

F. Transportation

This chapter contains an analysis of the transportation-related impacts associated with the Glen Cove Creek Mixed-Use Waterfront Development. The following items are addressed in this section:

- A summary of existing transportation system characteristics at each of the study locations and the roadways within the study area;
- Existing traffic operations at the study intersections during the weekday AM, weekday PM, and Saturday peak hours;
- A summary of crash data and collision diagrams for high accident locations;
- A description of other planned or approved developments within the project study area;
- A description of transportation system improvements already planned within the project study area;
- Forecast year 2016 Future No-Action Condition (without site development) traffic volumes and operations at the study intersections during each of the three peak hours;
- Vehicular trip generation and trip distribution estimates for the Proposed Action;
- Forecast year 2016 “Proposed Action” traffic volumes at the study intersections during each of the three peak hours;
- Forecast year 2016 “Full Build-Out of 96 Acre MW-3” traffic volumes and operations at the study intersections during each of the three peak hours;
- Identified impacts to traffic operations and proposed transportation system improvements;
- A review of proposed parking facilities, including a parking demand analysis;
- A discussion of pedestrian amenities, including linkages to the downtown; and
- A description of existing public transportation facilities and services, as well as those proposed as part of the proposed project.

The above components within the chapter are divided into the following four subchapters: Traffic; Parking; Pedestrians; and Transit.

1. Traffic

Study Area and Study Intersections

The traffic study area, shown in **Exhibit III.F-1**, was defined to include the major access routes to and from the proposed Glen Cove Creek Mixed-Use Waterfront Development.

The following list of 19 study intersections includes those locations which were identified in the original scoping document, as well as additional intersections which were added as a result of discussions with the City's traffic engineering consultant. As noted in the final scope, these intersections, which are depicted in **Exhibit III.F-1**, are those which potentially may be impacted by traffic generated by the proposed development and were, therefore, selected for detailed traffic analysis:

- Glen Cove Avenue/Brewster Street & Pratt Boulevard/Charles Street;
- Glen Cove Avenue & Charles Street;
- Glen Cove Avenue & Morris Avenue;
- Brewster Street & Herb Hill Road/Mill Hill Road;
- Glen Cove Avenue & Shore Road;
- Glen Cove Avenue & Sea Cliff Avenue;
- Glen Cove Avenue & Glen Head Road;
- Glen Cove Road at Route 107 Split;
- Glen Cove Road & Glen Head Road;
- Route 107 & Glen Head Road;
- Glen Cove Avenue & Back Road;
- Glen Cove Road & Back Road/Mary Lane;
- Pratt Boulevard & Continental Place/Bridge Street;
- Brewster Street & Cottage Row/School Street
- Charles Street & Herb Hill Road;
- Herb Hill Road & Dickson Street/Garvies Point Road;
- Forest Avenue & Lattingtown Road/Ford Street;
- Northern Boulevard (Route 25A) & Glen Cove Road; and
- Bryant Avenue & Witte Lane(Route 25A Entrance/Exit)

As discussed below, a comprehensive data collection effort was undertaken to obtain the necessary traffic and roadway data required for operational and safety analyses.

Traffic Data Collection

Data at the study intersections was collected in 2005, 2006, 2007, and 2008. The traffic data collection effort included automatic traffic recorder (“ATR”) counts; manual turning movement; sample vehicle classification counts at select intersections; and an inventory of roadway geometries and physical operating characteristics at each study intersection

In almost all instances, it was found that there was not any substantial difference in counts obtained in 2005 when compared with those obtained more recently. In some cases, the more recent counts were actually lower than earlier counts. This may be due, at least in part, to changes in driving habits resulting from higher gasoline prices and/or the downturn in the economy over the past year or so. At intersections closest to the site, there may have also been a reduction in volumes as a result of businesses in and around the project site closing. At the intersection of Northern Boulevard and Glen Cove Road, more recent counts would likely be skewed as a result of the construction on the Roslyn Viaduct. The 2005 counts which were utilized were obtained prior to commencement of the construction. For these reasons, it was determined that the use of 2005 counts at a limited number of study intersections would be appropriate.

ATR Counts

For the one-week period beginning November 14, 2008, ATR counts were conducted continuously at 15-minute intervals at the following locations:

- Glen Cove Avenue between Pratt Boulevard and Charles Street;
- Brewster Street between Pratt Boulevard and Herb Hill Road;
- Pratt Boulevard between Glen Cove Avenue and Continental Place/Bridge Street; and
- Charles Street between Glen Cove Avenue and Herb Hill Road;

In addition, ATR counts for a one-week period were conducted in June 2005 at the following two locations:

- Glen Cove Road south of Pound Hollow Road; and
- Glen Cove Avenue south of Marcus Lane

A summary of the ATR data is presented in Appendix L (L-1).

Manual Turning Movement/Vehicle Classification Counts

Manual turning movement counts at the following four intersections were performed at 15-minute intervals on Thursday, June 2, 2005 during the morning (7:30 to 9:30 AM) and evening (4:15 to 6:15 PM) peak periods; and on Saturday, June 4, 2005 during the midday peak period (11:00 AM to 1:00 PM):

- Forest Avenue & Lattingtown Road
- Glen Cove Avenue & Sea Cliff Avenue
- Glen Cove Road & Glen Head Road
- Glen Cove Road & Northern Boulevard

During the above counts, vehicles were classified as autos, trucks, or buses.

Turning movement counts at the Brewster Street & Cottage Row/School Street intersection were performed on Tuesday, May 2, 2006 during the morning (7:00 to 9:30 AM) and evening (3:30 to 6:00 PM) peak periods; and on Saturday, May 6, 2006 during the midday peak period (11:00 AM to 3:00 PM).

Manual turning movement and vehicle classification counts at the following four intersections were performed at 15-minute intervals on Tuesday, June 5, 2007 during the morning (7:00 to 9:30 AM) and evening (3:30 to 6:00 PM) peak periods; and on Saturday, June 9, 2007 during the midday peak period (11:00 AM to 3:00 PM):

- Glen Cove Avenue & Shore Road
- Glen Cove Avenue & Glen Head Road
- Glen Cove Avenue & Back Road
- Glen Cove Road & Back Road/Mary Lane

Manual turning movement counts at the following five intersections were performed at 15-minute intervals on Thursday, September 27, 2007 during the morning (7:00 to 9:30 AM) and evening (3:30 to 6:00 PM) peak periods; and on Saturday, October 20, 2007 during the midday peak period (11:00 AM to 2:00 PM):

- Brewster Street & Herb Hill Road/Mill Hill Road/Shopping Center
- Brewster Street/Glen Cove Avenue & WB Charles Street (Pratt Blvd)
- Glen Cove Avenue & Charles Street
- Pratt Boulevard & Bridge Street/Continental Place
- Charles Street & Herb Hill Road

Manual turning movement counts at the following three intersections were performed at 15-minute intervals on Thursday, November 13, 2008 during the morning (7:00 to 9:30 AM) and evening (3:30 to 6:00 PM) peak periods; and on Saturday, November 15, 2008 during the midday peak period (11:00 AM to 3:00 PM):

- Glen Cove Avenue & Morris Avenue
- Herb Hill Road & Dickson Street/Garvies Point Road
- Glen Head Road & NY 107

Manual turning movement counts were conducted at the intersection of Bryant Avenue and Witte Lane at 15 minute intervals on Tuesday, January 27, 2009 during the morning (6:00 AM to 9:30 AM) and evening (3:00 to 6:00 PM) peak periods; and on Saturday, January 24, 2009 during the midday peak period (11:00 AM to 3:00 PM).

Preliminary counts, field observations, and the ATR data indicate that traffic volumes in the study area during the 6:00 AM to 7:00 AM hour are significantly lower than during the actual AM peak. This is consistent with the findings of numerous traffic studies throughout Long Island, where the morning peak typically occurs between 7:00 AM and 9:00 AM. Based on these findings, it was determined that manual turning movement counts during the 6:00 AM to 7:00 AM hour were not necessary to determine the AM peak hour volumes.

Based on New York State Department of Transportation Seasonal Adjustment Factors, the majority of the turning movement counts (14 of 18 intersections) were taken in months when traffic is above average. Of the remaining four intersections, only one was counted in January, and three were counted in November, when the under average change is minimal. Therefore, the application of seasonal adjustments would essentially result in lower overall intersection volumes. This would result in a less conservative approach for analysis purposes. For this reason, it was determined that the actual counts would be utilized without any (primarily downward) adjustment.

Complete turning movement counts are presented in Appendix L (L-2). A table of the seasonal adjustment factors (Group 30) is included at the end of Appendix L-2. Factor Group 30 was chosen as the most appropriate factor group since the City of Glen Cove does not experience large seasonal variations in traffic (greater than 10%), and the NYSDOT typically uses Factor Group 30 to adjust traffic counts on Long Island, if necessary.

Intersection Inventory

The physical and operational characteristics of each study intersection were inventoried in the field. This inventory specifically included:

- Street directions;
- Number and configuration of lanes;
- Crosswalk locations and crosswalk widths;
- Pavement markings;
- Curbside parking regulations;
- Turning restrictions and prohibitions;
- Type of intersection traffic control;
- Signal timing and phasing sequence;

- Bus stop locations and bus routes; and
- Truck routes and restrictions.

The intersection geometries are provided in Appendix L (L-3).

Exhibit III.F-1

Study Intersections

INSERT SEPARATE GRAPHIC

a) Existing Traffic Conditions

Roadway Network (within the Project Area)

The existing street network around the project area includes a number of primary north-south and east-west roadways which are capable of accommodating high volumes of through traffic, as well as minor roadways with low volumes of local traffic. Average Daily Traffic (“ADT”) volumes on the study area roadways were determined using the ATR count data. Annual Average Daily Traffic (“AADT”) volumes for the entire year were estimated using the ADTs and NYSDOT seasonal adjustment factors to reflect seasonal fluctuations in traffic. The ADT and AADT volumes on the study roadways are shown in **Table III.F-1**.

One of the two major arterials within the study area is Glen Cove Avenue, a Nassau County arterial roadway. Glen Cove Avenue provides two travel lanes in each direction and additional turning lanes at major intersections. North of the firehouse, Glen Cove Avenue becomes Brewster Street. South of the firehouse, Glen Cove Avenue currently accommodates an AADT of approximately 10,850 and 8,350 vehicles in the northbound and southbound directions, respectively.

Glen Cove Road, also designated as Route 107, is part of the New York State arterial highway system that extends from Merrick Road near the south shore of Nassau County to Pulaski Street, two blocks south of its northern terminus, where it intersects Glen Cove Avenue and Brewster Street in the City of Glen Cove. The northern-most section of Glen Cove Road is called Pratt Boulevard and is currently under the jurisdiction of the City of Glen Cove (the last block between Continental Place/Bridge Street and Glen Cove Avenue/Brewster Street is formally known as Glen Cove Avenue). Glen Cove Road provides access to several principal arterials including Northern Boulevard, the Long Island Expressway, and the Northern State Parkway. Pratt Boulevard currently provides two travel lanes in each direction and carries an AADT of 9,800 and 9,950 vehicles in the eastbound and westbound directions, respectively. In 2007, the City of Glen Cove completed a major reconstruction project, known as the Glen Cove Road Extension, which resulted in a complete realignment of the Pratt Boulevard/Glen Cove Avenue/Brewster Street intersection. The planning for this intersection/roadway improvement project contemplated the future redevelopment of the waterfront, including both the proposed ferry terminal and the redevelopment project that is the subject of the proposed action.

Charles Street is a collector roadway providing connections between Glen Cove Avenue and local roadways to the west and north. It will serve as a primary access route to and from the subject site. Charles Street recently underwent extensive improvements under the Glen Cove Road Extension Project, as described above.

The City of Glen Cove also has plans to improve Herb Hill Road and Garvies Point Road up to its terminus at Garvies Point Beach to facilitate access to the proposed ferry terminal, and reconstructed boat ramp and waterfront. The City

has received funding for the design of the roadway and associated infrastructure and is in the process of issuing a Request for Qualifications (RFQ) for complete roadway and infrastructure design/engineering services. Based on discussions with the City, the goal is to have the design team secured by the end of Summer 2009 so that the construction bid documents can be completed in time for a Spring 2010 project start.

Within the study area, Garvies Point Road, Dickson Street, Herb Hill Road, Mill Hill Road, and Hill Street are minor, low-volume roadways. North of Mill Hill Road, Hill Street accommodates an AADT of approximately 2,400 and 1,200 vehicles in the northbound and southbound directions, respectively. Garvies Point Road accommodates an AADT of approximately 800 and 750 vehicles in the eastbound and westbound directions, respectively. The northbound and southbound travel lanes on Dickson Street accommodate an AADT of approximately 250 and 500 vehicles, respectively, between Herb Hill Road and Janet Lane.

Selection of Analysis Peak Hours

The ATR and manual turning movement count data were used to determine the critical peak hours for the traffic operations analyses. Based on count summaries from both data sources, the peak hours for traffic activity on the roadway system were determined to be as follows:

- Weekday AM peak hour: 8:00 to 9:00 AM
- Weekday PM peak hour: 4:45 to 5:45 PM
- Saturday midday peak hour: 11:30 AM to 12:30 PM

Based on the traffic count data summaries, existing turning movement volumes at each intersection during the weekday AM, weekday PM, and Saturday midday peak hours were determined and are shown in **Exhibits III.F-2, III.F-3, and III.F-4**, respectively.

Table III.F-1
Summary of Average Daily Traffic (ADT) & Annual Average Daily Traffic (AADT)

Location	Direction	ADT	AADT
Glen Cove Avenue south of Pratt Boulevard	Northbound	10,650	10,850
	Southbound	8,200	8,350
Pratt Boulevard east of Glen Cove Avenue	Eastbound	9,600	9,800
	Westbound	9,750	9,950
Charles Street between Glen Cove Avenue and Herb Hill Road	Eastbound	2,050	2,100
	Westbound	3,500	3,600
Brewster Street north of Pratt Boulevard	Northbound	11,900	12,100
	Southbound	10,950	11,150
Glen Cove Road south of Pound Hollow Road	Northbound	24,090	22,640
	Southbound	23,430	22,020
Glen Cove Avenue south of Marcus Lane	Northbound	7,860	7,385
	Southbound	8,315	7,815

Exhibit III.F-2

Existing Traffic Volumes; Weekday AM Peak Hour

INSERT SEPARATE GRAPHIC

**Exhibit III.F-3
Existing Traffic Volumes; Weekday PM Peak Hour**

INSERT SEPARATE GRAPHIC

**Exhibit III.F-4
Existing Traffic Volumes; Saturday Midday Peak Hour**

INSERT SEPARATE GRAPHIC

Accident Data

Crash data, in the form of the Accident Verbal Description Report, was obtained from the NYSDOT utilizing the Centralized Local Accident Surveillance System (CLASS) and the Accident Location Information System (ALIS), for the most recently available three-year period (January 1, 2005 through December 31, 2007).

The accident data provided by the NYSDOT was summarized for the study intersections by severity and by accident type, and is shown in **Tables III.F-2** and **III.F-3**. Accident rates at each study intersection were calculated and are compared to statewide averages in **Table III.F-4**. A review of the summary statistics reveals that the predominant accident type in the study area was rear-end collisions. The next most common type of occurrence was left-turn crashes. Collision diagrams were prepared for each study intersection that had ten or more accidents reported from 2005 through 2007. A review of the collision diagrams reveals no significant accident patterns. The collision diagrams and accident data summaries at the collision diagram intersections can be found in Appendix L-4.

Table III.F-2
Accident Summary – Severity of Injury
January 1, 2005 through December 31, 2007

Intersection	Fatality	Injury	Property Damage	Total
Herb Hill Road & Dickson Street/Garvies Point Rd	0	1	0	1
Herb Hill Road & Charles Street	0	0	2	2
Forest Avenue & Lattingtown Road	0	1	2	3
Brewster Street/Glen Cove Ave & WB Charles St	0	10	10	20
Glen Cove Avenue & Charles Street	0	5	4	9
Glen Cove Avenue & Morris Avenue	0	6	3	9
Glen Cove Avenue & Sea Cliff Avenue	0	0	5	5
Pratt Boulevard & Bridge Street/Continental Place	0	1	1	2
Glen Head Road & NY 107 (Cedar Swamp Road)	0	0	3	3
Glen Cove Road & Glen Head Road	1	7	10	18
Glen Cove Road & Northern Boulevard	0	12	13	25
Brewster Street & Herb Hill/Mill Hill/Shop Center	0	10	9	19
Brewster Street & Cottage Row/School Street	0	5	5	10
Glen Cove Road at NY 107 Split	0	0	2	2
Glen Cove Avenue & Shore Road	0	5	5	10
Glen Cove Avenue & Glen Head Road	0	3	3	6
Glen Cove Avenue & Back Road	0	0	0	0
Glen Cove Road & Back Road/Mary Lane	0	0	2	2
Bryant Avenue & Witte Lane	0	2	9	11
Totals:	1	68	88	157

**Table III.F-3
Accident Summary – Accident Type
January 1, 2005 through December 31, 2007**

Intersection	Right Angle	Rear End	Head On	Left-turn	Fixed Object	Over Take	Ped/Bike	Other / Unkn	Total
Herb Hill Road & Dickson Street/Garvies Point Rd	1	0	0	0	0	0	0	0	1
Herb Hill Road & Charles Street	0	1	0	1	0	0	0	0	2
Forest Avenue & Lattingtown Road	0	0	0	1	0	0	1	1	3
Brewster Street/Glen Cove Ave & WB Charles St	6	10	0	0	0	2	2	0	20
Glen Cove Avenue & Charles Street	4	2	0	3	0	0	0	0	9
Glen Cove Avenue & Morris Avenue	1	1	1	1	0	2	0	3	9
Glen Cove Avenue & Sea Cliff Avenue	1	1	0	0	0	1	0	2	5
Pratt Boulevard & Bridge Street/Continental Place	0	1	0	0	0	0	1	0	2
Glen Head Road & NY 107 (Cedar Swamp Road)	0	2	0	1	0	0	0	0	3
Glen Cove Road & Glen Head Road	3	9	0	2	0	2	0	2	18
Glen Cove Road & Northern Boulevard	2	15	0	2	0	6	0	0	25
Brewster Street & Herb Hill/Mill Hill/Shop Center	3	9	0	3	0	2	2	0	19
Brewster Street & Cottage Row/School Street	4	2	0	4	0	0	0	0	10
Glen Cove Road at NY 107 Split	0	1	0	0	0	1	0	0	2
Glen Cove Avenue & Shore Road	2	5	0	2	1	0	0	0	10
Glen Cove Avenue & Glen Head Road	1	1	0	2	0	0	1	1	6
Glen Cove Avenue & Back Road	0	0	0	0	0	0	0	0	0
Glen Cove Road & Back Road/Mary Lane	0	1	0	0	1	0	0	0	2
Bryant Avenue & Witte Lane	1	6	0	3	0	1	0	0	11
Totals:	29	67	1	25	2	17	7	9	157

**Table III.F-4
Accident Rate Comparisons
January 1, 2005 through December 31, 2007**

Intersection	AADT entering intersection	No. of Accidents	Accident Rate (Acc/MEV)	NYS Average (Acc/MEV)
Herb Hill Road & Dickson Street/Garvies Point Rd	1,280	1	0.71	0.09
Herb Hill Road & Charles Street	5,980	2	0.31	0.26
Forest Avenue & Lattingtown Road	14,230	3	0.19	0.26
Brewster Street/Glen Cove Ave & WB Charles St	30,950	20	0.59	0.26
Glen Cove Avenue & Charles Street	21,310	9	0.39	0.26
Glen Cove Avenue & Morris Avenue	15,780	9	0.52	0.18
Glen Cove Avenue & Sea Cliff Avenue	13,090	5	0.35	0.26
Pratt Boulevard & Bridge Street/Continental Place	19,540	2	0.09	0.26
Glen Head Road & NY 107 (Cedar Swamp Road)	17,430	3	0.16	0.07
Glen Cove Road & Glen Head Road	32,860	18	0.50	0.26
Glen Cove Road & Northern Boulevard	54,330	25	0.42	0.26
Brewster Street & Herb Hill/Mill Hill/Shop Center	22,270	19	0.78	0.26
Brewster Street & Cottage Row/School Street	32,880	10	0.28	0.26
Glen Cove Road at NY 107 Split	38,230	2	0.05	0.18
Glen Cove Avenue & Shore Road	19,300	10	0.47	0.18
Glen Cove Avenue & Glen Head Road	19,170	6	0.28	0.26
Glen Cove Avenue & Back Road	12,340	0	0.00	0.07
Glen Cove Road & Back Road/Mary Lane	38,340	2	0.05	0.26
Bryant Avenue & Witte Lane	17,050	11	0.59	0.19

Existing Levels-of-Service

Existing conditions level-of-service (“LOS”) analyses were conducted for each of the study intersections for the weekday AM, weekday PM, and Saturday midday peak hours. A short outline of the LOS analyses process for both signalized and the unsignalized study intersections is provided below.

Signalized Intersections

Peak hour traffic operations at all signalized study intersections were analyzed using the methodology presented in the year 2000 version of the *Highway Capacity Manual* (“HCM”). Level-of-service at signalized intersections is defined in terms of the “average control delay” (in seconds per vehicle) encountered by vehicles traveling through the intersection, typically during the peak 15-minute period within each peak hour. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The corresponding LOS grades are expressed by the letters “A”, “B”, “C”, “D”, “E” and “F”, with successive letters representing greater congestion and worsening delay conditions at the intersection. The relationships between LOS and average control delay for signalized intersections are shown below.

Level-of-Service Criteria for Signalized Intersections

<u>Level-of-Service</u>	<u>Average Control Delay (seconds per vehicle)</u>
A	< 10
B	> 10 and < 20
C	> 20 and < 35
D	> 35 and < 55
E	> 55 and < 80
F	> 80

Source: Year 2000 Highway Capacity Manual, Chapter 16 (Signalized Intersections), Exhibit 16-2

The following is a qualitative description of LOS for signalized intersections:

- *Level-of-Service “A”*: This level generally occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay;
- *Level-of-Service “B”*: This level generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay;
- *Level-of-Service “C”*: The higher delays at this LOS may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is more at this level, although some may still pass through the intersection without stopping;

- *Level-of-Service “D”*: At this level, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity (v/c) ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable;
- *Level-of-Service “E”*: This level is considered to be the limit of acceptable delay. The high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences; and
- *Level-of-Service “F”*: This level is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e. when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Unsignalized Intersections

Peak hour traffic operations at each unsignalized study intersection were also analyzed by applying the methodologies presented in the year 2000 version of the *Highway Capacity Manual*. However, the analysis methodologies for two-way stop-controlled (“TWSC”) and all-way stop-controlled (“AWSC”) intersections are considerably different, as described below.

Level-of-service for TWSC intersections is based on the average control delay (in seconds per vehicle) calculated for all stop-controlled movements, typically during the peak 15-minute period within each peak hour. It is important to note that at TWSC intersections, major street through and right-turning traffic virtually always travels through the intersection unimpeded, and thus experiences no delay. Therefore, these movements are not considered in the analysis. Consequently, LOS is calculated only for the minor street approaches and major street left-turns at TWSC intersections.

Unlike TWSC intersections, AWSC intersections require drivers on all approaches to stop before proceeding through the intersection. Consequently, level-of-service for AWSC intersections is based on the average control delay (in seconds per vehicle) calculated for all approaches to the intersection, and for the intersection overall.

The relationships between LOS and average control delay for unsignalized intersections (both TWSC and AWSC) are shown below.

Level-of-Service Criteria for Unsignalized Intersections

<u>Level-of-Service</u>	<u>Average Control Delay (seconds per vehicle)</u>
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

Source: Year 2000 Highway Capacity Manual, Chapter 17 (Unsignalized Intersections), Exhibit 17-2

Analysis Results

The existing turning movement volumes illustrated in **Exhibits III.F-2** through **III.F-4**, in conjunction with the intersection geometries and signal timing parameters, were used to calculate the peak hour levels-of-service for each of the study intersections. **Table III.F-5** summarizes the operational analysis results, including delays and the corresponding LOS for all lane groups and for each intersection overall during each of the three peak hours. The detailed *Synchro*¹ analysis worksheets are provided in Appendix L (L-5).

¹ Synchro Version 6 by Trafficware

**Table III.F-5
Existing Traffic Conditions Level-of-Service (LOS) Analysis Results**

Intersection	Approach	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS
Lattingtown Road & Forest Avenue	EB	L	3.2	A	4.0	A	3.5	A
		TR	3.3	A	3.1	A	3.1	A
	WB	LTR	6.7	A	7.7	A	7.5	A
		LT	15.8	B	19.8	B	18.0	B
	SB	LT	15.8	B	19.8	B	18.0	B
Overall			4.0	A	5.0	A	4.7	A
Brewster Street & Herb Hill Road/ Mill Hill Road/Shopping Center	EB	L	30.3	C	27.0	C	27.6	C
		TR	13.9	B	18.0	B	16.4	B
	WB	LTR	22.0	C	25.0	C	27.3	C
		L	5.4	A	17.5	B	8.0	A
	NB	TR	2.9	A	4.7	A	4.2	A
		L	2.4	A	3.7	A	3.2	A
SB	TR	2.5	A	3.9	A	2.8	A	
Overall			4.3	A	7.6	A	5.7	A
Brewster St/Glen Cove Ave & WB Charles St/ Pratt Boulevard	WB	L	32.0	C	33.1	C	33.8	C
		T	29.0	C	29.9	C	28.7	C
		R	10.0	B	12.2	B	10.0	A
	NB	L	8.8	A	9.6	A	9.4	A
		T	23.0	C	25.1	C	26.0	C
		R	9.9	A	9.0	A	8.9	A
	SB	L	26.3	C	26.7	C	27.2	C
		TR	11.9	B	13.7	B	13.1	B
Overall			19.0	B	20.0	C	20.0	C
Glen Cove Ave & Charles Street	EB	L	14.1	B	13.5	B	13.3	B
		T	11.7	B	12.1	B	11.2	B
		R	5.7	A	7.2	A	8.8	A
	WB	LR	9.3	A	8.8	A	7.6	A
		TR	5.4	A	6.1	A	5.9	A
	SB	L	5.7	A	7.0	A	6.2	A
		TR	5.4	A	5.3	A	6.0	A
Overall			6.2	A	6.3	A	6.5	A
Glen Cove Ave & Sea Cliff Ave	EB	L	14.7	B	15.7	B	17.8	B
		TR	13.8	B	14.4	B	11.1	B
	WB	L	17.9	B	19.1	B	20.2	C
		TR	7.4	A	8.0	A	14.5	B
	NB	LTR	5.8	A	6.9	A	7.6	A
		LTR	8.9	A	10.0	B	11.1	B
Overall			9.2	A	10.0	B	11.2	B
Bridge Street/ Continental Pl & Pratt Blvd	EB	L	6.2	A	10.5	B	10.0	A
		TR	5.9	A	6.8	A	5.3	A
	WB	LTR	5.8	A	7.7	A	5.8	A
		L	14.9	B	16.1	B	17.1	B
	NB	TR	11.3	B	10.0	A	10.8	B
		L	19.9	B	22.7	C	20.5	C
SB	TR	10.9	B	7.5	A	8.1	A	
Overall			7.4	A	8.8	A	7.3	A
Glen Cove Road & Glen Head Road	EB	L	56.4	E	59.8	E	60.9	E
		T	86.1	F	57.5	E	56.9	E
	WB	LTR	87.5	F	61.4	E	95.9	F
		L	73.7	E	71.3	E	192.1	F
	NB	TR	22.2	C	38.8	D	25.5	C
		L	21.2	C	49.2	D	24.8	C
SB	TR	28.4	C	43.6	D	55.9	E	
Overall			39.0	D	45.8	D	53.5	D
Glen Cove Road & Northern Blvd	EB	L	70.0	E	76.4	E	72.5	E
		TR	44.6	D	80.5	F	66.6	E
	WB	L	71.0	E	72.3	E	156.0	F
		TR	106.7	F	53.1	D	146.8	F
	NB	L	79.3	E	86.2	F	240.5	F
		T	33.8	C	59.2	E	41.5	D
		R	17.3	B	20.9	C	16.5	B
	SB	L	84.7	F	111.0	F	59.0	E
		T	65.8	E	149.7	F	41.9	D
R		24.0	C	29.4	C	17.6	B	
Overall			62.2	E	77.5	E	88.1	F

TABLE III.F-5 (continued)

Intersection	Approach	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS
Glen Cove Avenue & Morris Avenue	EB	L	12.4	B	12.4	B	11.9	B
		R	5.0	A	5.2	A	6.1	A
	NB	L	6.7	A	5.4	A	4.5	A
		T	4.3	A	4.7	A	3.6	A
	SB	TR	4.8	A	4.8	A	4.0	A
Overall			5.1	A	5.2	A	4.0	A
Brewster Street & Cottage Row/School Street	EB	LT	35.5	D	41.0	C	39.8	C
		R	0.3	A	0.2	A	0.2	A
	WB	LT	20.6	C	24.4	C	26.5	C
		R	23.5	C	32.7	C	33.6	C
	NB	L	9.1	A	20.1	C	10.1	B
		TR	15.9	B	20.4	C	20.0	C
	SB	L	11.7	B	29.8	C	23.7	C
		TR	16.7	B	19.7	B	16.5	B
Overall			17.0	B	22.8	C	21.2	C
Glen Cove Rd at NY 107 Divide	NB	T	16.7	B	20.2	C	15.4	B
	SB	L	107.1	F	71.0	E	38.6	D
		T	0.4	A	0.3	A	0.4	A
Overall			26.8	C	21.8	C	11.1	B
Herb Hill Road & Charles Street	EB	LT	27.6	C	26.1	C	25.2	C
		R	0.0	A	0.1	A	0.0	A
	WB	LTR	23.2	C	22.6	C	22.7	C
		L	13.0	B	11.6	B	9.5	A
	NB	T	12.9	B	11.8	B	9.5	A
		R	12.0	B	9.0	A	7.7	A
	SB	L	17.2	B	17.4	B	16.0	B
TR		22.9	C	22.3	C	20.2	C	
Overall			17.8	B	15.4	B	14.7	B
Glen Cove Avenue & Shore Road	EB	L	15.3	B	17.2	B	15.7	B
		R	4.8	A	4.0	A	3.8	A
	NB	L	7.7	A	13.1	B	10.9	B
		T	6.7	A	10.9	B	8.7	A
SB	TR	5.4	A	11.2	B	8.4	A	
Overall			7.3	A	12.3	B	9.7	A
Glen Cove Road & Mary Lane/Back Road	EB	LT	53.4	D	73.5	E	54.1	D
		R	4.0	A	3.3	A	3.8	A
	WB	LTR	44.6	D	41.8	D	49.5	D
		L	58.2	E	59.8	E	53.3	D
	NB	TR	7.0	A	13.5	B	6.0	A
		L	23.2	C	36.9	D	23.4	C
	SB	T	31.9	C	38.3	D	24.7	C
R		4.7	A	3.9	A	3.1	A	
Overall			23.0	C	27.5	C	19.0	B
Glen Cove Avenue & Back Road	WB	L	11.3	B	12.1	B	10.5	B
		R	7.0	A	7.4	A	7.4	A
	NB	T	8.9	A	9.7	A	8.9	A
		R	6.5	A	6.9	A	6.6	A
SB	LT	17.5	C	14.1	B	14.5	B	
Overall			12.7	B	10.5	B	10.7	B
Glen Cove Avenue & Glen Head Road	EB	LTR	17.8	B	21.3	C	23.5	C
		LTR	25.3	C	26.6	C	33.3	C
	NB	L	10.5	B	10.1	B	10.9	B
		TR	11.0	B	13.1	B	12.9	B
	SB	L	28.8	C	42.3	D	51.2	D
TR		14.4	B	13.3	B	13.3	B	
Overall			19.0	B	20.8	C	24.1	C
NY 107 & Glen Head Road	EB	LR	37.8	E	30.5	D	14.6	B
	NB	L	11.1	B	10.1	B	8.8	A
Herb Hill Road & Dickson Street	WB	LR	9.7	A	9.0	A	9.0	A
	SB	LT	7.0	A	6.3	A	6.2	A
Bryant Avenue & Witte Lane	EB	LTR	18.3	B	13.3	B	19.0	B
		L	59.4	E	40.1	D	35.7	D
	WB	TR	18.3	B	11.1	B	10.5	B
		LTR	14.7	B	19.7	B	13.6	B
	SB	L	19.6	B	9.1	A	7.3	A
TR		11.4	B	6.4	A	6.5	A	
Overall			22.1	C	17.7	B	14.3	B

b) Future No-Action Traffic Conditions (Year 2016)

The proposed development is expected to be completed and operational by the year 2016. An analysis of year 2016 traffic conditions without the proposed development (the 2016 Future No-Action scenario) was conducted to serve as a baseline against which the proposed action could be compared. The Future No-Action scenario includes future traffic growth from two components: 1) growth in traffic volumes associated with specific planned developments within the project study area, and 2) projected increases in traffic volume due to regional traffic growth. In addition, the Future No-Action scenario includes planned roadway improvement projects within the study area that are anticipated to be completed by 2016.

The following planned/approved transportation improvement projects and other planned developments are located within the vicinity of the project site and were included as part of the Future No-Action scenario:

- ***Glen Cove Creek Ferry Terminal and Boat Basin*** (In-design Phase) – This separately proposed project is being developed to provide a new ferry terminal (along with related land and water-side improvements to support the ferry terminal and other potential marine uses) serving the City of Glen Cove and the surrounding area. Originating from the new terminal will be a high-speed ferry providing connections to Manhattan and possibly other destinations;
- ***Glen Cove Mews*** – 86 residential units on the east side of Hill Street between The Place and Cottage Row;
- ***Glen Cove Villas*** – 226 residential units on the east side of Glen Cove Avenue between Robinson Avenue and Young Avenue.
- ***Lee Gray Court*** – 60 residential units on the west side of Hill Street between The Place and Landing Road.
- ***Roadway Improvements at Route 25A/Glen Cove Road Intersection*** (Phase I Construction – Completed) – The roadway improvements at this intersection included an additional right-turn lane at the southbound approach of Glen Cove Road and a new lane configuration at the northbound approach that includes two exclusive left-turn lanes, one exclusive through lane, and one shared through/right-turn lane. Phase II of the project proposes the construction of a third through lane on the southbound approach; and
- ***Roadway Improvements at Glen Cove Avenue & Sea Cliff Avenue Intersection*** (In Design) – The roadway improvements at this intersection as part of “Local Safe Streets and Traffic Calming Project” include new

left-turn lanes on the northbound and southbound approaches of Glen Cove Avenue, new crosswalk striping, new handicap ramps, and relocation of stop bars.

- **Roadway Improvements at Bryant Avenue & Witte Lane** – As part of the current Roslyn Viaduct reconstruction project, Witte Lane has been reduced to one lane in each direction while construction is underway. However, the final plans call for reinstatement of a second westbound lane upon completion of the viaduct. Therefore, the capacity analyses were performed on the basis of one westbound left turn lane and one through/right turn lane.

The location of the above other planned developments are shown on **Exhibit III.F-5**. The vehicle trips estimated to be generated by these other projects are summarized in Table III.F-5A and presented graphically in **Appendix L-6**. In addition to anticipated traffic volumes from the planned and approved developments listed above, an annual background growth rate of 0.6 percent was applied to the existing traffic volumes to account for regional traffic growth, including but not limited to subdivision applications which have been or may be filed within the study area. This background growth rate was obtained from NYSDOT's Region 10 office, based on projections for the Glen Cove area from the Long Island Transportation Plan to manage congestion (LITP 2000, Build Alternative 1).

The expected year 2016 Future No-Action scenario traffic volumes for the weekday AM, weekday PM, and Saturday midday peak hours are illustrated in **Exhibits III.F-6, III.F-7 and III.F-8**, respectively.

**Table III.F-5A
Other Project Vehicular Trips**

Project	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
	Total	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting
Glen Cove Ferry	186	162	24	159	21	138	97	78	19
Glen Cove Mews	46	8	38	68	44	24	68	37	31
Glen Cove Villas*	51	0	51	56	48	8	65	35	30
Lee Gray Court	34	6	28	40	26	13	60	32	28

* Trip totals for Glen Cove Villas include credits taken for vehicle trips produced by existing uses on the site.

Exhibit III.F-5

Other Planned Developments

INSERT SEPARATE GRAPHIC

Exhibit III.F-6

Future No-Action Traffic Volumes; Weekday AM Peak Hour

INSERT SEPARATE GRAPHIC

**Exhibit III.F -7
Future No-Action Traffic Volumes; Weekday PM Peak Hour**

INSERT SEPARATE GRAPHIC

**Exhibit III.F -8
Future No-Action Traffic Volumes; Saturday Midday Peak Hour**

INSERT SEPARATE GRAPHIC

Future No-Action Levels-of-Service

Level-of-service analyses for each of the signalized and unsignalized study intersections were conducted for the weekday AM, weekday PM, and Saturday midday peak hours using the projected year 2016 Future No-Action traffic volumes shown in **Exhibits III.F-6, III.F -7 and III.F -8**. Planned future traffic and roadway improvements—specifically, the Glen Cove Road Extension Project, Route 25A/Glen Cove Road, and Glen Cove Avenue & Sea Cliff Avenue—were incorporated in the Future No-Action analysis. **Table III.F -6** presents the Future No-Action LOS analysis results for all signalized and unsignalized study intersections. *Synchro* analysis worksheets for the Future No-Action scenario are presented in Appendix L (L-5).

**Table III.F -6
Future No-Action Level-of-Service (LOS) Analysis Results**

Intersection	Approach	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS
Lattingtown Road & Forest Avenue	EB	L	3.3	A	4.3	A	3.6	A
		TR	3.4	A	3.1	A	3.1	A
	WB	LTR	6.8	A	7.8	A	7.5	A
		LT	15.8	B	20.8	C	18.6	B
	SB	LT	15.8	B	20.8	C	18.6	B
Overall			4.1	A	5.1	A	4.7	A
Brewster Street & Herb Hill Road/ Mill Hill Road/Shopping Center	EB	L	29.7	C	28.9	C	27.1	C
		TR	11.5	B	16.1	B	15.2	B
	WB	LTR	18.6	B	20.0	B	22.8	C
		L	3.8	A	16.1	B	7.7	A
	NB	TR	3.0	A	5.1	A	5.0	A
		L	2.6	A	4.8	A	3.8	A
SB	TR	2.6	A	5.2	A	3.9	A	
Overall			4.0	A	8.1	A	6.4	A
Brewster St/Glen Cove Ave & WB Charles St/ Pratt Boulevard	WB	L	31.1	C	34.6	C	34.4	C
		T	28.9	C	31.5	C	29.7	C
		R	10.7	B	13.3	B	11.0	B
	NB	L	9.2	A	9.7	A	9.8	A
		T	23.2	C	25.1	C	25.7	C
		R	10.7	B	10.3	B	10.2	B
	SB	L	26.0	C	26.3	C	27.3	C
		TR	13.4	B	14.8	B	14.6	B
Overall			19.1	B	20.6	C	20.4	C
Glen Cove Ave & Charles Street	EB	L	12.4	B	12.9	B	11.7	B
		T	11.1	B	12.1	B	10.5	B
		R	5.2	A	8.2	A	7.9	A
	WB	LR	7.4	A	7.8	A	6.3	A
		TR	6.0	A	7.5	A	6.8	A
	NB	L	6.2	A	9.0	A	7.4	A
		TR	5.7	A	6.5	A	6.8	A
Overall			6.2	A	7.5	A	7.1	A
Glen Cove Ave & Sea Cliff Ave	EB	L	18.3	B	19.2	B	23.6	C
		TR	17.9	B	18.4	B	15.1	B
	WB	L	25.0	C	26.1	C	27.7	C
		TR	9.5	A	10.3	B	20.3	C
	NB	L	7.4	A	6.6	A	5.6	A
		TR	11.7	B	13.9	B	12.3	B
	SB	L	5.8	A	6.7	A	6.4	A
		TR	9.3	A	10.9	B	12.9	B
Overall			12.1	B	13.4	B	14.6	B
Bridge Street/ Continental Pl & Pratt Blvd	EB	L	6.5	A	13.2	B	11.9	B
		TR	6.1	A	7.5	A	5.4	A
	WB	LTR	6.1	A	8.8	A	6.0	A
		L	16.0	B	16.8	B	17.9	B
	NB	TR	11.0	B	10.0	A	10.2	B
		L	18.4	B	20.7	C	19.4	B
SB	TR	10.6	B	6.9	A	7.0	A	
Overall			7.5	A	9.3	A	7.3	A
Glen Cove Road & Glen Head Road	EB	L	60.5	E	64.5	E	62.4	E
		T	107.8	F	61.6	E	58.5	E
	WB	LTR	107.4	F	70.0	E	109.0	F
		L	86.8	F	114.4	F	247.2	F
	NB	TR	22.6	C	43.9	D	26.7	C
		L	24.8	C	55.8	E	27.2	C
SB	TR	30.9	C	53.7	D	75.3	E	
Overall			44.2	D	53.5	D	65.5	E
Glen Cove Road & Northern Blvd	EB	L	72.0	E	81.0	F	80.4	F
		TR	44.6	D	101.1	F	77.8	E
	WB	L	72.9	E	74.5	E	175.6	F
		TR	118.0	F	56.6	E	168.0	F
	NB	L	81.7	F	90.5	F	269.1	F
		T	35.5	D	72.6	E	45.4	D
		R	18.0	B	21.0	C	16.8	B
	SB	L	85.7	F	114.9	F	59.3	E
		T	48.4	D	68.9	E	37.0	D
R		24.1	C	29.7	C	17.9	B	
Overall			61.9	E	72.8	E	97.5	F

TABLE III.F -6 (continued)

Intersection	Approach	Movement	Weekday AM Peak Hour		Weekday PM Peak Hour		Saturday Midday Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS
Glen Cove Avenue & Morris Avenue	EB	L	12.4	B	12.5	B	1.9	B
		R	5.0	A	5.1	A	6.1	A
	NB	L	7.4	A	5.6	A	4.7	A
		T	4.6	A	4.9	A	3.8	A
	SB	TR	5.0	A	5.1	A	4.2	A
Overall			5.3	A	5.4	A	4.2	A
Brewster Street & Cottage Row/School Street	EB	LT	31.4	C	43.2	D	38.6	D
		R	0.3	A	0.2	A	0.2	A
	WB	LT	18.7	B	23.1	C	24.3	C
		R	20.9	C	28.8	C	27.5	C
	NB	L	10.2	B	21.6	C	11.7	B
		TR	18.1	A	23.6	C	22.8	C
	SB	L	13.9	B	43.0	D	39.2	D
	TR	19.4	B	23.4	C	20.0	B	
Overall			17.9	B	25.5	C	23.5	C
Glen Cove Rd at NY 107 Divide	NB	T	17.4	B	21.9	C	16.3	B
	SB	L	138.5	F	86.6	F	40.9	D
		T	0.5	A	0.3	A	0.5	A
Overall			33.4	C	25.4	C	11.8	B
Herb Hill Road & Charles Street	EB	LT	27.7	C	27.5	C	26.8	C
		R	0.1	A	0.2	A	0.1	A
	WB	LTR	26.2	C	24.4	C	25.3	C
	NB	L	16.4	B	15.4	B	14.1	B
		T	15.8	B	16.6	B	14.2	B
		R	13.0	B	10.7	B	10.0	A
	SB	L	18.4	B	18.9	B	18.2	B
TR		23.0	C	23.7	C	21.6	C	
Overall			18.9	B	16.1	B	17.0	B
Glen Cove Avenue & Shore Road	EB	L	13.7	B	20.3	C	14.8	B
		R	4.3	A	4.2	A	3.6	A
	NB	L	8.5	A	12.4	B	11.1	B
		T	7.7	A	10.5	B	9.0	A
SB	TR	6.1	A	10.7	B	8.6	A	
Overall			7.8	A	12.5	B	9.7	A
Glen Cove Road & Mary Lane/Back Road	EB	LT	46.5	D	68.2	E	46.9	D
		R	3.5	A	3.3	A	3.4	A
	WB	LTR	43.9	D	40.8	D	49.2	D
	NB	L	52.1	D	68.4	E	48.9	D
		TR	7.5	A	15.0	B	6.4	A
	SB	L	24.0	C	37.0	D	26.1	C
		T	36.4	D	41.4	D	28.8	C
R		5.0	A	4.3	A	3.4	A	
Overall			24.2	C	29.8	C	19.8	B
Glen Cove Avenue & Back Road	WB	L	11.9	B	12.8	B	10.9	B
		R	7.0	A	7.6	A	7.6	A
	NB	T	9.1	A	10.0	B	9.1	A
		R	6.6	A	7.0	A	6.6	A
SB	LT	21.2	C	15.5	C	16.2	B	
Overall			14.6	B	11.1	B	11.4	B
Glen Cove Avenue & Glen Head Road	EB	LTR	18.1	B	23.1	C	25.7	C
	WB	LTR	24.1	C	30.1	C	38.5	D
	NB	L	10.8	B	10.3	B	11.2	B
		TR	11.2	B	14.0	B	13.9	B
	SB	L	30.4	C	68.6	E	98.9	F
	TR	14.8	B	13.8	B	13.9	B	
Overall			19.1	B	24.9	C	31.5	C
NY 107 & Glen Head Road	EB	LR	54.3	F	39.7	E	15.8	C
	NB	L	11.7	B	10.5	B	9.0	A
Herb Hill Road & Dickson Street	WB	LR	12.1	B	10.3	B	10.1	A
	SB	LT	5.4	A	6.4	A	4.8	A
Bryant Avenue & Witte Lane	EB	LTR	18.2	B	13.6	B	18.6	B
		L	66.9	E	45.2	D	36.2	D
	WB	TR	18.4	B	11.1	B	10.3	B
		LTR	15.6	B	21.2	C	14.5	B
	SB	L	27.1	C	10.1	B	8.0	A
	TR	12.2	B	6.4	A	6.9	A	
Overall			25.6	C	19.1	B	14.9	B

c) Proposed Action Traffic Conditions (Year 2016)

An analysis of expected traffic conditions in the year 2016 under the proposed action was conducted to identify potential traffic impacts. The expected traffic volumes generated by the project were then added to the Future No-Action traffic volumes to obtain the expected traffic volumes when the project is complete.

The proposed project area is part of an approximate 96-acre tract of land on the north side of the Glen Cove Creek that was recently amended by the City of Glen Cove to permit residential, cultural, commercial, retail, entertainment, hospitality, recreational and water-enhanced, water-dependent and other related uses. The proposed mixed-use development includes:

- 860 Residential units;
- A 250-suite hotel complex and luxury spa;
- New catering/restaurant facilities;
- Approximately 50,000 square-feet of office space;
- Approximately 20,000 square-feet of cultural/arts, entertainment uses, and complementary retail space;
- 85 marina slips; and
- Approximately 3,000 parking spaces.

Additionally, a number of public amenities that complement the proposed land uses and provide benefits to the City of Glen Cove and the public as a whole would be included. Among other components, these include habitat/wetlands restoration and education, an enhanced waterfront esplanade, reconstructed boat ramp, restoration of the existing public beach along Hempstead Harbor, rehabilitation and creation of new parks and open space, and new inter-modal transit connections.

Trip Generation

Estimates of the total number of new weekday AM, weekday PM, and Saturday midday peak hour vehicular trips generated by the proposed development were based on empirical observations at other similar land uses. These observations are documented and summarized in the standard reference manual, *Trip Generation, 7th Edition*, published by the Institute of Transportation Engineers (“ITE”). Trip generation rates summarized in the ITE manual were applied to the respective land uses to estimate the total number of new vehicular trips to be generated by each land use during each of the three analysis peak hours. The trip generation rates in the 7th Edition ITE publication were also compared to the rates in the 8th Edition, which was released in 2008, and the results were found to be virtually identical for the proposed uses on the subject site.

The ITE rates described above are based on “stand alone” single-use type developments and do not take into account reductions in trip generation that will result from the mixed-use nature of this project. Nor do the ITE rates take into account the benefits of a transit oriented development (“TOD”) which is evidenced by the multi-modal aspects of the transportation network which will serve the project site. These include the existing MTA/LI Bus transit routes (N21 and N27) which currently provide service to the Glen Cove area, the revival of ferry service to New York City and other destinations (separately planned), and the proposed shuttle service which will be provided by the developer. This shuttle service will provide a direct link between the project site and the downtown business district, as well as with the nearby LIRR stations.

The June 2004 Second Edition of the Institute of Transportation Engineers’ *Trip Generation Handbook* recognizes that the overall number of external vehicle trips generated by a mixed-use development will be less than the number of trips that would be generated by each of the individual uses considered separately. This is because a portion of the trips will be internal trips which take place between the various land uses and do not leave the project site, and therefore not impact the external roadway network. The results of research at several mixed use sites presented in the ITE publication reveal an average internal capture rate of 36 percent of the total number of trips.

This DEIS utilized a conservative five percent internal trip capture rate as a basis for analysis. These internal capture rates were then adjusted up or down for some specific land uses on the site. The internal capture rates for the restaurant land uses, for example, was adjusted down in the AM peak, while the rate for the PM and Saturday peaks was adjusted up. The capture rate for retail space was adjusted upwards, since retail typically has one of the highest internal capture rates in a mixed use development.

The *Trip Generation Handbook* also recognizes that the number of vehicle trips is further reduced at transit oriented developments. A vehicular trip reduction credit of seven percent was taken for the AM and PM peak periods (no credit for transit was taken for the Saturday peak, during which few commuter trips occur). Data from the 2000 Census indicates that six percent of Glen Cove residents use a bus (1.6%) or the LIRR (4.5%) to commute to work. With the addition of the proposed shuttle service and the Glen Cove Ferry, a one percent increase in the transit share of trips to and from the site is a conservative expectation.

Table **III.F-7** following summarizes the estimated number of trips (after the multi-use and TOD reductions are applied) to be generated by the proposed development during each of the three peak hours. As shown in the table, the project is expected to generate 583 trips (254 in, 329 out) during the weekday AM peak hour, 826 trips (438 in, 388 out) during the weekday PM peak hour, and 855 trips (461 in, 394 out) during the Saturday midday peak hour.

**Table III.F -7
Project Generated Vehicular Trips**

Uses	AM Peak Hour						PM Peak Hour						Saturday Peak Hour					
	ITE Trips	Transit Credit	Internal Capture	Total	Enter	Exit	ITE Trips	Transit Credit	Internal Capture	Total	Enter	Exit	ITE Trips	Transit Credit	Internal Capture	Total	Enter	Exit
Residential/ Condominiums - 680 Units	240	17	12	211	36	175	290	21	22	247	165	82	241	0	12	229	124	105
Apartments - 180 Units	93	6	5	82	17	65	117	8	9	100	65	35	94	0	5	89	48	41
Hotel - 250 Suites	140	10	3	127	77	50	148	10	7	131	69	62	180	0	9	171	96	75
Marinas - 85 Slips	7	0	0	7	2	5	17	0	0	17	10	7	23	0	1	22	10	12
Office Space - 50,000 SF	108	8	0	100	88	12	135	9	11	115	20	95	20	0	0	20	11	9
Retail Space/Cultural Arts/Entertainment - 20,000 SF	61	4	6	51	31	20	217	15	18	184	88	96	305	0	31	274	143	131
Restaurant - 5,000 SF	5	0	0	5	3	2	38	3	3	32	21	11	55	0	5	50	29	21
Totals	654	45	26	583	254	329	962	66	70	826	438	388	918	0	63	855	461	394

The complete Trip Generation calculations can be found in Appendix L-7.

Trip Distribution

Trip distribution patterns were derived from the existing traffic count data. The percentages were determined by first calculating the portion of traffic entering or leaving Glen Cove via primary routes, and then adjusting to account for the expected difference in travel patterns between existing traffic and project generated traffic.

Local Trips

Not all trips exiting the project site will exit Glen Cove. Many trips to or from the site will instead originate or end at other locations in Glen Cove, such as local stores, businesses and professional offices. By using the existing traffic data to compare the number of vehicles leaving Glen Cove via the three primary gateways to the city (Forest Avenue at Lattingtown Road, Pratt Boulevard east of Bridge Street, and Glen Cove Avenue at Sea Cliff Avenue) versus the number of vehicles leaving the immediate downtown area along those same gateway routes (Brewster Street at Herb Hill Road, Pratt Boulevard at Glen Cove Avenue, and Glen Cove Avenue at Shore Road), an estimate of the number of trips made to the areas in between, internal to the city of Glen Cove, was made. The overall calculated local trip percentage was 19 percent. This DEIS utilizes conservative local trip percentages, which are lower than indicated by existing travel patterns. The resultant overall local trip percentage used for analysis was 14 percent. For study intersections further from the site than local trip sinks and sources, the project generated volumes were reduced by the agreed upon local trip percentage. The resulting trip distribution percentages are illustrated in **Exhibit III.F-9**. The exhibit also shows the area of local trips used for analysis.

**Exhibit III.F-9
Trip Distribution Percentages**

INSERT SEPARATE GRAPHIC

Trip Assignment

The weekday AM, weekday PM, and Saturday midday peak hour trip generation estimates (shown in **Table III.F-7**) and the estimated trip distribution percentages (shown in **Exhibit III.F-9**) were used to assign site-generated traffic to the study intersections. **Exhibits III.F-10** through **III.F-12** illustrate the resulting site-generated traffic during each of the three peak hour periods.

Proposed Action Traffic Volumes and Levels-of-Service

The weekday AM, weekday PM, and Saturday midday peak hour site-generated traffic volumes (shown in **Exhibits III.F-10** through **III.F-12**) were then added to the Future No-Action traffic volumes (shown in **Exhibits III.F-6** through **III.F-8**) to obtain the estimated Proposed Action traffic volumes. **Exhibits III.F-13** through **III.F-15** present these volumes for the weekday AM, weekday PM, and Saturday midday peak hours, respectively.

The Levels-of-Service for each of the study intersections under Proposed Action traffic volumes are summarized in **Table III.F-8**. *Synchro* analysis worksheets for the Proposed Action condition are presented in Appendix L (L-5).

Network Simulation

In addition to the intersection capacity analyses, traffic flow simulation software was utilized to evaluate the potential impacts of the proposed action on closely spaced intersections in the vicinity of the site along Glen Cove Avenue/Brewster Street. The results of the simulation are presented in digital format in the Appendix.

**Exhibit III.F-10
Site Generated Volumes
AM Peak Hour**

INSERT SEPARATE GRAPHIC

**Exhibit III.F-11
Site Generated Volumes
Weekday PM Peak Hour**

INSERT SEPARATE GRAPHIC

**Exhibit III.F -12
Site Generated Volumes
Saturday Peak Hour**

INSERT SEPARATE GRAPHIC

**Exhibit III.F -13
Proposed Action Traffic Volumes
AM Peak Hour**

INSERT SEPARATE GRAPHIC

**Exhibit III.F -14
Proposed Action Traffic Volumes
PM Peak Hour**

INSERT SEPARATE GRAPHIC

**Exhibit III.F -15
Proposed Action Traffic Volumes
Saturday Peak Hour**

INSERT SEPARATE GRAPHIC

**Table III.F-8
Proposed Action
Level-of-Service (LOS) Analysis Results**

Lattingtown Road & Forest Avenue		AM Peak						PM Peak						Saturday Peak					
		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated	
Approach	Movement	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
EB	L	3.3	A	3.3	A	N/A	N/A	4.3	A	5.3	A	N/A	N/A	3.6	A	3.6	A	N/A	N/A
	TR	3.4	A	3.5	A	N/A	N/A	3.1	A	4.1	A	N/A	N/A	3.1	A	3.2	A	N/A	N/A
WB	LTR	6.8	A	6.9	A	N/A	N/A	7.8	A	9.4	A	N/A	N/A	7.5	A	7.6	A	N/A	N/A
NB	LTR	16.1	B	16.1	B	N/A	N/A	19.6	B	20.6	C	N/A	N/A	18.1	B	18.7	B	N/A	N/A
SB	LT	15.8	B	15.8	B	N/A	N/A	20.8	C	21.8	C	N/A	N/A	18.6	B	19.3	B	N/A	N/A
Overall		4.1	A	4.2	A	N/A	N/A	5.1	A	6.2	A	N/A	N/A	4.7	A	4.8	A	N/A	N/A
Brewster Street & Herb Hill Road/Mill Hill Road/Shopping Center																			
EB	L	29.7	C	31.4	C	N/A	N/A	28.9	C	30.6	C	N/A	N/A	27.1	C	29.4	C	N/A	N/A
	TR	11.5	B	11.4	B	N/A	N/A	16.1	B	15.3	B	N/A	N/A	15.2	B	15.2	B	N/A	N/A
WB	LTR	18.6	B	18.5	B	N/A	N/A	20.0	B	19.1	B	N/A	N/A	22.8	C	22.8	C	N/A	N/A
NB	L	3.8	A	3.9	A	N/A	N/A	16.1	B	16.5	B	N/A	N/A	7.7	A	8.1	A	N/A	N/A
	TR	3.0	A	3.0	A	N/A	N/A	5.1	A	5.7	A	N/A	N/A	5.0	A	5.0	A	N/A	N/A
SB	L	2.6	A	2.5	A	N/A	N/A	4.8	A	5.3	A	N/A	N/A	3.8	A	3.7	A	N/A	N/A
	TR	2.6	A	2.7	A	N/A	N/A	5.2	A	7.1	A	N/A	N/A	3.9	A	4.5	A	N/A	N/A
Overall		4.0	A	4.5	A	N/A	N/A	8.1	A	9.5	A	N/A	N/A	6.4	A	6.8	A	N/A	N/A
Brewster Street/Glen Cove Avenue & WB Charles St/Pratt Boulevard																			
WB	L	31.1	C	31.2	C	N/A	N/A	34.6	C	29.6	C	N/A	N/A	34.4	C	29.8	C	N/A	N/A
	T	28.9	C	32.3	C	N/A	N/A	31.5	C	35.0	C	N/A	N/A	29.7	C	34.3	C	N/A	N/A
	R	10.7	B	12.1	B	N/A	N/A	13.3	B	17.7	B	N/A	N/A	11.0	B	12.8	B	N/A	N/A
NB	L	9.2	A	10.5	B	N/A	N/A	9.7	A	15.6	B	N/A	N/A	9.8	A	15.9	B	N/A	N/A
	T	23.2	C	24.1	C	N/A	N/A	25.1	C	30.5	C	N/A	N/A	25.7	C	30.9	C	N/A	N/A
SB	R	10.7	B	17.0	B	N/A	N/A	10.3	B	16.8	B	N/A	N/A	10.2	B	17.6	B	N/A	N/A
	L	26.0	C	26.6	C	N/A	N/A	26.3	C	31.2	C	N/A	N/A	27.3	C	32.6	C	N/A	N/A
	TR	13.4	B	14.7	B	N/A	N/A	14.8	B	20.3	C	N/A	N/A	14.6	B	20.3	C	N/A	N/A
Overall		19.1	B	20.4	C	N/A	N/A	20.6	C	24.2	C	N/A	N/A	20.4	C	24.1	C	N/A	N/A

Glen Cove Avenue & Charles Street		AM Peak						PM Peak						Saturday Peak					
		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated	
Approach	Movement	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
EB	L	12.4	B	13.3	B	N/A	N/A	12.9	B	16.2	B	N/A	N/A	11.7	B	14.3	B	N/A	N/A
	LTR	11.1	B	10.3	B	N/A	N/A	12.1	B	12.9	B	N/A	N/A	10.5	B	10.9	B	N/A	N/A
	R	5.2	A	7.0	A	N/A	N/A	8.2	A	11.5	B	N/A	N/A	7.9	A	10.5	B	N/A	N/A
WB	LR	7.4	A	7.0	A	N/A	N/A	7.8	A	8.6	A	N/A	N/A	6.3	A	6.3	A	N/A	N/A
NB	TR	6.0	A	9.2	A	N/A	N/A	7.5	A	11.9	A	N/A	N/A	6.8	A	10.3	B	N/A	N/A
SB	L	6.2	A	9.1	A	N/A	N/A	9.0	A	14.8	B	N/A	N/A	7.4	A	10.7	B	N/A	N/A
	T	5.7	A	8.6	A	N/A	N/A	6.5	A	9.6	A	N/A	N/A	6.8	A	9.6	A	N/A	N/A
Overall		6.2	A	9.0	A	N/A	N/A	7.5	A	11.4	B	N/A	N/A	7.1	A	10.3	B	N/A	N/A
Glen Cove Avenue & Sea Cliff Avenue																			
EB	L	18.3	B	18.5	B	N/A	N/A	19.2	B	19.4	B	N/A	N/A	23.6	C	24.6	C	N/A	N/A
	TR	17.9	B	18.1	B	N/A	N/A	18.4	B	18.5	B	N/A	N/A	15.1	B	15.7	B	N/A	N/A
WB	L	25.0	C	25.7	C	N/A	N/A	26.1	C	26.1	C	N/A	N/A	27.7	C	29.0	C	N/A	N/A
	TR	9.5	A	9.7	A	N/A	N/A	10.3	B	10.4	B	N/A	N/A	20.3	C	21.2	C	N/A	N/A
NB	L	7.4	A	7.1	A	N/A	N/A	6.6	A	6.6	A	N/A	N/A	5.6	A	5.6	A	N/A	N/A
	TR	11.7	B	11.4	B	N/A	N/A	13.9	B	14.0	B	N/A	N/A	12.3	B	12.9	B	N/A	N/A
SB	L	5.8	A	5.7	A	N/A	N/A	6.7	A	7.2	A	N/A	N/A	6.4	A	6.7	A	N/A	N/A
	TR	9.3	A	9.5	A	N/A	N/A	10.9	B	11.6	B	N/A	N/A	12.9	B	13.7	B	N/A	N/A
Overall		12.1	B	12.0	B	N/A	N/A	13.4	B	13.7	B	N/A	N/A	14.6	B	15.2	B	N/A	N/A
Bridge Street/Continental Place & Pratt Boulevard																			
EB	L	6.5	A	7.7	A	N/A	N/A	13.2	B	32.7	C	N/A	N/A	11.9	B	32.8	C	N/A	N/A
	TR	6.1	A	6.7	A	N/A	N/A	7.5	A	7.9	A	N/A	N/A	5.4	A	6.0	A	N/A	N/A
WB	LTR	6.1	A	6.5	A	N/A	N/A	8.8	A	11.0	B	N/A	N/A	6.0	A	7.6	A	N/A	N/A
NB	L	16.0	B	18.1	B	N/A	N/A	16.8	B	21.1	C	N/A	N/A	17.9	B	23.2	C	N/A	N/A
	TR	11.0	B	12.5	B	N/A	N/A	10.0	A	11.5	B	N/A	N/A	10.2	B	12.6	B	N/A	N/A
SB	L	18.4	B	21.3	C	N/A	N/A	20.7	C	26.5	C	N/A	N/A	19.4	B	26.3	C	N/A	N/A
	TR	10.6	B	11.4	B	N/A	N/A	6.9	A	14.9	B	N/A	N/A	7.0	A	13.5	B	N/A	N/A
Overall		7.5	A	8.0	A	N/A	N/A	9.3	A	12.0	B	N/A	N/A	7.3	A	10.2	B	N/A	N/A

Glen Cove Road & Glen Head Road		AM Peak						PM Peak						Saturday Peak					
		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated	
Approach	Movement	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
EB	L	60.5	E	63.0	E	30.0	C	64.5	E	64.5	E	31.6	C	62.4	E	62.4	E	39.1	D
	TR	107.8	F	117.8	F	25.7	C	61.6	E	61.6	E	24.5	C	58.5	E	58.5	E	26.2	C
WB	LTR	107.4	F	117.6	F	45.5	D	70.0	E	70.0	E	52.2	D	109.0	F	109.0	F	51.4	D
NB	L	86.8	F	86.7	F	18.1	B	114.4	F	114.4	F	25.4	C	247.2	F	247.2	F	28.6	C
	TR	22.6	C	23.8	C	25.0	C	43.9	D	56.9	E	33.3	C	26.7	C	30.3	C	27.2	C
SB	L	24.8	C	34.5	C	17.9	B	55.8	E	55.8	E	24.1	C	27.2	C	46.4	D	20.1	C
	TR	30.9	C	37.3	D	31.3	C	53.7	D	85.0	F	39.3	D	75.3	E	119.9	F	40.6	D
Overall		44.2	D	48.2	D	29.6	C	53.5	D	70.1	E	36.4	D	65.5	E	86.0	F	36.0	D
Glen Cove Road & Northern Boulevard																			
EB	L	72.0	E	78.8	F	N/A	N/A	81.0	F	110.1	F	N/A	N/A	80.4	F	113.3	F	N/A	N/A
	TR	44.6	D	45.3	D	N/A	N/A	101.1	F	101.1	F	N/A	N/A	77.8	E	77.8	E	N/A	N/A
WB	L	72.9	E	72.9	E	N/A	N/A	74.5	E	74.5	E	N/A	N/A	175.6	F	241.1	F	N/A	N/A
	TR	118.0	F	131.4	F	N/A	N/A	56.6	E	57.6	E	N/A	N/A	168.0	F	203.1	F	N/A	N/A
NB	L	81.7	F	81.7	F	N/A	N/A	90.5	F	90.5	F	N/A	N/A	269.1	F	269.1	F	N/A	N/A
	T	35.5	D	36.3	D	N/A	N/A	72.6	E	106.0	F	N/A	N/A	45.4	D	49.4	D	N/A	N/A
SB	R	18.0	B	17.7	B	N/A	N/A	21.0	C	21.0	C	N/A	N/A	16.8	B	16.8	B	N/A	N/A
	L	85.7	F	85.7	F	N/A	N/A	114.9	F	114.9	F	N/A	N/A	59.3	E	59.3	E	N/A	N/A
	T	48.4	D	50.2	D	N/A	N/A	68.9	E	84.2	F	N/A	N/A	37.0	D	36.7	D	N/A	N/A
Overall		61.9	E	65.0	E	N/A	N/A	72.8	E	83.2	F	N/A	N/A	97.5	F	111.7	F	N/A	N/A
Glen Cove Avenue & Morris Avenue																			
EB	L	12.4	B	12.8	B	N/A	N/A	12.5	B	12.7	B	N/A	N/A	1.9	B	11.9	B	N/A	N/A
	R	5.0	A	5.2	A	N/A	N/A	5.1	A	5.3	A	N/A	N/A	6.1	A	6.1	A	N/A	N/A
NB	L	7.4	A	8.3	A	N/A	N/A	5.6	A	5.8	A	N/A	N/A	4.7	A	5.2	A	N/A	N/A
	T	4.6	A	4.6	A	N/A	N/A	4.9	A	5.1	A	N/A	N/A	3.8	A	4.0	A	N/A	N/A
SB	TR	5.0	A	5.2	A	N/A	N/A	5.1	A	5.3	A	N/A	N/A	4.2	A	4.4	A	N/A	N/A
Overall		5.3	A	5.4	A	N/A	N/A	5.4	A	5.6	A	N/A	N/A	4.2	A	4.4	A	N/A	N/A
Brewster Street & Cottage Row/School Street																			
EB	LT	31.4	C	32.4	C	N/A	N/A	43.2	D	33.7	C	N/A	N/A	38.6	D	34.8	C	N/A	N/A
	R	0.3	A	0.3	A	N/A	N/A	0.2	A	0.2	A	N/A	N/A	0.2	A	0.2	A	N/A	N/A
WB	LT	18.7	B	19.1	B	N/A	N/A	23.1	C	22.3	C	N/A	N/A	24.3	C	23.8	C	N/A	N/A
	R	20.9	C	21.3	C	N/A	N/A	28.8	C	27.2	C	N/A	N/A	27.5	C	27.4	C	N/A	N/A
NB	L	10.2	B	10.7	B	N/A	N/A	21.6	C	23.0	C	N/A	N/A	11.7	B	19.1	B	N/A	N/A
	TR	18.1	B	19.0	B	N/A	N/A	23.6	C	28.8	C	N/A	N/A	22.8	C	27.2	C	N/A	N/A
SB	L	13.9	B	14.1	B	N/A	N/A	43.0	D	30.2	C	N/A	N/A	39.2	D	30.0	C	N/A	N/A
	TR	19.4	B	19.4	B	N/A	N/A	23.4	C	25.0	C	N/A	N/A	20.0	C	18.6	B	N/A	N/A
Overall		17.9	B	18.3	B	N/A	N/A	25.5	C	25.7	C	N/A	N/A	23.5	C	23.5	C	N/A	N/A

Glen Cove Road at NY 107 Divide		AM Peak						PM Peak						Saturday Peak					
		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated	
Approach	Movement	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NB	T	17.4	B	18.8	B	40.5	D	21.9	C	27.5	C	45.4	D	16.3	B	19.2	B	25.5	C
SB	L	138.5	F	180.2	F	46.0	D	86.6	F	128.5	F	70.8	E	40.9	D	50.8	D	34.9	C
	T	0.5	A	0.6	A	0.6	A	0.3	A	0.4	A	0.4	A	0.5	A	0.6	A	0.6	A
Overall		33.4	C	42.0	D	23.4	C	25.4	C	41.5	D	33.0	C	11.8	B	14.6	B	14.8	B
Herb Hill Road & Charles Street																			
EB	LT	27.7	C	28.5	C	N/A	N/A	27.5	C	28.3	C	N/A	N/A	26.8	C	27.8	C	N/A	N/A
	R	0.1	A	0.4	A	N/A	N/A	0.2	A	0.9	A	N/A	N/A	0.1	A	0.5	A	N/A	N/A
WB	LTR	26.2	C	28.1	C	N/A	N/A	24.4	C	28.6	C	N/A	N/A	25.3	C	27.7	C	N/A	N/A
NB	L	16.4	B	27.8	C	N/A	N/A	15.4	B	37.7	D	N/A	N/A	14.1	B	38.6	D	N/A	N/A
	T	15.8	B	17.6	B	N/A	N/A	16.6	B	20.1	C	N/A	N/A	14.2	B	17.1	C	N/A	N/A
	R	13.0	B	14.0	B	N/A	N/A	10.7	B	13.0	B	N/A	N/A	10.0	B	11.3	B	N/A	N/A
SB	L	18.4	B	19.4	B	N/A	N/A	18.9	B	20.7	C	N/A	N/A	18.2	B	19.4	B	N/A	N/A
	TR	23.0	C	25.5	C	N/A	N/A	23.7	C	25.6	C	N/A	N/A	21.6	C	24.0	C	N/A	N/A
Overall		18.9	B	19.2	B	N/A	N/A	16.1	B	20.0	C	N/A	N/A	17.0	B	21.7	C	N/A	N/A
Glen Cove Avenue & Shore Road																			
EB	L	13.7	B	14.0	B	N/A	N/A	20.3	C	25.0	C	N/A	N/A	14.8	B	16.2	B	N/A	N/A
	R	4.3	A	4.3	A	N/A	N/A	4.2	A	4.7	A	N/A	N/A	3.6	A	3.8	A	N/A	N/A
NB	L	8.5	A	9.2	A	N/A	N/A	12.4	B	13.3	B	N/A	N/A	11.1	B	12.6	B	N/A	N/A
	T	7.7	A	8.2	A	N/A	N/A	10.5	B	10.5	B	N/A	N/A	9.0	A	9.9	A	N/A	N/A
SB	TR	6.1	A	7.0	A	N/A	N/A	10.7	B	11.2	B	N/A	N/A	8.6	A	9.8	A	N/A	N/A
Overall		7.8	A	8.4	A	N/A	N/A	12.5	B	13.7	B	N/A	N/A	9.7	A	10.8	B	N/A	N/A
Glen Cove Road & Back Road/Mary Lane																			
EB	LT	46.5	D	46.5	D	N/A	N/A	68.2	E	68.2	E	N/A	N/A	46.9	D	46.9	D	N/A	N/A
	R	3.5	A	3.5	A	N/A	N/A	3.3	A	3.3	A	N/A	N/A	3.4	A	3.4	A	N/A	N/A
WB	LTR	43.9	D	43.9	D	N/A	N/A	40.8	D	40.8	D	N/A	N/A	49.2	D	49.2	D	N/A	N/A
NB	L	52.1	D	52.1	D	N/A	N/A	68.4	E	68.4	E	N/A	N/A	48.9	D	48.9	D	N/A	N/A
	TR	7.5	A	8.0	A	N/A	N/A	15.0	B	17.8	B	N/A	N/A	6.4	A	7.2	A	N/A	N/A
SB	L	24.0	C	25.0	C	N/A	N/A	37.0	D	37.0	D	N/A	N/A	26.1	C	35.5	D	N/A	N/A
	T	36.4	D	46.1	D	N/A	N/A	41.4	D	54.6	D	N/A	N/A	28.8	C	32.4	C	N/A	N/A
	R	5.0	A	5.4	A	N/A	N/A	4.3	A	5.1	A	N/A	N/A	3.4	A	3.9	A	N/A	N/A
Overall		24.2	C	28.4	C	N/A	N/A	29.8	C	35.0	D	N/A	N/A	19.8	B	21.2	C	N/A	N/A

Glen Cove Avenue & Back Road		AM Peak						PM Peak						Saturday Peak					
		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated	
Approach	Movement	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
WB	L	11.9	B	12.4	B	N/A	N/A	12.8	B	13.7	B	N/A	N/A	10.9	B	11.5	B	N/A	N/A
	R	7.0	A	7.0	A	N/A	N/A	7.6	A	7.6	A	N/A	N/A	7.6	A	7.6	A	N/A	N/A
NB	T	9.1	A	9.6	A	N/A	N/A	10.0	B	11.2	B	N/A	N/A	9.1	A	10.1	B	N/A	N/A
	R	6.6	A	6.6	A	N/A	N/A	7.0	A	7.0	A	N/A	N/A	6.6	A	6.6	A	N/A	N/A
SB	LT	21.2	C	27.3	D	N/A	N/A	15.5	C	19.1	C	N/A	N/A	16.2	C	20.3	C	N/A	N/A
Overall		14.6	B	17.6	C	N/A	N/A	11.1	B	12.7	B	N/A	N/A	11.4	B	13.3	B	N/A	N/A
Glen Cove Avenue & Glen Head Road																			
EB	LTR	18.1	B	18.6	B	19.5	B	23.1	C	23.3	C	30.3	C	25.7	C	25.7	C	37.4	D
WB	LTR	24.1	C	25.3	C	27.3	C	30.1	C	30.4	C	44.2	D	38.5	D	38.5	D	70.9	E
NB	L	10.8	B	11.3	B	10.5	B	10.3	B	10.6	B	8.8	A	11.2	B	11.8	B	9.6	A
	TR	11.2	B	11.6	B	11.2	B	14.0	B	15.1	B	13.1	B	13.9	B	15.4	B	12.9	B
SB	L	30.4	C	37.7	D	33.4	C	68.6	E	125.9	F	63.0	E	98.9	F	191.1	F	100.1	F
	TR	14.8	C	16.0	B	15.3	C	13.8	B	14.9	B	13.0	B	13.9	B	15.0	B	12.7	B
Overall		19.1	B	20.6	C	20.4	C	24.9	C	30.8	C	27.8	C	31.5	C	41.5	D	39.5	D
NY 107 & Glen Head Road																			
EB	LR	54.3	F	75.2	F	-	-	39.7	E	59.6	F	-	-	15.8	C	18.2	C	-	-
	R	-	-	-	-	65.7	F	-	-	-	-	31.6	C	-	-	-	-	16.5	C
NB	L	11.3	B/A	12.3	B	12.3	B	10.5	B	11.1	B	11.1	B	9.0	A	9.3	A	9.3	A
Overall		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Herb Hill Road & Dickson Street/Garvies Point Road																			
WB	LR	12.1	B	157.7	F	-	-	10.3	A	68.7	F	-	-	10.1	B	80.5	F	-	-
	L	-	-	-	-	8.8	A	-	-	-	-	5.9	A	-	-	-	-	6.4	A
	R	-	-	-	-	3.2	A	-	-	-	-	1.7	A	-	-	-	-	1.7	A
NB	TR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	T	-	-	-	-	10.0	A	-	-	-	-	8.8	B	-	-	-	-	10.8	B
SB	R	-	-	-	-	0.3	A	-	-	-	-	0.8	A	-	-	-	-	0.3	A
	LT	5.4	A	7.4	A	12.1	B	6.4	A	8.6	A	9.5	B	4.8	A	7.0	A	11.7	B
Overall		-	-	-	-	6.8	A	-	-	-	-	3.3	A	-	-	-	-	4.6	A

Roundabout Option:

Herb Hill Road & Dickson Street/Garvies Point Road	AM Peak				PM Peak				Saturday Peak			
	Upperbound		Lowerbound		Upperbound		Lowerbound		Upperbound		Lowerbound	
	Capacity	v/c ratio	Capacity	v/c ratio	Capacity	v/c ratio	Capacity	v/c ratio	Capacity	v/c ratio	Capacity	v/c ratio
WB	1376	0.37	1154	0.44	1335	0.36	1116	0.42	1367	0.45	1145	0.53
NB	1185	0.01	980	0.01	1278	0.04	1065	0.04	1275	0.01	1061	0.02
SB	961	0.24	779	0.30	1069	0.11	875	0.13	951	0.13	770	0.17

Bryant Avenue & Witte Lane		AM Peak						PM Peak						Saturday Peak					
		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated		Future No-Action		Proposed Action		Proposed Action Mitigated	
Approach	Movement	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
EB	LTR	18.2	B	18.8	B	N/A	N/A	13.6	B	14.4	B	N/A	N/A	18.6	B	20.0	B	N/A	N/A
WB	L	66.9	E	72.9	E	N/A	N/A	45.2	D	54.0	D	N/A	N/A	36.2	D	39.9	C	N/A	N/A
	TR	18.4	B	18.8	B	N/A	N/A	11.1	B	11.8	B	N/A	N/A	10.3	B	11.2	B	N/A	N/A
NB	LTR	15.6	B	17.0	B	N/A	N/A	21.2	C	24.4	C	N/A	N/A	14.5	B	17.0	B	N/A	N/A
SB	L	27.1	C	41.4	D	N/A	N/A	10.1	B	14.8	B	N/A	N/A	8.0	A	8.9	A	N/A	N/A
	TR	12.2	B	12.5	B	N/A	N/A	6.4	A	6.0	A	N/A	N/A	6.9	A	6.7	A	N/A	N/A
Overall		25.6	C	29.9	C	N/A	N/A	18.1	B	21.8	C	N/A	N/A	14.9	B	16.1	B	N/A	N/A

Expected Traffic Impacts

Table III.F-5 compares delays under the Future No-Action condition with delays under the Proposed Action. Traffic impacts at specific locations are described and discussed below:

- ***Lattingtown Road at Forest Avenue*** –This intersection operates at LOS “A” during all time periods under existing conditions and will continue to do so under future No-Action and future Proposed Action conditions. According to the analysis results, the individual lane movements and the overall intersection LOS for this location will change minimally as a result of traffic generated by the Proposed Action.
- ***Brewster Street & Herb Hill Road/Mill Hill Road/Shopping Center*** – This intersection operates at LOS “A” during all time periods under existing conditions and will continue to do so under future No-Action and future Proposed Action conditions. According to the analysis results, the individual lane movements and the overall intersection LOS for this location will change minimally as a result of traffic generated by the Proposed Action.
- ***Brewster Street/Glen Cove Avenue &WB Charles/ Pratt Boulevard*** – This intersection operates at LOS “B” during the weekday AM peak and LOS “C” during the weekday PM and Saturday peaks under existing conditions and will continue to do so under future No-Action conditions. Under the Proposed Action scenario, the weekday morning LOS goes from “B” to “C” with a change in average delay time of less than 1 second. During the weekday PM and Saturday peaks, the LOS remains at “C” with an increase in delay time of less than 4 seconds in both cases.
- ***Glen Cove Avenue at Charles Street*** – This intersection operates at LOS “A” during all time periods under existing conditions and will continue to do so under future No-Action conditions. Under the Proposed Action, the intersection LOS goes from “A” to “B” during the weekday PM and Saturday peak periods due to minor increases in average delay time of less than 4 seconds in both cases.
- ***Glen Cove Avenue at Sea Cliff Avenue*** – This intersection operates at LOS “A” during the weekday AM peak and LOS “B” during the weekday PM and Saturday peaks under existing conditions. Under future No-Action and future Proposed Action conditions the intersection will operate at LOS “B” during all three analysis periods. In all instances, the change in average intersection delay time is less than one second when comparing the No-Action condition to the Proposed Action.
- ***Pratt Boulevard at Bridge Street/Continental Place*** –This intersection operates at LOS “A” during all three analysis periods under existing conditions and future No-Action conditions. Under the Proposed Action conditions it will continue to operate at LOS “A” during the weekday AM period and will go to LOS “B” during the weekday PM and Saturday peak

hours with increases in average intersection delay time of approximately 3 seconds in both periods.

- ***Glen Cove Road & Glen Head Road*** – This intersection operates at LOS “D” during all three analysis periods under existing conditions. Under future No-Action conditions, it will continue to operate at LOS “D” during the weekday AM and PM peak hours and will go from LOS “D” to LOS “E” during the Saturday peak. Under the Proposed Action, the weekday AM LOS remains at “D”, but the weekday PM changes to LOS “E” and the Saturday LOS changes to “F”. However, mitigation in the form of an additional lane in both directions on Glen Cove Road in the vicinity of the intersection is proposed and discussed below. This mitigation will result in operating conditions which are better than the No-Action scenario.
- ***Glen Cove Road & Northern Boulevard*** – This intersection operates at LOS “E” during the weekday AM and PM peak periods and LOS “F” during the Saturday peak under existing conditions and will continue to do so under the future No-Action conditions. The intersection LOS is projected to go from LOS “E” to “F” during the PM peak hour under the Proposed Action condition with an increase in average delay time of approximately 10 seconds. During the Saturday peak under the Proposed Action, the intersection will continue to operate at LOS “F” with an increase in average delay of just under 15 seconds.
- ***Glen Cove Avenue at Morris Avenue*** – This intersection operates at LOS “A” during all three analysis periods under existing conditions and will continue to do so under future No-Action and future Proposed Action conditions. According to the analysis results, the individual lane movements and the overall intersection LOS for this location will change minimally as a result of traffic generated by the Proposed Action.
- ***Brewster Street & Cottage Row/School Street*** – This intersection operates at LOS “B” during the weekday AM peak and LOS “C” during the weekday PM and Saturday peak hours under existing conditions and will continue to do so under future No-Action and future Proposed Action conditions.
- ***Glen Cove Road/NY 107 Divide*** – This intersection operates at LOS “C” during the weekday AM and PM peak periods and LOS “B” during the Saturday peak under existing conditions and will continue to do so under the future No-Action conditions. Under the Proposed Action conditions, the Saturday LOS does not change, but the weekday AM and PM peak hour LOS goes from “C” to “D”. This is due to the southbound left from Glen Cove Road onto southbound NY 107/Cedar Swamp Road which is projected to operate at a LOS “F” during these time periods. However, this impact can be effectively mitigated by modifying the signal timing, as discussed below.
- ***Herb Hill Road & Charles Street*** – This intersection operates at LOS “B” during all three analysis periods under existing conditions and will continue to do so under future No-Action conditions. Under the future

Proposed Action conditions, it will continue to operate at LOS “B” during the weekday AM period and will go to LOS “C” during the weekday PM and Saturday peak hours with increases in average intersection delay time of approximately 4 seconds in both periods.

- ***Glen Cove Avenue at Shore Road***- This intersection operates at LOS “A” during the weekday AM and Saturday peaks and LOS “B” during the weekday PM peak under existing conditions and will continue to do so under the future No-Action condition. Under the future Proposed Action conditions, the intersection will continue to operate at LOS “A” during the weekday AM period and LOS “B” during the weekday PM period, but will go from LOS “A” to LOS “B” during the Saturday peak due to an increase in average intersection delay time of just over one second.
- ***Glen Cove Road & Back Road/Mary Lane*** – This intersection operates at LOS “C” during the weekday AM and PM periods and LOS “B” during the Saturday peak under existing conditions and will continue to do so under the future No-Action scenario. The overall LOS is projected to remain at LOS “C” during the AM peak hour and go from LOS “C” to “D” during the weekday PM peak hour and from LOS “B” to “C” during the Saturday peak hour when comparing the Proposed Action condition to the No-Action condition. However, the increase in average intersection delay is minimal in both instances and the projected LOS is acceptable under peak operating conditions.
- ***Glen Cove Avenue at Back Road***- This intersection operates at LOS “B” during all three analysis periods under existing conditions and will continue to do so under future No-Action conditions. Under the Proposed Action scenario, the weekday AM LOS goes from “B” to “C” with an increase in average delay time of 3 seconds. During the weekday PM peak and Saturday peak hours the intersection remains at LOS “B”.
- ***Glen Cove Avenue & Glen Head Road*** – This intersection operates at LOS “B” during the weekday AM peak and LOS “C” during the weekday PM and Saturday peaks under existing conditions and will continue to do so under future No-Action conditions. The overall LOS at this intersection is projected to remain at “C” during the weekday PM peak and go from LOS “B” to “C” during the AM peak hour and from LOS “C” to “D” during the Saturday peak hour when comparing the Proposed Action condition to the No-Action condition. This is primarily attributable to the southbound left turn movement which reflects substantial increases in delay times during the weekday PM and Saturday peak hours under the Proposed Action. However, this is a very light movement in terms of the number of turning vehicles and signal timing optimization can mitigate these impacts.
- ***Route 107 & Glen Head Road*** – The eastbound Stop controlled approach to this intersection operates at LOS “E” during the weekday AM peak, LOS “D” during the weekday PM peak and LOS “B” during the Saturday peak hour under existing conditions. Under the future No-Action condition

the LOS for the eastbound approach goes to “F” during the weekday AM peak, “E” during the weekday PM peak and “C” during the Saturday peak., Under the Proposed Action the eastbound stop-controlled approach at this intersection is projected to operate at LOS “F” during the weekday AM and PM peak hours and at LOS “C” during the Saturday peak hour. However, these impacts can be mitigated as discussed below.

- ***Herb Hill Road & Dickson Street/Garvies Point Road*** – The westbound stop-controlled approach at this intersection operates at LOS “A” during all three analysis periods under existing conditions. In its present configuration it is projected to operate at LOS “F” during all three analysis periods under the Proposed Action condition. This is due to the fact that it is in the center of the project area and the majority of the site traffic will pass through it upon entering or exiting the site. However, this condition can be readily mitigated as discussed below by either the installation of a roundabout or the installation of a traffic signal.
- ***Bryant Avenue at Witte Lane***- This intersection operates at LOS “C” during the weekday AM peak and LOS “B” during the weekday PM and Saturday peaks under existing conditions and will continue to do so under future No-Action conditions. Under the Proposed Action condition, the weekday AM peak and Saturday peak LOS remains unchanged, but the weekday PM peak LOS goes from “B” to “C” with an increase in average delay time of less than 4 seconds.

Additional Intersections

In addition to the study intersections identified in **Exhibit III.F-1**, the following additional intersections have been evaluated by reviewing existing available data and reports and conducting field observations of existing traffic operations to determine the possible impacts that site generated traffic may have on intersection operating conditions:

- Glen Cove Avenue at North Shore High School North Driveway
- Glen Cove Avenue at North Shore High School South Driveway
- Glen Cove Avenue and Glen Avenue
- Shore Road and Albin Street
- Albin Street and Carpenter Avenue Extension
- Prospect Avenue and Carpenter Avenue
- Prospect Avenue and Cliff Way
- Prospect Avenue and Sea Cliff Avenue
- Prospect Avenue and Glen Avenue
- Prospect Avenue and Littleworth Lane
- Prospect Avenue (Shore Road) and Glenwood Road
- Scudder’s Lane and Glenwood Road
- Glenwood Road and Bryant Avenue
- Dickson Street and McLoughlin Street

- Ellwood Street and Landing Road
- Ellwood Street and The Place
- The Place and Charles Street
- Hill Street, Mill Hill Road and The Place
- Landing Road and Cottage Row
- Northern Boulevard (Route 25A) and NYS Route 107
- NYS Route 107 (Pratt Boulevard) and Town Path/Duck Pond Road

These locations are depicted in **Exhibit III.F-16**.

**INSERT
EXHIBIT III.F-16
Additional Intersections**

- Glen Cove Avenue at North Shore High School Driveways** - The North Shore High School driveways are located on the west side of Glen Cove Avenue between Todd Drive North and Plymouth Drive South. The south driveway is the primary access point for the High School. It intersects Glen Cove Avenue opposite the access driveway to the North Shore Middle School. The intersection is controlled by a traffic signal which includes northbound and southbound protective/permmissive left turn arrows to facilitate safe entry and exit from both schools. The north driveway services the faculty and staff parking lot. It intersects Glen Cove Avenue opposite Club Road. The north driveway is controlled by a stop sign. Observations of traffic conditions in the vicinity of the school driveways at arrival and dismissal times reveal that traffic flow along Glen Cove Avenue is disrupted for 30 to 45 minutes due to the volume of traffic associated with the schools, including a significant number of school buses. There is also a substantial amount of pedestrian activity during both time periods involving students crossing Glen Cove Avenue. A school crossing guard is present during these times to facilitate safe crossing.

The worst case appears to occur at dismissal time, approximately 2:45 pm to 3:30 pm, well before the typical peak hour for the roadway and site generated traffic.

The estimated site generated traffic on Glen Cove Avenue is as follows:

Table III.F-9
Estimated Site Generated Traffic on Glen Cove Avenue – North Shore High School

	Northbound	Southbound
AM	31	40
PM	53	47
Saturday	56	48

During the afternoon dismissal time, the traffic signal cycle at the school driveways was timed at approximately a 70 second cycle which amounts to roughly 50 signal cycles per hour. Even if the peak site traffic were to coincide with the school peaks, a worst case scenario which is unlikely to occur, the projected increase of traffic on Glen Cove Avenue of one vehicle or less per signal cycle will not result in any significant changes to the existing conditions which occur during the peak periods of activity at the school driveways. Conditions along Glen Cove Avenue return to normalcy within a few signal cycles after the traffic in and out of the school driveways subsides. At most, it may take one or two more signal cycles to dissipate the additional site traffic.

The north driveway does not appear to experience any operational problems, even during afternoon dismissal time. The north parking lot is connected internally to the south driveway, thereby providing the

opportunity for anyone leaving the lot and proceeding south to do so safely by way of a traffic signal.

At non-school times, traffic on Glen Cove Avenue flows relatively freely past the schools.

- Glen Cove Avenue and Glen Avenue** - The intersection of Glen Cove Avenue and Glen Avenue/Valentine Avenue is a signalized intersection just south of Sea Cliff Avenue. Observations indicate that this intersection functions in a similar manner to the Sea Cliff Avenue intersection. The analysis results for the Sea Cliff Avenue intersection reveal that the intersection will operate at an acceptable Level of Service under future Build conditions and that project generated traffic will not affect intersection Level of Service and will have minimal impact on intersection delays. Since the volume of site traffic through the Glen Avenue/Valentine Avenue intersection will be less than or equal to that passing through the Sea Cliff Avenue intersection, any impacts on traffic operations at the Glen Avenue/Valentine Avenue will also be minimal.
- Shore Road and Albin Street** - Shore Road and Albin Street is a “T” intersection with 3-way stop control. The predominant traffic movements at this location are the westbound to southbound left turn from Shore Road to Albin Street and the reverse right turns from northbound Albin Street by-pass routes for traffic from between Glen Cove and Route 25A in Roslyn. The table below summarizes the site generated traffic that is anticipated to pass through this intersection:

**Table III.F-10
Estimated Site Generated Traffic to Pass Through the
Shore Road and Albin Street Intersection**

	NB to EB	WB to SB
AM	20	26
PM	35	31
Saturday	37	31

Existing traffic volumes for this intersection are contained in the draft traffic report that has been prepared for the nearby Villas at Glen Cove. That report also provides existing and future analysis results which indicate that the intersection with the all-way stop control will operate at a satisfactory level of service with minimal delays under future conditions. Based on field observations and a review of the data, it is clear that the additional traffic associated with the Proposed Action will not result in any capacity related problems at this intersection.

- Albin Street and Carpenter Avenue Extension** - Albin Street at Carpenter Avenue Extension is a minor intersection with minimal side friction from Carpenter Avenue Extension. The intersection is currently uncontrolled. Based on existing and anticipated future traffic volumes, the addition of

one site-related vehicle in each direction every two to three minutes, as determined from the above table, will not result in any perceptible change in operating conditions.

- ***Prospect Avenue and Carpenter Avenue; Prospect Avenue and Cliff Way; Prospect Avenue and Sea Cliff Avenue; Prospect Avenue and Glen Avenue*** - As noted above, Albin Street/Prospect Avenue is a known by-pass route between Glen Cove and Roslyn. Numerous observations of traffic conditions along Prospect Avenue at various times of the day have been made in conjunction with this project, as well as other projects in the Glen Cove, Sea Cliff and Roslyn areas. In addition, traffic counts which were obtained in conjunction with a traffic safety study jointly commissioned by the City of Glen Cove and the Village of Sea Cliff were reviewed. The intersection of Prospect Avenue at Carpenter Avenue is a four-way intersection with stop controls northbound and southbound on Prospect Avenue. The west leg of the intersection is a one-way approach. The intersection of Prospect at Cliff Avenue is a “Y” intersection with Cliff Avenue intersecting Prospect from the west. This intersection is also controlled with northbound and southbound stops signs on Prospect Avenue. Prospect Avenue at Sea Cliff Avenue is a “T” intersection with Sea Cliff Avenue intersecting from the east. The intersection is controlled by all-way stop signs. Prospect Avenue at Glen Avenue is a “Y” intersection with Glen Avenue intersecting from the east. The intersection is controlled by a stop sign on the Glen Avenue approach. In addition to a review of the existing traffic volume data, field observations clearly indicate that these intersections can accommodate the additional site-related traffic without any adverse impact on operations. Existing and future volumes are such that changes to intersection delays, if any, would be imperceptible to the average driver.
- ***Prospect Avenue and Littleworth Lane*** - Prospect Avenue at Littleworth Lane is a signalized “T” intersection with Littleworth Lane intersecting from the east. Field observations indicate that this intersection currently operates at a very good level of service with minimal delays, even during peak hours. Therefore, the addition of one vehicle in each direction every two to three minutes, which equates to less than one vehicle per signal cycle, will not result in any noticeable impact on intersection operations nor any measurable increase in intersection delays.
- ***Prospect Avenue (Shore Road) and Glenwood Road*** - Prospect Avenue (Shore Road) at Glenwood Road is a signalized “T” intersection with Glenwood Road intersecting from the east. This intersection was previously analyzed in conjunction with a traffic study for a nearby residential development and was found to operate at a satisfactory level of service during all peak hours. Recent observations reveal that the intersection is still operating very well with minimal delays. As with the intersection of Littleworth Avenue, the additional traffic associated with

the proposed action is not expected to result in any noticeable impacts on intersection operations and vehicle delay time.

- Scudders Lane and Glenwood Road** - Scudders Lane and Glenwood Road is a “T” intersection with Glenwood Road intersecting Scudders Lane from the south. The intersection is controlled by a stop sign for northbound traffic on Glenwood Road. This intersection was also analyzed in conjunction with a prior study for a project in the area and it was found that traffic on Glenwood Road does experience moderate delays during peak hours due to the fact that they must yield to traffic on Scudders Lane. Traffic from the project site heading in the southerly direction will be making the free right turn from Scudders Lane to Glenwood Road and will not directly contribute to intersection delay time. While northbound traffic destined for the site is expected to add to the existing delays on the stop controlled approach, the anticipated addition of approximately one vehicle every two minutes during peak hours will not result in any significant project related impacts.
- Glenwood Road and Bryant Avenue** - Glenwood Road and Bryant Avenue is a signalized “T” intersection along the by-pass route between Prospect Avenue and Route 25A in Roslyn. Observations during peak traffic hours on weekdays reveal that the intersection operates well without any significant delays or lengthy vehicle queues. In addition to the northbound and southbound site traffic on Glenwood Road, it is also projected that there will be site generated traffic on Bryant Avenue, as summarized below:

**Table III.F-11
Estimated Site Generated Traffic on Bryant Avenue**

	Eastbound	Westbound
AM	31	40
PM	53	47
Saturday	56	48

Based on the existing conditions and the absence of any apparent operational deficiencies, the additional site-related traffic that will be added to the intersection during peak hours as a result of the proposed action is not expected to significantly impact intersection level of service or average vehicle delays.

- Dickson Street and McLoughlin Street** - Dickson Street and McLoughlin Street is a minor intersection just north of the project site. A review of the roadway network surrounding the site reveals that there would be little reason for site traffic to travel through this intersection with the exception of a minimal number of trips that might be specifically destined to the area northwest of the site. The intersection is controlled by all-way stop signs and the limited site traffic that may pass through is expected to result in negligible impact.

- **Elwood Street and Landing Road** - The intersection of Ellwood Street and Landing Road is also located northwest of the site and, as with Dickson Street and McLoughlin Street, there is little reason for site traffic to travel through this intersection unless they have a specific destination in the area. Thus, minimal site generated traffic is anticipated to pass through this intersection and project related impacts will be negligible.
- **Ellwood Street and The Place** - The intersection of Ellwood Street and The Place is located just north of the site border which is utilized by traffic to and from areas northwest of the site to access Glen Cove Avenue and points to the south. This intersection may be utilized by site traffic along Dickson Street seeking to utilize an alternate route via The Place, Hill Street and Cottage Row to destinations further north on Brewster. The following table summarizes the overall projections of total site generated traffic travelling north of Cottage Row on Brewster Street:

**Table III.F-12
Estimated Site Generated Traffic Traveling North of Cottage Row on Brewster Street**

	Northbound	Southbound
AM	33	25
PM	39	44
Saturday	39	46

Based on these overall numbers and observations of existing intersection operations, even if 50% of these vehicles opt to take the back route, the impact of one vehicle in each direction every two to three minutes on traffic operations at this intersection will be minimal in nature and will not result in any noticeable decrease in intersection operations.

- **The Place and Charles Street** - Existing conditions at The Place and Charles Street are similar to those at Ellwood Street and The Place and, as with the latter, a minimal amount of project generated traffic is anticipated to pass through this intersection. Therefore, no significant adverse impacts are expected at this location.
- **Hill Street/Mill Hill Road and The Place** - The intersection of Hill Street/Mill Hill and The Place is a lightly travelled intersection which, as with the previous two locations, is anticipated to receive very little site generated traffic. A 2006 analysis of this intersection in conjunction with a project on Hill Street revealed that this intersection operates at very good levels of service during all peak periods. Based on the results of that analysis and recent observations which reveal that the intersection is still functioning in a similar manner, the limited site generated traffic that might be added to this intersection will not result in any adverse operational impacts.

- Landing Road and Hill Street/Cottage Row** - The intersection of Landing Road and Hill Street/Cottage Row is controlled by a flashing traffic signal with flashing red indications for Landing Road and flashing yellow indications on Hill Street. Although a limited number of site generated vehicles are anticipated to traverse this intersection, this intersection was also analyzed in conjunction with the 2006 study mentioned above and it was found that there are moderately long delays to traffic on Landing Avenue during peak hours. However, it was also determined that modification to all-way flashing red operation or a fully operational three color traffic signal would substantially improve intersection operations and reduce delays. While the site traffic will not substantially impact the current operating conditions, it is recommended that consideration be given to implementing this recommendation in order to benefit both the capacity and safety at this location.
- Route 25A and Route 107** - The intersection of Route 25A and Route 107 is a major New York State intersection located approximately four miles from the site. The table below depicts the site related traffic volumes northbound and southbound on Route 107 north of the intersection:

Table III.F-13
Estimated Site Related Traffic Volumes on Route 107 North of Rt. 25A Intersection

	Northbound	Southbound
AM	45	59
PM	78	69
Saturday	82	70

Although the project's traffic engineers were unable to obtain any recent turning movement counts for this intersection, they are reasonably familiar with peak hour operating conditions as a result of involvement on the subject project, as well as with other projects in Glen Cove and the surrounding communities. The site generated volumes presented in the table above represent a combination of northbound/southbound through traffic on Route 107 and traffic to and from the east on Route 25A. During recent weekday peak hour observations at this intersection the traffic signal cycle length was timed at 170 to 175 seconds which equates to approximately 20 signal cycles per hour. Assuming a 3 to 1 split of through traffic in relation to traffic turning to/from the east, the site generated traffic represents approximately 1.5 vehicles per travel lane per signal cycle. This would result in the need for increased green time of roughly three seconds in the northbound and southbound signal phases. Observations reveal that the existing signal timing can readily accommodate these few extra seconds of green time during most cycles throughout both the AM and PM peak hours. Furthermore, these observations indicate that there is excess green time during the east-west movement of almost every cycle to redistribute a few seconds to the northbound and/or southbound phases, if necessary. Typically, the need for signal timing adjustments is determined by the New York State

Department of Transportation based on actual operating conditions. Therefore, the actual need for timing revisions due to site generated traffic cannot be ascertained until the project is complete and occupied.

- **Route 107 and Town Path/Duck Pond Road** - The intersection of Route 107 (Pratt Boulevard) and Town Path/Duck Pond Road was also observed during the morning and afternoon peak hours and was found to be operating at a relatively good level of service with minimal delays on any of the approaches. The anticipated site traffic through the intersection is presented in the table below:

Table III.F-14
Estimated Site Generated Traffic on intersection of Route 107 (Pratt Boulevard) and Town Path/Duck Pond Road

	Northbound	Southbound
AM	151	189
PM	260	223
Saturday	274	226

This intersection operates in a similar manner to the study intersection to the north at Pratt Boulevard and Bridge Street/Continental Place. Since the analysis results indicate that the Bridge Street/Continental Place intersection operates at a relatively good level of service under existing conditions, as well as under future No-Build and Build conditions and there will be less site generated traffic passing through the Town Path/Duck Pond Road intersection, it is reasonable to conclude that the proposed action will not have any significant impacts on the level of service and overall vehicle delays at this intersection.

Potential Effects on Diversion Routes

In addition to the intersections analyzed and discussed above, possible diversion/cut-through routes in the vicinity of the project site have been reviewed and the potential impact of project related traffic on these neighborhood streets was assessed. One such route which currently serves as a minor local connector route between the project site and the Route 25A viaduct in Roslyn is Albin Street/Prospect Avenue/Shore Road. Travel time studies were conducted during the morning and afternoon peak hours along Glen Cove Road, Glen Cove Avenue and the Albin Street/Prospect Avenue/Shore Road route. During the weekday morning peak hour, the results reveal that the average travel time for southbound traffic was slightly better along the Glen Cove Road route than along the other two routes. In the northbound direction, the average travel time in the morning was almost identical on all three routes. In the afternoon, the travel time in the southbound direction on the Albin Street/Prospect Avenue/Shore Road route was very close to the time for the Glen Cove Avenue route, but averaged two minutes better than the Glen Cove Road route. In the northbound direction, the difference in the average travel time was even greater with the Albin Street/Prospect Avenue/Shore Road route approximately two minutes quicker than the Glen Cove

Avenue route and close to four minutes shorter than the Glen Cove Road route. It should also be noted that this route has been a known source of repeated complaints from residents, particularly with regard to the speed of traffic along the Albin Street/Prospect Avenue section. As a result of these complaints, the City of Glen Cove and the Village of Sea Cliff commissioned a joint traffic safety study which resulted in the implementation of traffic calming measures, including speed humps and the installation of additional stop signs. Based on the anticipated traffic distribution patterns, the site generated traffic volumes which are projected to utilize this by-pass route range from 20 to 37 vehicles in the northbound direction and 26 to 31 vehicles in the southbound direction during peak hours. Traffic counts conducted in conjunction with the City/Village study reveal existing volumes on Prospect Avenue of approximately 110 northbound vehicles and 190 southbound vehicles in the AM peak hour. In the PM peak hour the counts indicate that there are approximately 205 northbound vehicles and 90 southbound vehicles on a typical weekday. These figures represent only a small fraction of the theoretical capacity of the roadway and the expected addition of one or two vehicles per minute in each direction during peak hours as a result of the proposed action will not result in any capacity problems. Furthermore, based on recent observations and familiarity with conditions prior to the implementation of the traffic calming measures, it appears that the traffic calming initiatives have been effective in reducing travel speeds on Prospect Avenue. If speeding on other segments of this bypass route remain problematic, the implementation of additional traffic calming measures by the appropriate jurisdiction may be necessary.

Another potential cut-through route identified in the scope is Charles Street east to Continental Place and Continental Place north to Pratt Boulevard. This by-pass might conceivably be utilized by southbound traffic destined for Pratt Boulevard/Route 107 to avoid the intersection of Glen Cove Avenue and Pratt Boulevard. As indicated in Exhibits III.F-10 through III.F-12, the site generated traffic that is projected to use this route is fewer than 10 vehicles per hour. A review of the existing turning movement counts at the Glen Cove Avenue/Charles Street intersection do not indicate that northbound traffic on Glen Cove Avenue is currently utilizing Charles Street to avoid the Pratt Boulevard intersection. Additionally, the results of the intersection capacity analyses reveal that there will not be any significant delays for northbound to eastbound right turn vehicles at the Pratt Boulevard intersection under future Build operating conditions. Therefore, there is no apparent reason for site generated traffic to seek an alternative route to southbound Pratt Boulevard and it is anticipated that Charles Street will be utilized only sporadically by traffic from the subject site. The impact of less than one vehicle every seven to eight minutes, as projected, will be imperceptible.

Other possible cut-through routes identified in the scope include Craft Avenue and Lamarcus Avenue east of Glen Cove Avenue. Typically, motorists tend to seek bypass or short-cut routes through neighborhood streets in order to avoid congestion points and save time. In the case of both of these streets, the only traffic that would have reason to utilize either of them would be site traffic

travelling to or from Sea Cliff Avenue. First, it is anticipated that site related traffic destined for Sea Cliff Avenue will be minimal. Additionally, in looking at the analysis results for the Glen Cove Avenue/Sea Cliff Avenue intersection, both existing and future intersection levels of service and delay times are not indicative of a congestion problem at this location. Thus, the likelihood of site generated traffic utilizing either Craft Avenue or Lamarcus Avenue is remote, at best. At most, residents of these local streets should experience only a sporadic vehicle from the subject site.

Finally, there is a potential for the streets just north of the site (Ellwood Street, The Place, Hill Street, Cottage Row) to be used by site traffic to reach destination points further north on Brewster Street/Forest Avenue. However, the most direct route to such destinations is directly via Herb Hill Road to Brewster Street. The intersection analysis results indicate that there will not be any significant delay issues with this direct route and sample travel time measurements did not reveal any time savings by using these back streets. Thus, it is not anticipated that there will be any substantial traffic added to the local neighborhood streets north of the site as a result of the project.

d) Mitigation Measures

Proposed Transportation System Improvements

This section describes the proposed transportation system improvements (mitigation measures) to be implemented as part of the Glen Cove Creek Mixed-Use Waterfront Development. These improvements are proposed to mitigate the majority of the traffic impacts identified above, as well as to improve operations for lane groups and/or approaches that are not necessarily impacted by site-generated traffic, but are regardless projected to operate at a lower LOS under the Proposed Action condition. The proposed mitigation measures are as follows:

- ***Glen Cove Road & Glen Head Road*** – Widen to provide one additional northbound lane and one additional southbound lane at the intersection. There is sufficient room in the median to accomplish this widening without the need for any right-of-way acquisition. Additionally, it will be necessary to modify the traffic signal timing and phasing to optimize the intersection's operation. The intersection currently has a split phase operation for the eastbound and westbound approaches. Instead of a split phase operation, provide an eastbound leading left turn phase followed by a combined east-west phase. In addition, provide a north/south leading left turn phase. The redeveloper would be responsible for the funding of this mitigation.
- ***Glen Cove Road & Northern Boulevard*** – As stated previously, Nassau County has developed plans to improve the capacity of this intersection by widening the south leg of the intersection, thereby allowing for a third through lane on the southbound approach. The future condition analyses

for both the No-Action and Proposed Action scenarios are based on these proposed improvements being implemented prior to completion of the Proposed Action. The funding for these improvements was included in Nassau County's 2008 Capital Program, but in order for the County to proceed, there are right-of-way issues that must first be resolved.

- ***Herb Hill Road & Dickson Street/Garvies Point Road*** – This intersection is expected to experience a reduction in LOS from “A” or “B” to “F” if no mitigation is done. However, there are several options to improve the future operating conditions at this location. One option is to install a fully actuated traffic signal which will respond to the changing volumes on each of the approaches throughout the day. Another option is to construct a roundabout at this location. Both of these options were analyzed and both will operate satisfactorily under the Proposed Action conditions. The final determination as to which alternative will be implemented will be determined in consultation with the City of Glen Cove as the site plan approval process moves forward. The City has applied for federal funding to improve Garvies Point Road in conjunction with the proposed ferry terminal. It is anticipated that the improvements at this intersection will be incorporated into the City's project. The decision as to the design and operation of the intersection will be made during the design process.
- ***Route 107 & Glen Head Road*** – Prohibit eastbound left turns at the intersection. The number of vehicles currently performing this movement is very low, but causes excessive delays when done. This prohibition is a regulatory action, which would typically be ordinances and posted by NYSDOT since Route 107 is a State highway.
- ***Glen Cove Road at NY 107 Split*** – Adjust signal timing to optimize cycle length and phase split to improve overall performance of intersection and provide substantial reduction in delay for southbound left turn from Glen Cove Road to NY 107 (Cedar Swamp Road). The redeveloper would be responsible for the funding of the mitigation. This signal is under the jurisdiction of the State and the final decision as to whether or not to modify the signal timing rests with NYSDOT.
- ***Glen Cove Avenue & Glen Head Road*** – Optimize the phase splits to improve overall performance of intersection and substantially reduce delays for southbound left turning vehicles. The redeveloper would be responsible for the funding of the mitigation. This signal is under the jurisdiction of Nassau County and the final decision as to whether or not to modify the signal timing rests with NCDPW.

Tables III.F-15 includes summarized analysis results for all the study intersections under the Proposed Action Mitigated Condition. The Mitigated condition analyzes the Proposed Action traffic volumes combined with the proposed transportation system improvements described above. Detailed *Synchro* analysis worksheets for the Proposed Action Mitigated Condition are presented in the Appendix (L-5).

**Table III.F-15
Level of Service Summary**

Intersection	AM Peak			PM Peak			Saturday Peak		
	Existing	Future No Action	Proposed Action w/ Mitigation	Existing	Future No Action	Proposed Action w/ Mitigation	Existing	Future No Action	Proposed Action w/ Mitigation
	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS	LOS
Lattingtown Road & Forest Avenue	A	A	A	A	A	A	A	A	A
Brewster Street & Herb Hill/Mill Hill Rds	A	A	A	A	A	A	A	A	A
Brewster/Glen Cove Ave & Pratt Blvd	B	B	C	C	C	C	C	C	C
Glen Cove Avenue & Charles Street	A	A	A	A	A	B	A	A	B
Glen Cove Avenue & Sea Cliff Avenue	A	B	B	B	B	B	B	B	B
Pratt Boulevard & Continental/Bridge	A	A	A	A	A	B	A	A	B
Glen Cove Road & Glen Head Road	D	D	C	D	D	D	D	E	D
Glen Cove Road & Northern Boulevard	E	E	E	E	E	F	F	F	F
Glen Cove Avenue & Morris Avenue	A	A	A	A	A	A	A	A	A
Brewster St & Cottage Row/School St	B	B	B	C	C	C	C	C	C
Glen Cove Road at NY 107 Split	C	C	C	C	C	C	B	B	B
Herb Hill Road & Charles Street	B	B	B	B	B	C	B	B	C
Glen Cove Avenue & Shore Road	A	A	A	B	B	B	A	A	B
Glen Cove Road & Back Rd/Mary Lane	C	C	C	C	C	D	B	B	C
Glen Cove Avenue & Back Road	B	B	C	B	B	B	B	B	B
Glen Cove Avenue & Glen Head Road	B	B	C	C	C	C	C	D	D
Herb Hill Road & Dickson St/Garvies Pt	A	A	A	A	A	A	A	A	A
Bryant Avenue & Witte Lane	C	C	C	B	B	C	B	B	B

2. Parking

a) Existing Conditions

On-street parking activities and parking regulations were observed in the field during the traffic data collection process. There are sporadic parking, standing and stopping restrictions posted along Garvies Point Road, including a nighttime restriction between the hours of 11:00 PM and 6:00 AM, except for authorized vehicles with trailer permits. There are No Stopping restrictions on both sides of Herb Hill Road in the vicinity of Charles Street and continuing to the intersection of Garvies Point Road/Dickson Street. There are also some intermittent No Parking signs on the north side of the street. The west side of Dickson Street is posted with No Parking signs from Herb Hill Road to just south of The Place and both sides are posted as No Stopping beginning approximately 100 feet south of The Place. Existing parking demand in the vicinity of the study area is very low due to existing land use patterns. There is no on-street parking demand under the existing conditions, as most of the western portion and about 50 percent of the eastern portion of the project area consists of vacant land. The majority of the remaining eastern portion of the project area is developed with industrial uses which provide ample on site parking.

b) Future No-Action Conditions

The Future No-Action Condition would not include any changes in the existing parking conditions within the project area other than that which is associated with other planned projects (e.g., the Glen Cove Creek Ferry project, etc.). Parking for the ferry would be provided separately.

c) Future Conditions with the Proposed Action

A comprehensive shared parking analysis for the proposed action is contained in Appendix L. The report presents a detailed analysis of the actual anticipated parking demand for the proposed waterfront development on a block-by-block basis utilizing the Urban Land Institute’s (ULI) shared parking methodology.

A summary of the parking demand for the project at full build-out is presented in the table below:

**Table III.F-16
Parking Demand Summary**

	Weekdays		Weekends	
	Unadjusted	Adjusted	Unadjusted	Adjusted
Block A	591	582	601	596
Block B	501	501	501	501
Block C	865	487	788	422
Block D	184	176	19	18
Block E	182	182	182	182
Block F&G	172	172	172	172
Block H	178	178	178	178

Block I	188	188	188	188
Block J	72	65	80	76
TOTALS	2933	2531	2709	2333

As can be seen from the table, both the unadjusted (calculated using base parking ratios) and adjusted (modified to account for shared parking factors) peak parking demand occurs on a weekday, with an absolute maximum unadjusted demand of 2,933 parking spaces and an adjusted demand of 2,531 spaces. On weekends, the unadjusted demand is 2,709 spaces while the adjusted demand is 2,333 spaces.

The conceptual plans for the proposed waterfront development depict a total of 3,018 off-street parking spaces, which exceeds the estimated unadjusted demand and is approximately 400 spaces in excess of the anticipated adjusted peak demand based on the ULI adjustment factors. The shared parking analysis was conducted on a block-by-block basis to ensure that the supplied parking is located in proximity to the uses which it is intended to serve. It should be noted that the “non-captive” ratio utilized in the shared parking study does not correlate with the internally captured vehicle trips in the trip generation section because trip activity and parking demand are not directly related. That ratio is based on the parking consultant’s experience with projects in similar settings and locations. Since the actual number of proposed spaces exceeds the unadjusted peak demand as set forth in Table III.F-16 above, the assumptions contained in the shared parking analysis do not result in any reduction in the proposed parking supply and minor adjustments in the ratios used would not be expected to affect the conclusions of the study. The locations of the proposed on-site parking on each block and the number of spaces provided are depicted in Exhibit_II-22A.

The report also includes an evaluation of the parking supply in comparison to the City of Glen Cove’s existing zoning ordinance. In those instances where the existing ordinance does not contain a parking requirement for a specific proposed use, a reasonable industry standard was applied and it was determined that the total required parking would be approximately 2,752 spaces. Since the proposed parking supply exceeds this figure by 266 spaces, it is reasonable to conclude that the parking provided will exceed the City’s requirements.

In addition to the off-street parking, there will be approximately 238 on-street parking spaces available along Garvies Point Road, as well as Herb Hill Road and Dickson Street, for use by the general public accessing the waterfront promenade and users of the marinas and boat ramp, as well as to serve as overflow parking for the ferry terminal. Recognizing that 100 of the on-street spaces may have to be reserved during the early phases of the ferry undertaking, there will still be approximately 138 spaces available to the general public on a typical weekday. Since existing conditions are such that there is little attraction to the area with the exception of the boat ramp and promenade, current parking activity along Garvies Point Road is extremely limited. However, it is reasonable to assume that the available on-street parking will be adequate to meet the anticipated demand. On weekends when the ferry parking

demand is less, there will be even more spaces available for visitors to the waterfront. Since there will be adequate parking for residents and their guests within the on-site parking facilities, they will not have any need to park on Garvies Point Road. Special events at the proposed Esplanade Park would normally take place on weekends when the majority of spaces in the office building would be available for use. The redeveloper and City have also discussed providing overflow parking in the downtown parking garages and shuttle bus service could be used by event sponsors to transport people to and from the waterfront area.

For parking operations, there will be valet service available for the hotel and restaurant, and the condominium buildings. Residents and their guests will also be permitted to self-park. Access to the concealed parking facilities on each of the blocks is provided via internal access driveways between buildings. The conceptual site plan depicts the general configuration of the internal access roadways and driveways. The geometry of these internal roadways and driveways, as well as the access routes to the marinas, beach, boat ramp and park will be adequate to accommodate passenger vehicles, emergency vehicles, delivery trucks and boat trailers. Turning paths for emergency vehicles and vehicles with trailers are demonstrated in **Exhibits III.F-16A, III.F-16B and III.F-16C** and Sheets C-27 through C-29 of the Master Site Plan Drawings. The detailed design of the on-site parking facilities for each phase of the project will be subject to final approval during the site plan review process and will meet all applicable design standards for maneuverability. Based on anticipated traffic activity, the roadway system within the project area, including the public streets and the internal roadways, will be able to satisfactorily accommodate the flow of traffic into and out of the site. Furthermore, based on industry standards and the number of spaces on each block, the number of entry and exit points provided for the on-site parking is adequate.

In addition to the above, the conceptual site plan also includes a designated parking area for up to 14 boat trailers for people using the public boat ramp at the west end of Garvies Point Road. Observations on a typical Saturday in the summer revealed a maximum of 5 boat trailers parked at the end of Garvies Point Road. Therefore, the proposed 14 trailer spaces should be more than adequate to meet the anticipated summer demand. The boat ramp trailer parking area has been designed to function in conjunction with the turnaround at the end of Garvies Point Road to facilitate maneuverability and accommodate orderly flow.

Based on the above, no adverse parking impacts are anticipated.

INSERT EXHIBIT 16A
Trailer 1 Turning Diagram

INSERT EXHIBIT 16B
Trailer 3 Turning Diagram

INSERT EXHIBIT 16C
Turning Diagram

3. Pedestrians

a) Existing Conditions

Pedestrian activities were observed at each of the study intersections during the field data collection effort. Since the majority of the study intersections, including Herb Hill Road & Dickson Street/Garvies Point Road, Herb Hill Road & Charles Street, Mill Hill Road/Hill Street, and Glen Cove Avenue & Morris Street, are not located in pedestrian-friendly environments and lack pedestrian amenities such as sidewalks and crosswalks, very few pedestrians were observed at these four intersections during the study peak hours.

The adequacy and capacity of sidewalks and crosswalks are related to demand imposed on them. Due to the low pedestrian demands resulting from existing land use patterns in the vicinity of these intersections, these intersections do not require significant pedestrian-related improvements. The intersections along Glen Cove Avenue and Pratt Boulevard, with the exception of the Glen Cove Avenue & Morris Avenue intersection, provide sidewalks and crosswalks for pedestrian circulation at these intersections. However, the intersection of Glen Cove Avenue/Pratt Boulevard does not provide any east-west crossing. Pedestrian activities are also low at the intersections along Glen Cove Avenue and Pratt Boulevard.

b) Future No-Action Conditions

Pedestrian activities related to the Future No-Action condition are anticipated to be nearly identical as those under existing conditions, as the majority of the project area under the Future No-Action condition would remain as it currently is, a vacant area along with other separately planned projects.

c) Future Conditions with the Proposed Action

Proposed Pedestrian Amenities

The proposed development is designed to create a highly pedestrian-oriented neighborhood setting, which encourages walking and strolling both as an alternate means of transportation and as a recreational activity. The development is creating a public waterfront esplanade, cultural uses and other destinations which are intended for use by the entire Glen Cove community. Consequently, pedestrian facilities are intended for both residents of the new development and visitors from the neighboring areas, including Downtown Glen Cove. To accomplish these goals, pedestrian improvements are proposed both for the development area itself, and also for those areas which will serve as links between the waterfront and Downtown.

In order to accommodate pedestrian movements throughout the site, the current site plan calls for a connected network of sidewalks along both sides of all the site's public and private roadways, and additional pedestrian connections such as walks and paths to and from the proposed buildings, parking facilities and other amenities. Sidewalks are intended to be a minimum of five feet wide and will range in width depending on expected pedestrian volumes and adjacent uses. The proposed sidewalk system will also connect to existing sidewalks on Herb Hill Road.

Striped pedestrian crosswalks will be provided across all legs of the Charles Street/Herb Hill Road intersection to accommodate pedestrian movements. In addition, each of the stop-controlled intersections located on-site will have striped pedestrian crosswalks across all stop-controlled approaches. These pedestrian crosswalks may be raised and/or utilize textured pavement treatments to further delineate them for vehicular traffic and to provide traffic calming effects.

The sidewalk network will be integrally linked to the waterfront esplanade, by means of walks and paths that lead from the street system to the waterfront park at multiple locations. A continuous public waterfront esplanade extends the entire length of the development's waterfront frontage, leading from Pratt Park all the way to the "Point" in the vicinity of the Hempstead Harbor Club. The esplanade, which will be designed as a multi-use facility to accommodate bicycles as well as pedestrians, is a major feature and public benefit of the development, but must be connected and visible to the new neighborhood areas and sidewalks at numerous points, to ensure its accessibility and security.

Additionally, the proposed project includes linkage improvements to Downtown Glen Cove, including facilitating connections to existing Downtown streets and sidewalks. Enhancements will include way-finding signs to improve the linkage between the waterfront and Downtown areas. Special attention will be paid to enhancing walkability and wayfinding in the crucial area between the Glen Street/School Street intersection, central to Downtown, and Pratt Park, which serves as a gateway to the waterfront. To complete this connection, a new signalized pedestrian crossing will be added to the existing signal at the intersection of Brewster Street and Herb Hill Road, providing safe pedestrian access directly from Downtown to Pratt Park. Under a separate, but related project, the City of Glen Cove has plans to develop a similar path, Esplanade Phase 2, within Pratt Park. New walks and paths will link the entry points from Brewster Street to the waterfront area to the west, while providing improved means of enjoying the park's natural and recreational assets. A map of the proposed pedestrian/bicycle amenities is provided as **Exhibit II-10**.

Incorporating such pedestrian-friendly improvements is intended to create a safe and enjoyable pedestrian experience that encourages the residents of the development to travel downtown on foot. It is also anticipated that the cultural aspects of the development, as well as the public waterfront esplanade, will encourage residents of the neighboring areas to walk to the waterfront area. In order to promote pedestrian

safety and the compatible relationship between the waterfront and Downtown Glen Cove, it is envisioned that an event coordinator and support staff would be employed to assist during special events on the waterfront to facilitate pedestrian and vehicular flow between the project site and the Downtown.

4. Transit

a) Existing Conditions

The Metropolitan Transportation Authority (“MTA”) operates the public mass transit system for New York City and the surrounding region, including Nassau County. The MTA network of transportation services is comprised of subways, buses and railroads that move approximately 2.4 billion riders a year (about one in every three users of mass transit in the United States and two-thirds of the nation's rail riders).

Public transit within Nassau County consists of the Long Island Rail Road (“LIRR”) and Long Island Bus (“LIB”). Both agencies are part of the MTA’s network of transportation agencies that serve the public transit needs for the region. Additionally, the City of Glen Cove operates a commuter/loop bus which runs throughout the City. The commuter bus runs to and from the Sea Cliff LIRR Station during the early morning and late afternoon/evening commuter hours. It passes directly through the project area with stops on Dickson Street at Janet Lane and Herb Hill Road at Charles Street. Between the hours of 9:00 am and 3:00 pm the bus is run as a loop service linking residential areas of the City with the downtown business district, Forest Avenue, Glen Street and the Glen Cove Hospital. The loop bus currently provides service to the residential area immediately north of the project area.

Existing Rail Connections

The MTA’s LIRR is both the largest commuter railroad and the oldest railroad in the country that still operates under its original name. Chartered in 1834, it extends from three major New York City terminals: Penn Station; Flatbush Avenue and Hunterspoint Avenue. A major transfer hub at Jamaica station links the LIRR to the easternmost tip of Long Island (see **Exhibit III.F-17**). The LIRR maintains 124 stations and over 594 miles of track on 11 rail lines/branches, with almost 300,000 average weekday passengers. Nassau County contains 58 LIRR stations.

The City of Glen Cove is served by the LIRR Oyster Bay Branch which, from east to west, contains 10 stations: East Williston, Albertson, Roslyn, Greenvale, Glen Head, Sea Cliff, Glen Street, Glen Cove, Locust Valley and Oyster Bay.

The Glen Cove station, Glen Street station and Sea Cliff station are all within the City of Glen Cove. Of these, the closest to the project area is the Glen Street station, located approximately one mile driving distance from the project area at Glen Street (Cedar Swamp Road) and Elm Avenue. Travel time from the Glen Street station to Pennsylvania (Penn) Station is approximately one hour. Connection is available at the Glen Street station to the MTA Long Island Bus route N27, which is discussed later in this chapter. Although parking is free and unrestricted at this LIRR station, observations reveal that the existing parking is fully occupied on most weekdays.

**Exhibit III.F-17
Long Island Rail Road Map**

The Glen Cove station is slightly further away from the site, located directly off St. Andrew's Lane at Highland Road and Pearsall Avenue, approximately 1.2 miles driving distance from project area. Parking is also free and unrestricted at this station, but as with the Glen Street station, it is usually fully occupied on a typical weekday. No transit connections, other than local taxi service and the City's loop/commuter buses, are available at the Glen Cove station. The Sea Cliff Station is the furthest away of all three, approximately 1.4 miles driving distance from the site. The City's Commuter/Loop bus currently provides service to this station. As with the other two LIRR stations, parking at this location is free and unrestricted, but is fully occupied on typical weekdays.

Since there is no land readily available in the vicinity of any of the LIRR stations discussed above, the likelihood of expanding the available parking supply is highly improbable. However, as discussed below, the applicant is proposing to provide direct shuttle service between the site and one or more of the nearby LIRR stations. This shuttle service has the potential to fully mitigate any project impacts on LIRR parking conditions.

The Oyster Bay branch operates seven days a week. On weekdays (Monday through Friday), there are 6 morning peak westbound trains from Oyster Bay to Penn Station with the first one leaving Oyster Bay at approximately 5:20 a.m. and the last one arriving at Penn Station at approximately 9:40 a.m.. During evening peak hours there are 6 eastbound trains from Penn Station to Oyster Bay, beginning at approximately 4:15 p.m. During off-peak times, service is available approximately every one to two hours.

Weekend and holiday service on the Oyster Bay branch is less frequent than weekday service. Westbound service from Oyster Bay begins at approximately 6:00 a.m. and ends at approximately 10:00 p.m. Eastbound trains from Penn Station begin just after 8:00 a.m. and continue to just after 1:00 a.m. Weekend headways range between one and two hours throughout the day.

Existing Bus Connections

As part of the MTA network, LIB provides bus service throughout Nassau County, western Suffolk County and into eastern Queens with 54 routes over 995 bus route miles (see **Exhibit III.F-18**). Formed in 1973 (by the combination of ten private bus carriers into a unified transportation system), LIB links 96 communities to 47 LIRR stations, five subway stations and seven major shopping malls. Until recently, buses in the county were operated under a lease-operating agreement between Nassau County and the MTA. However, the MTA is in the process of taking over the operation from the County. The City of Glen Cove is currently serviced by two Long Island Bus lines, the N21 and the N27. Both routes terminate at the intersection of Glen Street and Bridge Street in downtown Glen Cove.

Two private taxi companies also serve the City: Arena Taxi and Mid-Island Taxi.

**Exhibit III.F-18
Bus System Connections Map**

Long Island Bus N21 Route

The N21 route runs from Downtown Glen Cove to Flushing, New York. The route serves the municipalities of Glen Cove, Sea Cliff, Roslyn, Manhasset, and Great Neck in Nassau County, and the neighborhoods of Little Neck, Douglaston, Bayside and Flushing in the Borough of Queens. Beginning at the intersection of Glen Street & Bridge Street in downtown Glen Cove, the N21 route travels directly past the site along Glen Cove Avenue to Glen Avenue, then west along Glen Avenue to Prospect Avenue, Shore Road and Bryant Avenue. The route then travels south until finally turning west along Northern Boulevard and terminating in Flushing at Main Street.

Transfers are available from the N21 route to several other LIB routes. Available in downtown Glen Cove and in Sea Cliff, two transfers are available for the N27 route. Transfers are also available along Northern Boulevard for the N20, N23, N25, N26, N28 and N58 routes. Numerous New York City bus lines also cross the N21 route in Queens. Connection is also available in Flushing with the #7 subway line of the MTA New York City Transit.

On weekdays service on the N21 route in the westbound direction from Glen Cove towards Flushing begins at about 5:32 a.m. and operates about every ½ hour to hour, depending on the time of day. The last bus leaves Glen Cove at approximately 9:45 p.m. In the eastbound direction, buses departing Flushing for Glen Cove begin service at about 5:40 a.m. with headways ranging between 15 and 40 minutes during the morning and evening peak hour periods, and about every hour during the mid-day period.. The last bus to Glen Cove departs Flushing at approximately 9:55 p.m. Service on Saturdays and Sundays is less frequent, operating about every hour to hour and 15 minutes. Weekend service begins around the same time as weekday service in the morning, but ends earlier in the evenings, approximately between 7:30 p.m. and 9:00 p.m. depending on the day and direction of travel.

Long Island Bus N27 Route

The LIB N27 route operates between Downtown Glen Cove and Hempstead Village. The route serves the municipalities of Glen Cove, Glen Head, Sea Cliff, Roslyn, East Hills, Greenvale, Albertson, East Williston, Mineloa, Carle Place and Hempstead, as well as the Roosevelt Field shopping center. The route travels primarily north-south along Glen Street, Glen Cove Avenue, Glen Cove Road, Roslyn Road, Jericho Turnpike and Clinton Street. The route terminates in Hempstead at Station Plaza and Main Street.

Transfers are available from the N27 route to several other LIB routes, including numerous other routes that terminate in downtown Hempstead. Along the N27 route from Glen Cove to Roosevelt Field, connections area available to the N20, N21, N22A, N23 and N28 routes. Transfers are also available at Roosevelt Field and in

downtown Hempstead to over 25 other LIB routes that disperse throughout Nassau County and into the Borough of Queens.

On weekdays, N27 buses from Hempstead arrive in Glen Cove about every half hour from approximately 6:19 a.m. to 9:20 a.m. and from just after 3:00 p.m. until the last bus, which arrives at about 7:45 p.m. Throughout the mid-day period, buses run about every hour. From Glen Cove, the N27 begins service just before 6:00 a.m., with headways of one half hour to an hour, with the last bus leaving Glen Cove just before 8:00 p.m.. Service on Saturdays, Sundays and holidays is less frequent, operating about every hour to two hours, depending on the day and direction traveled. Weekend and holiday service generally starts later in the mornings and ends earlier in the evenings.

The City of Glen Cove Commuter/Loop Bus

The City of Glen Cove also operates a Commuter/Loop Bus which serves the residents of the City and provides service stops to the downtown and outlying commercial and industrial districts, the Glen Cove Hospital, the Long Island Rail Road stations, and outlying residential neighborhoods. The Commuter Bus runs in the morning between approximately 7:00 a.m. and 8:30 a.m. and in the afternoon between about 3:20 p.m. and 4:45 p.m. It provides connections to the Sea Cliff LIRR Station, as well as the Glen Cove LIRR Station.

Between the hours of 9:00 a.m. and 2:45 p.m., the Loop Bus circulates throughout the City, starting and ending at Morgan Park on the west end of Landing Road.

Service begins at 6:58 a.m. at the City of Glen Cove's Police Headquarters on Bridge Street (connecting LI Bus Stop) and ends at 3:00 P.M.

b) Future No-Action Conditions

The Future No-Action condition assumes that the existing conditions within the project area would continue to remain as they currently are (that is, if no major development at all occurred in the project area). Under the Future No-Action condition, the approximately 56-acre project area would maintain its existing uses, including those areas currently vacant. No major development would take place in the project area by the project's 2016 build year, with the exception of the construction of a new ferry terminal with supporting infrastructure and other planned developments in the surrounding area, accompanied with background growth for the region. Such planned developments are proposed under separate actions that would already be in place by the 2016 build year.

Under the Future No-Action scenario, the only major change/addition to transit services within the project area would be the separate but geographically related Glen Cove Creek Ferry project. As discussed in a separate environmental document

prepared on behalf of the City for the ferry, this project would reintroduce a high-speed ferry from Glen Cove Creek to New York City and other regional destinations. It is anticipated that ferry service will be available to the project area by the time of development of the project or the Future No-Action scenario. While details of the ferry service are still being discussed and will be determined by both the City of Glen Cove and a ferry operator at a later date, the ferry route will provide fast, convenient and efficient service from the proposed ferry terminal to potential locations in Manhattan, about 27 miles away, as well as other potential regional stops.

The proposed ferry route could begin service in 2010 from a new ferry landing constructed on the south side of Garvies Point Road, , near the center of the project area. It is envisioned that ferry passengers would be sheltered in a new ferry terminal building located south of Garvies Point Road east of the proposed hotel location.

At this time, potential ferry departure and arrival times are still being contemplated. However, it is initially assumed that vessels would make at least two trips in the AM, PM and Saturday travel periods. This would stagger the trips to and from the creek. It is anticipated that the majority of the AM vehicle trips induced by the ferry would arrive at the terminal approximately 10 to 15 minutes before departure.

Preliminary estimates indicate that the ferry would potentially generate the following AM, PM and Saturday vehicle trips from the surrounding region:

- In the AM period of ferry operations (around 6:30 a.m. to 8:50 a.m.), approximately 162 vehicle trips would be induced by the ferry;
- In the PM period of ferry operations (around 4:40 p.m. to 8:30 p.m.), approximately 159 vehicle trips would be induced by the ferry;
- During Saturdays, approximately 78 vehicle trips are anticipated during the AM hours and 19 vehicle trips during the PM hours.

At this time, it is not envisioned that ferry passengers would take the LIRR to the Glen Street or Glen Cove stations to connect to the ferry, as it is assumed that those passengers would simply stay on the LIRR until they reach their destination, most likely Penn Station in Manhattan. As such, it is anticipated that ferry passengers would arrive at the ferry terminal via private automobile, taxi or bus (either from the LIB or the City of Glen Cove's Commuter Loop Buses).

c) Future Conditions with the Proposed Action

Potential Growth in Transit Demand

The entire proposed mixed-use development would include a variety of residential, commercial, office, retail, hospitality, entertainment, cultural, marine, recreation, and other related uses. Overall, project has the potential to introduce approximately 1,844

new residents to the area, as discussed in **Section III.L, Demographics**. Based on the trip generation projections and the census statistics on modal choices, it is estimated that the proposed action will result in 30 to 50 additional LIRR passengers during the morning and afternoon peak hours. Since peak hour trains run on approximately 30 minute headways, it is reasonable to assume that these new trips will be split between at least two trains, resulting in no more than two or three additional passengers per train car during peak commuter periods.

In terms of MTA/Long Island Bus, the number of new bus passengers is anticipated to be less than the projected number of train passengers. The trip generation calculations and census data indicate that no more than 10 to 15 peak hour bus trips, excluding the proposed project's shuttle bus, can be anticipated. When split between the two LI Bus routes serving the City and at least two buses per route during the peak hours, the resultant increase in passengers will amount to no more than two or three passengers per bus. This minor level of increased ridership would be within the ability of Long Island Bus to absorb without placing any undue burden on the public transportation system.

In addition to the above, as discussed below, the proposed action includes provisions for a shuttle bus to the LIRR and to the Downtown business district and other local destination points. Thus, the project is expected to have little or no impact on the City's Commuter/Loop bus service.

d) Mitigation Measures

Potential Changes/Additions to Transit Service

The proposed project will introduce new transit service and linkages to an area that currently has few such linkages. These new transit services will supplement and complement the development of the proposed Glen Cove Creek Ferry project anticipated under the Future No-Action condition and will positively impact the project area regarding transit services.

Since the ferry service operations were taken into consideration in the trip generation forecasting used in the intersection analyses, the project generated traffic would increase slightly as a result of cancellation and/or postponement of the ferry project. However, ferry related traffic travelling to and from the site has been included in the No-Build and Build traffic analyses. Because the ferry related traffic volumes are significantly greater than the credits taken for site generated traffic due to the ferry project, overall traffic volumes at the intersections in the immediate vicinity of the project site will actually be lower without the ferry project than those used in the future condition analyses herein. The proposed action will introduce modern, convenient and safe transit service into both the project area and the surrounding area, including downtown Glen Cove. Transit system enhancements proposed by the developer include new shuttle bus service within the project area to service the LIRR, Downtown, and other local destinations. Also envisioned is a possible extension of

the City's Commuter and Loop bus service into the project area. Additionally, it is anticipated that regional ferry service to the project area will also be in place before the mixed-use development is fully constructed, as in the Future No-Action condition scenario.

Transit improvements proposed as part of the current development proposal are further described as follows:

Glen Isle Shuttle Buses

The developer proposes the use of private shuttle buses to service the project area and provide residents, employees and visitors with a convenient and reliable alternative to the private automobile for intermodal connections and local trips. It is anticipated that the Glen Isle shuttle buses will provide a direct connection to the LIRR, probably at the Glen Street station, as well as connections to the N21 and N27 Long Island Bus routes, thereby providing access to other points in Nassau County and Queens. The shuttle bus will also provide service between the site and Downtown Glen Cove. Although it is premature to establish the exact route and schedule of operations, Exhibit III.F-19 depicts one possible route which accomplishes these objectives. The timing of the LIRR peak hour trains is such that the shuttle bus will meet all of the westbound trains in the morning and eastbound trains in the evening. This shuttle service will mitigate the project's impact on parking demand at the three LIRR stations within the City. Throughout the day, it will circulate through the project area, into Downtown Glen Cove and possibly to other local destination points, depending on demand.

Long Island Bus

As indicated, the N21 and N27 LIB routes currently terminate in downtown Glen Cove at the intersection of Glen Street and Bridge Street. Inter-modal connections to and from the shuttle buses would be available, at their current terminus, thereby providing the opportunity for additional connections to several LIRR stations and other Long Island Bus routes throughout Nassau County, as well as potential transit linkages to Suffolk County and Queens.

Exhibit III.F-19
Potential Transit Improvements within the Project Area