651	0	-	0	1007	640
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	367	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	935	-	-	-	267	475
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	701	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	935	-	-	-	262	475
Mov Cap-2 Maneuver	-	-	-	-	262	-
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	701	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	17.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	935	-	-	-	316
HCM Lane V/C Ratio	0.014	-	-	-	0.072
HCM Control Delay (s)	8.9	0	-	-	17.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	335	45	57	331	1	44	0	45	2	2	0
Future Vol, veh/h	0	335	45	57	331	1	44	0	45	2	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	84	92	65	92	92	65	92	65	92	92	92
Heavy Vehicles, %	2	0	0	0	0	2	0	2	0	2	2	2
Mvmt Flow	0	399	49	88	360	1	68	0	69	2	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	361	0	0	448	0	0	962	961	424	995	985	361
Stage 1	-	-	-	-	-	-	424	424	-	537	537	-
Stage 2	-	-	-	-	-	-	538	537	-	458	448	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.52	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1198	-	-	1123	-	-	237	256	634	224	248	684
Stage 1	-	-	-	-	-	-	612	587	-	528	523	-
Stage 2	-	-	-	-	-	-	531	523	-	583	573	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1198	-	-	1123	-	-	218	231	634	185	224	684
Mov Cap-2 Maneuver	-	-	-	-	-	-	218	231	-	185	224	-
Stage 1	-	-	-	-	-	-	612	587	-	528	472	-
Stage 2	-	-	-	-	-	-	477	472	-	519	573	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.7	23.8	23.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	326	1198	-	-	1123	-	-	203
HCM Lane V/C Ratio	0.42	-	-	-	0.078	-	-	0.021
HCM Control Delay (s)	23.8	0	-	-	8.5	0	-	23.1
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	2	0	-	-	0.3	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	370	1	2	371	2	4	0	6	4	0	4
Future Vol, veh/h	1	370	1	2	371	2	4	0	6	4	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	84	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	0	2	2	2	2	2	2	2
Mvmt Flow	1	402	1	2	442	2	4	0	7	4	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	444	0	0	403	0	0	854	853	403	855	852	443
Stage 1	-	-	-	-	-	-	405	405	-	447	447	-
Stage 2	-	-	-	-	-	-	449	448	-	408	405	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1116	-	-	1156	-	-	279	296	647	278	297	615
Stage 1	-	-	-	-	-	-	622	598	-	591	573	-
Stage 2	-	-	-	-	-	-	589	573	-	620	598	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1116	-	-	1156	-	-	276	295	647	275	296	615
Mov Cap-2 Maneuver	-	-	-	-	-	-	276	295	-	275	296	-
Stage 1	-	-	-	-	-	-	621	597	-	590	572	-
Stage 2	-	-	-	-	-	-	584	572	-	613	597	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.8	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	421	1116	-	-	1156	-	-	380
HCM Lane V/C Ratio	0.026	0.001	-	-	0.002	-	-	0.023
HCM Control Delay (s)	13.8	8.2	0	-	8.1	0	-	14.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	364	2	2	377	6	8
Future Vol, veh/h	364	2	2	377	6	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	84	92	92
Heavy Vehicles, %	2	2	2	0	2	2
Mvmt Flow	396	2	2	449	7	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	398	0	850	397
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	453	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1161	-	331	652
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	640	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1161	-	330	652
Mov Cap-2 Maneuver	-	-	-	-	330	-
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	639	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	460	-	-	1161	-
HCM Lane V/C Ratio	0.033	-	-	0.002	-
HCM Control Delay (s)	13.1	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	321	370	13	45	27
Future Vol, veh/h	8	321	370	13	45	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	84	92	92	92
Heavy Vehicles, %	2	2	0	2	2	2
Mvmt Flow	9	349	440	14	49	29

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	454	0	-	0	814	447
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	367	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1107	-	-	-	347	612
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	701	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1107	-	-	-	344	612
Mov Cap-2 Maneuver	-	-	-	-	344	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	701	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1107	-	-	-	412
HCM Lane V/C Ratio	0.008	-	-	-	0.19
HCM Control Delay (s)	8.3	0	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	312	38	49	510	3	56	0	56	1	1	0
Future Vol, veh/h	0	312	38	49	510	3	56	0	56	1	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	65	65	92	92	88	92	88	92	92	92
Heavy Vehicles, %	2	0	0	0	4	2	0	2	0	2	2	2
Mvmt Flow	0	339	58	75	554	3	64	0	64	1	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	557	0	0	397	0	0	1074	1075	368	1106	1103	556
Stage 1	-	-	-	-	-	-	368	368	-	706	706	-
Stage 2	-	-	-	-	-	-	706	707	-	400	397	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.52	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1014	-	-	1173	-	-	199	220	682	188	211	531
Stage 1	-	-	-	-	-	-	656	621	-	427	439	-
Stage 2	-	-	-	-	-	-	430	438	-	626	603	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1014	-	-	1173	-	-	184	200	682	158	191	531
Mov Cap-2 Maneuver	-	-	-	-	-	-	184	200	-	158	191	-
Stage 1	-	-	-	-	-	-	656	621	-	427	398	-
Stage 2	-	-	-	-	-	-	389	397	-	568	603	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	26.8	26.1
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	290	1014	-	-	1173	-	-	173
HCM Lane V/C Ratio	0.439	-	-	-	0.064	-	-	0.013
HCM Control Delay (s)	26.8	0	-	-	8.3	0	-	26.1
HCM Lane LOS	D	A	-	-	A	A	-	D
HCM 95th %tile Q(veh)	2.1	0	-	-	0.2	-	-	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	346	3	4	556	6	3	0	2	2	0	3
Future Vol, veh/h	3	346	3	4	556	6	3	0	2	2	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	3	376	3	4	604	7	3	0	2	2	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	611	0	0	379	0	0	1001	1003	378	1001	1001	608
Stage 1	-	-	-	-	-	-	384	384	-	616	616	-
Stage 2	-	-	-	-	-	-	617	619	-	385	385	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	968	-	-	1179	-	-	222	242	669	222	243	496
Stage 1	-	-	-	-	-	-	639	611	-	478	482	-
Stage 2	-	-	-	-	-	-	477	480	-	638	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	968	-	-	1179	-	-	219	240	669	220	241	496
Mov Cap-2 Maneuver	-	-	-	-	-	-	219	240	-	220	241	-
Stage 1	-	-	-	-	-	-	636	609	-	476	480	-
Stage 2	-	-	-	-	-	-	471	478	-	633	609	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	17.2	16.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	300	968	-	-	1179	-	-	330
HCM Lane V/C Ratio	0.018	0.003	-	-	0.004	-	-	0.016
HCM Control Delay (s)	17.2	8.7	0	-	8.1	0	-	16.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	347	5	8	554	3	5
Future Vol, veh/h	347	5	8	554	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	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	4	2	2
Mvmt Flow	377	5	9	602	3	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	382	0	1000	380
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	620	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1176	-	270	667
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	536	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1176	-	267	667
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	530	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	427	-	-	1176	-
HCM Lane V/C Ratio	0.02	-	-	0.007	-
HCM Control Delay (s)	13.6	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	330	525	32	22	14
Future Vol, veh/h	21	330	525	32	22	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	23	359	571	35	24	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	606	0	-	0	994	589
Stage 1	-	-	-	-	589	-
Stage 2	-	-	-	-	405	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	972	-	-	-	272	508
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	972	-	-	-	264	508
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	972	-	-	-	325
HCM Lane V/C Ratio	0.023	-	-	-	0.12
HCM Control Delay (s)	8.8	0	-	-	17.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	272	33	41	402	3	39	0	40	2	2	0
Future Vol, veh/h	0	272	33	41	402	3	39	0	40	2	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	79	65	65	65	92	65	92	65	92	92	92
Heavy Vehicles, %	2	0	0	0	0	2	0	2	0	2	2	2
Mvmt Flow	0	344	51	63	618	3	60	0	62	2	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	621	0	0	395	0	0	1117	1117	370	1147	1141	620
Stage 1	-	-	-	-	-	-	370	370	-	746	746	-
Stage 2	-	-	-	-	-	-	747	747	-	401	395	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.52	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	960	-	-	1175	-	-	186	207	680	176	201	488
Stage 1	-	-	-	-	-	-	654	620	-	405	421	-
Stage 2	-	-	-	-	-	-	408	420	-	626	605	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	960	-	-	1175	-	-	173	190	680	150	185	488
Mov Cap-2 Maneuver	-	-	-	-	-	-	173	190	-	150	185	-
Stage 1	-	-	-	-	-	-	654	620	-	405	386	-
Stage 2	-	-	-	-	-	-	372	386	-	569	605	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	27.6	27.3
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	278	960	-	-	1175	-	-	166
HCM Lane V/C Ratio	0.437	-	-	-	0.054	-	-	0.026
HCM Control Delay (s)	27.6	0	-	-	8.2	0	-	27.3
HCM Lane LOS	D	A	-	-	A	A	-	D
HCM 95th %tile Q(veh)	2.1	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	292	6	8	428	5	6	0	10	3	0	3
Future Vol, veh/h	3	292	6	8	428	5	6	0	10	3	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	79	92	92	65	92	92	92	92	92	92	92
Heavy Vehicles, %	2	0	2	2	0	2	2	2	2	2	2	2
Mvmt Flow	3	370	7	9	658	5	7	0	11	3	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	663	0	0	377	0	0	1060	1061	374	1064	1062	661
Stage 1	-	-	-	-	-	-	380	380	-	679	679	-
Stage 2	-	-	-	-	-	-	680	681	-	385	383	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	926	-	-	1181	-	-	202	224	672	201	223	462
Stage 1	-	-	-	-	-	-	642	614	-	441	451	-
Stage 2	-	-	-	-	-	-	441	450	-	638	612	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	926	-	-	1181	-	-	198	220	672	195	219	462
Mov Cap-2 Maneuver	-	-	-	-	-	-	198	220	-	195	219	-
Stage 1	-	-	-	-	-	-	639	612	-	439	446	-
Stage 2	-	-	-	-	-	-	433	445	-	625	610	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	15.7	18.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	354	926	-	-	1181	-	-	274
HCM Lane V/C Ratio	0.049	0.004	-	-	0.007	-	-	0.024
HCM Control Delay (s)	15.7	8.9	0	-	8.1	0	-	18.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	292	7	9	428	7	9
Future Vol, veh/h	292	7	9	428	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	92	92	65	92	92
Heavy Vehicles, %	0	2	2	0	2	2
Mvmt Flow	370	8	10	658	8	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	378	0	1052	374
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	678	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1180	-	251	672
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	504	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1180	-	248	672
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	497	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	384	-	-	1180	-
HCM Lane V/C Ratio	0.045	-	-	0.008	-
HCM Control Delay (s)	14.8	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	272	408	27	27	18
Future Vol, veh/h	19	272	408	27	27	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	79	65	92	92	92
Heavy Vehicles, %	2	0	0	2	2	2
Mvmt Flow	21	344	628	29	29	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	657	0	-	0	1029	643
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	386	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	931	-	-	-	259	473
Stage 1	-	-	-	-	523	-
Stage 2	-	-	-	-	687	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	931	-	-	-	252	473
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	687	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	931	-	-	-	310
HCM Lane V/C Ratio	0.022	-	-	-	0.158
HCM Control Delay (s)	9	0	-	-	18.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

F | Level of Service Summary

ATLANTIC TRAFFIC+DESIGN

30 Independence Boulevard, Suite 110
Warren, New Jersey 07059
908-769-5588
www.atlantictraffic.com

Klein Enterprises
212 Durham Avenue
Metuchen
Middlesex County, New Jersey

ATDE Project No. ANJ21013

Table 1: Table of Data

Intersection	Lane Group	No-Build AM Del.	No-Build AM LOS	No-Build PM Del.	No-Build PM LOS	No-Build SAT Del.	No-Build SAT LOS	Build AM Del.	Build AM LOS	Build PM Del.	Build PM LOS	Build SAT Del.	Build SAT LOS
Greenway	EB: LTR	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
Ave, Site	WB: LTR	8.3	A	8.3	A	8.2	A	8.5	A	8.3	A	8.2	A
Dwy	NB: LTR	22.4	C	22.3	C	26.5	D	23.8	C	26.8	D	27.6	D
@Durham	SB: LTR	10.5	B	11.5	B	12.3	B	23.1	C	26.1	D	27.3	D
Ave	Overall	3.7	A	3.6	A	3.2	A	4.0	A	3.5	A	3.3	A
Hampton	EB: LTR	8.3	A	8.6	A	8.9	A	8.2	A	8.7	A	8.9	A
St, Site	WB: LTR	8.0	A	8.1	A	8.0	A	8.1	A	8.1	A	8.1	A
Dwy	NB: LTR	13.5	B	16.9	C	15.4	C	13.8	B	17.2	C	15.7	C
@Durham	SB: LTR	14.7	B	18.7	C	19.9	C	14.7	B	16.1	C	18.5	C
Ave	Overall	0.3	A	0.4	A	0.5	A	0.3	A	0.3	A	0.5	A
Smith St	WB: LT	8.0	A	8.1	A	8.0	A	8.1	A	8.1	A	8.1	A
@Durham	NB: LR	12.8	B	13.5	B	14.6	B	13.1	B	13.6	B	14.8	B
Ave	Overall	0.2	A	0.2	A	0.3	A	0.2	A	0.2	A	0.3	A
Durham Ave	EB: LT	8.4	A	8.6	A	8.9	A	8.3	A	8.8	A	9.0	A
@Gulton St	SB: LR	14.6	B	17.3	C	17.3	C	15.8	C	17.6	C	18.8	C
	Overall	0.4	A	1.0	A	0.5	A	1.5	A	0.9	A	1.0	A