

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



**School Safety Engineering Project**

**FINAL REPORT: St. Matthias, Queens**



**Prepared by  
The RBA Group and URBITRAN Associates Inc.**



**October 20, 2006**

## School Safety Engineering Project Final Report: St. Matthias, Queens

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### **APPENDIX**



## **1. INTRODUCTION**

### **1.1 PROJECT DESCRIPTION**

The Department of Transportation (DOT) 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, accident 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). St. Matthias in Queens is one of the 135 “priority” schools identified by the New York City Department of Transportation, Office of School Safety Engineering.

## **2. BACKGROUND—EXISTING CONDITIONS AND ANALYSIS**

### **2.1 ABOUT THE SCHOOL**

St. Matthias is located at 58-25 Catalpa Street, in the Ridgewood section of Queens. The school has a total enrollment of approximately 350 students from Pre-Kindergarten through Grade 8. School sessions start between 7:30 and 8:15 am, and general dismissal occurs at 2:30 pm. Approximately 50 students at St. Matthias participate in after-school programs that have a later dismissal time.

### **2.2 NEIGHBORHOOD DESCRIPTION**

Exhibit 1 shows an aerial view of the neighborhood surrounding the school. St. Matthias is bounded by Cornelia Street to the northwest, Catalpa Avenue to the southeast, Woodward Avenue to the northeast, and Onderdonk Avenue to the southwest. The neighborhood surrounding the school consists primarily of medium-density multi-family residential buildings, with some commercial uses (see Figure 1). The commercial uses are primarily found along Forest Avenue (east of the school) and along Myrtle Avenue (south of the school).



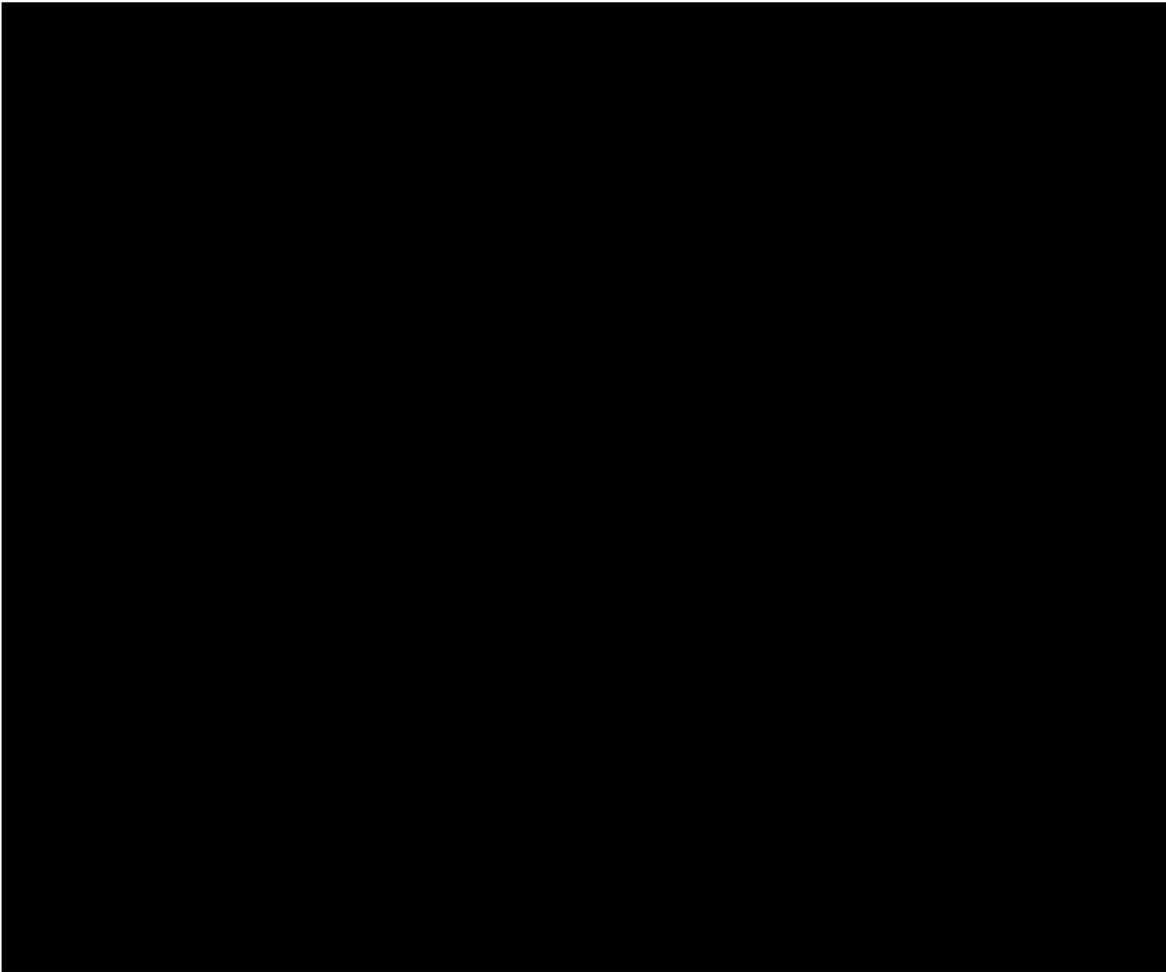
*Figure 1: Looking northeast on Catalpa Avenue (St. Matthias school is visible to the left).*

### **2.3 MEETING WITH SCHOOL REPRESENTATIVES**

Members of the consultant team met with the school principal and the St. Matthias parish plant manager at the school on the afternoon of May 19, 2004. The school representatives identified the following issues and concerns:

- Double parking on Catalpa Avenue and Woodward Avenue.





## 2.6 PRIMARY MODES OF TRANSPORT TO AND FROM SCHOOL

The school’s catchment area is typically defined by the Department of Education and normally shown in an Exhibit at the end of this section. However, since St. Matthias is a private parochial school, the “catchment area” is instead determined by school administrators.

Table 1 presents the modes of travel for St. Matthias School as estimated by school officials.

<b>TABLE 1: MODES OF TRAVEL (AS ESTIMATED BY SCHOOL OFFICIALS)</b>	<b>STUDENTS (Percentage)</b>
Walk	48%
Driven by car	48%
School bus	0%
MTA Bus/Subway	4%
Bicycle	0%
<b>TOTAL</b>	<b>100%</b>

## 2.7 ADDITIONAL STUDENT PEDESTRIAN TRAFFIC GENERATORS

There are a variety of commercial uses (including deli/groceries and pizzerias) located in the vicinity of the school that were observed to generate student pedestrian activity. There are also several schools located south of St. Matthias, including P.S. 4, P.S. 239, P.S. 75, and I.S. 77.

## 2.8 CROSSING GUARD LOCATIONS

One crossing guard is assigned to each the following intersections in the vicinity of the school:

- Catalpa Avenue and Woodward Avenue
- Catalpa Avenue and Forest Avenue

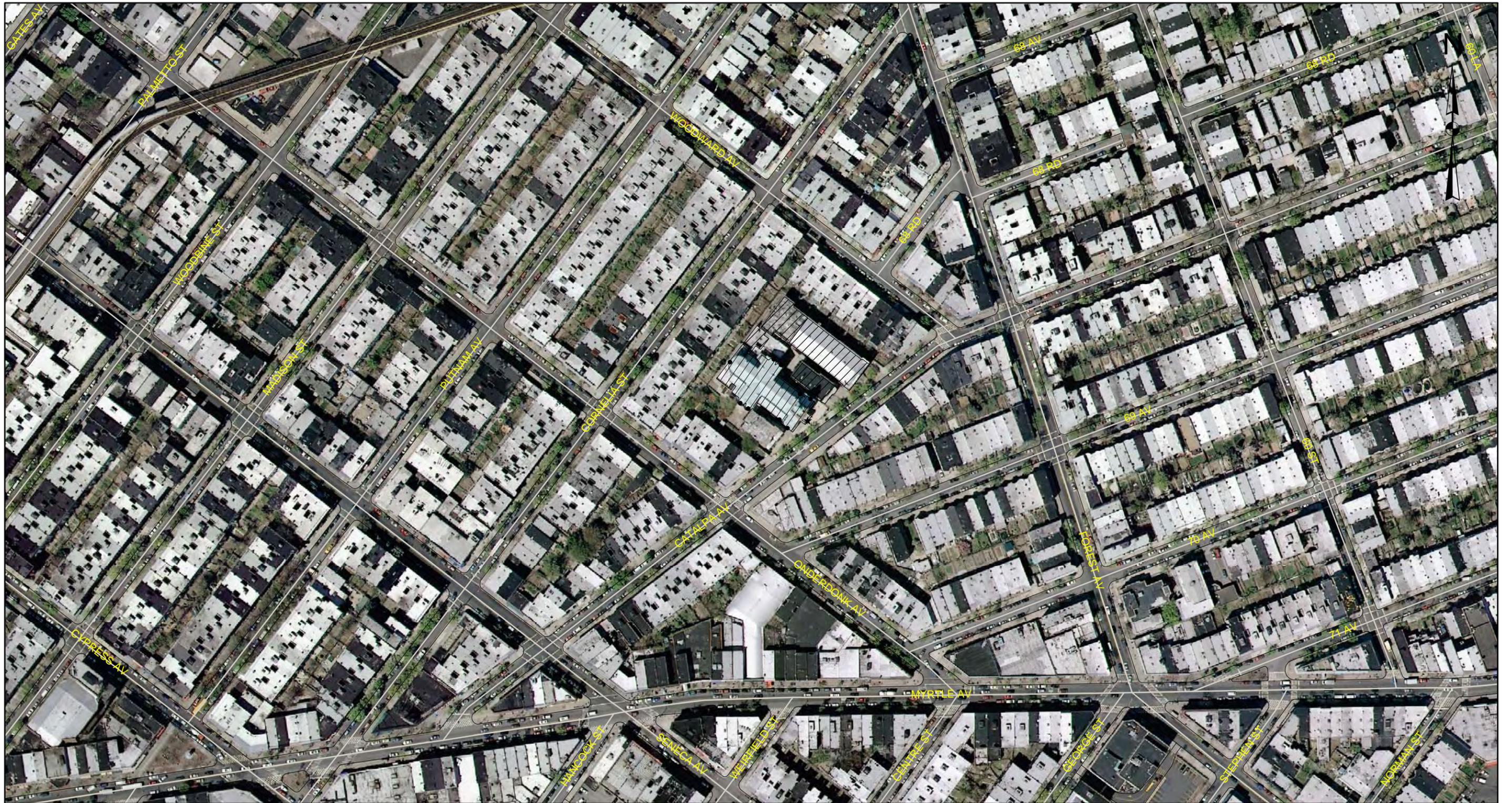
The locations of the crossing guards are shown in Exhibit 3 at the end of this section, as well as in Figures 5 and 6.



*Figure 5: The school crossing guard at the Catalpa Avenue and Woodward Avenue intersection during dismissal time.*



*Figure 6: The school crossing guard at the Catalpa Avenue and Forest Avenue intersection during dismissal time.*



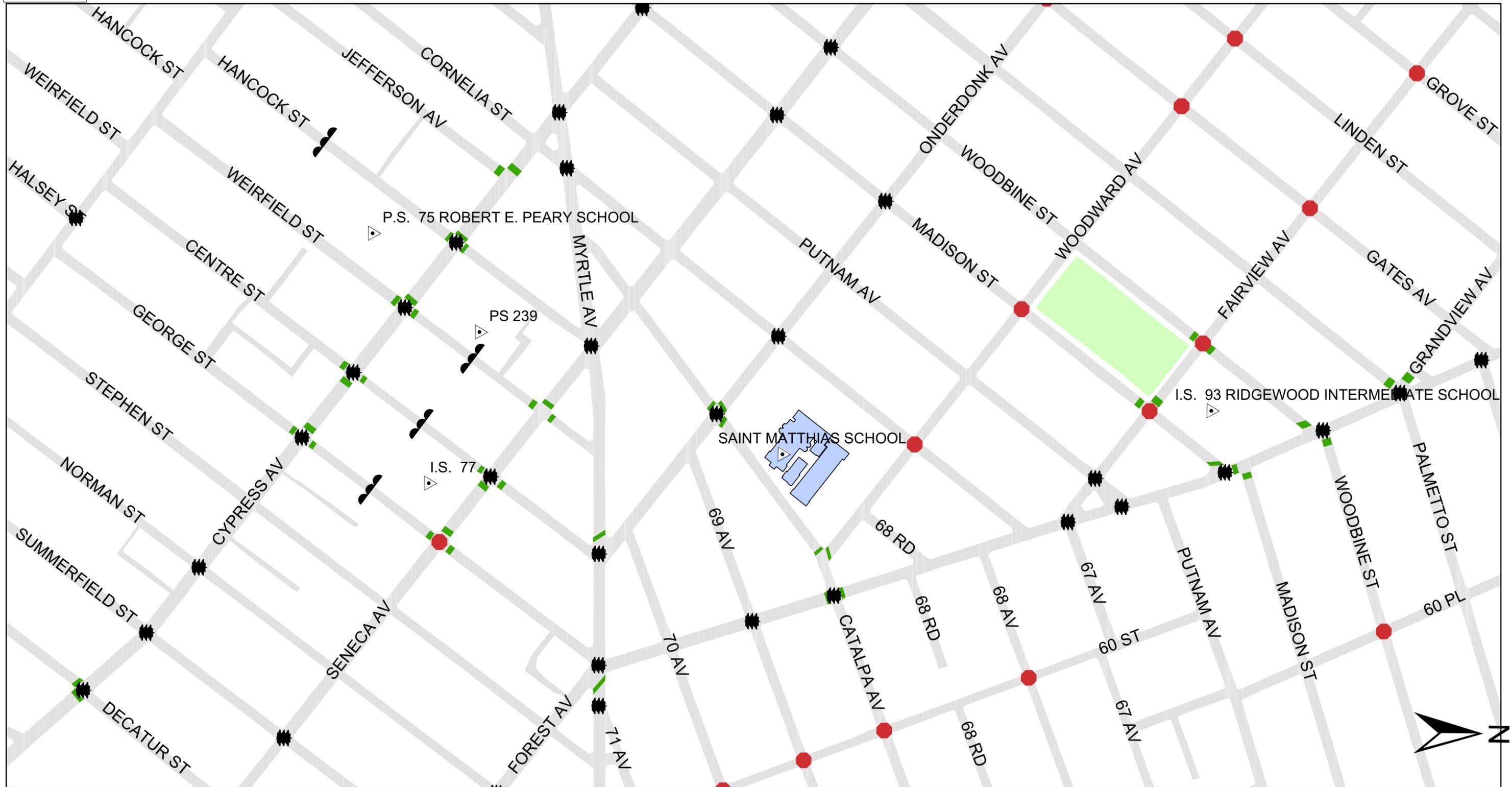
**EXHIBIT 1**  
**ST. MATTHIAS SCHOOL QUEENS**

**AERIAL PHOTOGRAPH**





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

**Queens**  
**SAINT MATTHIAS SCHOOL**

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

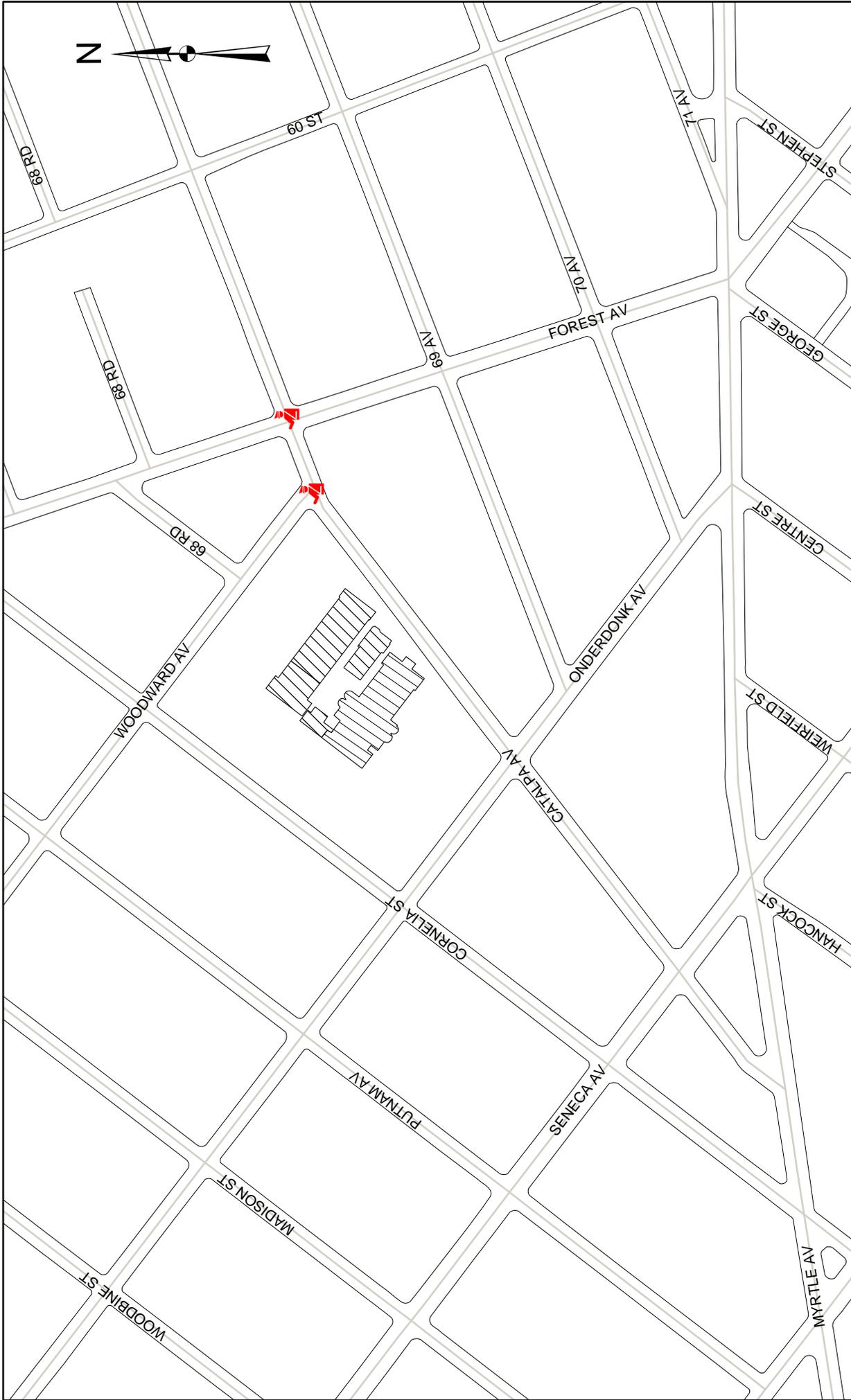
Map created on 11/17/2006

**EXHIBIT 2**

1.5.1

COMM. BOARD: 405  
 PRECINCT: 104

10



**EXHIBIT 3**  
**ST. MATTHIAS SCHOOL QUEENS**  
**CROSSING GUARDS LOCATION**

**LEGEND:**

 CROSSING GUARD LOCATION

0 250 500 1,000 Feet

11

### **3. TRAFFIC OPERATIONS**

#### **3.1 SCHOOL BUS OPERATIONS**

According to school officials, there are no yellow school buses serving St. Matthias. However, approximately 10 to 12 students ride an MTA bus to school.

#### **3.2 PARENT DROP-OFF OPERATIONS**

Parents typically drop off and pick up students on Catalpa Avenue and on Woodward Avenue. Some congestion and double parking was observed during the afternoon dismissal period in connection with parents picking up students.

#### **3.3 PARKING REGULATIONS**

Parking regulations around the school block are shown in Exhibit 4. Myrtle Avenue is a designated snow route. This is a special regulation that prohibits standing or parking a vehicle on the street during a declared snow emergency.

#### **3.4 EXISTING SCHOOL SIGNS AND MARKINGS**

Exhibit 2 shows the existing school signals and pavement markings around St. Matthias. It should be 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” in Exhibit 6.

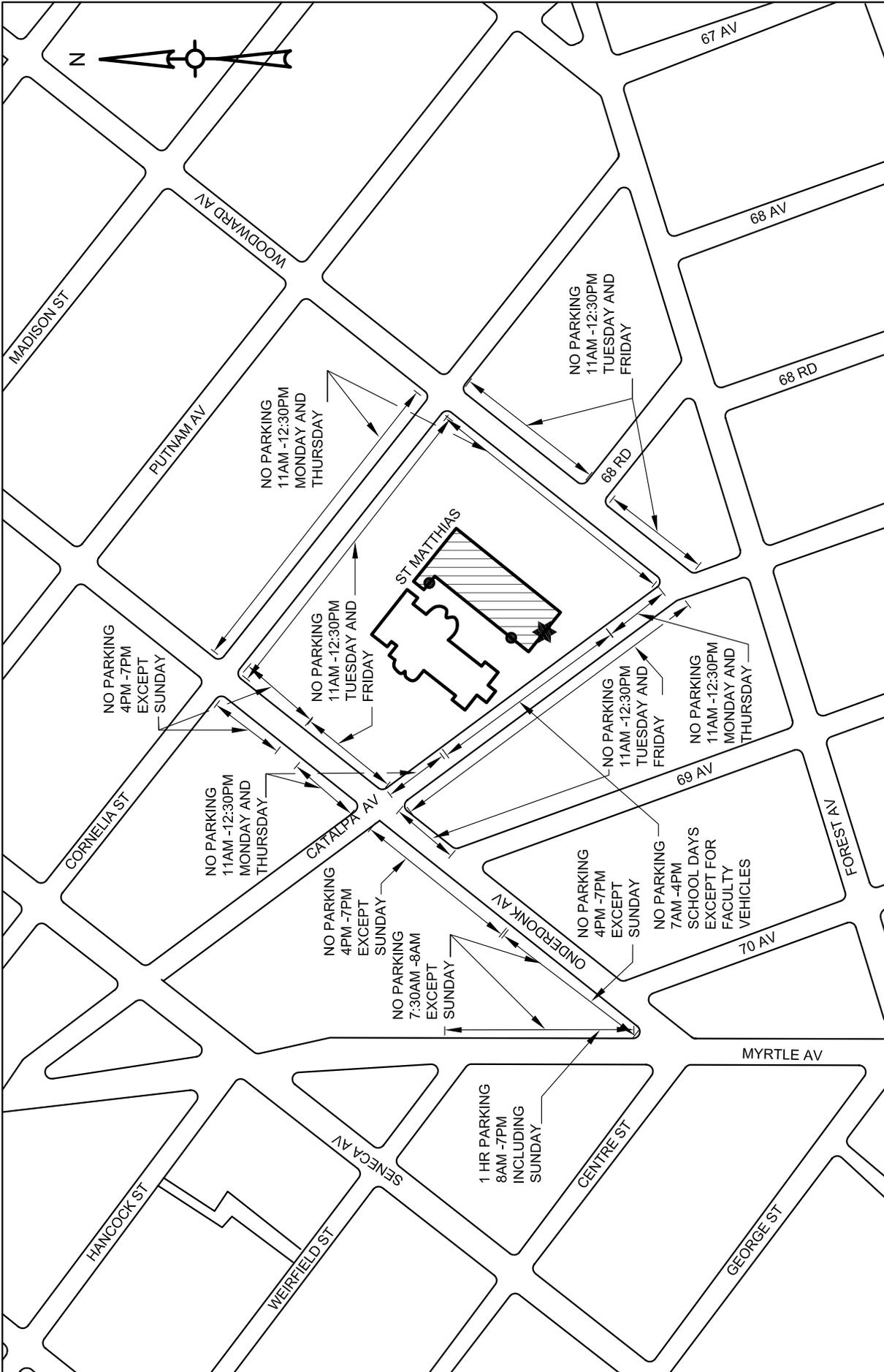
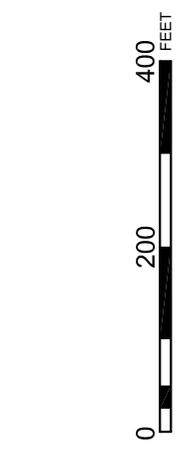


EXHIBIT 4  
 ST. MATTHIAS SCHOOL QUEENS  
 EXISTING PARKING REGULATION



- LEGEND:**
- ★ MAIN ENTRANCE
  - ENTRANCE

### 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 St. Matthias for the three-year period from January 1, 1998 through December 31, 2000. The DMV data provides some detail relating to the circumstances and probable cause(s) of an accident. 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.

<b>INTERSECTION</b>	<b>TOTAL ACCIDENTS</b>	<b>PEDESTRIAN ACCIDENTS</b>	<b>PEDESTRIAN FATALITIES</b>	<b>SCHOOL-RELATED ACCIDENTS*</b>
Catalpa Avenue and Onderdonk Avenue	11	0	0	0
Catalpa Avenue and Woodward Avenue	2	0	0	0
Catalpa Avenue and Forest Avenue	14	2	0	0
Myrtle Avenue and Onderdonk Avenue / Centre Street	23	3	0	0
Myrtle Avenue and Forest Avenue / George Street	30	6	0	0
Onderdonk Avenue and Cornelia Street	23	0	0	0
Woodward Avenue and Cornelia Street	11	1	0	0
Woodward Avenue and 68 <sup>th</sup> Road	1	0	0	0
<b>TOTAL</b>	<b>115</b>	<b>12</b>	<b>0</b>	<b>0</b>

\* School-related accidents are defined as accidents involving school-age pedestrians (age 4 to 14), occurring on weekdays during the school year.

<b>TABLE 3: ACCIDENT SUMMARY OF NYPD DATA (2001-2004)</b>				
<b>INTERSECTION</b>	<b>TOTAL ACCIDENTS</b>	<b>PEDESTRIAN ACCIDENTS</b>	<b>PEDESTRIAN FATALITIES</b>	<b>SCHOOL-RELATED ACCIDENTS*</b>
Catalpa Avenue and Onderdonk Avenue	9	0	0	0
Catalpa Avenue and Woodward Avenue	6	0	0	0
Catalpa Avenue and Forest Avenue	29	1	0	0
Myrtle Avenue and Onderdonk Avenue / Centre Street	34	4	0	0
Myrtle Avenue and Forest Avenue / George Street	48	8	0	0
Onderdonk Avenue and Cornelia Street	19	2	0	1
Woodward Avenue and Cornelia Street	8	1	0	0
Woodward Avenue and 68 <sup>th</sup> Road	2	0	0	0
<b>TOTAL</b>	<b>155</b>	<b>16</b>	<b>0</b>	<b>1</b>

\* School-related accidents are defined as accidents involving school-age pedestrians (age 4 to 14), occurring on weekdays during the school year.



### **3.6 TRAFFIC OPERATIONS AND ISSUES**

The specific roadway-related physical conditions for each location within the school's vicinity directly affect the safety and efficiency of operations for both pedestrian and vehicular traffic. These specific conditions are required information when analyzing a location, and are the starting point for any revisions that may be considered to improve safety and/or efficiency.

The following sub-sections outline the physical conditions and issues concerning traffic operations and accidents at the intersections in the vicinity of St. Matthias.

#### **3.6.1 Catalpa Avenue and Onderdonk Avenue**

This is a four-leg signalized intersection, with school crosswalks located across the northwest leg of Onderdonk Avenue, and the northeast and southwest legs of Catalpa Avenue. There is a pedestrian crosswalk located across the southeast leg of Onderdonk Avenue. Catalpa Avenue is a one-way southwest-bound street with one travel lane and on-street parking permitted on both sides of the roadway. Onderdonk Avenue is a one-way southeast-bound street with one travel lane and on-street parking permitted on both sides of the roadway.

There was a total of 11 accidents reported at this intersection between 1998 and 2000, but none of these accidents involved pedestrians (Table 2).

To more fully assess existing conditions, the consultant performed a search of NYCDOT records for any warrant studies that may have been performed at any of the intersections in the vicinity of the school. A warrant study was completed for the intersection of Onderdonk Avenue and Cornelia Street to determine the need for additional traffic control for the intersection. The investigation was completed in October of 2002, and included a full warrant analysis including vehicle and pedestrian counts, and an accident analysis. The investigation determined that traffic signal control was warranted for the intersection. An all-way stop was initially installed at the intersection as an interim measure, followed installation of the traffic signal.

#### **3.6.2 Catalpa Avenue and Woodward Avenue**

This is a three-leg unsignalized intersection with school crosswalks located across the southwest leg of Catalpa Avenue and the northwest leg of Woodward Avenue.

Catalpa Avenue is a one-way southwest-bound street with one travel lane and on-street parking permitted on both sides of the roadway. Woodward Avenue is a one-way northwest-bound street with one travel lane and on-street parking permitted on both sides of the roadway (see Figures 7 and 8).

There were two accidents reported at this intersection between 1998 and 2000, but neither of these accidents involved pedestrians (Table 2).



*Figure 7: Looking southwest on Catalpa Avenue at the unsignalized intersection with Woodward Avenue.*



*Figure 8: Looking northwest on Woodward Avenue at the unsignalized intersection with Catalpa Avenue.*

### 3.6.3 Catalpa Avenue and Forest Avenue

This is a four-leg signalized intersection with school crosswalks located across the northwest and southeast legs of Forest Avenue, and pedestrian crosswalks located across the northeast and southwest legs of Catalpa Avenue. Catalpa Avenue is a one-way southwest-bound street with one travel lane and on-street parking permitted on both sides of the roadway. Forest Avenue is a two-way street on a northwest-southeast alignment, with one travel lane and one on-street parking lane on each side of the roadway (see Figures 9 and 10).

There was a total of 14 accidents reported at this intersection between 1998 and 2000, including two pedestrian accidents, neither of which was school-related (Table 2). There were no pedestrian fatalities reported at this intersection between 1998 and 2000.



*Figure 9: Looking southwest on Catalpa Avenue at the signalized intersection with Forest Avenue.*



*Figure 10: Looking southeast on Forest Avenue between Catalpa Avenue and 69th Avenue.*

#### 3.6.4 Myrtle Avenue and Onderdonk Avenue / Centre Street

This is a signalized intersection with school crosswalks located across east and west legs of Myrtle Avenue, and the south leg of Centre Street. There is a pedestrian crosswalk located across the north leg of Onderdonk Avenue. Myrtle Avenue is a two-way east-west street with one travel lane and one on-street parking lane on each side of the roadway. Onderdonk Avenue is a one-way southwest-bound street, with one travel lane and on-street parking permitted on both sides of the roadway. Centre Street is a one-way northeast-bound street, with one travel lane and on-street parking permitted on both sides of the roadway.

There was a total of 23 accidents reported at this intersection between 1998 and 2000, including three pedestrian accidents, none of which were school-related (Table 2). There were no pedestrian fatalities reported at this intersection between 1998 and 2000.

#### 3.6.5 Myrtle Avenue and Forest Avenue / George Street

This is a five-leg signalized intersection with school crosswalks located across all legs. Myrtle Avenue is a two-way east-west street with one travel lane and one on-street parking lane on each side of the roadway. Forest Avenue is a two-way street on a northwest-southeast alignment, with one travel lane and one on-street parking lane on each side of the roadway. George Street is a one-way southwest-bound street with one travel lane and on-street parking permitted on both sides of the roadway (see Figures 11 and 12).

There was a total of 30 accidents reported at this intersection between 1998 and 2000, including six pedestrian accidents, none of which were school-related (Table 2). There were no pedestrian fatalities reported at this intersection between 1998 and 2000.



*Figure 11: Looking west on Myrtle Avenue to the signalized intersection with Forest Avenue and George Street.*



*Figure 12: Looking northwest on Forest Avenue to the intersection with Myrtle Avenue and George Street.*

### 3.6.6 Onderdonk Avenue and Cornelia Street

This is a four-leg unsignalized intersection with pedestrian crosswalks located across all four legs of the intersection. Onderdonk Avenue is a one-way southeast-bound street with one travel lane and on-street parking permitted on both sides of the roadway. Cornelia Street is a one-way northeast-bound street with one travel lane and on-street parking permitted on both sides of the roadway.

There was a total of 23 accidents reported at this intersection between 1998 and 2000, but none of these accidents involved pedestrians (Table 2).

### 3.6.7 Woodward Avenue and Cornelia Street

This is a four-leg all-way stop-controlled intersection with no crosswalks. Woodward Avenue is a one-way northwest-bound street with one travel lane and on-street parking permitted on both sides of the roadway. Cornelia Street is a one-way northeast-bound street with one travel lane and on-street parking permitted on both sides of the roadway.

There was a total of 11 accidents reported at this intersection between 1998 and 2000, including one pedestrian accident that was not school-related nor involved a pedestrian fatality (Table 2).

### 3.6.8 Woodward Avenue and 68<sup>th</sup> Road

This is a three-leg unsignalized “T”-intersection with no crosswalks. Woodward Avenue is a one-way northwest-bound street with one travel lane and on-street parking permitted on both sides of the roadway. 68<sup>th</sup> Road is a one-way southwest-bound street with one travel lane and on-street parking permitted on both sides of the roadway. 68<sup>th</sup> Road is stop-controlled at the intersection with Woodward Avenue.

There was a total of 23 accidents reported at this intersection between 1998 and 2000, but none of these accidents involved pedestrians (Table 2).

### 3.7 SIGNAL TIMING

Pedestrian crossing times were field-verified for crosswalks at signalized intersections in the vicinity of St. Matthias, and were found to be adequate based upon a child pedestrian walking at the rate of three feet per second. A comparison of actual and required pedestrian crossing times is shown in Table 4.

<b>TABLE 4: PEDESTRIAN CROSSING TIMES AT SIGNALIZED INTERSECTIONS</b>				
<b>INTERSECTION</b>	<b>CROSSWALK LENGTH (FEET)</b>	<b>PEDESTRIAN TIME ACTUAL (SECONDS)</b>	<b>PEDESTRIAN TIME REQUIRED (SECONDS)</b>	<b>TIMING ADJUSTMENT REQUIRED?</b>
<b>Catalpa Avenue and Onderdonk Avenue</b>				
crossing Catalpa Avenue	32	38	14	No
crossing Onderdonk Avenue	35	20	15	No
<b>Catalpa Avenue and Forest Avenue</b>				
crossing Catalpa Avenue	32	57	14	No
crossing Forest Avenue	35	30	15	No
<b>Myrtle Avenue and Onderdonk Avenue</b>				
crossing Myrtle Avenue	37	42	16	No
crossing Onderdonk Avenue	70	44	27	No
crossing Centre Street	42	44	17	No
<b>Myrtle Avenue and Forest Avenue</b>				
crossing Myrtle Avenue	51	35	20	No
crossing Forest Ave. (north leg)	37	50	16	No
crossing Forest Ave. (south leg)	61	50	24	No
crossing George Street	41	35	17	No

*Note: A child pedestrian walking rate of 3 feet/second, plus 3 seconds reaction time, was utilized to calculate the required pedestrian crossing times.*

### 3.8 PHYSICAL CONDITIONS

#### 3.8.1 Roadways and Sidewalks

The roadways and sidewalks in the vicinity of St. Matthias School are in fair condition, and range in width between five and 15 feet.

#### 3.8.2 Pedestrian Ramps

Pedestrian ramps in the vicinity of the school were found to be standard, with the exception of the following locations:

- A pedestrian ramp is missing on the northeast corner of the Catalpa Avenue and Woodward Avenue intersection, for the school crosswalk located across the northwest leg of Woodward Avenue.

- A pedestrian ramp is missing on the southeast side of Catalpa Avenue at the intersection with Woodward Avenue for the school crosswalk located across the southwest leg of Catalpa Avenue.
- On the southeast corner of the Forest Avenue and Catalpa Avenue intersection, a utility pole is obstructing the path for the school crosswalk located across the southeast leg of Forest Avenue.
- A pedestrian ramp is missing on the southeast corner the Forest Avenue and Catalpa Avenue intersection, for the school crosswalk located across the southeast leg of Forest Avenue.

## 4. POTENTIAL MEASURES TO IMPROVE STUDENT PEDESTRIAN SAFETY

This section describes proposed measures to improve school pedestrian safety around St. Matthias. The proposed recommendations are divided into short-term and long-term measures. Short-term measures are those that potentially can be performed in-house. Long-term measures involve capital improvements. Each of the short- and long-term measures recommended for the St. Matthias is discussed as follows, and is shown in more detail in Exhibit 6 at the end of this section. See Section 4.3 for additional recommendations for this area from the report for I.S. 77, a nearby priority school.

### 4.1 SHORT-TERM MEASURES

➤ *Install “NO STANDING 7AM - 4PM SCHOOL DAYS” signs*

Signs reading “NO STANDING 7AM - 4PM SCHOOL DAYS” should be installed for a distance of 30 feet in front of the main entrance to the school. (This is a typical requirement for all NYC schools in order to provide for emergency access to and from the school.)

➤ *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.

➤ *Convert pedestrian crosswalks to school crosswalks*

There are existing pedestrian crosswalks located across the northeast and southeast legs of the Cornelia Street and Onderdonk Avenue intersection. These crosswalks are located adjacent to the school block and would be appropriate to be designated as school crosswalks.

Therefore, the following actions are recommended:

- Convert the existing pedestrian crosswalks located across the northeast and southeast legs of the Cornelia Street and Onderdonk Avenue intersection to school crosswalks, and install all appropriate advance-warning devices.

➤ *Install school crosswalks*

There are no crosswalks located across any legs of the all-way stop-controlled Cornelia Street and Woodward Avenue intersection. Because the southeast and southwest legs are adjacent to the school block, it would be appropriate to designate school crosswalks across these legs. In addition, there is no crosswalk located across the stop-controlled approach of 68<sup>th</sup> Road at the intersection with

Woodward Avenue. However, this intersection is also adjacent to the school block, and it would be appropriate to designate a school crosswalk across the stop-controlled 68<sup>th</sup> Road leg.

Therefore, the following actions are recommended:

- Install school crosswalks across the southeast and southwest legs of the Cornelia Street and Woodward Avenue intersection, and install all appropriate advance-warning devices.
- Install a school crosswalk across 68<sup>th</sup> Road at the intersection with Woodward Avenue.

➤ Install school crosswalks

Crosswalks are recommended at selected intersections to maximize safety for pedestrians.

Therefore, the following actions are recommended:

- Install pedestrian crosswalks across the west leg of 69<sup>th</sup> Avenue and Forest Avenue intersection.
- Install pedestrian crosswalks across the east leg of 69<sup>th</sup> Avenue and Onderdonk Avenue intersection.
- Install pedestrian crosswalks across the east leg of 70<sup>th</sup> Avenue and Onderdonk Avenue intersection.

## 4.2 LONG-TERM MEASURES

➤ Construct pedestrian ramps

Pedestrian ramps are missing at several intersections in the vicinity of St. Matthias. Therefore, the following actions are recommended:

- Construct a pedestrian ramp on the northeast corner of the Woodward Avenue and Catalpa Avenue intersection for the school crosswalk located across the northwest leg of Woodward Avenue.
- Construct a pedestrian ramp on the southeast side of Catalpa Avenue at the intersection with Woodward Avenue, for the school crosswalk located across the south west leg of Catalpa Avenue.
- Construct a pedestrian ramp on the southeast corner of the Forest Avenue and Catalpa Avenue intersection for the school crosswalk located across the southeast leg of Forest Avenue.

➤ Relocate utility pole

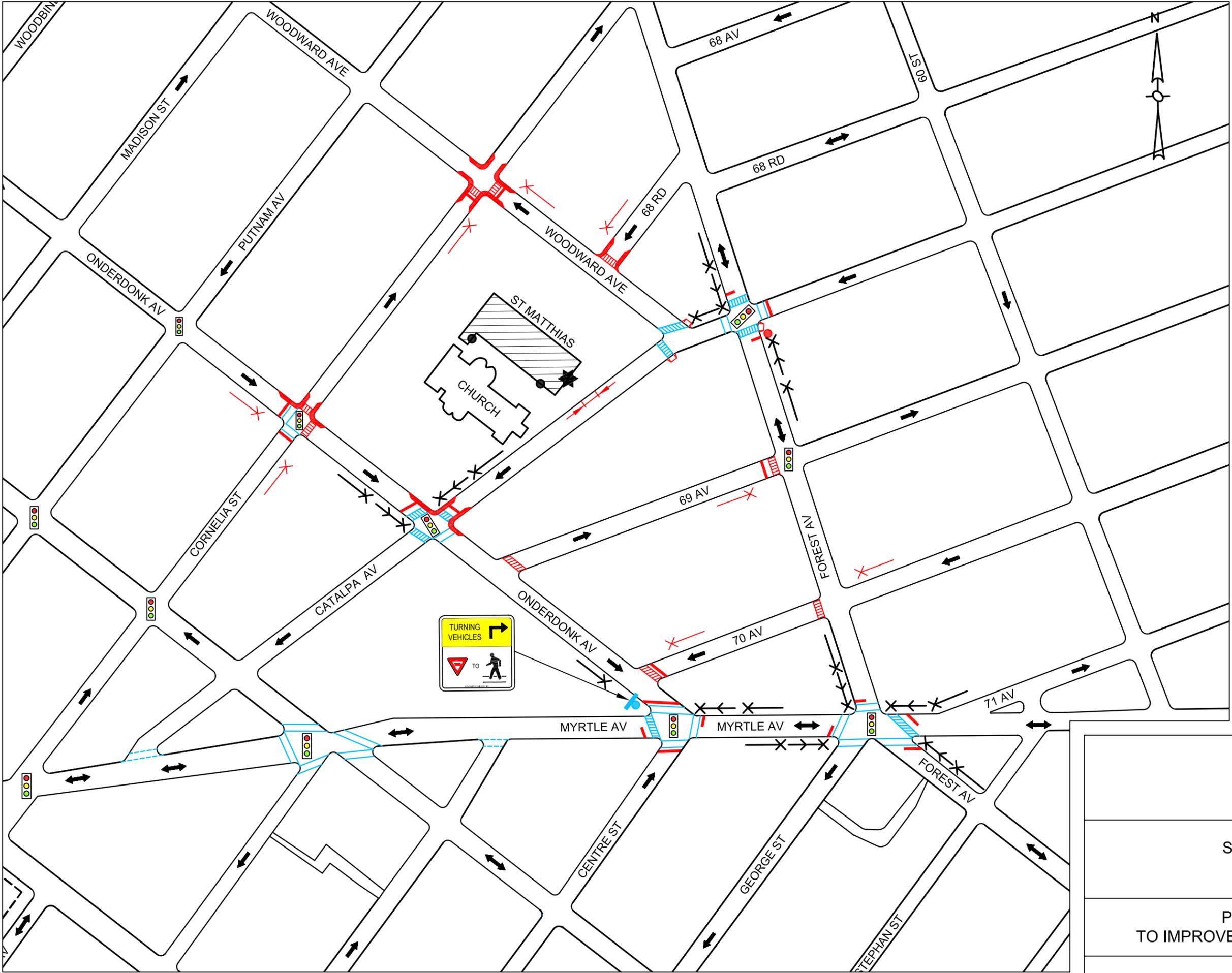
- Relocate the utility pole located on the southeast corner of the Forest Avenue and Catalpa Avenue intersection from the path for the school crosswalk located across the southeast leg of Forest Avenue.

➤ Consider installing curb extensions at the following locations

Consideration should be given to installing curb extensions at the following locations, provided that the Final Design confirms that construction of the recommended curb extensions would be feasible and not interfere with traffic operations. Final details pertaining to the number, location and geometry of curb extensions will be developed during the Final Design/Contract Document preparation

- On the northeast and southeast corners of the Cornelia Street and Onderdonk Avenue intersection.
- On all four corners of the Cornelia Street and Woodward Avenue intersection.
- On the east and west sides of 68<sup>th</sup> Road, at the intersection with Woodward Avenue.
- On the north and east corners of the Catalpa Avenue and Onderdonk Avenue intersection.

The purpose of the curb extensions is to shorten the crossing distance for pedestrians, and to reduce speeds of vehicles approaching and turning at these heavily utilized school crosswalks. These curb extensions would not eliminate or reduce the width of any moving lanes.



- LEGEND**
- ★ MAIN ENTRANCE
  - OTHER ENTRANCES
  - ↔ EXISTING TRAVEL DIRECTION
  - X EXISTING ADVANCE WARNING SIGN OR SCHEDULED TO BE INSTALLED
  - X EXISTING SCHOOL CROSSWALK WARNING ASSEMBLY OR SCHEDULED TO BE INSTALLED
  - 🚦 EXISTING SIGNALIZED LOCATION
  - STOP EXISTING ALL WAY STOP LOCATION
  - 🚶 EXISTING TRAFFIC SIGN
  - ▬ EXISTING SCHOOL CROSSWALK
  - ▬ EXISTING PEDESTRIAN CROSSWALK
  - - - EXISTING SCHOOL CROSSWALK ASSIGNED TO ANOTHER SCHOOL
  - ▬ PROPOSED SCHOOL CROSSWALK
  - ▬ PEDESTRIAN RAMP TO BE RECONSTRUCTED
  - ▬ PROPOSED STOP LINE IN ADVANCE OF SCHOOL CROSSWALK
  - +— PROPOSED "NO STANDING 7:00AM - 4:00PM SCHOOL DAYS"
  - RELOCATED EXISTING UTILITY POLE
  - 📐 PROPOSED CURB EXTENSION (NECKDOWN)



1" = 200'

EXHIBIT 6

ST. MATTHIAS SCHOOL  
QUEENS

POTENTIAL MEASURES  
TO IMPROVE STUDENT PEDESTRIAN SAFETY

# APPENDIX

