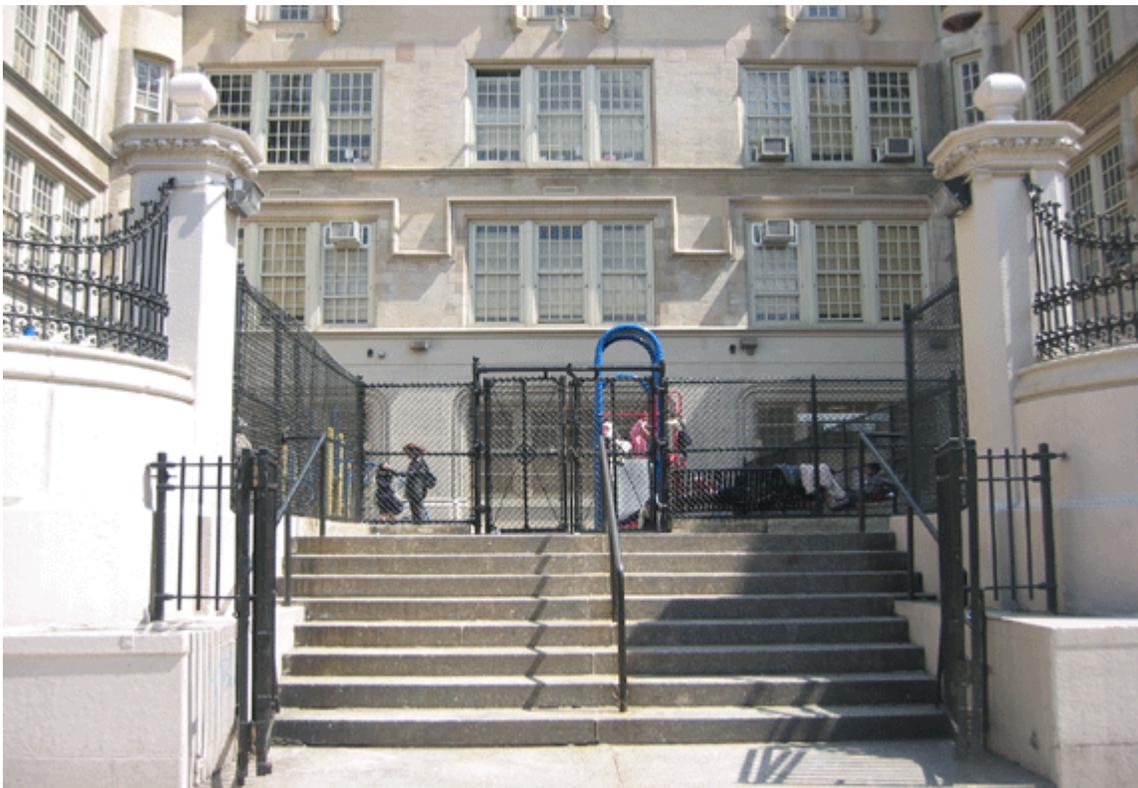


**New York City Department of Transportation
Office of School Safety Engineering**



School Safety Engineering Project

FINAL REPORT: P.S. 33 (Timothy Dwight School), Bronx



**Prepared by
The RBA Group/Urbitran Associates**



August 18, 2006

**School Safety Engineering Project
Final Report: P.S. 33, Bronx**

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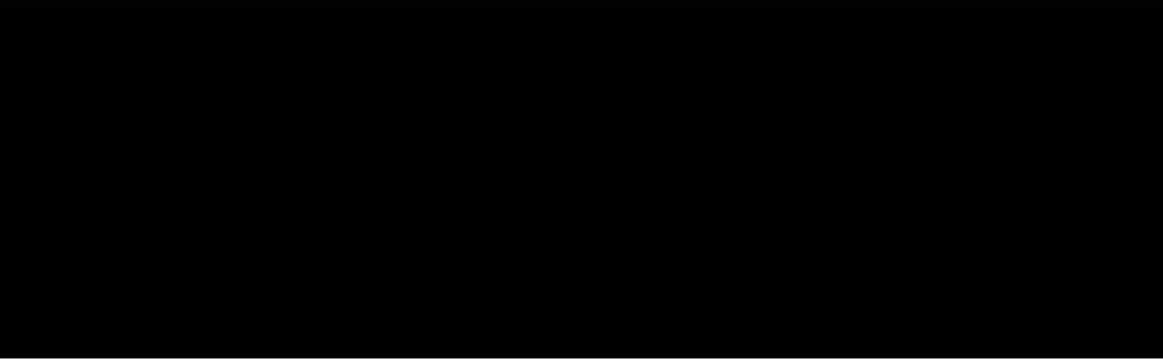
1. INTRODUCTION

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, 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). P.S. 33 (Timothy Dwight School) in the Bronx 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



2.2 NEIGHBORHOOD DESCRIPTION

Exhibit 1 shows an aerial view of the neighborhood surrounding the school. P.S. 33 is bounded by Jerome Avenue to the west, East Fordham Road to the north, Walton Avenue to the east and East 184th Street to the south. The area surrounding the school is generally residential in character, with high-density apartment buildings. Jerome Avenue and East Fordham Road have significant commercial activities and carry considerable traffic volumes.

2.3 MEETING WITH SCHOOL REPRESENTATIVES

Consultant staff, the principal of P.S. 33, and two Department of Education Aspiring Principals met at the school on the afternoon of Tuesday, April 27, 2004. According to the Principal of the school, P.S. 33 students face the following problems:

- Delivery trucks often block sight distances on Jerome Avenue in the area of the school.
- Food vendors located in the vicinity of the school are an attraction for students that cause them to act irresponsibly (Principal Lopez reported that a child was struck on Walton Avenue during this past school year. The student was hit by a school bus when running out between cars to get to an ice cream vendor's truck).
- It was reported that a taxicab struck a home-school teacher on Walton Avenue and continued on, with her on the fender.
- A woman pedestrian was struck and killed in front of the school.
- The school reports double-parking generally occurs at both arrival and dismissal times.
- Trucks loading and unloading at an appliance store block sight distances.
- The school requested a police officer/traffic agent be stationed in front of the school at dismissal time.
- The school reports they generally experience congestion on Walton Avenue until about 4:00 pm.

(See Appendix for a summary of school concerns.)



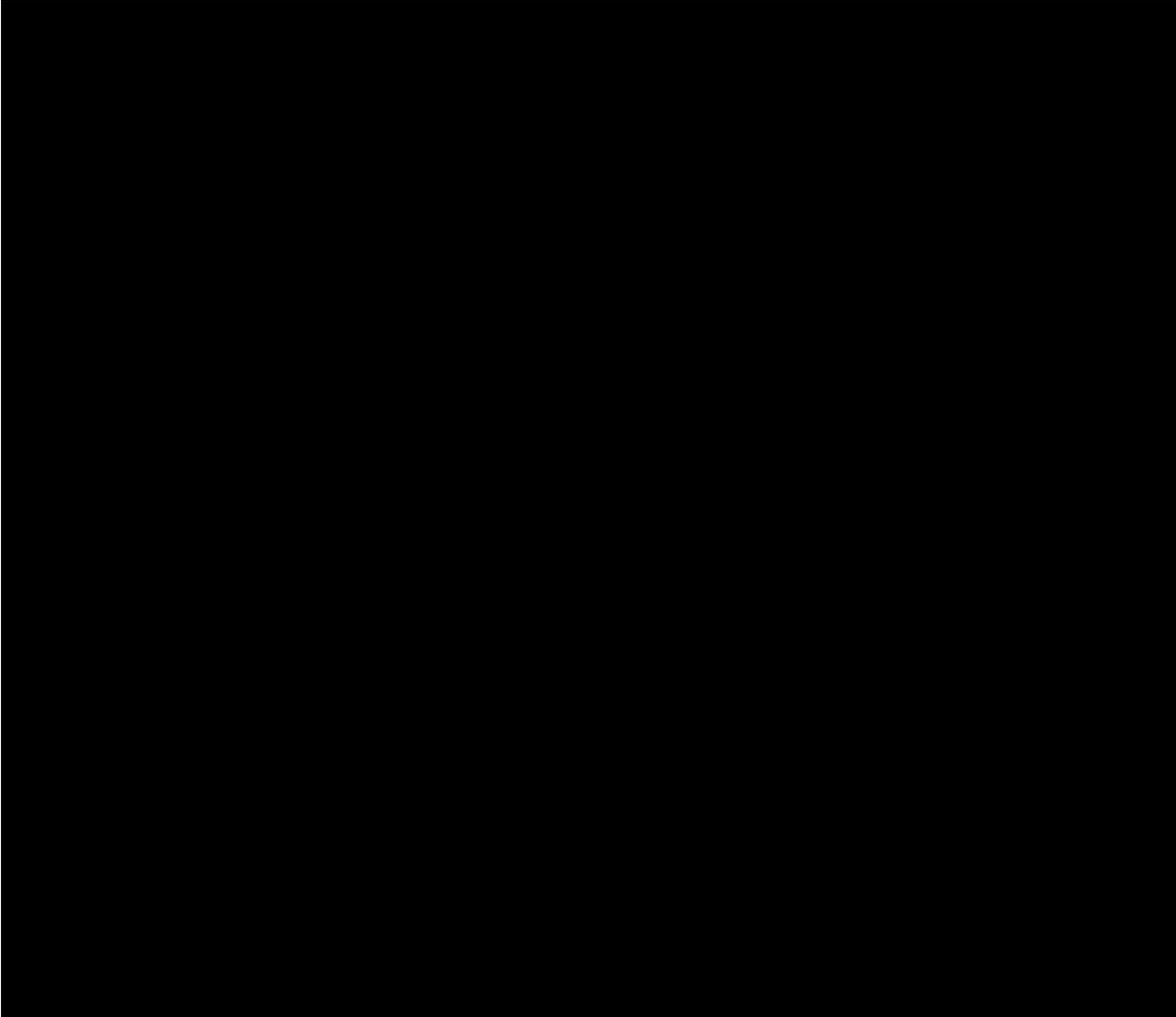




Figure 2: Additional food vendors in front of the school on Jerome Avenue, away from the school exit gate



Figure 3: Looking north on Jerome Avenue at dismissal time (school building to the right)



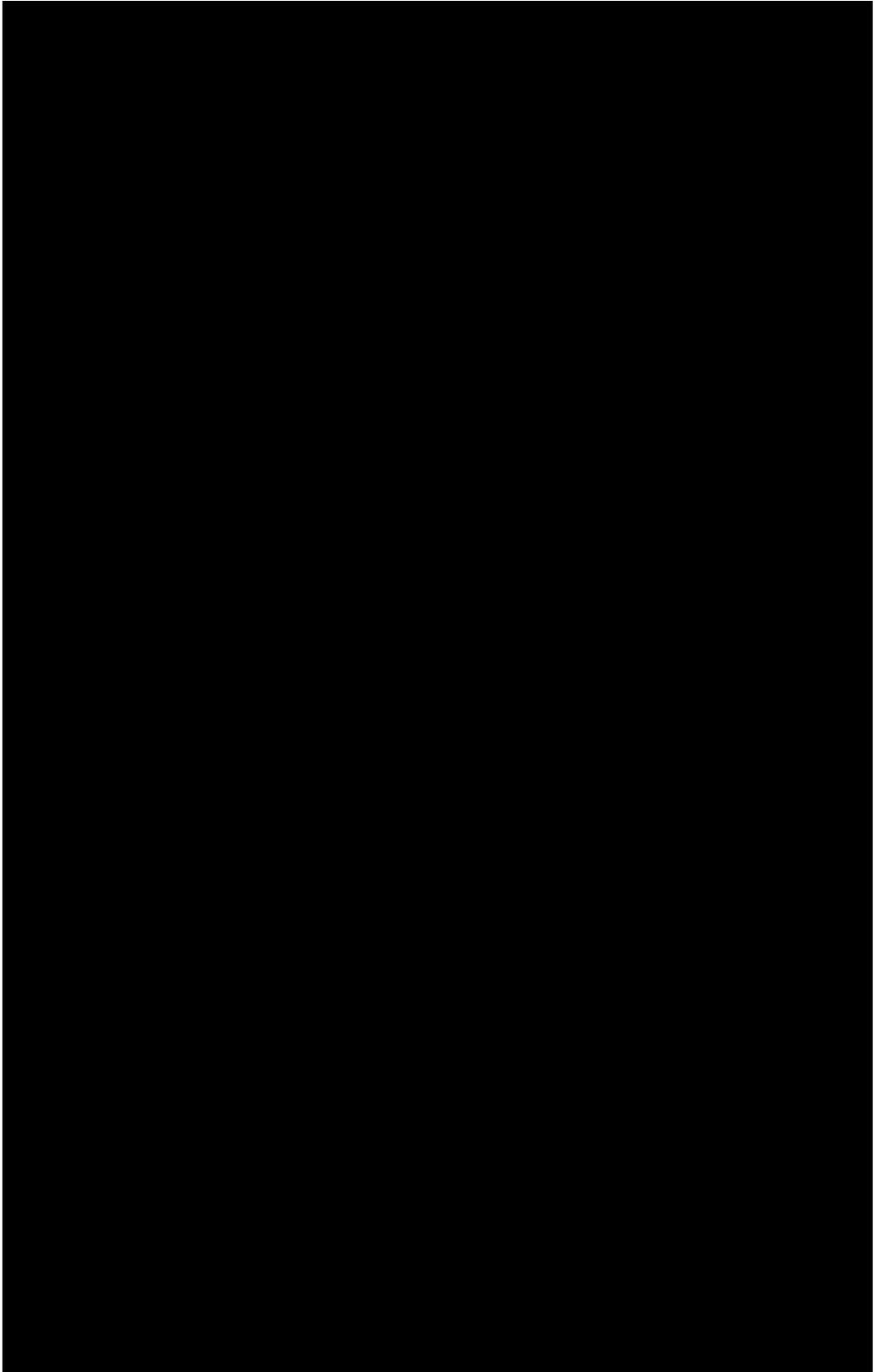
2.6 PRIMARY MODES OF TRANSPORT TO AND FROM SCHOOL

The school’s “catchment area” as defined by the Department of Education is shown in Exhibit 2.

The school’s catchment area is as follows: the northerly portion of the area goes along Fordham Road between University Avenue and the Grand Concourse; the easterly side runs along the Grand Concourse between East Fordham Road and East 183rd Street; the southerly line extends to East 183rd Street between Morris Avenue and Jerome Avenue, and the westerly line runs along Jerome Avenue to East 184th Street, then extends out to University Avenue; it then goes up to West Fordham Road.

Table 1 presents the modes of travel for P.S. 33 as identified by school representatives.

TABLE 1: MODES OF TRAVEL (AS ESTIMATED BY SCHOOL OFFICIALS)	STUDENTS (Percentage)
Walk	82%
Driven by car	10%
School bus	6%
MTA Bus/ Subway	2%
Bicycle	0%
TOTAL	100%



2.7 ADDITIONAL STUDENT PEDESTRIAN TRAFFIC GENERATORS

Stores located near the school on Jerome Avenue and north of the school on East Fordham Road generate pedestrian and vehicular traffic around the school. Food vendors located in front of the school are an additional attraction for students (see Figures 1, 2 and 5).

2.8 CROSSING GUARD LOCATION

According to the school principal, there is a crossing guard assigned to P.S. 33 at one location, Jerome Avenue and East Fordham Road, as shown in Exhibit 4 at the end of this section.

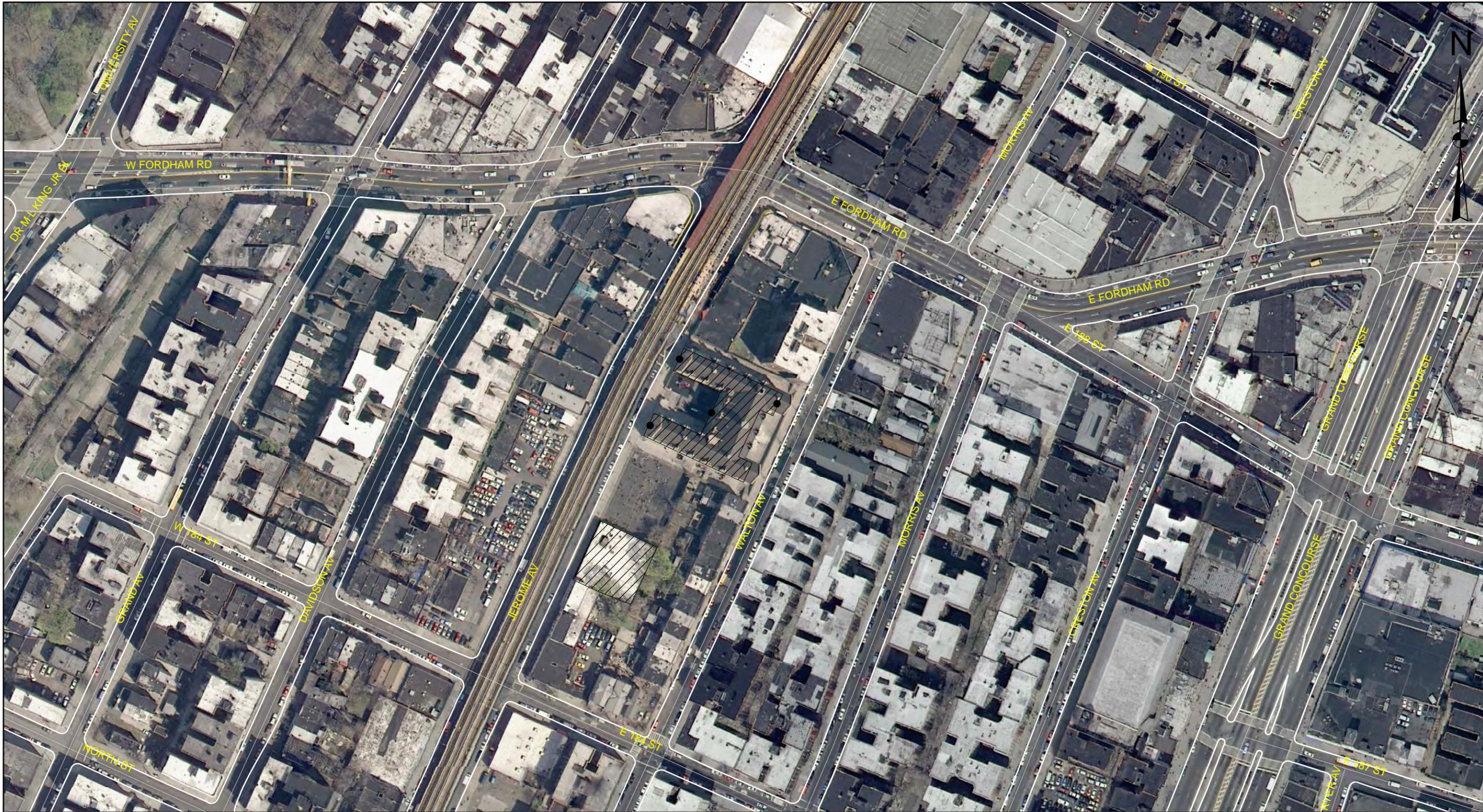


EXHIBIT 1
P.S. 33 BRONX
TIMOTHY DWIGHT SCHOOL
AERIAL PHOTOGRAPH

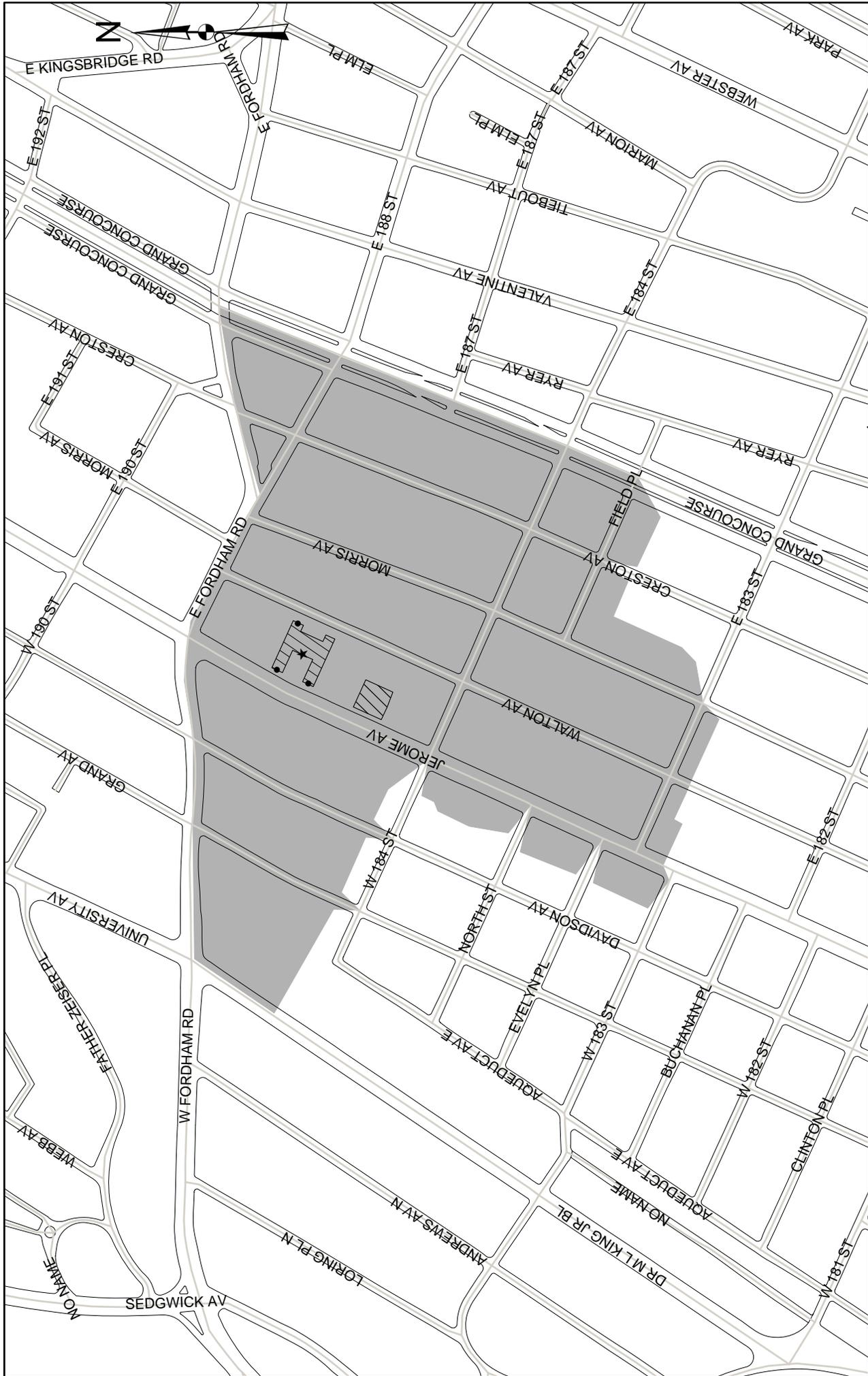
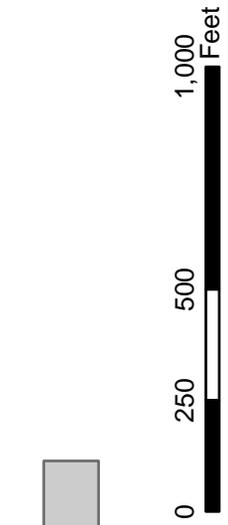
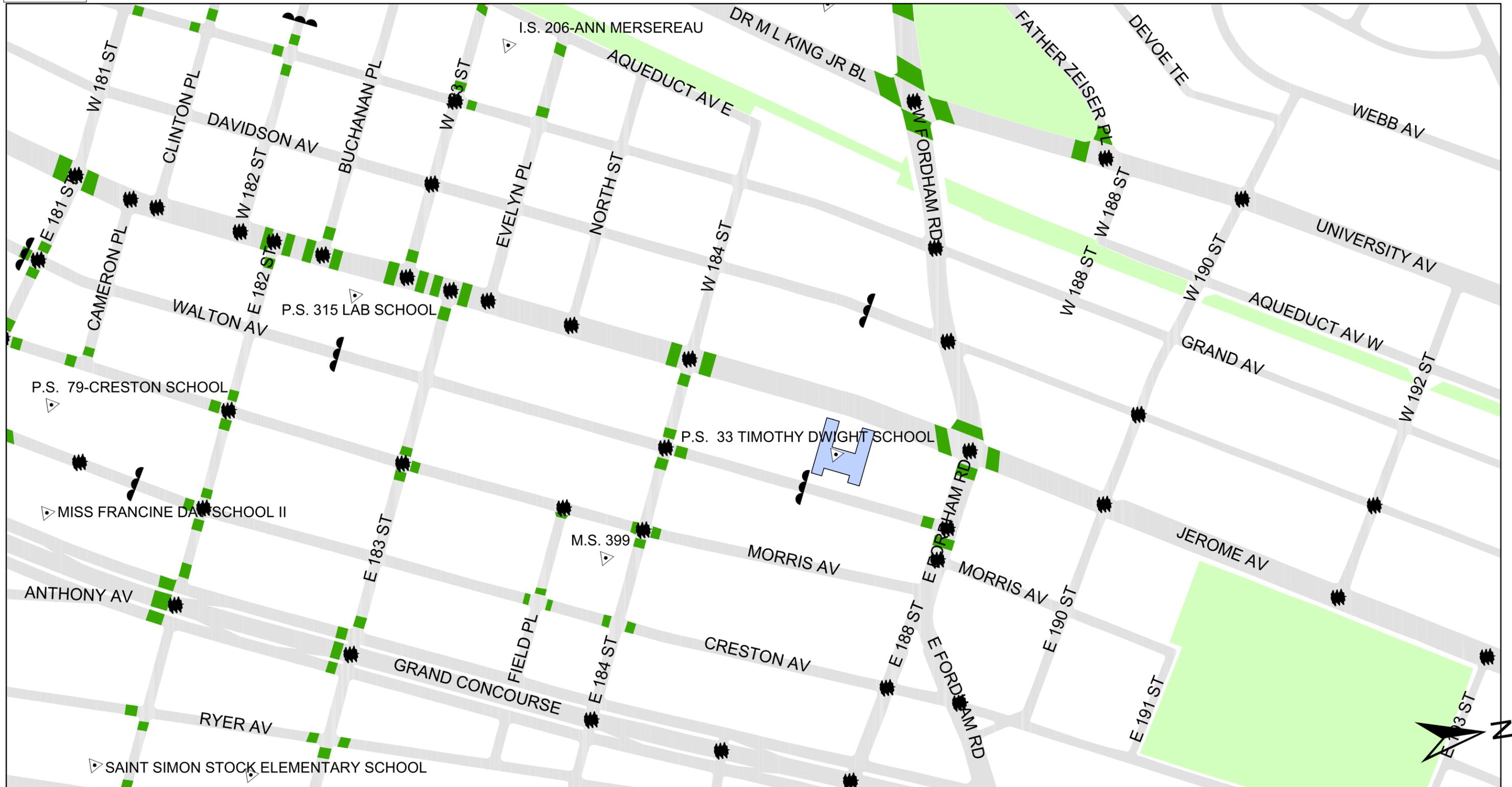


EXHIBIT 2
P.S. 33 BRONX
TIMOTHY DWIGHT SCHOOL
CATCHMENT AREA



LEGEND:
 CATCHMENT AREA, (DEPARTMENT OF EDUCATION DESIGNATED AREA FROM WITHIN WHICH STUDENTS ARE ENTITLED TO ATTEND P.S.33)



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

PS 33 Bronx
TIMOTHY DWIGHT SCHOOL

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

Map created on 11/16/2006

EXHIBIT 3

COMM. BOARD: 205
 PRECINCT: 46

3. TRAFFIC OPERATIONS

3.1 SCHOOL BUS OPERATIONS

According to school representatives, approximately 25 students ride a city (MTA) bus to school, and approximately 60 students ride a yellow school bus to school. Bus transportation for these students consists of five special education buses. The students from the five buses enter through the main entrance on Jerome Avenue, in the center of the building.

3.2 PARENT DROP-OFF OPERATIONS

According to school representatives, approximately ten percent of the students are being dropped off. Parents usually double park on Jerome Avenue in the area of the school. Truck pick-up and delivery operations, in addition to the double parking, contribute to congestion on Jerome Avenue (see Figure 3).

3.3 PARKING REGULATIONS

Parking regulations around the school block are shown in Exhibit 5.

3.4 EXISTING SCHOOL SIGNS AND MARKINGS

Exhibit 3 shows the existing school signals and pavement markings around P.S. 33. 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. This will make the school crossing warning signs more visible to motorists. Signs scheduled to be installed under this program are shown as “existing” in Exhibit 7.

3.5 ACCIDENT SUMMARY

Exhibit 6 and Table 2 show a summary of accidents, as obtained from the New York State Department of Motor Vehicles (DMV), in the vicinity of P.S. 33 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 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.

INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
Jerome Avenue and East Fordham Road	127	15	0	0
Walton Avenue and East Fordham Road	24	6	0	0
East 188 Street and Creston Avenue	33	5	0	0
Jerome Avenue and East 184 th Street	26	3	0	1
Walton Avenue and East 184 th Street	10	0	0	0
TOTAL	220	29	0	1

INTERSECTION	TOTAL ACCIDENTS	PEDESTRIAN ACCIDENTS	PEDESTRIAN FATALITIES	SCHOOL-RELATED ACCIDENTS*
Jerome Avenue and East Fordham Road	221	33	3	2
Walton Avenue and East Fordham Road	39	4	0	2
East 188 Street and Creston Avenue	41	7	0	1
Jerome Avenue and East 184 th Street	78	11	0	3
Walton Avenue and East 184 th Street	15	1	0	0
TOTAL	394	56	3	8

* School-related accidents are defined as accidents involving school-age pedestrians (age 4 – 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 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 P.S. 33.

3.6.1 Jerome Avenue and East 184th Street

This is a four-leg signalized intersection with school crosswalks located on the north leg of Jerome Avenue and east leg of East 184th Street. Jerome Avenue is two-way street with two travel lanes and a parking lane on each side of the roadway. Jerome Avenue also has an elevated train running over the center of the roadway. The supports for the train are located so that they provide an inner and an outer lane for each direction of travel (see Figures 3 and 6).

East 184th Street is a two-way street with one travel lane and one parking lane on each side of the roadway. The street has commercial activity near Jerome Avenue; otherwise it is mostly residential in character (see Figure 7).

This intersection has been the site of 26 accidents between 1998 and 2000 (Table 2). Three were pedestrian accidents, of which one was a school-related accident. In the school-related accident, two 12-year-old pedestrians were struck in the roadway at 3:00 pm in the afternoon, on Monday, April 17, 2000, and both pedestrians suffered incapacitating injuries. The traffic signal was not a contributory factor in the accident, and their actual actions were recorded as "other actions in roadway." The road was wet and it was raining. There were no fatalities during this time period.



Figure 6: Looking north along Jerome Avenue across East 184th Street (school is up on far right)



Figure 7: Looking east along East 184th Street from Jerome Avenue (south end of school block)

3.6.2 Jerome Avenue and East Fordham Road

This is a four-leg signalized intersection with school crosswalks across all four legs. North of the intersection, Jerome Avenue is two-way street with two travel lanes and a parking lane on the east side of the roadway, and one southbound traffic lane on the west side of the roadway. South of the intersection, Jerome Avenue is two-way street with two travel lanes and a parking lane on each side of the roadway. Jerome Avenue also

has an elevated train (No. 4 Train, Lexington Avenue Express) running over the center of the roadway. South of East Fordham Road, the supports for the train are located so that they provide an inner and an outer lane for each direction of travel (see Figures 3 and 6).

East Fordham Road is a two-way street with two travel lanes and a parking lane on each side of the roadway. East Fordham Road is a major connector roadway for this area, carrying significant traffic volumes (see Figures 8 and 10).

This intersection was the site of one hundred 127 accidents between 1998 and 2000 (Table 2); 15 of these were pedestrian accidents. There were no school-related accidents reported during the same three-year period.

A fatality occurred on southbound Jerome Avenue near West Fordham Road on July 14, 2004 at 4:30 pm. An investigation was conducted for safety improvements at the above location by NYCDOT's Safe Team Squad. The team reported that the crash occurred as a result of the driver operating the vehicle under the influence of alcohol. The report indicates that appropriate signage, markings, and traffic controls were present, clearly visible and functioning correctly. It was determined at the time of the investigation that additional signage or markings were not needed

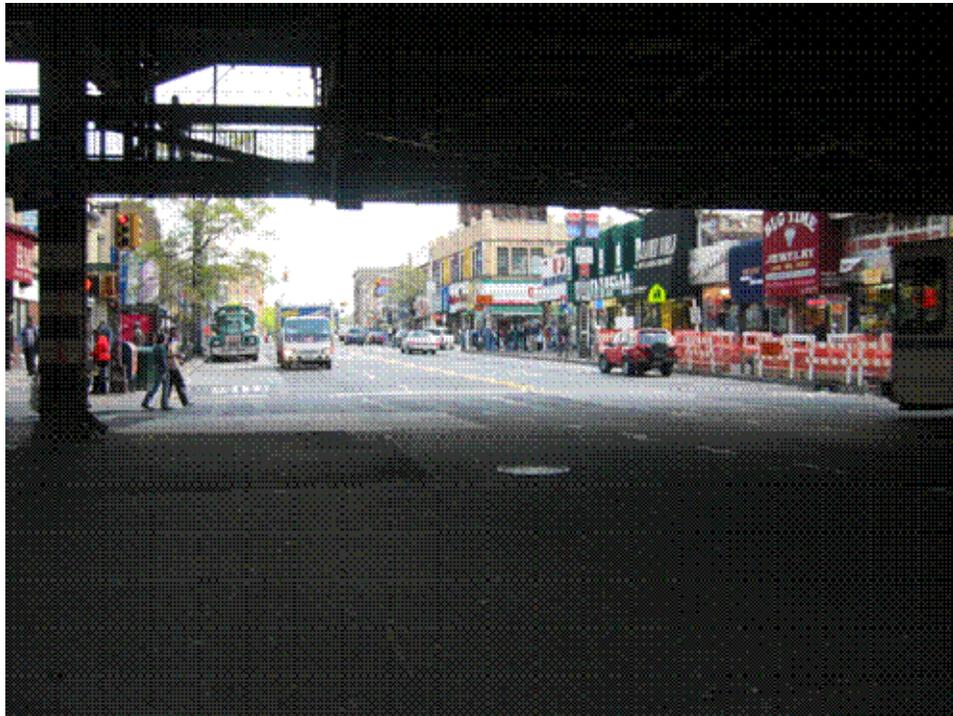


Figure 8: Looking east along East Fordham Road from Jerome Avenue



Figure 9: Looking south along Jerome Avenue from across East Fordham Road

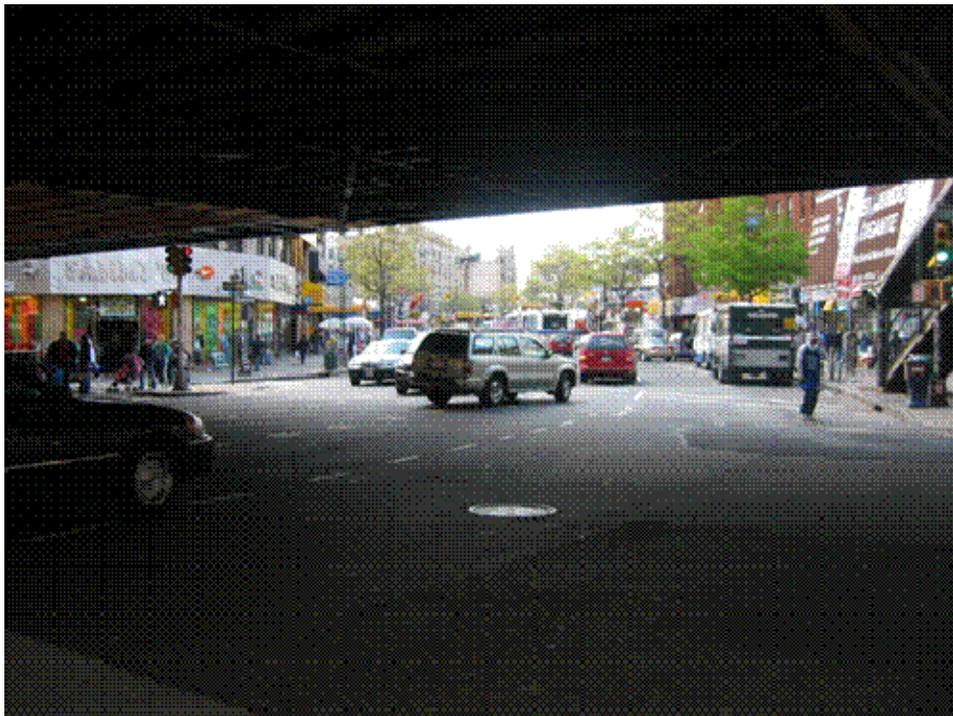


Figure 10: Looking west along West Fordham Road from Jerome Avenue

3.6.3 Walton Avenue and East 184th Street

This is a four-leg signalized intersection with school crosswalks located across the north, west, and east legs. A pedestrian crosswalk is located across the south leg of Walton Avenue. Walton Avenue is a one-way southbound street with one travel lane and parking on both sides of the roadway (see Figure 10).

East 184th Street is a two-way street with one travel lane and a parking lane on each side of the roadway (see Figure 11).

This intersection was the site of ten accidents between 1998 and 2000 (Table 2). There were no pedestrian accidents or fatalities reported during the same three-year period. However, two mid-block school-related accidents were reported on East 184th Street between Walton Avenue and Morris Avenue. The first accident occurred at approximately 9:00 am on October 20, 1998 when a 14-year-old pedestrian was reported to have sustained a “possible injury” while attempting to cross East 184th Street mid-block. At the time of the accident, the road surface was dry and the weather was clear. The accident occurred under daylight conditions. The second accident occurred at approximately 8:00 am on October 29, 1999 when a 11-year-old pedestrian was reported to have sustained a “possible injury” while crossing mid-block. At the time of the accident, the road surface was dry and the weather was clear. The accident occurred under daylight conditions. There were no fatalities or school-related accidents reported between 1998 and 2000.



Figure 11: Looking north along Walton Avenue from across East 184th Street (P.S. 33 is up on the far left)



Figure 12: Looking west along East 184th Street from across Walton Avenue (P.S. 33 is on the left)

3.6.4 Walton Avenue and East Fordham Road

This is a signalized T-intersection with school crosswalks located across the south leg of Walton Avenue and east leg of East Fordham Road. Walton Avenue is a one-way southbound street with one travel lane and parking on both sides of the roadway.

East Fordham Road is a two-way street with two travel lanes and a parking lane on each side of the roadway. East Fordham Road is a major connector roadway for this area with significant commercial activity, and carrying significant traffic volumes.

This intersection was the site of 24 accidents between 1998 and 2000 (Table 2), including six pedestrian accidents. There were no fatalities or school-related accidents during the same three-year period.

3.6.5 Creston Avenue and East 188th Street

This is a four-leg signalized intersection with pedestrian crosswalks located across all four legs. East 188th Street is a one-way eastbound street wide enough to provide two travel lanes and permits parking on both sides of the roadway. Creston Avenue is a one-way southbound street with one travel lane and on-street parking on both sides of the roadway.

This intersection was site of 33 accidents between 1998 and 2000, including five pedestrian accidents. There were no pedestrian fatalities or school-related accidents during the same three-year period.

Finally, it should be noted that one school-related pedestrian accident occurred mid-block along Davidson Avenue between West Fordham Road and West 184th Street. This particular accident occurred at approximately 5:00 pm on March 27, 1998 when a nine-

year-old pedestrian was reported to have sustained a “possible injury” while attempting to cross Davidson Avenue mid-block at what was reported as a “marked crosswalk” location. At the time of the accident, the road surface was dry and the weather was cloudy. The accident occurred under daylight conditions.

3.7 SIGNAL TIMING

Pedestrian crossing times were field-verified for crosswalks at signalized intersections in the vicinity of P.S. 33, and were found to be adequate based upon a child pedestrian walking at a rate of 3 feet per second. Signal timings are shown in Table 4.

TABLE 4: PEDESTRIAN CROSSING TIME AT SIGNALIZED INTERSECTIONS				
INTERSECTION	CROSSWALK LENGTH (FEET)	PEDESTRIAN TIME ACTUAL (SECONDS)	PEDESTRIAN TIME REQUIRED (SECONDS)	TIMING ADJUSTMENT REQUIRED?
Jerome Avenue and East 184 th Street				
crossing East 184 th Street	39	67	16	No
crossing Jerome Avenue	74	43	28	No
Jerome Avenue and East Fordham Road				
crossing East Fordham Road	75	37	28	No
crossing Jerome Avenue	46	73	19	No
Walton Avenue and East 184 th Street				
crossing East 184 th Street	40	17	17	No
crossing Walton Avenue	37	17	16	No
Walton Avenue and East Fordham Road				
crossing East Fordham Road	60	31	23	No
crossing Walton Avenue	34	55	15	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

3.8.1 Roadways and Sidewalks

The roadways and sidewalks in the vicinity of P.S. 33 are generally in fair condition.

3.8.2 Pedestrian Ramps

Overall, pedestrian ramps in the area of the school appear to be standard, except at the northeast corner of East 184th Street and Jerome Avenue, where a pole is situated so that it impedes the use of the crosswalk. The pole is near the curb and centered in the extension of the northerly crosswalk (see Figures 7 and 13).



Figure 13: Looking east at traffic signal pole in area of pedestrian ramp

4. POTENTIAL MEASURES TO IMPROVE STUDENT PEDESTRIAN SAFETY

This section describes proposed measures to improve school pedestrian safety around P.S. 33. 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 P.S. 33 is discussed as follows, and is shown in more detail in Exhibit 7 at the end of this section. See section 4.3 for additional recommendations for this area from the report on M.S.399, a nearby priority school.

4.1 SHORT-TERM MEASURES

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

There are existing “NO PARKING 7AM – 4PM SCHOOL DAYS EXCEPT BOARD OF EDUCATION” signs along east side of Jerome Avenue in front of the school main entrance. Replace these signs with “NO STANDING 7AM – 4PM SCHOOL DAYS” signs for a distance of 240 feet in front of the school main entrance to accommodate the six school yellow buses. (This is a typical requirement for all NYC schools in order to provide for emergency access to and from the school.)

➤ Place advance stop bars before 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 intersections and mid-block crossings, the vehicle stop line can be moved farther back from the pedestrian crosswalk.

For school crosswalks with significant potential for vehicular/pedestrian conflicts, it is recommended that the advance stop bar be placed ten feet in advance of the crosswalk to maximize the safety benefit for school-aged pedestrians. (This would improve visibility of pedestrians to motorists, and allow pedestrians to proceed in a crosswalk before motor vehicles turn.)

Ten foot advanced stop bars are recommended before all school crosswalks.

➤ Create time-specific “NO STANDING 2PM – 4PM SCHOOL DAYS” (“NO LOADING OR UNLOADING ZONE”)

Truck pick-up and delivery operations, coinciding with dismissal time and double-parking, lead to congestion around the Jerome Avenue entrance of the school.

It is therefore recommended to:

- Install signs reading “NO STANDING 2PM – 4PM SCHOOL DAYS” for the area on the west side of the roadway for a distance of 60 feet across from the main entrance of the school on Jerome Avenue.

➤ Change existing pedestrian crosswalk to a school crosswalk

According to observations made during the fieldwork, and the school catchment area, students are arriving at the school from West 184th Street and using the pedestrian crosswalks at the west leg of East 184th Street and the south leg of Jerome Avenue.

It is therefore recommended to:

- Convert the existing pedestrian crosswalks across the west and the south legs of East 184th Street and the south leg of Jerome Avenue into school crosswalks and install the associated advanced warning signs.

➤ Assign crossing guards at the following intersections:

There were 49 pedestrian accidents including three fatalities and seven school-related accidents between 2001 and 2004 (including three fatalities and two school-related accidents at Jerome Avenue/East Fordham Road, three school-related accidents at Jerome Avenue/East 184th Street, and two school-related accidents at East Fordham Road/Walton Avenue).

There is only one crossing guard assigned at the intersection of Jerome Avenue and East Fordham Road. It is therefore recommended to:

- Assign a crossing guard to the intersection of East Fordham Road and Walton Avenue
- Assign a crossing guard to the intersection of Jerome Avenue and East 184th Street.

➤ Request police officer for traffic control in front of main entrance

To address the school's concerns regarding congestion in front of the school's main entrance on Jerome Avenue, representatives should request the assistance of an NYPD officer to provide traffic control and parking enforcement at this location during arrival and dismissal times. This would provide for a safer environment for P.S. 33 students.

➤ Administer student pedestrian safety education program

As mentioned earlier, the intersections around the school block experienced seven school-related accidents during the four-year period between 2001 and 2004. In addition to the crossing guards, it is also proposed that:

- The school should participate in the NYCDOT Safety Education Program to educate the students to cross the street using the designated school crosswalks, not to cross mid-block, not to cross against signals, and not to run out between parked vehicles.

➤ NYCDOT Pilot Program to reduce speeds

NYC's existing Pilot Program to reduce speeds (15 mph) has been implemented on Walton Avenue from 181st Street to Burnside Avenue. Its effectiveness is being evaluated by DOT.

4.2 LONG-TERM MEASURES

➤ Relocate Traffic Signal Pole

There is no pedestrian ramp at the northwest corner of Jerome Avenue and East 184th Street for eastbound pedestrians. The traffic signal pole presently at the northeast corner is in conflict with the pedestrian crosswalk at this intersection.

It is therefore recommended to:

- Relocate the signal pole at the northeast corner.

➤ Consider curb extensions at the following locations:

- At all four corners of Jerome Avenue at its intersection with East 184th Street.
- Northeast and southeast corners of West 184th Street and Walton Avenue intersection.
- At all four corners of East 188th Street and Creston Avenue intersection.

The purpose of the curb extension is to provide additional waiting space for pedestrians, to shorten the crossing distance for pedestrians, and to reduce the speed of vehicles approaching and turning on school crosswalks. The curb extension will not eliminate or reduce the width of any travel lanes. Curb extensions are not proposed where they would hinder the ability of a vehicle to turn.

It should be noted that the recent improvements at the intersection of Jerome Avenue and West Fordham Road included curb extensions along Jerome Avenue (bus stop neckdowns) that were extended to the elevated column. These improvements also included a curb extension along West Fordham Road (northwest corner). The extended curbs not only provide additional pedestrian space at this very busy intersection, but also reduce the crossing distance across the north and south legs of Jerome Avenue and the west leg of West Fordham Road.

4.3 ADDITIONAL RECOMMENDATIONS FROM PRIORITY SCHOOLS IN THE VICINITY OF P.S. 33

4.3.1 RECOMMENDATIONS FOR M.S. 399 (THE ELIZABETH BARRETT BROWNING SCHOOL):

The following recommendations are proposed as part of the proposed measures to improve school pedestrian safety around nearby M.S. 399, which is also a priority school.

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

Install “NO STANDING 7AM-4PM SCHOOL DAYS” signs for a distance of thirty feet on East 184th Street in front of the main entrance of the school. (This is a typical requirement for all NYC schools in order to provide for emergency access to and from the school.)

➤ Install graphic “YIELD TO PEDESTRIAN” signs

Install “YIELD TO PEDESTRIAN” signs at intersection approaches with substantial vehicle–student pedestrian volumes.

“YIELD TO PEDESTRIAN” signs are recommended on the following approaches of signalized intersections around M.S. 399:

- Eastbound approach of East 184th Street at Creston Avenue
- Northbound approach of Morris Avenue at Field Place

These signs are suggested to improve driver awareness and the visibility and safety of student-pedestrians.

➤ Place advanced stop bars before 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 intersections and mid-block crossings, the vehicle stop line can be moved farther back from the pedestrian crosswalk.

For school crosswalks with significant potential for vehicular / pedestrian conflicts, it is recommended that the advance stop bar be placed ten feet in advance of the crosswalk to maximize the safety benefit for school-aged pedestrians. (This would improve visibility of pedestrians to motorists, and allow pedestrians to proceed in the crosswalk before motor vehicles turn.)

Ten foot advanced stop bars are recommended before all school crosswalks.

➤ Other Traffic Issues

The principal related that parking across the school driveway is often a problem. The principal also reported that drivers often do not stop for students crossing Morris Avenue during fire drills and at dismissal, even with faculty out in the street indicating for them to stop. It is therefore recommended that:

- NYCDOT should consider arranging a meeting with representatives of the local police precinct and school officials in order to discuss this problem and identify corrective actions.

➤ Administer student pedestrian safety education program

There were mid-block accidents reported on West 184th Street between Morris Avenue and Creston Avenue and also on Creston Avenue between East 184th Street and Field Place. It is therefore recommended that:

- The school should participate in the NYCDOT Safety Education Program to educate students to use designated school crosswalks while crossing the street, not to cross mid-block, not to cross against signals, and not to run out between cars.

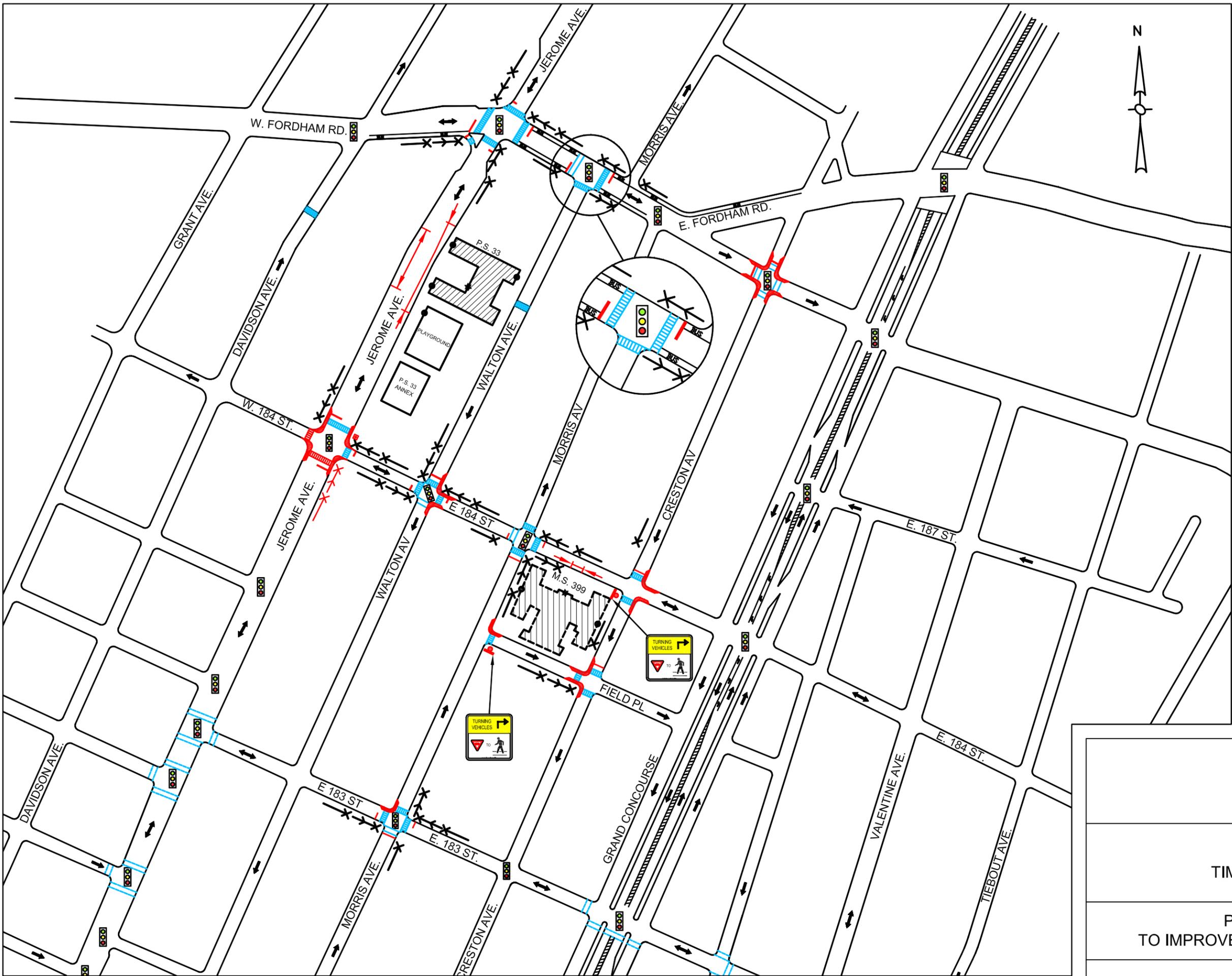
➤ NYCDOT Pilot Program to reduce speeds

- NYCDOT's existing Pilot Program to reduce speeds (20 mph) has been implemented on Morris Avenue from East 183rd Street to East 184th Street. Its effectiveness is being evaluated by the DOT.

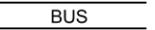
➤ Consider curb extensions at the following locations:

- Northwest corner of East 183rd Street and Morris Avenue intersection.
- Northeast corner of Morris Avenue and Field Place intersection.
- Northeast and southeast corners of Creston Avenue and East 184th Street intersection.
- Northwest and southwest corners of Creston Avenue and Field Place intersection.

The purpose of the curb extension is to provide additional space for pedestrians, to shorten the crossing distance for pedestrians, and to reduce the speed of vehicles approaching and turning on school crosswalks. The curb extension will not eliminate or reduce the width of any travel lanes. Curb extensions are not proposed where they would hinder the ability of a vehicle to turn.



LEGEND

-  MAIN ENTRANCE
-  OTHER ENTRANCES
-  EXISTING TRAVEL DIRECTION
-  EXISTING ADVANCE WARNING SIGN OR SCHEDULED TO BE INSTALLED
-  EXISTING SCHOOL CROSSWALK WARNING ASSEMBLY OR SCHEDULED TO BE INSTALLED
-  EXISTING BUS LANE
-  SIGNALIZED LOCATION
-  EXISTING SCHOOL CROSSWALK
-  EXISTING PEDESTRIAN CROSSWALK
-  EXISTING SCHOOL CROSSWALK ASSOCIATED WITH ANOTHER SCHOOL
-  EXISTING SPEED REDUCER (HUMP)
-  PROPOSED ADVANCE WARNING SIGN
-  PROPOSED SCHOOL CROSSWALK WARNING ASSEMBLY
-  PROPOSED SCHOOL CROSSWALK
-  PROPOSED TRAFFIC SIGN
-  PROPOSED STOP LINE IN ADVANCE OF SCHOOL CROSSWALK
-  PROPOSED "NO STANDING 2 PM - 4 PM SCHOOL DAYS"
-  PROPOSED "NO STANDING 7 AM - 4 PM SCHOOL DAYS"
-  TRAFFIC SIGNAL POLE TO BE RELOCATED
-  PROPOSED CURB EXTENSION (NECKDOWN)



1" = 200'

EXHIBIT 7

P.S. 33 BRONX
TIMOTHY DWIGHT SCHOOL

POTENTIAL MEASURES
TO IMPROVE STUDENT PEDESTRIAN SAFETY

APPENDIX

