

**New York City Department of Transportation
Office of School Safety Engineering**



School Safety Engineering Project

FINAL REPORT: Yeshivat Ateret Torah, Brooklyn



Prepared by
The RBA Group/Urbitran Associates



AUGUST 9, 2006

School Safety Engineering Project Yeshivat Ateret Torah, Brooklyn

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1. INTRODUCTION

1.1 PROJECT DESCRIPTION

The Department of Transportation has developed school safety maps for 1,471 schools throughout the City. Schools currently in the program are primarily elementary and intermediate schools with an enrollment of at least 250 students. The safety plans include the designation of official school crosswalks, identified by prominent warning signs and roadway markings. DOT also designates curbside locations for school bus loading and unloading and other parking controls to improve conditions for students. In addition, nearly 350 speed reducers (humps) have been installed in the immediate vicinity of schools.

Under this consultant study, the School Safety Engineering Project, crash data in the vicinity of all program schools was reviewed. As a result, schools were ranked in terms of pedestrian safety, and 135 “priority” schools were identified Citywide. At each of these priority schools safety improvements are being recommended (e.g., new school crosswalks, new traffic signals and signal timing modifications, new speed reducers). In addition, 32 of these schools will receive further investigation to design physical improvements (e.g., raised center medians, widened sidewalks, “neckdowns” or “bulbouts” at intersections). Yeshivat Ateret Torah in Brooklyn is one of the 135 priority schools.

2. BACKGROUND—EXISTING CONDITIONS AND ANALYSIS

2.2 NEIGHBORHOOD DESCRIPTION

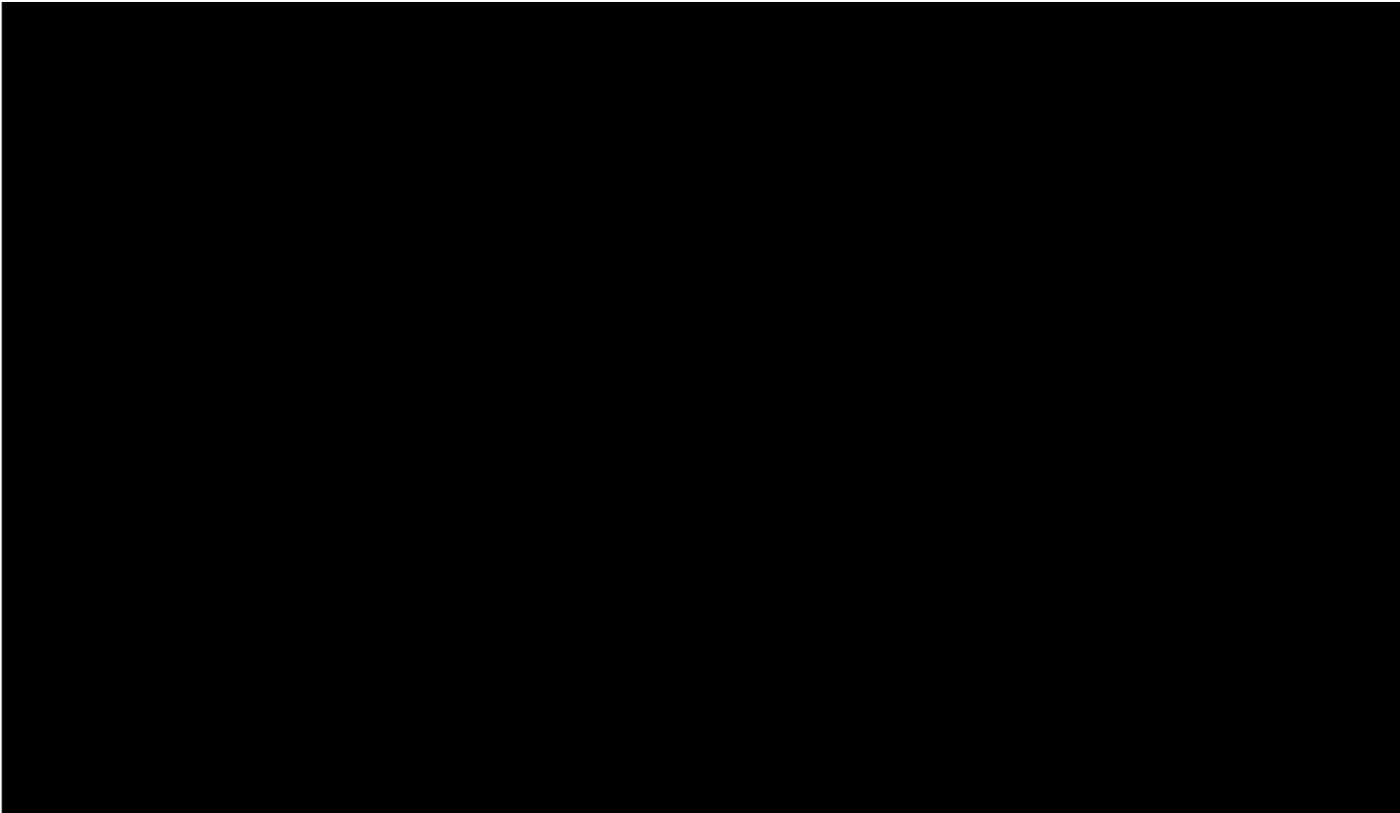
Yeshivat Ateret Torah is located at 901 Quentin Road. The immediate neighborhood surrounding the school building is a mixture of single-family homes and small commercial properties. Kings Highway, Quentin Road and Coney Island Avenue are mostly commercial and the cross streets are primarily residential. Directly across the street from the school are a couple of auto repair shops, some of which are no longer in business. (Exhibit 1, Aerial Photograph).

There are bus stops for the B7, B68, and X29 bus route at the intersection of Quentin Road and Coney Island Avenue but there are no bus routes along Quentin Road, East Ninth Street, or East 10th Street in the vicinity of the school.

2.3 MEETING WITH SCHOOL REPRESENTATIVES

Representatives from Yeshivat Ateret Torah and the consultant staff met at the school on the afternoon of June 29th, 2004. According to representatives at the school, the major problems presented for student pedestrians include the following:

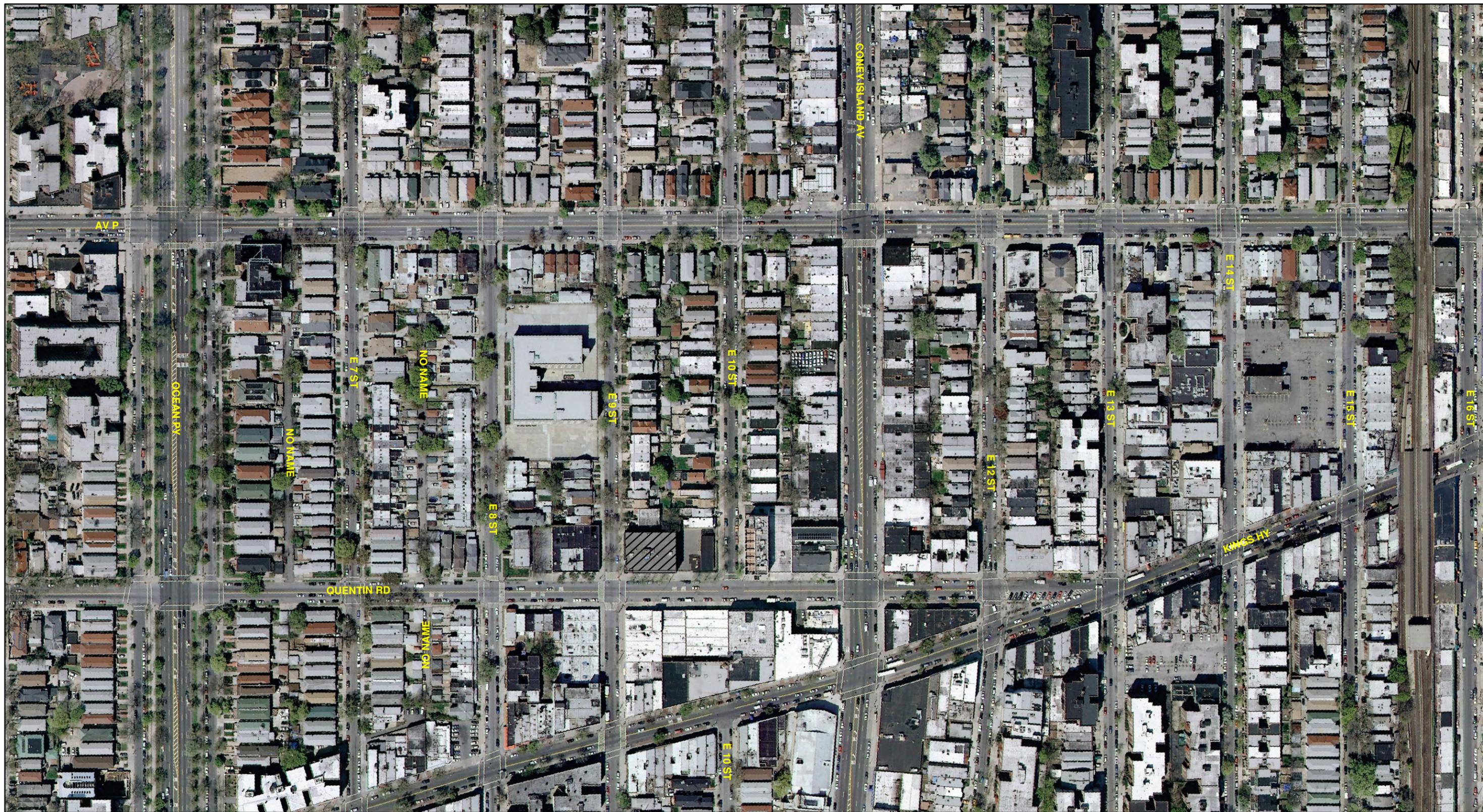
- Some speeding on Quentin Road
- Crossing guard at East Ninth Street and Quentin Road is only there during the arrival and dismissal of P.S. 238 and should be extended to include arrival and dismissal times for Yeshivat Ateret Torah School.



2.6 PRIMARY MODES OF TRANSPORT TO AND FROM SCHOOL

According to school officials, 50% of students either walk or ride bicycles to and from school. 25% of students ride MTA buses or subways, 15% are transported by school buses, and 10% are driven by a parent or guardian. See Table 1 for the schools estimate of the modes of travel.

| TABLE 1: MODES OF TRAVEL (AS ESTIMATED BY SCHOOL OFFICIALS) | |
|---|-------------------|
| DESCRIPTION | PERCENTAGE |
| Walk/Bicycle | 50% |
| Driven by parent of guardian | 10% |
| School bus | 15% |
| MTA bus/subway | 25% |
| TOTAL | 100% |



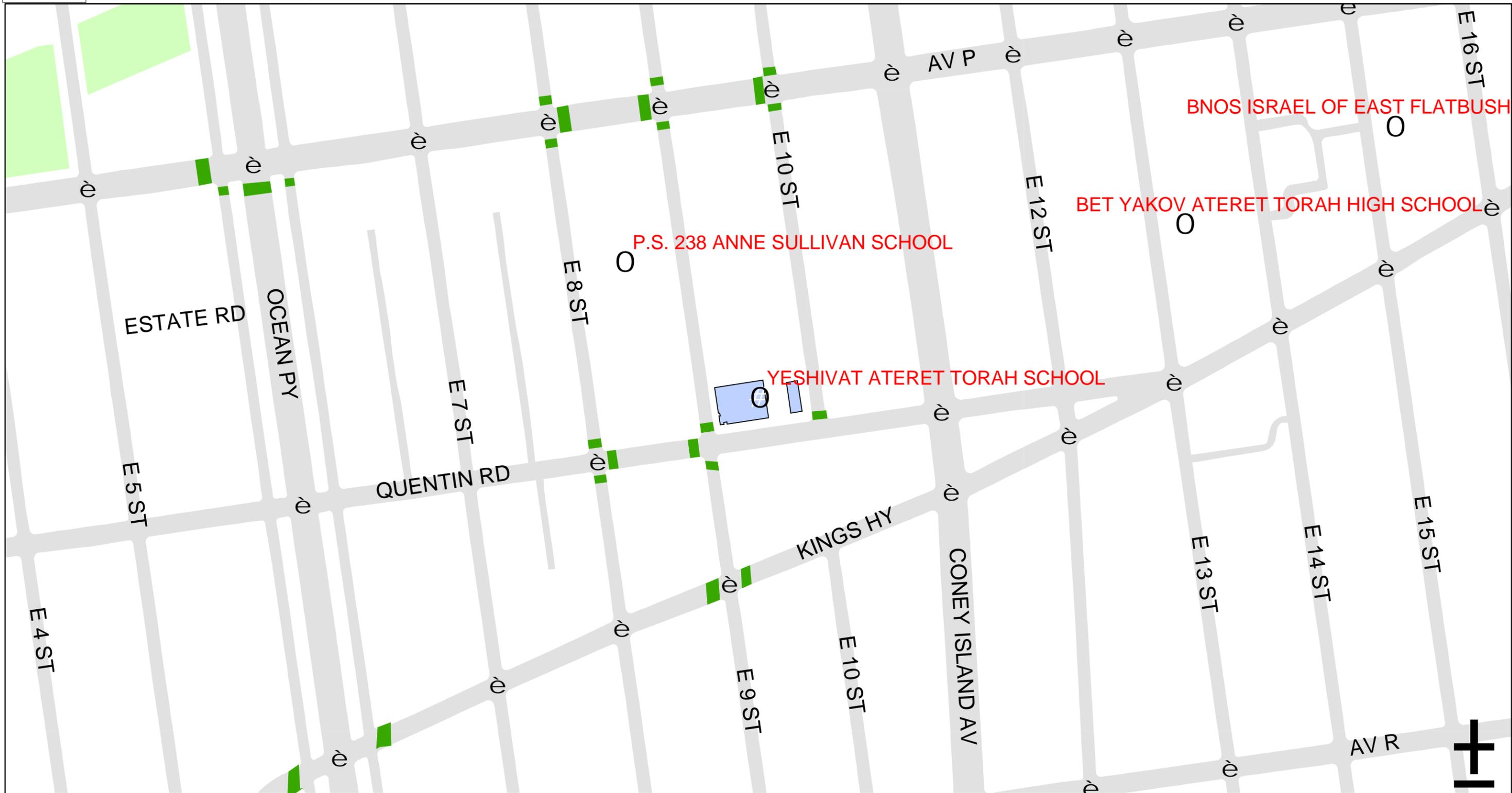
1 inch equals 200 feet

**EXHIBIT 1
YESHIVAT ATERET TORAH SCHOOL
BROOKLYN**

AERIAL PHOTOGRAPH



School Traffic Safety Map



0 305 610 1,220 Feet

The School Traffic Safety Map was established to help provide the maximum degree of safety for children going to and from school - by indicating the location of advance warning signs, speed reducers, school crosswalks and some traffic control devices. (While virtually all intersections in NYC benefit from traffic control devices - such as stop signs, traffic signals, yield signs, and all way stop signs - this map only shows traffic signals and all way stop signs.) The school crosswalks that are shown are ladder striped and make the crosswalk more visible to drivers and help make the intersection safer. These crosswalks are where school children are recommended to cross.

Note: Every attempt has been made to provide complete and accurate information that is updated regularly. The City's streets are constantly changing and it is not always possible to present information without error.

LEGEND:

- SCHOOL LOCATION
- SCHOOL CROSSWALK
- TRAFFIC SIGNAL
- ALL - WAY STOP
- SPEED REDUCER

Brooklyn [YESHIVAT ATERET TORAH SCHOOL]

Prepared by the NEW YORK CITY DEPARTMENT OF TRANSPORTATION, Iris Weinsall, COMMISSIONER.

Map created on 6/27/2006

EXHIBIT 2

COMM. BOARD: 315
PRECINCT: 61

1.3.3

2.7 ADDITIONAL STUDENT PEDESTRIAN TRAFFIC GENERATORS

P.S. 238 is on the same block as Yeshivat Ateret Torah. P.S. 238 has an enrollment of approximately 600 students. Most of these students walk south to the intersection of East Ninth Street and Quentin Road (Figure 2) and cross East Ninth Street in front of Yeshivat Ateret Torah. Many of the students, along with their parents or guardians also cross at mid-block locations along East Ninth Street. The main entrance for P.S. 238 is approximately mid-block on East Ninth Street between Avenue P and Quentin Road.



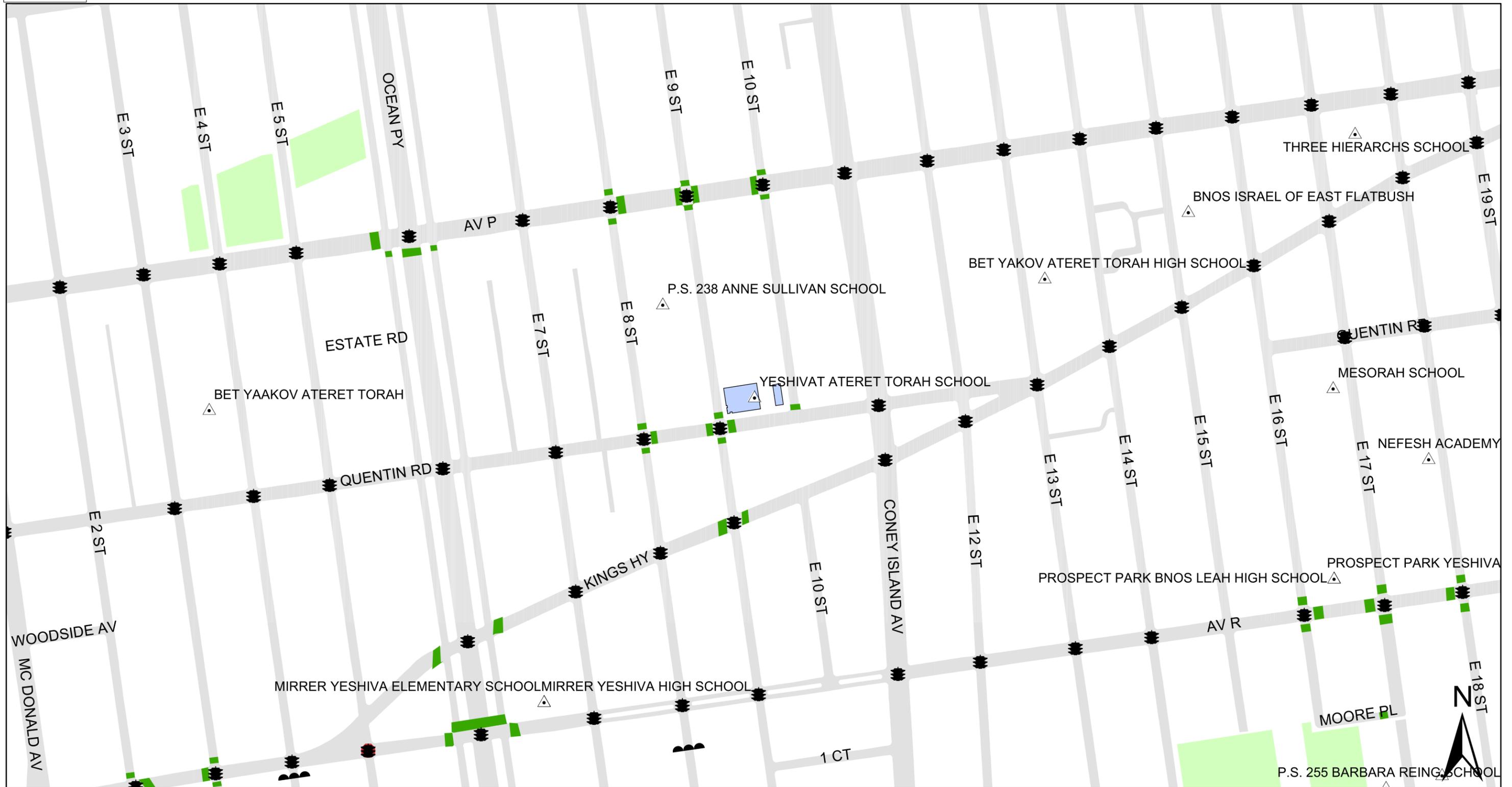
Figure 2. Students from P.S. 238 walking towards Quentin Road and East Ninth Street during dismissal.

2.8 CROSSING GUARD LOCATIONS

There is no crossing guard assigned to Yeshivat Ateret Torah. One crossing guard (assigned to P.S. 238) was stationed at the intersection of East Ninth Street and Quentin Road (see Exhibit 3).



School Traffic Safety Map



The School Traffic Safety Map was established to help provide the maximum degree of safety for children going to and from school - by indicating the location of speed reducers, school crosswalks and some traffic control devices. (While virtually all intersections in NYC benefit from traffic control devices - such as stop signs, traffic signals, yield signs, and all way stop signs - this map shows only traffic signals and all way stop signs.) The school crosswalks that are shown are ladder striped and make the crosswalk more visible to drivers and help make the intersection safer. These crosswalks are where school children are recommended to cross.

Note: Every attempt has been made to provide complete and accurate information that is updated regularly. The City's streets are constantly changing and it is not always possible to present information without error.

LEGEND:

| | |
|--|--|
| SCHOOL LOCATION  | TRAFFIC SIGNAL  |
| SCHOOL CROSSWALK  | ALL - WAY STOP  |
| | SPEED REDUCER  |

Brooklyn
YESHIVAT ATERET TORAH SCHOOL

Prepared by the NEW YORK CITY DEPARTMENT OF TRANSPORTATION, Iris Weinsahl, COMMISSIONER.

Map created on 11/16/2006 **EXHIBIT 3** COMM. BOARD: 315
PRECINCT: 61

1.5.1

3. TRAFFIC OPERATIONS

3.1 SCHOOL BUS OPERATIONS

According to school officials approximately 15% of the students are transported by three school buses. The school officials place cones along the curb in front of the school on Quentin Road to restrict vehicle parking (Figure 3). When the school buses arrive school officials move the cones to allow the buses to pull up to the curb.



Figure 3. Cones along the curb prohibit vehicle parking to allow school buses to pick up students at the curb

3.2 PARENT DROP-OFF OPERATIONS

According to school officials, approximately 10% of students are driven to and from school by their parents or guardians. During the arrival and dismissal period, parents typically park or double-park on Quentin Road.

3.3 PARKING REGULATIONS

Exhibit 4 shows parking regulations on the roadways surrounding the school. On Quentin Road, “NO PARKING 7:00 AM – 7:00 PM, SCHOOL DAYS” parking regulations are posted in front of the school. On the other side of Quentin Road “2 HR PARKING, 9:00 AM – 7:00 PM” signs are posted. For approximately 50 feet north from the intersection of East Ninth Street and Quentin Road there is a “2 HR PARKING, 9:00 AM – 7:00 PM” sign on each side of East Ninth Street.

Along East Ninth Street, in front of P.S. 238 there is a “NO STANDING, 7:00 AM – 4:00 PM, SCHOOL DAYS” parking regulation.

Street cleaning regulations, which prohibit parking on alternating sides of the roadway, are in place on all streets surrounding the school.

3.4 EXISTING SCHOOL SIGNS AND MARKINGS

The Traffic Safety Plan, Exhibit 2, shows existing signs, signals and pavement markings. It is noted that a citywide signage program is currently underway to upgrade school signage to current Federal Manual on Uniform Traffic Control Devices (MUTCD) standards of fluorescent yellow-green signs accompanied by downward pointing arrows. Signs scheduled to be installed under this program are shown as “existing” on Exhibit 7.



LEGEND

- ★ MAIN ENTRANCE
- OTHER ENTRANCES

SCALE 1" = 200'

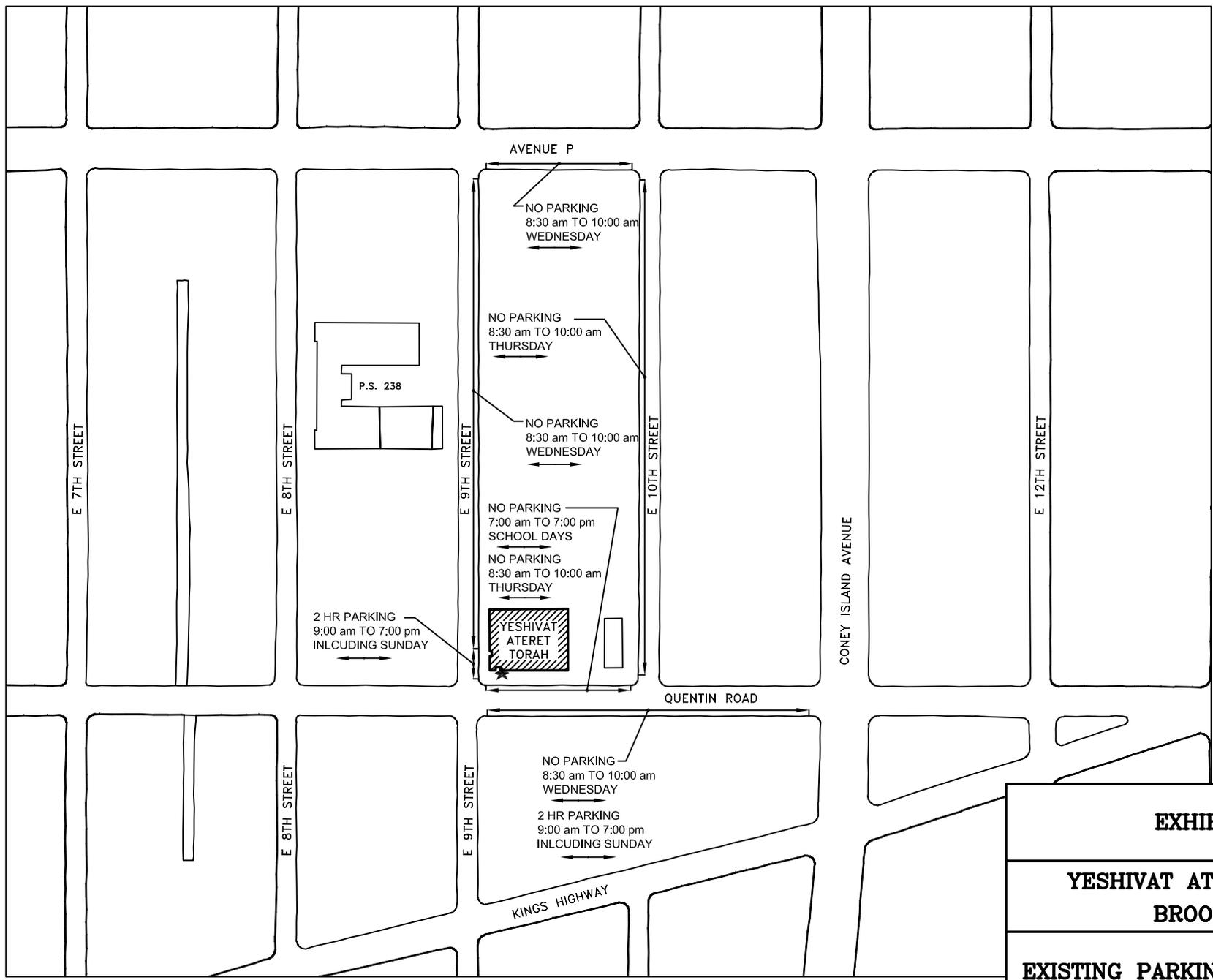


EXHIBIT 4

YESHIVAT ATERET TORAH

BROOKLYN

EXISTING PARKING REGULATIONS

3.5 ACCIDENT SUMMARY

Exhibit 5 and Table 2 show a summary of accidents, as obtained from the New York State Department of Motor Vehicles (DMV), in the vicinity of Yeshivat Ateret Torah School for the three-year period from January 1, 1998 through December 31, 2000. The DMV data provides some detail relating to the circumstances and cause of the accidents. Table 3 is a summary of more recent accident data obtained from the NYC Police Department (NYPD). Though current through 2004, the NYPD data does not provide the same level of detail as the DMV data.

This report targets intersections closest to the school where the highest concentration of student pedestrians occurs. Intersections farther from the school and locations for which detailed data was not available at the time of this study will be addressed with the ongoing work of DOT's School Safety Engineering Program. DMV accident data is discussed in Section 3.6, Traffic Operations and Issues.

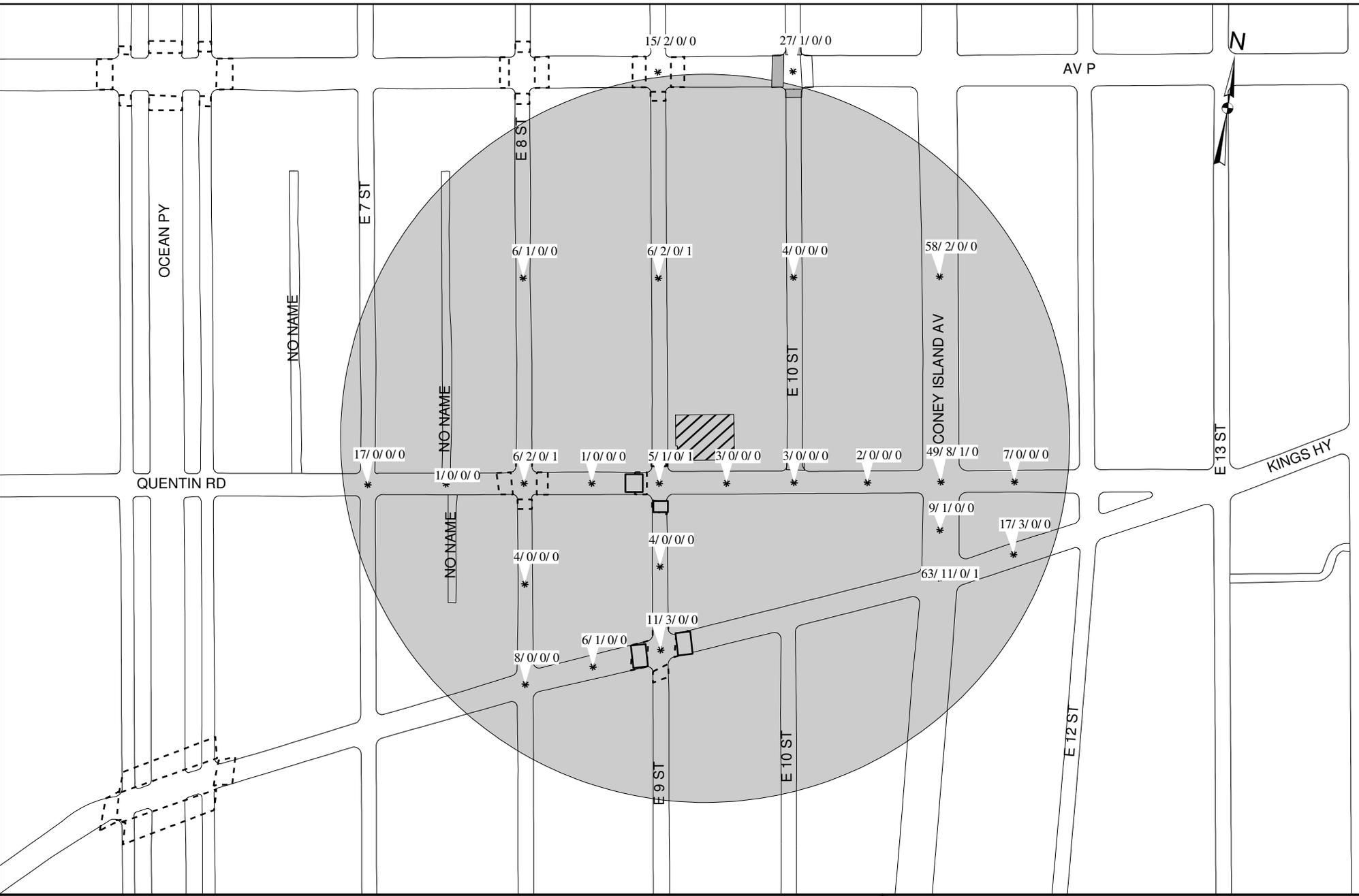
| INTERSECTION | TOTAL ACCIDENTS | PEDESTRIAN ACCIDENTS | PEDESTRIAN FATALITIES | SCHOOL-RELATED ACCIDENTS* |
|--------------------------------|------------------------|-----------------------------|------------------------------|----------------------------------|
| Quentin Rd at East Ninth St | 5 | 1 | 0 | 1 |
| Quentin Rd at East 10 St | 3 | 0 | 0 | 0 |
| Quentin Rd at East Eighth St | 6 | 2 | 0 | 1 |
| Quentin Rd at Coney Island Ave | 49 | 8 | 1 | 0 |
| Kings Hwy at East Ninth St | 11 | 3 | 0 | 0 |
| Ave P at East Ninth St | 15 | 2 | 0 | 0 |
| Ave P at East 10 St | 27 | 1 | 0 | 0 |
| Kings Hwy at Coney Island Ave | 63 | 11 | 0 | 1 |
| TOTAL | 179 | 28 | 1 | 3 |

| INTERSECTION | TOTAL ACCIDENTS | PEDESTRIAN ACCIDENTS | PEDESTRIAN FATALITIES | SCHOOL-RELATED ACCIDENTS* |
|--------------------------------|------------------------|-----------------------------|------------------------------|----------------------------------|
| Quentin Rd at East Ninth St | 17 | 1 | 0 | 0 |
| Quentin Rd at East 10 St | 11 | 1 | 0 | 0 |
| Quentin Rd at East Eighth St | 19 | 0 | 0 | 0 |
| Quentin Rd at Coney Island Ave | 89 | 8 | 0 | 1 |
| Kings Hwy at East Ninth St | 28 | 3 | 0 | 0 |
| Ave P at East Ninth St | 28 | 0 | 0 | 0 |
| Ave P at East 10 St | 28 | 0 | 0 | 0 |
| Kings Hwy at Coney Island Ave | 135 | 11 | 0 | 1 |
| TOTAL | 355 | 24 | 0 | 2 |

* School-Related Accidents are defined as accidents involving school-age pedestrians (age 4 – 14), occurring weekdays during the school year.

School Safety Engineering Project

FINAL Recommendations Report



ACCIDENT LOCATION *

SCHOOL CROSSWALK ASSIGNED TO YESHIVAT ATERET TORAH SCHOOL

SCHOOL CROSSWALK ASSIGNED TO ANOTHER SCHOOL

CROSSWALK

X/X/X/X

| TOTAL ACCIDENTS | PED ACCIDENTS | PED FATAL | SCHOOL PED ACCIDENTS |
|-----------------|---------------|-----------|----------------------|
| X | X | X | X |

* 1 inch equals 250 feet

EXHIBIT 5

YESHIVAT ATERET TORAH SCHOOL

BROOKLYN

ACCIDENT SUMMARY

THREE YEAR PERIOD

(1998-2000)

3.6 TRAFFIC OPERATIONS AND ISSUES

The following outlines the traffic accident and operational issues at the intersections in the vicinity of Yeshivat Ateret Torah.

3.6.1 Quentin Road and East Ninth Street

Quentin Road is a 45-foot wide, two-way (east-west) roadway with one travel lane in each direction and parking on both sides. Parking is not permitted 7:00 am to 7:00 pm on the north side of the street in front of the school. East Ninth Street is a 30-foot wide one-way (southbound) roadway with one travel lane and parking on both sides of the street. This intersection is controlled by a traffic signal. There are school crosswalks on the north, south and west legs of the intersection.



Figure 4. Quentin Road with Yeshivat Ateret Torah on the left.

There were five accidents at this intersection during the 1998-2000 study period. One accident involved a pedestrian, who was a school age student. This pedestrian was crossing East Ninth Street on the north leg with the signal when struck. In addition, two pedestrians were struck in the mid-block of East Ninth Street between Quentin Road and Avenue P. One pedestrian was a 12-year-old student.

There is congestion on both Quentin Road and East Ninth Street during dismissal time. The school officials set cones along the curb to prevent vehicles from parking in front of the main entrance. This area, reserved for buses, is not sufficient to accommodate all the school buses, and therefore some buses still double-park (Figure 5). It was also observed that vehicles double-park or park in crosswalks to pick up students (Figure 6.)

Students from P.S. 238 exit the school on East Ninth Street and walk south to the intersection of Quentin Road and East Ninth Street. The majority of these students cross East Ninth Street on the north leg and continue east along Quentin Road. Students from P.S 238 make up the majority of pedestrians crossing at Quentin Road and East Ninth Street.



Figure 5. Buses double-park at dismissal.



Figure 6. Intersection of Quentin Road and East Ninth Street during dismissal time.

A speed study was conducted on Quentin Road between East Ninth Street and East 10th Street to determine if there was excessive speeding, as reported by school officials. As shown in Table 4, the 85th percentile speed was 26 mph, which is lower than the legal speed limit of 30 mph.

TABLE 4: SPOT SPEED STUDY –QUENTIN ROAD

| LOCATION | MEDIAN SPEED (MPH) | 85TH PERCENTILE SPEED (MPH) |
|---|--------------------|-----------------------------|
| Quentin Road between East 9 th Street and East 10 th Street | 23 | 26 |

3.6.2 Quentin Road and East 10th Street

East 10th Street is a 30-foot wide, one-way (northbound) roadway with one travel lane and parking on both sides. This T-intersection is uncontrolled. There is a standard crosswalk on the north leg of the intersection.

There were three accidents during the 1998-2000 study period. There were no pedestrians involved.

A one-hour traffic count was performed on September 22, 2005 from 2:30 pm to 3:30 pm (Exhibit 6). The results show that the majority of pedestrians cross East 10th Street with the school crosswalk, 354 pedestrians total. Only a small number of pedestrians cross Quentin Road at this intersection.

3.6.3 Quentin Road and East Eighth Street

East Eighth Street is a 30-foot wide, one-way (northbound) roadway with one travel lane and parking on both sides of the street. The intersection of Quentin Road and East Eighth Street is signalized and has school crosswalks on the north, east and south legs. The southwest corner quadrant was recently reconstructed, however, the other three quadrants have either one apex pedestrian ramp or misaligned pedestrian ramps (see Exhibit 7 for location of proposed pedestrian ramps).

There were six accidents at this intersection during the 1998-2000 study period. Two of these accidents involved pedestrians, one of which was a student pedestrian. Accident data shows that the student was either getting on or off the bus when struck by a vehicle.

3.6.4 Quentin Road and Coney Island Avenue

Coney Island Avenue is 70-foot wide, two-way roadway with two travel lanes, left turn bays in both directions and parking on both sides. This intersection is signalized. There are no school crosswalks at this intersection, and all corner quadrants have two pedestrian ramps correctly aligned with each crosswalk.

There were 49 accidents at this intersection during the 1998-2000 study period. Eight of these accidents involved pedestrians, but none involved students. Four pedestrians were struck while crossing with the signal. On December 14, 1999, an 84-year-old pedestrian was struck and killed crossing Quentin Road with the signal. Three other pedestrians were struck while crossing against the signal and/or outside the crosswalk. There is no information on the last pedestrian accident.

3.6.5 Avenue P and East Ninth Street

Avenue P is a 60-foot wide, two-way (east-west) roadway with two travel lanes in each direction and parking on both sides. The intersection of Avenue P and East Ninth Street has school crosswalks on the west, north and south legs of the intersection. This is a signalized intersection. Traffic signal poles and light poles obstruct the proper installation of pedestrian ramps at this intersection. See Exhibit 7 for new pedestrian ramp locations.

This signalized intersection had 15 accidents between 1998 and 2000. Two pedestrians were involved in these 15 accidents, but none involved school-age children. Both of the pedestrians involved in these accidents were crossing the street with the signal when they were struck by drivers that failed to yield to pedestrians.

3.6.6 Avenue P and East 10th Street

The intersection of Avenue P and East 10th Street is also controlled by a traffic signal and has school crosswalks on the north, south and west legs of the intersection. All corners at this intersection have one pedestrian ramp per corner quadrant due to obstructions caused by various utilities.

There were 27 accidents between the years of 1998 and 2000. One accident involved a 28-year-old pedestrian, who was struck while crossing with the signal.

3.6.7 Kings Highway and East Ninth Street

Kings Highway is a 40-foot wide, two-way roadway with one travel lane in each direction and parking on both sides of the street. This intersection is controlled by a traffic signal. There are school crosswalks on the east and west legs of the intersection. Both the northeast and southwest corner quadrants have only one pedestrian ramp due to the placement of light poles.

There were 11 accidents at this intersection between 1998 and 2000. Three of these accidents involved pedestrians, however, none were students. Of the three pedestrian accidents between 1998 and 2000, two involved pedestrians that were crossing Kings Highway with the signal. In both cases, the pedestrians were struck while crossing Kings Highway when a vehicle traveling southbound on East Ninth Street made a left turn onto Kings Highway.

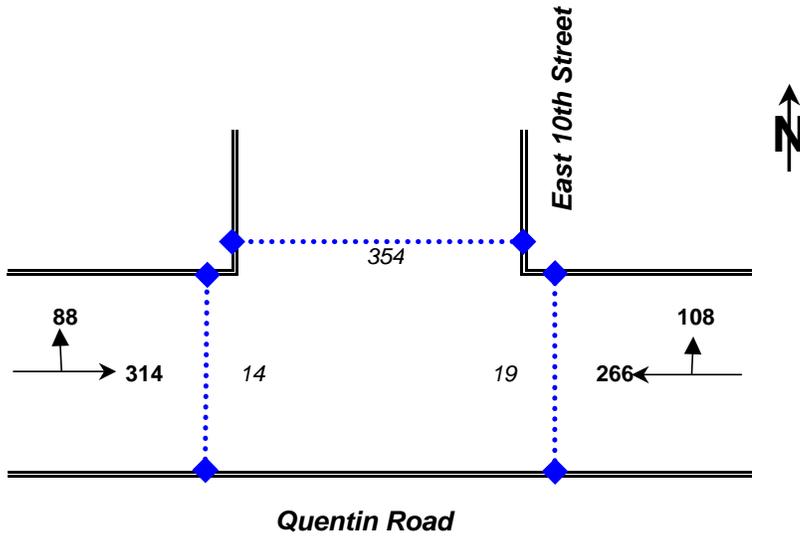
3.6.8 Kings Highway and Coney Island Avenue

This major signalized intersection does not have school crosswalks.

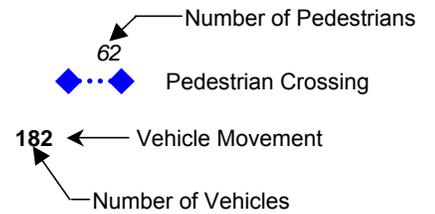
There were 63 accidents at this location during the 1998-2000 study period. 11 accidents involved pedestrians. One was a school related accident. According to the accident data, six pedestrians were struck while crossing against the signal, and these accidents were attributed to pedestrian error. Three pedestrians were struck while crossing with the signal by turning vehicles failing to yield. These accidents were attributed to driver error due to inattention and disregard for traffic control devices. One pedestrian was struck by

a vehicle that was improperly backing up. There was no information on the last pedestrian accident.

One Hour Traffic Count Volumes
 (2:30 PM - 3:30 PM Sept. 22, 2005)



Quentin Road and East 10th Street



| |
|--|
| EXHIBIT 6 |
| Yeshivat Ateret Torah School Brooklyn |
| TRAFFIC COUNTS |

3.7 SIGNAL TIMING: PEDESTRIAN PHASE

Pedestrian crossing time was field verified at all signalized intersections in the vicinity of Yeshivat Ateret Torah School, and found to be adequate in all directions and approaches.

| TABLE 4: PEDESTRIAN CROSSING TIME AT SIGNALIZED INTERSECTIONS | | | | |
|--|-------------------------------|------------------------------------|-----------------------------------|------------------------------------|
| Intersection Name | Crosswalk Width (Feet) | Ped. Phase Actual (Seconds) | Ped. Phase Req'd (Seconds) | Timing Adjustment? (Yes/No) |
| Quentin Road at East Ninth Street | | | | |
| Crossing Quentin Road | 45 | 36 | 18 | NO |
| Crossing East Ninth Street | 31 | 24 | 14 | NO |
| Avenue P at East 10th Street | | | | |
| Crossing Avenue P | 60 | 60 | 23 | NO |
| Crossing East 10 th Street | 32 | 30 | 14 | NO |
| Kings Highway at East Ninth Street | | | | |
| Crossing Kings Highway | 45 | 27 | 18 | NO |
| Crossing East Ninth Street | 32 | 63 | 14 | NO |
| Kings Highway and Coney Island Avenue | | | | |
| Crossing Kings Highway | 45 | 40 | 18 | NO |
| Crossing Coney Isl. Ave | 70 | 50 | 27 | NO |
| Coney Island Avenue at Quentin Road | | | | |
| Crossing Coney Isl. Ave | 70 | 50 | 27 | NO |
| Crossing Quentin Road | 45 | 40 | 18 | NO |
| Quentin Road and East 8th Street | | | | |
| Crossing Quentin Road | 45 | 35 | 15 | NO |
| Crossing East 8 th Street | 30 | 25 | 13 | NO |

Note: – *A rate of 3 ft/sec plus 3 seconds reaction time was utilized as the child pedestrian walking rate

3.8 PHYSICAL CONDITIONS (ROADWAYS AND SIDEWALKS)

The roadways and sidewalks in the vicinity of Yeshivat Ateret Torah were generally observed to be in good condition. Pedestrian ramps that are missing or not positioned correctly have been noted in Section 3.6.

4. POTENTIAL MEASURES TO IMPROVE STUDENT PEDESTRIAN SAFETY

This section describes potential countermeasures. These countermeasures are divided into short-term and long-term measures. Short-term measures are those that potentially can be performed in-house, long term measures are proposed capital improvements.

4.1 SHORT-TERM MEASURES

- Upgrade No Parking to No Standing parking regulations on Quentin Road

“NO PARKING, 7:00 AM TO 7:00 PM, SCHOOL DAYS” parking regulations on Quentin Road directly in front of the school should be upgraded to “NO STANDING, 7:00 AM TO 7:00 PM, SCHOOL DAYS” for a length of 100 feet (Exhibit 7).

- Administer student pedestrian safety education program

It is recommended that the NYCDOT Safety Education Program work with the school to educate students on pedestrian safety, including crossing the street with the WALK phase, and the meaning of the WALK - FLASHING DON'T WALK - DON'T WALK pedestrian signal sequence. It is also recommended that students be educated not to cross at mid-block locations.

- Submit a request to the Police Department for Crossing Guards

Currently there is a crossing guard assigned to the intersection of East Ninth Street and Quentin Road. This crossing guard is only there at the arrival and dismissal times corresponding with operations at P.S. 238. It is recommended that a request be submitted to the Police Department for this crossing guard to be present at the arrival and dismissal times of Yeshivat Ateret Torah also.

- Install school crosswalk at the following locations:

- Coney Island Avenue and Quentin Road - north and west leg
- Coney Island Avenue and Kings Highway - west leg

- Place stop bars ten feet in advance of school crosswalks.

The MUTCD and New York City DOT standard for placement of a stop bar is four feet in advance of a marked crosswalk. At signalized (or stop controlled) crosswalks, the vehicle stop line can be placed farther back from the crosswalk in order to maximize visibility of pedestrians and to minimize the potential for pedestrian/vehicle conflicts. Therefore, it is recommended that stop bars be placed ten feet in advance of all school crosswalks.

4.2 LONG-TERM MEASURES

- Install or replace pedestrian ramps at all corners where required

New pedestrian ramps should be installed at all locations where there are currently no pedestrian ramps, where only one ramp currently exists or where a pole requires relocation to facilitate the standard ramp installation. See Exhibit 7 for locations of proposed pedestrian ramps.

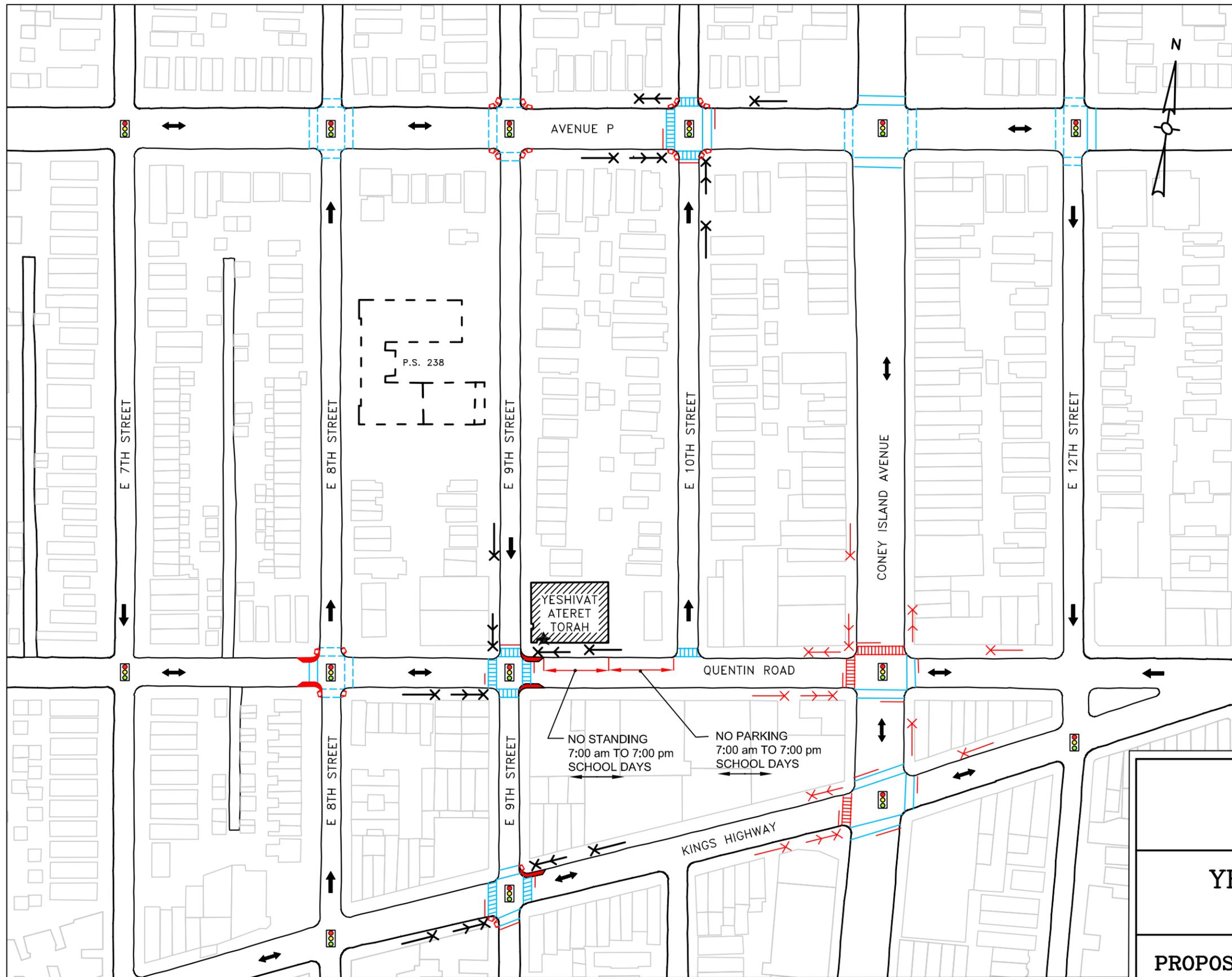
- Consider curb extensions at the following intersections:

- Quentin Road and East Ninth Street
- Quentin Road and East Eighth Street
- Kings Highway and East Ninth Street

Curb extensions should be installed at the corners as shown in Exhibit 7.

The purpose of the curb extensions is to shorten the crossing distance for pedestrians, and to reduce speeds of vehicles approaching and turning at school crosswalks.

These curb extensions will not eliminate or reduce the width of any moving lanes. Curb extensions are not proposed where they would hinder the ability of vehicles to turn. Final details pertaining to curb extensions will be developed during the Final Design/Contract Document preparation. Curb extensions should be installed at the corners as shown in Exhibit 7.



- LEGEND**
- ★ MAIN ENTRANCE
 - OTHER ENTRANCES
 - X— EXISTING ADVANCE WARNING SIGN
 - X— EXISTING (OR SCHEDULED TO BE INSTALLED BY DOT) ADVANCE WARNING SIGN WITH ARROW
 - ↔ EXISTING TRAVEL DIRECTION
 - 🚦 SIGNALIZED INTERSECTION
 - ▬ EXISTING SCHOOL CROSSWALK
 - ▬ EXISTING STANDARD (NON-SCHOOL) CROSSWALK
 - ▬ EXISTING SCHOOL CROSSWALK ASSOC. WITH OTHER SCHOOL
 - ▬ PROPOSED PEDESTRIAN RAMP
 - X— PROPOSED ADVANCE WARNING SIGN WITH ARROW
 - X— PROPOSED ADVANCE WARNING SIGN
 - PROPOSED STOP LINE
 - ▬ PROPOSED SCHOOL CROSSWALK
 - ▬ PROPOSED CURB EXTENSION (NECKDOWN)
 - XX' PROPOSED PARKING REGULATIONS

SCALE 1:150

EXHIBIT 7

**YESHIVAT ATERET TORAH
BROOKLYN**

PROPOSED MEASURES TO IMPROVE SAFETY

APPENDIX

YESHIVAT ATERET TORAH

Septemebr 22, 2005

2:30 pm - 3:30 pm

Title1 : SCHOOL SAFETY ENGINEERING
 Title2 : BOROUGH OF BROOKLYN
 Title3 : NYC-DOT

Site:
 Date: 09/22/05

Combined

**Peds not included in table data*

| Begin | E 10th Street | | | Quentin Road | | | E 10th Street | | | Quentin Road | | |
|------------|---------------|---|---|--------------|-----|-----|---------------|---|---|--------------|-----|----|
| Time | Total | | | | W-R | W-T | | | | E-T | E-L | |
| 14:30:00 | 167 | 0 | 0 | 0 | 28 | 53 | 0 | 0 | 0 | 0 | 0 | 25 |
| 14:45:00 | 205 | 0 | 0 | 0 | 31 | 70 | 0 | 0 | 0 | 0 | 0 | 24 |
| 15:00:00 | 200 | 0 | 0 | 0 | 12 | 76 | 0 | 0 | 0 | 0 | 0 | 19 |
| 15:15:00 | 204 | 0 | 0 | 0 | 37 | 67 | 0 | 0 | 0 | 0 | 0 | 20 |
| 776 | | 0 | 0 | 0 | 108 | 266 | 0 | 0 | 0 | 0 | 0 | 88 |

| Peak Volume Periods (1 hour Res:15 min.) | | | | | |
|---|----------|-------------|-------------|-------------|--------|
| Period | | | Peak Period | | Volume |
| AM | 05:00:00 | To 10:00:00 | NA | To NA | 0 |
| Noon | 10:00:00 | To 15:00:00 | 14:15:00 | To 15:15:00 | 372 |
| PM | 15:00:00 | To 20:00:00 | 14:30:00 | To 15:30:00 | 776 |

YESHIVAT ATERET TORAH

Septemebr 22, 2005

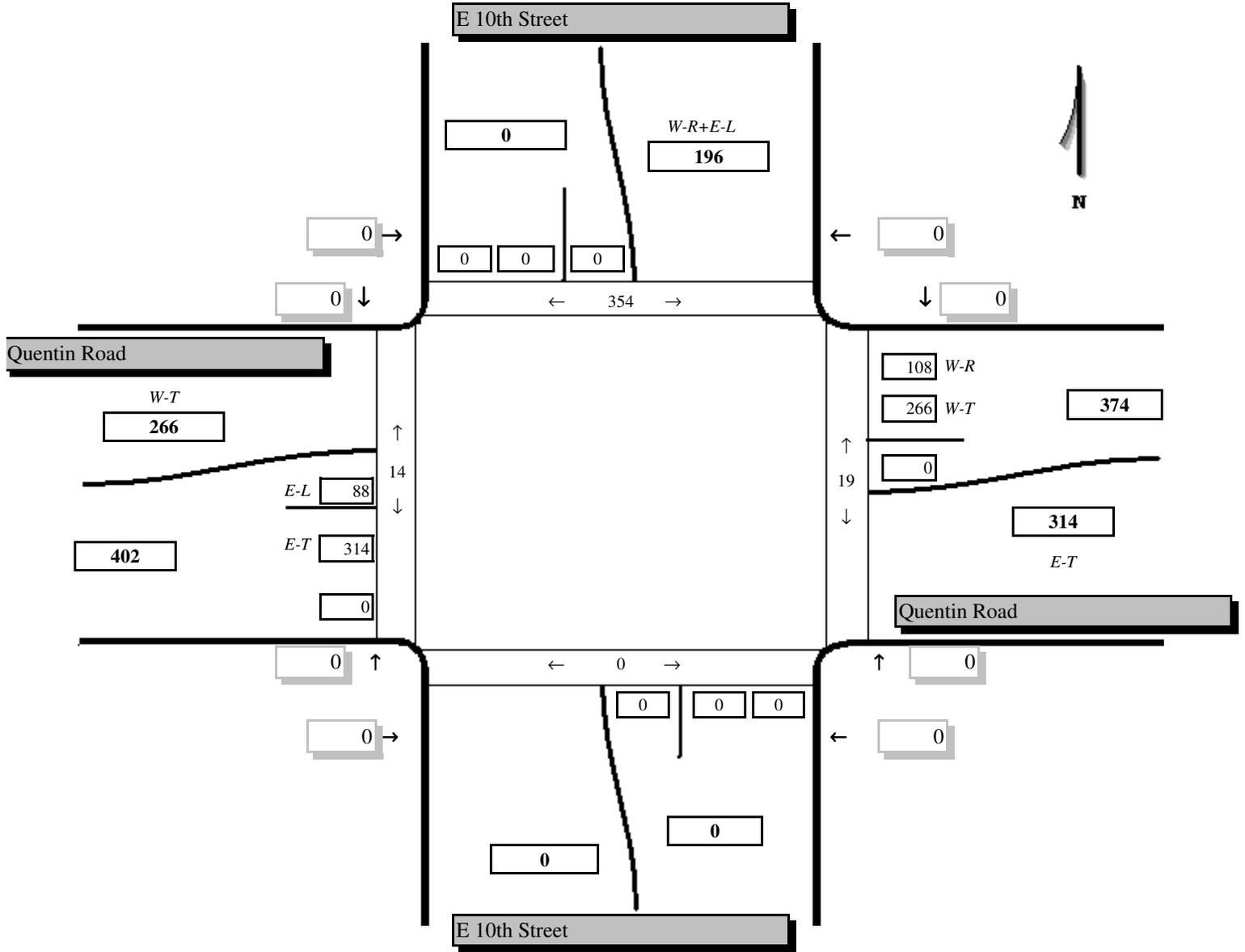
2:30 pm - 3:30 pm

Title1 : SCHOOL SAFETY ENGINEERING
 Title2 : BOROUGH OF BROOKLYN
 Title3 : NYC-DOT

Site: _____
 Date: 09/22/05

Combined

*Peds not included in table data



SPOT SPEED STUDY

Date: **January 6, 2006**
 Location: **Quentin Road btw. East 9th and 10th Streets**
 Surveyor: **The RBA Group**

Time: **11:15 am - 12:00 pm**

School: **Yeshivat Ateret Torah**
 Direction: **East-West**
 Comments:

| Speed S (mph) | No. of Vehicles in Group n | % of Vehicles in Group | % Cumulative Vehicles | nS | nS ² |
|---------------------|----------------------------------|---------------------------|--------------------------|------|-----------------|
| 8 | 0 | 0.0% | 0.0% | 0 | 0 |
| 9 | 0 | 0.0% | 0.0% | 0 | 0 |
| 10 | 0 | 0.0% | 0.0% | 0 | 0 |
| 11 | 0 | 0.0% | 0.0% | 0 | 0 |
| 12 | 0 | 0.0% | 0.0% | 0 | 0 |
| 13 | 0 | 0.0% | 0.0% | 0 | 0 |
| 14 | 0 | 0.0% | 0.0% | 0 | 0 |
| 15 | 0 | 0.0% | 0.0% | 0 | 0 |
| 16 | 0 | 0.0% | 0.0% | 0 | 0 |
| 17 | 2 | 2.0% | 2.0% | 34 | 578 |
| 18 | 2 | 2.0% | 4.0% | 36 | 648 |
| 19 | 3 | 3.0% | 6.9% | 57 | 1083 |
| 20 | 2 | 2.0% | 8.9% | 40 | 800 |
| 21 | 9 | 8.9% | 17.8% | 189 | 3969 |
| 22 | 16 | 15.8% | 33.7% | 352 | 7744 |
| 23 | 19 | 18.8% | 52.5% | 437 | 10051 |
| 24 | 23 | 22.8% | 75.2% | 552 | 13248 |
| 25 | 12 | 11.9% | 87.1% | 300 | 7500 |
| 26 | 4 | 4.0% | 91.1% | 104 | 2704 |
| 27 | 7 | 6.9% | 98.0% | 189 | 5103 |
| 28 | 0 | 0.0% | 98.0% | 0 | 0 |
| 29 | 0 | 0.0% | 98.0% | 0 | 0 |
| 30 | 2 | 2.0% | 100.0% | 60 | 1800 |
| 31 | 0 | 0.0% | 100.0% | 0 | 0 |
| 32 | 0 | 0.0% | 100.0% | 0 | 0 |
| 33 | 0 | 0.0% | 100.0% | 0 | 0 |
| 34 | 0 | 0.0% | 100.0% | 0 | 0 |
| 35 | 0 | 0.0% | 100.0% | 0 | 0 |
| 36 | 0 | 0.0% | 100.0% | 0 | 0 |
| 37 | 0 | 0.0% | 100.0% | 0 | 0 |
| 38 | 0 | 0.0% | 100.0% | 0 | 0 |
| 39 | 0 | 0.0% | 100.0% | 0 | 0 |
| 40 | 0 | 0.0% | 100.0% | 0 | 0 |
| 41 | 0 | 0.0% | 100.0% | 0 | 0 |
| 42 | 0 | 0.0% | 100.0% | 0 | 0 |
| 43 | 0 | 0.0% | 100.0% | 0 | 0 |
| 44 | 0 | 0.0% | 100.0% | 0 | 0 |
| 45 | 0 | 0.0% | 100.0% | 0 | 0 |
| 46 | 0 | 0.0% | 100.0% | 0 | 0 |
| 47 | 0 | 0.0% | 100.0% | 0 | 0 |
| 48 | 0 | 0.0% | 100.0% | 0 | 0 |
| 49 | 0 | 0.0% | 100.0% | 0 | 0 |
| 50 | 0 | 0.0% | 100.0% | 0 | 0 |
| 51 | 0 | 0.0% | 100.0% | 0 | 0 |
| 52 | 0 | 0.0% | 100.0% | 0 | 0 |
| 53 | 0 | 0.0% | 100.0% | 0 | 0 |
| 54 | 0 | 0.0% | 100.0% | 0 | 0 |
| 55 | 0 | 0.0% | 100.0% | 0 | 0 |
| 56 | 0 | 0.0% | 100.0% | 0 | 0 |
| | 101 | 100.0% | | 2350 | 55228 |

Mean Speed = 23.3 mph
 Standard Deviation = 2.3 mph
 Margin of Error (95% Confidence) = ± 0.5 mph

Median Speed = 23.3 mph
 15th Percentile Speed = 20.8 mph
 85th Percentile Speed = 25.7 mph

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