Appendix K-2: Traffic Impact Study

Proposed Redevelopment of EPCAL Property at Calverton

Hamlet of Calverton
Town of Riverhead
Suffolk County, New York

Prepared for **Town Board of the Town of Riverhead**
Riverhead, New York

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Hauppauge, New York

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1.0 Introduction

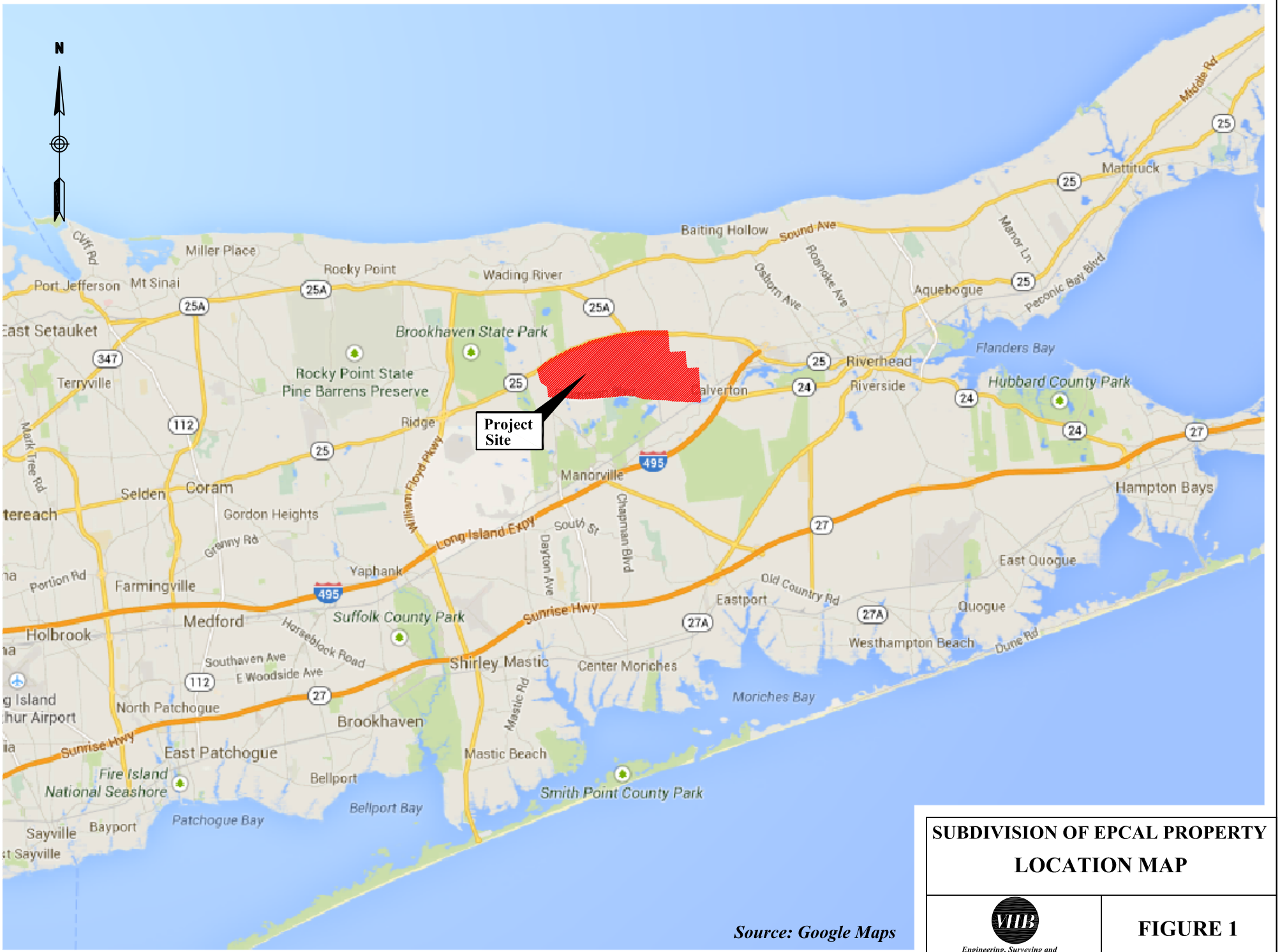
This study documents the comprehensive evaluation of the potential traffic impacts associated with the proposed subdivision and redevelopment of the Enterprise Park at Calverton (EPCAL) property in Calverton, New York. The purpose of this study is to determine if there are any significant adverse traffic impacts due to the proposed project and to evaluate and proposed mitigation measures, as required by the Final Scope issued by the Town Board, as lead agency for this project. This report presents the findings of the traffic study and summarizes the data collection processes, traffic analysis procedures, and study conclusions.

Project Description

The project site, referred to as the EPCAL property, is approximately 2,324 acres and consists of mostly undeveloped land within the larger property formerly known as the Naval Weapons Industrial Reserve Plant (NWIRP). The site is located on the south side Middle Country Road (NY 25) and on the north side of Grumman Boulevard and River Road. Wading River Manor Road runs along the western boundary of the site while the eastern portion of the site is bounded by privately owned properties.

The proposed action includes the subdivision of the site into a total of 50 lots, of which 42 lots would be for ultimate redevelopment with a mix of uses (e.g., business [commercial and retail], industrial, government, energy park, recreation, utilities, residential).

The proposed site development would be served by a total of five access points -- two existing and three proposed. Three access points would be located on Middle Country Road and two on Grumman Boulevard. All of the access intersections on Middle Country Road would be signalized: one at Burman Boulevard (existing); one aligned with the entrance to the Calverton National Cemetery; and one to the east opposite the existing signalized intersection of Middle Country Road with NY 25A. The existing access on Grumman Boulevard and a second access to be constructed to the west would be signalized.



SUBDIVISION OF EPCAL PROPERTY

LOCATION MAP

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FIGURE 1

Study Methodology

The following describes the methodology used in this traffic study:

- The proposed Subdivision Map and related documents were reviewed to obtain an understanding of the project scope and layout.
- A review was made of the area roadway system, and the key intersections that might be significantly impacted by the proposed project were identified to be included in this study.
- Field inventories were made to observe the number and direction of travel lanes at the key intersections, along with signal timing, phasing and cycle lengths.
- Accident data for the most recent three-year period available for the study area were obtained, tabulated and summarized.
- Turning movement counts were collected using Miovision cameras at the key intersections during the weekday a.m., p.m. and Saturday midday peak periods.
- The existing traffic volumes at the key intersections were expanded to the future No-Build years (assumed to be 2025 and 2035).
- Traffic likely to be generated by other planned developments in the area and passing through the study intersections was accounted for.
- The traffic generated by the proposed development was projected based on recognized traffic engineering standards.
- The site-generated volumes were distributed along the adjacent roadway network and were added to the No-Build volumes to produce the proposed Build volumes.
- Capacity analyses were performed at the key intersections for the Existing, No-Build, and future Build conditions.
- The results of the analyses for the Existing, No-Build, and Build were compared to assess any significant traffic impacts due to the proposed project.
- The site access points and on-site circulation were evaluated.
- The need for traffic mitigation measures was evaluated.

2.0 Existing Conditions

Evaluation of the transportation impacts associated with the proposed project requires a thorough understanding of the current transportation system in the project study area. Existing transportation conditions include roadway geometry, traffic control devices, peak-hour traffic volumes, and roadway operating characteristics. An inventory of available information on local roadways and traffic control in the vicinity of the project site was compiled. The following sections present a summary of this information.

When determining the appropriate scope of the traffic impact study, an initial screening process was conducted. The screening process included the evaluation of numerous roadways and intersections in the study area. The screening process consisted of a review of the roadway network and identification of roadways that are likely to be used by those destined to and from the EPCAL property. This qualitative screening process evaluated the following roadways:

- Middle Country Road (NY 25)
- Wading River Manor Road
- Edwards Avenue
- Grumman Boulevard
- River Road
- Burman Boulevard
- Mill Road
- Old River Road
- Connecticut Avenue
- Line Road
- Raynor Road

This process identified the following roadways as having a potential to experience significant increases in traffic, thereby warranting detailed analyses:

- Middle Country Road (NY 25)
- Wading River Manor Road
- Edwards Avenue
- Grumman Boulevard
- River Road
- Burman Boulevard

The initial screening process identified several roadways as not having the potential to experience significant increases in traffic. These roadways, and the associated qualitative analysis follow.

- Mill Road – This roadway, which runs in an east west direction, is not expected to see any significant traffic increases as it is a poor alternative to River Road as a route to and from the site. It is less direct and any motorist that would use it would travel a significantly longer distance.
- Old River Road – Old River Road south of River Road travels in a northeasterly/southwesterly direction and is very narrow and winding. Any motorist that would use this roadway would essentially double back regardless of direction of travel to access or leave the site.
- Connecticut Avenue – This roadway is very narrow and arrives at River Road from the south in an indirect way, as opposed to other available routes.
- Line Road – While Line Road does provide a connection to Grumman Boulevard, getting to Line Road requires use of a very circuitous route through northern Manorville, north of the Long Island Expressway.
- Raynor Road – This roadway is located a significant distance to the east and it is not anticipated that this roadway would be used by site traffic to any significant degree.

While there may be some level of traffic to and from the subdivision that would utilize these roadways, it is not anticipated to approach any significant level that may cause a traffic impact. Therefore, no further analysis is required for these roadways.

Roadways and Intersection Conditions

The principal roadways and intersections in the project area are described below. The descriptions of the roadways and key intersections include geometric conditions and traffic control characteristics.

Roadways

Middle Country Road (NY 25)

Middle Country Road (NY 25) is a major east-west arterial under the jurisdiction of New York State Department of Transportation (NYSDOT) that extends from Queens to Orient Point. The roadway is designated Middle Country Road in the vicinity of the project site. It runs along the north side of the project site and provides one travel lane in each direction with additional turn lanes at some intersections. According to 2011 NYSDOT estimates the Average Annual Daily Traffic (AADT) on this section of Middle Country Road west of NY 25A is approximately 8,000 vehicles per day and east of NY 25A the estimates are approximately 14,600 vehicles per day. The posted speed limit on Middle Country Road in the vicinity of the project site is 50 miles per hour (mph).

Wading River Manor Road

Wading River Manor Road is a north-south collector roadway under the jurisdiction of the Towns of Riverhead and Brookhaven. It runs south from North Country Road in Wading River to Railroad Avenue in Center Moriches. Sections of this roadway are also called Schultz Road and Wading River Road. Wading River Manor Road runs along the west side of the project site and provides one travel lane in each direction with additional turn lanes at major intersections. The posted speed limit along Wading River Manor Road is 45 mph.

Edwards Avenue

Edwards Avenue is a north-south collector roadway under the jurisdiction of the Town of Riverhead. It runs south from the Long Island Sound to River Road. South of River Road, the roadway transitions to County Road 24. Edwards Avenue provides one travel lane in each direction. According to 2011 NYSDOT estimates the AADT on this section of Edwards Avenue is approximately 8,750 vehicles per day. The posted speed limit along Edwards Avenue north of River Road is 45 mph.

Grumman Boulevard

Grumman Boulevard is east west local roadway under the jurisdiction of the Town of Riverhead. It runs east from Wading River Road approximately 2-1/2 miles along the south side of project site to River Road. Grumman Boulevard provides one travel lane in each direction. According to 2011 NYSDOT estimates the AADT on this section of Grumman Boulevard is approximately 1,625 vehicles per day. The posted speed on Grumman Boulevard is 40 mph.

River Road

River Road is a local roadway under the jurisdiction the Town of Riverhead and runs north from David Terry Road to Grumman Boulevard where it turns east, bordering the balance of the project site's southerly frontage. From this point River Road continues east to West Main Street (NY Route 25). River Road provides one travel lane in each direction. According to 2011 NYSDOT estimates the AADT on River Road west of Edwards Avenue is approximately 850 vehicles per day. The posted speed limit on River Road is 30 mph.

Burman Boulevard

Burman Boulevard is an internal roadway within the Calverton Camelot industrial subdivision, formerly part of the Calverton NWIRP property, maintained by the Town of Riverhead that runs from north to south through the project site. Burman Boulevard is signalized at its intersection with Middle Country Road and provides for one travel lane in each direction with additional turn lanes at major intersections. There is no speed limit posted on the roadway.

Study Area Intersections

To determine the potential traffic impacts of the proposed project, five signalized intersections and six unsignalized intersections were analyzed under Existing, No-Build, and Build Conditions, as required by the Final Scope. They are:

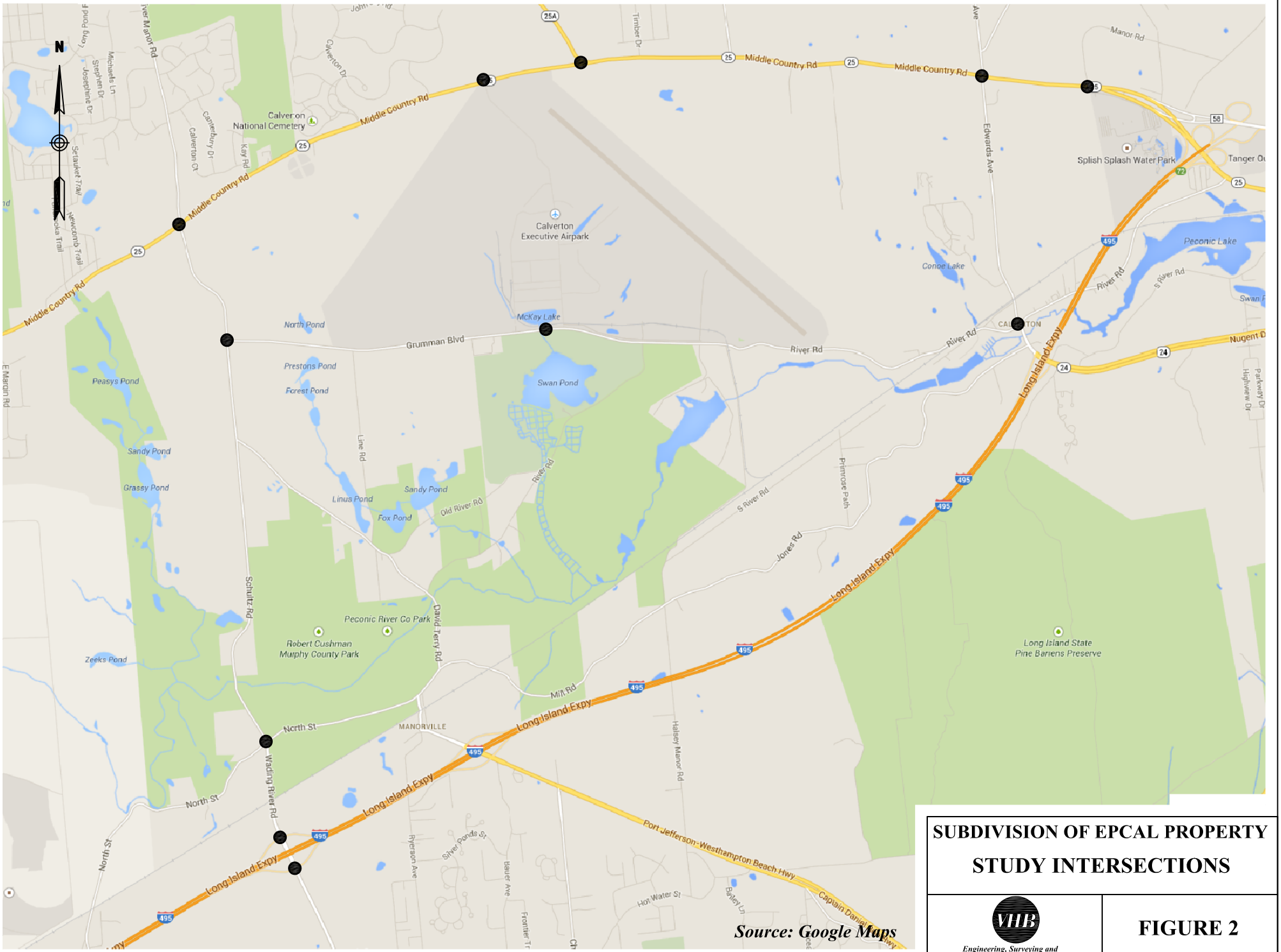
Signalized Intersections

- Middle Country Road and Wading River Manor Road
- Middle Country Road and Burman Boulevard
- Middle Country Road and NY Route 25A
- Middle Country Road and Edwards Avenue
- Middle Country Road and Splish Splash Drive/Manor Road

Unsignalized Intersections

- Edwards Avenue and River Road
- Grumman Boulevard and Burman Boulevard
- Wading River Manor Road and Grumman Boulevard
- Wading River Road/Schultz Road and North Street
- Wading River Road and LIE North Service Road
- Wading River Road and LIE South Service Road.

The study intersections are presented in Figure 2.



Source: Google Maps

SUBDIVISION OF EPCAL PROPERTY

STUDY INTERSECTIONS

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FIGURE 2

Middle Country Road (NY 25) and Wading River Manor Road

Middle Country Road and Wading River Manor Road is a four-legged signalized intersection. The east-west Middle Country Road approaches provide an exclusive left-turn lane, a through lane and a shared through and right-turn lane in both directions. However, there is a shoulder on both approaches that is being utilized as a right-turn lane by motorists and the approaches were modeled as such. The northbound/southbound Wading River Manor Road approaches have no lane designation markings but are wide and are used as two lanes. It was observed that usage on both approaches is shared left-turn/through lane and a right-turn lane. The approaches were modeled as such.

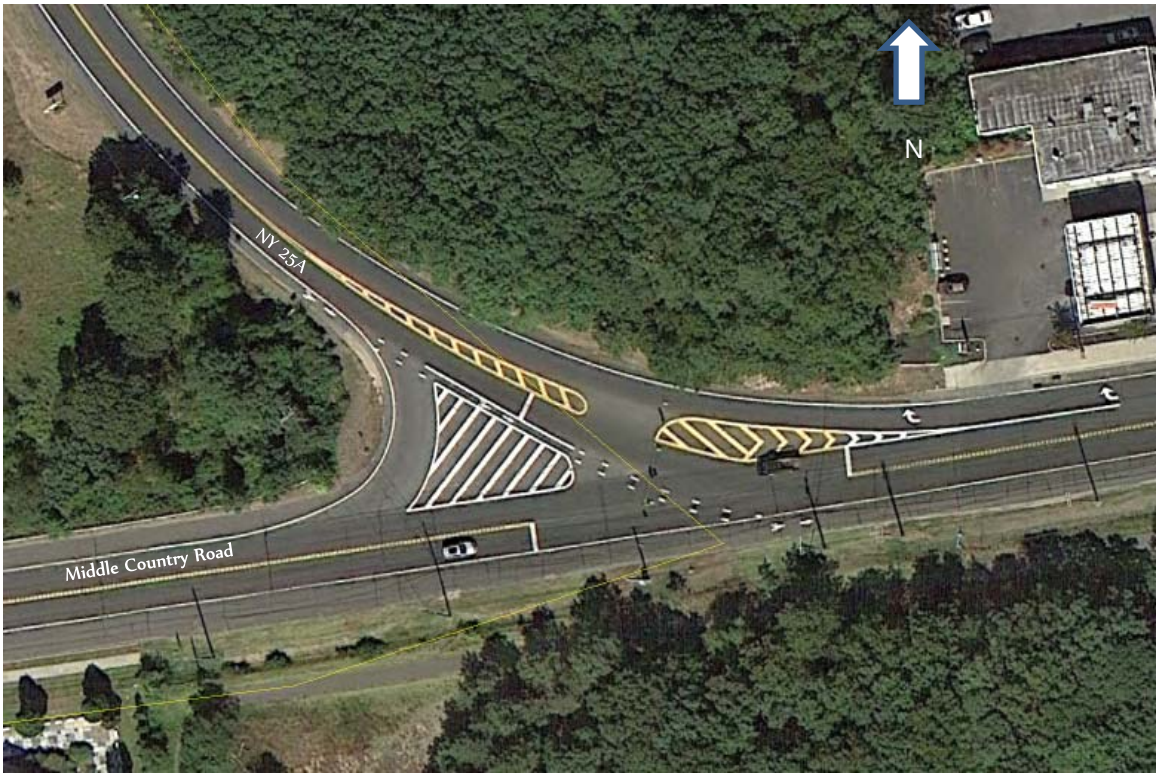
The intersection is controlled by a two-phase traffic signal.

Middle Country Road and Burman Boulevard

Middle Country Road and Burman Boulevard is a three-legged signalized intersection. The east-west Middle Country Road approaches provide an exclusive left-turn lane and a through lane in the westbound direction and a through and an exclusive right-turn lane in the eastbound direction. No U-turns are permitted in the eastbound direction. Burman Boulevard, currently the main entrance to the project site, provides an exclusive left-turn lane and an exclusive right-turn lane that flares out at the stop bar.

The intersection is controlled by a two-phase traffic signal.

Middle Country Road and NY 25A



Middle Country Road and NY 25A is a three-legged signalized intersection. The east-west Middle Country Road approaches provide a through lane and a right-turn lane in the westbound direction and a shared through and left-turn lane in the eastbound direction. NY 25A provides an exclusive left-turn lane and an exclusive channelized right-turn lane that is controlled by a yield sign.

The intersection is controlled by a two-phase traffic signal. The channelized westbound right-turn acts as a free movement due to a constant green right-turn arrow displayed.

Middle Country Road and Edwards Avenue

Middle Country Road and Edwards Avenue is a four-legged signalized intersection. The east-west Middle Country Road approaches provide a single shared left-turn/through/right-turn lane in both directions. In the westbound direction the shoulder is being used by the motorists to make a right turn, hence the approach was modeled as such. The north-south Edwards Avenue approaches provide a single shared left-turn/through/right-turn lane in each direction. Right turns on red are not permitted on the eastbound, northbound and southbound approaches.

The intersection is controlled by a two-phase traffic signal.

Middle Country Road and Manor Road / Splish Splash Drive

Middle Country Road and Manor Road /Splish Splash Drive is a four-legged signalized intersection. The east-west Middle Country Road approaches provide an exclusive left-turn lane and a shared through/right-turn lane in both directions. In the westbound direction the shoulder is being used by motorists to make right turns, hence the approach was modeled as such. The northbound Splish Splash Drive approach provides one left-turn/through/right-turn lane but is flared sufficiently at the intersection to allow for right turning vehicles to go around left turning/through vehicles. The approach has been modeled as such. The southbound Manor Road approach provides a single shared left-turn/through/right-turn lane.

The intersection is controlled by a three phase actuated traffic signal with the following phasing:

- Westbound protected left turns
- East-west through movements with permitted left turns
- North-south movements.

Edwards Avenue and River Road

Edwards Avenue and River Road is a four-legged unsignalized intersection. The eastbound and westbound River Road approaches are stop controlled. There are no lane designation markings, but the eastbound approach flares out at the stop bar to provide a shared left-turn/through lane and a right-turn lane. The westbound approach provides a single shared left-turn/through/right-turn lane. The northbound Edwards Avenue approach provides a shared left-turn/through lane and an exclusive channelized right-turn lane while the southbound approach provides a single shared left-turn/through/right-turn lane.

Grumman Boulevard and Burman Boulevard

Grumman Boulevard and Burman Boulevard is a three-legged unsignalized intersection. The southbound Burman Boulevard approach is stop controlled and provides a single shared left-turn/right-turn lane. The east-west Grumman Boulevard provides a shared left-turn/though lane on the eastbound approach and a shared through/right-turn lane in the westbound direction. North of the intersection a railroad spur crosses Burman Boulevard at grade. There is no active traffic control at the crossing.

Wading River Manor Road and Grumman Boulevard

Wading River Manor Road and Grumman Boulevard is a compound three-legged unsignalized intersection. Grumman Boulevard is bifurcated near Wading River Manor Road forming a triangle as shown in the above photo. The Grumman Boulevard approaches at both locations are yield controlled. Wading River Manor Road provides a through and a channelized right-turn lane in the northbound direction and a shared left-turn/through in the southbound direction.

Schultz Road/Wading River Road and North Street

Schultz Road/Wading River Road and North Street is a four-legged unsignalized intersection. It is an all-way stop-controlled intersection and provides a single shared left-turn/through/right-turn lane on the northbound, southbound and westbound approaches. The eastbound approach flares out at the stop bar to provide a shared left-turn/through lane and a right-turn lane.

Wading River Road and LIE North Service Road

Wading River Road and LIE North Service Road is a four-legged unsignalized intersection, with three active approaches. The stop controlled LIE North Service Road is one-way westbound. There are no lane designation markings but the LIE North Service Road is utilized by motorists as two lanes and is modeled with a shared left-turn/through lane and a right-turn lane. Wading River Road provides an exclusive left-turn lane and a through lane in the northbound direction and a through lane and an exclusive right-turn lane in the southbound direction.

Wading River Road and LIE South Service Road

Wading River Road and LIE South Service Road is a four-legged unsignalized intersection, with three active approaches; The stop controlled LIE South Service Road is one-way eastbound. There are no lane designation markings but the LIE South Service Road is utilized by motorists as two lanes and is modeled with a shared left-turn/through lane and an exclusive right-turn lane. Wading River Road provides an exclusive left turn lane and a through lane in the southbound direction and a through lane and an exclusive channelized right-turn lane in the northbound direction.

Existing Traffic Volume Data

Intersection turning movement counts at the key intersections previously described (with two exceptions as described below) were collected using Miovision cameras on a typical weekday during the a.m. and p.m. peak hours and on a typical Saturday during the midday peak hours. The counts were performed on Thursday, November 14, 2013 from 7:00 a.m. to 9:00 a.m. and again from 4:00 p.m. to 6:00 p.m. The Saturday midday counts were collected on Saturday, November 16, 2013 from 10:00 a.m. to 2:00 p.m. These time periods typically reflect the heaviest traffic flows coinciding with commuter and shopping activities.

Counts at two of the study intersections, Middle Country Road at Wading River Manor Road and Middle Country Road at NY 25A, were collected on Wednesday, August 24, 2011 and Saturday August 20, 2011. The appropriate growth factor from the NYSDOT's LITP 2000 study was applied to these counts to adjust them to 2013.

In order to understand the traffic patterns on Middle Country Road in the vicinity of the site as well as well as traffic on Burman Boulevard, Automatic Traffic Recorders (ATRs) were installed at the following locations:

- On Middle Country Road east of Burman Boulevard
- On Middle Country Road west of Burman Boulevard
- On Burman Boulevard south of Middle Country Road
- On Burman Boulevard north of Grumman Boulevard.

Summaries of the turning movement counts and the ATR data are provided in Attachment A.

The existing traffic volumes for the weekday a.m. peak, p.m. peak and Saturday midday peak hours are presented in Figures 3, 4 and 5, respectively.

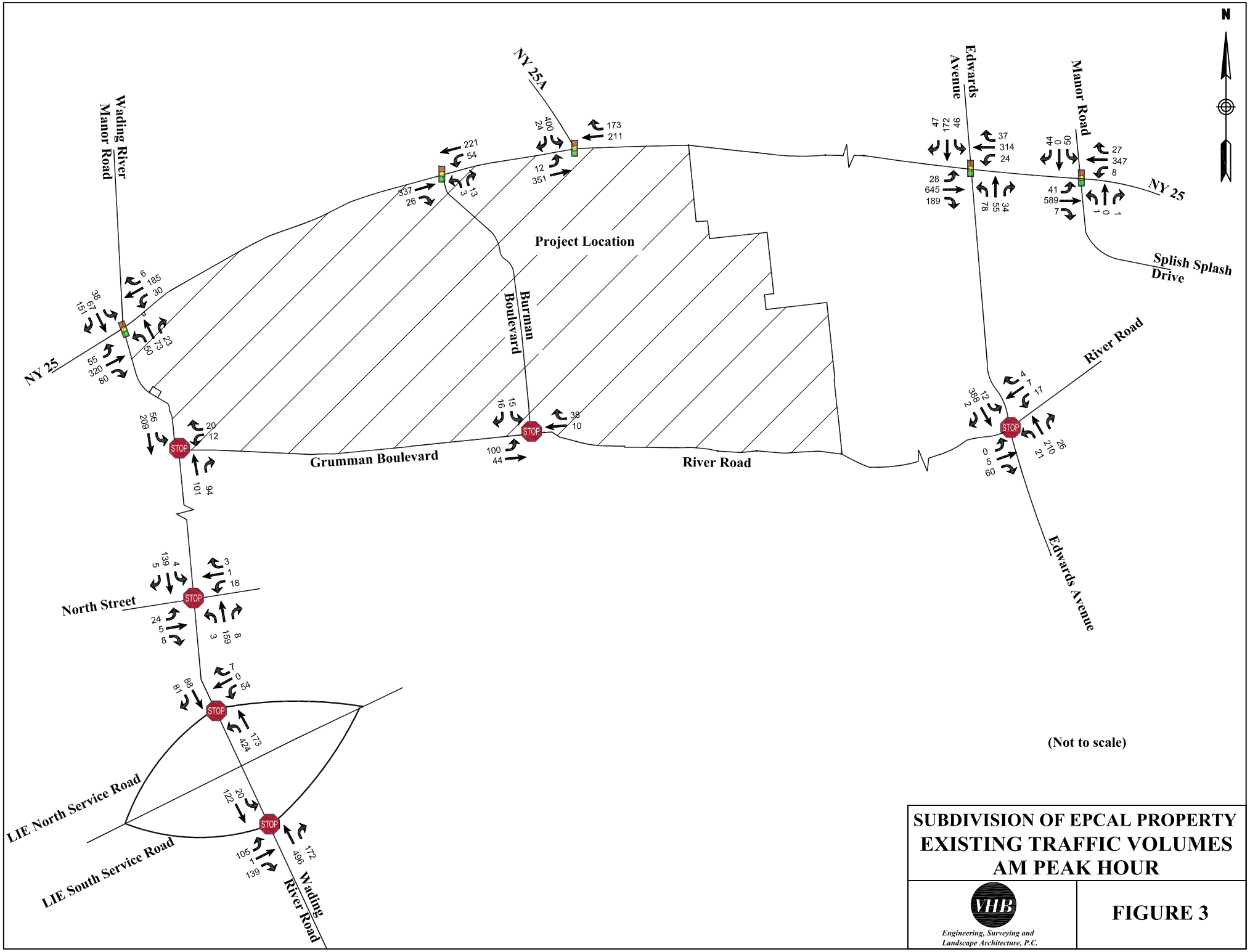
Seasonal Traffic Variation

The site of the proposed subdivision is located near the east end of Long Island in an area that is subject to seasonal traffic variations. This is in large part due to the level of agricultural activity and recreational opportunities that exist in the Town of Riverhead and points east on the North Fork. While the NYSDOT classifies the segment of Middle Country Road that abuts the site as having typical seasonal characteristics, it is known that during specific times of the year, days of week and at specific times of the day, there are increases in traffic volume levels on area roadways.

While there are increases in traffic volumes on area roadways due to seasonal activities, it must be understood that the proposed project will generate peak levels of site traffic during specific time periods. The nature of the proposed uses in the subdivision (e.g., industrial, office, commercial) are such that peak traffic to and from the site will occur during the normal weekday a.m. and p.m. commuting hours due to the employment-centric nature of the trips

that will occur. Outside of these distinct peak periods, and particularly on weekends when the seasonal variations are most acute, the proposed subdivision will generate significantly lower levels of traffic. This is evident in the trip generation developed for the project that is presented in a subsequent section of this report. Saturday midday peak hour site traffic levels are expected to be only approximately fifteen percent of weekday a.m. peak levels. Although there is a retail and service component to the development mix anticipated, this retail is anticipated to be ancillary to the employment center that would be created and would be expected to attract very few trips from the outside roadway system, particularly on weekends.

Based on the above, it is concluded that the normal weekday commuting hours in combination with the peak hour site traffic is the critical condition with regard to the determination of traffic impacts and the development of appropriate mitigation.



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EXISTING TRAFFIC VOLUMES

AM PEAK HOUR

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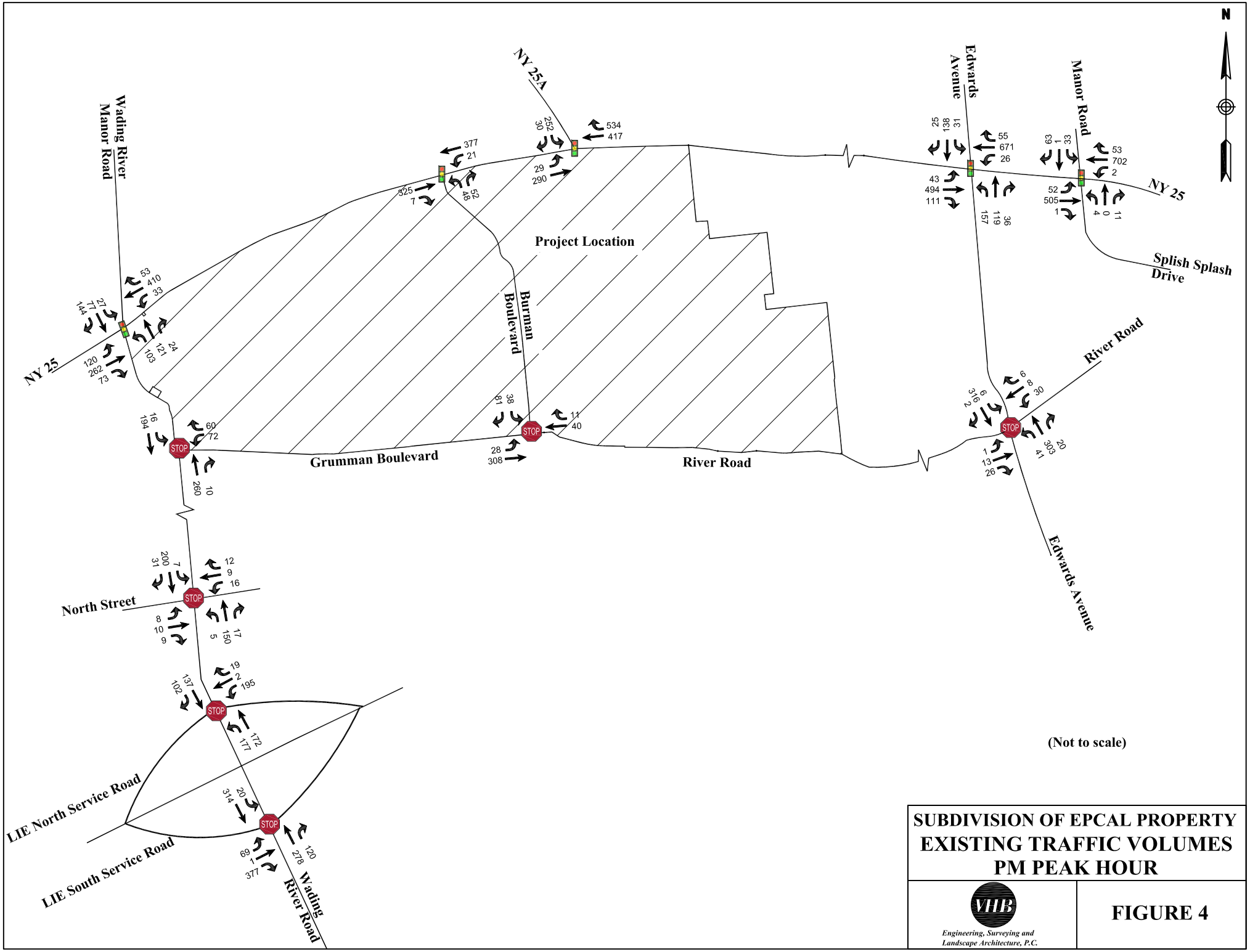
FIGURE 3



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EXISTING TRAFFIC VOLUMES

PM PEAK HOUR

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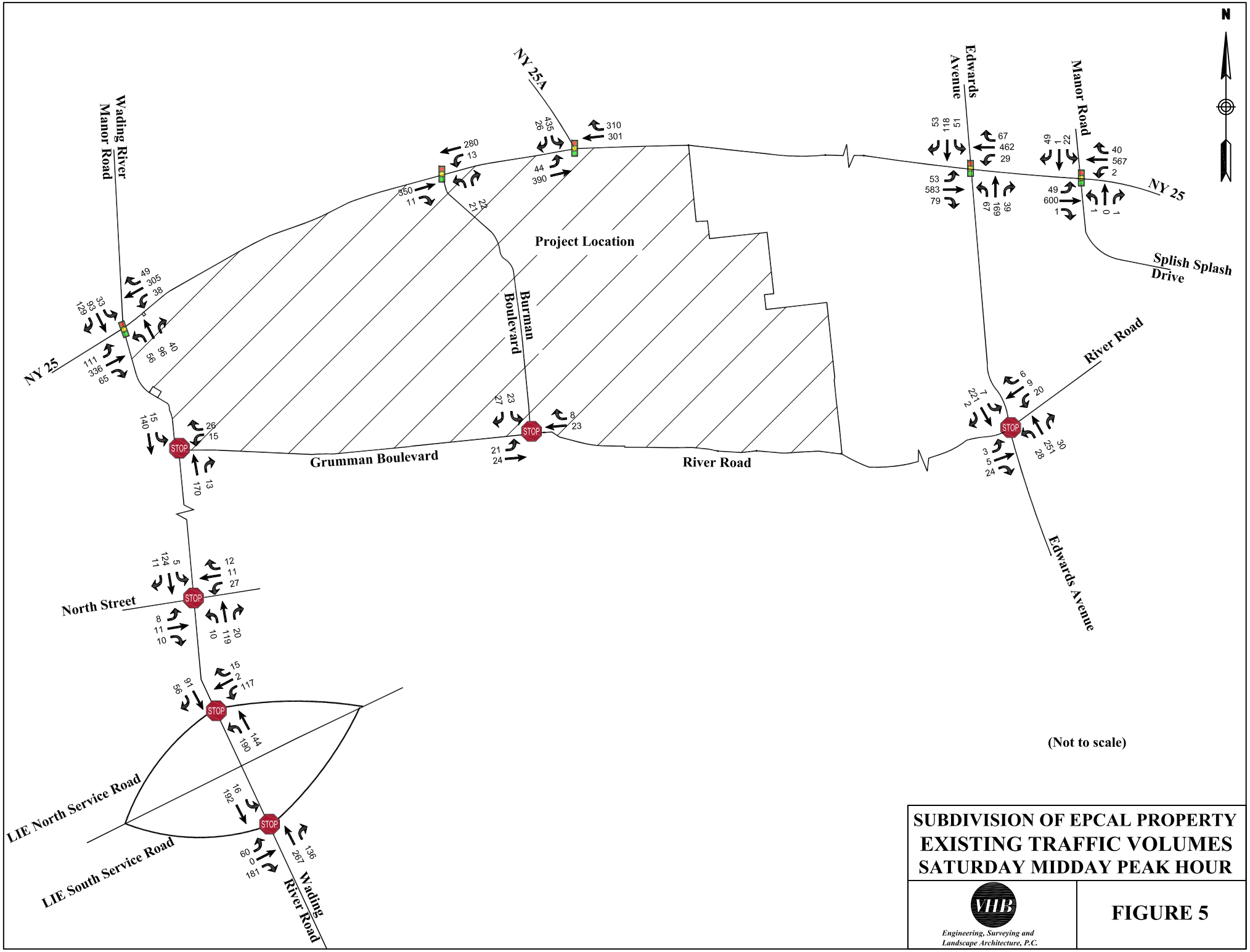
FIGURE 4



SUBDIVISION OF EPCAL PROPERTY
EXISTING TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

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FIGURE 5

Accident History

Accident data from the NYSDOT Accident Location Information System (ALIS) records for the most recent available three-year period was requested. Accident Verbal Description Reports (VDRs) for the period of March 1, 2010 through February 28, 2013 were obtained for the following roadway segments within the specified limits. These data include the terminal and intermediate intersections:

- Middle Country Road – From Wading River Manor Road to Splish Splash Drive
- Grumman Boulevard – From Wading River Manor Road to River Road
- River Road – From Grumman Boulevard to Edwards Avenue
- Edwards Avenue – From Middle Country Road to River Road
- Wading River Manor Road – From Middle Country Road to LIE South Service Road.

Table 1 provides a summary of the Accident data. The Accident VDRs are included in Attachment B. The intersections with no recorded accidents are omitted from the table.

A discussion of the accident history at specific intersections and roadway segments in the study area is presented herein.

Table 1- Accident Data Summary

Location	Accident Severity				Total	Accident Type												
Study Intersections	Fatality	Injury	Property Damage Only	Non-Reportable		Rear End	Overtaking	Right Angle	Left Turn	Right Turn	Fixed Object	Head On	Side-Swipe	Pedestrian	Parked Vehicle	Run Off The Road	Animal's Action	Other/ Unknown
Middle Country Road & Wading River Manor Road	-	8	3	4	**15**	6	-	4	-	-	2	-	-	-	-	-	2	1
Middle Country Road & NY 25A	1	3	14	3	**21**	5	2	2	4	1	2	-	-	-	-	1	4	
Middle Country Road & Edwards Avenue	-	22	16	3	**41**	17	3	7	7	1	1	2	1	-	-	-	-	2
Middle Country Road & Manor Road/Splish Splash Drive	-	7	8	-	**15**	10	-	1	2	-	1	-	-	-	-	-	1	-
Wading River Manor Road & North Street	-	2	3	-	**5**	1	-	-	1	-	1	-	-	-	-	-	2	-
Wading River Road & LIE NSR	-	1	1	-	**2**	1	-	-	-	-	1	-	-	-	-	-	-	-
Wading River Road & LIE SSR	-	1	3	-	**4**	1	-	-	-	-	2	-	-	-	-	-	1	-
Edwards Avenue & River Road	-	1	2	-	**3**	-	-	2	-	-	1	-	-	-	-	-	-	-

Roadway Segments (excludes intersection accidents)																			
Middle Country Road - Between Wading River Manor Road & NY 25A	1	10	21	3	**35**	7	1	-	2	2	5	-	-	-	1	-	14	3
Middle Country Road - Between NY 25A & Splish Splash Drive	2	51	26	5	**84**	24	3	4	8	0	24	4	5	1	2	0	6	3
Edwards Avenue Between Middle Country Road & River Road		1		1	**2**		1		1									
Wading River Manor Road Between Middle Country Road & Grumman Boulevard			1		**1**			1										
Wading River Manor Road Between Grumman Boulevard & North Street		10	2	1	**13**	1	1			1	8					1		1
Wading River Manor Road Between North Street & LIE		8	5		**13**			7	4	1					1			
Grumman Boulevard Between Wading River Manor Road & Burman Boulevard			2		**2**						1							1
River Road Between Burman Boulevard & Edwards Avenue		1	2		**3**						1						2	

Study Intersections:

At Middle Country Road and Wading River Manor Road, during the three-year study period a total of 15 accidents were reported to have occurred. There were no fatalities, 8 accidents resulted in personal injury, and 3 accidents resulted in property damage only. Four were classified as non-reportable. The accident types with the highest incident rates were rear-end collisions (6 accidents – 40%), right-angle collisions (4 accidents each – 27%), collisions with fixed objects (2 accidents – 13%) and collisions due to animal action (2 accidents – 13%). There are no other types that exceed 10% of the total.

At Middle Country Road and NY 25A, a total of 21 accidents were reported to have occurred. There was one fatality, 3 accidents resulted in personal injury, and 14 accidents resulted in property damage only. Three were classified as non-reportable. The accident types with the highest incident rates were rear-end collisions (5 accidents – 24%), left-turn collisions (4 accidents each – 19%), and collisions due to animal action (4 accidents – 19%). There are no other types that exceed 10% of the total.

One fatal accident was recorded at this intersection during the study period:

- Assigned the case number 34526669 the fatal accident occurred on 11/9/2012 at 10:02 a.m. when car one travelling south at the intersection collided with car two travelling west. The VDR records the weather as clear, surface conditions as dry and light condition as daylight. The apparent factors indicated are “driver inattention” and “traffic control devices disregarded.”

At Middle Country Road and Edwards Avenue, a total of 41 accidents were reported to have occurred. There were no fatalities, 22 accidents resulted in personal injury, and 16 accidents resulted in property damage only. Three were classified as non-reportable. The accident types with the highest incident rates were rear-end collisions (17 accidents – 41%), right-angle collisions (7 accidents each – 17%) and left-turn collisions (7 accidents – 17%). There are no other types that exceed 10% of the total.

At Middle Country Road and Manor Road /Splish Splash Drive, a total of 15 accidents were reported to have occurred. There were no fatalities, 7 accidents resulted in personal injury, and 8 accidents resulted in property damage only. The accident types with the highest incident rates were rear-end collisions (10 accidents – 67%), and left-turn collisions (2 accidents – 13%). There are no other types that exceed 10% of the total.

At Wading River Manor Road and North Street, a total of 5 accidents were reported to have occurred. There were no fatalities, 2 accidents resulted in personal injury, and 3 accidents resulted in property damage only. The accident types with the highest incident rates were collisions due to animal action (2 accidents – 40%), rear-end collision, left-turn collision and collision with fixed object (1 accident each – 20% each).

At Wading River Manor Road and LIE North Service Road, a total of 2 accidents were reported to have occurred. There were no fatalities, 1 accident resulted in personal injury, and 1 accident resulted in property damage only.

At Wading River Manor Road and LIE South Service Road, a total of 4 accidents were reported to have occurred. There were no fatalities, 1 accident resulted in personal injury, and 3 accidents resulted in property damage only.

At Edwards Avenue and River Road, a total of 3 accidents were reported to have occurred. There were no fatalities, 1 accident resulted in personal injury, and 2 accidents resulted in property damage only.

Roadway Segments:

On the segment of Middle Country Road between Wading River Road and NY 25A, a total of 35 accidents were reported to have occurred. There was one fatality, 10 accidents resulted in personal injury, and 21 accidents resulted in property damage only. Three were classified as non-reportable. The accident types with the highest incident rates were collisions due to animal action (14 accidents – 40%), rear end collisions (7 accidents – 20%) and collisions with fixed objects (5 accidents – 20%) and. There are no other types that exceed 10% of the total.

One fatal accident was recorded on this segment during the study period:

- Assigned the case number 34521764 the fatal accident occurred on 11/1/2012 at 13:36 p.m. when a car travelling west on Middle Country Road collided with a bicyclist. The VDR records the weather as clear, surface conditions as dry and light condition as daylight. The apparent factors indicated for the car are “passing or lane usage improperly” and “drugs (illegal)”.

On the segment of Middle Country Road between NY 25A and Manor Road/Splish Splash Drive a total of 84 accidents were reported to have occurred. There were two fatalities, 51 accidents resulted in personal injury, and 26 accidents resulted in property damage only and 5 were classified as non-reportable. The accident types with the highest incident rates were rear end collisions (24 accidents – 29%) and collisions with fixed objects (24 accidents – 29%). There are no other types that exceed 10% of the total.

Two fatal accidents were recorded on this segment during the study period:

- Assigned the case number 33578987 the fatal accident occurred on 9/21/2010 at 17:18 p.m. when a car travelling west on Middle Country Road collided with a bicyclist. The VDR records the weather as clear, surface conditions as dry and light condition as daylight. The apparent factors indicated for bicycle are “turning improper” and “error/confusion.”

- Assigned the case number 33600728 the fatal accident occurred on 10/2/2010 at 12:17 p.m. when a car travelling west on Middle Country Road collided head-on with a car

travelling east. The VDR records the weather as clear, surface conditions as dry and light condition as daylight. The apparent factor indicated is “failure to keep right.”

On the segment of Edwards Avenue between Middle Country Road and River Road a total of 2 accidents were reported to have occurred. There were no fatalities, 1 accident resulted in personal injury, and 1 was classified as non-reportable.

On the segment of Wading River Manor Road between Middle Country Road and Grumman Boulevard one accident was reported to have occurred. It was a right-angle collision that resulted in property damage only.

On the segment Wading River Manor Road between Grumman Boulevard and North Street a total of 13 accidents were reported to have occurred. There were no fatalities, 10 accidents resulted in personal injury, and 2 accidents resulted in property damage only and 1 was classified as non-reportable. The accident type with the highest incident rate was collisions with fixed objects (8 accidents – 62%). There are no other types that exceed 10% of the total.

On the segment Wading River Manor Road between North Street and the LIE a total of 13 accidents were reported to have occurred. There were no fatalities, 8 accidents resulted in personal injury, and 5 accidents resulted in property damage only. The accident types with the highest incident rates were right angle collisions (7 accidents – 54%) and left turn collisions (4 accidents – 31%). There are no other types that exceed 10% of the total.

On the segment Grumman Boulevard between Wading River Manor Road and Burman Boulevard a total of 2 accidents were reported to have occurred, both resulting in property damage only.

On the segment of River Road between Burman Boulevard and Edwards Avenue a total of 3 accidents were reported to have occurred. There were no fatalities, one accident resulted in personal injury and 2 accidents resulted in property damage only. One accident was a collision with fixed object and the other two were collisions due to animal action.

3.0
Future Conditions

The analysis of future conditions, with and without the proposed project ("Build" and "No-Build" conditions, respectively), was performed to evaluate the effect of the proposed project on future traffic conditions in the study area. The No-Build condition represents the future traffic conditions that can be expected to occur, were the proposed project not constructed. The No-Build condition serves to provide a basis of comparison to the Build condition, which represents expected future traffic conditions resulting from both project and non-project generated traffic.

Theoretical Mixed-Use Development Program

A *Real Estate Market Assessment Calverton Enterprise Park (EPCAL) Riverhead, New York (*hereinafter *"Market Assessment"*) was prepared by RKG Associates, Inc. (RKG) in association with Jeffrey Donohoe Associates LLC, dated December 8, 2011 (hereinafter the *"Market Study"*). According to this report, there are a variety of different uses that could be feasible over the multi-decade redevelopment horizon, including, but not necessarily limited to:

- Multi-Modal Freight Village
- Agri-Business/Food Processing
- High-Tech Business/Green Technology/Research Park
- Mixed Use Planned Development
- Specialty Uses.

For purposes of this analysis, a Theoretical Mixed-use Development Program occurring over two time horizons is evaluated: 1) a near-term build-out in 2025; and 2) the full build-out in 2035.

Projected Development in 2025

The following interim Theoretical Mixed-use Development Program with a horizon year of 2025 is being analyzed in this DSGEIS. This development program is generally consistent with that included in RKG's *Absorption Analysis for NWIRP/EPCAL* (hereinafter *"Absorption Analysis"*), dated April 25, 2012, although it examines less residential development than considered in that study:

- 289,606 SF of industrial/research and development (R&D)/flex space
- 1,330,305 SF of office/medical office/flex or institutional space
- 358,785 SF of commercial/retail space
- 150 Residential Units (supportive of commercial/industrial development at the EPCAL Property).

Potential Maximum Development
Full Build-Out

In order to ensure comprehensive environmental review in accordance with SEQRA and its implementing regulations at 6 NYCRR Part 617, a full build-out Theoretical Mixed-use, Development Program at 2035 has been identified, which reflects the potential ultimate development of the subject property in accordance with the Reuse and Redevelopment Plan, the proposed PD District and the Subdivision Map. The 2035 Theoretical Mixed-Use Development Program would occur on Lots 1 through 42 and would consist of the following components:

- 6,886,836 SF of industrial/research and development (R&D)/flex space
- 2,927,232 SF of office/flex and 740,520 SF of medical office space (3,667,752 SF total)
- 805,860 SF commercial/retail space
- 300 Residential Units (supportive of commercial/industrial development at the EPCAL Property).

This development program is evaluated in this study to ensure that all potential significant adverse environmental impacts are analyzed in accordance with 6 NYCRR Part 617.

As will be demonstrated later in this study, the mix of uses set forth in the theoretical potential maximum build-out would result in significant adverse traffic impacts that likely cannot be fully mitigated. It must be understood, however, that no one can predict, over a multi-year development period, what specific uses would be developed and at what levels. For example, if a significant portion of the site is developed for warehouse uses, minimal traffic would result. Moreover, if a significant area was used as a solar field, virtually no traffic would result from that area. Accordingly, the maximum development limit will be a function of the actual trip generation associated with the uses developed. As explained in Trip Generation Section of this study, the maximum number of trips that can be generated and reasonably mitigated at this site is 5,000 trips per hour (combined entering and exiting) during the weekday a.m. peak hour of traffic. The Mitigation Phasing Section of this study provides the

various levels of trip generation and the mitigation required to be in place for each level of trip generation.

In order to ensure that the traffic generated by the permitted development can be adequately mitigated, as each use is approved, constructed and occupied, traffic counts must be taken to document the total number of trips actually being generated. Once the total number of trips generated reaches 5,000 trips per hour (combined entering and exiting) during the critical weekday a.m. peak hour, no further development can be approved unless additional evaluation and mitigation (as necessary based on the evaluation) is conducted.

Given the scale of the development which could be realized after the proposed subdivision, as described above, it is anticipated that the build-out of the parcels will occur over many years. For the purpose of this study, two future Build years were considered in order to present relevant "snap-shots" at which potential traffic conditions were evaluated. The first Build condition was analyzed in the year 2025 (Build 2025), for which the background traffic volumes in the study area were projected to the year 2025. Build 2025 includes development of the lots in the subdivision to the level forecast in the RKG study. The second Build condition (Full Build 2035) was analyzed in the year 2035, for which the background traffic volumes in the study area were projected to the year 2035. In 2035 it was assumed that the entirety of the subdivision parcels would be occupied.

No-Build Condition

The 2025 No-Build traffic volumes include existing traffic, additional traffic volume due to background traffic growth, and other planned developments in the area as explained below.

Background Traffic Growth

To account for increases in general population and background growth not related to the proposed project or specifically identified other planned developments, an annual growth factor was applied to existing traffic volumes. Based on the NYSDOT Long Island Transportation Plan (LITP) 2000 model, the growth rate anticipated for the Town of Riverhead in Suffolk County is 1.7% per year. Therefore, for Build 2025, a growth rate of 1.7% per year was applied for twelve years (2013 to 2025) for a total of 20.4% (1.7% x 12 years).

For the Full Build 2035 the growth rate was applied for 22 years (2013 to 2035) for a total of 37.4% (1.7% x 22 years).

Other Planned Developments

The Town of Riverhead Planning Department was contacted to determine whether there existed any other planned, approved or developments under consideration, that were

significant enough to have the potential to influence traffic conditions in the study area. The following other planned developments in the vicinity of the project site were identified:

Hamlet Centre, located on the north side Middle Country Road and east of NY 25A, this development is proposed to consist of 14,000 square feet of retail space, 50 residential apartments and 6 single family residential homes. The development is estimated to generate 42 trips (Entering 14 & Exiting 28) during weekday a.m. peak hour, 76 trips (Entering 43 & Exiting 33) during weekday p.m. peak hour and 90 trips (Entering 48 & Exiting 42) during Saturday midday peak hour.

Calverton Camelot is an industrial subdivision that is surrounded by the proposed EPCAL subdivision and contained within the former Calverton NWIRP property. This site was previously subdivided from that larger property and consists mainly of light-industrial/office uses. The ultimate full occupied size of the development would be 3,229,350 square feet, of which 1,268,212 square feet has already been occupied. When the remaining portion of the development is completed by 2025, the development is estimated to generate an additional 410 trips (Entering 356 & Exiting 54) during weekday a.m. peak hour and 394 trips (Entering 91 & Exiting 303) during the weekday p.m. peak hour. Available documentation for Calverton Camelot did not include an evaluation or trip generation estimate for the Saturday peak hour.

To obtain the 2025 No-Build traffic volumes at the study intersections, the trips anticipated to be generated by the other planned developments in the area were added to the existing traffic volumes plus background traffic growth. The No-Build traffic volumes for the weekday a.m., p.m. and Saturday midday peak hours are presented in Figures 6, 7 and 8, respectively.

No Build Improvements

The intersection of Middle Country Road and Edwards Avenue is currently over capacity and imparts significant delays on motorists during peak periods. With growth in traffic volumes over time, these conditions will continue to worsen. In the No-Build 2025 condition these conditions are such that the SYNCHRO software which is used to evaluate conditions will not produce accurate results. Therefore, in order to model the roadway network in the vicinity of the site it was necessary to improve the No-Build conditions to allow the model to function. The following measures were developed in order for the modeled intersection to function and assumed to be in place for the 2025 No-Build condition at Middle Country Road and Edwards Avenue:

- Eastbound: From an existing single lane approach to an exclusive left-turn lane, a second through lane and an exclusive right-turn lane.
- Westbound: From an existing single lane approach to an exclusive left-turn lane, and a shared through/ right-turn lane.
- Northbound: From an existing single lane approach to an exclusive left-turn lane and a shared through/right-turn lane.

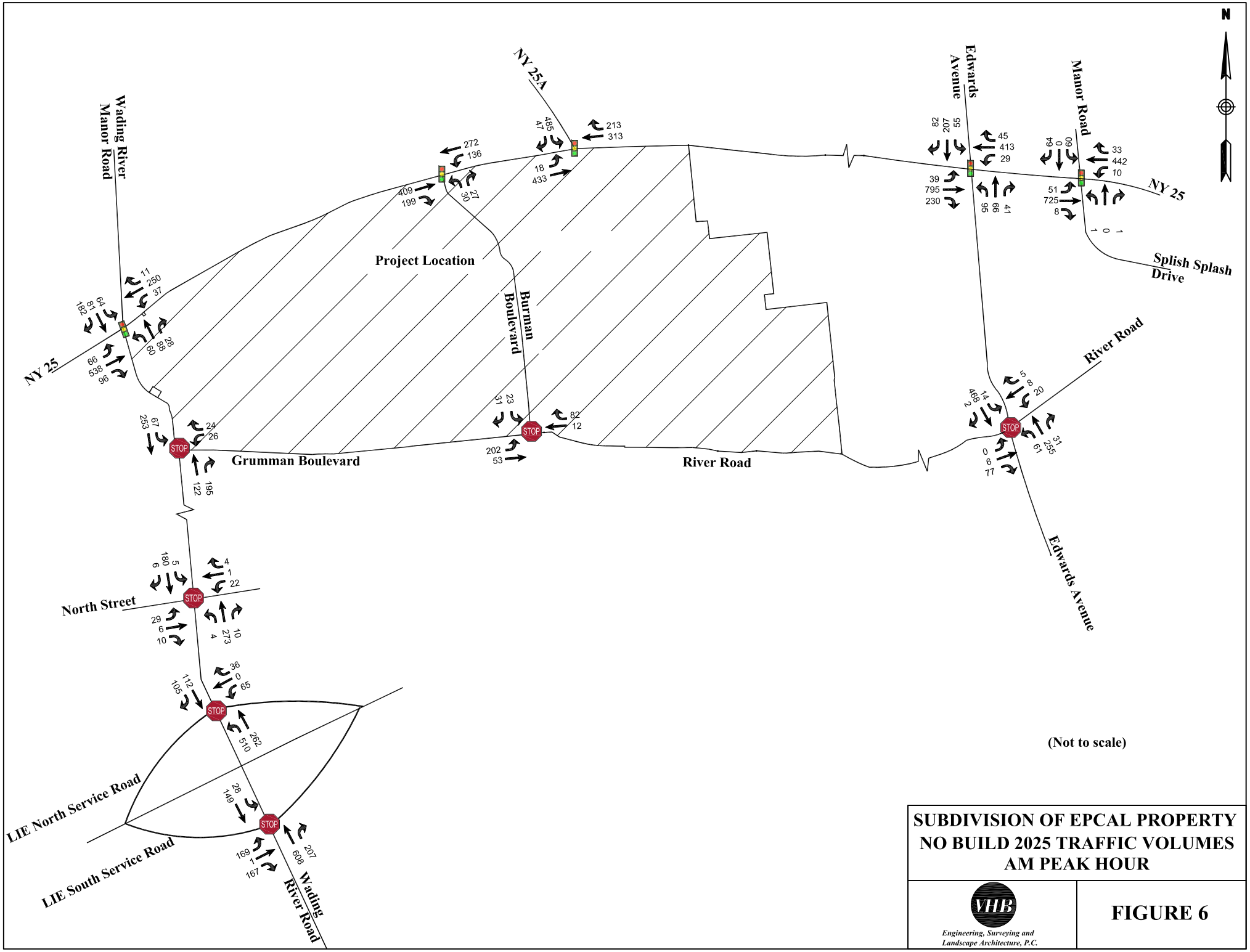
- Southbound: From an existing single lane approach to an exclusive left-turn lane, a through lane and an exclusive right-turn lane.

It is noted that the construction of these improvements at this location will require additional roadway right-of-way beyond that currently available.

Table 2 presents the results of the 2025 No Build improvements at Middle Country Road and Edwards Avenue.

Table 2 – 2025 No-Build Improvements

Intersection	Movement	Lane Group	AM Peak				PM Peak				Saturday Midday Peak			
			2025 No Build		2025 No Build Improved		2025 No Build		2025 No Build Improved		2025 No Build		2025 No Build Improved	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Edwards Avenue	EB	LTR / L	133.8	F	10.6	B	1026.1	F	14.7	B	68.4	E	10.0	A
		T			65.9	E			38.8	D			30.5	C
		R			17.8	B			17.5	B			14.4	B
		Approach	133.8	F	53.5	D	1026.1	F	33.2	C	68.4	E	27.2	C
	WB	LT / L	14.7	B	16.3	B	58.0	E	13.1	B	14.8	B	10.8	B
		R / TR	3.9	A	17.0	B	5.0	A	23.1	C	5.0	A	16.0	B
		Approach	13.7	B	16.9	B	54.3	D	22.7	C	13.6	B	15.8	B
	NB	LTR / L	168.0	F	64.7	E	228.9	F	44.3	D	71.1	E	28.8	C
		TR			36.0	D			38.9	D			61.0	E
		Approach	168.0	F	49.5	D	228.9	F	41.6	D	71.1	E	52.9	D
	SB	LTR / L	131.6	F	24.4	C	45.5	D	23.1	C	76.2	E	26.6	C
		TR / T			78.4	E			51.2	D			45.6	D
		Approach	131.6	F	69.8	E	45.5	D	46.8	D	76.2	E	41.3	D
	Overall		**110.1**	**F**	**48.0**	**D**	**452.2**	**F**	**31.8**	**C**	**53.5**	**D**	**29.8**	**C**



SUBDIVISION OF EPCAL PROPERTY
NO BUILD 2025 TRAFFIC VOLUMES
AM PEAK HOUR

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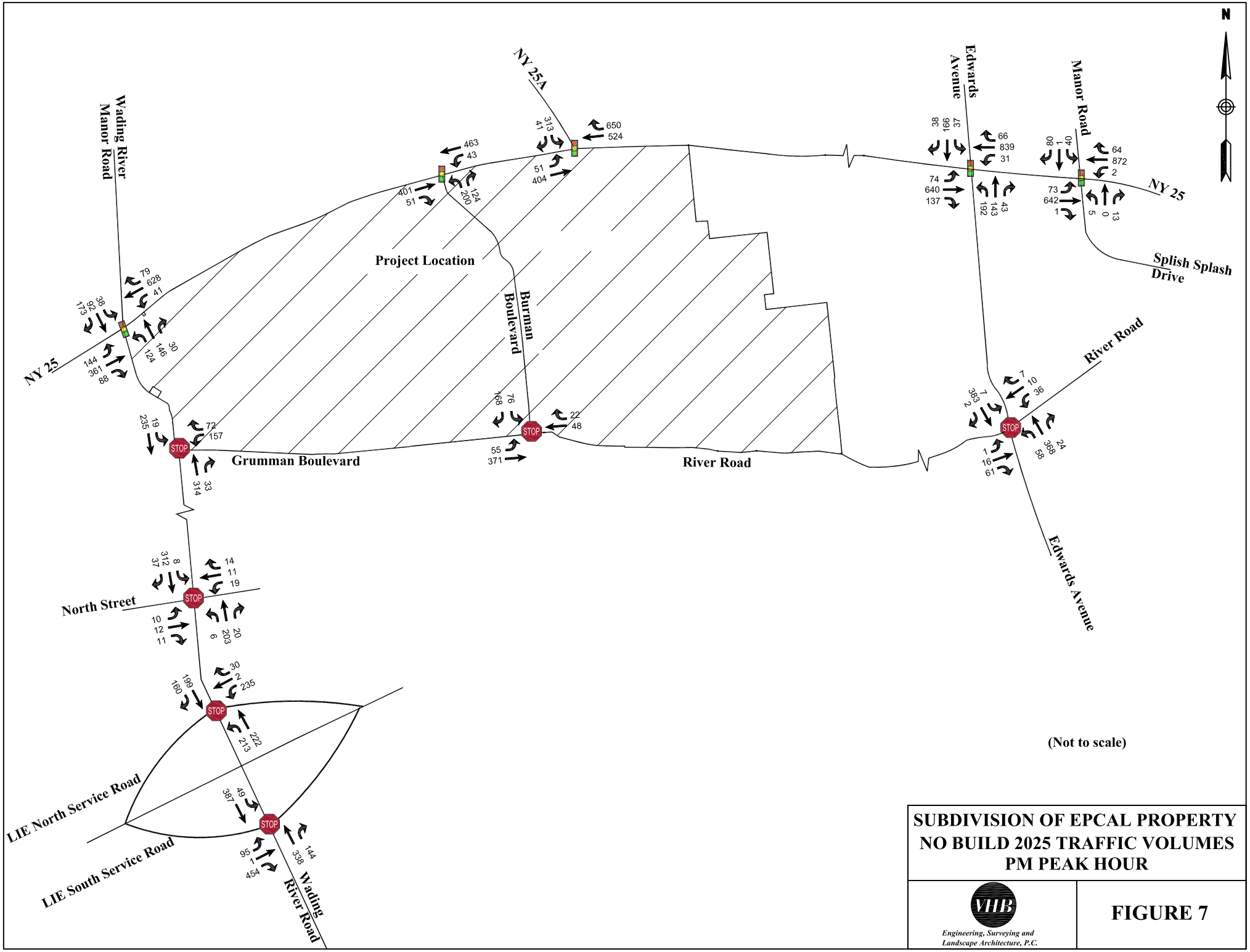
FIGURE 6



SUBDIVISION OF EPCAL PROPERTY
NO BUILD 2025 TRAFFIC VOLUMES
PM PEAK HOUR

VHB
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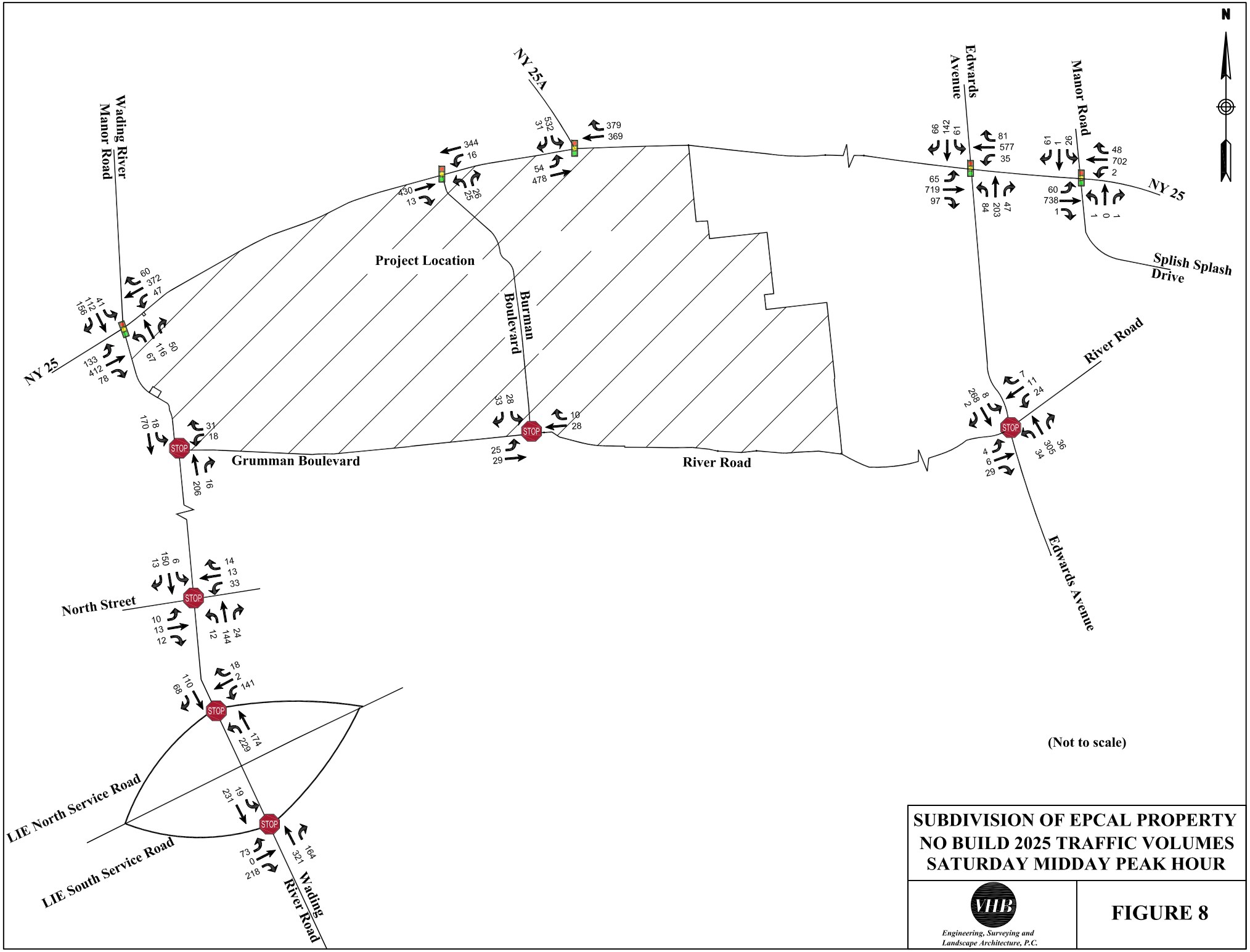
FIGURE 7



SUBDIVISION OF EPCAL PROPERTY
NO BUILD 2025 TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

FIGURE 8

Build Condition

To estimate the traffic impacts of the proposed project, it is necessary to determine the traffic volumes expected to be generated by the proposed project. As noted previously, two build years during the anticipated build-out of the parcels were chosen for evaluation -- 2025 and 2035.

Projected Development

Projected Development in 2025

As previously described, the following interim Theoretical Mixed-Use Development Program with a horizon year of 2025 is being analyzed in this DSGEIS. This development program is generally consistent with that included in the *Absorption Analysis for NWIRP/EPCAL*, dated April 25, 2012, although it examines less residential development than considered in that study:

- 289,606 SF of industrial/research and development (R&D)/flex space
- 1,330,305 SF of office/medical office/flex or institutional space
- 358,785 SF of commercial/retail space
- 150 Residential Units (supportive of commercial/industrial development at the EPCAL Property).

Potential Maximum Development

Full Build-Out

In order to ensure comprehensive environmental review in accordance with SEQRA and its implementing regulations at 6 NYCRR Part 617, a theoretical mixed-use, full build-out development program has been identified, which reflects the potential ultimate development of the subject property in accordance with the Reuse and Redevelopment Plan, the proposed PD District and the Subdivision Map. The 2035 Theoretical Mixed-Use Development Program would occur on Lots 1 through 42 and would consist of the following components:

- 6,886,836 SF of industrial/research and development (R&D)/flex space
- 2,927,232 SF of office/flex and 740,520 SF of medical office space (3,667,752 SF total)
- 805,860 SF commercial/retail space
- 300 Residential Units (supportive of commercial/industrial development at the EPCAL Property).

Trip Generation

To estimate the project-generated traffic for the proposed development, a review was undertaken of available trip generation data sources, including the reference published by the Institute of Transportation Engineers (ITE), *Trip Generation*, 9th Edition. This widely utilized reference source contains trip generation rates for numerous land uses, including "Office Park" (Land Use Code #750), "Industrial Park" (Land Use Code #130) and "Residential Condos" (Land Use Code #230).

Based on review of available information, it was determined that the most applicable, best-fit land use category for the non-residential portions of the proposed subdivision is Office Park as it incorporates all of the anticipated components of the development. The ITE defines an Office Park as follows – "Office Parks are usually suburban subdivisions or planned unit developments containing general office buildings and support services, such as banks, restaurants and service stations arranged in a park or campus-like atmosphere". Given the nature of the proposed subdivision, it was determined to be appropriate to combine the office/institutional space and the retail space under the Office Park land use. The industrial and residential components of the subdivision were treated separately.

Table 3 summarizes the resulting peak hour trip generation for Build 2025. Likewise, Table 4 summarizes the trip generation for Full Build 2035.

Table 3 - Trip Generation – Build 2025

Project Component	Component Size	AM Peak Hour		PM Peak Hour		Saturday Midday	
OFFICE PARK ITE # 750 Park/Campus Like Development	**1,689,090 SF**	T=1.37(X)+124.36		T=1.22 (X)+95.83		Rate =	0.14
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		89%	11%	14%	86%	74%	26%
		2,170	268	302	1,855	175	61
		Total =	**2438**	Total =	**2157**	Total =	**236**
INDUSTRIAL PARK ITE # 130	**289,606 SF**	Rate =	0.82	Rate =	0.85	Rate =	0.35
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		82%	18%	21%	79%	32%	68%
		194	43	52	194	32	69
		Total =	**237**	Total =	**246**	Total =	**101**
RESIDENTIAL ITE # 230 Condos/Townhouses	**150 Units**	Rate =	0.44	Rate =	0.52	Rate =	0.47
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		17%	83%	67%	33%	54%	46%
		11	55	52	26	38	33
		Total =	**66**	Total =	**78**	Total =	**71**
TOTALS		**AM Peak Hour Trips**		**PM Peak Hour Trips**		**Saturday Midday Trips**	
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		2,375	366	406	2,075	245	163
		2,741		**2,481**		**408**	

Table 3 reveals that by 2025 the project would be expected to generate 2,741 trips (2,375 entering and 366 exiting) during the weekday a.m. peak hour, 2,481 trips (406 entering and 2,075 exiting) during the weekday p.m. peak hour and 408 trips (245 entering and 163 exiting) during Saturday midday peak hour.

Table 4 - Trip Generation – Full Build 2035

Project Component	Component Size	AM Peak Hour		PM Peak Hour		Saturday Midday	
OFFICE PARK ITE # 750 Park/Campus Like Development	**4,473,612 SF**	T=1.37(X)+124.36		T=1.22 (X)+95.83		Rate =	0.14
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		89%	11%	14%	86%	74%	26%
		5,565	688	778	4,776	463	163
		Total =	**6,253**	Total =	**5,554**	Total =	**626**
INDUSTRIAL PARK ITE # 130	**6,886,836 SF**	Rate =	0.82	Rate =	0.85	Rate =	0.35
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		82%	18%	21%	79%	32%	68%
		4,631	1,016	1,229	4,625	771	1,639
		Total =	**5,647**	Total =	**5,854**	Total =	**2,410**
RESIDENTIAL ITE # 230 Condos/Townhouses	**300 Units**	Rate =	0.44	Rate =	0.52	Rate =	0.47
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		17%	83%	67%	33%	54%	46%
		22	110	105	51	76	65
		Total =	**132**	Total =	**156**	Total =	**141**
TOTALS		**AM Peak Hour Trips**		**PM Peak Hour Trips**		**Saturday Midday Trips**	
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		10,218	1,814	2,112	9,452	1,310	1,867
		12,032		**11,564**		**3,177**	

Table 4 reveals that by 2035 the project would generate 12,032 trips (10,218 entering and 1,814 exiting) during the weekday a.m. peak hour, 11,564 trips (2,112 entering and 9,452 exiting) during the weekday p.m. peak hour and 3,177 trips (1,310 entering and 1,867 exiting) during the Saturday midday peak hour.

However, through the course of the analysis it was determined that the existing roadway network in the study area cannot support the level of traffic projected with the Theoretical Mixed Use Development Program Full Build-Out in 2035, even with the implementation of all roadway mitigations that, at this time, are reasonable to implement given the configuration of the area roadways, available rights-of-way, and other factors (such as Pine Barrens Core Preservation Area land). There are a limited number of routes to and from the site, and these routes have limits on the extent of potential improvements able to be implemented. Geometric and environmental considerations limit the extent of improvements that could be made to the roadway system and construction of additional, new roadways is not necessarily feasible at this time. Through an iterative analysis process, the level of traffic that can be mitigated was established as 5,000 total trips (combined entering and exiting) during the critical weekday a.m. peak hour.

As previously indicated, it must be understood that no one can predict, over a multi-year development period, what specific uses would be developed and at what levels. Therefore, the trip generation could vary significantly based upon the actual uses established at the site. For example, if a significant portion of the site is developed for warehouse uses, minimal traffic would result. Moreover, if a significant area was used as a solar field, virtually no traffic would result from that area. Accordingly, the maximum development limit will be a function of the actual trip generation associated with the uses developed. The Mitigation Phasing Section of this study provides the various levels of trip generation and the mitigation required to be in place for each level of trip generation.

The following is one example of a development mix possible that the roadway network could support when reasonable mitigation is considered:

Potential Program Mix for Full Build 2035 Mitigated Traffic Level:

- Office/Institutional Space 2,474,367 square feet
- Retail Uses - 667,340 square feet
- Industrial Park - 538,667 square feet
- Residential Condos - 300 units

Table 5 summarizes the Trip Generation for the above development mix.

Table 5 - Trip Generation – Full Build 2035 Mitigated Traffic levels

Project Component	Component Size	AM Peak Hour		PM Peak Hour		Saturday Midday	
OFFICE PARK ITE # 750 Park/Campus Like Development	**3,141,707 SF**	T=1.37(X)+124.36		T=1.22 (X)+95.83		Rate =	0.14
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		89%	11%	14%	86%	74%	26%
		3,941	487	550	3,379	326	114
		Total =	**4,428**	Total =	**3,929**	Total =	**440**
INDUSTRIAL PARK ITE # 130	**538,667 SF**	Rate =	0.82	Rate =	0.85	Rate =	0.35
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		82%	18%	21%	79%	32%	68%
		362	80	96	362	60	129
		Total =	**442**	Total =	**458**	Total =	**189**
RESIDENTIAL ITE # 230 Condos/Townhouses	**300 Units**	Rate =	0.44	Rate =	0.52	Rate =	0.47
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		17%	83%	67%	33%	54%	46%
		22	110	105	51	76	65
		Total =	**132**	Total =	**156**	Total =	**141**
TOTALS		**AM Peak Hour Trips**		**PM Peak Hour Trips**		**Saturday Midday Trips**	
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		4,325	677	751	3,792	462	308
		5,002		**4,543**		**770**	

Table 5 presents the peak hour trip generation which could be expected with the development of the trip-limited Full Build 2035 development mix above. As can be seen from Table 5, this mix would result in 5,002 trips (4,325 entering and 677 exiting) during the weekday a.m. peak hour, 4,543 trips (751 entering and 3,543 exiting) during the weekday p.m. peak hour and 770 trips (462 entering and 308 exiting) during the Saturday midday peak hour. The Saturday peak hour of site traffic is not the limiting case in developing a "ceiling" on trip generation. Rather it is the a.m. and p.m. peak commuting hours where the issue occurs.

It should be noted again that the exact mix of uses in Table 5 is not as important as the resulting trip generation that would enter and exit to the surrounding roadway network. Different mixes of uses at different sizes could be mitigated as long as the corresponding trip generation does not exceed the total trip levels in Table 5.

Trip Distribution and Assignment

The net trips generated by the proposed development were distributed to the adjacent roadways based on location of the access points, area demographics and the characteristics of the roadway system in the vicinity of the site. The trip distribution percentages depicted in Figure 9 were applied to the site-generated volumes and the resulting volumes were then assigned to the local roadway network.

The resulting Build 2025 site generated traffic volumes for the weekday a.m., p.m. and Saturday midday peak hours are presented in Figures 10, 11 and 12, respectively. To determine the 2025 Build traffic volumes, the trips generated by the site in 2025 were added to the No-Build traffic volumes at the key intersections. The resulting 2025 Build traffic volumes for the weekday a.m. peak, p.m. peak and Saturday midday peak hours are presented in Figures 13, 14 and 15, respectively.

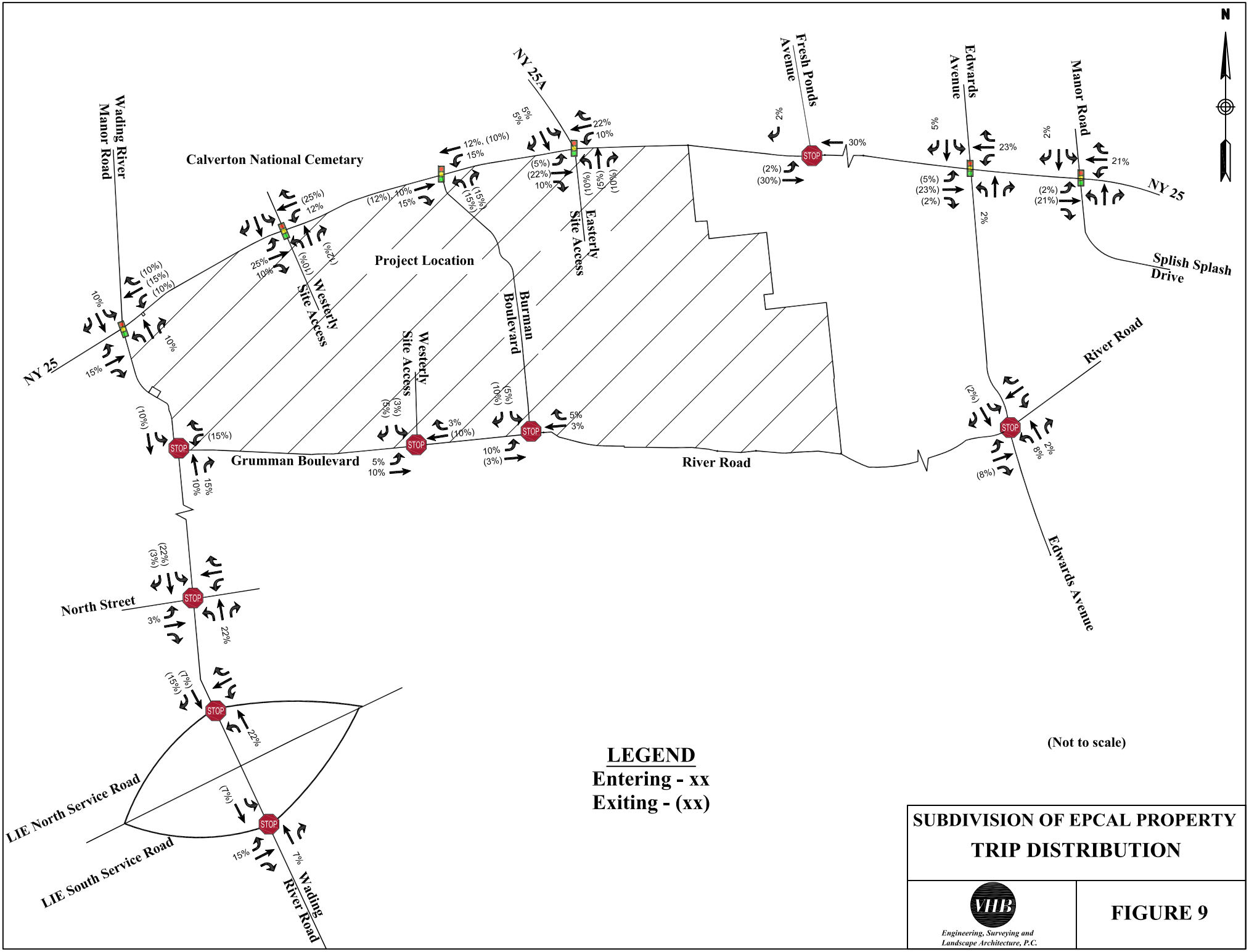
The 2035 site-generated traffic volumes were determined by applying the trip distribution percentages in Figure 9 to the trip generation presented in Table 5. The resulting site-generated traffic volumes for the weekday a.m., p.m. and Saturday midday peak hours are presented in Figures 16, 17 and 18, respectively. To determine the Full Build 2035 volumes, the 2035 site-generated volumes were then combined with the No-Build 2035 volumes. The resulting 2035 Build traffic volumes for the weekday a.m. peak, p.m. peak and Saturday midday peak hours are presented in Figures 19, 20 and 21, respectively.

New Site Access Points

The proposed Subdivision Map for the property includes the development of a number of new access points on Middle Country Road and Grumman Boulevard. Currently, Burman Boulevard extends from Grumman Boulevard to the south through the site to Middle Country Road on the north. The intersection of Burman Boulevard with Middle Country Road is signalized. This roadway provides access to the existing uses in the Calverton Camelot industrial subdivision and would also provide access to the future subdivided parcels.

Two additional access points are proposed on Middle Country Road. A westerly access would be located across from the Calverton National Cemetery access and would be signalized. A new easterly access would be located opposite the signalized intersection of NY 25A with Middle Country Road. This arrangement results in three signalized access points to the site on Middle Country Road.

On Grumman Boulevard a new unsignalized site access is proposed west of Burman Boulevard, at the entry to a new small subdivided area.



SUBDIVISION OF EPCAL PROPERTY

TRIP DISTRIBUTION

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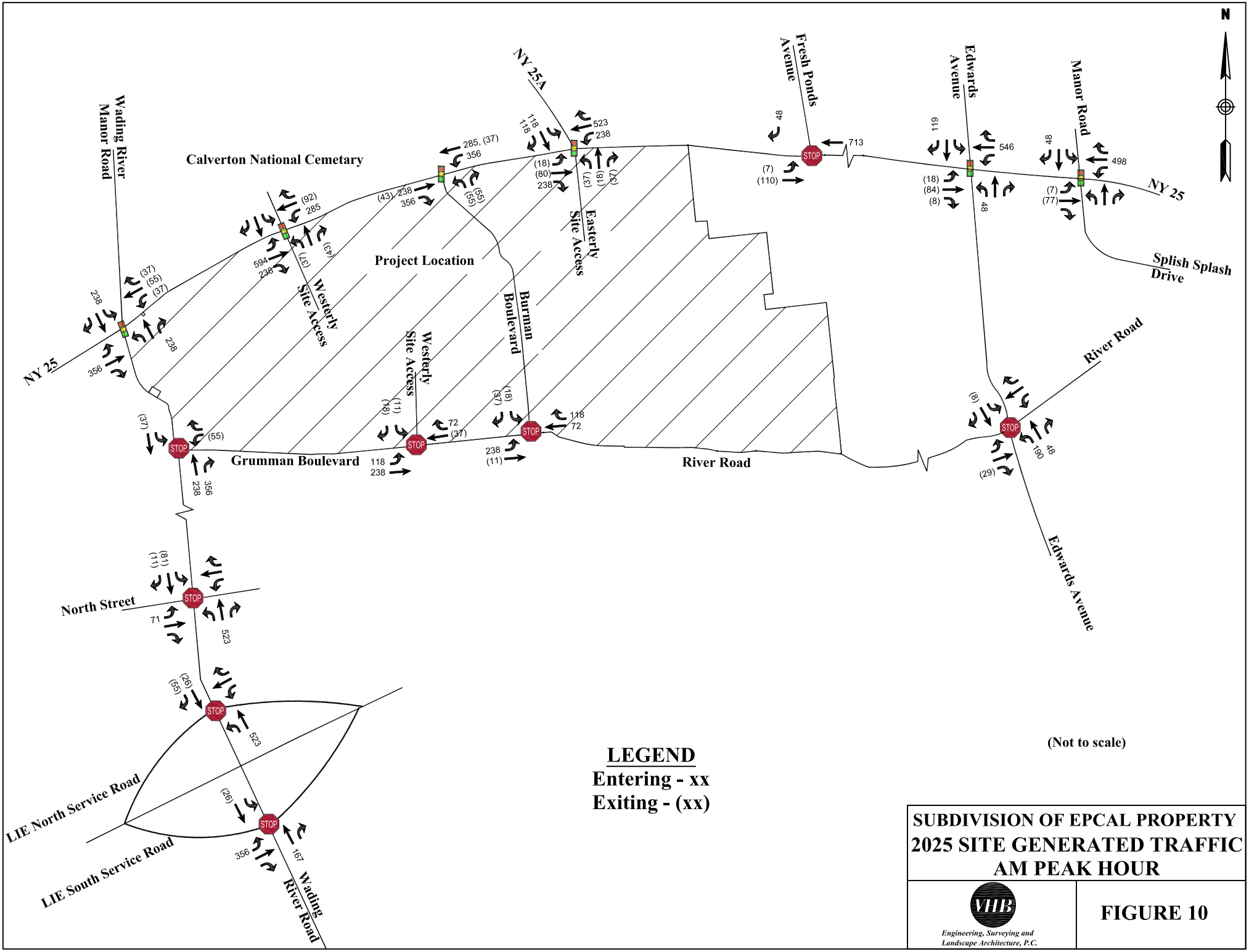
FIGURE 9



SUBDIVISION OF EPCAL PROPERTY
2025 SITE GENERATED TRAFFIC
AM PEAK HOUR

VHB
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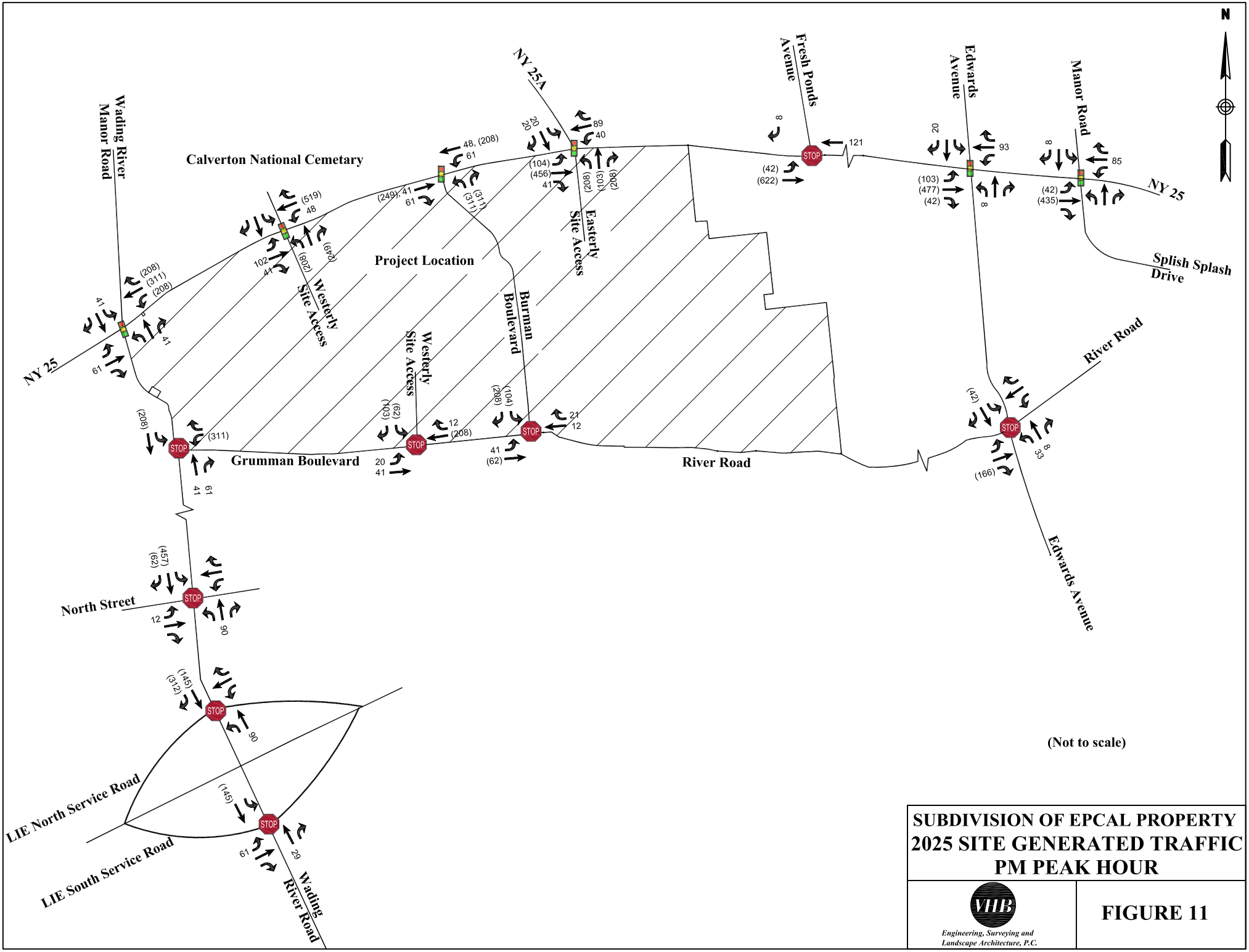
FIGURE 10



SUBDIVISION OF EPCAL PROPERTY
2025 SITE GENERATED TRAFFIC
PM PEAK HOUR

VHB
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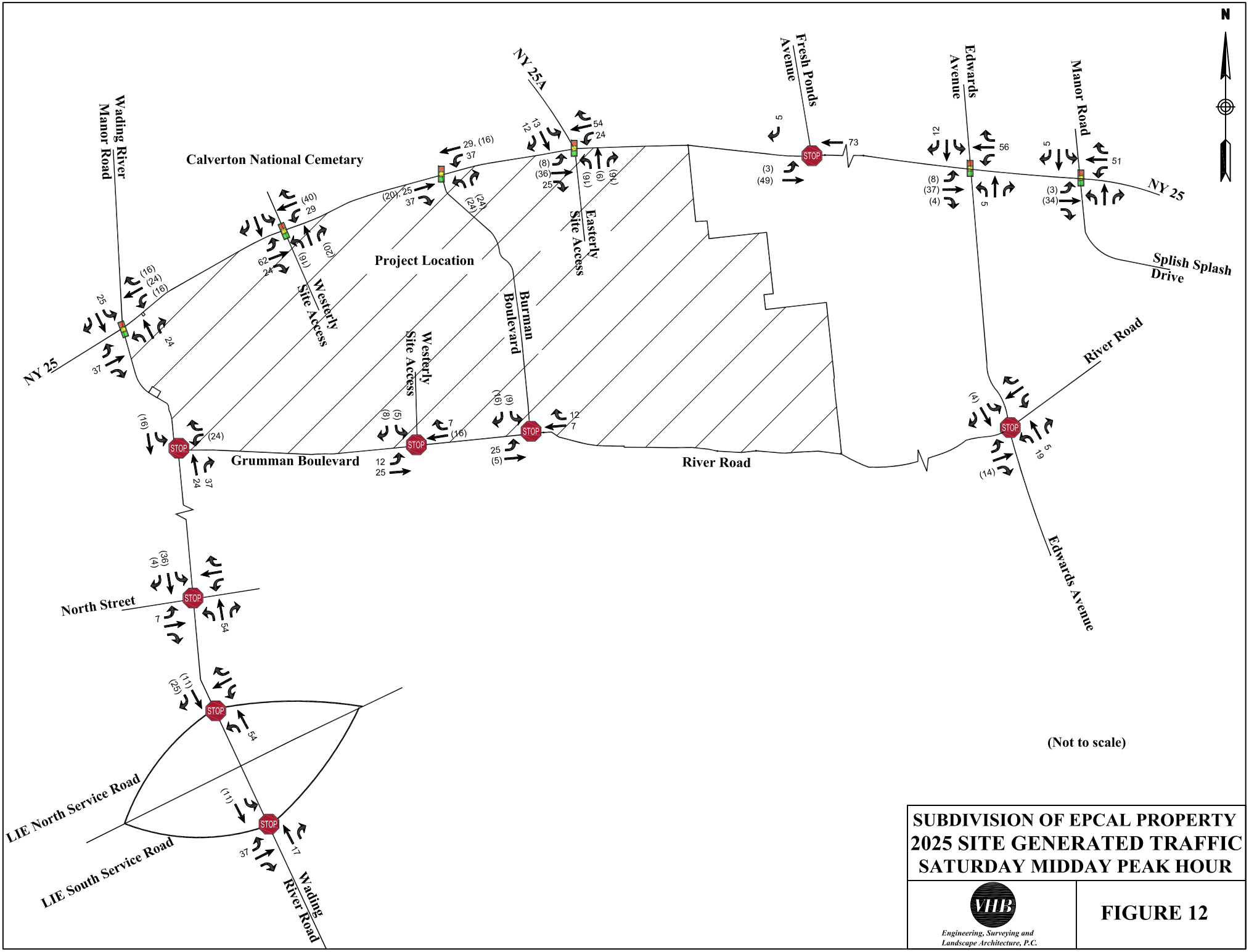
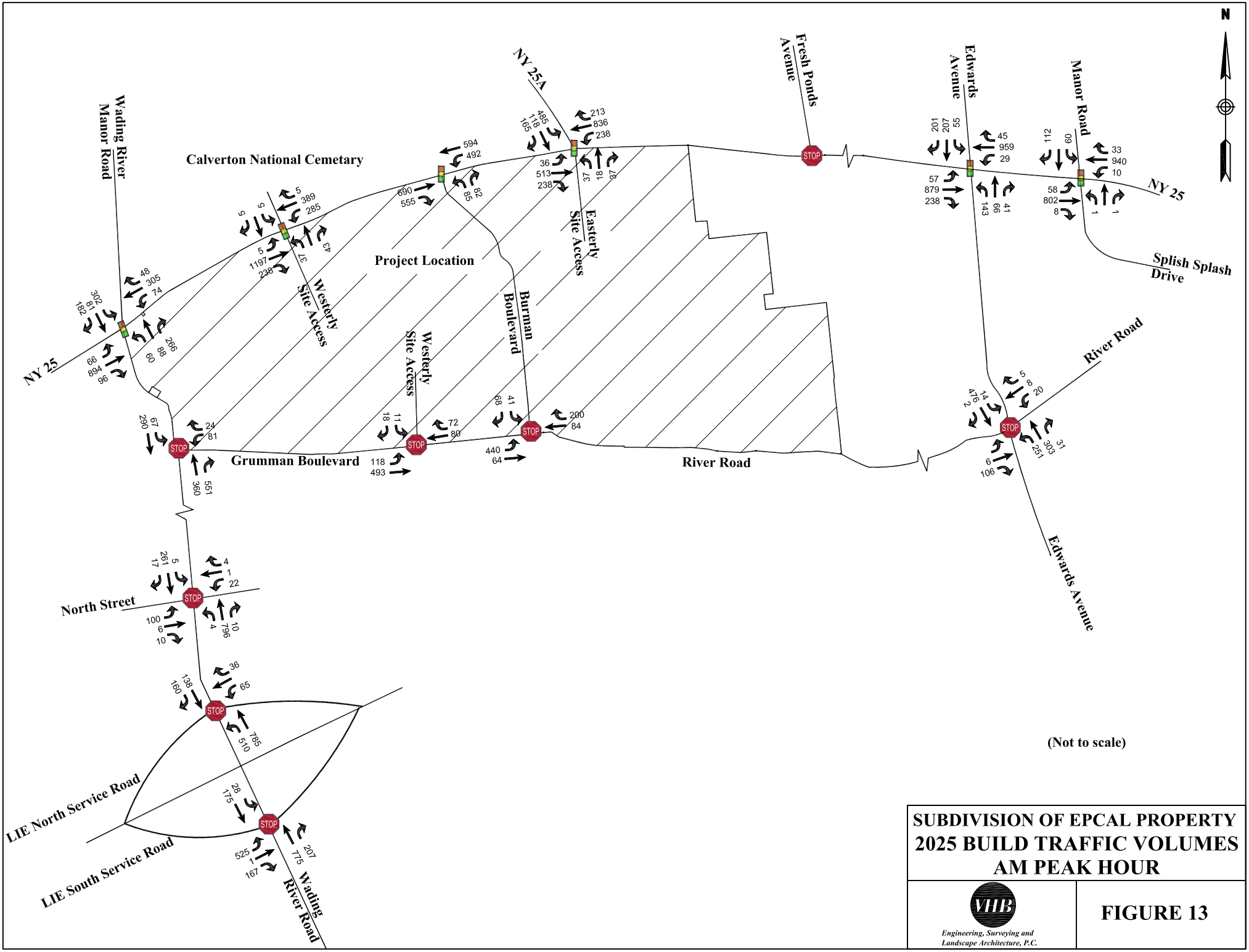
FIGURE 11



SUBDIVISION OF EPCAL PROPERTY
2025 SITE GENERATED TRAFFIC
SATURDAY MIDDAY PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

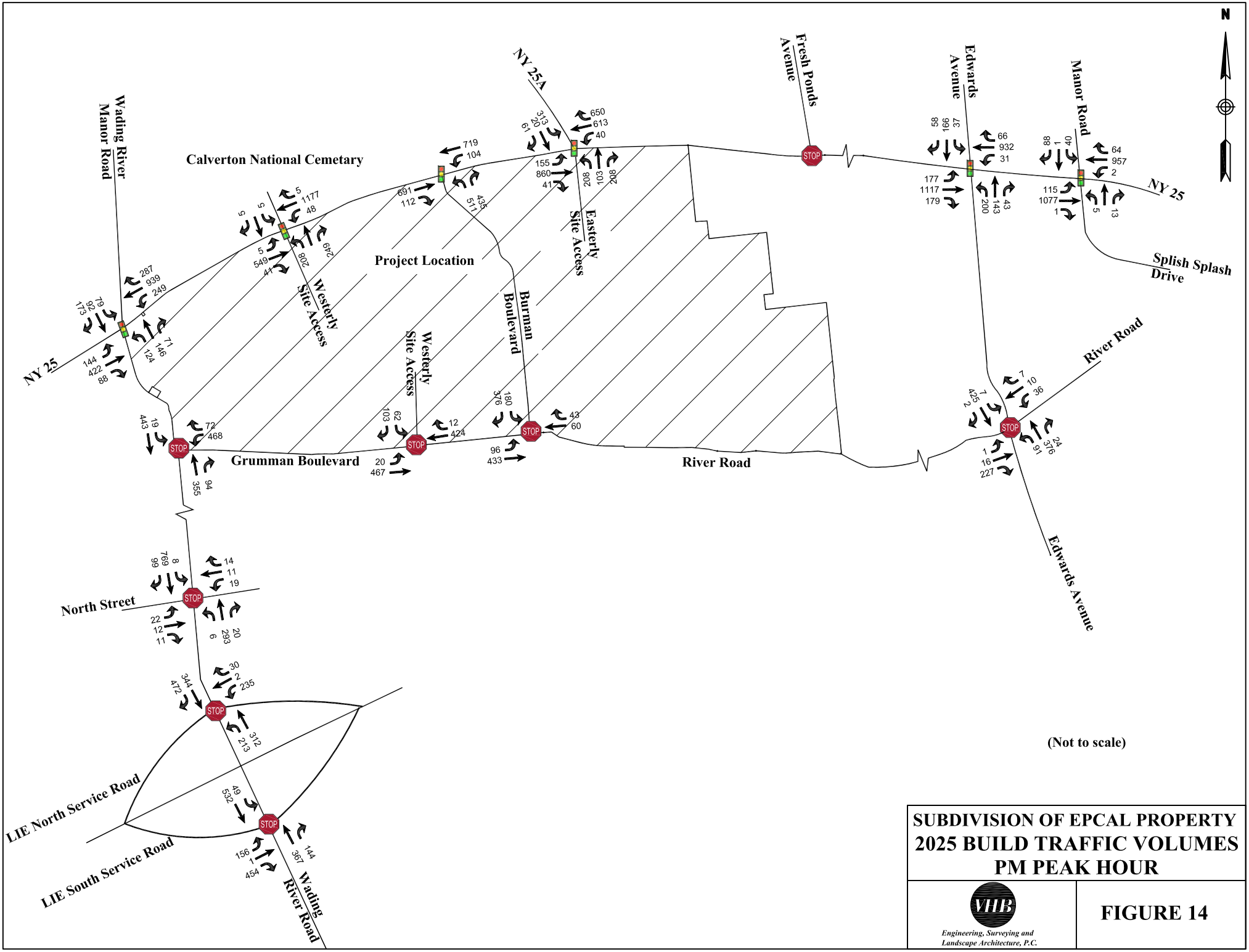
FIGURE 12



SUBDIVISION OF EPCAL PROPERTY
2025 BUILD TRAFFIC VOLUMES
AM PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

FIGURE 13



SUBDIVISION OF EPCAL PROPERTY

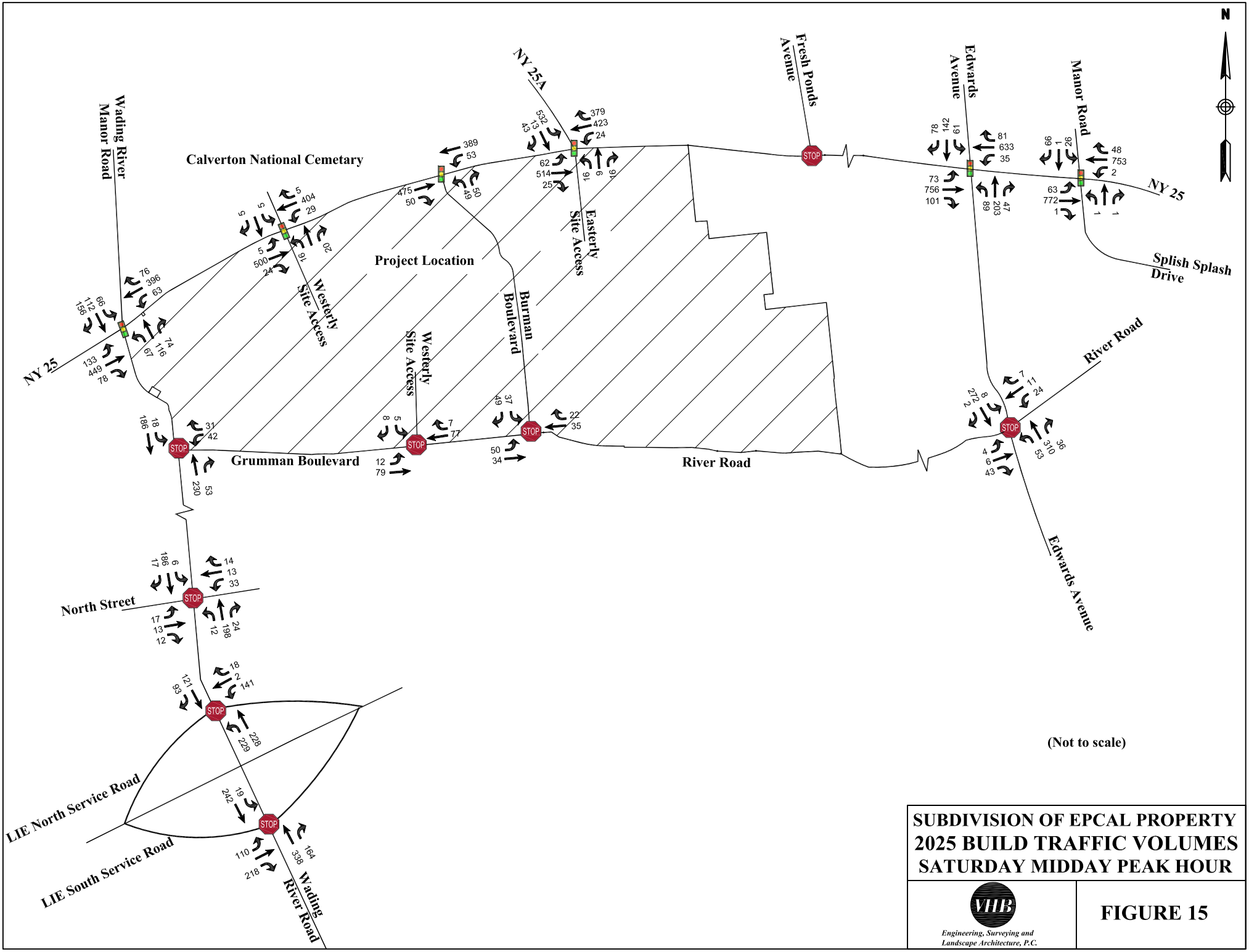
2025 BUILD TRAFFIC VOLUMES

PM PEAK HOUR

VHB

Engineering, Surveying and Landscape Architecture, P.C.

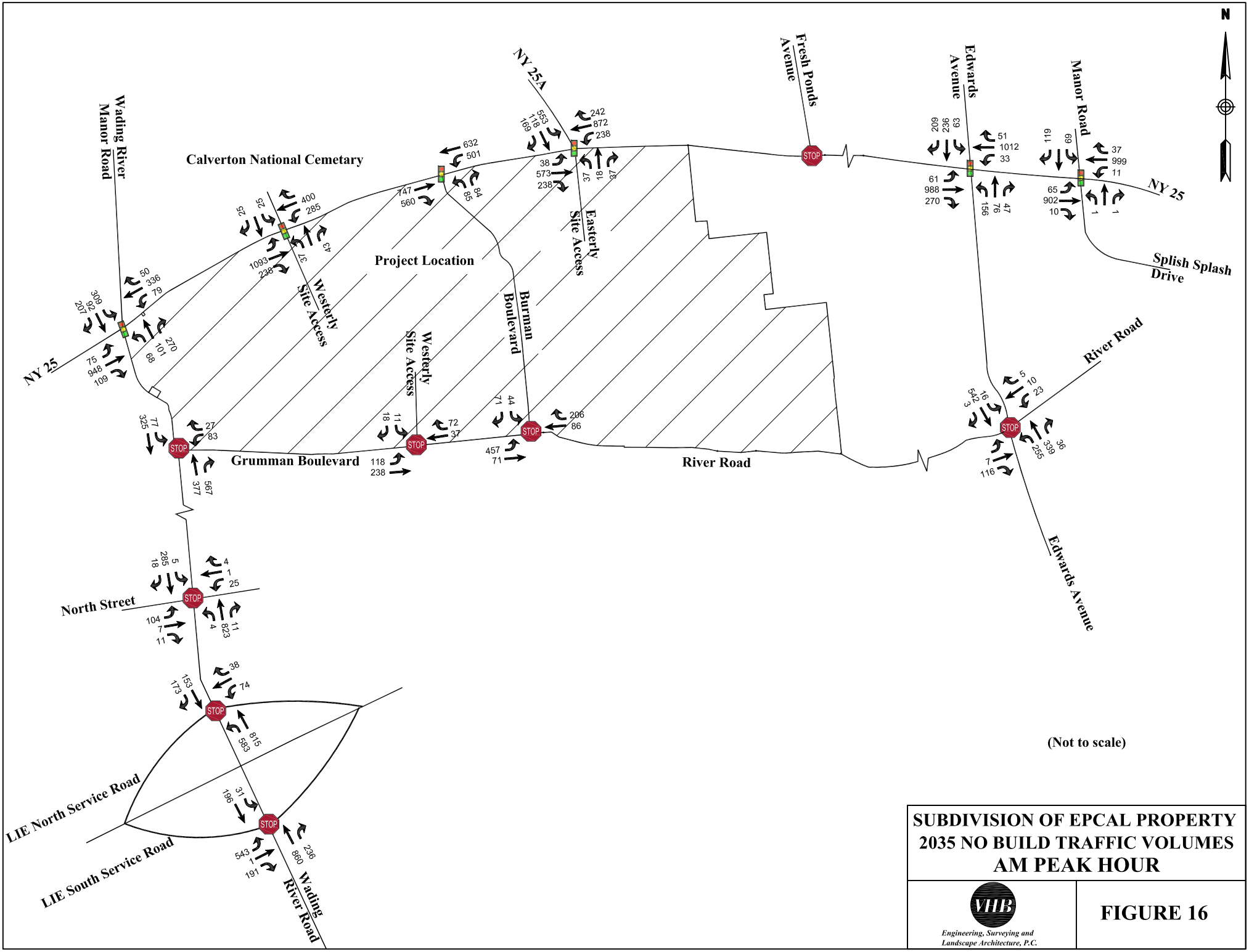
FIGURE 14



SUBDIVISION OF EPCAL PROPERTY
2025 BUILD TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

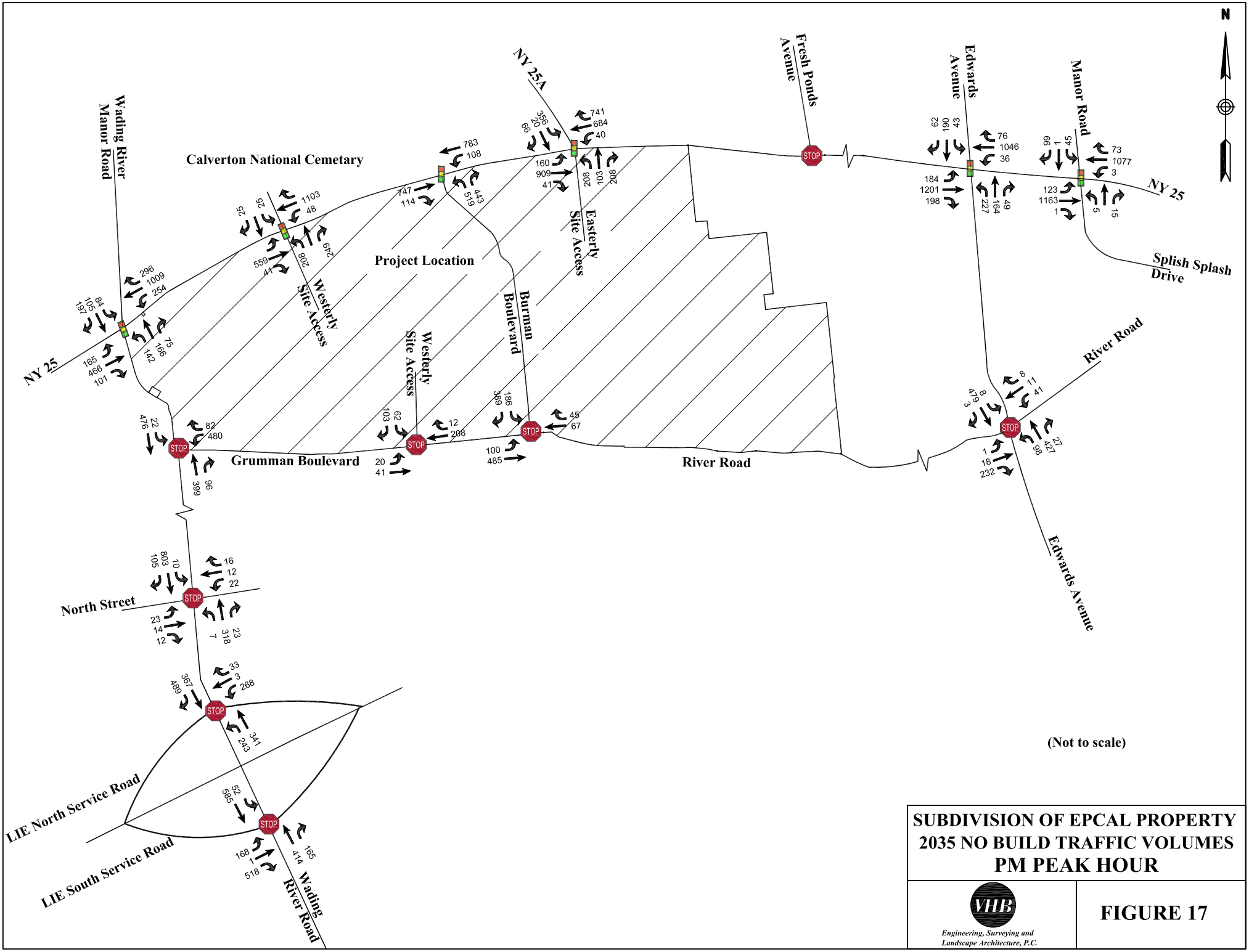
FIGURE 15



SUBDIVISION OF EPCAL PROPERTY
2035 NO BUILD TRAFFIC VOLUMES
AM PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

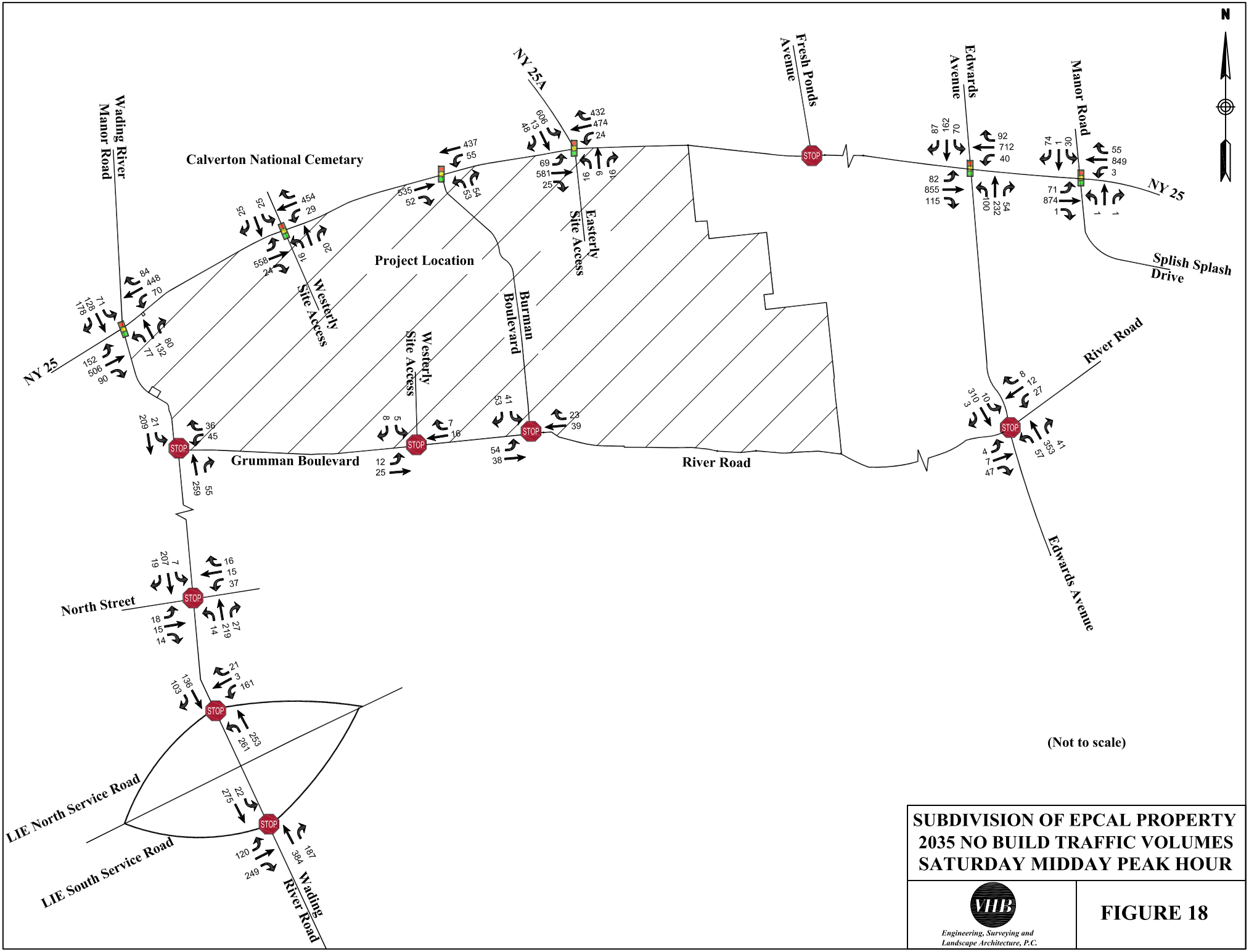
FIGURE 16



SUBDIVISION OF EPCAL PROPERTY
2035 NO BUILD TRAFFIC VOLUMES
PM PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

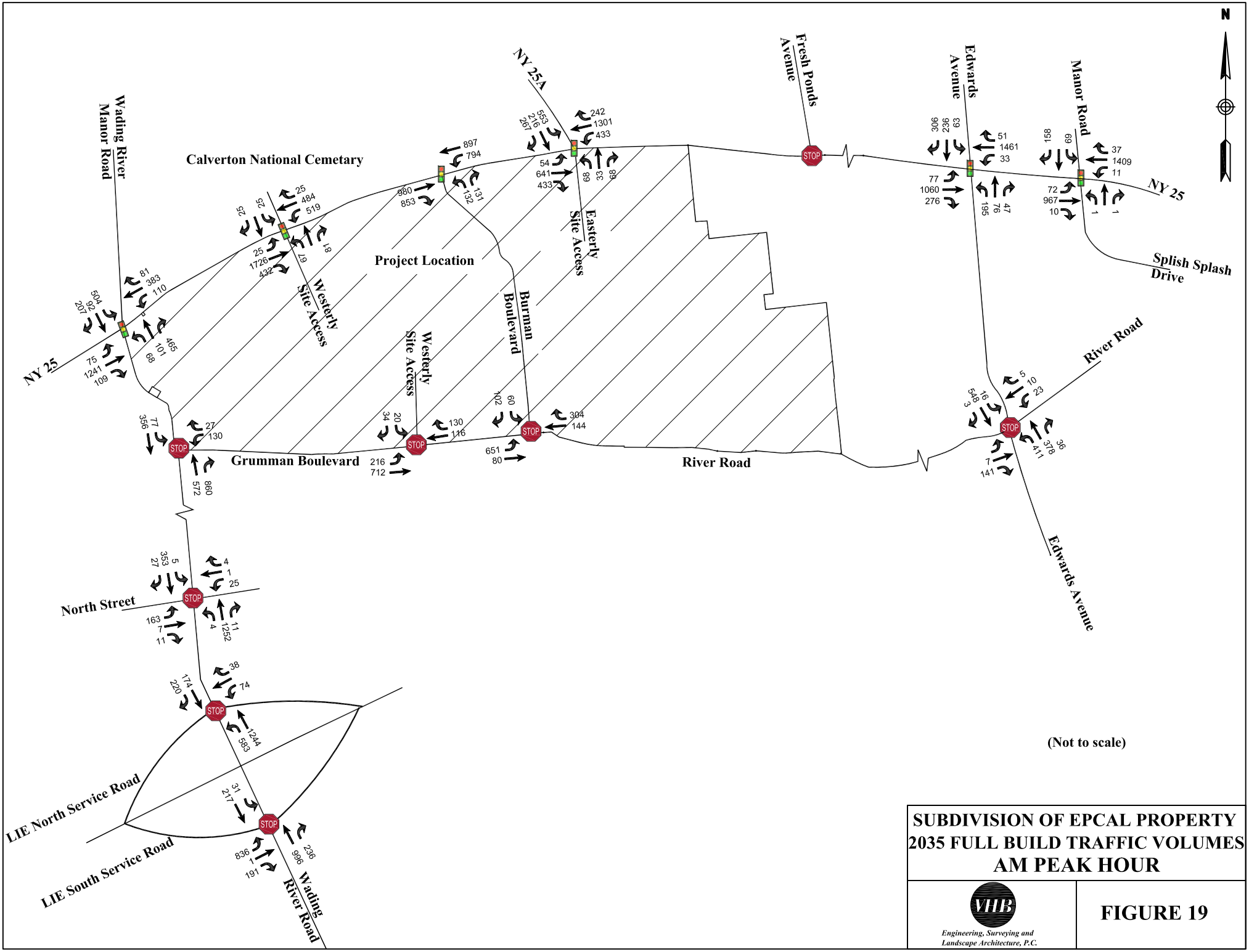
FIGURE 17



SUBDIVISION OF EPCAL PROPERTY
2035 NO BUILD TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

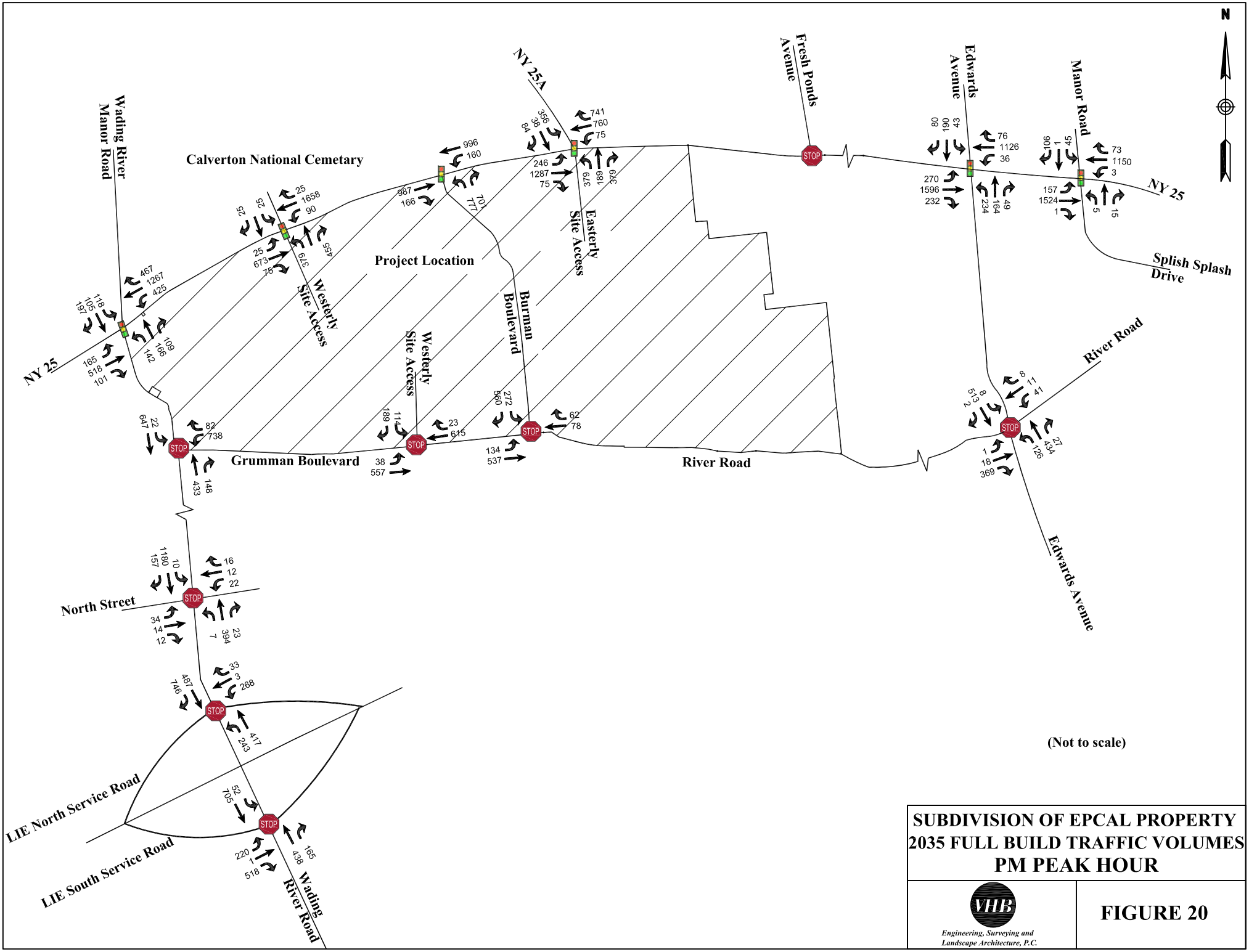
FIGURE 18



SUBDIVISION OF EPCAL PROPERTY
2035 FULL BUILD TRAFFIC VOLUMES
AM PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

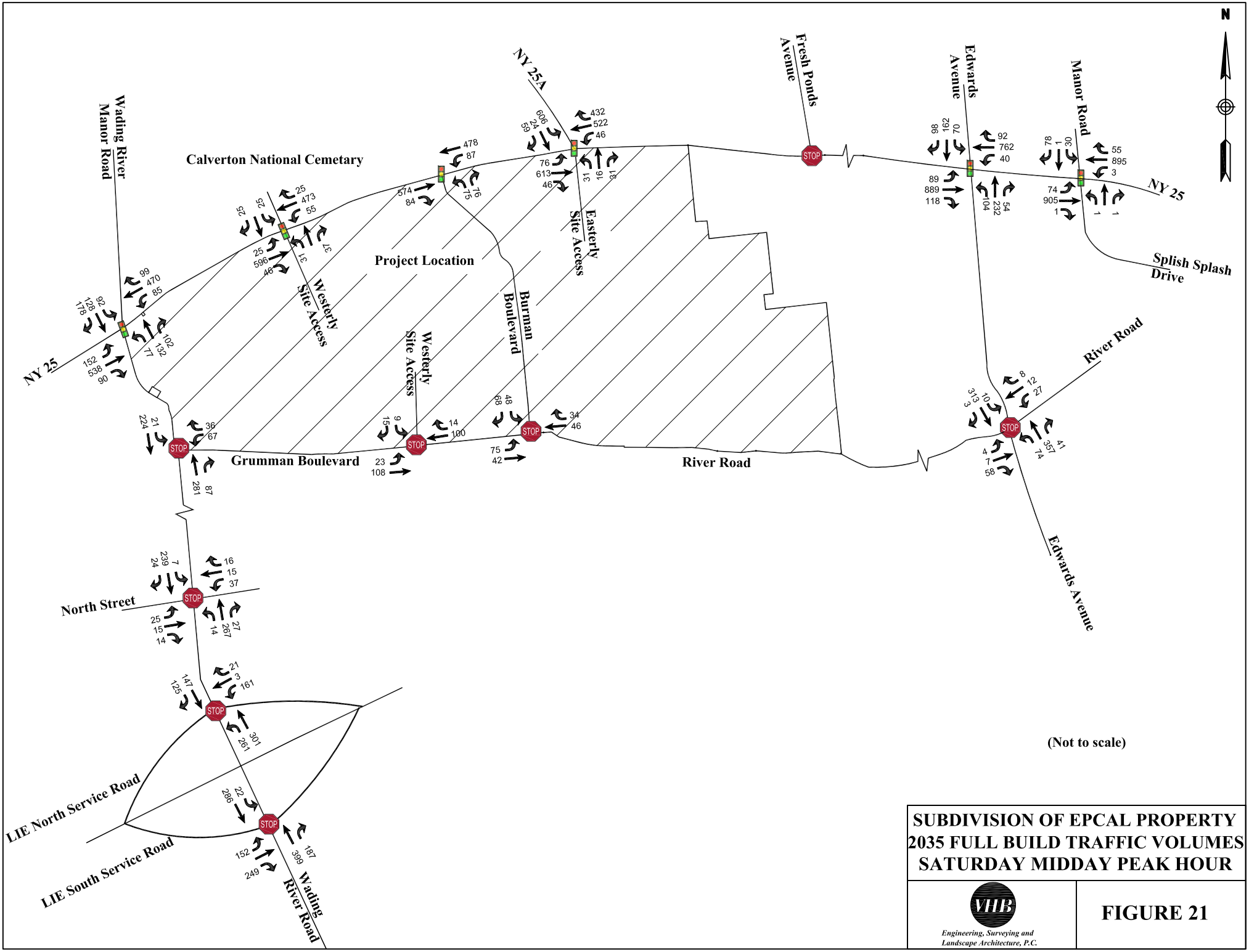
FIGURE 19



SUBDIVISION OF EPCAL PROPERTY
2035 FULL BUILD TRAFFIC VOLUMES
PM PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

FIGURE 20



SUBDIVISION OF EPCAL PROPERTY
2035 FULL BUILD TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

VHB
Engineering, Surveying and Landscape Architecture, P.C.

FIGURE 21

4.0 Traffic Operations Analysis

Measuring existing traffic volumes and projecting future traffic volumes enables traffic flow within the study area to be quantified. To assess the quality of traffic flow, roadway capacity analyses were conducted with respect to the Existing, No-Build and both Build conditions. These capacity analyses provide an indication of the adequacy of the roadway facilities to serve the anticipated traffic demands.

Level of Service and Delay Criteria

The evaluation criteria used to analyze area intersections in this traffic study are based on the 2000 and 2010 *Highway Capacity Manual* (HCM). The term" level of service" (LOS) is used to denote the different operating conditions that occur at an intersection under various traffic volume loads. It is a qualitative measure that considers a number of factors including roadway geometry, speed, travel delay and freedom to maneuver. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of Service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

In addition to LOS, vehicle delay time (expressed in seconds per vehicle) is typically used to quantify the traffic operations at intersections. For example, a delay of 15 seconds for a particular vehicular movement or approach indicates that vehicles on the movement or approach will experience an average additional travel time of 15 seconds. It should be noted that delay time has a range of values for a given LOS letter designation. Therefore, when evaluating intersection capacity results, in addition to the LOS, vehicle delay time should also be considered.

The Levels of Service designations, which are based on delay, are reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, however, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or side driveway.

It should be noted that the analytical methodologies typically used for the analysis of unsignalized intersections apply conservative parameters such as long critical gaps. Actual field observations indicate that drivers on minor streets generally accept shorter gaps in traffic than those used in the analysis procedures and therefore experience less delay than reported by the analysis software. The analysis methodologies also do not take into account the beneficial grouping effects caused by nearby signalized intersections. The net effect of these analysis procedures is the over-estimation of calculated delay at unsignalized intersections in the study area. Cautious judgment should therefore be exercised when interpreting the capacity analysis results at unsignalized intersections.

The LOS definitions for both the signalized and unsignalized intersections can be found in Attachment C of the report.

Software

The capacity analyses were done using the traffic analysis software Synchro, *version 8*, a computer program developed by Trafficware Ltd. Synchro is a complete software package for modeling and optimizing traffic signal timing. Synchro adheres to and implements the guidelines and methods set forth in the 2000 and 2010 *Highway Capacity Manual*. This analysis methodology was used to evaluate the ability of an intersection or roadway to efficiently handle the number of vehicles using the facility. Synchro was used to model and analyze the Existing, No-Build and both Build conditions at the key intersections.

Level of Service Analysis 2025

LOS analyses were conducted for the Existing, 2025 No-Build and 2025 Build conditions for each of the key intersections.

Analysis Results – Signalized Intersection

The results of the capacity analyses at six existing and proposed signalized study intersections, for the weekday a.m., p.m. and Saturday midday peak periods, are summarized in Tables 6, 7 and 8, respectively. Detailed capacity analysis worksheets are contained in Attachment D.

Table 6 – Signalized Intersection LOS – AM Peak Hour

Intersection	Movement	Lane Group	Existing 2013		No Build 2025		Build 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	7.5	A	7.1	A	7.5	A
		T	10.0	A	13.4	B	57.5	E
		R	2.4	A	1.9	A	2.2	A
		Approach	8.3	A	11.2	B	49.3	D
	WB	L	7.3	A	8.1	A	109.8	F
		T	8.0	A	7.8	A	8.6	A
		R	0.0	A	0.0	A	2.1	A
		Approach	7.7	A	7.6	A	25.4	C
	NB	LT	22.9	C	34.7	C	530.4	F
		R	4.5	A	6.4	A	33.8	C
		Approach	19.9	B	30.2	C	211.7	F
	SB	LT	20.4	C	32.4	C	287.6	F
		R	6.3	A	7.3	A	15.9	B
		Approach	12.0	B	18.5	B	200.2	F
	Overall		**10.5**	**B**	**14.0**	**B**	**103.0**	**F**
NY 25 & Calverton National Cemetery / West Site Access	EB	L					8.4	A
		T					102.1	F
		R					2.0	A
		Approach					85.2	F
	WB	L					103.1	F
		T					3.9	A
		R					0.0	A
		Approach					45.5	D
	NB	L					36.4	D
		T					29.0	C
		R					11.0	B
		Approach					22.8	C
	SB	L					34.2	C
		TR / R					23.2	C
		Approach					28.3	C
	Overall						**70.4**	**E**
NY 25 & Burman Boulevard	EB	T	5.2	A	9.4	A	18.5	B
		R	2.5	A	1.4	A	2.9	A
		Approach	5.1	A	6.8	A	11.5	B
	WB	L	5.4	A	10.6	B	1047.7	F
		T	4.9	A	8.3	A	17.6	B
		Approach	5.0	A	9.1	A	484.0	F
	NB	L	25.3	C	28.3	C	34.4	C
		R	12.4	B	9.9	A	7.9	A
		Approach	14.6	B	19.6	B	21.5	C
	Overall		**5.3**	**A**	**8.4**	**A**	**221.1**	**F**

Table 6 – Signalized Intersection LOS – AM Peak Hour … Continued 2 of 2

Intersection	Movement	Lane Group	Existing 2013		No Build 2025		Build 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & NY 25A / East Site Access	EB	LT / L	22.6	C	23.5	C	21.4	C
		T					124.6	F
		R					5.4	A
		Approach	22.6	C	23.5	C	83.8	F
	WB	L					244.4	F
		T	16.2	B	16.4	B	233.2	F
		R	0.2	A	0.2	A	3.6	A
		Approach	9.0	A	9.8	A	197.3	F
	NB	L					31.7	C
		T					35.4	D
		R					0.8	A
		Approach					20.1	C
	SB	L	25.2	C	45.4	D	76.3	E
		T					36.9	D
		R	6.7	A	6.8	A	7.8	A
		Approach	24.2	C	41.9	D	55.5	E
	Overall		**19.2**	**B**	**25.9**	**C**	**120.0**	**F**
NY 25 & Edwards Avenue	EB	LTR / L	41.6	D	10.6	B	15.4	B
		T			65.9	E	103.2	F
		R			17.8	B	18.0	B
		Approach	41.6	D	53.3	D	81.6	F
	WB	LT / L	11.6	B	16.3	B	16.5	B
		R / TR	3.4	A	17.0	B	28.1	C
		Approach	10.8	B	16.9	B	27.7	C
	NB	LTR / L	64.4	E	64.7	E	183.2	F
		TR			36.0	D	36.0	D
		Approach	64.4	E	49.5	D	120.4	F
	SB	LTR / L	62.0	E	24.4	C	24.4	C
		TR / T			78.4	E	208.5	F
		Approach	62.0	E	69.8	E	186.8	F
	Overall		**41.1**	**D**	**48.0**	**D**	**86.1**	**F**
NY 25 & Manor Road / Splish Splash Drive	EB	L	8.0	A	7.6	A	13.6	B
		TR	13.3	B	15.8	B	19.2	B
		Approach	13.0	B	15.2	B	18.8	B
	WB	L	4.4	A	4.2	A	4.6	A
		T	7.2	A	7.2	A	23.6	C
		R / TR	2.2	A	1.9	A	2.6	A
		Approach	6.8	A	6.8	A	22.7	C
	NB	LT	23.5	C	29.0	C	30.0	C
		R	24.0	C	29.0	C	30.0	C
		Approach	23.7	C	29.0	C	30.0	C
	SB	LTR	21.0	C	31.4	C	34.3	C
		Approach	21.0	C	31.4	C	34.3	C
	Overall		**11.7**	**B**	**14.0**	**B**	**22.0**	**C**

Table 7 – Signalized Intersection LOS – PM Peak Hour

Intersection	Movement	Lane Group	Existing 2013		No Build 2025		Build 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	12.1	B	24.4	C	402.6	F
		T	10.1	B	10.2	B	9.6	A
		R	2.8	A	2.0	A	1.7	A
		Approach	9.4	A	12.4	B	95.2	F
	WB	L	8.4	A	7.6	A	14.6	B
		T	12.2	B	15.4	B	28.6	C
		R	3.0	A	2.1	A	1.8	A
		Approach	11.0	B	13.6	B	21.0	C
	NB	LT	25.2	C	41.7	D	68.9	E
		R	3.6	A	6.4	A	7.9	A
		Approach	23.2	C	38.1	D	56.2	E
	SB	LT	18.2	B	27.4	C	69.3	E
		R	5.4	A	6.4	A	15.4	B
		Approach	10.8	B	15.4	B	42.3	D
	Overall		**12.4**	**B**	**17.1**	**B**	**45.3**	**D**
NY 25 & Calverton National Cemetery / West Site Access	EB	L					10.0	A
		T					12.4	B
		R					0.1	A
		Approach					11.5	B
	WB	L					37.4	D
		T					36.0	D
		R					0.0	A
		Approach					35.9	D
	NB	L					55.9	E
		T					26.0	C
		R					12.6	B
		Approach					32.3	C
	SB	L					32.4	C
		TR / R					22.3	C
		Approach					27.0	C
	Overall						**28.8**	**C**
NY 25 & Burman Boulevard	EB	T	8.3	A	12.3	B	26.1	C
		R	3.7	A	2.7	A	2.9	A
		Approach	8.2	A	11.2	B	22.9	C
	WB	L	7.0	A	9.7	A	108.2	F
		T	8.8	A	13.3	B	26.9	C
		Approach	8.7	A	13.0	B	37.2	D
	NB	L	28.3	C	41.0	D	307.8	F
		R	7.5	A	5.4	A	110.9	F
		Approach	17.5	B	27.4	C	217.2	F
	Overall		**9.9**	**A**	**16.9**	**B**	**112.2**	**F**

Table 7 – Signalized Intersection LOS – PM Peak Hour … Continued 2 of 2

Intersection	Movement	Lane Group	Existing 2013		No Build 2025		Build 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & NY 25A / East Site Access	EB	LT / L	14.2	B	21.3	C	223.2	F
		T					349.5	F
		R					0.2	A
		Approach	14.2	B	21.3	C	319.3	F
	WB	L					20.2	C
		T	13.8	B	15.5	B	115.7	F
		R	0.6	A	0.8	A	7.5	A
		Approach	6.4	A	7.4	A	58.8	E
	NB	L					32.4	C
		T					43.0	D
		R					16.5	B
		Approach					28.2	C
	SB	L	28.7	C	37.1	D	27.4	C
		T					30.8	C
		R	9.1	A	8.6	A	0.7	A
		Approach	26.6	C	33.8	C	23.4	C
	Overall		**11.9**	**B**	**15.7**	**B**	**144.6**	**F**
NY 25 & Edwards Avenue	EB	LTR / L	103.4	F	14.7	B	76.7	E
		T			38.8	D	284.5	F
		R			17.5	B	18.5	B
		Approach	103.4	F	33.2	C	227.2	F
	WB	LT / L	22.8	C	13.1	B	13.5	B
		R / TR	4.4	A	23.1	C	29.6	C
		Approach	21.5	C	22.7	C	29.2	C
	NB	LTR / L	94.8	F	44.3	D	48.9	D
		TR			38.9	D	37.7	D
		Approach	94.8	F	41.6	D	43.5	D
	SB	LTR / L	36.2	D	23.1	C	22.5	C
		TR / T			51.2	D	52.3	D
		Approach	36.2	D	46.8	D	48.0	D
	Overall		**64.2**	**E**	**31.8**	**C**	**131.4**	**F**
NY 25 & Manor Road/Splish Splash Drive	EB	L	8.9	A	12.6	B	18.9	B
		TR	11.5	B	13.9	B	60.0	E
		Approach	11.2	B	13.8	B	56.0	E
	WB	L	3.5	A	3.5	A	3.0	A
		T	10.2	B	14.3	B	12.4	B
		R / TR	2.5	A	2.4	A	2.2	A
		Approach	9.6	A	13.5	B	11.7	B
	NB	LT	21.2	C	28.2	C	33.2	C
		R	21.2	C	28.6	C	33.7	C
		Approach	21.2	C	28.5	C	33.5	C
	SB	LTR	13.1	B	19.3	B	24.0	C
		Approach	13.1	B	19.3	B	24.0	C
	Overall		**10.7**	**B**	**14.2**	**B**	**36.7**	**D**

Table 8 - Signalized Intersection LOS – Saturday Midday Peak Hour

Intersection	Movement	Lane Group	Existing 2013		No Build 2025		Build 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	9.5	A	11.7	B	12.3	B
		T	9.8	A	10.9	B	11.5	B
		R	2.8	A	2.6	A	2.4	A
		Approach	8.8	A	10.0	B	10.6	B
	WB	L	7.8	A	8.5	A	9.3	A
		T	10.2	B	11.6	B	12.0	B
		R	2.8	A	2.6	A	2.3	A
		Approach	9.0	A	10.1	B	10.3	B
	NB	LT	21.9	C	25.8	C	27.0	C
		R	6.8	A	7.0	A	6.8	A
		Approach	18.7	B	21.8	C	21.2	C
	SB	LT	19.9	B	23.0	C	27.4	C
		R	5.8	A	5.9	A	6.1	A
		Approach	12.7	B	14.4	B	17.5	B
	Overall		**11.0**	**B**	**12.5**	**B**	**13.3**	**B**
NY 25 & Calverton National Cemetery / West Site Access	EB	L					6.0	A
		T					6.1	A
		R					0.0	A
		Approach					5.8	A
	WB	L					34.8	C
		T					2.5	A
		R					0.0	A
		Approach					4.6	A
	NB	L					33.9	C
		T					26.0	C
		R					6.5	A
		Approach					19.0	B
	SB	L					32.0	C
		TR / R					21.8	C
		Approach					26.5	C
	Overall						**6.0**	**A**
NY 25 & Burman Boulevard	EB	T	6.8	A	8.8	A	9.3	A
		R	3.5	A	3.2	A	2.1	A
		Approach	6.7	A	8.7	A	8.6	A
	WB	L	6.7	A	6.9	A	7.8	A
		T	6.5	A	8.3	A	8.8	A
		Approach	6.5	A	8.3	A	8.7	A
	NB	L	26.6	C	27.4	C	28.7	C
		R	10.0	B	9.5	A	8.0	A
		Approach	18.1	B	18.3	B	18.3	B
	Overall		**7.6**	**A**	**9.3**	**A**	**9.8**	**A**

Table 8 – Signalized Intersection LOS – Saturday Midday Peak Hour
Continued 2 of 2

Intersection	Movement	Lane Group	Existing 2013		No Build 2025		Build 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & NY 25A	EB	LT / L	22.5	C	23.9	C	14.5	B
		T					27.9	C
		R					0.1	A
		Approach	22.5	C	23.9	C	25.3	C
	WB	L					13.1	B
		T	17.4	B	17.0	B	29.8	C
		R	0.3	A	0.4	A	1.5	A
		Approach	8.7	A	8.6	A	16.3	B
	NB	L					35.8	D
		T					35.4	D
		R					0.2	A
		Approach					22.0	C
	SB	L	25.9	C	44.9	D	118.4	F
		T					20.2	C
		R	7.1	A	8.1	A	0.2	A
		Approach	24.8	C	42.9	D	107.7	F
	Overall		17.6	B	23.5	C	45.4	D
NY 25 & Edwards Avenue	EB	LTR / L	19.6	B	10.0	A	10.3	B
		T			30.5	C	33.9	C
		R			14.4	B	14.4	B
		Approach	19.6	B	27.2	C	30.0	C
	WB	LT / L	11.5	B	10.8	B	11.5	B
		R / TR	4.3	A	16.0	B	16.6	B
		Approach	10.6	B	15.8	B	16.3	B
	NB	LTR / L	44.3	D	28.8	C	30.8	C
		TR			61.0	E	61.0	E
		Approach	44.3	D	52.9	D	53.1	D
	SB	LTR / L	48.1	D	26.6	C	26.6	C
		TR / T			45.6	D	48.0	D
		R						
		Approach	48.1	D	41.3	D	43.4	D
	Overall		24.9	C	29.8	C	31.1	C
NY 25 & Manor Road / Splish Splash Drive	EB	L	8.1	A	7.5	A	7.7	A
		TR	11.7	B	13.2	B	12.8	B
		Approach	11.5	B	12.8	B	12.5	B
	WB	L	3.5	A	3.0	A	3.0	A
		T	8.5	A	9.8	A	9.8	A
		R / TR	2.2	A	2.1	A	2.1	A
		Approach	8.1	A	9.3	A	9.3	A
	NB	LT	20.5	C	27.5	C	28.5	C
		R	21.0	C	28.0	C	29.0	C
		Approach	20.7	C	27.7	C	28.7	C
	SB	LTR	12.5	B	16.7	B	17.3	B
		Approach	12.5	B	16.7	B	17.3	B
	Overall		10.0	B	11.5	B	11.4	B

Tables 6, 7 and 8 reveal that of the six signalized intersections, only Middle Country Road and Manor Road/Splish Splash Drive is operating satisfactorily with an overall LOS D or better in the Build 2025 condition. The others were found to be operating poorly during one or more of the time periods analyzed. The five poorly performing intersections were re-analyzed with capacity and signal timing improvements. The results of the analysis with mitigation are presented in a subsequent section of this report.

Analysis Results – Unsignalized Intersection

The results of the capacity analyses for the six existing unsignalized study intersections; Edwards Avenue and River Road, Grumman Boulevard and Burman Boulevard, Wading River Road and Grumman Boulevard, Wading River Road and North Street, Wading River Road and the LIE North Service Road, Wading River Road and the LIE South Service Road and the new created Grumman Boulevard and West Site Access, for weekday a.m., p.m. and Saturday midday peak periods, are summarized in Tables 9, 10 and 11, respectively. Detailed capacity analysis worksheets are contained in Attachment D.

Table 9 - Unsignalized Intersection LOS – AM Peak Hour

Intersection	Critical Approach/ Movement	Existing 2013		No Build 2025		Build 2025	
		Delay	LOS	Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	12.4	B	14.3	B	18.6	C
	WB	19.4	C	32.6	D	278.9	F
	NB L	8.4	A	8.9	A	10.4	B
Grumman Boulevard & Burman Boulevard	SB	10.2	B	12.5	B	75.2	F
	EB L	7.5	A	7.9	A	10.1	B
Wading River Manor Road & Grumman Boulevard	WB L	11.0	B	11.9	B	19.7	C
	WB R	9.1	A	9.3	A	11.3	B
Wading River Road & North Street (All-way Stop)	EB	8.7	A	9.3	A	13.1	B
	WB	8.3	A	8.9	A	10.8	B
	NB	8.8	A	10.8	B	56.6	F
	SB	8.6	A	9.5	A	14.2	B
	Overall	8.7	A	10.1	B	47.1	E
Wading River Road & LIE North Service Road	WB	37.4	E	78.0	F	299.0	F
	NB L	8.6	A	9.2	A	9.3	A
Wading River Road & LIE South Service Road	EB	12.4	B	17.2	C	354.8	F
	SB L	8.7	A	9.2	A	10.0	B
Grumman Boulevard & West Site Access	EB L					7.8	A
	SB					13.1	B

Table 10 - Unsignalized Intersection LOS – PM Peak Hour

Intersection	Critical Approach/ Movement	Existing 2013		No Build 2025		Build 2025	
		Delay	LOS	Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	13.3	B	14.4	B	20.0	C
	WB	21.7	C	37.3	E	201.7	F
	NB L	8.2	A	8.5	A	9.0	A
Grumman Boulevard & Burman Boulevard	SB	10.9	B	15.3	C	213.2	F
	EB L	7.4	A	7.5	A	7.7	A
Wading River Manor Road & Grumman Boulevard	WB L	13.4	B	19.2	C	470.8	F
	WB R	10.3	B	10.9	B	11.3	B
Wading River Road & North Street (All-way Stop)	EB	8.4	A	9.0	A	10.6	B
	WB	8.4	A	9.1	A	10.6	B
	NB	8.6	A	9.7	A	13.0	B
	SB	9.3	A	11.7	B	54.2	F
	Overall	8.9	A	10.7	B	40.8	E
Wading River Road & LIE North Service Road	WB	24.5	C	56.5	F	126.5	F
	NB L	8.0	A	8.3	A	9.0	A
Wading River Road & LIE South Service Road	EB	19.0	C	35.7	E	83.1	F
	SB L	7.9	A	8.2	A	8.2	A
Grumman Boulevard & West Site Access	EB L					8.5	A
	SB					17.2	C

Table 11 – Unsignalized Intersection LOS – Saturday Midday Peak Hour

Intersection	Critical Approach/ Movement	Existing 2013		No Build 2025		Build 2025	
		Delay	LOS	Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	11.0	B	11.8	B	11.8	B
	WB	14.7	B	17.6	C	19.2	C
	NB L	7.8	A	8.0	A	8.1	A
Grumman Boulevard & Burman Boulevard	SB	9.2	A	9.4	A	10.0	B
	EB L	7.3	A	7.4	A	7.5	A
Wading River Manor Road & Grumman Boulevard	WB L	10.8	B	11.4	B	12.2	B
	WB R	9.4	A	9.6	A	9.8	A
Wading River Road & North Street (All-way Stop)	EB	8.2	A	8.5	A	9.1	A
	WB	8.3	A	8.7	A	9.1	A
	NB	8.5	A	9.1	A	10.1	B
	SB	8.5	A	9.1	A	9.9	A
	Overall	8.4	A	9.0	A	9.8	A
Wading River Road & LIE North Service Road	WB	20.4	C	32.1	D	38.1	E
	NB L	7.9	A	8.1	A	8.1	A
Wading River Road & LIE South Service Road	EB	11.2	B	12.3	B	12.9	B
	SB L	8.0	A	8.1	A	8.2	A
Grumman Boulevard & West Site Access	SB					9.1	A
	EB L					7.4	A

Tables 9, 10 and 11 reveal that during the Build 2025 condition only the newly- created site access operates satisfactorily with an overall LOS C or better. The other intersections were found to be operating poorly during one or more of the time periods analyzed. Therefore, the six unsignalized study intersections, Edwards Avenue and River Road, Grumman Boulevard and Burman Boulevard, Wading River Road and Grumman Boulevard, Wading River Road and North Street, Wading River Road and LIE North Service Road, Wading River Road and LIE South Service Road, were re-analyzed with capacity mitigation and/or signalization and the results are presented in the next section of this report.

Mitigation 2025

The analysis of 2025 Build conditions discussed above reveals that mitigation is necessary at various key intersections to restore good levels of traffic service. The future roadway conditions were simulated and the roadway segments/study intersections that require mitigation were identified. These measures of mitigation are necessary to ensure that the roadway network operates well with the volumes anticipated during the Build 2025 condition as a result of increases due to the proposed project, other developments and normal background growth. The identified mitigation includes roadway widening to increase capacity as well as changes to traffic control. The analysis performed with mitigation is detailed in this section of the report.

The mitigation measures utilized at each location are described in Table 12. In addition, the proposed layout of the site access intersections are also included in the table.

Table 12 - Table of Mitigation 2025… 1 of 4

Location		Capacity Improvements		Signal Improvements	
		Existing Conditions	**Proposed in 2025**	**Existing Conditions**	**Proposed in 2025**
1	**NY 25 & Wading River Manor Road**	Eastbound – One exclusive left turn lane, one through lane and shoulder being used as a right turn lane Westbound – One exclusive left turn lane, one through lane and shoulder being used as a right turn lane Northbound - One shared left turn and through lane and one exclusive right turn lane Southbound - One shared left turn and through lane and one exclusive right turn lane	Eastbound – One exclusive left turn lane, two through lanes and one exclusive right turn lane Westbound – One exclusive left turn lane, two through lanes and one exclusive right turn lane Northbound - One exclusive left turn lane, one through lane and one exclusive right turn lane Southbound - One exclusive left turn lane, one through lane and one exclusive right turn lane	Two-phase semi-actuated signal with permitted left turns 80 Second cycle all time periods	Multi-phase Actuated-Coordinated signal East-West left turns fully protected North-South left turns protected/permitted AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals
2	**NY 25 & Burman Boulevard (Site Access)**	Eastbound – One through lane and one exclusive right turn lane Westbound – One exclusive left turn lane and one through lane Northbound - One exclusive left turn lane and one exclusive right turn lane	Eastbound – Two through lanes and one exclusive right turn lane Westbound – Two exclusive left turn lanes and two through lanes Northbound - Two exclusive left turn lanes and two exclusive right turn lanes	Two-phase semi-actuated signal with permitted left turns 95 Second cycle all time periods	Multi-phase Actuated-Coordinated signal Westbound Lefts turns fully protected EB right turn overlaps NBL NB right turn overlaps WBL AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals
3	**NY 25 & NY 25A / East Site Access**	Eastbound – One shared left turn and through lane Westbound – One through lane and one channelized right turn lane Southbound - One exclusive left turn lane and one channelized right turn lane	Eastbound – One exclusive left turn lane, two through lanes and one exclusive right turn lane Westbound - Two exclusive left turn lanes, two through lanes and one channelized right turn lane Northbound - Two exclusive left turn lanes, one through and one exclusive right turn lane Southbound - Two exclusive left turn lanes, one through and one channelized right turn lane	Two-phase semi-actuated signal with permitted left turns 95 Second cycle all time periods	Multi-phase Actuated-Coordinated signal Westbound Lefts turns fully protected Northbound Lefts turns fully protected Other left turns protected/permitted WB right turn overlaps SBL NB right turn overlaps WBL AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals

Table 12 – Table of Mitigation 2025… Continued 2 of 4

Location		Capacity		Signal Improvements	
		Existing Conditions	**Proposed in 2025**	**Existing Conditions**	**Proposed in 2025**
4	**NY 25 & Edwards Avenue**	Eastbound – Single shared left turn/ through and right turn lane Westbound – Single shared left turn/ through and right turn lane (shoulder being used to go around turning vehicles and to make a right turn) Northbound - Single shared left turn/ through and right turn lane Southbound - Single shared left turn/ through and right turn lane	Eastbound – One exclusive left turn lane, two through lanes and an exclusive right turn lane Westbound – One exclusive left turn lane, one through lane and a shared through/right turn lane Northbound - One exclusive left turn lane, one shared through /right turn lane Southbound - One exclusive left turn lane, one through lane and one exclusive right turn lane	Two-phase semi-actuated signal with permitted left turns 90 Second cycle all time periods	Multi-phase Actuated-Coordinated signal All left turns protected/permitted AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals
5	**NY 25 & Manor Road/ Splish Splash Drive**	Eastbound – One exclusive left turn lane, a shared through / right turn lane Westbound – One exclusive left turn lane, one through, and an exclusive right turn lane Northbound - One shared left turn/ through lane and the approach flares to provide a right turn lane Southbound - Single shared left turn/ through and right turn lane	Eastbound – One exclusive left turn lane, one through lane and shared through/right turn lane Westbound – One exclusive left turn lane, one through lane and a shared through/right turn lane Northbound - No Change Proposed Southbound - No Change Proposed	Semi-actuated signal with protected permitted westbound left turns 115 Second cycle all time periods	Multi-phase Actuated-Coordinated signal AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals
6	**NY 25 & Calverton National Cemetery/ West Site Access**	Eastbound – One exclusive left turn lane, and one through lane Westbound – One through lane and one exclusive right turn lane Southbound - One exclusive left turn lane and one exclusive right turn lane	Eastbound – One exclusive left turn lane, two through lanes and an exclusive right turn lane Westbound – Two exclusive left turn lanes and two through lanes and one exclusive right turn lane Northbound - One exclusive left turn lane, a shared left turn / though lane and one exclusive right turn lane Southbound - No change proposed	Unsignalized T-intersection Southbound Approach Stop Controlled	Signalize Multi-phase Actuated-Coordinated signal Westbound Lefts turns fully protected Eastbound left turns protected/permitted North-south split phasing AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals

Table 12 – Table of Mitigation 2025… Continued 3 of 4

Location		Capacity		Signal Improvements	
		Existing Conditions	**Proposed in 2025**	**Existing Conditions**	**Proposed in 2025**
7	**Edwards Avenue & River Road**	Eastbound – One shared left turn / through lane, and the approach flares to provide a right turn lane Westbound – Single shared left turn/ through and right turn lane Northbound - One shared left turn / through lane and one channelized right turn lane Southbound - Single shared left turn/ through / right turn lane	No Change Proposed	Unsignalized Intersection Eastbound & Westbound approaches stop controlled	Signalize Two-phase semi-actuated signal with permitted left turns Northbound approach leading AM/PM Cycle length: 80seconds Saturday Cycle length : 70 Seconds Optimize phase splits, vary with time period to correlate to future volumes
8	**Grumman Boulevard & Burman Boulevard (Site Access)**	Eastbound – Single shared left turn / through lane Westbound – Single shared through / right turn lane Southbound - Single shared left turn/ right turn lane	Eastbound – One exclusive left turn lane and one through lane Westbound – Single shared through / right turn lane Southbound - One exclusive left turn lane and one exclusive right turn lane	Unsignalized Intersection Southbound Approach Stop Controlled	Signalize Two-phase semi-actuated signal with permitted left turns 70 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes
9	**New Intersection Grumman Boulevard & West Site Access**		Eastbound – – One exclusive left turn lane, one through lane Westbound – Single shared through / right turn lane Southbound - One exclusive left turn lane and one exclusive right turn lane		Unsignalized Intersection Southbound Approach Stop Controlled
10	**Wading River Manor Road & Grumman Boulevard**	Westbound – One exclusive left turn lane and one exclusive right turn lane Northbound - Single shared through / right turn lane Southbound - Single shared left turn / through lane	Westbound – Two exclusive left turn lanes and one free channelized right turn lane Northbound - One through lane and a free channelized right turn lane Southbound - One exclusive left turn lane and a through lane	Unsignalized Intersection Westbound Approach Stop Controlled	Signalize Two-phase semi-actuated signal with permitted Southbound left turns 70 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes

Table 12 – Table of Mitigation 2025… Continued 4 of 4

Location		Capacity		Signal Improvements	
		Existing Conditions	Proposed in 2025	Existing Conditions	Proposed in 2025
11	Wading River Manor Road & North Street	Eastbound – One shared left turn / through lane, and the approach flares to provide a right turn lane Westbound – Single shared left turn/ through and right turn lane Northbound - Single shared left turn/ through and right turn lane Southbound - Single shared left turn/ through and right turn lane	Eastbound – Single shared left turn/ through and right turn lane Westbound – No change proposed Northbound - No change proposed Southbound - No change proposed	All-way Stop	Signalize Two-phase semi-actuated signal with permitted left turns 70 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes
12	Wading River Manor Road & LIE North Service Road	Westbound – Stop Controlled with One shared left turn / through lane, and one right turn lane Northbound - One exclusive left turn lane and one through lane Southbound - One through lane and a channelized right turn lane	Westbound – No change proposed Northbound - One exclusive left turn lane and two through lanes Southbound - No change proposed	Unsignalized Intersection Westbound Approach Stop Controlled	Signalize Two-phase semi-actuated signal with protected/permitted Northbound left turns AM/PM Cycle length: 80seconds Saturday Cycle length : 70 Seconds Optimize phase splits, vary with time period to correlate to future volumes
13	Wading River Manor Road & LIE South Service Road	Unsignalized Eastbound – Stop Controlled with One shared left turn / through lane, and one right turn lane Northbound - One through lane and a channelized right turn lane Southbound - One exclusive left turn lane and one through lane	Signalized Eastbound – One exclusive left turn lane, one shared left turn / through lane, and one right turn lane Northbound - No change proposed Southbound - No change proposed	Unsignalized Intersection Eastbound Approach Stop Controlled	Signalize Two-phase semi-actuated signal with protected/permitted Southbound left turns AM/PM Cycle length: 80seconds Saturday Cycle length : 70 Seconds Optimize phase splits, vary with time period to correlate to future volumes

The network was reanalyzed with the mitigation in order to measure the effectiveness of the proposed improvements at the various intersections. Tables 13, 14 and 15 present the results of this analysis for the signalized intersections for weekday a.m., p.m. and Saturday midday peak periods, respectively. The results of the analysis for the site accesses on Middle Country Road at Burman Boulevard and Calverton National Cemetery, and Grumman at Burman Boulevard are presented in the Site Access section of this report. For ease of comparison, the table also includes the corresponding No-Build and Build condition results.

The analysis results of unsignalized intersections that were signalized as part of the mitigation are presented in Table 16 for weekday a.m., p.m. and Saturday midday peak periods.

Table 13 - Mitigation Analysis - AM Peak

Intersection		Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
				Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road		EB	L	7.1	A	7.5	A	54.2	D
			T	13.4	B	57.5	E	31.4	C
			R	1.9	A	2.2	A	0.4	A
			Approach	11.2	B	49.3	D	30.0	C
		WB	L	8.1	A	109.8	F	54.0	D
			T	7.8	A	8.6	A	35.7	D
			R	0.0	A	2.1	A	5.1	A
			Approach	7.6	A	25.4	C	35.4	D
		NB	LT / L	34.7	C	530.4	F	28.0	C
			T					50.5	D
			R	6.4	A	33.8	C	22.0	C
			Approach	30.2	C	211.7	F	28.9	C
		SB	LT / L	32.4	C	287.6	F	44.2	D
			T					32.5	C
			R	7.3	A	15.9	B	6.7	A
			Approach	18.5	B	200.2	F	30.4	C
		Overall		14.0	B	103.0	F	30.8	C
NY 25 & NY 25A / East Site Access		EB	LT / L	23.5	C	21.4	C	23.8	C
			T			124.6	F	38.8	D
			R			5.4	A	13.2	B
			Approach	23.5	C	83.8	F	30.4	C
		WB	L			244.4	F	49.0	D
			T	16.4	B	233.2	F	25.0	C
			R	0.2	A	3.6	A	6.8	A
			Approach	9.8	A	197.3	F	26.4	C
		NB	L			31.7	C	43.9	D
			T			35.4	D	40.4	D
			R			0.8	A	28.8	C
			Approach			20.1	C	37.1	D
		SB	L	45.4	D	76.3	E	43.9	D
			T			36.9	D	40.3	D
			R	6.8	A	7.8	A	5.4	A
			Approach	41.9	D	55.5	E	35.0	D
		Overall		25.9	C	120.0	F	30.3	C

Table 13 – Mitigation Analysis - AM Peak Hour … Continued 2 of 2

Intersection	Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Edwards Avenue	EB	LTR / L	10.6	B	15.4	B	16.8	B
		T	65.9	E	103.2	F	25.7	C
		R	17.8	B	18.0	B	22.8	C
		Approach	53.5	D	81.6	F	24.6	C
	WB	LT / L	16.3	B	16.5	B	13.9	B
		R / TR	17.0	B	28.1	C	31.6	C
		Approach	16.9	B	27.7	C	31.1	C
	NB	LTR / L	64.7	E	183.2	F	35.4	D
		TR	36.0	D	36.0	D	31.6	C
		Approach	49.5	D	120.4	F	33.8	C
	SB	LTR / L	24.4	C	24.4	C	22.8	C
		TR / T	78.4	E	208.5	F	54.8	D
		R					17.7	B
		Approach	69.8	E	186.8	F	34.9	C
	Overall		**48.0**	**D**	**86.1**	**F**	**29.5**	**C**
NY 25 & Splish Splash Drive	EB	L	7.6	A	13.6	B	3.9	A
		TR	15.8	B	19.2	B	8.8	A
		Approach	15.2	B	18.8	B	8.5	A
	WB	L	4.2	A	4.6	A	5.0	A
		T	7.2	A	23.6	C		
		R / TR	1.9	A	2.6	A	13.4	B
		Approach	6.8	A	22.7	C	13.3	B
	NB	LT	29.0	C	30.0	C	37.5	D
		R	29.0	C	30.0	C	34.7	C
		Approach	29.0	C	30.0	C	36.6	D
	SB	LTR	31.4	C	34.3	C	41.0	D
		Approach	31.4	C	34.3	C	41.0	D
	Overall		**14.0**	**B**	**22.0**	**C**	**14.3**	**B**

Table 14 - Mitigation Analysis - PM Peak Hour

Intersection	Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	24.4	C	402.6	F	54.0	D
		T	10.2	B	9.6	A	25.2	C
		R	2.0	A	1.8	A	0.4	A
		Approach	12.4	B	95.2	F	28.2	C
	WB	L	7.6	A	14.6	B	61.7	E
		T	15.4	B	28.6	C	17.9	B
		R	2.1	A	1.8	A	2.2	A
		Approach	13.6	B	21.0	C	22.2	C
	NB	LT / L	41.7	D	68.9	E	37.8	D
		T					46.9	D
		R	6.4	A	7.9	A	0.9	A
		Approach	38.1	D	56.2	E	34.0	C
	SB	LT / L	27.4	C	69.3	E	33.2	C
		T					43.9	D
		R	6.4	A	15.4	B	8.2	A
		Approach	15.4	B	42.3	D	23.5	C
	Overall		**17.1**	**B**	**45.3**	**D**	**25.2**	**C**
NY 25 & NY 25A / East Site Access	EB	LT / L	21.3	C	223.2	F	26.5	C
		T			349.5	F	42.5	D
		R			0.2	A	0.1	A
		Approach	21.3	C	319.3	F	38.7	D
	WB	L			20.2	C	45.5	D
		T	15.5	B	115.7	F	32.1	C
		R	0.8	A	7.5	A	10.4	B
		Approach	7.4	A	58.8	E	21.7	C
	NB	L			32.4	C	38.3	D
		T			43.0	D	50.5	D
		R			16.5	B	7.8	A
		Approach			28.2	C	28.5	C
	SB	L	37.1	D	27.4	C	50.2	D
		T			30.8	C	38.0	D
		R	8.6	A	0.7	A	0.7	A
		Approach	33.8	C	23.4	C	41.8	D
	Overall		**15.7**	**B**	**144.6**	**F**	**31.3**	**C**

Table 14 – Mitigation Analysis - PM Peak Hour … Continued 2 of 2

Intersection	Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Edwards Avenue	EB	LTR / L	14.7	B	76.7	E	38.3	D
		T	38.8	D	284.5	F	26.3	C
		R	17.5	B	18.5	B	17.3	B
		Approach	33.2	C	227.2	F	26.7	C
	WB	LT / L	13.1	B	13.5	B	12.3	B
		R / TR	23.1	C	29.6	C	25.6	C
		Approach	22.7	C	29.2	C	25.2	C
	NB	LTR / L	44.3	D	48.9	D	44.5	D
		TR	38.9	D	37.7	D	41.1	D
		Approach	41.6	D	43.5	D	42.9	D
	SB	LTR / L	23.1	C	22.5	C	24.1	C
		TR / T	51.2	D	52.3	D	49.7	D
		R					1.4	A
		Approach	46.8	D	48.0	D	35.3	D
	Overall		**31.8**	**C**	**131.4**	**F**	**28.7**	**C**
NY 25 & Splish Splash Drive	EB	L	12.6	B	18.9	B	4.9	A
		TR	13.9	B	60.0	E	12.7	B
		Approach	13.8	B	56.0	E	11.9	B
	WB	L	3.5	A	3.0	A	3.5	A
		T	14.3	B	12.4	B		
		R / TR	2.4	A	2.2	A	11.0	B
		Approach	13.5	B	11.7	B	11.0	B
	NB	LT	28.2	C	33.2	C	46.0	D
		R	28.6	C	33.7	C	41.3	D
		Approach	28.5	C	33.5	C	44.1	D
	SB	LTR	19.3	B	24.0	C	31.7	C
		Approach	19.3	B	24.0	C	31.7	C
	Overall		**14.2**	**B**	**36.7**	**D**	**13.2**	**B**

Table 15 – Mitigation Analysis - Saturday Midday Peak Hour

Intersection	Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	11.7	B	12.3	B	45.4	D
		T	10.9	B	11.5	B	16.8	B
		R	2.6	A	2.4	A	0.2	A
		Approach	10.0	B	10.6	B	20.6	C
	WB	L	8.5	A	9.3	A	52.4	D
		T	11.6	B	12.0	B	12.5	B
		R	2.6	A	2.3	A	0.7	A
		Approach	10.1	B	10.3	B	15.5	B
	NB	LT / L	25.8	C	27.0	C	28.3	C
		T					44.2	D
		R	7.0	A	6.8	A	1.1	A
		Approach	21.8	C	21.2	C	27.6	C
	SB	LT / L	23.0	C	27.4	C	28.6	C
		T					44.5	D
		R	5.9	A	6.1	A	5.3	A
		Approach	14.4	B	17.5	B	23.0	C
	Overall		**12.5**	**B**	**13.3**	**B**	**20.3**	**C**
NY 25 & NY 25A / East Site Access	EB	LT / L	23.9	C	14.5	B	7.5	A
		T			27.9	C	11.6	B
		R			0.1	A	0.0	X
		Approach	23.9	C	25.3	C	10.7	B
	WB	L			13.1	B	40.4	D
		T	17.0	B	29.8	C	18.7	B
		R	0.4	A	1.5	A	1.5	A
		Approach	8.6	A	16.3	B	11.4	B
	NB	L			35.8	D	39.9	D
		T			35.4	D	36.9	D
		R			0.2	A	0.2	A
		Approach			22.0	C	23.9	C
	SB	L	44.9	D	118.4	F	41.7	D
		T			20.2	C	28.9	C
		R	8.1	A	0.2	A	0.3	A
		Approach	42.9	D	107.7	F	38.4	D
	Overall		**23.5**	**C**	**45.4**	**D**	**19.3**	**B**

Table 15 – Mitigation Analysis - Saturday Midday Peak Hour … Continued 2 of 2

Intersection	Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Edwards Avenue	EB	LTR / L	10.0	A	10.3	B	10.5	B
		T	30.5	C	33.9	C	18.0	B
		R	14.4	B	14.4	B	16.0	B
		Approach	27.2	C	30.0	C	17.2	B
	WB	LT / L	10.8	B	11.5	B	7.8	A
		R / TR	16.0	B	16.6	B	12.8	B
		Approach	15.8	B	16.3	B	12.5	B
	NB	LTR / L	28.8	C	30.8	C	25.4	C
		TR	61.0	E	61.0	E	53.2	D
		Approach	52.9	D	53.1	D	45.9	D
	SB	LTR / L	26.6	C	26.6	C	26.6	C
		TR / T	45.6	D	48.0	D	39.0	D
		R					2.8	A
		Approach	41.3	D	43.4	D	26.3	C
	Overall		**29.8**	**C**	**31.1**	**C**	**21.3**	**C**
NY 25 & Splish Splash Drive	EB	L	7.5	A	7.7	A	1.5	A
		TR	13.2	B	12.8	B	4.7	A
		Approach	12.8	B	12.5	B	4.5	A
	WB	L	3.0	A	3.0	A	3.0	A
		T	9.8	A	9.8	A		
		R / TR	2.1	A	2.1	A	8.4	A
		Approach	9.3	A	9.3	A	8.4	A
	NB	LT	27.5	C	28.5	C	35.5	D
		R	28.0	C	29.0	C	35.0	D
		Approach	27.7	C	28.7	C	35.3	D
	SB	LTR	16.7	B	17.3	B	22.9	C
		Approach	16.7	B	17.3	B	22.9	C
	Overall		**11.5**	**B**	**11.4**	**B**	**7.5**	**A**

Review of Tables 13, 14 and 15 reveals that the mitigation measures identified result in an improvement in the overall intersection operating delay and LOS at the study intersections where mitigation was deemed necessary. The intersection LOS has been restored to the No-Build condition and, in a few cases, improved.

Table 16 - Mitigation Analysis - Newly Signalized Intersections

Intersection	Movement	Lane Group	Build Mitigation 2025					
			AM Peak		PM Peak		Saturday Midday Peak	
			Delay	LOS	Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	LT	27.4	C	27.1	C	25.1	C
		R	11.4	B	9.9	A	9.2	A
		Approach	12.3	B	11.1	B	12.3	B
	WB	LTR	29.2	C	30.4	C	26.4	C
		Approach	29.2	C	30.4	C	26.4	C
	NB	LT	19.9	B	5.9	A	5.6	A
		R	1.4	A	0.8	A	0.9	A
		Approach	19.0	B	5.7	A	5.2	A
	SB	LTR	8.1	A	8.0	A	5.0	A
		Approach	8.1	A	8.0	A	5.0	A
	Overall		14.7	B	8.8	A	7.1	A
Grumman Boulevard & Burman Boulevard	EB	L	13.2	B	9.7	A	6.9	A
		T	3.6	A	15.3	B	6.4	A
		Approach	11.9	B	14.3	B	6.7	A
	WB	TR	1.9	A	5.9	A	4.8	A
		Approach	1.9	A	5.9	A	4.8	A
	SB	L	27.5	C	18.2	B	9.3	A
		R	10.2	B	6.2	A	3.7	A
		Approach	16.8	B	10.1	B	6.1	A
	Overall		9.6	A	11.5	B	6.0	A
Wading River Manor Road & Grumman Boulevard	WB	L	12.9	B	16.4	B	11.4	B
		R	6.2	A	4.8	A	5.5	A
		Approach	11.3	B	14.9	B	8.9	A
	NB	T	7.0	A	12.2	B	4.9	A
		R	0.8	A	0.1	A	0.0	A
		Approach	3.3	A	9.7	A	4.0	A
	SB	L	6.1	A	8.8	A	4.9	A
		T	6.4	A	15.9	B	4.8	A
		Approach	6.4	A	15.6	B	4.8	A
	Overall		4.8	A	13.6	B	5.0	A
Wading River Manor Road & North Street	EB	LTR	30.0	C	21.1	C	8.3	A
		Approach	30.0	C	21.1	C	8.3	A
	WB	LTR	18.9	B	19.5	B	8.3	A
		Approach	18.9	B	19.5	B	8.3	A
	NB	LTR	14.9	B	3.6	A	4.9	A
		Approach	14.9	B	3.6	A	4.9	A
	SB	LTR	6.3	A	7.0	A	4.7	A
		Approach	6.3	A	7.0	A	4.7	A
	Overall		14.7	B	7.4	A	5.6	A

Table 16 – Mitigation Analysis - Newly Signalized Intersections
Continued 2 of 2

Intersection	Movement	Lane Group	Build Mitigation 2025					
			AM Peak		PM Peak		Saturday Midday Peak	
			Delay	LOS	Delay	LOS	Delay	LOS
Wading River Road & LIE North Service Road	WB	LT	23.1	C	31.4	C	33.0	C
		R	0.4	A	0.3	A	0.3	A
		Approach	15.1	B	27.9	C	29.4	C
	NB	L	16.6	B	13.6	B	8.1	A
		T	14.1	B	11.4	B	10.0	B
		Approach	15.1	B	12.2	B	9.0	A
	SB	T	21.7	C	21.3	C	15.3	B
		R	4.4	A	3.7	A	3.6	A
		Approach	12.4	B	11.1	B	10.2	B
	Overall		14.6	B	14.2	B	13.6	B
Wading River Road & LIE South Service Road	EB	L	38.2	D	22.7	C	24.0	C
		LT	38.3	D	22.8	C	24.0	C
		R	5.7	A	34.1	C	7.2	A
		Approach	30.4	C	31.2	C	12.9	B
	NB	T	30.0	C	15.4	B	11.4	B
		R	5.9	A	3.1	A	2.7	A
		Approach	25.0	C	11.9	B	8.6	A
	SB	L	16.5	B	11.4	B	7.5	A
		T	27.2	C	34.0	C	19.5	B
		Approach	25.7	C	32.1	C	18.6	B
	Overall		27.0	C	26.1	C	12.2	B

Review of Tables 16 reveals that signalizing of the six intersections has improved their operation to a LOS C or better.

Site Access

The mitigation analysis results of the three signalized site accesses are presented in Table 17, 18 and 19, for weekday a.m., p.m. and Saturday midday peak periods, respectively.

Table 17 - Site Access Mitigation Analysis - AM Peak Hour

Intersection	Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Burman Boulevard	EB	T	9.4	A	18.5	B	7.6	A
		R	1.4	A	2.9	A	6.4	A
		Approach	6.8	A	11.5	B	7.1	A
	WB	L	10.6	B	1047.7	F	34.1	C
		T	8.3	A	17.6	B	7.2	A
		Approach	9.1	A	484.0	F	19.4	B
	NB	L	28.3	C	34.4	C	43.8	D
		R	9.9	A	7.9	A	16.1	B
		Approach	19.6	B	21.5	C	30.2	C
	Overall		**8.4**	**A**	**221.1**	**F**	**14.3**	**B**
NY 25 & West Site Access / Calverton National Cemetery	EB	L			8.4	A	11.0	B
		T			102.1	F	19.2	B
		R			2.0	A	1.0	A
		Approach			85.2	F	16.1	B
	WB	L			103.1	F	20.8	C
		T			3.9	A	5.3	A
		R			0.0	A	0.4	A
		Approach			45.5	D	11.4	B
	NB	L			36.4	D	47.4	D
		T			29.0	C	47.3	D
		R			11.0	B	7.4	A
		Approach			22.8	C	26.0	C
	SB	L			34.2	C	49.0	D
		TR / R			23.2	C	19.2	B
		Approach			28.3	C	33.8	C
	Overall				**70.4**	**E**	**15.4**	**B**
Grumman Boulevard & Burman Boulevard	EB	L					13.2	B
		T					3.6	A
		Approach					11.9	B
	WB	TR					1.9	A
		Approach					1.9	A
	SB	L					27.5	C
		R					10.2	B
		Approach					16.8	B
	Overall						**9.6**	**A**

Table 18 - Site Access Mitigation Analysis - PM Peak Hour

Intersection	Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Burman Boulevard	EB	T	12.3	B	26.1	C	38.4	D
		R	2.7	A	2.9	A	0.3	A
		Approach	11.2	B	22.9	C	33.1	C
	WB	L	9.7	A	108.2	F	27.5	C
		T	13.3	B	26.9	C	26.2	C
		Approach	13.0	B	37.2	D	26.3	C
	NB	L	41.0	D	307.8	F	39.9	D
		R	5.4	A	110.9	F	20.5	C
		Approach	27.4	C	217.2	F	31.0	C
	Overall		**16.9**	**B**	**112.2**	**F**	**30.3**	**C**
NY 25 & West Site Access / Calverton National Cemetery	EB	L			10.0	A	4.4	A
		T			12.4	B	7.8	A
		R			0.1	A	0.5	A
		Approach			11.5	B	7.3	A
	WB	L			37.4	D	51.2	D
		T			36.0	D	14.2	B
		R			0.0	A	0.0	A
		Approach			35.9	D	15.6	B
	NB	L			55.9	E	51.3	D
		T			26.0	C	51.6	D
		R			12.6	B	15.4	B
		Approach			32.3	C	31.8	C
	SB	L			32.4	C	45.8	D
		TR / R			22.3	C	28.7	C
		Approach			27.0	C	36.6	D
	Overall				**28.8**	**C**	**16.8**	**B**
Grumman Boulevard & Burman Boulevard	EB	L					9.7	A
		T					15.3	B
		Approach					14.3	B
	WB	TR					5.9	A
		Approach					5.9	A
	SB	L					18.2	B
		R					6.2	A
		Approach					10.1	B
	Overall						**11.5**	**B**

Table 19 – Site Access Mitigation Analysis – Saturday Midday Peak Hour

Intersection	Movement	Lane Group	No Build 2025		Build 2025		Build Mitigation 2025	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Burman Boulevard	EB	T	8.8	A	9.3	A	8.8	A
		R	3.2	A	2.1	A	2.4	A
		Approach	8.7	A	8.6	A	8.2	A
	WB	L	6.9	A	7.8	A	24.6	C
		T	8.3	A	8.8	A	7.2	A
		Approach	8.3	A	8.7	A	9.3	A
	NB	L	27.4	C	28.7	C	40.3	D
		R	9.5	A	8.0	A	26.8	C
		Approach	18.3	B	18.3	B	33.5	C
	Overall		**9.3**	**A**	**9.8**	**A**	**11.8**	**B**
NY 25 & West Site Access / Calverton National Cemetery	EB	L			6.0	A	11.2	B
		T			6.1	A	16.3	B
		R			0.0	A	0.1	A
		Approach			5.8	A	15.4	B
	WB	L			34.8	C	45.7	D
		T			2.5	A	6.7	A
		R			0.0	A	0.0	A
		Approach			4.6	A	8.8	A
	NB	L			33.9	C	40.6	D
		T			26.0	C	40.2	D
		R			6.5	A	3.6	A
		Approach			19.0	B	20.7	C
	SB	L			32.0	C	42.4	D
		TR / R			21.8	C	17.5	B
		Approach			26.5	C	29.8	C
	Overall				**6.0**	**A**	**13.5**	**B**
Grumman Boulevard & Burman Boulevard	EB	L					6.9	A
		T					6.4	A
		Approach					6.7	A
	WB	TR					4.8	A
		Approach					4.8	A
	SB	L					9.3	A
		R					3.7	A
		Approach					6.1	A
	Overall						**6.0**	**A**

Table 17, 18 and 19 reveal that the three signalized site accesses operate satisfactorily with the mitigation in place for the Build 2025 condition, with a LOS C or better during the three time periods analyzed.

Non-Intersection Improvements 2025

The mitigation details presented in Table 12 above indicate the improvements identified for the study intersections where traffic conditions as a result of the project, other developments and background growth would result in poor operating conditions without improvement. In addition to the intersection treatments, given the levels of traffic anticipated, it will be necessary to provide roadway segment improvements, specifically to Middle Country Road. Based on the through volumes anticipated, Middle Country Road should be improved to provide additional capacity between CR 46 (William Floyd Parkway) and the existing four lane section near the LIE. This is a total length of approximately seven and one-half miles and includes the approximately three and one-quarter mile section that abuts the subject property.

As previously noted, it must be understood that no one can predict, over a multi-year development period, what specific uses would be developed and at what levels. A different use mix on the site could result in significantly different trip generation, as described above. Accordingly, the point in time when various mitigation elements are required will be a function of the actual trip generation associated with the uses developed. The Mitigation Phasing Section of this study provides the various levels of trip generation and the mitigation required to be in place for each level of trip generation.

Based on the anticipated volumes, Middle Country Road should be reconstructed to a five-lane section over this distance. This pavement section includes two through lanes in each direction, safety shoulders and a median which could serve as an area for left-turn lanes (either dedicated or two-way left-turn lanes) in appropriate areas. It is recommended that the posted speed limit on this section of the roadway be set to 45 mph.

This improvement represents a significant roadway project. However, existing volumes are already high, and with 2025 No-Build volumes on sections of Middle Country Road exceeding 1,000 vehicles per hour per direction without the proposed project, the improvement of Middle Country Road as noted herein should be considered even without the proposed subdivision.

No-Build 2035 & Full Build 2035

The No-Build 2035 was analyzed using the volumes obtained by combining the background growth for 10 years from 2025 to 2035, to the Build 2025 volumes.

Full Build 2035 was analyzed using the site generated volumes in 2035 presented earlier in the report in Table 5. Through the course of the analysis, it was determined that the existing roadway network in the study area cannot support the level of traffic projected in the Theoretical Mixed Use Development Program in 2035, even with the implementation of all roadway mitigation that, at this time, are reasonable to implement given the configuration of the area roadways, available rights-of-way, and other factors (such as Pine Barrens Core

Preservation Area land). There are a limited number of routes to and from the site, and these routes have limits on the extent of potential improvements that are able to be implemented. Geometric and environmental considerations limit the extent of improvements that could be made to the roadway system and construction of additional, new roadways is not necessarily feasible at this time. Through an iterative analysis process, the level of traffic that can be mitigated was established as 5,000 total trips (combined entering and exiting) during the critical weekday a.m. peak hour.

As noted above, based upon actual future development on the site, a different use mix on the site could result in significantly different trip generation, as described above. Accordingly, the maximum development limit will be a function of the actual trip generation associated with the uses developed. The Mitigation Phasing Section of this study provides the various levels of trip generation and the mitigation required to be in place for each level of trip generation.

The level of the site-generated trip increase difference between 2025 (Table 3) and 2035 (Table 5) was added to the No-Build 2035 volume to obtain the Full Build 2035 volumes used in the analysis.

The results of the No-Build 2035 and Full Build 2035 capacity analyses at the twelve signalized study intersections, for weekday a.m., p.m. and Saturday midday peak periods, are summarized in Tables 20, 21 and 22, respectively.

The results of the No-Build 2035 and Full Build 2035 capacity analyses at the unsignalized study intersection, for weekday a.m., p.m. and Saturday midday peak periods, are summarized in Tables 23, 24 and 25, respectively.

Detailed capacity analysis worksheets are contained in Attachment D.

Table 20 - Signalized Intersection LOS 2035 – AM Midday Peak Hour

Intersection	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	55.6	E	58.4	E
		T	35.0	D	180.0	F
		R	0.8	A	1.0	A
		Approach	33.1	C	159.9	F
	WB	L	55.0	E	66.7	E
		T	36.9	D	41.6	D
		R	5.6	A	7.4	A
		Approach	36.6	D	41.6	D
	NB	L	28.8	C	25.7	C
		T	51.9	D	43.0	D
		R	22.8	C	142.3	F
		Approach	30.4	C	113.9	F
	SB	L	44.7	D	130.1	F
		T	32.5	C	30.0	C
		R	6.6	A	6.0	A
		Approach	29.9	C	86.6	F
	Overall		**32.6**	**C**	**117.3**	**F**
NY 25 & West Site Access / Calverton National Cemetery	EB	L	10.8	B	12.8	B
		T	19.0	B	202.1	F
		R	0.8	A	0.6	A
		Approach	15.9	B	160.1	F
	WB	L	19.6	B	35.3	D
		T	6.1	A	4.5	A
		R	0.5	A	0.2	A
		Approach	11.3	B	20.0	C
	NB	L	47.4	D	49.2	D
		LT	47.3	D	48.8	D
		R	7.4	A	10.2	B
		Approach	26.0	C	27.8	C
	SB	L	49.0	D	49.0	D
		TR	19.2	B	19.1	B
		Approach	33.8	C	33.8	C
	Overall		**15.3**	**B**	**110.2**	**F**
NY 25 & Burman Boulevard	EB	T	8.6	A	15.9	B
		R	6.9	A	40.6	D
		Approach	7.9	A	27.4	C
	WB	L	34.7	C	189.9	F
		T	7.6	A	12.3	B
		Approach	19.6	B	95.7	F
	NB	L	43.4	D	39.9	D
		R	16.0	B	14.9	B
		Approach	29.8	C	27.5	C
	Overall		**14.7**	**B**	**58.4**	**E**

Table 20 – Signalized Intersection LOS 2035 – AM Midday Peak Hour
Continued 2 of 4

Intersection	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
NY 25 & NY 25A / East Site Access	EB	L	24.7	C	29.5	C
		T	39.7	D	53.4	D
		R	13.6	B	25.7	C
		Approach	31.7	C	41.6	D
	WB	L	49.0	D	67.8	E
		T	25.7	C	76.0	E
		R	7.0	A	9.1	A
		Approach	26.4	C	66.0	E
	NB	L	43.9	D	45.7	D
		T	40.4	D	41.2	D
		R	28.8	C	26.6	C
		Approach	37.2	D	37.2	D
	SB	L	49.2	D	53.0	D
		T	40.0	D	44.9	D
		R	5.7	A	14.9	B
		Approach	39.2	D	41.5	D
	Overall		**31.9**	**C**	**51.8**	**D**
NY 25 & Edwards Avenue	EB	L	17.3	B	19.1	B
		T	29.5	C	33.4	C
		R	24.6	C	25.4	C
		Approach	28.0	C	31.0	C
	WB	L	17.2	B	22.7	C
		TR	42.3	D	217.9	F
		Approach	41.5	D	213.7	F
	NB	L	42.4	D	60.8	E
		TR	31.6	C	31.0	C
		Approach	37.6	D	49.2	D
	SB	L	23.1	C	22.7	C
		T	59.9	E	54.5	D
		R	19.8	B	60.0	E
		Approach	38.8	D	53.9	D
	Overall		**35.3**	**D**	**106.7**	**F**
NY 25 & Splish Splash Drive	EB	L	6.4	A	14.5	B
		TR	11.9	B	23.9	C
		Approach	11.5	B	23.2	C
	WB	L	5.6	A	5.5	A
		TR	15.3	B	23.2	C
		Approach	15.2	B	23.0	C
	NB	LT	35.5	D	36.0	D
		R	33.1	C	33.4	C
		Approach	34.7	C	35.2	D
	SB	LTR	42.6	D	46.0	D
		Approach	42.6	D	46.0	D
	Overall		**16.5**	**B**	**25.3**	**C**

Table 20 – Signalized Intersection LOS 2035 – AM Midday Peak Hour
Continued 3 of 4

Intersection	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	LT	27.3	C	27.1	C
		R	11.2	B	11.2	B
		Approach	12.1	B	12.0	B
	WB	LTR	30.1	C	29.8	C
		Approach	30.1	C	29.8	C
	NB	L				
		LT	34.5	C	201.2	F
		R	1.7	A	1.8	A
		Approach	32.6	C	192.6	F
	SB	LTR	9.1	A	9.4	A
		Approach	9.1	A	9.4	A
	Overall		**21.6**	**C**	**109.5**	**F**
Grumman Boulevard & Burman Boulevard	EB	L	14.5	B	158.3	F
		T	3.7	A	4.2	A
		Approach	13.0	B	141.5	F
	WB	T / TR	2.0	A	3.7	A
		R				
		Approach	2.0	A	3.7	A
	SB	L	28.5	C	28.9	C
		R	10.5	B	9.9	A
		Approach	17.4	B	17.0	B
	Overall		**10.3**	**B**	**79.5**	**E**
Wading River Manor Road & Grumman Boulevard	WB	L	13.1	B	17.5	B
		R	6.1	A	8.0	A
		Approach	11.4	B	15.9	B
	NB	T	7.2	A	10.8	B
		R	0.9	A	2.1	A
		Approach	3.4	A	5.5	A
	SB	L	6.3	A	8.3	A
		T	6.7	A	7.2	A
		Approach	6.6	A	7.4	A
	Overall		**5.0**	**A**	**6.9**	**A**
Wading River Manor Road & North Street	EB	L / LTR	30.8	C	41.5	D
		TR				
		Approach	30.8	C	41.5	D
	WB	LTR	19.2	B	18.1	B
		Approach	19.2	B	18.1	B
	NB	LTR	16.3	B	166.1	F
		Approach	16.3	B	166.1	F
	SB	LTR	6.6	A	8.7	A
		Approach	6.6	A	8.7	A
	Overall		**15.5**	**B**	**117.9**	**F**

Table 20 – Signalized Intersection LOS 2035 – AM Midday Peak Hour
Continued 4 of 4

Intersection	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
Wading River Road & LIE North Service Road	WB	LT	23.4	C	21.8	C
		R	0.4	A	0.3	A
		Approach	15.6	B	14.5	B
	NB	L	22.2	C	27.8	C
		T	14.6	B	22.4	C
		Approach	17.8	B	24.1	C
	SB	T	23.1	C	24.4	C
		R	4.5	A	4.6	A
		Approach	13.2	B	13.3	B
	Overall		**16.7**	**B**	**21.6**	**C**
Wading River Road & LIE South Service Road	EB	L	38.9	D	63.0	E
		LT	39.0	D	63.5	E
		R	5.7	A	5.1	A
		Approach	30.3	C	52.5	D
	NB	T	42.6	D	161.7	F
		R	6.6	A	8.5	A
		Approach	34.9	C	132.4	F
	SB	L	16.5	B	18.1	B
		T	29.8	C	32.6	C
		Approach	28.0	C	30.8	C
	Overall		**32.5**	**C**	**90.3**	**F**

Table 21 - Signalized Intersection LOS 2035 – PM Midday Peak Hour

Intersection	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	56.3	E	56.3	E
		T	26.5	C	34.4	C
		R	0.5	A	0.7	A
		Approach	29.6	C	34.7	C
	WB	L	64.2	E	62.1	E
		T	21.5	C	34.2	C
		R	3.3	A	9.1	A
		Approach	25.0	C	34.2	C
	NB	L	39.1	D	38.6	D
		T	47.5	D	51.5	D
		R	0.9	A	1.7	A
		Approach	35.2	D	34.1	C
	SB	L	33.4	C	39.9	D
		T	43.9	D	43.4	D
		R	10.2	B	10.0	A
		Approach	24.4	C	26.8	C
	Overall		**27.3**	**C**	**33.5**	**C**
NY 25 & West Site Access / Calverton National Cemetery	EB	L	10.2	B	32.3	C
		T	9.1	A	14.8	B
		R	0.8	A	2.7	A
		Approach	8.6	A	14.2	B
	WB	L	52.7	D	55.8	E
		T	16.7	B	38.5	D
		R	0.4	A	0.0	A
		Approach	17.7	B	38.9	D
	NB	L	51.3	D	57.7	E
		LT	51.6	D	58.1	E
		R	15.3	B	19.7	B
		Approach	31.8	C	37.1	D
	SB	L	48.9	D	42.0	D
		TR	18.5	B	21.1	C
		Approach	33.4	C	31.3	C
	Overall		**18.3**	**B**	**32.8**	**C**
NY 25 & Burman Boulevard	EB	T	39.1	D	76.1	E
		R	0.3	A	0.5	A
		Approach	34.0	C	65.2	E
	WB	L	26.1	C	23.6	C
		T	27.1	C	27.3	C
		Approach	27.0	C	26.8	C
	NB	L	40.2	D	100.7	F
		R	20.3	C	23.8	C
		Approach	31.1	C	64.2	E
	Overall		**30.8**	**C**	**54.8**	**D**

Table 21 – Signalized Intersection LOS 2035 – PM Midday Peak Hour
Continued 2 of 4

Intersection	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
NY 25 & NY 25A / East Site Access	EB	L	29.1	C	84.5	F
		T	46.2	D	220.0	F
		R	0.1	A	0.5	A
		Approach	42.3	D	190.5	F
	WB	L	45.5	D	49.2	D
		T	34.6	C	48.7	D
		R	15.7	B	37.7	D
		Approach	25.4	C	43.6	D
	NB	L	38.3	D	36.4	D
		T	50.5	D	55.8	E
		R	7.8	A	20.7	C
		Approach	28.5	C	34.0	C
	SB	L	56.5	E	56.5	E
		T	38.0	D	41.2	F
		R	0.7	A	1.1	A
		Approach	47.3	D	45.5	D
	Overall		**34.5**	**C**	**99.2**	**F**
NY 25 & Edwards Avenue	EB	L	41.4	D	76.5	E
		T	31.2	C	103.8	F
		R	18.5	B	19.3	B
		Approach	30.8	C	91.0	F
	WB	L	16.8	B	19.1	B
		TR	37.9	D	74.6	E
		Approach	37.3	D	73.0	E
	NB	L	56.8	E	61.1	E
		TR	45.9	D	45.9	D
		Approach	51.5	D	53.8	D
	SB	L	23.9	C	23.9	C
		T	50.8	D	50.8	D
		R	1.3	A	3.2	A
		Approach	36.5	D	34.9	C
	Overall		**35.7**	**D**	**78.1**	**E**
NY 25 & Splish Splash Drive	EB	L	8.7	A	9.6	A
		TR	18.8	B	26.5	C
		Approach	17.8	B	24.9	C
	WB	L	4.0	A	4.7	A
		TR	13.5	B	16.0	B
		Approach	13.5	B	16.0	B
	NB	LT	44.3	D	44.5	D
		R	40.5	D	40.3	D
		Approach	42.7	D	42.7	D
	SB	LTR	33.3	C	33.0	C
		Approach	33.3	C	33.0	C
	Overall		**17.3**	**B**	**22.3**	**C**

Table 21 – Signalized Intersection LOS 2035 – PM Midday Peak Hour
Continued 3 of 4

Intersection	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	LT	27.1	C	25.3	C
		R	9.8	A	17.5	B
		Approach	11.1	B	17.9	B
	WB	LTR	31.5	C	27.8	C
		Approach	31.5	C	27.8	C
	NB	L				
		LT	6.8	A	10.2	B
		R	1.0	A	1.3	A
		Approach	6.5	A	9.8	A
	SB	LTR	8.1	A	10.1	B
		Approach	8.1	A	10.1	B
	Overall		**9.2**	**A**	**12.7**	**B**
Grumman Boulevard & Burman Boulevard	EB	L	9.7	A	12.0	B
		T	16.7	B	21.2	C
		Approach	15.5	B	19.4	B
	WB	T / TR	6.0	A	6.5	A
		R				
		Approach	6.0	A	6.5	A
	SB	L	19.7	B	24.9	C
		R	6.4	A	8.0	A
		Approach	10.7	B	13.5	B
	Overall		**12.4**	**B**	**15.2**	**B**
Wading River Manor Road & Grumman Boulevard	WB	L	17.5	B	28.2	C
		R	4.8	A	4.7	A
		Approach	15.6	B	25.8	C
	NB	T	12.9	B	14.6	B
		R	0.1	A	0.1	A
		Approach	10.4	B	10.9	B
	SB	L	9.0	A	10.2	B
		T	16.7	B	29.0	C
		Approach	16.4	B	28.4	C
	Overall		**14.3**	**B**	**22.8**	**C**
Wading River Manor Road & North Street	EB	L / LTR	21.8	C	26.8	C
		TR				
		Approach	21.8	C	26.8	C
	WB	LTR	20.0	C	21.5	C
		Approach	20.0	C	21.5	C
	NB	LTR	3.7	A	4.6	A
		Approach	3.7	A	4.6	A
	SB	LTR	7.6	A	34.3	C
		Approach	7.6	A	34.3	C
	Overall		**7.9**	**A**	**27.3**	**C**

Table 21 – Signalized Intersection LOS 2035 – PM Midday Peak Hour
Continued 4 of 4

Intersection	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
Wading River Road & LIE North Service Road	WB	LT	29.7	C	28.8	C
		R	0.3	A	0.2	A
		Approach	26.5	C	25.7	C
	NB	L	21.6	C	43.4	D
		T	13.9	B	15.0	B
		Approach	17.1	B	25.5	C
	SB	T	24.3	C	34.7	C
		R	4.9	A	15.8	B
		Approach	13.3	B	23.3	C
	Overall		**16.8**	**B**	**24.2**	**C**
Wading River Road & LIE South Service Road	EB	L	21.8	C	22.5	C
		LT	21.9	C	22.5	C
		R	46.7	D	51.3	D
		Approach	40.6	D	42.7	D
	NB	T	18.6	B	19.6	B
		R	3.1	A	3.1	A
		Approach	14.2	B	15.1	B
	SB	L	12.3	B	14.1	B
		T	59.2	E	148.9	F
		Approach	55.4	E	139.7	F
	Overall		**38.4**	**D**	**72.6**	**E**

Table 22 - Signalized Intersection LOS 2035 – Saturday Midday Peak Hour

	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	45.5	D	45.5	D
		T	18.4	B	19.0	B
		R	0.3	A	0.3	A
		Approach	21.7	C	22.0	C
	WB	L	50.3	D	51.1	D
		T	14.9	B	16.3	B
		R	0.9	A	1.5	A
		Approach	17.1	B	18.6	B
	NB	L	28.2	C	28.2	C
		T	43.6	D	43.6	D
		R	1.1	A	1.5	A
		Approach	27.7	C	26.0	C
	SB	L	27.8	C	30.4	C
		T	44.1	D	44.1	D
		R	6.9	A	6.9	A
		Approach	23.5	C	24.4	C
	Overall		**21.3**	**C**	**21.8**	**C**
NY 25 & West Site Access / Calverton National Cemetery	EB	L	14.4	B	16.8	B
		T	19.3	B	24.5	C
		R	0.4	A	1.3	A
		Approach	18.3	B	22.6	C
	WB	L	44.7	D	46.9	D
		T	7.8	A	9.7	A
		R	0.0	A	0.2	A
		Approach	9.5	A	12.9	B
	NB	L	40.6	D	41.1	D
		LT	40.2	D	41.2	D
		R	3.6	A	5.6	A
		Approach	20.7	C	22.0	C
	SB	L	42.4	D	43.0	D
		TR	17.5	B	17.5	B
		Approach	29.8	C	30.1	C
	Overall		**15.2**	**B**	**18.9**	**B**
NY 25 & Burman Boulevard	EB	T	9.6	A	14.1	B
		R	2.6	A	2.9	A
		Approach	9.0	A	12.6	B
	WB	L	26.6	C	24.3	C
		T	7.6	A	6.7	A
		Approach	9.7	A	9.4	A
	NB	L	40.4	D	40.9	D
		R	26.9	C	25.5	C
		Approach	33.6	C	33.1	C
	Overall		**12.3**	**B**	**14.3**	**B**

Table 22 – Signalized Intersection LOS 2035 – Saturday Midday Peak Hour
Continued 2 of 4

	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
NY 25 & NY 25A / East Site Access	EB	L	9.9	A	14.6	B
		T	14.4	B	20.3	C
		R	0.0	A	0.4	A
		Approach	13.4	B	18.5	B
	WB	L	40.4	A	41.7	D
		T	19.3	B	23.2	C
		R	1.6	A	1.9	A
		Approach	11.6	B	14.9	B
	NB	L	39.9	D	40.2	D
		T	37.0	D	37.6	D
		R	0.2	A	0.3	A
		Approach	23.9	C	23.7	C
	SB	L	47.1	D	47.9	D
		T	28.9	C	27.9	C
		R	0.3	A	0.4	A
		Approach	43.4	D	43.1	D
	Overall		**21.6**	**C**	**24.0**	**C**
NY 25 & Edwards Avenue	EB	L	11.2	B	11.6	B
		T	19.5	B	19.8	B
		R	16.3	B	16.3	B
		Approach	18.5	B	18.8	B
	WB	L	8.7	A	10.0	A
		TR	14.7	B	16.4	B
		Approach	14.4	B	16.1	B
	NB	L	26.2	C	26.7	C
		TR	60.2	E	60.2	E
		Approach	51.4	D	51.3	D
	SB	L	29.6	C	29.6	C
		T	39.8	D	39.8	D
		R	3.6	A	4.7	A
		Approach	27.7	C	27.2	C
	Overall		**23.5**	**C**	**23.8**	**C**
NY 25 & Splish Splash Drive	EB	L	2.0	A	2.3	A
		TR	5.6	A	6.1	A
		Approach	5.3	A	5.8	A
	WB	L	3.0	A	3.0	A
		TR	9.2	A	9.5	A
		Approach	9.2	A	9.5	A
	NB	LT	35.0	D	35.0	D
		R	35.0	D	35.0	D
		Approach	35.0	D	35.0	D
	SB	LTR	23.0	C	22.8	C
		Approach	23.0	C	22.8	C
	Overall		**8.3**	**A**	**8.7**	**A**

Table 22 – Signalized Intersection LOS 2035 – Saturday Midday Peak Hour
Continued 3 of 4

	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	LT	25.0	C	24.9	C
		R	9.9	A	10.0	A
		Approach	12.8	B	12.4	B
	WB	LTR	26.6	C	27.2	C
		Approach	26.6	C	27.2	C
	NB	L				
		LT	6.1	A	7.0	A
		R	1.3	A	1.3	A
		Approach	5.7	A	6.5	A
	SB	LTR	5.3	A	5.8	A
		Approach	5.3	A	5.8	A
	Overall		**7.4**	**A**	**8.0**	**A**
Grumman Boulevard & Burman Boulevard	EB	L	7.1	A	7.6	A
		T	6.5	A	6.6	A
		Approach	6.8	A	7.3	A
	WB	T / TR	5.0	A	4.8	A
		R				
		Approach	5.0	A	4.8	A
	SB	L	9.2	A	9.4	A
		R	3.6	A	3.7	A
		Approach	6.1	A	6.1	A
	Overall		**6.1**	**A**	**6.1**	**A**
Wading River Manor Road & Grumman Boulevard	WB	L	11.2	B	11.1	B
		R	5.2	A	5.1	A
		Approach	8.5	A	9.0	A
	NB	T	5.1	A	6.3	A
		R	0.0	A	0.1	A
		Approach	4.2	A	4.8	A
	SB	L	5.1	A	5.4	A
		T	5.0	A	6.1	A
		Approach	5.0	A	6.0	A
	Overall		**5.1**	**A**	**5.9**	**A**
Wading River Manor Road & North Street	EB	L / LTR	8.8	A	11.6	B
		TR				
		Approach	8.8	A	11.6	B
	WB	LTR	8.6	A	11.1	B
		Approach	8.6	A	11.1	B
	NB	LTR	5.0	A	6.7	A
		Approach	5.0	A	6.7	A
	SB	LTR	4.8	A	6.2	A
		Approach	4.8	A	6.2	A
	Overall		**5.8**	**A**	**7.5**	**A**

Table 22– Signalized Intersection LOS 2035 – Saturday Midday Peak Hour
Continued 4 of 4

	Movement	Lane Group	No Build 2035		Full Build 2035	
			Delay	LOS	Delay	LOS
Wading River Road & LIE North Service Road	WB	LT	32.8	C	32.8	C
		R	0.3	A	0.3	A
		Approach	29.1	C	29.1	C
	NB	L	10.5	B	10.4	B
		T	12.2	B	12.1	B
		Approach	11.3	B	11.3	B
	SB	T	16.8	B	17.0	B
		R	4.5	A	4.4	A
		Approach	11.5	B	11.2	B
	Overall		**15.2**	**B**	**14.8**	**B**
Wading River Road & LIE South Service Road	EB	L	22.9	C	23.8	C
		LT	23.0	C	23.9	C
		R	6.8	A	6.8	A
		Approach	12.0	B	13.2	B
	NB	T	13.0	B	13.2	B
		R	2.8	A	2.8	A
		Approach	9.7	A	9.9	A
	SB	L	8.7	A	9.1	A
		T	22.7	C	23.3	C
		Approach	21.7	C	22.3	C
	Overall		**13.2**	**B**	**13.8**	**B**

Table 23 - Unsignalized Intersection LOS 2035 – AM Peak Hour

Intersection	Critical Approach/ Movement	No Build 2035		Full Build 2035	
		Delay	LOS	Delay	LOS
Grumman Boulevard & West Site Access	EB L	7.8	A	8.4	A
	SB	13.4	B	23.2	C

Table 24 - Unsignalized Intersection LOS 2035 – PM Peak Hour

Intersection	Critical Approach/ Movement	No Build 2035		Full Build 2035	
		Delay	LOS	Delay	LOS
Grumman Boulevard & West Site Access	EB L	8.5	A	9.3	A
	SB	17.2	C	49.9	E

Table 25 - Unsignalized Intersection LOS 2035 – Saturday Midday Peak Hour

Intersection	Critical Approach/ Movement	No Build 2035		Full Build 2035	
		Delay	LOS	Delay	LOS
Grumman Boulevard & West Site Access	EB L	7.4	A	7.5	A
	SB	9.2	A	9.4	A

As revealed in Tables 20 – 25, almost all the study intersections were found to be operating poorly during one or more of the time periods analyzed. Therefore, the twelve signalized and one unsignalized intersections were re-analyzed with capacity mitigation and/or signal improvements, and the results are presented in the next section of this report.

Mitigation 2035

The Full Build 2035 analysis reveals that mitigation is necessary at the various key intersections in order to accommodate the volumes generated by the scaled down program mix. Therefore, various measures of mitigation were applied to the network and study intersections. These are capacity mitigations and/or signal improvements. The analysis with mitigation is detailed in this section of the report.

The mitigation measures utilized at each location are described in Table 26. In addition, the additional changes proposed to the layout of the site access intersections are also included. The changes/mitigation proposed in 2025 are also included in the table for easy comparison and to understand the additional proposals.

Table 26 - Table of Mitigation 2035… 1 of 4

Location		Capacity		Signal Improvements	
		Proposed in 2025	**Additional Changes Proposed in 2035**	**Proposed in 2025**	**Additional Changes Proposed in 2035**
1	**NY 25 & Wading River Manor Road**	Eastbound – One exclusive left turn lane, two through lanes and one exclusive right turn lane Westbound – One exclusive left turn lane, two through lanes and one exclusive right turn lane Northbound - One exclusive left turn lane, one through lane and one exclusive right turn lane Southbound - One exclusive left turn lane, one through lane and one exclusive right turn lane	Eastbound – No Change Proposed Westbound – Two exclusive left turn lanes, two through lanes and one exclusive right turn lane Northbound - One exclusive left turn lane, one through lane and two exclusive right turn lane Southbound - Two exclusive left turn lanes, one through lane and one exclusive right turn lane	Multi-phase Actuated-Coordinated signal East-West Lefts turns fully protected North-South Left turns protected/permitted AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals	AM/PM Cycle length: 120 seconds Saturday Cycle length : 100 Seconds SB right turn overlaps EBL NB right turn overlaps WBL Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals
2	**NY 25 & Burman Boulevard (Site Access)**	Eastbound – Two through lanes and one exclusive right turn lane Westbound – Two exclusive left turn lanes and two through lanes Northbound - Two exclusive left turn lanes and two exclusive right turn lanes	Eastbound – Two through lanes and two exclusive right turn lane Westbound – No Change Proposed Northbound - No Change Proposed	Multi-phase Actuated-Coordinated signal Westbound Lefts turns fully protected EB right turn overlaps NBL NB right turn overlaps WBL AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals	AM/PM Cycle length: 120 seconds Saturday Cycle length : 100 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals
3	**NY 25 & NY 25A / East Site Access**	Eastbound – One exclusive left turn lane, two through lanes and one exclusive right turn lane Westbound - Two exclusive left turn lanes, two through lanes and one channelized right turn lane Northbound - Two exclusive left turn lanes, one through and one exclusive right turn lane Southbound - Two exclusive left turn lanes, one through and one channelized right turn lane	Eastbound – No Change Proposed Westbound - No Change Proposed Northbound - Two exclusive left turn lanes, one through and two exclusive right turn lanes Southbound - No Change Proposed	Multi-phase Actuated-Coordinated signal Westbound Lefts turns fully protected Northbound Lefts turns fully protected Other left turns protected/permitted WB right turn overlaps SBL NB right turn overlaps WBL AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals	AM/PM Cycle length: 120 seconds Saturday Cycle length : 100 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals

Table 26 – Table of Mitigation 2035… Continued 2 of 4

Location		Capacity		Signal Improvements	
		Proposed in 2025	**Additional Changes Proposed in 2035**	**Proposed in 2025**	**Additional Changes Proposed in 2035**
4	**NY 25 & Edwards Avenue**	Eastbound – One exclusive left turn lane, two through lanes and an exclusive right turn lane Westbound – One exclusive left turn lane, one through lane and a shared through/right turn lane Northbound - One exclusive left turn lane, one shared through /right turn lane Southbound - One exclusive left turn lane, one through lane and one exclusive right turn lane	No change proposed	Multi-phase Actuated-Coordinated signal All left turns protected/permitted AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals	AM/PM Cycle length: 120 seconds Saturday Cycle length : 100 Seconds SB right turn overlaps EBL Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals
5	**NY 25 & Manor Road/Splish Splash Drive**	Eastbound – One exclusive left turn lane, one through lane and shared through/right turn lane Westbound – One exclusive left turn lane, one through lane and a shared through/right turn lane Northbound - No Change Proposed Southbound - No Change Proposed		Multi-phase Actuated-Coordinated signal AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals	AM/PM Cycle length: 120 seconds Saturday Cycle length : 100 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals
6	**NY 25 & Calverton National Cemetery/Site Access**	Eastbound – One exclusive left turn lane, two through lanes and an exclusive right turn lane Westbound – Two exclusive left turn lanes and two through lanes and one exclusive right turn lane Northbound - One exclusive left turn lane, a shared left turn / though lane and one exclusive right turn lane Southbound - No change proposed	Eastbound – No change proposed Westbound – No change proposed Northbound - One exclusive left turn lane, a shared left turn / though lane and two exclusive right turn lanes Southbound - No change proposed	Signalize Multi-phase Actuated-Coordinated signal Westbound Lefts turns fully protected Eastbound left turns protected/permitted North-south Split phasing AM/PM Cycle length: 100 seconds Saturday Cycle length : 90 Seconds Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals	AM/PM Cycle length: 120 seconds Saturday Cycle length : 100 Seconds NB right turn overlaps WBL EB right turn overlaps NBL Optimize phase splits to correlate to future volumes. Optimize offsets to the adjacent signals

Table 26 – Table of Mitigation 2035… Continued 3 of 4

Location		Capacity		Signal Improvements	
		Proposed in 2025	**Additional Changes Proposed in 2035**	**Proposed in 2025**	**Additional Changes Proposed in 2035**
7	**Edwards Avenue & River Road**	No Change Proposed	Eastbound – No change proposed Westbound – No change proposed Northbound - One exclusive left turn lane, a shared left turn / through lane and one channelized right turn lane Southbound - No change proposed	Signalize Two-phase semi-actuated signal with permitted left turns Northbound approach leading 80 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes	North-south split phasing EB right turn overlaps NBL 90 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes
8	**Grumman Boulevard & Burman Boulevard (Site Access)**	Eastbound – One exclusive left turn lane and one through lane Westbound – Single shared through / right turn lane Southbound - One exclusive left turn lane and one exclusive right turn lane	Eastbound – Two exclusive left turn lanes and one through lane Westbound – No change proposed Southbound - No change proposed	Signalize Two-phase semi-actuated signal with permitted left turns 70 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes	80 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes
9	**New Intersection Grumman Boulevard & West Site Access**	Eastbound – One exclusive left turn lane, one through lane Westbound – Single shared through / right turn lane Southbound - One exclusive left turn lane and one exclusive right turn lane	Eastbound – One exclusive left turn lane, one through lane Westbound – One through lane and an exclusive right turn lane Southbound - One exclusive left turn lane and one exclusive right turn lane	Unsignalized Intersection Southbound Approach Stop Controlled	Signalize Two-phase semi-actuated signal with permitted Southbound left turns 80 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes
10	**Wading River Manor Road & Grumman Boulevard**	Westbound – Two exclusive left turn lanes and one free channelized right turn lane Northbound - One through lane and a free channelized right turn lane Southbound - One exclusive left turn lane and a through lane	No change proposed	Signalize Two-phase semi-actuated signal with permitted Southbound left turns 70 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes	Optimize phase splits, vary with time period to correlate to future volumes

Table 26 – Table of Mitigation 2035… Continued 4 of 4

Location		Capacity		Signal Improvements	
		Proposed in 2025	**Additional Changes Proposed in 2035**	**Proposed in 2025**	**Additional Changes Proposed in 2035**
11	**Wading River Manor Road & North Street**	Eastbound – Single shared left turn/ through and right turn lane Westbound – No change proposed Northbound - No change proposed Southbound - No change proposed	Eastbound – One exclusive left turn lane and a shared through and right turn lane Westbound – No change proposed Northbound - No change proposed Southbound - No change proposed	Signalize Two-phase semi-actuated signal with permitted left turns 70 Second cycle all time periods Optimize phase splits, vary with time period to correlate to future volumes	EB left turn protected/permitted AM/PM Cycle length: 100 seconds Saturday Cycle length : 80 Seconds Optimize phase splits, vary with time period to correlate to future volumes
12	**Wading River Manor Road & LIE North Service Road**	Westbound – No change proposed Northbound - One exclusive left turn lane and two through lanes Southbound - No change proposed	No change proposed	Signalize Two-phase semi-actuated signal with protected/permitted Northbound left turns AM/PM Cycle length: 80seconds Saturday Cycle length : 70 Seconds Optimize phase splits, vary with time period to correlate to future volumes	No Change Proposed
13	**Wading River Manor Road & LIE South Service Road**	Signalized Eastbound – One exclusive left turn lane, one shared left turn / through lane, and one right turn lane Northbound - No change proposed Southbound - No change proposed	No change proposed	Signalize Two-phase semi-actuated signal with protected/permitted Southbound left turns AM/PM Cycle length: 80seconds Saturday Cycle length : 70 Seconds Optimize phase splits, vary with time period to correlate to future volumes	No Change Proposed

The network was re-analyzed with the identified mitigation in order to measure the effectiveness of the proposed improvements at the various intersections. Tables 27, 28 and 29 present the results of this analysis for the signalized intersections for weekday a.m., p.m. and Saturday midday peak periods, respectively. For ease of comparison, the tables also include the corresponding No-Build and Build condition results.

Table 27 - Full Build 2035 Mitigation – AM Midday Peak Hour

Intersection	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	55.6	E	58.4	E	15.5	B
		T	35.0	D	180.0	F	48.4	D
		R	0.8	A	1.0	A	0.8	A
		Approach	33.1	C	159.9	F	42.9	D
	WB	L	55.0	E	66.7	E	19.4	B
		T	36.9	D	41.6	D	11.5	B
		R	5.6	A	7.4	A	0.6	A
		Approach	36.6	D	41.6	D	11.5	B
	NB	L	28.8	C	25.7	C	29.2	C
		T	51.9	D	43.0	D	69.5	E
		R	22.8	C	142.3	F	51.5	D
		Approach	30.4	C	113.9	F	52.0	D
	SB	L	44.7	D	130.1	F	54.8	D
		T	32.5	C	30.0	C	37.8	D
		R	6.6	A	6.0	A	4.3	A
		Approach	29.9	C	86.6	F	39.8	D
	Overall		**32.6**	**C**	**117.3**	**F**	**38.7**	**D**
NY 25 & West Site Access / Calverton National Cemetery	EB	L	10.8	B	12.8	B	14.2	B
		T	19.0	B	202.1	F	54.3	D
		R	0.8	A	0.6	A	5.2	A
		Approach	15.9	B	160.1	F	44.1	D
	WB	L	19.6	B	35.3	D	52.1	D
		T	6.1	A	4.5	A	8.2	A
		R	0.5	A	0.2	A	1.2	A
		Approach	11.3	B	20.0	C	30.2	C
	NB	L	47.4	D	49.2	D	61.9	E
		LT	47.3	D	48.8	D	61.8	E
		R	7.4	A	10.2	B	23.9	C
		Approach	26.0	C	27.8	C	41.2	D
	SB	L	49.0	D	49.0	D	68.1	E
		TR	19.2	B	19.1	B	26.2	C
		Approach	33.8	C	33.8	C	46.8	D
	Overall		**15.3**	**B**	**110.2**	**F**	**39.8**	**D**
NY 25 & Burman Boulevard	EB	T	8.6	A	15.9	B	13.8	B
		R	6.9	A	40.6	D	5.3	A
		Approach	7.9	A	27.4	C	9.8	A
	WB	L	34.7	C	189.9	F	31.3	C
		T	7.6	A	12.3	B	2.0	A
		Approach	19.6	B	95.7	F	15.8	B
	NB	L	43.4	D	39.9	D	55.3	E
		R	16.0	B	14.9	B	16.2	B
		Approach	29.8	C	27.5	C	35.8	D
	Overall		**14.7**	**B**	**58.4**	**E**	**14.3**	**B**

Table 27– Full Build 2035 Mitigation – AM Midday Peak Hour …Continued 2 of 4

Intersection	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & NY 25A / East Site Access	EB	L	24.7	C	29.5	C	25.5	C
		T	39.7	D	53.4	D	15.3	B
		R	13.6	B	25.7	C	3.6	A
		Approach	31.7	C	41.6	D	11.3	B
	WB	L	49.0	D	67.8	E	48.4	D
		T	25.7	C	76.0	E	25.5	C
		R	7.0	A	9.1	A	5.4	A
		Approach	26.4	C	66.0	E	28.0	C
	NB	L	43.9	D	45.7	D	52.8	D
		T	40.4	D	41.2	D	56.7	E
		R	28.8	C	26.6	C	29.5	C
		Approach	37.2	D	37.2	D	44.2	D
	SB	L	49.2	D	53.0	D	53.4	D
		T	40.0	D	44.9	D	60.2	E
		R	5.7	A	14.9	B	20.9	C
		Approach	39.2	D	41.5	D	46.4	D
	Overall		**31.9**	**C**	**51.8**	**D**	**28.7**	**C**
NY 25 & Edwards Avenue	EB	L	17.3	B	19.1	B	41.7	D
		T	29.5	C	33.4	C	15.7	B
		R	24.6	C	25.4	C	14.3	B
		Approach	28.0	C	31.0	C	16.9	B
	WB	L	17.2	B	22.7	C	15.3	B
		TR	42.3	D	217.9	F	52.3	D
		Approach	41.5	D	213.7	F	51.4	D
	NB	L	42.4	D	60.8	E	67.3	E
		TR	31.6	C	31.0	C	42.6	D
		Approach	37.6	D	49.2	D	57.8	E
	SB	L	23.1	C	22.7	C	30.7	C
		T	59.9	E	54.5	D	71.0	E
		R	19.8	B	60.0	E	47.5	D
		Approach	38.8	D	53.9	D	54.9	D
	Overall		**35.3**	**D**	**106.7**	**F**	**40.0**	**D**
NY 25 & Splish Splash Drive	EB	L	6.4	A	14.5	B	18.3	B
		TR	11.9	B	23.9	C	22.4	C
		Approach	11.5	B	23.2	C	22.1	C
	WB	L	5.6	A	5.5	A	6.2	A
		TR	15.3	B	23.2	C	20.8	C
		Approach	15.2	B	23.0	C	20.7	C
	NB	LT	35.5	D	36.0	D	42.1	D
		R	33.1	C	33.4	C	39.2	D
		Approach	34.7	C	35.2	D	41.1	D
	SB	LTR	42.6	D	46.0	D	51.2	D
		Approach	42.6	D	46.0	D	51.2	D
	Overall		**16.5**	**B**	**25.3**	**C**	**24.3**	**C**

Table 27– Full Build 2035 Mitigation – AM Midday Peak Hour … Continued 3 of 4

Intersection	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	LT	27.3	C	27.1	C	32.5	C
		R	11.2	B	11.2	B	6.1	A
		Approach	12.1	B	12.0	B	7.5	A
	WB	LTR	30.1	C	29.8	C	33.1	C
		Approach	30.1	C	29.8	C	33.1	C
	NB	L					27.2	C
		LT	34.5	C	201.2	F	29.8	C
		R	1.7	A	1.8	A	0.7	A
		Approach	32.6	C	192.6	F	27.4	C
	SB	LTR	9.1	A	9.4	A	36.4	D
		Approach	9.1	A	9.4	A	36.4	D
	Overall		**21.6**	**C**	**109.5**	**F**	**28.9**	**C**
Grumman Boulevard & Burman Boulevard	EB	L	14.5	B	158.3	F	16.7	B
		T	3.7	A	4.2	A	3.6	A
		Approach	13.0	B	141.5	F	15.3	B
	WB	T / TR	2.0	A	3.7	A	21.7	C
		R					6.8	A
		Approach	2.0	A	3.7	A	11.6	B
	SB	L	28.5	C	28.9	C	24.3	C
		R	10.5	B	9.9	A	2.0	A
		Approach	17.4	B	17.0	B	9.4	A
	Overall		**10.3**	**B**	**79.5**	**E**	**13.3**	**B**
Wading River Manor Road & Grumman Boulevard	WB	L	13.1	B	17.5	B	16.6	B
		R	6.1	A	8.0	A	8.1	A
		Approach	11.4	B	15.9	B	15.2	B
	NB	T	7.2	A	10.8	B	8.0	A
		R	0.9	A	2.1	A	1.3	A
		Approach	3.4	A	5.5	A	4.0	A
	SB	L	6.3	A	8.3	A	6.4	A
		T	6.7	A	7.2	A	6.0	A
		Approach	6.6	A	7.4	A	6.1	A
	Overall		**5.0**	**A**	**6.9**	**A**	**5.3**	**A**
Wading River Manor Road & North Street	EB	L / LTR	30.8	C	41.5	D	49.3	D
		TR					19.4	B
		Approach	30.8	C	41.5	D	46.3	D
	WB	LTR	19.2	B	18.1	B	45.7	D
		Approach	19.2	B	18.1	B	45.7	D
	NB	LTR	16.3	B	166.1	F	49.0	D
		Approach	16.3	B	166.1	F	49.0	D
	SB	LTR	6.6	A	8.7	A	6.8	A
		Approach	6.6	A	8.7	A	6.8	A
	Overall		**15.5**	**B**	**117.9**	**F**	**40.0**	**D**

Table 27 – Full Build 2035 Mitigation – AM Midday Peak Hour … Continued 4 of 4

Intersection	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
Wading River Road & LIE North Service Road	WB	LT	23.4	C	21.8	C	17.9	B
		R	0.4	A	0.3	A	0.2	A
		Approach	15.6	B	14.5	B	11.9	B
	NB	L	22.2	C	27.8	C	45.1	D
		T	14.6	B	22.4	C	28.7	C
		Approach	17.8	B	24.1	C	34.1	C
	SB	T	23.1	C	24.4	C	28.6	C
		R	4.5	A	4.6	A	5.8	A
		Approach	13.2	B	13.3	B	15.7	B
	Overall		**16.7**	**B**	**21.6**	**C**	**29.9**	**C**
Wading River Road & LIE South Service Road	EB	L	38.9	D	63.0	E	40.1	D
		LT	39.0	D	63.5	E	40.3	D
		R	5.7	A	5.1	A	4.3	A
		Approach	30.3	C	52.5	D	33.5	C
	NB	T	42.6	D	161.7	F	22.4	C
		R	6.6	A	8.5	A	4.7	A
		Approach	34.9	C	132.4	F	18.9	B
	SB	L	16.5	B	18.1	B	29.8	C
		T	29.8	C	32.6	C	57.1	E
		Approach	28.0	C	30.8	C	53.5	D
	Overall		**32.5**	**C**	**90.3**	**F**	**28.4**	**C**
Grumman Boulevard & West Site Access	EB	L					4.6	A
		T					6.7	A
		Approach					6.2	A
	WB	T					10.8	B
		R					3.3	A
		Approach					6.8	A
	SB	L					19.4	B
		R					9.4	A
		Approach					13.2	B
	Overall						**6.6**	**A**

Table 28 - Full Build 2035 Mitigation – PM Midday Peak Hour

Intersection	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	56.3	E	56.3	E	40.5	D
		T	26.5	C	34.4	C	29.0	C
		R	0.5	A	0.7	A	0.4	A
		Approach	29.6	C	34.7	C	27.7	C
	WB	L	64.2	E	62.1	E	54.9	D
		T	21.5	C	34.2	C	29.6	C
		R	3.3	A	9.1	A	13.8	B
		Approach	25.0	C	34.2	C	31.2	C
	NB	L	39.1	D	38.6	D	38.1	D
		T	47.5	D	51.5	D	62.2	E
		R	0.9	A	1.7	A	22.7	C
		Approach	35.2	D	34.1	C	43.7	D
	SB	L	33.4	C	39.9	D	57.5	E
		T	43.9	D	43.4	D	50.1	D
		R	10.2	B	10.0	A	13.1	B
		Approach	24.4	C	26.8	C	34.8	C
	Overall		**27.3**	**C**	**33.5**	**C**	**32.3**	**C**
NY 25 & West Site Access / Calverton National Cemetery	EB	L	10.2	B	32.3	C	40.5	D
		T	9.1	A	14.8	B	15.6	B
		R	0.8	A	2.7	A	0.7	A
		Approach	8.6	A	14.2	B	15.0	B
	WB	L	52.7	D	55.8	E	49.1	D
		T	16.7	B	38.5	D	32.0	C
		R	0.4	A	0.0	A	0.5	A
		Approach	17.7	B	38.9	D	32.5	C
	NB	L	51.3	D	57.7	E	60.0	E
		LT	51.6	D	58.1	E	60.0	E
		R	15.3	B	19.7	B	32.1	C
		Approach	31.8	C	37.1	D	44.8	D
	SB	L	48.9	D	42.0	D	64.9	E
		TR	18.5	B	21.1	C	22.6	C
		Approach	33.4	C	31.3	C	43.4	D
	Overall		**18.3**	**B**	**32.8**	**C**	**31.8**	**C**
NY 25 & Burman Boulevard	EB	T	39.1	D	76.1	E	37.2	D
		R	0.3	A	0.5	A	3.4	A
		Approach	34.0	C	65.2	E	32.3	C
	WB	L	26.1	C	23.6	C	47.1	D
		T	27.1	C	27.3	C	16.6	B
		Approach	27.0	C	26.8	C	20.8	C
	NB	L	40.2	D	100.7	F	44.3	D
		R	20.3	C	23.8	C	24.8	C
		Approach	31.1	C	64.2	E	35.0	D
	Overall		**30.8**	**C**	**54.8**	**D**	**29.9**	**C**

Table 28 – Full Build 2035 Mitigation – PM Midday Peak Hour … Continued 2 of 4

Intersection	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & NY 25A / East Site Access	EB	L	29.1	C	84.5	F	58.1	E
		T	46.2	D	220.0	F	51.6	D
		R	0.1	A	0.5	A	1.2	A
		Approach	42.3	D	190.5	F	50.3	D
	WB	L	45.5	D	49.2	D	65.7	E
		T	34.6	C	48.7	D	23.8	C
		R	15.7	B	37.7	D	37.2	D
		Approach	25.4	C	43.6	D	32.2	C
	NB	L	38.3	D	36.4	D	45.5	D
		T	50.5	D	55.8	E	74.6	E
		R	7.8	A	20.7	C	41.7	D
		Approach	28.5	C	34.0	C	49.8	D
	SB	L	56.5	E	56.5	E	52.5	D
		T	38.0	D	41.2	F	46.5	D
		R	0.7	A	1.1	A	1.4	A
		Approach	47.3	D	45.5	D	42.8	D
	Overall		**34.5**	**C**	**99.2**	**F**	**43.2**	**D**
NY 25 & Edwards Avenue	EB	L	41.4	D	76.5	E	59.6	E
		T	31.2	C	103.8	F	26.8	C
		R	18.5	B	19.3	B	4.7	A
		Approach	30.8	C	91.0	F	28.6	C
	WB	L	16.8	B	19.1	B	19.9	B
		TR	37.9	D	74.6	E	43.0	D
		Approach	37.3	D	73.0	E	42.3	D
	NB	L	56.8	E	61.1	E	54.6	D
		TR	45.9	D	45.9	D	48.7	D
		Approach	51.5	D	53.8	D	51.7	D
	SB	L	23.9	C	23.9	C	29.2	C
		T	50.8	D	50.8	D	64.6	E
		R	1.3	A	3.2	A	6.9	A
		Approach	36.5	D	34.9	C	45.0	D
	Overall		**35.7**	**D**	**78.1**	**E**	**36.6**	**D**
NY 25 & Splish Splash Drive	EB	L	8.7	A	9.6	A	7.1	A
		TR	18.8	B	26.5	C	8.2	A
		Approach	17.8	B	24.9	C	8.1	A
	WB	L	4.0	A	4.7	A	4.0	A
		TR	13.5	B	16.0	B	13.2	B
		Approach	13.5	B	16.0	B	13.2	B
	NB	LT	44.3	D	44.5	D	58.7	E
		R	40.5	D	40.3	D	49.8	D
		Approach	42.7	D	42.7	D	54.9	D
	SB	LTR	33.3	C	33.0	C	43.1	D
		Approach	33.3	C	33.0	C	43.1	D
	Overall		**17.3**	**B**	**22.3**	**C**	**12.9**	**B**

Table 28 – Full Build 2035 Mitigation – PM Midday Peak Hour … Continued 3 of 4

Intersection	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	LT	27.1	C	25.3	C	29.7	C
		R	9.8	A	17.5	B	10.2	B
		Approach	11.1	B	17.9	B	11.1	B
	WB	LTR	31.5	C	27.8	C	32.5	C
		Approach	31.5	C	27.8	C	32.5	C
	NB	L					18.8	B
		LT	6.8	A	10.2	B	33.5	C
		R	1.0	A	1.3	A	0.1	A
		Approach	6.5	A	9.8	A	29.2	C
	SB	LTR	8.1	A	10.1	B	32.0	C
		Approach	8.1	A	10.1	B	32.0	C
	Overall		**9.2**	**A**	**12.7**	**B**	**25.8**	**C**
Grumman Boulevard & Burman Boulevard	EB	L	9.7	A	12.0	B	21.5	C
		T	16.7	B	21.2	C	14.8	B
		Approach	15.5	B	19.4	B	16.1	B
	WB	T / TR	6.0	A	6.5	A	20.5	C
		R					7.6	A
		Approach	6.0	A	6.5	A	14.8	B
	SB	L	19.7	B	24.9	C	22.7	C
		R	6.4	A	8.0	A	7.0	A
		Approach	10.7	B	13.5	B	12.2	B
	Overall		**12.4**	**B**	**15.2**	**B**	**14.0**	**B**
Wading River Manor Road & Grumman Boulevard	WB	L	17.5	B	28.2	C	19.4	B
		R	4.8	A	4.7	A	3.8	A
		Approach	15.6	B	25.8	C	17.9	B
	NB	T	12.9	B	14.6	B	15.2	B
		R	0.1	A	0.1	A	0.1	A
		Approach	10.4	B	10.9	B	11.4	B
	SB	L	9.0	A	10.2	B	11.1	B
		T	16.7	B	29.0	C	26.1	C
		Approach	16.4	B	28.4	C	25.6	C
	Overall		**14.3**	**B**	**22.8**	**C**	**18.6**	**B**
Wading River Manor Road & North Street	EB	L / LTR	21.8	C	26.8	C	37.0	D
		TR					23.1	C
		Approach	21.8	C	26.8	C	31.0	C
	WB	LTR	20.0	C	21.5	C	39.4	D
		Approach	20.0	C	21.5	C	39.4	D
	NB	LTR	3.7	A	4.6	A	5.5	A
		Approach	3.7	A	4.6	A	5.5	A
	SB	LTR	7.6	A	34.3	C	38.1	D
		Approach	7.6	A	34.3	C	38.1	D
	Overall		**7.9**	**A**	**27.3**	**C**	**30.6**	**C**

Table 28 – Full Build 2035 Mitigation – PM Midday Peak Hour … Continued 4 of 4

Intersection	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
Wading River Road & LIE North Service Road	WB	LT	29.7	C	28.8	C	41.5	D
		R	0.3	A	0.2	A	0.3	A
		Approach	26.5	C	25.7	C	37.0	D
	NB	L	21.6	C	43.4	D	15.2	B
		T	13.9	B	15.0	B	8.6	A
		Approach	17.1	B	25.5	C	11.1	B
	SB	T	24.3	C	34.7	C	22.8	C
		R	4.9	A	15.8	B	8.1	A
		Approach	13.3	B	23.3	C	13.8	B
	Overall		**16.8**	**B**	**24.2**	**C**	**16.2**	**B**
Wading River Road & LIE South Service Road	EB	L	21.8	C	22.5	C	27.7	C
		LT	21.9	C	22.5	C	27.7	C
		R	46.7	D	51.3	D	40.6	D
		Approach	40.6	D	42.7	D	36.8	D
	NB	T	18.6	B	19.6	B	10.5	B
		R	3.1	A	3.1	A	2.4	A
		Approach	14.2	B	15.1	B	8.2	A
	SB	L	12.3	B	14.1	B	10.0	A
		T	59.2	E	148.9	F	39.2	D
		Approach	55.4	E	139.7	F	37.1	D
	Overall		**38.4**	**D**	**72.6**	**E**	**28.7**	**C**
Grumman Boulevard & West Site Access	EB	L					5.3	A
		T					8.9	A
		Approach					8.7	A
	WB	T					17.3	B
		R					4.2	A
		Approach					16.8	B
	SB	L					27.4	C
		R					8.3	A
		Approach					15.5	B
	Overall						**13.4**	**B**

Table 29 - Full Build 2035 Mitigation – Saturday Midday Peak Hour

	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & Wading River Manor Road	EB	L	45.5	D	45.5	D	11.0	B
		T	18.4	B	19.0	B	18.5	B
		R	0.3	A	0.3	A	0.7	A
		Approach	21.7	C	22.0	C	14.9	B
	WB	L	50.3	D	51.1	D	46.6	D
		T	14.9	B	16.3	B	21.0	C
		R	0.9	A	1.5	A	4.4	A
		Approach	17.1	B	18.6	B	21.8	C
	NB	L	28.2	C	28.2	C	27.9	C
		T	43.6	D	43.6	D	49.9	D
		R	1.1	A	1.5	A	25.8	C
		Approach	27.7	C	26.0	C	36.5	D
	SB	L	27.8	C	30.4	C	46.3	D
		T	44.1	D	44.1	D	49.5	D
		R	6.9	A	6.9	A	4.7	A
		Approach	23.5	C	24.4	C	28.7	C
	Overall		**21.3**	**C**	**21.8**	**C**	**22.8**	**C**
NY 25 & West Site Access / Calverton National Cemetery	EB	L	14.4	B	16.8	B	8.2	A
		T	19.3	B	24.5	C	7.0	A
		R	0.4	A	1.3	A	0.3	A
		Approach	18.3	B	22.6	C	6.6	A
	WB	L	44.7	D	46.9	D	46.2	D
		T	7.8	A	9.7	A	3.7	A
		R	0.0	A	0.2	A	0.3	A
		Approach	9.5	A	12.9	B	7.8	A
	NB	L	40.6	D	41.1	D	46.6	D
		LT	40.2	D	41.2	D	46.8	D
		R	3.6	A	5.6	A	24.6	C
		Approach	20.7	C	22.0	C	34.9	C
	SB	L	42.4	D	43.0	D	48.5	D
		TR	17.5	B	17.5	B	19.6	B
		Approach	29.8	C	30.1	C	33.8	C
	Overall		**15.2**	**B**	**18.9**	**B**	**9.6**	**A**
NY 25 & Burman Boulevard	EB	T	9.6	A	14.1	B	4.5	A
		R	2.6	A	2.9	A	0.6	A
		Approach	9.0	A	12.6	B	4.0	A
	WB	L	26.6	C	24.3	C	50.3	D
		T	7.6	A	6.7	A	1.3	A
		Approach	9.7	A	9.4	A	8.9	A
	NB	L	40.4	D	40.9	D	45.8	D
		R	26.9	C	25.5	C	30.3	C
		Approach	33.6	C	33.1	C	38.0	D
	Overall		**12.3**	**B**	**14.3**	**B**	**9.9**	**A**

Table 29 – Full Build 2035 – Saturday Midday Peak Hour
Continued 2 of 4

	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
NY 25 & NY 25A / East Site Access	EB	L	9.9	A	14.6	B	11.6	B
		T	14.4	B	20.3	C	23.7	C
		R	0.0	A	0.4	A	0.6	A
		Approach	13.4	B	18.5	B	21.0	C
	WB	L	40.4	A	41.7	D	53.0	D
		T	19.3	B	23.2	C	19.1	B
		R	1.6	A	1.9	A	4.3	A
		Approach	11.6	B	14.9	B	14.1	B
	NB	L	39.9	D	40.2	D	42.3	D
		T	37.0	D	37.6	D	40.1	D
		R	0.2	A	0.3	A	31.6	C
		Approach	23.9	C	23.7	C	37.6	D
	SB	L	47.1	D	47.9	D	48.0	D
		T	28.9	C	27.9	C	32.5	C
		R	0.3	A	0.4	A	0.7	A
		Approach	43.4	D	43.1	D	43.3	D
	Overall		**21.6**	**C**	**24.0**	**C**	**24.9**	**C**
NY 25 & Edwards Avenue	EB	L	11.2	B	11.6	B	16.4	B
		T	19.5	B	19.8	B	22.4	C
		R	16.3	B	16.3	B	16.6	B
		Approach	18.5	B	18.8	B	21.3	C
	WB	L	8.7	A	10.0	B	7.5	A
		TR	14.7	B	16.4	B	17.0	B
		Approach	14.4	B	16.1	B	16.6	B
	NB	L	26.2	C	26.7	C	26.9	C
		TR	60.2	E	60.2	E	47.7	D
		Approach	51.4	D	51.3	D	42.1	D
	SB	L	29.6	C	29.6	C	28.0	C
		T	39.8	D	39.8	D	39.8	D
		R	3.6	A	4.7	A	5.4	A
		Approach	27.7	C	27.2	C	27.1	C
	Overall		**23.5**	**C**	**23.8**	**C**	**23.5**	**C**
NY 25 & Splish Splash Drive	EB	L	2.0	A	2.3	A	1.8	A
		TR	5.6	A	6.1	A	3.9	A
		Approach	5.3	A	5.8	A	3.7	A
	WB	L	3.0	A	3.0	A	2.8	A
		TR	9.2	A	9.5	A	8.3	A
		Approach	9.2	A	9.5	A	8.3	A
	NB	LT	35.0	D	35.0	D	51.1	D
		R	35.0	D	35.0	D	45.2	D
		Approach	35.0	D	35.0	D	48.6	D
	SB	LTR	23.0	C	22.8	C	27.2	C
		Approach	23.0	C	22.8	C	27.2	C
	Overall		**8.3**	**A**	**8.7**	**A**	**8.5**	**A**

Table 29 – Full Build 2035 Mitigation – Saturday Midday Peak Hour
Continued 3 of 4

	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
Edwards Avenue & River Road	EB	LT	25.0	C	24.9	C	26.6	C
		R	9.9	A	10.0	B	2.5	A
		Approach	12.8	B	12.4	B	6.3	A
	WB	LTR	26.6	C	27.2	C	25.0	C
		Approach	26.6	C	27.2	C	25.0	C
	NB	L					14.6	B
		LT	6.1	A	7.0	A	21.0	C
		R	1.3	A	1.3	A	1.6	A
		Approach	5.7	A	6.5	A	18.4	B
	SB	LTR	5.3	A	5.8	A	22.6	C
		Approach	5.3	A	5.8	A	22.6	C
	Overall		**7.4**	**A**	**8.0**	**A**	**19.3**	**B**
Grumman Boulevard & Burman Boulevard	EB	L	7.1	A	7.6	A	12.4	B
		T	6.5	A	6.6	A	3.8	A
		Approach	6.8	A	7.3	A	9.4	A
	WB	T / TR	5.0	A	4.8	A	11.9	B
		R					6.4	A
		Approach	5.0	A	4.8	A	9.6	A
	SB	L	9.2	A	9.4	A	12.9	B
		R	3.6	A	3.7	A	5.7	A
		Approach	6.1	A	6.1	A	8.7	A
	Overall		**6.1**	**A**	**6.1**	**A**	**9.1**	**A**
Wading River Manor Road & Grumman Boulevard	WB	L	11.2	B	11.1	B	11.2	B
		R	5.2	A	5.1	A	5.3	A
		Approach	8.5	A	9.0	A	9.1	A
	NB	T	5.1	A	6.3	A	5.3	A
		R	0.0	A	0.1	A	0.1	A
		Approach	4.2	A	4.8	A	4.1	A
	SB	L	5.1	A	5.4	A	5.2	A
		T	5.0	A	6.1	A	5.1	A
		Approach	5.0	A	6.0	A	5.1	A
	Overall		**5.1**	**A**	**5.9**	**A**	**5.2**	**A**
Wading River Manor Road & North Street	EB	L / LTR	8.8	A	11.6	B	30.8	C
		TR					19.2	B
		Approach	8.8	A	11.6	B	24.6	C
	WB	LTR	8.6	A	11.1	B	44.8	D
		Approach	8.6	A	11.1	B	44.8	D
	NB	LTR	5.0	A	6.7	A	6.5	A
		Approach	5.0	A	6.7	A	6.5	A
	SB	LTR	4.8	A	6.2	A	6.3	A
		Approach	4.8	A	6.2	A	6.3	A
	Overall		**5.8**	**A**	**7.5**	**A**	**11.6**	**B**

Table 29 – Full Build 2035 Mitigation – Saturday Midday Peak Hour
Continued 4 of 4

	Movement	Lane Group	No Build 2035		Build 2035		Build Mitigation 2035	
			Delay	LOS	Delay	LOS	Delay	LOS
Wading River Road & LIE North Service Road	WB	LT	32.8	C	32.8	C	39.2	D
		R	0.3	A	0.3	A	0.2	A
		Approach	29.1	C	29.1	C	34.8	C
	NB	L	10.5	B	10.4	B	5.3	A
		T	12.2	B	12.1	B	6.2	A
		Approach	11.3	B	11.3	B	5.8	A
	SB	T	16.8	B	17.0	B	13.4	B
		R	4.5	A	4.4	A	1.5	A
		Approach	11.5	B	11.2	B	7.8	A
	Overall		**15.2**	**B**	**14.8**	**B**	**11.7**	**B**
Wading River Road & LIE South Service Road	EB	L	22.9	C	23.8	C	30.7	C
		LT	23.0	C	23.9	C	30.8	C
		R	6.8	A	6.8	A	8.5	A
		Approach	12.0	B	13.2	B	16.9	B
	NB	T	13.0	B	13.2	B	7.9	A
		R	2.8	A	2.8	A	2.3	A
		Approach	9.7	A	9.9	A	6.1	A
	SB	L	8.7	A	9.1	A	3.9	A
		T	22.7	C	23.3	C	13.9	B
		Approach	21.7	C	22.3	C	13.2	B
	Overall		**13.2**	**B**	**13.8**	**B**	**11.2**	**B**
Grumman Boulevard & West Site Access	EB	L					2.6	A
		T					2.0	A
		Approach					2.1	A
	WB	T					5.0	A
		R					4.4	A
		Approach					4.9	A
	SB	L					11.2	B
		R					7.1	A
		Approach					8.6	A
	Overall						**3.9**	**A**

Review of Tables 27, 28 and 29 reveals that the mitigation measures identified result in an improvement in the overall intersection operating delay and LOS at all the study intersections including the site accesses where mitigation was deemed necessary. The intersection LOS has been restored to the No-Build condition and in a few cases, improved.

Right-of-Way Considerations

When developing the roadway mitigation plan for the proposed subdivision, consideration was given to developing improvements, to the extent possible, which could be put in place without the need for acquisition of private property. This includes the use of public property in the form of existing highway right-of-way and property that is part of the subject property that would be dedicated for that purpose.

However, the results of the analysis performed indicate that there are a number of locations where right-of-way will be required to construct the identified roadway improvements. Based on review of available record plans and tax map information, it is anticipated that the identified roadway mitigation will require the acquisition of private property for highway purposes in the following areas:

- Middle Country Road from east of CR 46 to Wading River Manor Road
- Middle Country Road from east of NY 25A to east of Manor Road/Splish Splash Drive
- Wading River Manor Road north of Middle Country Road (intersection approach widening)
- Edwards Avenue north of Middle Country Road (intersection approach widening)
- Edwards Avenue south of Middle Country Road (intersection approach widening)
- Edwards Avenue north of River Road (intersection approach widening)
- Edwards Avenue south of River Road (intersection approach widening).

Mitigation Phasing

The impact analysis performed for the proposed subdivision focused on two build years, 2025 and 2035, to gauge the potential impacts of the project and develop reasonable improvements to the roadway system to maintain good traffic service in the study area. However, the site will be developed over many years and not in the discrete increments evaluated in the two build years used in this study. Given the long-term nature anticipated for the development of the site, and the fact that the identified roadway improvements are significant and capital intensive, it is unrealistic to expect that the mitigation program would be implemented in one or two phases, but would be conducted in smaller increments over the course of the development of the parcels within the subdivision, dependent upon the nature of the actual uses established on-site and their associated trip generation.

While it is considered elsewhere in this study that there may be the need for short- term interim access points to Middle Country Road for some lots that are developed early in the life of the project, in general, the subdivision access points and internal roadway system should be constructed as early as possible. The intersection configurations for locations 2, 3, 6, 8 and 9 (as indicated in Table 12) should be constructed as described in Table 12.

The following discussion focuses on the off-site mitigation phasing, and identifies trip generation thresholds at which certain mitigation must be in place. It is noted that these thresholds are based on the trip generation associated with the lots within the subdivision. It

should be noted that the trip generation estimates presented earlier in this report are based on development of the lots to the maximum degree that the proposed PD District will allow. In reality, the total amount of square footage of the various types of uses within the subdivision may be significantly less than the maximum yield. As previously indicated, no one can predict, over a multi-year development period, what specific uses would be developed and at what levels. For example, if a significant portion of the site is developed for warehouse uses, minimal traffic would result. Moreover, if a significant area was used as a solar field, virtually no traffic would result from that area. Accordingly, as lots are developed, traffic counts must be collected to determine actual traffic being generated to ensure that the mitigation set forth below is in place when the specific level of traffic generation set forth for each of the mitigation levels below are reached. As counting of the subdivision access points to the external road network would capture traffic not associated with the subdivided lots, these counts should be performed at the individual lot access points. These counts should capture the weekday a.m. peak period of activity as this has been determined to be the critical time period.

Initial Construction (Mitigation Level One) – Prior to the occupancy of any significant developed space within the subdivision, the proposed access roadways should be constructed. The intersection configurations for locations 2, 3, 6, 8 and 9 (as indicated in Table 12) should be constructed as described in Table 12. In addition, given the conditions expected to prevail at the intersection of Middle Country Road and Edwards Avenue, the improvements detailed in Table 12 for location 4 should be in place. It is noted that this improvement requires additional right-of-way. However, this location is currently the worst performing location in the study area currently and will deteriorate further by 2025.

Mitigation Level Two – Prior to occupancy of buildings in the subdivision that increase trip generation of the development during the weekday a.m. peak period above 750 vehicles per hour (combined entering and exiting), the mitigation detailed in Table 12 for locations 1, 5, 7, 10, 12 and 13 shall be completed.

Mitigation Level Three - Prior to occupancy of buildings in the subdivision that increase trip generation of the development during the weekday a.m. peak period above 1,500 vehicles per hour (combined entering and exiting), the mitigation detailed in Table 12 for location 11 shall be completed.

Mitigation Level Four - Prior to occupancy of buildings in the subdivision that increase trip generation of the development during the weekday a.m. peak period above 2,000 vehicles per hour (combined entering and exiting), Middle Country Road should be improved to a five lane section from just east of CR 46 (William Floyd Parkway) through just east of Manor Road /Splish Splash Drive.

Mitigation Level Five – Prior to occupancy of buildings in the subdivision that increase trip generation of the development during the weekday a.m. peak period above 3,000 vehicles per hour (combined entering and exiting), the mitigation detailed in Table 26 for locations 1, 3, 4, 6, 7 and 8 shall be completed.

Mitigation Level Six – Prior to occupancy of buildings in the subdivision that increase trip generation of the development during the weekday a.m. peak period above 4,000 vehicles per hour (combined entering and exiting), the mitigation detailed in Table 26 for locations 2, 5, 9, 10 and 11 shall be completed.

Middle Country Road at William Floyd Parkway Interchange

The NYSDOT has expressed concern that the development of the subdivision may result in traffic volumes at the interchange of Middle Country Road and William Floyd Parkway (CR 46) that could adversely impact the operation of the interchange. Therefore, to forecast and evaluate future operations with the development of the proposed subdivision, existing volumes were obtained for key ramps and mainline segments at the interchange. To these existing volumes, the anticipated traffic increases due to other developments and normal background growth were added. Finally, the anticipated increases that would be seen as a result of the proposed subdivision were added, resulting in Build Condition volumes (2025 and 2035) at the interchange. These volumes were evaluated on a qualitative basis as discussed below.

Peak hour ramp and segment traffic volume data was obtained from ATRs installed in 2011, supplemented with NYSDOT published count data from 2010. These volumes were expanded to the year 2013, established previously as the base (existing) year for this study. The Existing 2013 peak hour traffic volumes at the interchange are presented in Figure WFP-1 in Attachment E. The anticipated background growth to 2025 and the traffic likely to be generated by the other planned developments were combined with the Existing 2013 volumes to obtain the No-Build 2025 volumes, which are presented in Figure WFP-2. The anticipated trip distribution of site-generated traffic at the Middle Country Road -William Floyd Parkway interchange is presented in Figure WFP-3. The trip distribution percentages were then applied to the site-generated traffic to forecast site traffic that is anticipated to traverse the interchange on each ramp and segment. These were then combined with the No-Build 2025 volumes to obtain the Build 2025 volumes and are presented in Figure WFP-4. The anticipated background growth for the period of 2025 through 2035 and the additional traffic likely to be generated by the project site during the same period were combined with Build 2025 volumes to obtain the Full Build 2035 Volumes.

William Floyd Parkway is a high speed, limited access freeway facility in the vicinity of the interchange which consists of two through lanes in each direction. An auxiliary weaving lane is provided in both the northbound and southbound directions between the inner loop ramps to and from Middle Country Road. Acceleration and deceleration lanes are provided at the terminus of all outer ramps with both Middle Country Road and William Floyd Parkway. Middle Country Road also provides two through lanes in each direction in through the area of its interchange with CR 46. An auxiliary weaving lane is provided in both the eastbound and

westbound directions on Middle Country Road between the inner loop ramps to and from CR 46.

A review of the anticipated interchange volumes indicates that even in the 2035 Build condition, ramp volumes within the interchange are not expected to approach levels which would cause the interchange to function poorly. The maximum peak hour ramp volume is expected to occur in 2035 during the weekday p.m. peak hour on the northwest inner-loop ramp at 727 vehicles per hour. This volume is lower than other ramp volumes experienced at other interchanges in the area. The balance of the ramp volumes do not exceed 500 vehicles per hour.

The volume figures and the base ATR data are contained in Attachment E.

Site Access and Circulation

The proposed subdivision has been designed with multiple points of access and an internal roadway system appropriate to accommodate the needs of the future occupants of the site. As noted previously, there are a number of existing access points to the site that would continue to be utilized (and improved) as well as several proposed new access points.

Three access points would be provided on Middle Country Road -- one existing and two newly developed. The westerly site access will be signalized and located opposite the existing access to Calverton National Cemetery. The central access will use the existing Burman Boulevard, a signalized T-intersection. The easterly access will be aligned opposite NY 25A, forming the fourth leg of a currently signalized T-intersection. Thus, three signalized access points will be provided on Middle Country Road along the site frontage.

Two access points would be provided on Grumman Boulevard and River Road, along the south of the site. One of these will be the existing Burman Boulevard T-intersection with River Road, which would be signalized. A second access point would be developed to the west of Burman Boulevard, forming a new T-intersection with Grumman Boulevard which would be signalized by 2035.

The access points proposed for the subdivision have been designed to serve the proposed uses on the site and have been found through the analysis performed herein to provide adequate ingress and egress to and from the adjacent roadway system.

The Subdivision Map includes a system of internal roadways designed to provide connections from the external access point to the proposed lots. These proposed internal roadways, with the exception of some of the roadways leading to the access points, provide a paved width of 37 feet and a 55-foot right-of-way. In addition, the existing Burman Boulevard, which bisects the site between Middle Country Road and River Road, will remain to serve the proposed development. These internal roadways will remain under the jurisdiction and maintenance of the Town of Riverhead. It is recommended that STOP control be installed on the minor legs

of the internal intersections initially. As the subdivision occupancy increases, some of the internal intersections may be candidates for signalization. This situation should be monitored and traffic signals considered if and when they become appropriate.

Potential Interim Access to Middle Country Road

While it is the intention of the Town to minimize the number of access points on the State highway, based on the capital costs and time-frame associated with the development of the internal roadway system within the subdivision, it may be necessary to provide interim access to some of the subdivided lots from Middle Country Road. This interim access would exist until such time that the internal roadway system, or portion of the roadway system can be put in place. As with the development of the proposed access roadways to Middle Country Road, the process of approval of any access point to Middle Country Road would be subject to the review and approval of NYSDOT.

To minimize the number of potential access points to the State highway, any interim access should be provided along a common property line with cross-access agreements sought from adjacent lots so the access points can be combined. Once the internal roadway system is developed to the extent necessary to serve the lot(s) in question, this roadway can be removed and the cross-access agreement extinguished.

Development of any interim access points to Middle Country Road may require that improvements be made to facilitate safe and efficient traffic movements into and out of the site. This could include the development of turning lanes on Middle Country Road. The specific traffic generating characteristics that are associated with a specific use of a lot will need to be examined to determine the access needs of that proposed use. The NYSDOT may require that a traffic study be performed to evaluate the effect of the proposed access point on the highway as part of the highway work permit process. No access point may be developed without the issuance of a NYSDOT highway work permit for construction within the state highway right-of-way.

Public Transportation

The project area is served by public bus through Suffolk County Transit (SCT). SCT Route S58 travels weekdays and weekends between East Northport (Huntington Square Mall) and Riverhead County Center. The eastbound service runs on the following route: East Northport, Commack, Smithtown, St. James, Lake Grove (Smith Haven Mall), Centereach, Selden, Coram, Middle Island, Calverton, Riverhead Tanger Outlets and Riverhead County Center, with connections to other Suffolk County Bus routes from various locations en-route. In the vicinity of the project site Route S58 runs along Middle Country Road - NY 25.

The Long Island Railroad (LIRR) provides service to the Riverhead area via the Riverhead station on the Ronkonkoma Branch. The existing service provided along this portion of the branch is limited however. The Riverhead LIRR station is located at Osborne Avenue and Railroad Street, just north of West Main Street (NY 25) in Riverhead, approximately 8 miles east of the project site.

While no credit was taken for the use of public transportation in this study, it is anticipated that some employees and patrons of the proposed development will take advantage of the presence of this option. The policy of SCT regarding additional or modified bus service is that as demand for the bus service expands or changes, they will consider changes to its existing service to meet that demand. For instance, should the demand for additional or modified bus service to meet the needs of employees and visitors to the project site develop, SCT may revise the bus routing to include buses entering the site of the subdivision, modify other routes to serve the site or add more frequent service.

The bus schedules and maps for the above mentioned route are included in Appendix F.

Walkability and Bicycle Considerations

Significant infrastructure will be provided within the proposed subdivision dedicated to pedestrians and bicyclists. The entire former Calverton NWIRP is ringed by a perimeter path which exists just inside the existing fence. As part of the proposed action, this path will be relocated within the perimeter subdivided parcels to be outside the setback distance prescribed in the proposed zoning for the subdivision. In other isolated areas, the segments of the path that are not present will be established to provide a continuous ring. This alignment will then serve as a multi-use trail for pedestrians and bicyclists that circles the entire property for a length of approximately ten and one-half miles. The presence of this trail will provide recreational and fitness opportunities for the occupants of and visitors to the subdivision and for the public in general.

The roadway system around the proposed subdivision is currently limited in pedestrian and bicycle facilities. In terms of bicycles, Middle Country Road provides wide safety shoulders within the study area. While improvements have been identified for Middle Country Road in this study, which includes widening of Middle Country Road, this widening must be performed to the requirements of the NYSDOT. It is anticipated that any widening of Middle Country Road will include safety shoulder and will likely include a dedicated bicycle lane and sidewalks in areas with any significant roadside development.

Rail Freight Opportunities

As noted previously, the subject property is a portion of a larger property formerly known as the Calverton NWIRP. When that plant was in operation, it was served by a rail spur, which

extended from the Ronkonkoma Branch south of the site near Connecticut Avenue north into the plant. This spur was utilized to move bulk materials and large items from points west to the plant for use in their manufacturing operations. This spur, long in a state of disrepair, was reconstructed and modernized in 2011 and returned to freight operations. It is utilized by some of the existing industrial uses that occupy the Calverton Camelot industrial subdivision, which is located adjacent to the proposed subdivision.

The presence of the rail spur provides an opportunity for its use by future occupants of the EPCAL subdivision and the potential to reduce truck traffic to and from the site. However, no credit for its use was taken in this study.

Construction Impacts

The proposed subdivision of the EPCAL property would result in construction of improvements to the subdivision lots over a period of many years. This study identified two analysis years, 2025 and 2035, as representative forecast years for which to evaluate potential impacts. Given the extended build-out anticipated, the exact duration and nature of construction on specific lots cannot be known at this time. However, specific steps should be taken to ensure that impacts due to construction are minimized.

Based on the scale of the development, the Town should require a construction traffic management and logistics plan be developed and filed with each site plan application. This plan should indicate the following:

- Days/Hours of proposed construction activity
- A description of the construction vehicles to be used on-site and in delivering/removing material to the site
- Designated routes of heavy vehicles to and from the site
- Parking areas for workers and heavy vehicles on each lot on which construction is to occur, so as not to result in parking along the adjacent or internal roadways
- Construction vehicle and materials staging areas.

It shall be made clear through the approval process that heavy vehicles shall arrive and depart the subdivision via major roadways only and avoid secondary minor streets.

Parking

The proposed subdivision and proposed PD District envision a range of potential land uses from light industrial to energy park to multi-family housing and includes uses such as office and retail. As such, there may be a wide range of parking needs within the subdivision. Table 30 presents the proposed minimum number of parking spaces which will be required for various uses within the subdivision.

Any relief from these minimum parking requirements sought by an applicant should proceed through the typical variance process.

Table 30 - Proposed Parking Schedule

Parking Use	Number of Minimum Spaces
Multiple dwellings	1.5 per unit
Hotels, motels, tourist homes, cabins, lodging, rooming, and boarding houses	1 per guest sleeping room or suite
Hospitals	1 per bed + 1 per each employee on max. shift
Medical or Dental Office	1 per 150 sq ft of floor area
Theaters, Auditoriums, or any public assembly area with fixed seats including churches, schools above elementary levels, colleges, and universities	1 per 3 seats
Any public assembly area without fixed seats	1 per 100 sq ft of floor area
Office buildings	1 per 200 sq ft of floor area
Restaurants	1 per 2 seats or 1 per 3 persons legally accommodated, whichever is greater
Retail Stores	1 per 200 sf GFA
Industrial or Manufacturing Establishments	1 per 2 employees during peak employment but at least 1 per 400 sq ft of floor area
Any commercial or business use not otherwise expressly provided for	1 per 300 sq ft of floor area
Warehouse	1.5 per 1000 sf GFA
Golf driving range	1 per driving tee
Golf course	2 per hole
Professional service buildings	1 per 150 sq ft of floor area
Solar Farm	Min. 800 sf paved or gravel area off-street

5.0 Conclusions

Based on the results of the analyses conducted for the purpose of this report, VHB has arrived at the following conclusions:

- The proposed subdivision and redevelopment of the EPCAL property will generate a significant level of new traffic on the adjacent roadway system. A total of thirteen intersections were evaluated for operation and potential impacts. This includes five access points; two existing and three proposed.

- The potential impacts were evaluated at two Build years, 2025 and 2035, to present relevant "snap-shots" of the sites development.

- Through the course of the analysis it was determined that the existing roadway network in the study area cannot support the level of traffic projected with the full build-out of the Theoretical Mixed Use Development Program in 2035, even with the implementation of all roadway mitigation that, at this time, are reasonable to implement given the configuration of the area roadways, available rights-of-way, and other factors (such as Pine Barrens Core Preservation Area land).

- In order to ensure that the traffic generated by the permitted development can be adequately mitigated, as each use is approved, constructed and occupied, traffic counts must be taken to document the total number of trips actually being generated. Once the total number of trips generated reaches 5,000 trips per hour (combined entering and exiting) during the critical weekday a.m. peak hour, no further development can be approved unless additional evaluation and mitigation (as necessary based on the evaluation) is conducted.

- Below the level of 5,000 trips per hour (combined entering and exiting) during the critical weekday a.m. peak hour, the impacted intersections can be mitigated with physical changes such as widening, additional lanes and changes to lane

designations, changes in signal timing parameters, such as cycle, phase-splits and signal progression. Recommendations to this effect have been included in the report.

- Mitigation phasing has been developed, and identifies trip generation thresholds at which certain mitigation must be in place. It is noted that these thresholds are based on the trip generation associated with the development lots within the subdivision.

- It must be understood that no one can predict, over a multi-year development period, what specific uses would be developed and at what levels. For example, if a significant portion of the site is developed for warehouse uses, minimal traffic would result. Moreover, if a significant area was used as a solar field, virtually no traffic would result from that area. Therefore, trip generation associated with the actual mix of uses developed on the site could vary widely.

- As lots are developed, traffic counts must be collected to determine actual traffic being generated to ensure that the mitigation is in place when the specific level of traffic generation set forth for each of the mitigation levels described in this study are reached.

- The proposed access plan contains five points of access which will allow traffic to and from the subdivision to enter and exit at various locations, reducing the additional traffic at any one point. The access plan proposed is more than adequate to serve the subdivision and will provide good traffic service.

- All access points to the adjacent roadway network are proposed to be signalized, in accordance with the mitigation phasing schedule set forth in this study.

- The traffic generated by the development can be accommodated by the adjacent roadway network with the recommended mitigation measures in place.

- The traffic generated by the development is not expected to unduly affect the accident rates on the adjacent roadways.

- The proposed number of parking spaces on each subdivided lot shall be in accordance with the proposed minimum parking requirements set forth in this study.

- While no credit was taken for the use of public transportation in this study, it is anticipated that some employees and patrons of the proposed development will take advantage of the presence of this option.

- The presence of the rail spur provides an opportunity for its use by future occupants of the subdivision and the potential to reduce truck traffic to and from the site.

- The proposed subdivision of the EPCAL property would result in construction of improvements to the subdivision lots over a period of many years. Specific steps,

identified in this study, should be taken to ensure that impacts due to construction are minimized.

- The analysis performed in this study concludes that the development of the proposed subdivision can be accommodated by the surrounding roadway network given the implementation of the identified roadway mitigation and the limiting of the critical site trip generation during the weekday a.m. peak hour to 5,000 trips (combined entering and exiting).