

DRAFT

**TRAFFIC/PARKING/
PEDESTRIAN STUDY**

CITY OF RYE PUBLIC SCHOOLS
City of Rye, New York

Prepared for

**CITY OF RYE AND
RYE CITY SCHOOL DISTRICT**

Prepared by

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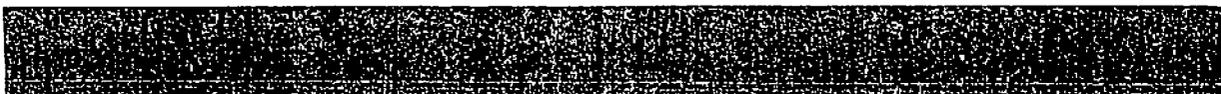


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SECTION 1 - EXECUTIVE SUMMARY

DRAFT

1.0 INTRODUCTION
(Figure No. 1.0.1)

TRC Raymond Keyes Associates (TRC) has been retained by the City of Rye and the Rye City School District to study the existing and future traffic and parking conditions at the five City public schools, including a review of the safety and flow for both pedestrians and vehicles. The flow of traffic and the location/availability of parking have a direct effect on the safety of the children.

The safety of the children is the foremost concern of TRC. This is also the concern of the parents, as well as the Schools and City officials. In recent years, traffic congestion, speeding and other problems in the vicinity of schools have led parents to become even more concerned about the safety of their children. This has resulted in more parents driving their children to/from school, which has further compounded the problem.

To conduct this Study, TRC gathered input from various sources, including, but not limited to, City and School officials, the City Council, the City Planning Commission, the School Board, the Police Department, the Fire Department, the School PTO's, the School Traffic Committees and numerous parents and students. A survey was distributed to the parents of all of the Elementary and Middle School parents through the backpack program. A separate survey was distributed to the High School students. Previous Studies performed for the City and the Schools were reviewed. In addition, significant research was performed on how other municipalities handled their school traffic considerations. Published information from such organizations as the Institute of Transportation Engineers, the Pupil Transportation Safety Institute, Inc., and the National Safety Council, among others were reviewed.

The five (5) schools studied were:

- 1) Midland Elementary School ✓
- 2) Milton Elementary School ✓
- 3) Osborn Elementary School ✓
- 4) Rye Middle School ✓
- 5) Rye High School ✓

Several recommendations are made in this Study. In addition to the recommendations, several other mitigation measures are listed for the School Board and City's review, but are not recommended at this time. The advantages and disadvantages of the recommendations and other mitigation measures are also provided. Essentially every potential improvement will require some form of "give and take", such as loss of green space, funding, or change in operational patterns.

The physical improvements that can be performed at the schools are significantly restrained due to lack of free space. Each of the schools was designed as a neighborhood

school, particularly the elementary schools, for people walking and are confined to a limited space, with little room for additional roadways/parking. Therefore, this Report provides both physical improvements and non-physical improvements. The physical improvements include such things as driveway re-alignment, sidewalk modifications, and additional parking areas. The non-physical improvements include such items as staggered start times, increase in carpooling through education/incentives, and encouragement of walking via programs such as the "walking train" or "walking school bus", in conjunction with the physical improvements discussed above.

Each school has essentially the same general problem, too many vehicles arriving/parking in not enough space. However, each school has different nuances to the problem. The schools were generally designed for a "walking" community. The problems at the schools tend to be a 15-minute problem in the morning, slightly more in the afternoon during pick-up, and are further compounded in bad weather and during special events. The major problem experienced at the Elementary Schools and the Middle School is generally only a 15 - 30 minute problem in the morning and afternoon, as a significant number of cars arrive at each of the schools to drop off/pick up students. There are generally no significant traffic problems experienced at the Elementary Schools and the Middle School during the rest of the day or week. At the High School, the most significant traffic problem is the large number of students desiring to drive and the limited parking areas. There is also a shortage of visitor parking spaces at the High School and Middle School, resulting in cars parking illegally.

With the increase in the ownership of automobiles, more people are driving to school. Also, the size of many cars has increased with the significant influx of minivans and SUV's being used to drive children to school. Parents were observed turning around in residential/private driveways while others were observed blocking driveways/roadways of residents.

The following are the main intersections that have been considered in this Study in relationship to each of the schools.

High School/Middle School

- Middle School Driveway/Presbyterian Church Driveway and Parsons Street;
- High School Driveway/Presbyterian Church Driveway and Parsons Street;
- High School Driveway/Apawamis Avenue and Milton Road;
- Boston Post Road and Parsons Street;
- Milton Road and Parsons Street;
- Milton Road and Presbyterian Church Driveway;
- Milton Road and Resurrection School Entrance Driveway;
- Milton Road and Presbyterian Church Driveway;
- Milton Road and Resurrection School Entrance/Exit Driveway;
- Boston Post Road and Presbyterian Church Exit Driveway;
- Boston Post Road and Resurrection Church Entrance Driveway;
- Boston Post Road and Resurrection Church Exit Driveway.

Midland School

- Midland School Entrance Driveway/Billington Court and Midland Avenue;
- Middle School Exit Driveway/Rye Recreation Exit Drive and Midland Avenue;
- Rye Recreation Entrance Drive/Administration Building Driveway and Midland Avenue;
- Midland Avenue and Platt Lane/Greenacres Drive.

Milton School

- Milton Road and Hewlett Avenue;
- School Access Entrance Drive and Hewlett Avenue;
- Hewlett Avenue and Robert Crisfield Place;
- School Parking Lot/School Access Exit Drive and Hewlett Avenue;
- Forest Avenue and Hewlett Avenue;
- Fairway Avenue and Hewlett Avenue.

Osborn School

- Osborn School Entrance Driveway and Osborn Road;
- Osborn School Exit Driveway and Osborn Road;
- Osborn School Driveway/Sonn Drive and Boston Post Road School;
- Boston Post Road and Eldredge Place;
- Boston Post Road and Osborn Road/Oakland Beach Avenue;
- Osborn Road and Coolidge Avenue/Theall Road.

In addition to the above intersections, additional outlying key intersections, such as the intersection of Midland Avenue and Apawamis Avenue, were also observed.

1.1 FINDINGS

Based upon field observations, survey questionnaires, public discussions, and the detailed analysis undertaken during the preparation of this Traffic Study, the following findings are presented:

- While each school has the same general traffic/parking problem, too many cars arriving and not enough room for parking, each school has a different need.
- A significant number of children are being driven to/from the Elementary Schools, even from short distances.
- A significant number of the High School students are now driving to school, even from a very short distance. These drivers include sophomores, juniors and seniors. Due to the construction at the High School, there is currently no student parking on the High School grounds.

- During pick up time, some parents need to circulate around the parking lot onto the main street then turn into the driveway again since their child was not ready to be picked up.
- The parking on-street has a positive effect of traffic calming, slowing down traffic. However, it also narrows travel lanes, creates possible hazards for pedestrians cutting between cars and disturbs residents.
- Some parents, mainly parents of Elementary School students, have asked about the possibility of bringing back buses.
- In general, mainly positive comments were received from the parents regarding the crossing guards.
- The majority of sidewalks were in acceptable condition. Some needed to be repaired, while others should have vegetation cleared from them.
- The City and the School Board should attempt to re-open the pedestrian trail from the Synagogue to Midland School as well as maintain the pedestrian trail from Eve Lane.
- Certain intersections operate at poor levels of service during the peak pick up/drop off times, but generally operate at good levels of service the rest of the day.
- Middle School and High School parents have requested more visitor parking spaces to attend conferences/meetings or to perform volunteer activities.
- Student populations are projected to increase approximately 20% in the next 10 years. With the increase in students, there will also be an increase in staff and further demands on traffic and parking.
- Several recommendations have been made for each school. These recommendations are a combination of both physical (i.e., additional parking) and non-physical (pattern behavior) methods to reduce traffic and parking strains and increase safety for pedestrians as well as for drivers.

1.2 RECOMMENDATIONS

Based upon the field observations, data collected, and detailed traffic analysis contained in this Study, several recommendations are offered to improve the traffic flow, parking and safety at each of the schools, which are all interrelated. These recommendations are contained in Section 6 of this Study. Some recommendations can be utilized for each school while other recommendations are more school specific. The recommendations are a combination of both physical and non-physical methods and are based on three principles, Education, Engineering, and Enforcement. There are several alternatives to some of the improvements for the City Council and the School Board to decide upon. Each alternative has its advantages and disadvantages, and these are described. Staggered start times is a major, recommendation to reduce congestion.

1.3 CONCLUSIONS

It is the considered professional opinion of TRC Raymond Keyes Associates that with the recommendations discussed herein, safe and efficient operating conditions can be provided/maintained for pedestrian, bicycle and vehicular traffic destined to/from each of the schools, as well as non-school related traffic. There should be continuous communication/coordination between the schools (including the School Principals, the School Traffic Committees and the PTO's), the City, and the Police Department, as well as receiving input from commissions such as the City Planning Commission and the City Traffic and Transportation Committee.

SECTION 2 - TRAFFIC CONDITIONS AND PROJECTIONS

2.0 DESCRIPTION OF SCHOOLS

The following is a brief description of each of the schools. Specific details for each of the schools are incorporated into future sections, such as number of students (Section 2.4) and parking (Section 4.0). Aerial photographs of each of these schools are illustrated on Figures No.2.0.1 through 2.0.4.

Midland School – Midland School consists of approximately 8.9 acres and is located along the east side of Midland Avenue in the vicinity of the Rye Recreation Center. A semi-circular loop roadway provides access to the front of the school. A second access is located to the north of the semi-circular driveway, providing access to the Board of Education Administration Building and the staff parking lot in the rear of the building. There are two pedestrian trails in the back of Midland School, one from Eve Lane and one from the Synagogue (this trail was closed a few years ago). Midland School currently has approximately 568 students and 75 staff.

Milton School – Milton School consists of approximately 5.6 acres and is located along Hewlett Avenue. Hewlett Avenue becomes a one-way roadway during the school's pick-up and drop-off times. A fire lane forms a semi-circular driveway in front of the school. Staff parking is provided in a lot southeast of the school building. Milton School currently has approximately 299 students and 45 staff.

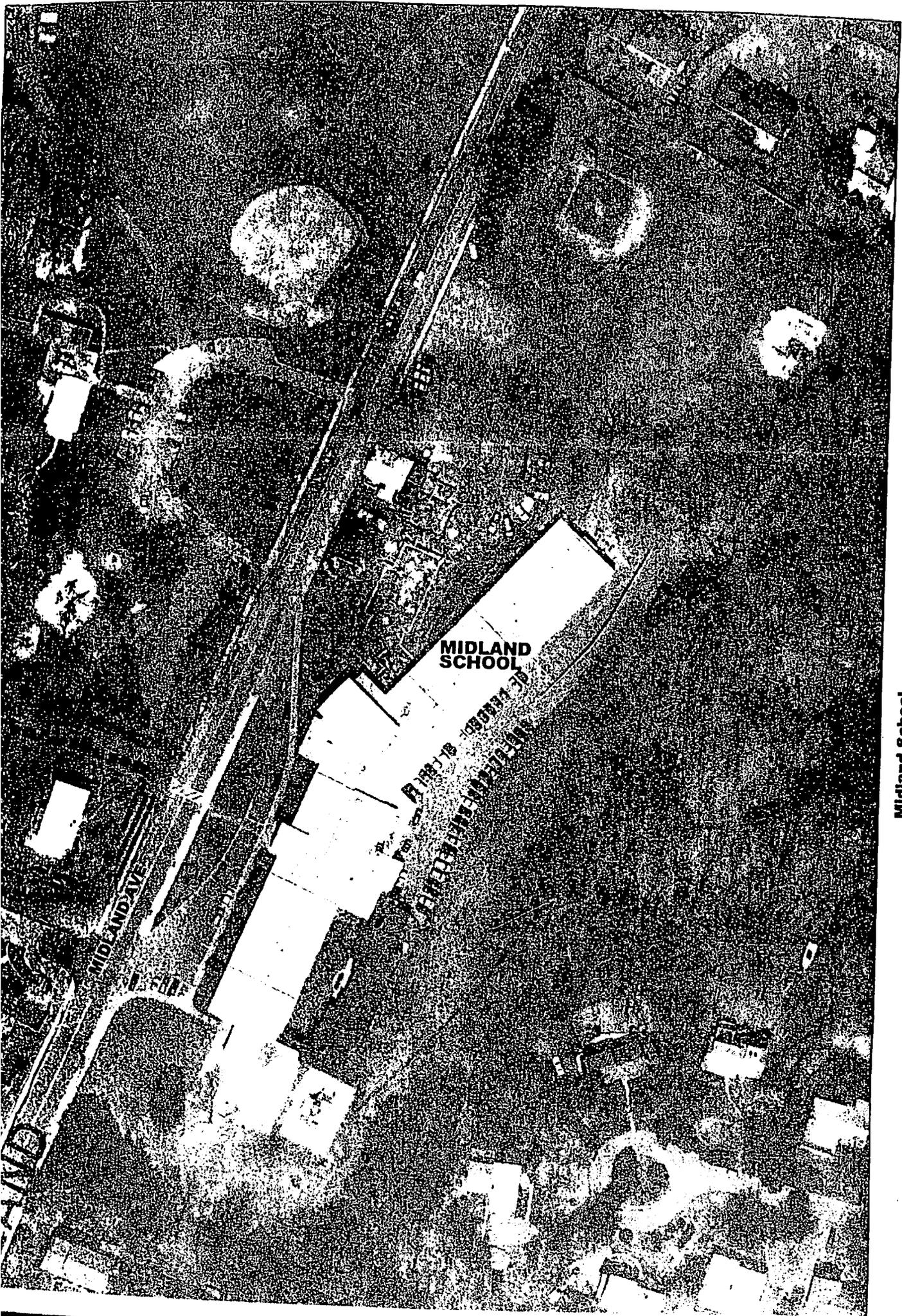
Osborn School – Osborn School consists of approximately 1011 acres and is located along Osborn Road. A semi-circular driveway travels through a parking lot in front of the school. A second access is provided along Boston Post Road. Grades K-2 drop-off/pick-up in the front lot, while grades 3-5 drop-off/pick-up through the rear driveway. Osborn School has approximately 462 students and 73 staff.

Rye Middle School – Rye Middle School is located along Parsons Street. One access point provides access to a circular driveway through the parking lot. A morning drop off zone is located along Parsons Street. The Middle School currently has approximately 563 students and 70 staff.

Rye High School – Rye High School is also located along Parsons Street, and is connected to the Middle School. An access to the parking lot is provided along Parsons Street. A second access, an exit only driveway, is located along Milton Road. The High School has approximately 558 students and 155 total staff.

2.1 DESCRIPTION OF ROADWAY NETWORK

The following are brief descriptions of the roadways in the vicinity of each of the schools. All of the roadways are under the jurisdiction of the City of Rye and have a speed limit of 30 mph, except as noted.



Midland School

Figure No. 2.0-1

MIDLAND SCHOOL

Midland Avenue – Midland Avenue is a main connector road that traverses north/south and consists of one wide lane in each direction. This roadway, south of the Apawamis Avenue is very wide. Midland Avenue is currently under the jurisdiction of Westchester County. However, the City of Rye is looking to take over the jurisdiction of Midland Avenue from the County. The posted speed limit is generally 30 mph, however, flashing beacons highlight that the speed is reduced to 20 mph during peak school times in the vicinity of Midland School. Parking is permitted on various sections of Midland Avenue. Sidewalks are located on both sides of Midland Avenue.

Billington Court – Billington Court is a dead-end cul-de-sac road that traverses east/west and consists of one lane in each direction. Billington Court aligns opposite the entrance to the front circle of Midland School. Some parents utilize Billington Court as a pick up area for Midland School. Parking is prohibited on one side of Billington Court during pick up/drop off times. There is no sidewalk on Billington Court.

Platt Lane – Platt Lane is a dead-end residential road that traverses east/west and consists of one lane in each direction. Some parents utilize Platt Lane as a pick up area for Midland School. No sidewalks are provided on Platt Lane.

Greenacres Drive – Greenacres Drive traverses east/west and is a private, narrow roadway. Greenacres Drive intersects Midland Avenue opposite Platt Lane.

MILTON SCHOOL

Milton Road – Milton Road is a main connector road that traverses north/south and consists of one lane in each direction. Milton Road is under the jurisdiction of the City of Rye. The posted speed limit is generally 30 mph, however, flashing beacons highlight that the speed is reduced to 20 mph during peak school times in certain areas. Parking is permitted on limited various sections of Milton Road such as on the northbound side in front of the stores just north of Hewlett Avenue and on the southbound side north of Parsons Street. Sidewalks are provided on the southbound side and in some limited areas on the northbound side.

Hewlett Avenue – Hewlett Avenue traverses east/west and is one lane per direction. Hewlett Avenue extends from Milton Road to Forest Avenue. During school drop-off/pick-up hours, Hewlett Avenue is one-way in the eastbound direction from Milton Road to Fairway Avenue. Sidewalks are provided on both sides of Hewlett Avenue.

Robert Crisfield Place – Robert Crisfield Place is a dead-end road that traverses east/west and is one lane per direction. Parents utilize Robert Crisfield Place to pick up students from Milton School. There are no sidewalks on Robert Crisfield Place.

Fairway Avenue – Fairway Avenue traverses north/south and is one lane per direction. Fairway Avenue extends from Hewlett Avenue to Overhill Avenue. Some parents utilize

Fairway Avenue to pick up students from Milton School. There are no sidewalks on Fairway Avenue.

Forest Avenue – Forest Avenue traverses north/south and is one lane per direction. Forest Avenue extends from Van Wagenen Avenue to Grace Church Street. Some areas of Forest Avenue, mainly in the vicinity of Rye Town Park and Playland, have sidewalks. However, there are no sidewalks in other areas such as in the vicinity of Eve Lane and in some areas near Hewlett Avenue.

OSBORN SCHOOL

Osborn Road – Osborn Road traverses east/west and is one lane per direction. Particularly during dismissal time, parents park along Osborn Road to pick up students. Osborn Road is a main link to/from Harrison, including the Harrison Train Station. There is a sidewalk on the westbound side of Osborn Road.

Boston Post Road – Boston Post Road, also known as Route 1, traverses north/south through the City of Rye. In the vicinity of Osborn School, Boston Post Road is two lanes per direction. In the vicinity of the High School, Boston Post Road consists of one lane per direction (with parking on the northbound side) north of Parsons Street, and one lane in the northbound direction and two lanes in the southbound direction for a portion south of Parsons Street. In the vicinity of Osborn School, sidewalks are provided on both sides of the Boston Post Road although the walking area has been narrowed due to excessive vegetation growth. In the vicinity of the High School, sidewalks are only provided on the northbound side.

Eldredge Place – Eldredge Place is a dead-end residential road that traverses east/west and is one lane per direction. There are no sidewalks on Eldredge Place.

Oakland Beach Avenue – Oakland Beach Avenue traverses east/west and is one lane per direction. Oakland Beach Avenue extends from Forest Avenue to the Boston Post Road, intersecting the Boston Post Road opposite Osborn Road at a signalized intersection. There are sidewalks on both sides of Oakland Beach Avenue.

Coolidge Avenue – Coolidge Avenue traverses north/south and is one lane per direction. Coolidge Avenue serves the Glen Oaks area and intersects Osborn Road at an unsignalized intersection. There are sidewalks on Coolidge Avenue.

Theall Road – Theall Road traverses north/south and is one lane per direction. Theall Road serves various commercial/residential properties including various offices and senior residences. Theall Road extends from Osborn Road to Playland Access Drive. There is a sidewalk on a limited part of Theall Road.

Sonn Drive – Sonn Drive traverses east/west and is one lane per direction. Sonn Drive serves the residences in the Rye Gardens area and intersects Boston Post Road in the vicinity of the rear driveway for Osborn School. Sonn Drive widens as it reaches Boston Post Road. There are no sidewalks on Sonn Drive.

RYE HIGH SCHOOL/RYE MIDDLE SCHOOL

Parsons Street – Parsons Street traverses east/west and is one lane per direction. Parsons Street connects the Boston Post Road with Milton Road and provides access to both the Middle School and the High School as well as to the Presbyterian Church. Parking and drop off zones exist on Parsons Street. Sidewalks are provided on the north side and a portion along the south side (from Boston Post Road). The sidewalk along the Presbyterian Church property is in need of repair in some places.

Boston Post Road – See description above for Osborn School.

Milton Road – See description above for Milton School.

Apawamis Avenue – Apawamis Avenue traverses east/west and is one lane per direction. Apawamis Avenue connects Milton Road with Forest Avenue. Some student parking for the High School occurs on the eastbound side of Apawamis Avenue. Sidewalks are provided on both sides of Apawamis. East of Midland Avenue, some vegetation should be cleared to provide a more useful sidewalk.

2.2 FIELD OBSERVATIONS AND EXISTING TRAFFIC VOLUMES
(Figure No. 2.2.1)

Representatives of TRC conducted field observations and manual traffic counts at each of the school driveways and key intersections on typical school days in May at the following locations in the vicinity of each of the schools.

MIDLAND SCHOOL

- Midland School Entrance Driveway/Billington Court and Midland Avenue;
- Midland School Exit Driveway/Rye Recreation Exit Drive and Midland Avenue;
- Rye Recreation Entrance Drive/Administration Building Driveway and Midland Avenue; and
- Midland Avenue and Platt Lane/Greenacres Drive.

MILTON SCHOOL

- Milton Road and Hewlett Avenue;
- School Access Entrance Drive and Hewlett Avenue;
- Hewlett Avenue and Robert Crisfield Place
- School Parking Lot/School Access Exit Drive and Hewlett Avenue
- Fairway Avenue and Hewlett Avenue; and,
- Forest Avenue and Hewlett Avenue.

OSBORN SCHOOL

- Osborn School Entrance Driveway and Osborn Road;
- Osborn School Exit Driveway and Osborn Road;
- Osborn School Driveway/Sonn Drive and Boston Post Road;
- Boston Post Road and Eldredge Place;
- Boston Post Road at Osborn Road/Oakland Beach Avenue; and,
- Osborn Road and Coolidge Avenue/Theall Road.

RYE HIGH SCHOOL/MIDDLE SCHOOL

- Middle School Driveway/Presbyterian Church Driveway and Parsons Street;
- High School Driveway/Presbyterian Church Driveway and Parsons Street;
- High School Driveway/Apawamis Avenue and Milton Road;
- Milton Road and Parsons Street;
- Boston Post Road and Parsons Street;
- Milton Road and Presbyterian Church Driveway;
- Milton Road and Resurrection School Entrance Driveway;
- Milton Road and Resurrection School Entrance/Exit Driveway;
- Boston Post Road and Presbyterian Church Exit Driveway;
- Boston Post Road and Resurrection Church Entrance Driveway; and,
- Boston Post Road and Resurrection Church Exit Driveway.

The counts were scheduled to not conflict with any special events such as field trips at any of the schools. Additional observations were also performed on various days at each of the schools, including on some rainy days and during special events to understand the variations in traffic patterns. Observations were also performed at additional outlying intersections such as the intersection of Midland Avenue and Apawamis Avenue as well as the intersection of Forest Avenue and Eve Lane, among others.

A careful review of the turning movement counts at the locations for each of the elementary schools identified the following representative Peak Hours of traffic flow for each of the elementary schools:

Peak AM Hour -	7:45 to 8:45 AM (Midland & Osborn)
	8:00 to 9:00 AM (Milton)
Peak PM Hour -	2:45 to 3:45 PM (all three schools)

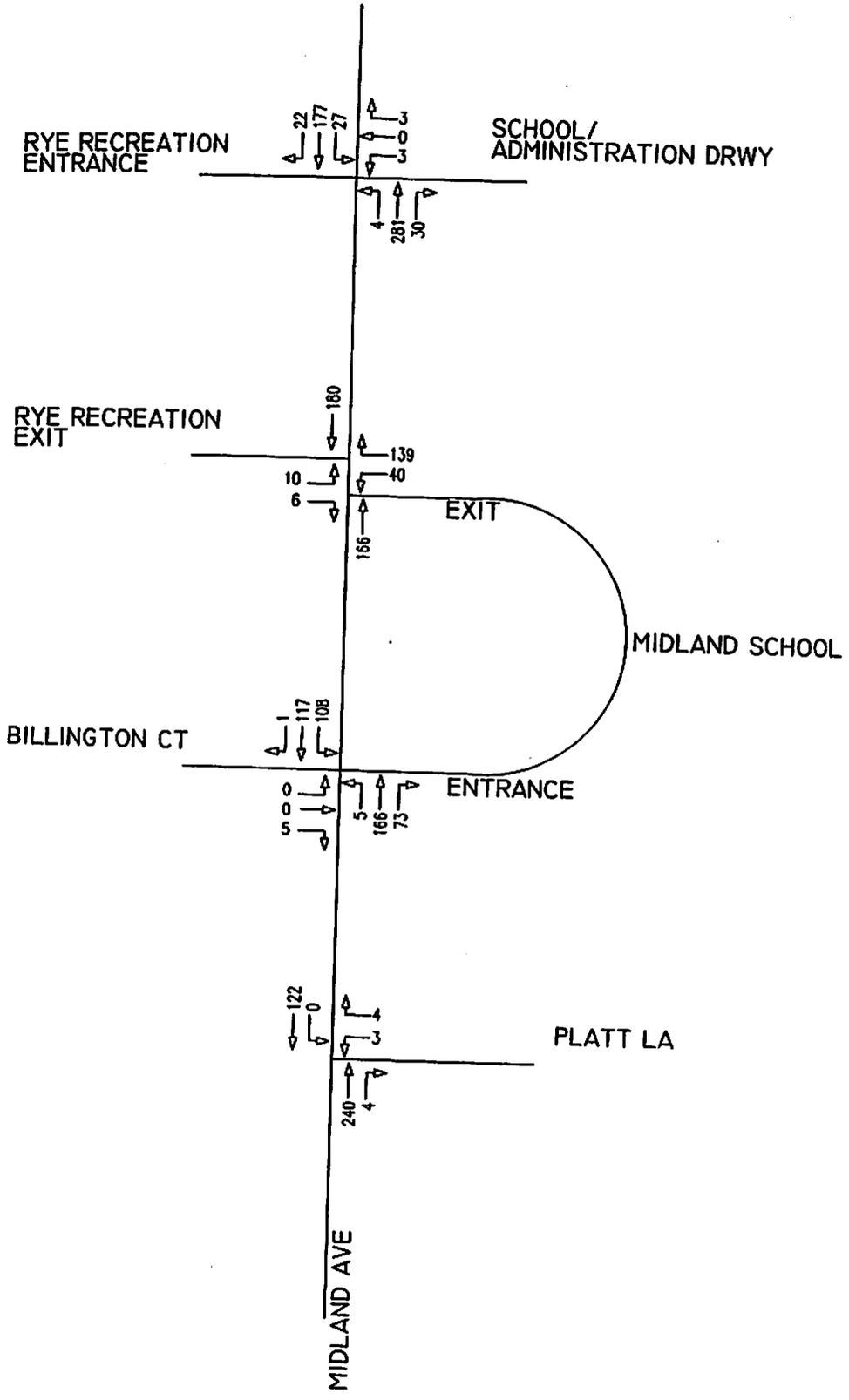
For the High School/Middle School, the representative Peak Hours are:

Peak AM Hour -	7:30 to 8:30 AM
Peak PM Hour -	2:30 to 3:30 PM

The existing Peak AM Hour and Peak PM Hour traffic volumes for each of the schools are shown on Figures No. 2.2.1 through 2.2.8.



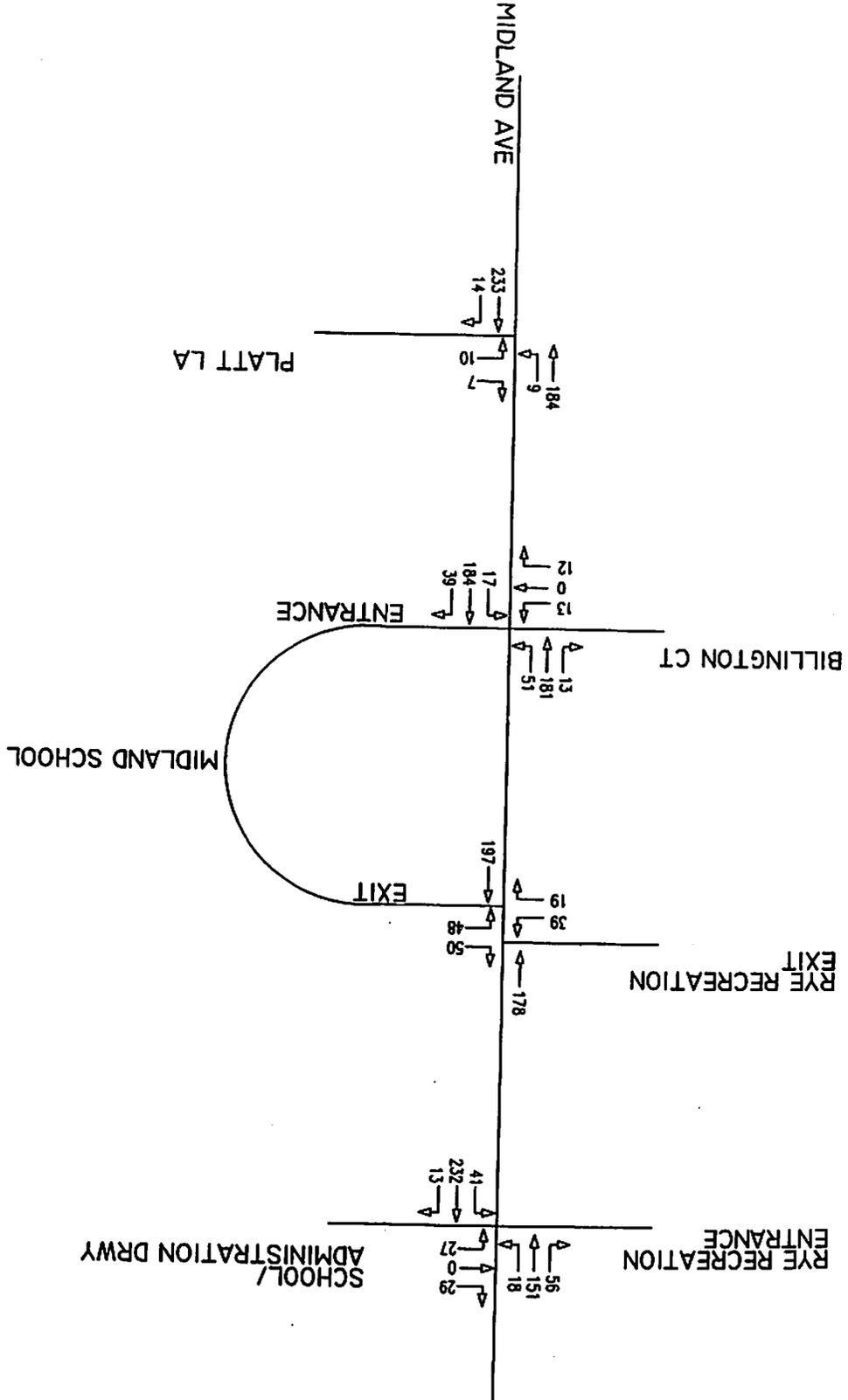
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2000 EXISTING AM TRAFFIC VOLUMES
RYE, NY

JOB NO. 28572
FIGURE NO. 2.2.1

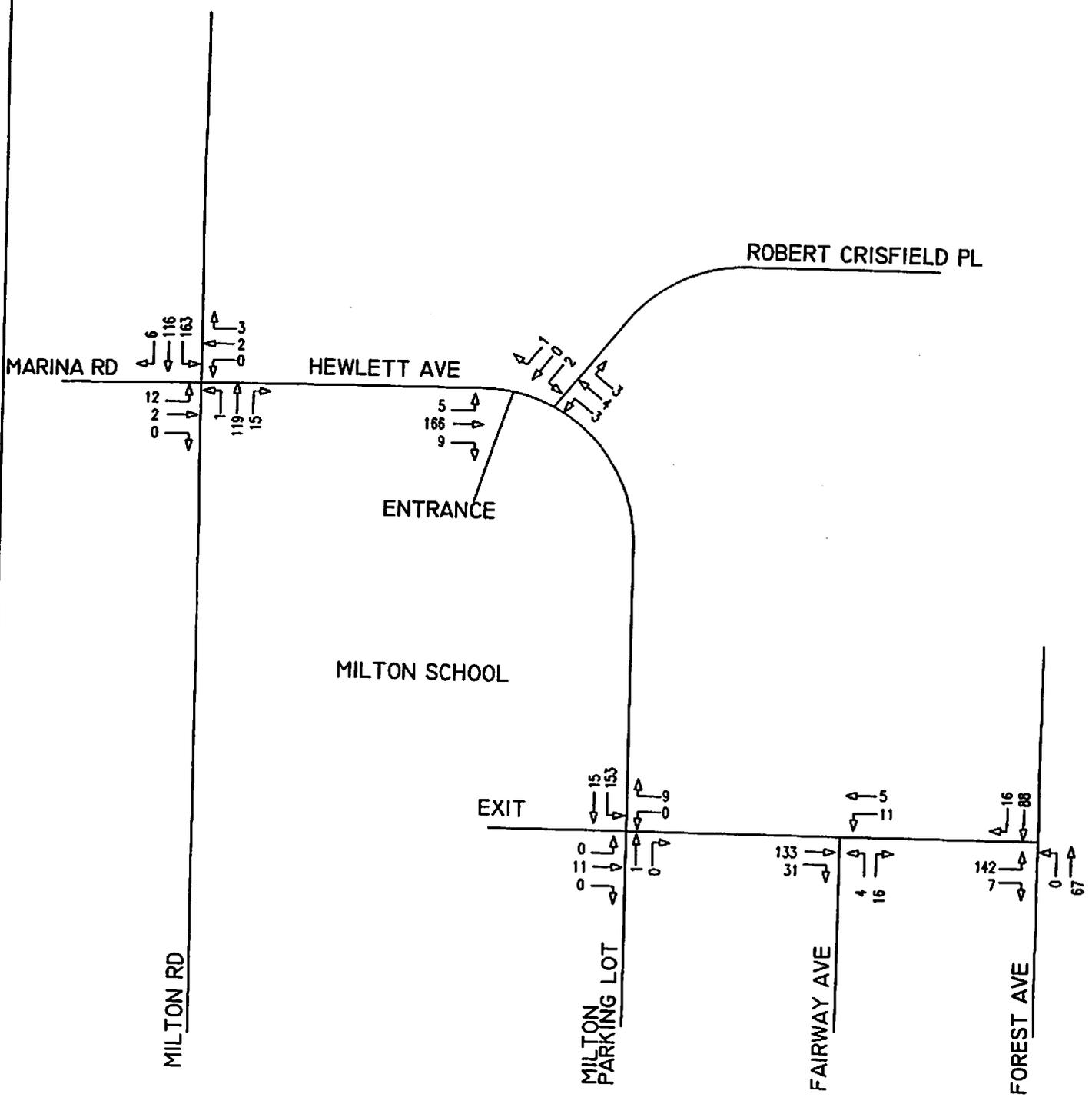


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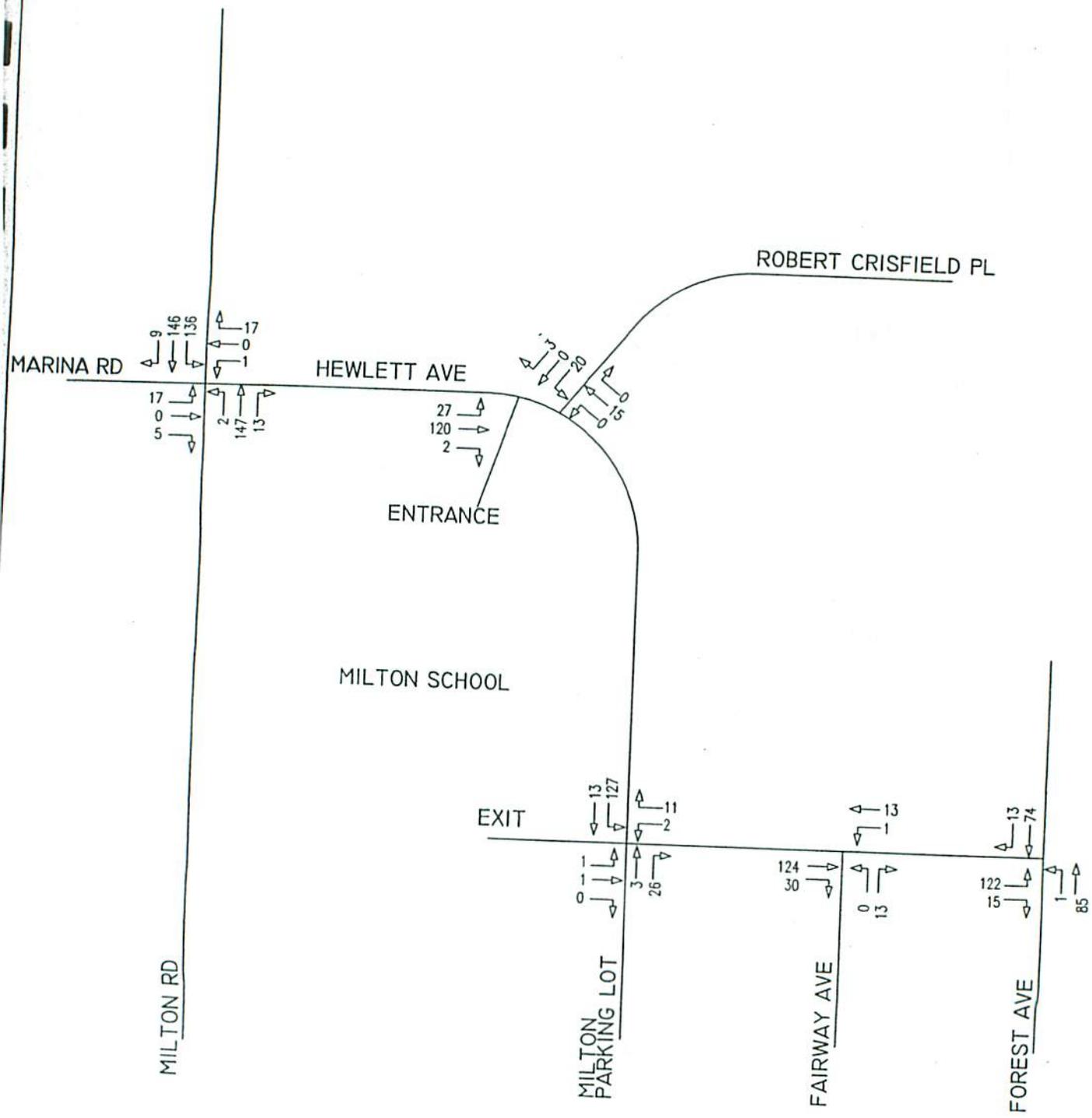
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2000 EXISTING AM TRAFFIC VOLUMES
RYE, NY

JOB NO. 28572
FIGURE NO. 2.2.3



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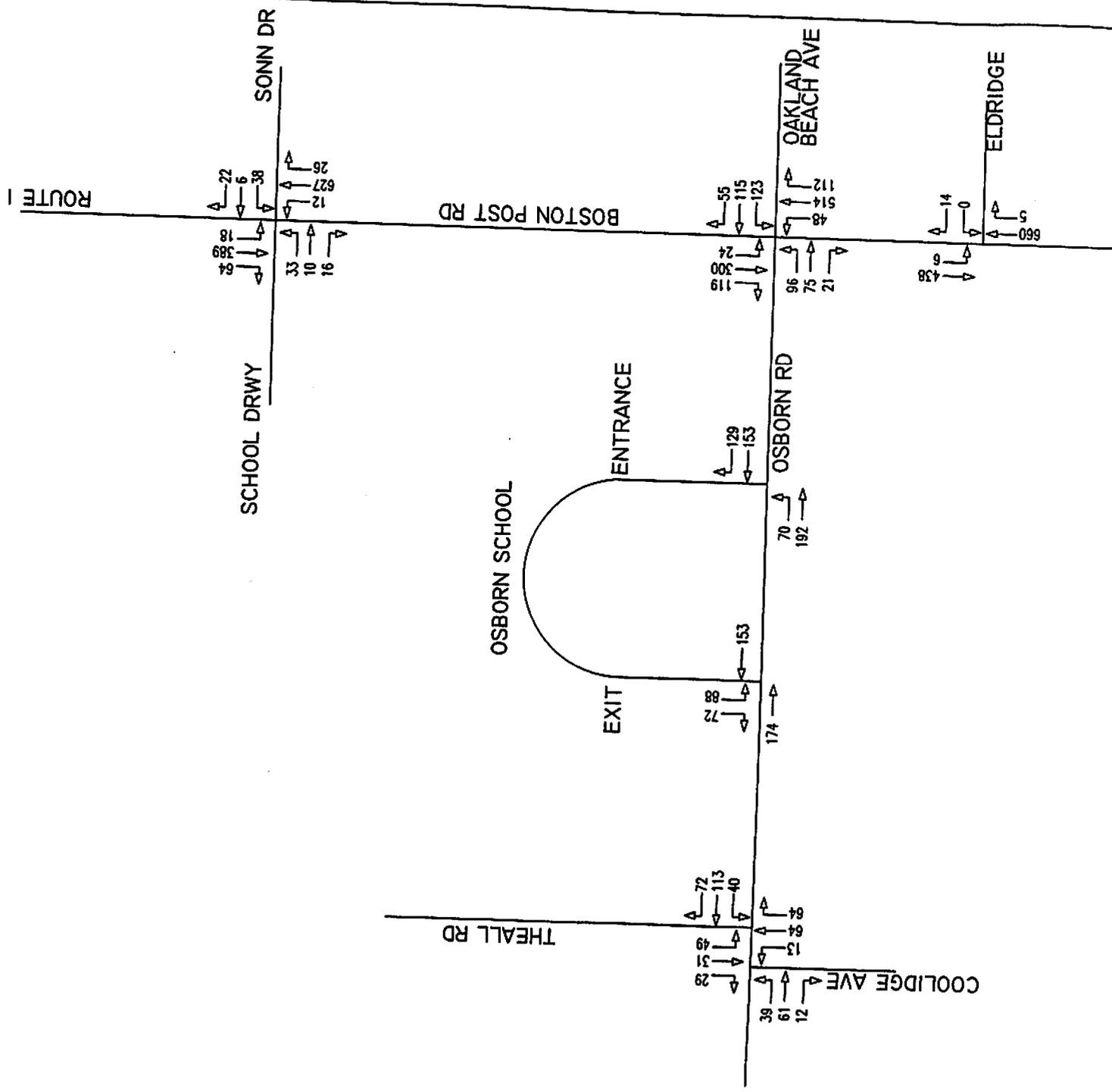
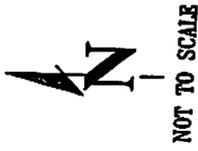
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2000 EXISTING PM TRAFFIC VOLUMES

RYE, NY

JOB NO. 28572

FIGURE NO 224



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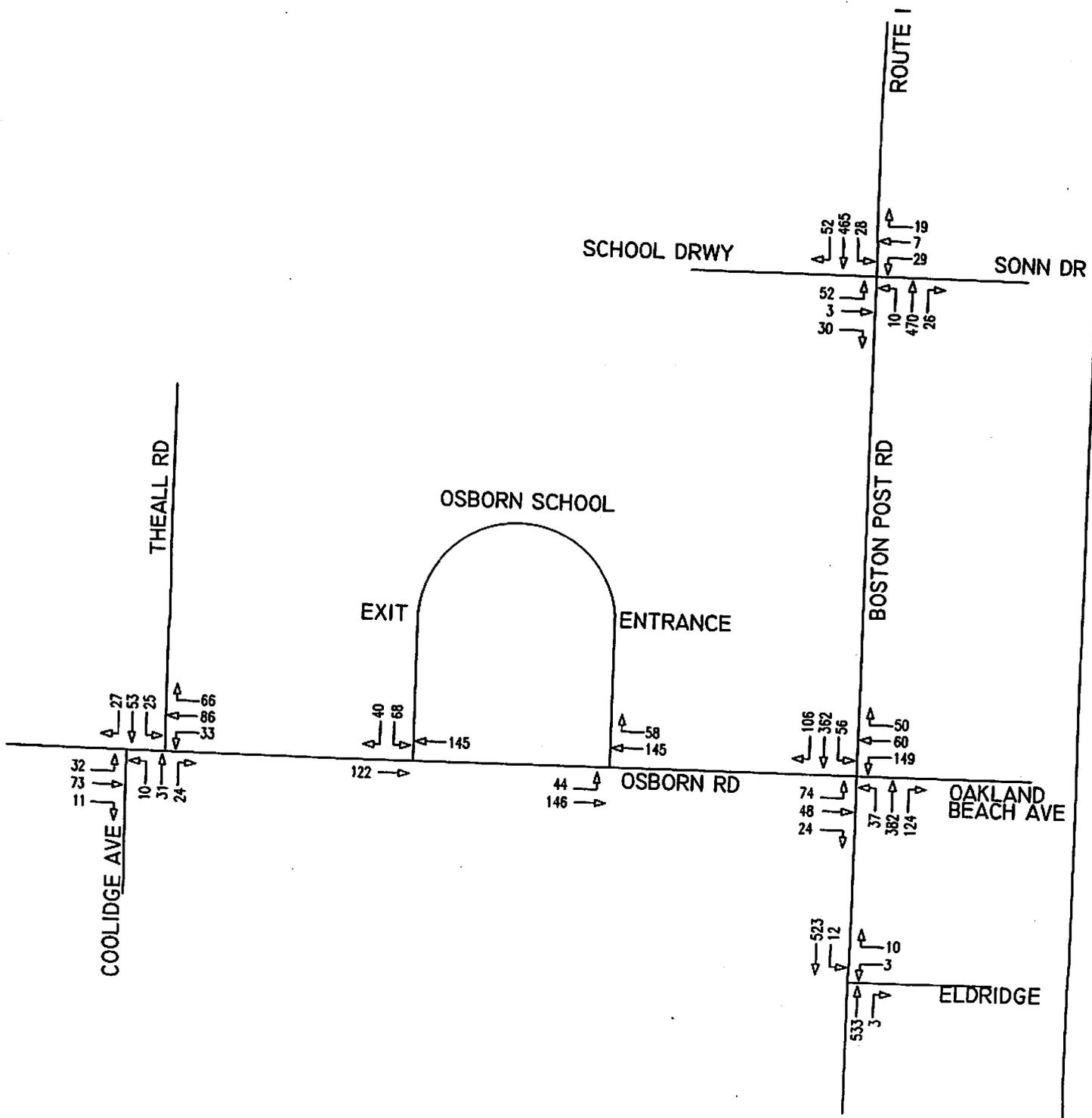
2000 EXISTING AM TRAFFIC VOLUMES
 RYE, NY

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FIGURE NO. 2.2.5



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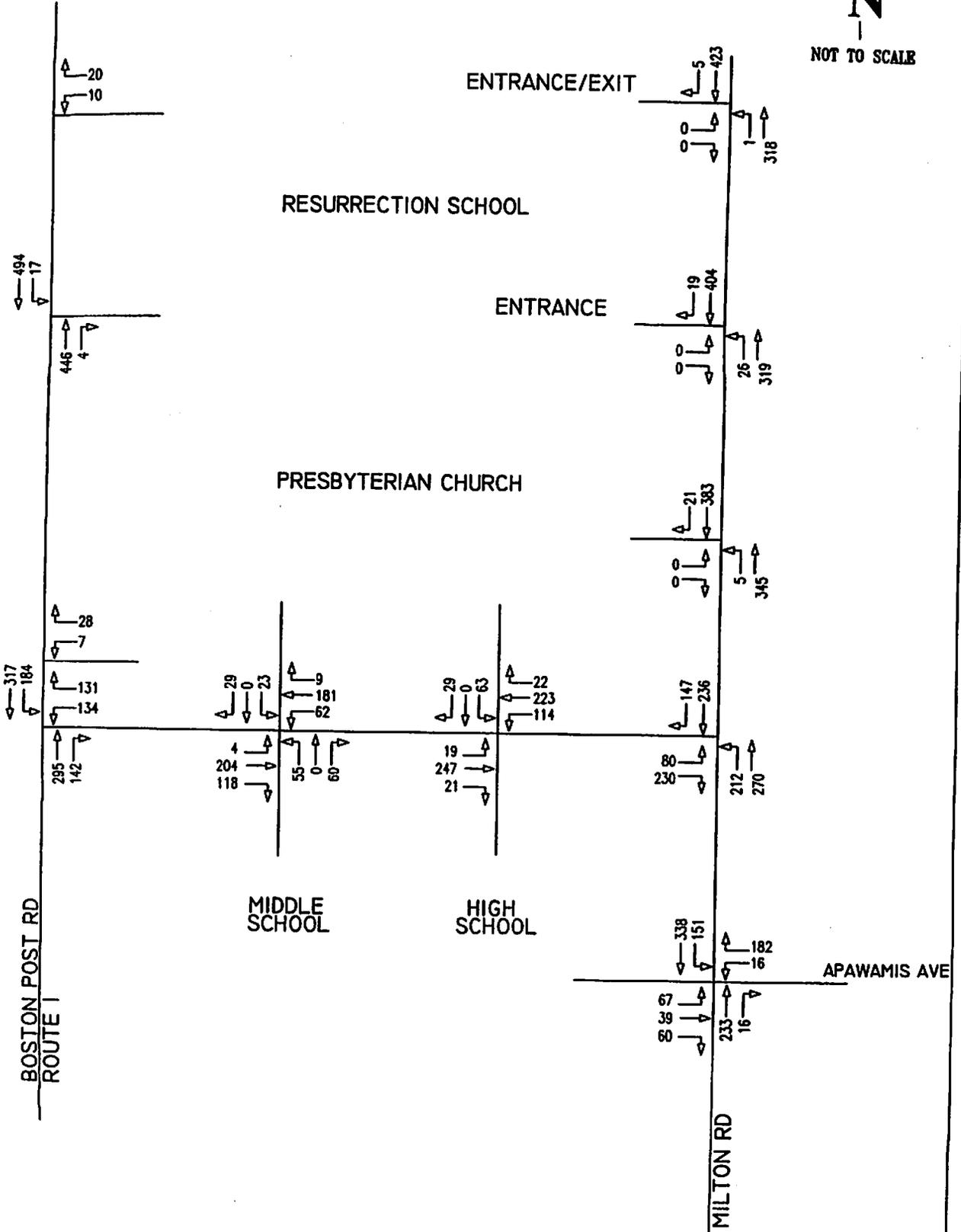
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2000 EXISTING PM TRAFFIC VOLUMES
 RYE, NY

JOB NO. 28572
 FIGURE NO. 2.2.6



NOT TO SCALE



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2000 EXISTING PM TRAFFIC VOLUMES

RYE, NY

JOB NO. 28572

FIGURE NO. 2.2.8

2.3 VEHICLE OCCUPANCY SURVEYS

Vehicle Occupancy Surveys were conducted to determine the number of students per car at each of the elementary schools during the drop off and pick up periods. The following table summarizes the number of students that got out of or into each car. A sampling of cars, but not every car, was observed.

TABLE NO. 2.3.1 VEHICLE OCCUPANCY OBSERVATION SUMMARY						
	AM DROP-OFF PERIOD			PM PICK-UP PERIOD		
	Vehicles Surveyed	Students	Students/ Vehicle	Vehicles Surveyed	Students	Students/ Vehicle
Midland School	123	169	1.37	42	47	1.12
Milton School	96	143	1.49	60	87	1.45
Osborn School						
Front Lot	140	195	1.39	86	159	1.85
Rear Lot	67	87	1.30	33	42	1.27

As illustrated in the above table, each car averaged 1.44 students per car. Thus, when accounting for siblings, there were very few people carpooling. At Midland School, 42 cars that were observed accounted for only 47 children. Thus, only 4 of 42 cars had more than one student (one car had 3 students). Therefore, if carpooling was performed, there could be a significant reduction in the number of vehicles at the schools.

2.4 EXISTING AND FUTURE STUDENT POPULATION

Based upon the 1999 - 2000 Enrollment Update, Rye City School District, Enrollment Projections 2000-2010 by Bishop Associates, dated October 1999, there are approximately 2,450 students in the Rye City School District, 1,329 of which are in the Elementary Schools (Grades K - 5). The following table illustrates the approximate Existing Student Populations:

TABLE NO. 2.4.1 APPROXIMATE EXISTING STUDENT POPULATIONS	
School	APPROX. EXISTING NUMBER OF STUDENTS SCHOOL YEAR 1999-2000 ⁽¹⁾
Midland School	568
Milton School	299
Osborn School	462
Total Elementary School Students	1,329
Rye Middle School	563
Rye High School	558
TOTAL STUDENTS	2,450

(1) Includes Special Education Students.

Source: 1999 - 00 Enrollment Update, Rye City School District, Enrollment Projections 2000-2010 by Bishop Associates, dated October 1999.

Since School Year 1994 – 1995, enrollment has increased a total of 422 students, an average of 84 additional students each year.

The “Average” forecast to project the future number of students utilized a 2.5% per year increase in students over the next five years and a 1.2% per year increase over the following five years. Table No. 2.4.2 summarizes the approximate total student populations for each of the schools for the School Year 2009 – 2010.

TABLE NO. 2.4.2 APPROXIMATE PROJECTED STUDENT POPULATIONS	
School	Approx. Projected Number of Students School Year 2009-2010⁽¹⁾
Midland School	611
Milton School	335
Osborn School	534
Total Elementary School Students	1,480
Rye Middle School	691
Rye High School	769
TOTAL STUDENTS	2,940

(1) Includes Special Education Students.

Source: 1999 – 00 Enrollment Update, Rye City School District, Enrollment Projections 2000-2010 by Bishop Associates, dated October 1999.

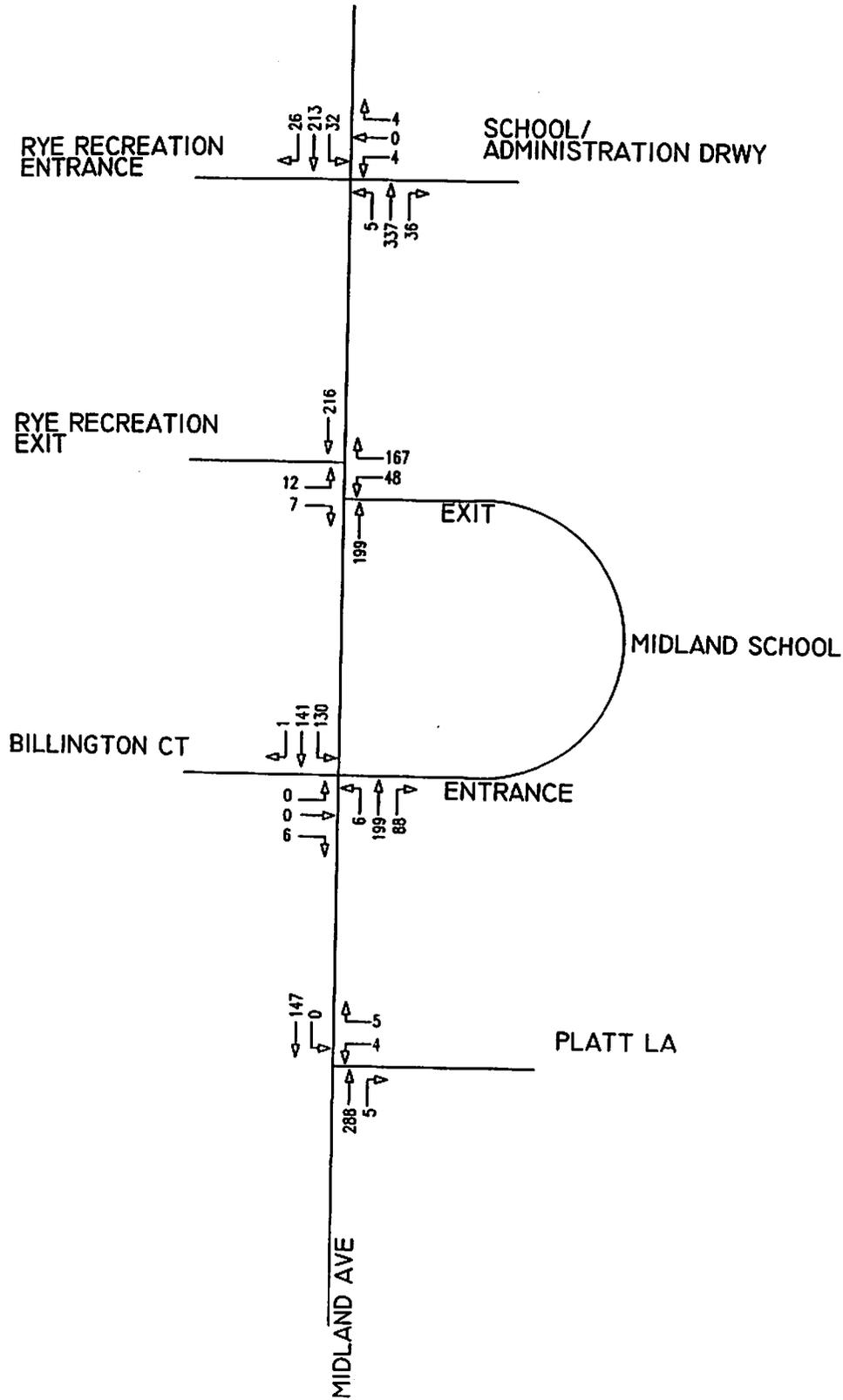
The projected enrollment for School Year 2009 – 2010 is approximately 2,940 students based upon the “Average” forecast. The projected increase in students is less than the increase over the past five years. The “Low” forecast was 2,743 students and the “High” forecast was 3,279 students.

The City’s 1985 Development Plan listed a peak school population of approximately 3100 in 1972. Midland Annex also existed at that time.

The projected Year 2010 Traffic Volumes are illustrated on Figures No. 2.4.1 through 2.4.8. To be conservative, all traffic was increased by approximately 20% over existing traffic volumes.

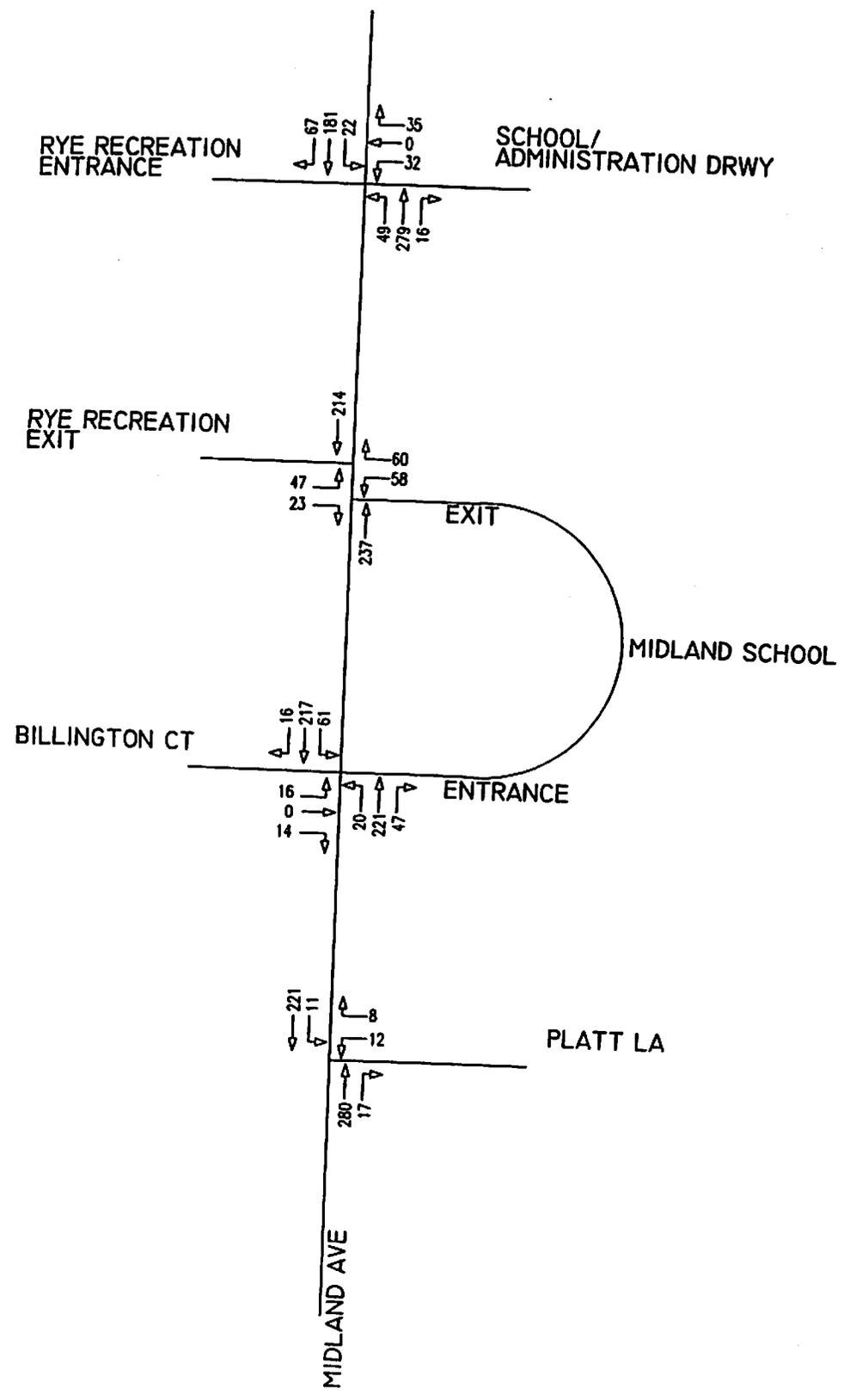
2.5 STAFF LEVELS AT SCHOOLS

The following table summarizes the existing staff levels at each of the schools, including teachers, administration, and custodial staff, etc. with the increase in the number of students, the number of staff will also rise.





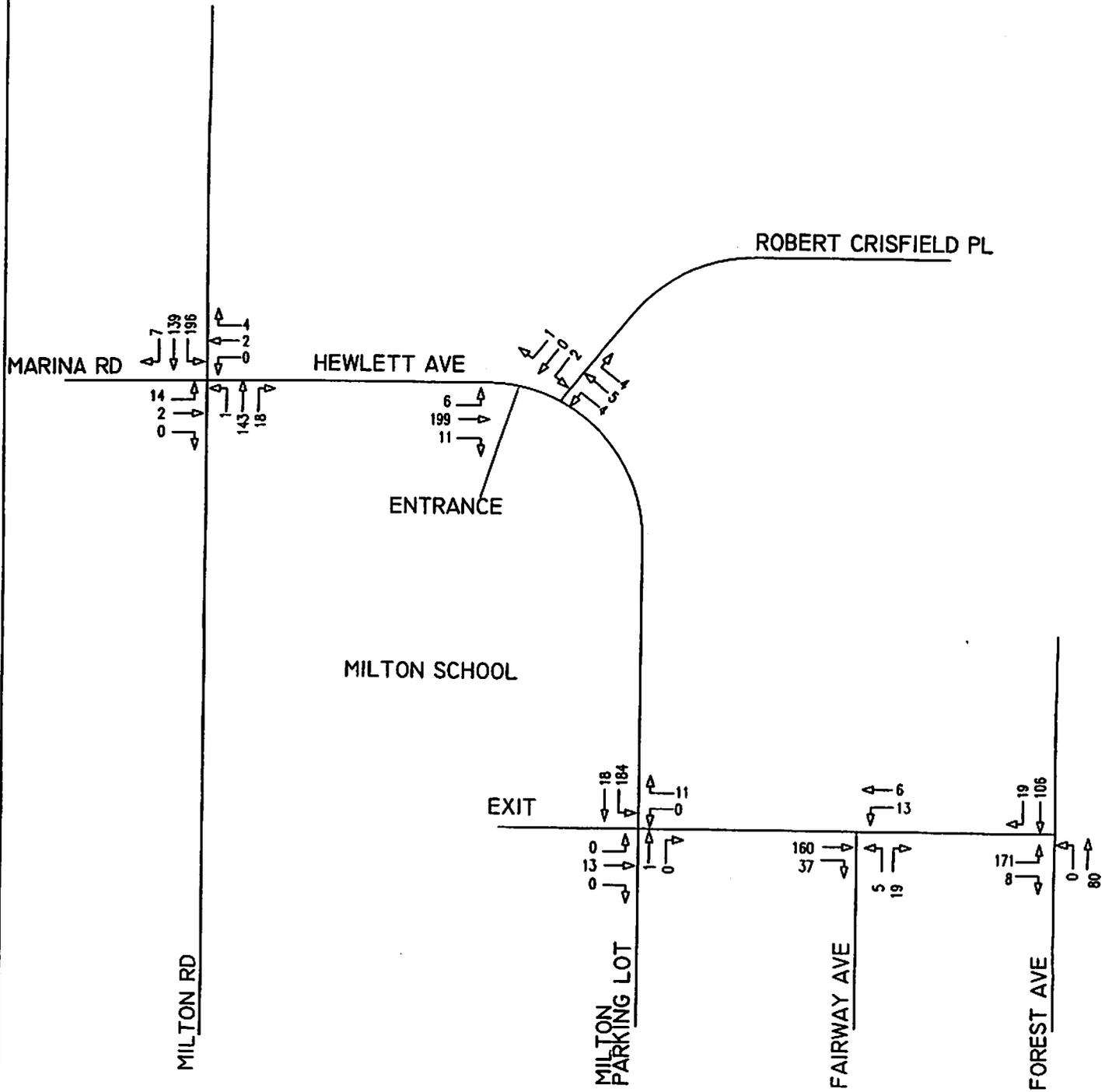
NOT TO SCALE



TRC Raymond Keyes Associates
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2010 PEAK PM TRAFFIC VOLUMES
RYE, NY

JOB NO. 28572
FIGURE NO. 2.4.2



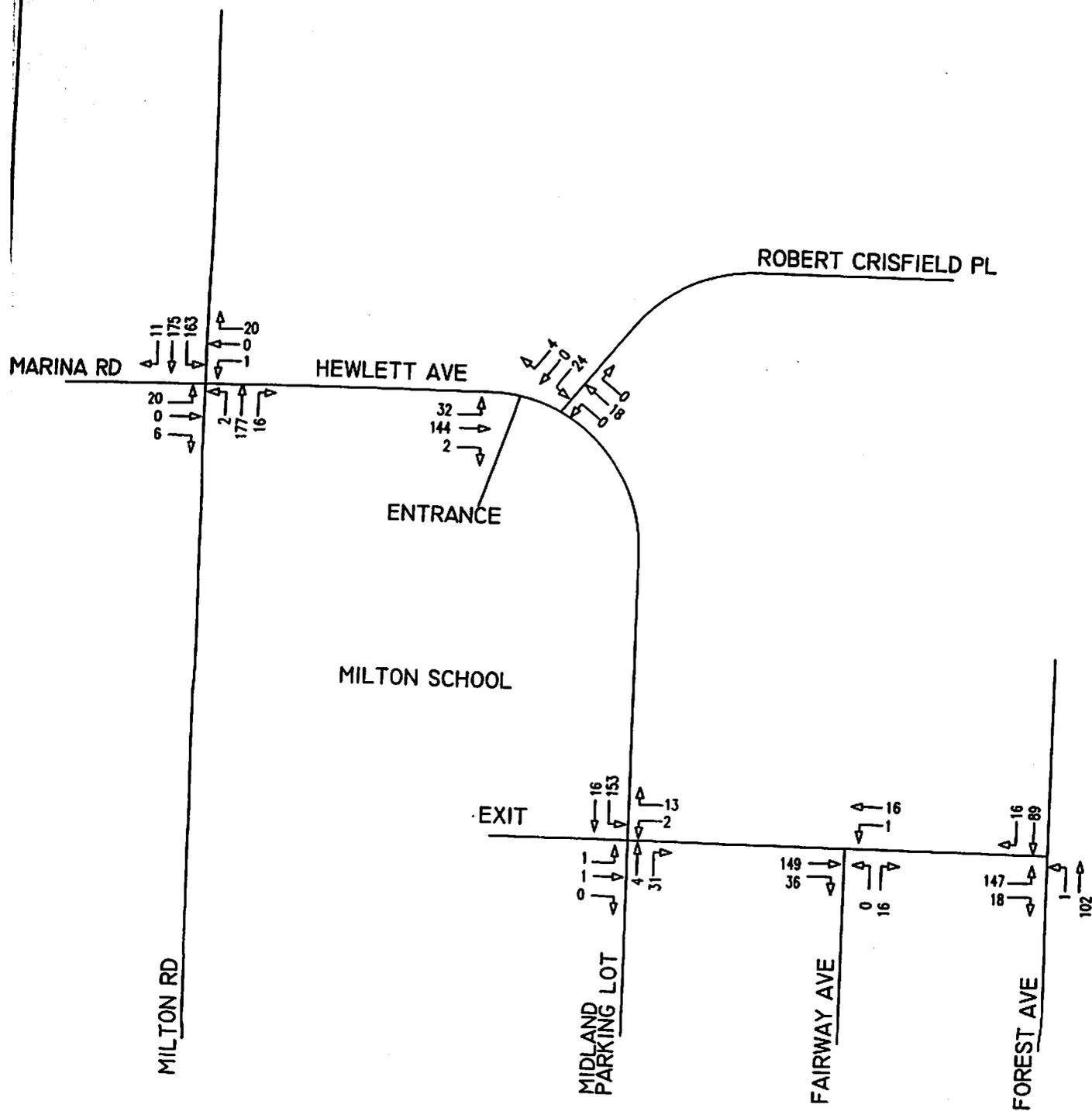
TRC Raymond Keyes Associates
 A Division of TRC Engineers, Inc.

2010 PEAK AM TRAFFIC VOLUMES
 RYE, NY

JOB NO. 28572
 FIGURE NO. 2.4.3



NOT TO SCALE



TRC Raymond Keyes Associates

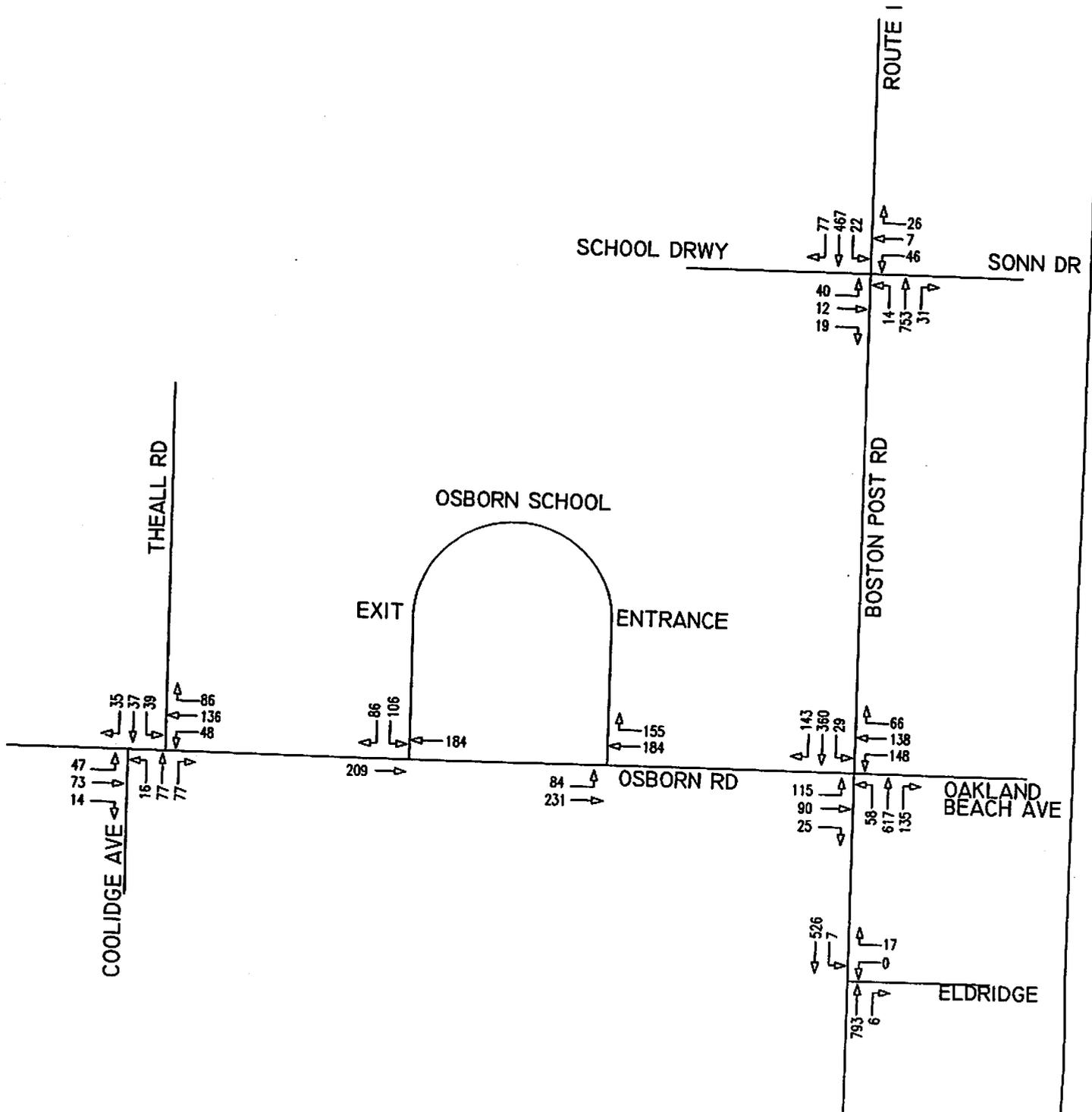
A Division of TRC Engineers, Inc.

2010 PEAK PM TRAFFIC VOLUMES

RYE, NY

JOB NO. 28572

FIGURE NO. 2.4.4



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2010 PEAK AM TRAFFIC VOLUMES

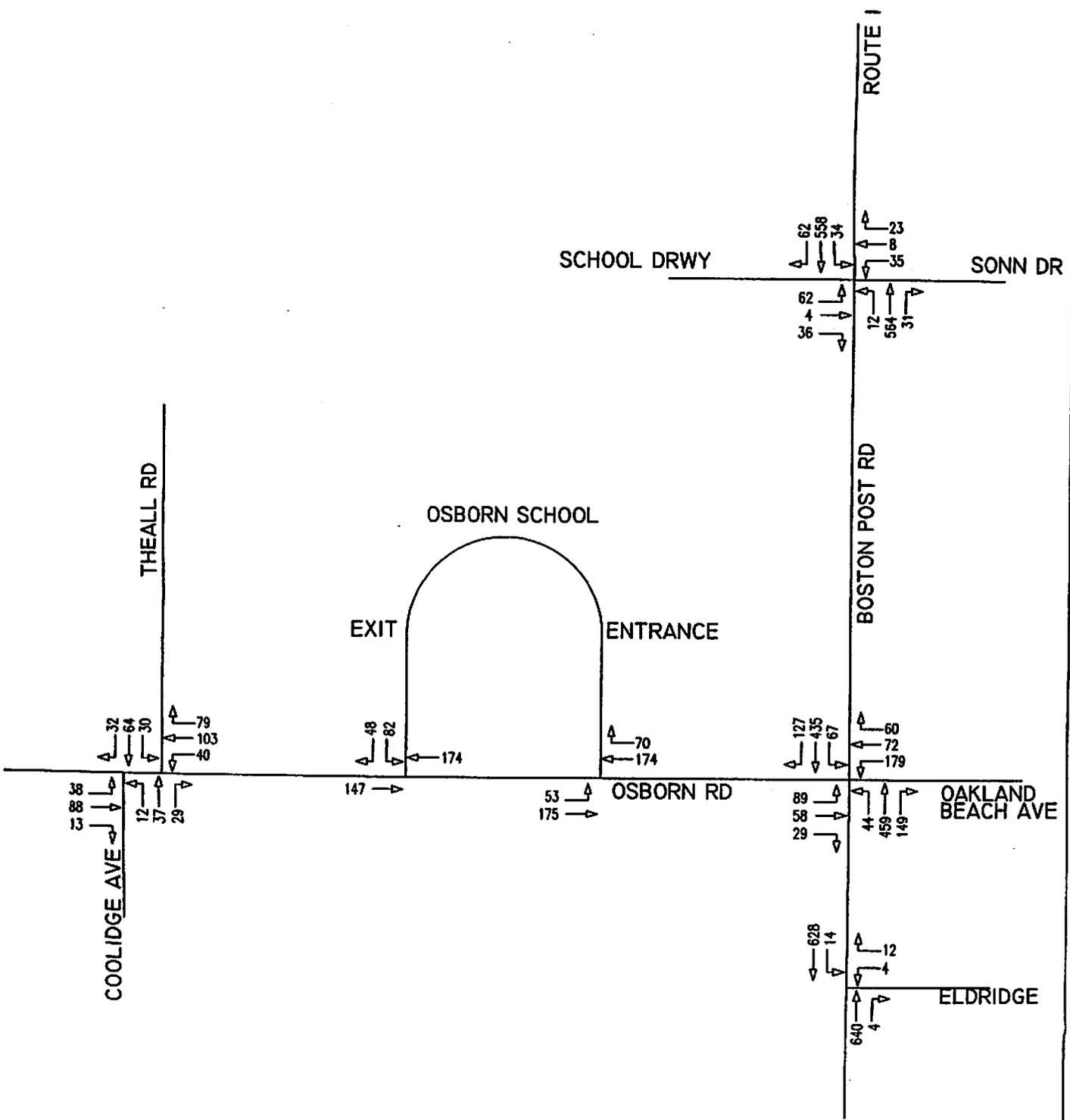
RYE, NY

JOB NO. 28572

FIGURE NO. 2.4.5



NOT TO SCALE



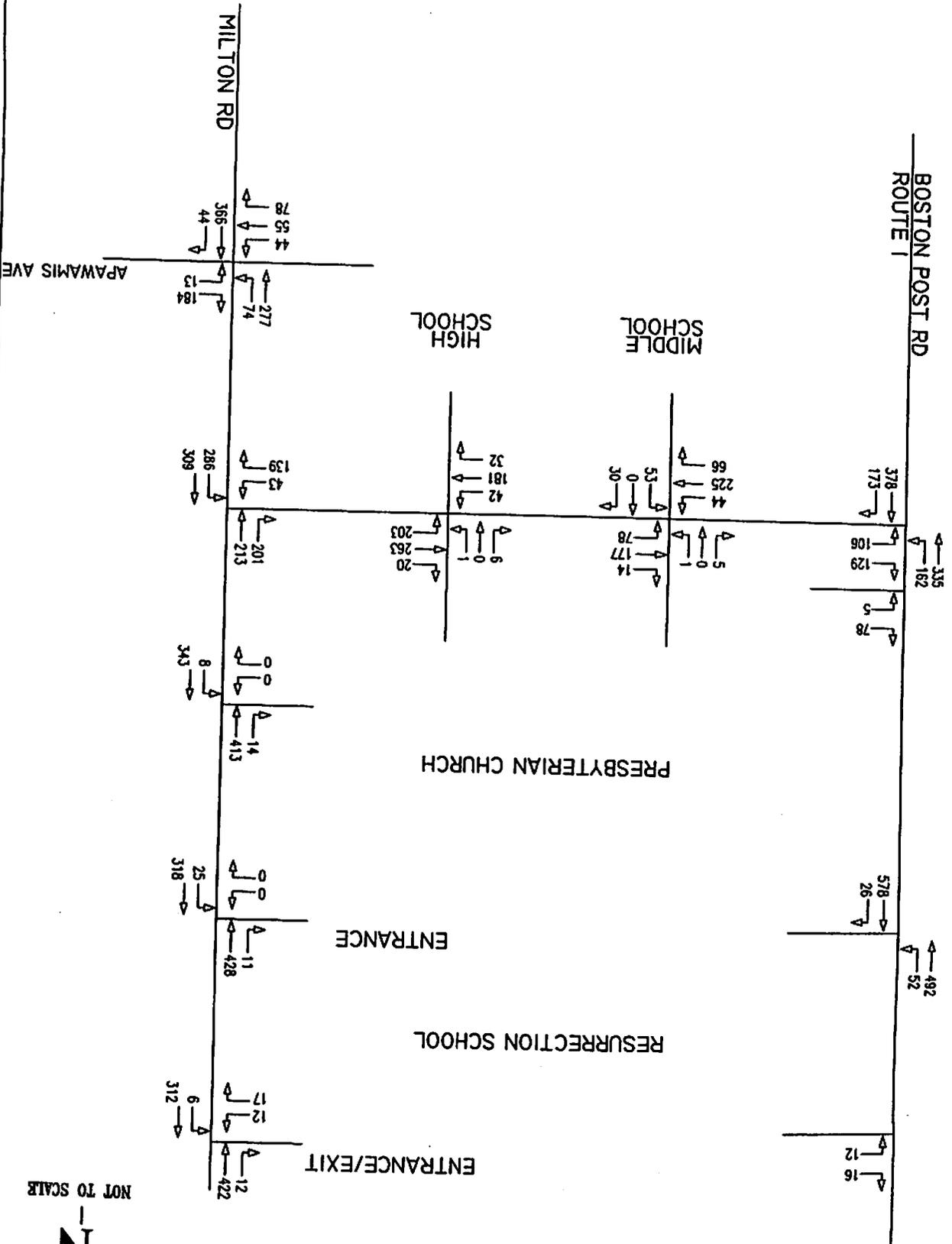
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2010 PEAK PM TRAFFIC VOLUMES
RYE, NY

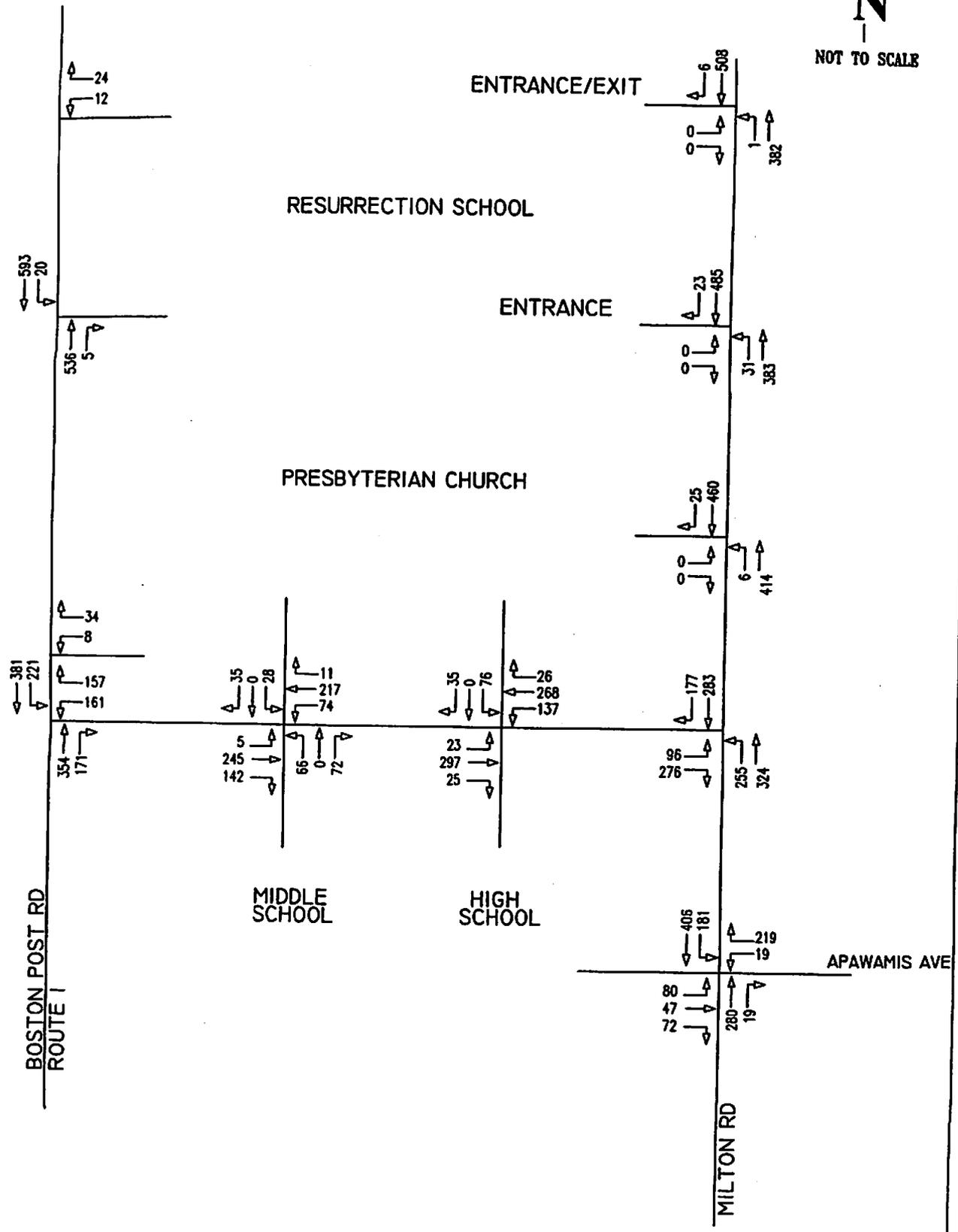
JOB NO. 28572

FIGURE NO. 2.4.6





NOT TO SCALE



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2010 PEAK PM TRAFFIC VOLUMES
 RYE, NY

JOB NO. 28572
 FIGURE NO. 2.4.8

TABLE NO. 2.5.1	
APPROXIMATE EXISTING STAFFING LEVELS	
SCHOOL	APPROXIMATE STAFF
Midland School	75
Milton School	45
Osborn School	73
Middle School	70
High School	155
TOTAL	418

2.6 BUSING POLICIES FOR NEIGHBORING SCHOOL DISTRICTS

TRC contacted various neighboring school districts to obtain information on their policies for busing. The following table summarizes these busing policies:

TABLE NO. 2.6.1	
BUSING POLICIES FOR NEIGHBORING SCHOOL DISTRICTS	
SCHOOL DISTRICT	Grade/Distance Requirement
Blind Brook	K-8 - 1.5 Miles 9-12 - 2.5 Miles
Mamaroneck	Awaiting information
New Rochelle	K-12 - 1.5 Miles
Pelham	No Busing Provided Within District
Port Chester	K-8 - 2 Miles 9-12 - 3 Miles (State Regulations for non-City)
Rye Neck	No Busing Provided Within District
Harrison	K-3 - 0.5 Miles 4-8 - 1.0 Mile 8-12 - 1.5 Miles
Greenwich	K-5 - 1 Mile 6-8 - 1.5 Miles 9-12 - 2 Miles

In 1994, Rye previously provided busing for K-3 for students living at least 0.75 miles from school and for grades 4-5, for students living more than 1.5 miles from school.

2.7 CROSSING GUARDS

Currently, the City of Rye generally employs crossing guards at the following locations:

- Boston Post Road & Milton Road/Cross Street (adjacent to Citibank)
- Boston Post Road & Central Avenue
- Boston Post Road & Oakland Beach Avenue/Osborn Road

- Milton Road & Hewlett Avenue
- Milton Road & Resurrection School/Rye Recreation Trail
- Midland Avenue & Manursing Avenue/Grace Church Street
- Midland Avenue at Midland School
- Osborn Road at Coolidge/Theall Road
- Parsons Street at Middle School Driveway (AM only, provided by the School)

The crossing guards generally work three shifts, a morning shift, a mid-day shift and an afternoon shift.

Generally, two spots, including the intersection of Boston Post Road at Oakland Beach Avenue/Osborn Road, are maintained by Police Officers while the intersection of Midland Avenue with Manursing Avenue/Grace Church Street is maintained by the City Parking Enforcement Officer. Since these Officers are busy with school crossings, the amount of enforcement occurring at these times is limited. The City has had problems in the past hiring/maintaining crossing guards.

In general, the comments from the public regarding the crossing guards has been mostly favorable. As discussed later in this report, parents have asked for more crossing guards such as at the Fireman's Circle, the intersections of Milton Road with Apawamis Avenue and with Playland Parkway, Boston Post Road at Sonn Drive, Apawamis Avenue at Midland Avenue, and Forest Avenue at Eve Lane, among others. There have also been requests for crossing guards to direct traffic at the intersections of Parsons Street with Milton Road with the Middle School Driveway (in the afternoon) and with the Boston Post Road. However, under New York State Law, crossing guards cannot "direct" traffic, so Police Officers would be required there.

Crossing guard locations are based on various factors, including number/age of pedestrians, speed limits, traffic control, number of lanes, and site-specific considerations.

School patrols, which use older students to help the crossing guards and help pedestrians in pick-up/drop-off operations, are not utilized in Rye. These are also not recommended for various reasons.

2.8 CROSSING GUARD POLICIES FOR NEIGHBORING SCHOOL DISTRICTS

TRC contacted various neighboring municipalities/school districts to obtain information on their policies regarding crossing guards. The following Table summarizes these crossing guard policies:

TABLE NO. 2.8.1 CROSSING GUARDS POLICIES FOR NEIGHBORING MUNICIPALITIES/SCHOOL DISTRICTS	
SCHOOL DISTRICT	Crossing Guard Status
Blind Brook	Crossing Guards are provided by the Village.
Mamaroneck	Awaiting Information
New Rochelle	Crossing Guards are provided by the City.
Pelham	Crossing Guards are provided by the Village. Part-time employees with no benefits.
Port Chester	Crossing Guards provided by the Police Department. Part-time employees (2hrs./day) paid \$12.50/hr. Advertise on cable and various newspapers.
Rye Neck	Crossing Guards provided by the Village.
Harrison	Crossing Guards provided by the Police Department. Work 20 hrs./week, get paid \$12/hr. and get hospitalization coverage until they retire. Always have two spare crossing guards.
Greenwich	Guards receive \$25 per day (\$12.50 an hour for Am and PM). No benefits.

2.9 HIGH SCHOOL STUDENT PARKING POLICIES FOR NEIGHBORING SCHOOL DISTRICTS

TRC contacted various neighboring school districts to obtain information on their policies for High School students. The following Table summarizes these parking policies:

TABLE NO. 2.9.1 HIGH SCHOOL PARKING POLICIES FOR NEIGHBORING SCHOOL DISTRICTS	
SCHOOL DISTRICT	Is Parking Provided For Students On Campus?
Blind Brook	Seniors are provided parking first and then juniors.
Mamaroneck	Awaiting information.
New Rochelle	No official parking provided on campus. Some parking around football field.
Pelham	No parking provided on campus.
Port Chester	No parking provided on campus.
Rye Neck	Provide approximately 45-50 parking spaces on a first come first serve basis.
Harrison	Parking provided for all students. If parking becomes a problem, then Seniors are provided parking first, then juniors who work, etc.
Greenwich	Seniors park on campus. Juniors can obtain a "J" permit to park on adjacent street.

Parents have asked about the issuance of parking permits to prohibit younger high school students from parking on the streets adjacent to the High School. This would require an ordinance and is discussed in detail later in this Study. At Greenwich High School, seniors park on campus. Juniors can obtain a "J" permit to park on the street adjacent to the High School during school hours. Thus sophomores are not officially permitted to park on this street. The High School's Parking Enforcement Officer maintains parking enforcement in Greenwich.

2.10 EMERGENCY SERVICES (POLICE AND FIRE DEPARTMENT) CONCERNS

Discussions were held with representatives of the Police Department and the Fire Inspector, as well as other members of the Rye Fire Department regarding their concerns with access to the schools in the case of an emergency. The Fire Department has various concerns, the most obvious of which is during the pick-up and drop-off period when there is congestion at the schools. If the parents follow the regulations, the engines will be able to reach close enough to the schools. However, it is pertinent that parents don't leave their cars unattended while in the travel lanes of the pick-up/drop-off circles or in the through lanes in the Middle School and High School parking areas. In addition, the Fire Department expressed concerns regarding other problems at the schools, including at the High School and Middle School lots, where there are vehicles parking in the Fire Lanes and people double-parking, generally parents visiting the school. At the Middle School, this causes problems as the engine tries to maneuver through the travel lane. In addition, with the roadway in front of the High School offices along Parsons Street chained off at each end, cars now park in front of the chain on the High School side and the Middle School side, thus the fire engine would not be able to utilize this area in an emergency or would not be able to bring their engine into this area during an emergency if vehicles are parked in those spaces. A third concern is that the small driveway leading behind the

Middle School to the practice field area and to the back of the school is blocked by a chain. The Fire Department has the ability to cut the chain, however, the Police Department and Ambulance Corps do not always have this ability. Therefore, the Fire Department recommends that this chain only be put up late at night, while during the day while events are going on in the upper practice fields, that cones be utilized to block access from the general public to this area. At Midland School, the Fire Department also had a concern about the sporadic parking along the side/back entrance as well as in the vicinity of the Board of Education Administration Building in the event the engine needs to get to the rear of the school.

Signs are only useful if people see them and obey them. Signs seen every day begin to blend in with the environment. The Police would like to increase enforcement, but, as described earlier, two Police Officers and the Parking Enforcement Officer are being utilized as crossing guards during various times of the day. If these Officers are freed up, they could help enforce speeds, which will provide a benefit to the children. There is not the manpower to add Officers to every location people have asked for traffic control. The Police feel that there is not one individual overwhelming safety problem at the schools and that there has not been significant pattern of accidents, although they do note that there is the significant congestion slowing traffic because of the large number of vehicles and the proposed patterns are not always being followed.

2.11 WALKING/BICYCLING

There has been a significant sharp decline nationally and worldwide, including Rye, in the number of school children who walk or bicycle to school, even those who live within short distances. Parents/guardians are increasingly driving their children to/from schools, primarily due to concerns about traffic and safety. Parents fear accidents, abduction and crossing streets if children walk to school.

The additional automobile trips occur during busy periods and further congest school driveways and adjacent intersections. According to the National Personal Transportation Survey, children aged 5-15 walked or biked for 70 percent less for all of their trips (not just to/from school) today than was done 20 years ago due to concerns about safety from traffic and crime. Similar reductions occurred for the number of children bicycling for their trips. This impacts the child's health, responsibility and independence, as well as impacting the environment. A study performed at some schools in Florida indicated that fifty percent of children hit by cars near schools were hit by parents of other students.

A British study of 7-8 year old students walking to school independently fell from 80 percent in 1971 to 9% in 1990. This study also showed a significant decrease in the number of children who were permitted to ride a bicycle on their own. A study in the United States showed similar trends, indicating that for children between the ages of 7 and 15, less than one percent ride a bicycle to school, a decrease of more than 60% since the 1970's.

There are a significant number of programs established recently to increase walking to school. In Denmark, the "Safe Routes to School" program has led to an 85% reduction

in child pedestrian and bicycle accidents. The "Partnership for a Walkable America" in conjunction with the National Safety Council has established a "National Walk Our Children to School Day" for each Fall. This past year it was held on October 6, 1999. There is an International Walk to School Day scheduled for October 4, 2000. Organizations such as the Institute of Transportation Engineers, the National Highway Traffic Safety Administration, the National Safe Kids Campaign and Walkable Communities, Inc., have developed information for safe walking, including educational materials, videos, coloring books, stickers, and pamphlets to get children and parents involved. There is also some funding possibly available for some of these programs.

Teaching children how to walk is critical, especially how to cross streets, crossing at designated areas, and not crossing between parked cars. According to the National Safety Council, the leading type of pedestrian accidents are due to dart-outs, pedestrians crossing at mid-block, often between parked cars. These account for approximately 40% of pedestrian injuries. The National Safety Council states that 78% of children do not get the daily-recommended amount of exercise. Walking also gives students the feelings of self-confidence, responsibility and independence.

"Safe Routes to Schools" program is now being utilized in the United States. The aim of this program is to provide a safer environment for children to/from school and to encourage children to walk or bicycle, thus decreasing traffic congestion. Parents, students and staff can all become involved. Classroom activities include teaching children road safety skills and promoting the environmental and health benefits of walking. Different curriculums have been established for elementary school, middle school and high school students. Painting "footprints" on sidewalks encourages some children as well as displaying the proper paths for the children to take.

Involving the children in these programs is important. Also, getting the parents to believe in the program is critical. Generally, these programs are not always accepted at first, but similar to the recycling program, their acceptance increases as the program continues.

Walking, to be effective, needs to be safe and easy from both the child and parent's point of view. Parents should walk a few times with the child to school to discuss concerns and teach safety. There are checklists that can be followed. Children who are too young should not walk or bicycle by themselves.

One other deterrent to walking expressed by parents was that the backpacks were too heavy. Many students were observed carrying other items besides books such musical instruments, sports equipment and personal belongings. Some students were observed using rolling backpacks or luggage cart type bags. The American Physical Therapy Association recommends that middle school students keep backpacks to 15% or less of body weight and that elementary students limit their loads to ten percent of their weight.

Traffic safety conditions at schools in other parts of the country are being improved through a program called "The Three E's", Education, Engineering, and Enforcement. This is a program to help children walk or bicycle to school, especially because of concerns of too many vehicles and speeding. Education, which is for both the parents

and the students, could alert people to ways that they can improve safety by driving slower or by traveling by walking or by bicycle. The Educational portion could be through providing a transportation curriculum for children in kindergarten through fifth grade. This could include training on pedestrian and bicycle training and the positives of walking. The Engineering portion could consist of various physical improvements such as flashing beacons for lowering the speed limit (which were installed this past year), additional parking areas, or the modification to the pick up/drop off areas. The Enforcement portion could consist of increased speed monitoring and the utilization of the SMART trailer, which is the trailer the Police utilize, which alerts drivers of their speed.

Traffic related issues should generally be processed through the school principal and the school Traffic Committee. Physical changes would also require the review of a professional and any changes off the school grounds would require approval from the City.

Traffic control in school areas is generally a highly sensitive subject. Logistics and funds do not always allow for all requests for additional police and crossing guards and sound engineering does not allow for all requests for additional traffic signals or signage. Excessive traffic control can sometimes be unnecessary and costly, and can lessen the respect for traffic controls at other locations. Traffic control should be based on realistic policies and standard engineering practices and guidelines.

Observations of pedestrians at Midland School indicate that students, including when with their parents, cross Midland Avenue opposite the Rec Driveway or opposite Billington Court instead of walking the short distance to the midblock crosswalk.

In discussions with parents, concerns were stated regarding their children walking from a safety standpoint, from not being able to cross the street properly, abduction, and too much traffic traveling too fast.

2.12 FLASHING BEACONS

Flashing beacons indicating a 20 mph speed limit in school zones were installed during this current school year. These have been influential in reducing the speeds of many of the vehicles in the school zones, though not necessarily to 20 mph, particularly on the Boston Post Road. The observed speeds were similar to those observed in a November 1999 Study prepared for the Institute of Transportation Engineers (ITE) entitled, "Vehicle Speeds in School Zones".

As stated above, and as found in the ITE Study, the flashing beacons do reduce speed. The beacons provide a high level of warning to alert the driver. However, enhanced enforcement is needed to maintain the effectiveness and decrease parent concern. Beacons also allow for better enforcement because it is difficult for motorists to argue that they did not see the beacon. The speed trailer could be utilized in this increased enforcement. Higher speeds pose a substantial risk of injury to children.

The ITE article states that "a 5 mph decrease in vehicle speed can mean the difference between a minor/moderate injury versus a major/fatal injury to a pedestrian." The Interdisciplinary Working Group for Accident Mechanics "estimated that the probability of a pedestrian fatality rose from about 10 percent to 60 percent, a six-fold increase", when vehicle impact speed increased from 23 mph to 28 mph."

If legal in New York State, consideration could be given to possibly doubling the fine for speeding in a school zone, such as is done in construction zones.

2.13 "WALKING TRAIN" OR "WALKING SCHOOL BUS"

Recently established throughout parts of the Country and the world is a program called a "Walking Train" or a "Walking School Bus" (referenced in this report as a "Walking Bus"). A Walking Bus essentially is when one parent walks with a group of children from the neighborhood to/from school. This ensures the other parents that their children get to school safely, that they weren't abducted or went off to Playland or wherever, and that the children had assistance in crossing the street.

The Walking Bus was designed to provide children with a safe, sustainable way to go to and from school. At the same time, it is a simple method to promote the healthy benefits of walking, including increased exercise and less automobile pollution through the reduction in automobile use. The program is especially helpful for children who are not old enough to walk on their own. Parents can arrange a Walking Bus at a PTO meeting or a school event. Interested parents could mark their house on a large map to determine "bus walkers", routes to be taken and "bus schedules".

2.14 CROSSWALK VERTICAL IDENTIFICATION

New York State established the Pedestrian and Bicycle Safety Task Force a few years ago. This Task Force developed the "Yield to Pedestrian in Your Half of Road" signs as folding, portable signs that can be placed in the middle of the road. These signs were installed in Harrison and cost approximately \$150 each. The Village of Ardsley recently installed flexible stanchions on Route 9A. These stanchions do not have signs, but highlight the crosswalk areas. Overhead crossing signs are also used in some locations.

A possible location for one of these options (either the overhead or portable sign) is at Midland School, to further illustrate the location of the crosswalk. The crossing guard could put a portable sign in/out each day. The sign would also be beneficial at the intersection of Milton Road and Apawamis Avenue. However, discussion with various police departments indicate that the signs get moved/stolen, and this would be a concern at the High School, with a student walking away with the sign or moving it into a travel lane.

2.15 ACCIDENT HISTORY

TRC has received and reviewed accident data from the City of Rye Police Department and the City of Rye Traffic and Transportation Committee. The accident data reviewed was from January 1996 to April 2000. The review concentrated on the key roadways/intersections in the vicinity of each of the schools as well as on the school properties. Particular concern was applied to accidents involving pedestrians. Accidents during school versus non-school periods were also reviewed. Property damage, personal injury, time and date, number of vehicles, ambulance response and violations were also reviewed, as well as the establishment of any patterns.

As would be expected, the roadway in the vicinity of the schools that had the most accidents was the Boston Post Road. Fifteen accidents occurred at the intersection of Boston Post Road and Osborn Road during the analysis period during school operating time. Another twenty accidents occurred at this location when school was not in session such as during the summer, at night, or on a weekend. One accident involved a pedestrian injury. In addition, the crossing guard was hit by a vehicle at this intersection. This traffic signal has been recently upgraded.

Five accidents occurred at the intersection of Boston Post Road and Sonn Drive, two of which were during school times. Seventeen accidents have occurred at the intersection of Boston Post Road and Parsons Street, eleven during school times, including one involving a pedestrian.

The intersection of Milton Road and Parsons Street had eleven accidents during school times. There have been 4 accidents at the intersection of Milton Road with Apawamis Avenue and the High School Driveway, and eight accidents at the intersection of Milton and Hewlett. There were various accidents at the other locations but no significant patterns were identified.

Within the schools, there have been three recorded accidents in the High School Parking Lot, one accident at the High School driveway with Parsons Street involving a pedestrian, and one accident at the Middle School driveway with Parsons Street. There were four recorded accidents at the Midland School driveways along Midland Avenue and four accidents at the Osborn School driveways.

There have been two recent accidents (both in June) affiliated with the schools, one along the Boston Post Road adjacent to Osborn School and one involving a Middle School student walking across Milton Road in the vicinity of Blind Brook Lodge. The first accident occurred at 3:11 PM when a sixteen-year old stated he was cut off and skidded on wet pavement approximately 250' north of Osborn Road and ended up on the curb in the vicinity of the sidewalk adjacent to the Osborn School field. The other accident occurred at 10:00 AM when (after taking an exam) the student was crossing Milton Road north of the crosswalk at Blind Brook Lodge, and was hit by a Rye resident.

2.16 IMPACTS ON PRESBYTERIAN CHURCH/NURSERY SCHOOL AND RESURRECTION SCHOOL/CHURCH

Discussions were held with representatives of the Presbyterian Church, the Presbyterian Nursery School and Resurrection School. These locations have been impacted by the increase in vehicles at the High School/Middle School. Parents were observed dropping off and picking up Middle School students while on the Presbyterian Church property. Also, vehicles were observed cutting through the Presbyterian Church property or turning around on the property to avoid portions of Parsons Street. The Church has made some modifications and the problem has been improved. The concern here is that there is a Nursery School on the property. Students and parents should be informed not to utilize this property. The other concern of the Presbyterian Church, as well as for Resurrection School, as more High School students are parking along Milton Road and the Boston Post Road, they are parking very close to the driveways, thus impacting access and limiting sight distance. This is discussed in Sections 4 and 6.

2.17 COMPARISON TO PREVIOUS STUDIES

In preparation of this Study, TRC reviewed previous studies conducted for the school including:

- (a) Traffic and Parking Study for Rye City School District, prepared by Frederick P. Clark Associates, Inc., dated February 1, 1995.
- (b) Report by Transportation Task Force for Rye City Schools, 1994/1995
- (c) City of Rye 1985 Development Plan
- (d) City of Rye Recreation Master Plan

The following is a summary/comparison of the findings of these reports in relationship to the latest findings:

1995 Traffic and Parking Study – The 1995 Study found similar traffic congestion and parking problems. Busing was still in effect at that time and there were approximately 450 less students as well as more than 100 less staff. The projected increases in students were close to the existing school populations, however the staff number was still lower. In general, the number of vehicles arriving to/from the schools increased since there are more students and no busing. However, some of the numbers did not increase as high as projected. It is difficult to do a direct comparison of the traffic and pedestrian volumes due to the existing on-street parking and students walking a block or two to get to the cars. The total number of parked vehicles on Milton Road, Apawamis Avenue and Parsons Street increased by about 50% since the 1995 Study. The 1995 Study recommended the initiation of a carpool program and additional police presence at the schools.

1994/1995 Transportation Task Force Study

This Study mainly focused on busing. There were seven buses running in the morning. In the 1994/1995 School Year, there were 316 children eligible for busing, 82 from

kindergarten, 205 from grades 1-3, and 8 from grades 4-5, as well as 21 children who were special education students. During warm months, approximately 202 students used the bus (64% of eligible students) in the morning and 177 students in the afternoon (56% of eligible students) in the afternoon. This usage dropped significantly in the winter, when only 37% of eligible students used the bus in the morning and afternoon. The eligibility for the bus was 0.75 miles for grades k-3 and 1.5 miles for grade 4-5.

Only 50% of the eligible families surveyed said they used the bus 4-5 days a week. Of the eligible families surveyed, 39% said that they never used the bus in the morning and 26% in the afternoon. The two main reasons for not using the bus were before/after school activities and that the bus took too long. Some of the other reasons included that they were already driving another child, concern about safety on the bus, and they preferred to drive. One conclusion of the report was that the buses were not utilized as much as was indicated in the questionnaire surveys especially during cold or inclement weather. Carpooling was recommended in the report. Crossing Playland Parkway was a concern mentioned.

City of Rye 1985 Development Plan

The 1985 Development Plan briefly discussed the schools. It indicated a peak enrollment of the schools of approximately 3100 students in 1972. The Plan's projected number of students was lower than what occurred. There is a picture in the Development Plan that showed numerous bicycles in the bicycle racks at Osborn School, something that was not observed in the latest survey.

City of Rye Recreation Master Plan

The Recreation Master Plan reviewed possible changes to the Recreational facilities in the City. Since the Recreation Department utilizes the fields at the schools, the schools were also included in the study. At the Recreation Center along Midland Avenue, a proposal is to increase parking by approximately 35 spaces. This may help Midland School, but the Study also considers expansion of the Recreation building and thus increasing activity in this area.

At Osborn School, the Study recommends shifting the driveway along Boston Post Road. However, the Study also suggests expanding the field to where potential parking could be added. This is further discussed in Section 6 of this Study. The other schools are not as impacted from a traffic/parking standpoint, except that modifications at Milton School could limit future parking lot expansion.

SECTION 3 – TRAFFIC ANALYSIS –SCHOOL DRIVEWAY AND OFF-SITE TRAFFIC OPERATING CONDITIONS

3.0 DESCRIPTION OF ANALYSIS

Capacity analyses were conducted for the school driveways and the off-site study locations to identify the existing and future traffic operating conditions at each of the schools. The following is a brief description of the procedures utilized in preparation of this analysis:

Capacity analysis is a method by which traffic volumes are compared to the calculated roadway and intersection capacities to evaluate future traffic conditions. The Transportation Research Board describes the methodology used in the 1998 Highway Capacity Manual (Special Report No. 209). In general, the terminology "Level of Service" is used to provide a "qualitative" evaluation based on certain "quantitative" calculations related to empirical values. The definition of Level of Service as contained in the 1998 Highway Capacity Manual appear in Appendix A of this Report.

In general, Level of Service A represents the best traffic operating condition. Level of Service for unsignalized and signalized intersections are defined in terms of average delay. Delay is used as a measure of driver discomfort, frustration, efficiency, etc.

Capacity analyses were performed for the key study locations with the projected traffic volumes utilizing Highway Capacity Software developed by the Federal Highway Administration (FHWA). Existing (Year 2000) and Projected (Year 2010) analyses were undertaken for the Peak AM Hour and the Peak PM Hour.

The capacity analysis worksheets for the key study locations are contained in Appendix D.

The capacity analyses performed in this study are conservative and reflect the peak fifteen-minute periods during pick-up and drop-off. Thus, the Peak Hour Factors were adjusted to account for the significant period and pedestrians were incorporated.

Levels of Service tables are provided for each location for the AM and PM conditions for the Year 2000 and the Year 2010. The tables indicate the Level of Service by approach, as well as the total control delay per approach, expressed in seconds per vehicle. The Year 2010 volumes and analyses are conservative as they account for a twenty percent increase in student traffic as well as in background traffic. There were no reductions taken for a potential increase in the percentage of carpools or walkers, and the analysis do not incorporate other possible changes such as staggered start times.

3.1 MIDLAND SCHOOL

3.1.1 STUDY LOCATIONS

The following intersections were analyzed to determine the conditions at the Midland School driveways as well as the off-site traffic operating in the vicinity of the school:

- Midland School Entrance Driveway/Billington Court and Midland Avenue;
- Midland School Exit Driveway/Rye Recreation Exit Drive and Midland Avenue;
- Rye Recreation Entrance Drive/Administration Building Driveway and Midland Avenue; and,
- Midland Avenue and Platt Lane/Greenacres Drive.

3.1.2 LOCATION NO. 1 – MIDLAND SCHOOL ENTRANCE DRIVEWAY/ BILLINGTON COURT AND MIDLAND AVENUE

A. Existing Conditions

Midland Avenue forms the northbound and southbound approaches of this four-way intersection with Billington Court and the Midland School Entrance Driveway and consists of one lane per direction with some on-street parking. The school access Entrance Driveway forms the westbound approach to this intersection and consists of one wide lane traveling only in the eastbound direction. The eastbound leg of this intersection is formed by Billington Court and consists of one lane per direction. This intersection is unsignalized and under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 1 – MIDLAND SCHOOL ENTRANCE DRIVEWAY/BILLINGTON COURT AND MIDLAND AVENUE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Eastbound LTR	a	9.2	a	9.4	b	13.8	c	16.5
Northbound L	a	7.6	a	7.7	a	7.9	a	8.1
Southbound L	a	8.5	a	8.8	a	8.2	a	8.5

As indicated in the Table above, delays experienced at this intersection are acceptable for this intersection. Some queuing from the driveway does exist due to the lack of flow in the traffic circle.

3.1.3 LOCATION NO. 2 – MIDLAND SCHOOL EXIT DRIVEWAY/RYE RECREATION EXIT DRIVE AND MIDLAND AVENUE

A. Existing Conditions

Milton Road forms the northbound and southbound approaches of this offset four-way intersection with Midland School Exit Driveway and Rye Recreation Exit Drive and consists of one lane per direction with some on-street parking. Midland School Exit Driveway forms the westbound approach to this intersection. The eastbound leg of this intersection is formed by an exit from the Recreation area. This intersection is unsignalized and under STOP control. A crossing guard is present to help children cross south of this location.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 2 – MIDLAND SCHOOL EXIT DRIVEWAY AND MIDLAND AVENUE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Westbound L	b	12.9	b	14.6	e	46.5	f	>100
Westbound R	b	11.4	b	12.7	c	23.2	e	37.3
Westbound Overall	b	11.8	b	13.1	d	34.6	f	83.3

LOCATION NO. 2 – RYE RECREATION EXIT DRIVEWAY AND MIDLAND AVENUE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Eastbound LR	b	13.0	b	14.8	c	23.5	e	37.4

As indicated in the Tables above, long delays are experienced in the PM condition, resulting from vehicles desiring to turn left from the school driveway. It is not recommended that this left turn be eliminated at this time but it could be necessary in the future. Some vehicles need to make this left to re-circulate during pick-up times, otherwise, if the left was eliminated, they would turn around in the Recreation Parking Lot. Also,

more vehicles would turn around using Billington Court. This intersection would not meet warrant criteria for the installation of a traffic signal, as per the New York State Department of Transportation (NYSDOT) Manual on Uniform Traffic Control Devices.

3.1.3 LOCATION NO. 3 – RYE RECREATION ENTRANCE DRIVEWAY/ ADMINISTRATION BUILDING DRIVEWAY AND MIDLAND AVENUE

A. Existing Conditions

Midland Avenue forms the northbound and southbound approaches of this four-way intersection with the Rye Recreation Entrance Driveway and the Administration Building Driveway and consists of one lane per direction with some on-street parking. The Administration Building Driveway forms the westbound approach to this intersection and consists of one lane per direction. The eastbound leg of this intersection is formed by an entrance to the Recreation area and consists of one lane in the westbound direction. This intersection is unsignalized and under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 3 – RYE RECREATION ENTRANCE DRIVEWAY/ADMINISTRATION BUILDING DRIVEWAY AND MIDLAND AVENUE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Northbound L	a	8.0	a	8.2	a	8.0	a	8.2
Southbound L	a	8.7	a	9.2	a	8.3	a	8.6
Westbound LTR	c	15.0	c	17.8	c	15.5	c	19.4

As illustrated in the above Table, this intersection operates at good Levels of Service.

3.1.4 LOCATION NO. 4 – MIDLAND AVENUE AND PLATT LANE/ GREENACRES DRIVE

A. Existing Conditions

Midland Avenue forms the northbound and southbound approaches of this four-way intersection with Platt Lane and Greenacres Drive and consists of one lane per direction with some on-street parking. Platt Lane forms

the westbound approach to this intersection and consists of one lane per direction. Greenacres Drive forms the eastbound approach to this intersection and consists of one lane per direction. This intersection is unsignalized and the Platt Lane and Greenacres Drive approaches are under stop control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 4 – MIDLAND AVENUE AND PLATT LANE/GREENACRES DRIVE.								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Westbound LTR	b	11.9	b	13.0	b	14.2	c	16.6
Southbound L	a	0.1	a	0.1	a	8.6	a	9.0

As indicated in the above Table, this intersection operates at good Levels of Service.

3.2 MILTON SCHOOL

3.2.1 STUDY LOCATIONS

The following intersections were analyzed to determine the traffic operating conditions at the Milton School driveways and the key intersections in the vicinity of the school:

- Milton Road and Hewlett Avenue;
- School Access Entrance Drive and Hewlett Avenue;
- Hewlett Avenue and Robert Crisfield Drive
- School Parking Lot/School Access Exit Drive and Hewlett Avenue
- Fairway Avenue and Hewlett Avenue; and,
- Forest Avenue and Hewlett Avenue.

3.2.2 LOCATION NO. 1 – MILTON ROAD AND HEWLETT AVENUE

A. Existing Conditions

Milton Road forms the northbound and southbound approaches of this four-way intersection with Hewlett Avenue and consists of one lane per direction with some on-street parking in front of the small strip of stores. Hewlett Avenue forms the westbound approach to this intersection and consists of one lane per direction. However, during school drop off and pick up times, Hewlett Avenue becomes a one-way only roadway with traffic flowing in an eastbound direction. The eastbound leg of this intersection is formed by an entrance/exit to the marina area. This intersection is unsignalized and controlled by stop signs facing the Hewlett Avenue and Marina Driveway approaches. A crossing guard is present to help children cross at this location.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 1 – MILTON RD. & HEWLETT AVE.								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Northbound L	a	7.6	a	7.7	a	7.6	a	7.6
Southbound L	a	8.0	a	8.3	a	7.9	a	8.1
Eastbound LTR	c	19.4	c	24.8	b	14.9	c	17.6
Westbound LTR	b	12.9	b	13.7	a	9.6	a	9.9

As indicated in the Table above, this intersection operates at acceptable Levels of Service. No improvements are recommended for this intersection.

3.2.3 LOCATION NO. 2 - SCHOOL ACCESS ENTRANCE DRIVE/ROBERT CRISFIELD PLACE AND HEWLETT AVENUE

A. Existing Conditions

Hewlett Avenue forms the eastbound and westbound approaches of this intersection with the School Access Entrance Drive and consists of one lane per direction. However, during school drop off and pick up times, Hewlett Avenue becomes a one-way only roadway with traffic flowing in an eastbound direction. The School Access Entrance Drive forms the northbound approach to this intersection and consists of one lane traveling only in the southbound direction. This intersection is unsignalized. Offset from this intersection is Robert Crisfield Place. For analysis purposes, this location was analyzed as a four-way intersection.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 2 - SCHOOL ACCESS ENTRANCE DRIVE/ROBERT CRISFIELD PLACE AND HEWLETT AVENUE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Southbound LTR	a	9.7	a	10.0	b	10.0	b	10.4
Eastbound L	a	7.2	a	7.3	a	7.3	a	7.3
Westbound L	a	7.8	a	8.0	a	0.1	a	0.1

As indicated in the table above, this intersection will operate at acceptable Levels of Service. No improvements are recommended for this intersection.

3.2.4 LOCATION NO. 3 - HEWLETT AVENUE AND SCHOOL ACCESS EXIT/SCHOOL PARKING LOT

A. Existing Conditions

Hewlett Avenue forms the southbound and westbound approaches of this four-way intersection with the School Access Exit Drive and School Parking Lot and consists of one lane per direction. The School Access

Exit Drive forms the eastbound approach to this intersection and consists of one lane traveling only in the eastbound direction. The School Parking Lot drive forms the northbound approach to this intersection and consists of one lane traveling in each direction. This intersection is unsignalized and under STOP control. For analysis purposes, since Hewlett Avenue is the main roadway and turns at this location, this location was analyzed as two separate intersections.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following tables:

LOCATION NO. 3A – HEWLETT AVENUE AND SCHOOL ACCESS EXIT								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Eastbound R	b	10.4	b	11.0	b	10.8	b	11.5

LOCATION NO. 3B – SCHOOL PARKING LOT AND HEWLETT AVE.								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Northbound LR	b	12.9	b	14.4	c	15.0	c	18.4
Westbound L	a	0.1	a	0.1	a	9.5	b	10.3

As indicated in the Tables above, these intersections operate at good Levels of Service.

3.2.5 LOCATION NO. 4 – FAIRWAY AVENUE AND HEWLETT AVENUE

A. Existing Conditions

Hewlett Avenue forms the eastbound and westbound approaches of this T-intersection with Fairway Avenue and consists of one lane per direction. Fairway Avenue forms the northbound approach to this intersection and consists of one lane per direction. This intersection is unsignalized and under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both

the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 4 – FAIRWAY AVENUE AND HEWLETT AVENUE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Westbound L	a	8.4	a	8.7	a	8.2	a	8.5
Northbound LR	b	11.3	b	12.3	b	10.6	b	11.3

As indicated in the above Table, this intersection operates at acceptable Levels of Service.

3.2.6 LOCATION NO. 5 – FOREST AVENUE AND HEWLETT AVENUE

A. Existing Conditions

Forest Avenue forms the northbound and southbound approaches of this T- intersection with Hewlett Avenue and consists of one lane per direction.

Forest Avenue forms the eastbound approach to this intersection and consists of one lane per direction. This intersection is unsignalized and under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 5 – FOREST AVENUE & HEWLETT AVENUE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Eastbound LR	b	11.5	b	12.7	b	12.8	b	14.9
Northbound L	a	0.1	a	0.1	a	7.6	a	7.6

As indicated in the above Table, this intersection operates at acceptable Levels of Service.

3.3 OSBORN SCHOOL

3.3.1 STUDY LOCATIONS

The following intersections were analyzed to determine the traffic operating conditions at the Osborn School driveways and key intersections in the vicinity of the school.

- Osborn School Entrance Driveway and Osborn Road;
- Osborn School Exit Driveway and Osborn Road;
- Osborn School Driveway and Boston Post Road/Sonn Drive;
- Boston Post Road and Eldredge Place;
- Boston Post Road and Osborn Road/Oakland Beach Avenue; and,
- Osborn Road and Coolidge Avenue/Theall Road.

3.3.2 LOCATION NO. 1 - OSBORN SCHOOL ENTRANCE DRIVEWAY AND OSBORN ROAD

A. Existing Conditions

Osborn Road forms the eastbound and westbound approaches of this T-intersection with the School Access Entrance Drive and consists of one lane per direction. The School Access Entrance Drive forms the southbound approach to this intersection and consists of one lane traveling only in the northbound direction. This intersection is unsignalized.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 1 - OSBORN SCHOOL ENTRANCE DRIVEWAY AND OSBORN ROAD								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Eastbound L	a	8.7	a	9.1	a	8.0	a	8.3

As indicated in the above Table, this intersection operates at acceptable Levels of Service.

3.3.3 LOCATION NO. 2 – OSBORN SCHOOL EXIT DRIVEWAY AND OSBORN ROAD

A. Existing Conditions

Osborn Road forms the eastbound and westbound approaches of this T-intersection with the School Access Exit Drive and consists of one lane per direction. The School Access Exit Drive forms the southbound approach to this intersection and consists of two lanes traveling only in the southbound direction. This intersection is unsignalized.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 2 – OSBORN SCHOOL EXIT DRIVEWAY AND OSBORN ROAD								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Southbound L	b	14.9	c	18.6	b	12.3	b	13.8
Southbound R	b	10.4	b	11.1	a	9.8	b	10.2
Southbound Overall	b	12.9	c	15.2	b	11.4	b	12.5

As indicated in the above Table, this intersection operates at acceptable Levels of Service.

3.3.4 LOCATION NO. 3 – OSBORN SCHOOL DRIVEWAY/SONN DRIVE AND BOSTON POST ROAD

A. Existing Conditions

Boston Post Road forms the northbound and southbound approaches of this four-way intersection with the School Access Drive/Sonn Drive and consists of one lane per direction. The School Access Drive forms the eastbound approach to this intersection and consists of one lane per direction. During peak school times, left turns are not permitted from the School Driveway. However, a significant number of vehicles were performing this left-turn maneuver. Sonn Drive forms the westbound approach to this intersection and consists of one lane per direction. The School Driveway and Sonn Drive are slightly offset from each other, which adds to the confusion of this intersection. This intersection is unsignalized.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 3 – OSBORN SCHOOL DRIVEWAY/SONN DRIVE AND BOSTON POST ROAD								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Northbound L	a	8.5	a	8.8	a	8.7	a	9.1
Southbound L	a	9.3	a	9.9	a	8.7	a	9.2
Eastbound LTR	d	25.7	f	57.7	d	29.6	e	35.7
Westbound LTR	d	29.2	e	43.6	c	23.1	f	62.9

As indicated in the above Table, this intersection generally operates at acceptable Levels of Service. Some delays are projected to be experienced for vehicles turning left from Sonn Drive and the School Driveway. Modifications to this intersection are discussed later in this report. A preliminary review of the traffic volumes indicates that this intersection currently does not meet warrants for installation of a traffic signal. The NYSDOT Manual on Uniform Traffic Control Devices does permit traffic signals for school pedestrian crossings. However, it is not recommended because of the availability of the traffic signal at Osborn Road.

3.3.5 LOCATION NO. 4 – BOSTON POST ROAD AT ELDREDGE PLACE

A. Existing Conditions

Boston Post Road forms the northbound and southbound approaches of this T- intersection with Eldredge Place and consists of one lane per direction. Eldredge Place forms the eastbound approach to this intersection and consists of one lane per direction. This intersection is unsignalized.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 4 – BOSTON POST ROAD AND ELDREDGE PLACE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Southbound L	a	9.2	a	9.8	a	8.8	a	9.2
Westbound L	b	10.9	b	11.7	b	12.4	b	14.3

As indicated in the Table above, this intersection operates at acceptable Levels of Service.

3.3.6 LOCATION NO. 5 – BOSTON POST ROAD AT OSBORN ROAD/OAKLAND BEACH AVENUE

A. Existing Conditions

Boston Post Road forms the northbound and southbound approaches of this four-way intersection with Osborn Road and Oakland Beach Avenue and consists of one lane per direction. Osborn Road forms the eastbound approach to this intersection and consists of one lane per direction. Oakland Beach Road forms the westbound approach to this intersection and consists of one lane per direction. This intersection is signalized. Pedestrian actuation provides an exclusive pedestrian phase. A Police Officer serves as a crossing guard at this location.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 5 – BOSTON POST ROAD AND OSBORN ROAD/OAKLAND BEACH AVENUE								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Eastbound LTR	F	>100	F	>100	E	77.7	F	>100
Westbound LTR	F	>100	F	>100	F	>100	F	>100
Northbound LT	D	36.8	D	40.7	C	33.4	D	35.3
Northbound R	C	30.7	C	31.5	C	31.0	C	31.9
Northbound Overall	D	35.7	D	39.2	C	32.9	C	34.6
Southbound LTR	D	35.8	D	38.7	D	37.9	D	42.2
OVERALL	F	84.7	F	>100	E	61.7	F	84.0

As indicated in the Table above, this intersection experiences some delays at peak times due to traffic volumes and the exclusive pedestrian phase. Geometric improvements at this intersection are limited due to existing layout and right-of-way. Re-timing of the traffic signal is a consideration.

3.3.7 LOCATION NO. 6 – OSBORN ROAD AT COOLIDGE AVENUE/THEALL ROAD

A. Existing Conditions

Osborn Road forms the eastbound and westbound approaches of this offset four-way intersection with Coolidge Avenue and Theall Road and consists of one lane per direction. Coolidge Avenue forms the northbound approach to this intersection and consists of one lane per direction. Theall Road forms the southbound approach to this intersection and consists of one lane per direction. Coolidge Avenue and Theall Road are offset from each other. This intersection is unsignalized.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 6 – OSBORN ROAD AND COOLIDGE AVENUE/THEALL ROAD								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Eastbound L	a	7.8	a	7.9	a	7.7	a	7.8
Westbound L	a	7.5	a	7.6	a	7.5	a	7.6
Northbound L	b	14.0	c	17.0	b	12.4	b	13.9
Southbound L	c	16.4	c	22.2	b	13.6	c	16.0

As indicated in the Table above, this intersection operates at good Levels of Service.

3.4 RYE HIGH SCHOOL/MIDDLE SCHOOL

3.4.1 STUDY LOCATIONS

The following intersections were analyzed to determine the traffic operating conditions at the High School and Middle School driveways as well as at the key intersections in the vicinity of the schools.

- Middle School Driveway/Presbyterian Church Driveway and Parsons Street;
- High School Driveway/Presbyterian Church Driveway and Parsons Street;
- High School Driveway/Apawamis Avenue and Milton Road;
- Milton Road and Parsons Street;
- Boston Post Road and Parsons Street;
- Milton Road and Presbyterian Church Driveway;
- Milton Road and Resurrection School Entrance Driveway;
- Milton Road and Resurrection School Entrance/Exit Driveway;
- Boston Post Road and Resurrection Church Entrance; and,
- Boston Post Road and Resurrection Church Exit.

3.4.2 LOCATION NO.1 - MIDDLE SCHOOL DRIVEWAY/PRESBYTERIAN CHURCH DRIVEWAY AND PARSONS STREET

A. Existing Conditions

Parsons Street forms the eastbound and westbound approaches of this intersection with the School Access Drive and Presbyterian Church Driveway and consists of one lane per direction. The School Access Drive forms the northbound approach to this intersection and consists of one lane per direction. The two driveways are offset but analyzed together because of the friction created between the two driveways. The Presbyterian Church Driveway forms the southbound approach to this intersection and consists of one lane per direction. This intersection is unsignalized and under STOP control. A crossing guard is present to help children cross at this location in the morning.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 1 - MIDDLE SCHOOL DRIVEWAY/PRESBYTERIAN CHURCH DRIVEWAY AND PARSONS STREET								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay

Northbound L	e	41.2	f	>100	d	26.8	f	61.0
Southbound L	b	13.9	c	15.7	c	18.4	d	26.3
Eastbound L	a	7.9	a	8.1	a	7.9	a	8.1
Westbound L	a	8.5	a	8.9	a	8.6	a	9.0

As indicated in the Table above, some delays are projected to be experienced by vehicles exiting the school driveway. Currently, parents are not supposed to be entering the parking area in the morning but were observed doing so. Prohibiting left turns from this driveway could be considered.

3.4.3 LOCATION NO. 2 - HIGH SCHOOL ENTRANCE DRIVEWAY/PRESBYTERIAN CHURCH DRIVEWAY AND PARSONS STREET

A. Existing Conditions

Parsons Street forms the eastbound and westbound approaches of this four-way intersection with the School Access Entrance Drive and Presbyterian Church Driveway and consists of one lane per direction. The School Access Entrance Drive forms the northbound approach to this intersection and consists of one lane traveling only in the southbound direction. The Presbyterian Church Driveway forms the southbound approach to this intersection and consists of one lane per direction. The two driveways are offset from each other. The intersection is unsignalized and the Church Driveway is under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 2 - HIGH SCHOOL ENTRANCE DRIVEWAY/PRESBYTERIAN CHURCH DRIVEWAY AND PARSONS STREET								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Eastbound L	a	8.4	a	8.8	a	7.9	a	8.1
Westbound L	a	9.2	a	10.0	a	8.5	a	8.9
Southbound L	c	16.1	c	20.1	c	22.3	e	37.5

As illustrated in the table above, this intersection operates at good Levels of Service.

3.4.4 LOCATION NO. 3 - HIGH SCHOOL EXIT DRIVEWAY/APAWAMIS AVENUE AND MILTON ROAD

A. Existing Conditions

Milton Road forms the northbound and southbound approaches of this four-way intersection with the School Access Exit Drive and Apawamis Avenue and consists of one lane per direction. The School Access Exit Drive forms the eastbound approach to this intersection and consists of one lane traveling only in the eastbound direction. Apawamis Avenue forms the westbound approach to this intersection and consists of one lane per direction. This intersection is unsignalized with Apawamis Avenue and the School Driveway under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 3 - HIGH SCHOOL EXIT DRIVEWAY /APAWAMIS AVENUE AND MILTON ROAD								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Southbound L	a	8.7	a	9.1	a	8.3	a	8.7
Westbound LR	c	22.1	f	73.2	c	19.3	f	58.2
Eastbound LTR	f	>100	f	>100	f	>100	f	>100

As illustrated in the Table above, long delays are experienced during peak periods by vehicles turning out of the school driveway, while delays will also be experienced for vehicles turning out of Apawamis Avenue during the afternoon in 2010. A review of traffic signal warrant criteria indicates that this intersection does not currently meet warrants for the installation of a traffic signal.

3.4.5 LOCATION NO. 4 - MILTON ROAD AND PARSONS STREET

A. Existing Conditions

Milton Road forms the northbound and southbound approaches of this T-intersection with Parsons Street and consists of one lane per direction. Parsons Street forms the eastbound approach to this intersection and consists of one lane in the eastbound direction. This intersection is unsignalized with Parsons Street under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 4 – MILTON ROAD AND PARSONS STREET								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Northbound L	b	10.2	b	11.7	a	9.2	b	10.0
Eastbound LR	f	53.3	f	>100	f	58.5	f	>100

As illustrated in the Table above, long delays are experienced during the peak periods for vehicles turning from Parsons Street. A preliminary review of the traffic volumes at this intersection indicates that warrants for the installation of a traffic signal are not currently met. However, warrant requirements for the peak afternoon period are met, although the NYSDOT generally will not permit a traffic signal on this premise. This intersection should be monitored in the future.

3.4.6 LOCATION NO. 5 – BOSTON POST ROAD AT PARSONS STREET

A. Existing Conditions

Boston Post Road forms the northbound and southbound approaches of this T-intersection with Parsons Street and consists of one lane per direction. Parsons Street forms the westbound approach to this intersection and consists of one lane per direction. This intersection is unsignalized and under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 5 – BOSTON POST ROAD AND PARSONS STREET								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Southbound L	a	9.9	b	11.1	a	9.3	b	10.0
Westbound L	f	>100	f	>100	f	>100	f	>100

As indicated in the Table above, long delays are experienced during the peak periods for vehicles turning left from Parsons Street onto the Boston Post Road. A preliminary review of the traffic volumes indicates that this intersection does not currently meet warrants for installation of a traffic signal.

3.4.7 LOCATION NO. 6 - MILTON ROAD AT RESURRECTION SCHOOL ENTRANCE ONLY DRIVEWAY

A. Existing Conditions

Milton Road forms the northbound and southbound approaches of this T-intersection with the Resurrection School Entrance Drive and consists of one lane per direction. The Resurrection School Entrance Drive forms the westbound approach to this intersection and consists of one lane traveling only in the eastbound direction. This intersection is unsignalized.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 6 - MILTON ROAD AND RESURRECTION SCHOOL ENTRANCE DRIVEWAY								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Northbound L	a	8.6	a	9.0	a	8.5	a	8.8

As illustrated in the Table above, this intersection operates at good Levels of Service.

3.4.8 LOCATION NO. 7 - MILTON ROAD AND PRESBYTERIAN CHURCH DRIVEWAY

A. Existing Conditions

Milton Road forms the northbound and southbound approaches of this T-intersection with the Presbyterian Church Driveway and consists of one lane per direction. The Presbyterian Church Driveway forms the eastbound approach to this intersection and consists of one lane traveling only in the westbound direction. This intersection is unsignalized.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 7 - MILTON ROAD AND PRESBYTERIAN CHURCH DRIVEWAY								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Northbound L	a	8.4	a	8.7	a	8.7	a	9.0

As illustrated in the Table above, this intersection operates at good Levels of Service.

3.4.9 LOCATION NO. 8 - MILTON ROAD AND RESURRECTION SCHOOL DRIVEWAY

A. Existing Conditions

Milton Road forms the northbound and southbound approaches of this T-intersection with the Resurrection School Driveway and consists of one lane per direction. The Resurrection School Driveway forms the eastbound approach to this intersection and consists of one lane per direction. This intersection is unsignalized. A crossing guard is located just to the south of this intersection. Some pedestrians utilize this crossing to reach the path through the Rye Recreation property to go to/from Midland School, as well as to Resurrection School.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 8 - MILTON ROAD AND RESURRECTION SCHOOL DRIEWAY								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Northbound L	a	8.4	a	8.8	a	8.5	a	8.9
Eastbound L	b	13.7	c	15.9	a	0.1	a	0.1

As illustrated in the Table above, this intersection operates at good Levels of Service.

3.4.10 LOCATION NO. 9 – BOSTON POST ROAD AND RESURRECTION CHURCH ENTRANCE DRIVEWAY

A. Existing Conditions

Boston Post Road forms the northbound and southbound approaches of this T-intersection with the Resurrection Church Entrance and consists of one lane per direction. The Resurrection Church Entrance forms the westbound approach to this intersection and consists of one lane traveling only in the eastbound direction. This intersection is unsignalized.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 9 – BOSTON POST ROAD AND RESURRECTION CHURCH ENTRANCE DRIVEWAY								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Southbound L	a	9.2	a	9.8	a	8.8	a	9.2

As indicated in the Table above, this intersection operates at good Levels of Service.

3.4.11 LOCATION 10 – BOSTON POST ROAD AND RESURRECTION CHURCH EXIT DRIVEWAY

A. Existing Conditions

Boston Post Road forms the northbound and southbound approaches to this T-intersection with the Resurrection Church Exit Driveway and consists of one lane per direction. The Resurrection Church Exit Driveway forms the westbound approach to the intersection and consists of one lane traveling only in the eastbound direction. This intersection is unsignalized and under STOP control.

B. Capacity Analysis

Capacity analyses were conducted for this location utilizing the 2000 Existing Traffic Volumes and the 2010 Future Traffic Volumes for both the Peak AM Hour and the Peak PM Hour. The results of these analyses showing the Existing and Future conditions are in the following table:

LOCATION NO. 9 - BOSTON POST ROAD AND RESURRECTION CHURCH EXIT DRIVEWAY								
APPROACH	PEAK AM HOUR				PEAK PM HOUR			
	2000 Existing		2010 Future		2000 Existing		2010 Future	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Westbound LR	c	18.0	c	23.0	c	16.5	c	20.8

As indicated in the Table above, this intersection operates at good Levels of Service.

SECTION 4 - PARKING

4.0 **INTRODUCTION**

Based upon multiple field observations, public discussions and through a review of the questionnaire surveys, parking is a critical issue at each of the schools. Parents parking during drop off and pick up at the elementary schools results in congestion both on school grounds and on the adjacent streets. During meetings with parents from the Middle School, one of the biggest complaints was that there was no visitor parking available for parents when attending a conference with a teacher or dropping something off at the school. The overwhelming comment from the High School students expressed in the questionnaire surveys was that there was not enough student parking.

Parking has also been stated as a concern of the Fire Department as parents have been double parking or parking in the fire lane, particularly at the Middle School and also at Midland School.

As previously stated, parking counts were performed on various days in May at each of the schools. These counts were performed both within the school parking lots as well as on the roads adjacent to the schools.

The following is a breakdown of the parking at each of the schools:

4.1 MIDLAND SCHOOL

Existing Parking Conditions

Midland School currently has 10 parking spaces in the front circle, including one handicapped parking space. Behind the school are 38 parking spaces while along the side access, there are approximately 16 parking spaces. (Some people create parking spaces by parking on the grass area and adjacent to the basketball courts.) There are an additional 16 parking spaces in the parking lot behind the Administration Building. Thus, there are a total of approximately 80 parking spaces on school property, however, a portion of these are for the Administration Building.

A few additional parking spaces could be provided in the rear parking area after the planned removal of the oil tank.

Off of the school property, parents have been parking along Midland Avenue, Billington Court and Platt Lane, as well as in the Rye Recreation Parking Lot, which has approximately 52 parking spaces.

Public Comments on Parking

Through the public presentations and from the surveys, there have been several comments received, including not allowing any parking in the front circle at any time, not allowing parking on Midland Avenue and to allow parking at the Rye Recreation lot.

Parking Counts

Parking counts were performed throughout the course of the school day for the school parking lots and on the adjacent streets, including Midland Avenue, Billington Court, Platt Lane and the Rye Recreation Parking Lot.

The highest number of parked vehicles, including vehicles standing waiting for children, occurred at 3:00 PM, pick up time, as would be expected. At 3:00 PM, there were 26 vehicles in the front circle, 29 vehicles in the rear teacher parking lot, 12 vehicles parked in the Administration Lot, and 19 vehicles parked in the side lot. This resulted in 86 vehicles on the school property at one time. At this same period, there were 59 vehicles parked or standing on Midland Avenue, 25 vehicles on Billington Court, 8 on Platt Lane and approximately 28 vehicles at the Rye Recreation Parking Lot, a portion of which were for the Rec facilities. This results in total of 120 parked or standing vehicles off of school property. A few of these vehicles are residential parking while some are for the Rec facilities.

The peak number of vehicles parked or standing in each of the areas was 29 in the front circle at 3:05 PM, 35 vehicles in the rear teacher parking lot at various times throughout the day, 13 vehicles parked in the Administration Lot at various times throughout the day, and 21 vehicles parked in the side lot. The maximum vehicles parked or standing off school property were generally the numbers observed at 3:00 PM.

The second highest overall period of parking during the day was at 11:55 AM, at the time for Kindergarten pick-up and lunch.

Parking Observations

Parking on school property was essentially fully occupied for the majority of the day. There were a few spaces that were vacant in the rear teacher lot and in the Administrative lot. However, at the same times, there were additional vehicles parking in non-official parking spaces in the front of the school.

There were numerous vehicles in the front circle, especially during peak pick up times. Some of these vehicles were left unattended, thus clogging the circle and stopping the proper flow of traffic. The vehicles left unattended were generally observed to be by parents talking or running into the school. Other vehicles were standing, as the parents were waiting for their children to get to the car.

A significant number of vehicles were parked along Midland Avenue. Some of these vehicles parked so close to the crosswalk, school driveways, and the side streets, that they blocked sight distance which then caused safety concerns and added to the congestion as vehicles had trouble performing the desired maneuvers, such as turning out of the school driveway. The vehicles parking right up in front of the crosswalk block the view of the crosswalk and create an unsafe condition for the crossing guard and the children crossing. During one observation, a mini van was parked right up to the crosswalk on Midland Avenue, thus blocking the sightlines between the drivers of vehicles traveling northbound on Midland Avenue and children desiring to cross. (See Picture No. 6 in Appendix C).

A few cars were observed waiting on Eve Lane to pick up their children who used the pedestrian trail in the back of the school.

Parents of some students were utilizing the Rye Recreation parking area, Billington Court, and Platt Lane. One problem observed with the parking at the Rec and on Billington Court was that the children, and their parents, were crossing Midland Avenue at these locations instead of walking slightly farther on Midland and using the crosswalk and crossing guard. These children and parents are creating an unsafe condition by cutting between cars.

Parking Recommendations

Recommendations to improve parking at Midland School are described in Section 6.

Parking in the circle should be eliminated, at least during pick up/drop off times.

With the removal of the oil tank, additional parking should be provided in the rear of the school.

It should be instilled in the children and the parents to utilize the crosswalk and crossing guard to cross Midland Avenue to reach Rye Rec or Billington Court.

4.2 MILTON SCHOOL

Existing Parking Conditions

Milton School currently has 29 parking spaces in the teacher lot. Some people also park along the driveway that forms the front circle.

A few additional parking could be provided in the teacher parking area after the planned removal of some minor green space currently located within the lot.

Parents have been observed parking on Hewlett Avenue, Robert Crisfield Place, Fairway Avenue, and occasionally on Valley View Avenue.

Public Comments on Parking

Through the public presentations and from the surveys, there have been several comments received, including removing some parking on the eastern side of Hewlett Avenue between the entrance and exit of the front circle driveway and parking too close to the intersection of Hewlett Avenue and Fairway Avenue. Some parents complained about the section between the sidewalk and Hewlett Avenue in front of the school. During rainy days, this area becomes very muddy.

Parking Counts

Parking counts were performed throughout the course of the school day for the teacher parking lot and the front driveway, as well as on the adjacent streets, including Hewlett Avenue, Robert Crisfield Place, Fairway Avenue and on Valley View Avenue (check spelling).

The highest number of parked vehicles, including vehicles standing waiting for children, occurred at 3:00 PM, pick up time, as would be expected. At 3:00 PM, there were 3 vehicles in the front circle, 28 vehicles in the teacher parking lot, 12 vehicles parked on Hewlett Avenue prior to the Circle Driveway, 19 vehicles on Hewlett Avenue between the entrance and exit of the circle, and 28 vehicles parked on Hewlett Avenue east of the circle. At this same period, there were 6 vehicles parked or standing on Fairway Avenue, 2 vehicles on Robert Crisfield Place, and 6 on Valley View Avenue (those there may have been residents). This results in total of 98 parked or standing vehicles in the vicinity of the school property (exclusive of Valley View Avenue).

The peak number of vehicles parked or standing in each of the areas was 7 in the front circle at 11:00 AM, 26 vehicles in the teacher parking lot at various times throughout the day, 6 vehicles parked on Robert Crisfield Place at 12:05 PM, and 6 vehicles parked on Valley View (although these appear to be from the residences). The maximum vehicles parked or standing along Hewlett Avenue were the numbers observed at 3:00 PM.

The second highest overall period of parking during the day was at 8:45 AM and 12:05 PM, at the time for Kindergarten pick-up and lunch.

Parking Observations

Parking in the teacher lot was mostly occupied for the majority of the day. There were a few spaces that were vacant in the teacher lot. There were vehicles parking in the driveway in the front of the school throughout the day.

There were numerous vehicles on Hewlett Avenue during peak pick-up times. Some of these vehicles were left unattended, thus slowing the flow of traffic. The vehicles left unattended were generally observed to be by parents talking or running into the school. Other vehicles were standing, as the parents were waiting for their children to get to the car. Some of these vehicles parked so close to the crosswalk, school driveways, and the side streets, that they blocked sight distance which then caused safety concerns and added to the congestion as vehicles had trouble performing the desired maneuvers, such as turning out of the school driveway.

Parents of students were utilizing Robert Crisfield Place and Fairview Avenue for parking. During rainy days, the area in front of the school along Hewlett between the sidewalk and the roadway becomes muddy. Some parents avoid this area or park where they impede traffic flow (see Pictures No. 24 and 25 in Appendix C).

Parking Recommendations

Recommendations to improve parking at Milton School are described in Section 6. Some additional parking could be provided in the parking lot for staff.

4.3 OSBORN SCHOOL

Existing Parking Conditions

Osborn School currently has 27 parking spaces in the front circle (of which 16 spaces are teacher spaces and 11 spaces are visitor spaces), including one handicapped parking space. There are approximately 17 temporary parking spaces along the field side that are only permitted during part of the day. Along the rear school driveway, there are 37 parking spaces. Thus, there are a total of approximately 64 parking spaces on school property, exclusive of the 17 temporary spaces. Parents also park along Osborn Road, which results in a narrow westbound travel lane.

Public Comments on Parking

Through the public presentations and from the surveys, there have been several comments received including not enough parking on school property, concern of the width of Osborn Road, and vehicles parking too close to the driveways, blocking the views of the drivers, particularly those trying to exit onto Osborn Road.

Parking Counts

Parking counts were performed throughout the course of the school day for the school parking lots and on Osborn Road.

The highest number of parked vehicles, including vehicles standing waiting for children, occurred at 2:55 PM, pick-up time, as would be expected. At 2:55 PM, there were 11 parked vehicles in the visitor spaces, the front circle, 9 vehicles standing in the middle aisle between the teacher parking lot and the visitor parking, 17 vehicles in the teacher parking area and 28 cars standing in the pick-up area. Some parents are creating their own parking spaces at the end of the aisles. This resulted in 65 vehicles in the front school parking area at one time. At this same period, there were 68 vehicles parked or standing in the rear lot. In addition, there were 30 cars parked on Osborn Road. This results in total of 163 parked or standing vehicles on and off of school property.

The peak number of vehicles parked or standing in each of the areas was what was observed at 2:55 PM, except for 11 vehicles standing in the middle aisle in the front circle at 3:00 PM.

The second highest overall period of parking during the day was 108 at 8:35 AM and 105 at 12:00 Noon, at the time for Kindergarten pick-up/lunch time.

Parking Observations

Teacher parking on school property was essentially fully occupied for the majority of the day. Parent/Visitor parking in the striped parking area was mostly occupied during the day while parking along the field had parking spaces available during non-peak hours.

There were numerous vehicles in the front circle, especially during peak pick up times. Some of these vehicles were left unattended, thus clogging the circle and stopping the proper flow of traffic. The vehicles left unattended were generally observed to be by parents talking or running into the school. Other vehicles were standing, as the parents were waiting for their children to get to the car.

A significant number of vehicles were parked along Osborn Road during peak times, but there were no vehicles parked there during mid-morning and mid-afternoon. Some of these vehicles parked so close to the school driveways that they blocked sight distance which then caused safety concerns and added to the congestion as vehicles had trouble performing the desired maneuvers, such as turning out of the school driveway (see Pictures No. 30-32 in Appendix C).

Parking Recommendations

Recommendations to improve parking at Osborn School are described in Section 6. There are methods to obtain additional parking at Osborn School.

4.4 RYE MIDDLE SCHOOL

Existing Parking Conditions

The Middle School currently has approximately 75 parking spaces in the parking lot, including only a few official visitor spaces, and two handicapped parking spaces. Some drivers create their own parking spaces by parking in front of the chained pedestrian area, thus blocking fire access. Some additional vehicles were parked in the fire lane on the outlying areas of the parking lot. Behind the school are 17 parking spaces near the field house. The off-school property parking is discussed under the Rye High School parking category.

Public Comments on Parking

Through the public presentations and from the surveys, there have been several comments received from parents that there was not enough visitor parking for parents when they have to go in to the school for a teacher conference, to drop something off, or to do volunteer service.

Parking Counts

Parking counts were performed throughout the course of the school day for the school parking lots and on the adjacent streets, including Parsons Street.

The highest number of parked vehicles occurred at 12:15 PM, when there were 72 vehicles parked in the Middle School parking lot. Some vehicles were illegally parked. In the field house parking area, the most vehicles observed was 13 at 1:45 PM. At 3:05 PM, there were 51 cars parked in parking spaces, 22 cars parked or standing in aisles, and approximately 20 additional cars circling.

Parking Observations

Parking on school property was essentially fully occupied for the majority of the day. There were some vacant spaces in the field house parking area. There were vehicles parked in the fire lane, which was a concern expressed by the Fire Department.

There were numerous vehicles in the front circle, especially during peak pick up times. Some of these vehicles were left unattended, thus clogging the circle and stopping the proper flow of traffic. The vehicles left unattended were generally observed to be by parents talking. Other vehicles were standing, as the parents were waiting for their children to get to the car. Vehicles were observed circulating the lot since their children were not ready to be picked up. Some of these circulating vehicles were blocking vehicles from exiting the school property as they were sitting near the lot entrance/exit instead of re-entering the pick up loop.

A significant number of vehicles were parked along Parsons Street. This is discussed under the High School Parking Section. Some of these vehicles parked so close to the

school driveway that they blocked sight distance which then caused safety concerns and added to the congestion as vehicles had trouble performing the desired maneuvers, such as turning out of the school driveway (see Pictures No. 21 and 22 in Appendix C).

Parents of students were utilizing the Presbyterian Church parking area as a pick-up/drop-off area.

Parking Recommendations

As stated above, during the meetings with parents from the Middle School, one of the biggest complaints was that there was no visitor parking available for parents when attending a conference with a teacher, dropping something off at the school, or when doing volunteer work at the school. Thus, the parents stated that they are either double parking, parking in the fire lane, parking in a teacher's spot, parking at the Presbyterian Church or parking a significant distance away. The double parking and parking in the fire lane is a concern of the Rye Fire Department.

Recommendations to improve parking at the Middle School are described in Section 6.

4.5 RYE HIGH SCHOOL

Existing Parking Conditions

Rye High School currently has approximately 103 parking spaces in the area essentially between the building and Milton Road, including handicapped parking spaces. Some people parked in front of the gate separating the pedestrian area and others parked in the fire lane, which was a concern of the Fire Department.

A few additional parking spaces could be provided after the current construction is completed.

Students at the High School park on the various streets in the vicinity of the High School, including Parsons Street, Milton Road, Apawamis Avenue and Midland Avenue. Because of Beach/Playland parking restrictions, parking is not officially permitted on Apawamis Avenue or Midland Avenue from May 1 to October 1. Students used to park on Cowles Avenue and Hillcrest Lane until recent one-hour parking restrictions were added.

Public Comments on Parking

Through the public presentations and from the surveys, there have been several comments received. The main comments from the students were that there should be student parking on campus and that seniors should have first rights. The main comments from parking was that the underclassmen should not be able to drive to school. However, other parents counter that they need their children to drive to school for various reasons, including distance, need to pick up siblings at elementary schools, after-school jobs, and sports practices at off-school facilities.

Parking Counts

Parking counts were performed throughout the course of the school day for the school parking lots and on the adjacent streets, including Milton Road, Parsons Street, Midland Avenue, Cloverdale Lane, Hillcrest Lane, Cowles Avenue and Boston Post Road.

The highest number of parked vehicles in the High School Parking Lot occurred at 11:00 AM, when there were 106 vehicles in the lot, including vehicles in the fire lanes.

During the day, there were 32 vehicles parked on Apawamis Avenue, 2 cars parked on Midland Avenue, 29 vehicles on Milton Road, 26 vehicles on Boston Post Road, 34 vehicles parked on Parsons Street, 7 vehicles on Cowles Avenue, 1 vehicle on Hillcrest Lane and 1 vehicle on Cloverdale Lane. This results in total of 132 parked vehicles off of school property. A few of these vehicles are residential parking, while a few may have been for the facilities at Resurrection.

Parking Observations

Parking on school property was essentially fully occupied for the majority of the day. There were a few spaces that were vacant in the rear teacher lot and in the Administrative lot. However, at the same times, there were additional vehicles parking in non-official parking spaces in the front of the school.

There were various vehicles parked in the fire lane and in front of the chain separating the pedestrian area.

A significant number of vehicles were parked along Milton Road, Boston Post Road, Parsons Street and Apawamis Avenue. Some of these vehicles parked so close to the crosswalk, school driveways, and the side streets, that they blocked sight distance which then caused safety concerns and added to the congestion as vehicles had trouble performing the desired maneuvers, such as turning out of the school driveways (see Pictures No. 1 and 22 in Appendix C).

Parents of students were utilizing the Presbyterian Church parking area for pick-up and drop-off.

Parking Recommendations

Recommendations to improve parking at the High School are described in Section 6.

The overwhelming comment from the High School students expressed in the questionnaire surveys was that there was not enough student parking. However, without the construction of a deck, which would be very expensive, no additional parking spaces can be provided without the loss of green space. Adding more parking could generate more vehicles as some students said that they did not drive because they had to park too far away.

There are a few places where additional parking could be provided.

- (1) One site is adjacent to the football field where the buses park for football games.
- (2) A second site is the "snow field" on the west side of the Boston Post Road opposite the football stadium.
- (3) A third potential site is an expansion of the parking lot that currently exists between the High School and Milton Road.
- (4) A fourth potential site for additional parking would be in the vicinity of the new gym along Milton Road.

The above locations are described in detail in Section 6. Additional possible locations are also described in Section 6. A permit parking plan is also discussed in Section 6.

SECTION 5 – QUESTIONNAIRE SURVEYS

5.0 SURVEY DISTRIBUTION

Two different questionnaire surveys were distributed. One survey was distributed through the Backpack Program for the Elementary Schools and the Middle School that was to be completed by parents. Only one survey form was to be completed per family. The second survey was geared towards the High School students and was distributed through the History classes at the High School. 795 surveys were returned, including 447 from the Elementary Schools and Middle School and 348 from the High School. Since only one survey form was to be completed per family, the surveys account for a significant number of students. The surveys returned from the Elementary School and Middle School parents represented 593 Elementary School children (249 students from Midland School, 126 students from Milton School and 218 students from Osborn School), as well as 150 students from the Middle School and 59 students from the High School, for a total of 802 students. As stated, about 348 High School students also submitted the surveys. Each survey from the Elementary Schools and Middle School accounted for an average of approximately 1.79 children per family. Copies of the survey forms are enclosed in Appendix B.

5.1 SURVEY RESULTS

Detailed breakdowns of the surveys are enclosed in Appendix B. The following is a summary of the survey results:

Elementary Schools and Middle School Parents' Surveys

At the Elementary Schools, the majority of children are driven to and from school. Not including students in carpools, at Midland School, 55% of the students are driven to school in the morning and 63% are driven home from school in the afternoon. At Milton School, 65% are driven in the morning and 81% are driven home from school. Osborn School had the highest percentages of students being driven, with 83% of the children being driven to school and 84% being driven home from school.

At Midland, 13% say they carpool sometimes in the morning and 6% carpool in the afternoon. At Milton, 10% say they sometimes carpool in the morning and 7% in the afternoon. At Osborn, about 10 to 14% state that they sometimes carpool.

Approximately 35% of the respondents from Midland School said they sometimes walk to school when the weather is nice, while another 7% sometimes bicycle. At Milton, approximately 44% say they sometimes will walk to school in nice weather, while 11% sometimes ride bicycles to school. 24% of the respondents from Osborn School said they sometimes walk to school when the weather is nice. Only 2% from Osborn indicated that they ever biked to school.

Some Midland School students stated that they take a bus in the morning (i.e., from Indian Village), while some Osborn students stated they take the YMCA bus in the afternoon. Otherwise, there is minimal bus use at the Elementary Schools.

For the Middle School, more than 70% responded that students are driven with another 6% carpooling. About 17% of the students say they sometimes walk in the morning, 25% in the afternoon. About 6% rode bicycles to school sometimes.

The main factors affecting how students get to school are distance and safety. The next three factors are the age of the children, the time required and the weather conditions. Convenience of dropping off the students, a lack of other options and heavy backpacks were also commonly referenced. Only 8 parents responded that the factor for why children walk or bike to school is for exercise.

To convince parents to let their children walk to school and convince children to walk to and from school, the main responses were additional crossing guards, additional/improved sidewalks or shortcuts/paths, and other children to walk with. Locations suggested for additional crossing guards were the intersection of Apawamis and Midland Avenue, and the intersection of Forest Avenue and Eve Lane for Midland School; the intersection of Playland Parkway and Milton Road for Milton School; the intersection of Boston Post Road and Sonn Drive for Osborn School; and the intersection of Milton Road and Apawamis Avenue for the Middle School, as well as at the traffic circle at the Firemen's Memorial. Other significant factors included are other children to walk with, more adult supervision, WALK/DON'T WALK signs, and more monitoring of vehicle speed. Some parents stated that because there is a significant amount of traffic, the distance and/or the age of the children, there would be nothing that would convince them to let their children walk to school. Vandalism to bicycles at the Middle School was also mentioned as why some students no longer come by bicycle.

21% of the respondents from Midland School state that they live within $\frac{1}{4}$ mile of the school, while 29% live between $\frac{1}{4}$ mile and $\frac{1}{2}$ mile of the school, and another 20% live between the $\frac{1}{2}$ mile and 1 mile. 24% stated they live between a mile and 2 miles, while only 6% stated they live more than 2 miles away. For Milton School, 27% of respondents stated that they were within $\frac{1}{4}$ mile, while 30% stated that they were between $\frac{1}{4}$ mile and $\frac{1}{2}$ mile, and another 37% were within $\frac{1}{2}$ mile to a mile. Thus, only 5% were between 1 and 2 miles and only 1% of respondents stated that they were greater than 2 miles. At Osborn School, 20% stated they were within $\frac{1}{4}$ mile while 20% stated they were between $\frac{1}{4}$ and $\frac{1}{2}$ mile and 22% stated they were between $\frac{1}{2}$ mile and 1 mile. 26% of the Osborn respondents stated that they are between 1 mile and 2 miles, while 8% stated that they were greater than 2 miles.

For the distance to the Middle School/High School, 7% stated that they were within $\frac{1}{4}$ mile, 18% stated that they were between $\frac{1}{4}$ mile and $\frac{1}{2}$ mile while another 33% were between $\frac{1}{2}$ mile and 1 mile. 35% stated they were between 1 mile and 2 miles, while a total of 7% stated that they were more than 2 miles away from the Middle School/High School.

From the surveys for Midland School, 46% said they would use buses, if available, for the Elementary Schools, while 46% said they would not utilize busing (8% were undecided). For Milton School, 42% of respondents stated that they would consider busing, while 58% stated that they would not. At Osborn School, 59% stated they would utilize busing, while 37% stated they would not (with 4% undecided). For each of the Elementary Schools, some small amount of parents did not answer the busing question, which would tend to indicate a slightly higher percentage that would not utilize buses. Also, some parents may indicate that they would utilize busing, but then will still drive their children.

58% of the parents stated they would utilize busing to the Middle School, while 36% of the parents stated they would not (6% undecided). Similar percentages said they would use busing for the High School (which is the opposite of what the High School students said (see High School student surveys below).

16% of the parents at the Midland School say their children participate in before school activities, while 65% state that they participate in after school activities. Of those who participate, the average was about 2 days per week for before school activities and slightly more than 2 days per week for after school activities.

15% of the parents at the Milton School say their children participate in before school activities, while 77% state that they participate in before school and after school activities. Of those who participate, the average was 2 days per week for before school activities and after school activities.

10% of the parents at the Osborn School say their children participate in before school activities, while 80% state that they participate in before school and after school activities. For those who participate, the average was 2 days per week for before school activities and 2.5 days per week for after school activities.

The Middle School had slightly higher participation rates, and more days per week for after school activities.

Of the people responding to the question about the staggering of start times, there was a significant negative response. However, it should be noted that the survey indicated a staggering of a half hour period. A shorter stagger may produce more positive results based upon discussions with various parents. In addition, a significant number of parents did not respond to the question, as they would not have two children at the same school. 42 of the families from Midland School who responded to the survey had children in both grades K-2 and grades 3-5. For Milton School, 22 families responding to the survey fell into this category, while 41 of the surveyed families from Osborn School had children in both sets of grades.

Many of the comments were similar and were a follow-up to the items discussed above and are discussed elsewhere in this report.

High School Student Surveys

The 348 completed surveys from the High School students were well-distributed amongst the grades: 94 surveys were from freshmen, 92 from sophomores, 83 from juniors and 79 from seniors.

50% of the High School students say they are driven to school, while approximately a third say they drive themselves to school. Only 12% say they ever walk to school, about 10% sometimes carpool and only 2% sometimes ride a bicycle. In the afternoon, slightly less say they are driven home, while the percent walking and carpooling increased.

The overwhelming reason for how students get to school is distance. The other major reasons were after-school activities, time, weather and convenience. Some students state they drive because of laziness and the availability of a car, while some stated they did not drive because there was no parking available.

5% of the students said that they lived within $\frac{1}{4}$ mile of school, 21% between $\frac{1}{4}$ and $\frac{1}{2}$ mile, 30% between $\frac{1}{2}$ and 1 mile, 31% between 1 mile and 2 miles, and 13% greater than 2 miles.

An overwhelming percentage (82%) said they would not consider busing, with only 12% stating they would consider busing and the rest (6%) undecided.

21% stated they participate in before-school activities, while 80% participate in after-school activities at least one day a week.

The main comment received from the students was that more parking was needed for students, particularly for seniors. Not allowing sophomores to drive was another consideration, as well as converting the tennis courts into a parking lot. The use of Parsons Street as a drop-off area until 8:30 was also criticized. Some students, however, did state that the situation is not that bad, that more students should carpool and that there shouldn't be an increase in pavement.

SECTION 6 – POTENTIAL IMPROVEMENTS

6.0 INTRODUCTION

Two types of improvements are recommended to improve traffic flow and parking, as well as to increase safety. These improvements are physical improvements (i.e., road widening, additional parking areas) and non-physical improvements (such as staggered hours, increasing carpooling). Some improvements are being recommended for all of the schools, while others are specific for a specific school. Some improvements that were brought up during the public discussions and the surveys are discussed in the following sections, but are not recommended, at least not at this time.

Traffic safety conditions at schools in other parts of the country are being improved through a program called “The Three E’s”, Education, Engineering, and Enforcement. The most common problem around school zones is generally too many vehicles where students cross streets or are picked up/dropped off and excessive speeding. Education could alert people to ways that they can improve safety by driving slower or by traveling by walking or by bicycle. The Educational portion could be through providing a transportation curriculum for children in kindergarten through fifth grade. This could include training on pedestrian and bicycle safety and the positives of walking. The Engineering portion could consist of the installation of flashing beacons for lowering the speed limit (which were installed this past year), curb extensions, or the modification to the parking and pick up/drop off areas. The Enforcement portion could consist of increased speed monitoring and the utilization of the SMART trailer, which is the trailer the Police utilize, which alerts drivers of their speed.

One of the biggest problems at the school is parents parking where they are not supposed to, getting out of their cars to talk or go into schools, or stopping in a place where they disrupt the flow of traffic. It is imperative that these people follow the proper operating procedures. The parents must be informed and reminded of the procedures regarding where they can stop and where they can park.

The advantages and disadvantages of each of the improvements are discussed below:

6.1 IMPROVEMENTS RECOMMENDED FOR MORE THAN ONE SCHOOL

Certain improvements are recommended for more than one school such as for all of the elementary schools or for the Middle School and High School.

Education

A critical factor to improve traffic and parking conditions at the schools is through education. Education could be provided through various means. This could incorporate teaching children the benefits from walking, the impacts on the environment from driving cars, and how to safely walk or ride a bicycle to school. Traffic educational programs are being held throughout the world and are becoming popular in certain areas of the United States. Various public agencies can provide materials such as brochures, teaching

materials and videos to schools. TRC can help the School District obtain some of these materials. Getting people to change their habits is not an easy task. However, it can be done through education and demonstrating the benefits. A good example of this is the recycling program, which was also not looked on too favorably when it was originated.

The educational factor not only involves the students, but the parents as well. Parents need to understand the cumulative impacts of their actions. Students could help reinforce the benefits to their parents. Parents must understand that their child is not the only child at the school. The parents should be reminded of the traffic/parking requirements at varying times throughout the year, not just at the beginning of the year. It is important that parents do not park/stand in the pick p/drop off lanes or travel lanes.

Education of safe walking/bicycling is critical and helps the children not only when going to/from school, but in every day life. Students should learn to cross at the supervised crossings, when available, and not to cross between cars.

Encouragement of Walking/Bicycling

In conjunction with the Education described above, the encouragement of walking will provide a benefit to the schools. There are various programs being established throughout the country. For example, Florida has started the "Safe Ways to Schools" program.

Many areas participate in a national "Walk to School Day" or a "Walk a Child to School Day", which was held last year on October 6, 1999 in some communities throughout the country and will be held again on October 4, 2000. These days highlight the benefits of walking and the importance of safe walking. They are also sometimes supported by various agencies/organizations such as Partnership for a Walkable America.

Another way to encourage walking is through incentives. Students could possibly receive community service credit, or some credit through scouting or the YMCA. Classes could have contests to see which have the highest percentage of walkers.

Children should not walk or bicycle without supervision until they are old enough to properly perform these tasks safely.

Portable Roadway or Overhead Warning Signs

Portable roadway signs similar to those in Harrison could be utilized in some crosswalk locations, but not all of them. The signs could be taken out/put away each day. One location is at the mid-block crossing in front of Midland School. Another possible location is at the intersection of Milton Road and Apawamis Avenue (see Picture No. 4 in Appendix C). The concern here is that a High School or middle School student would walk away with the sign or put it in a hazardous location. Overhead warning signs could be considered including a school crossing sign or a flashing beacon above an unsignalized crosswalk could be considered as a distant warning to drivers. A possibility for this is at the crosswalk along Midland Avenue in front of Midland School. However,

there are some concerns regarding these that the driver maybe looking at the overhead sign and not see the person crossing.

Enforcement

Even though each of the schools have flashing beacons indicating the 20 mph speed limit in the school zones, this does not ensure the safety of students as they cross the streets. Enforcement is a key. Enforcement has been brought up as a concern of many parents and was a major comment expressed by the City Planning Commission. Various locations have been mentioned for this enforcement in the vicinity of each of the schools. Two of the most prevalent roadways for enforcement would be Boston Post Road (near Osborn Road and near the High School) and along Playland Parkway at its intersection with Milton Road. Due to the number of Police Officers that would be available, the locations of enforcement would need to rotate. Utilization of the speed trailer in the school areas (which is currently done) is also beneficial (see Picture No. 38). However, without enforcement, this could lower the trailer's effectiveness.

Because two Police Officers and the Parking Enforcement Officer are generally serving as crossing guards during the pick up and drop off periods, there are not enough Officers to provide speed enforcement. If the City is able to hire more crossing guards and relieve the Officers from crossing duty, enforcement could be significantly upgraded. This would tend to slow the traffic, possibly encouraging more children to walk to/from the school.

A possibility in conjunction with the increased enforcement is to double the traffic fines in school zones (if legal in New York State), which has been done in other states and is done in construction zones

Additional Crossing Guards

It is not practical or realistic to add crossing guards to every location. The locations that the City currently employs crossing guards are the appropriate locations. Parents have requested crossing guards at various other locations including, but not limited to, at the Firemen's Circle, the intersections of Midland Avenue and Apawamis Avenue (discussed below under Midland School), Milton Road and Apawamis Avenue, Milton Road and Playland Parkway, Forest Avenue and Eve Lane, as well as the intersection of Boston Post Road and Sonn Drive. If proper crossing guards could be found, it would be beneficial to have crossing guards at some of these locations if more children started walking. However, there are not that many children walking at some of these locations to warrant a crossing guard, although some may argue that if the crossing guard was there, they would let their children walk.

A crossing guard is not recommended at the intersection of Boston Post Road and Sonn Drive since there is a signalized crossing with a crossing guard nearby. The majority of people crossing at the intersection of Milton Road and Apawamis Avenue are older students who are able to cross easier. The traffic circle is confusing to some people because they are not familiar with the proper operation as there are few circles in the area.

Crossing at all of these locations will be improved significantly if enforcement can be increased and vehicles drive slower.

If the City is able to hire more crossing guards, the most advantageous place to utilize the additional crossing guards is to replace the two Police Officers who are currently performing crossing duty. This way, these Officers can be used on enforcement, especially speed enforcement in the vicinity of the schools, providing a significant benefit. Additional crossing guards hired, if any, could then be used at the other places suggested. Having a reserve pool of crossing guards would relieve the Police Department from utilizing additional Officers.

A possible method to maintain the crossing guards is to possibly utilize them for parking enforcement at the schools such as at the High School/Middle School for vehicles parking in the fire lanes and for parking in the residential areas or without the proper permit, as discussed in other sections of this Study. Having split shifts for the crossing guards, so the guard is only working part of the day may also help in the hiring of more guards. another possibility is not requiring certain crossing guards to work the midday shift, such as at locations further from the schools where kindergarten students would not be walking.

School Staff Traffic Assistants/Monitors

In general, the schools have staff, whether school staff or separately hired personnel, to help with the flow of traffic and safety during pick up times. These monitors try to keep proper flow of traffic during pick up time. However, they take a significant amount of verbal abuse from some parents. The parents must learn to listen to these assistants. It is recommended that the schools maintain these assistants. The school traffic committees or other school staff could help these assistants. Some parents have requested additional assistants such as at Midland School to discourage illegal stopping/parking and illegal pedestrian crossings. If additional people were available for the fifteen minutes in the afternoon, it would be helpful. However, it is unlikely that additional staff would be available.

Staggered Start/Finish Times

Staggered start (and finish) times are a major recommendation by TRC to improve traffic flow. Osborn School currently staggers the release time for its kindergarten students. The kindergarten students at Osborn School are released at 2:50 PM, while the rest of the school is released at 3:00 PM. This helps the kindergarten student who is now *not getting* out with the whole school, but is with a smaller group. The parent of the kindergarten student can pick up his or her child quickly and easily before the rest of the parents arrive.

The recommended staggered start/finish times at the elementary schools is to have the kindergarten through second grade students start ten to fifteen minutes earlier than the third through fifth grade students. Thus, the kindergarten through second grade students would finish school ten to fifteen minutes earlier. This is sufficient time to remove a significant amount of traffic before the second wave of traffic comes.

At the Middle School and High School, a staggering is also recommended. Currently, the High School and Middle School start and finish at the same time. Staggering these schools by fifteen minutes will help traffic flow at both schools. Staggered start/finish times would provide a significant relief to the various schools.

A significant portion of traffic would be removed at the schools before the second wave would arrive. It is imperative that parents who will park, park in areas that do not affect traffic flow.

The staggered times may place some inconvenience on families with children in both sets of drop-off times, but this would be minor. The stagger would be short enough where two trips would not be needed. At the elementary schools, the older children can play outside during the nice weather and could possibly use the multi-purpose room or gym during bad weather. The ten to fifteen minutes is not a significant time. At pick-up time, the younger siblings can be given a short activity in the multi-purpose room (or gym). Supervision would need to be provided.

At the Middle School/High School, if a student from each school has to arrive together, the students can use the library, cafeteria or other facilities. Another advantage of this is the parents can use the Parsons Street drop-off until 8:05 AM and then the High School students can park here after 8:05 and still make it to their first period class. This was a comment from a number of High School students.

Staggering start times would require some modifications to school schedules, some additional supervision time and would be a contract issue with the school staff. The ten-minute stagger is recommended at first. If this does not account for enough of a gap, then a fifteen-minute stagger would be utilized.

Assignment of Pick-up Areas

A possible method to improve pick-up at some of the schools is to assign special areas in the pick up areas for children to be picked up. This could be done by last name or by grade. Osborn School has the older grades picked up in the back. One such use of this is Midland School could assign areas in the front circle. This way the parents will know where their children are and visa versa. Families with siblings at the school can go to the location of the younger child so that the parent does not have to stop twice. The areas may have to be adjusted slightly during the year to account for the number of children being picked up so that cars are not waiting to get into a certain area and clogging traffic.

Before-School/After-School Activities

Before-school and after-school activities help spread the traffic peak. A number of students participate in these programs, mainly after school, but usually only for one or two days a week, especially in the elementary schools. Increases in these activities will help traffic conditions at the schools, as traffic becomes dispersed. Disadvantages are that some parents may need to take two trips if only one child is participating. Also, these activities would reduce utilization of the bus, if busing were re-introduced.

Carpooling Program

A carpooling program, consistent with recommendations from previous Studies, should be established. TRC can provide information to the individual School Traffic Task Forces on the establishment of a carpooling program. This will help reduce some traffic at the schools. However, for this to have any effect, parents will need to be involved in the entire process. This is part of the Education program discussed above. Ways to encourage carpooling besides providing the positives of such a program would be providing a separate pick-up/drop off area and/or a separate parking area. However, areas for this are limited at some of the schools. Stickers could be provided to identify the carpool vehicles. Some parents had stated that they would not be in favor of carpooling because of various reasons such as they have a child seat in the back of the car and their neighbors are always late or they do not trust their neighbor's driving.

Busing

The re-introduction of busing was reviewed as part of this Study. It is not recommended to bring back busing at this time, but it could be considered some time in the future. Busing was previously disbanded because of limited use and high cost. Some parents did state they would like busing brought back but the amount of utilization would still be questionable. Some of the other recommendations in this Study would work against busing utilization. If busing was instituted, for families with more than one child with one qualifying for busing, consideration should be given to the second child utilizing the bus for a fee. Otherwise, if they are driving the older child to school, they will also drive the younger to school. Buses also have other safety concerns and the circulation patterns at each of the schools will have to be re-reviewed. If buses are brought back, and not well utilized, they could actually exacerbate the situation. The use of smaller size buses should be considered if busing is ever brought back.

Sidewalks/Crosswalks

In general, the sidewalks and crosswalks in the vicinity of the schools are in the appropriate locations and in good conditions. However, there are many residential streets that do not have sidewalks. Certain sidewalks have been uprooted by trees and are in need of repair such as along Parsons Street adjacent to the Presbyterian Church. Other locations, such as along the Boston Post Road on both sides of Oakland Beach Avenue as well as on Apawamis Avenue east of Midland Avenue should have vegetation cleared. The vegetation has overgrown the sidewalk, thus limiting its effectiveness. Parents stated that the sidewalk through the Recreation property between Milton Road and Midland Avenue floods in certain areas. All sidewalks should be checked periodically. A sidewalk would be beneficial on Billington Court, but this would need to be reviewed by the neighbors. Without a sidewalk on Billington Court, parking should continue to be restricted to one side of the street. Some other locations for sidewalks were suggested by parents but these are in locations further away from the schools such as on Grace Church Street and are more for the review of the City Engineer and the Traffic and Transportation Committee.

A crosswalk could be considered at the intersection of Boston Post Road with Old Post Road, near the south end of the football stadium. This should be done in combination with the traffic calming efforts that the City is considering for Boston Post Road. If parking is provided in the "snow field" lot, this crosswalk may be able to be combined with a crosswalk for this parking area. One concern is that there is no sidewalk on Old Post Road in this area.

Striped Triangles at Corners/Crosswalks

At each of the schools, parents and/or staff, as well as students from the High School, park too close to crosswalks and driveways. This results in the limitation of sight distance for pedestrians trying to cross the street and for vehicles attempting to exit a driveway or roadway. Examples of this are at the crosswalk at Midland School (see Picture No. 6) which illustrates a van parked in front of the crosswalk at Midland School), along Midland Avenue at Platt Lane (see Picture No. 14), and along Parsons Street at the Middle School (see Picture No. 22). Therefore, to improve sight distance, and thus safety, it is recommended that striping be added at each of the corners to prohibit parking. This was previously done along Milton Road at Parsons Street. "No Parking Here to Corner" signs should also be added. New York State Law states that there should be no parking within 20 feet of a crosswalk at an intersection. Some studies recommend even more clearance before a midblock crosswalk. This would result in the loss of some parking. An alternative to this is constructing curb extensions, as discussed later in this Section. However, curb extensions would not work at all of the locations, are more expensive and affect drainage.

Additional Traffic Signals

Additional traffic signals have been requested by parents at various locations such as at the intersections of the Boston Post Road and Sonn Drive, Milton Road and Apawamis Avenue, Milton Road and Parsons Street, and Boston Post Road and Parsons Street. Some of these requests were for signals that would only operate for two hours a day. These temporarily operating signals are not recommended because they result in a surprise/confusion to drivers. It is also not recommended that traffic signals not be installed unless they are warranted, based on traffic signal warrants prepared by the New York State Department of Transportation. Based on a review of these locations, traffic signals are not currently warranted at these locations, thus traffic signals are not currently recommended but could be in the future.

Upkeep of Striping

It is important that the striping on the crosswalks, stop bars and other areas be kept up with fresh paint as necessary.

Testing of Improvements

It is recommended that some of these improvements be implemented before the school year begins. The improvements, particularly those influencing traffic flow, could be

tested and adjusted as appropriate. The individual school task forces should help monitor the situation and help parents learn the patterns. Information should be distributed to the parents prior to school beginning and reinforced possibly at "Back to School" night.

Funding/Assistance of Improvements

It is recommended that the City and the School District review possible funding/assistance that may be available for pedestrian/bicycle improvements through such programs as the Intermodal Surface Transportation Efficiency Act (ISTEA) and the New York State Governor's Traffic Safety Board.

6.2 MIDLAND SCHOOL

IMPROVEMENTS RECOMMENDED FOR MIDLAND SCHOOL

Modifications to Pick Up/Drop Off Pattern

There are some modifications that could be performed to improve the pick up/drop off conditions at Midland School. Parking (and vehicles standing) within the circle, except for the few spaces up against the playground, should be eliminated, at least during pick up/drop off times (see Pictures No. 8 and 9). During the morning, vehicles traveling north on Midland Avenue will continue to make a right turn into the driveway and drop off their children on the curb on the right. Vehicles traveling south on Midland Avenue will turn left into the circle into their own lane and drop off their children at the curb on the left and cross at the supervised crosswalk in the middle of the circle. Striping and/or cones would separate the two lanes. All vehicles exiting the driveway would be required to turn right. The circle may need to be slightly widened and a portion of sidewalk should be constructed on the inside curb. During pick up the right hand lane would be for pick up, with no parking or standing permitted. The inside lane would be a travel lane. Certain areas around the circle could be assigned per grade or last name so that parents know where to pull over and children know where their parents are. A more extensive version of this concept would be to significantly widen the driveway to provide a concrete median.

Pedestrian Paths Behind School

There are two pedestrian paths that are behind Midland School. One of these paths is from the Synagogue and has been closed for a few years. The second pedestrian path is from Eve Lane and the School's Traffic Committee has been informed that this may be closed in the near future. Since these paths reduce the number of vehicles at the school, while provide convenient paths, which would encourage children to walk, it is recommended that the City Council and the School Board should attempt to re-open the path behind the Synagogue as well as maintain the path behind Eve Lane. A review of documents on file did not indicate any existing easements for these paths. Since there are no sidewalks on Forest Avenue (discussed below), a few parents would drop off/pick up their children at the end of Eve Lane.

Parking in Rear of School X *2/2/02*

When the oil tank is removed, additional parking should be provided in the rear lot.

Modifications to Pedestrian Signals at Midland Avenue/Apawamis Avenue *2/2/02*

Some parents had requested a crossing guard at the intersection of Midland Avenue and Apawamis Avenue. The intersection is currently signalized and has pedestrian walk/don't walk signals on only the north side of Apawamis Avenue. It is recommended that all approaches to this intersection be provided with pedestrian signal heads.

IMPROVEMENTS NOT RECOMMENDED AT THIS TIME

Extension of Front Circle

To support the number of vehicles utilizing the front circle, the circle could be extended on each end (see Figures No. 6.1.1 and 6.1.2). This will allow for an extended pick up area and would help if certain grades are assigned to be picked up in certain areas. The extension of the circle to the north could be accomplished without effecting too much (except for the loss of green space). However, extending the circle to the south would result in the loss of the play area for the children. The circle would be extended at just the north end. If the other recommendations do not provide enough benefit, than this could be considered.

Curb Extensions

Curb extensions, or curb bulb-outs, extend the sidewalk or landscaped area onto the street, narrowing the roadway width. The narrowing of the roadway encourages vehicles to drive slower. The extension of the sidewalk increases the visibility of the pedestrians and vehicles. They also provide a shorter distance for pedestrians to walk. These have been installed in the downtown area of Scarsdale and are proposed for the downtown area of Greenwich.

The advantages of curb extensions are: 1) reduce pedestrian crossing distance and time, 2) make pedestrian crossing points more visible to drivers, 3) do not impact emergency vehicles, 4) improve visibility for vehicles pulling out of side streets and driveways, 5) prevent vehicles from passing other vehicles, and 6) possibly enhance aesthetics through increased landscaping. The disadvantages of curb extensions are that 1) they sometimes require the loss of some parking, 2) could form an obstacle to bicyclists, 3) could cause some confusion to drivers when the parking areas are not utilized, especially at night, and 4) could impact roadway drainage.

Curb extensions are a possibility along Midland Avenue but would need to be located along an extended stretch of the road, not just at the school (see Figures 6.1.3 and 6.1.4). Their impact on drainage and on circulation would need to be reviewed by the City Engineer. The sight distance striping described earlier will provide some of the same

benefits at much less cost and with no impacts on drainage, and may be more feasible than the curb extensions (see Figure 6.1.5).

Other Access/Pick-Up Area Changes

Other changes to the access and pick up/drop off changes were reviewed and are not currently recommended. One change was to increase the use of the side driveway. However, this area gets very narrow and there is not a good turn around area (see Picture No. 16). Changes would require loss of field area and loss of trees. Also, children cross this driveway to go between the school building and the playing field/playground.

A second alternative was to construct a second pick up/drop off circle adjacent to the field. This is not adjacent to the school building and would result in the loss of trees and green space.

A third alternative involved using the basketball courts as a parking area or drop off area. The children play in this area so this is not recommended.

Closing the rear access and providing a roadway around the field to serve the teacher lot in the rear of the school was reviewed. This would eliminate the concern of parents of the conflict between vehicles and children when they cross the side driveway to get to the field/playground. However, the teachers are usually in the back lot before the children are in this area, though some conflicts do exist. Providing the road around the field would have a significant impact on the playing field and would require the relocation of the playground.

Another suggestion from parents was reviewed was the removal of the Administration Building to extend the front circle to connect with the side driveway. This is not recommended. It would be very expensive and would not result in sufficient benefit.

Remove Circle

It was suggested by parents to remove the circle and put in a drop off lane. However, this is not recommended, as it would not provide a proper pick up area. It also provides no access for people coming from the north. If a lane was to be provided for people coming from the north, either Midland Avenue would have to be realigned or property would need to be acquired.

Modify Signal at Forest and Apawamis

The traffic signal at the intersection of Forest Avenue and Apawamis Avenue has recently been converted to blinking operation as a result of requests from residents due to traffic cutting through residential neighborhoods to avoid the light. Now, other residents have stated that it is tough to cross Forest Avenue at this intersection. This location should be monitored. If enough children were to utilize a crossing at this intersection, consideration should be given to have the traffic signal operate again. Speed humps or other traffic calming devices could be installed to limit cut-throughs.

Raised Crosswalk

A raised crosswalk has previously been considered for the crosswalk along Midland Avenue at Midland School. Raised crosswalks are generally crosswalks constructed 3-4 inches above the elevation of the street and are intended to reduce vehicles' speed and to enhance the visibility of the crosswalk. They do impact emergency vehicles and do result in an increase in some noise as vehicles slow down before the crosswalk and accelerate afterward. They are generally not to be used on main routes such as snow emergency routes or primary emergency routes, which Midland Avenue is. With the crossing guard at this location, as well as some of the other modifications such as the flashing beacons, re-striping to improve sight distance, and possibly the overhead sign, a raised crosswalk is not recommended at this time.

Conversion of Midland Avenue to One-Way Roadway

Similar to Hewlett Avenue at Milton School, parents have requested that Midland Avenue become a one-way roadway. This is not recommended at this time. Midland Avenue is a different type of roadway than Hewlett Avenue. Midland Avenue is a main roadway and also used as an emergency route. Conversion of this roadway to a one-way roadway would result in significant diversions to school traffic and non-school traffic as well as could cause congestion at other locations

Sidewalks along Forest Avenue

Many parents have stated that their children would walk if there were sidewalks along Forest Avenue. Sidewalks along Forest Avenue north of Apawamis Avenue (they currently exist to the south) are desirable and recommended from a walking standpoint but they would be very expensive and would require a review of the right-of-way along Forest Avenue. There are various walls and rock outcroppings that are in the way of the potential sidewalk. Grading work and possibly retaining walls would also be required. If the sidewalk was installed, the students could use it to reach Eve Lane where they could use the trail. There are no sidewalks on Eve Lane but this is a very low volume roadway.

Utilization of the Recreation Center Parking Lot

Some parents are currently utilizing the Recreation Center parking lot as a pick up/drop off point. Generally, this is not a problem except on Wednesdays when the Senior Citizens are leaving the Recreation Center and cannot get out due to school parents blocking traffic. The Recreation Department is looking to increase the size of the Center as well as its use. The Recreation Department is looking at increasing parking in this lot, which will help the school if there are no activities planned. Thus, the School should try to coordinate schedules of activities with the Recreation Department. A possible interior loop road could someday be constructed at the Recreation Center to be used as a drop off, utilizing the existing driveways and traveling east of the large tree. However, this will result in the loss of green space. Another possibility is to utilize the Recreation Center property to create a loop road opposite Midland School for southbound traffic, but this is not currently recommended and would result in the loss of recreational land. One

problem with the parents utilizing the Recreation Parking lot is that the students, and parents, are crossing Midland Avenue at the Recreation driveway instead of walking the short distance to take advantage of the crossing guard. Some of these children are going to the Midland School field so they are taking the shortest trip.

6.3 MILTON SCHOOL

IMPROVEMENTS RECOMMENDED FOR MILTON SCHOOL

Modify Pick up/Drop Off Area and Relocate Bus Stop

The existing bus stop is currently located just north of the existing front circle exiting driveway, while the pick up/drop off area is just a small stretch between the circle exiting driveway and the parking lot entrance. It is recommended that these locations be switched with the bus stop being relocated to where the existing drop off area is (see Figure 6.2.1).

The drop off area would then be located on the right hand side of the road, extending from the fire lane driveway entrance (or from the crosswalk at Robert Crisfield Place) to the crosswalk at the fire lane driveway exit. This area would be signed for pick up and drop off only, with no parking permitted. Thus, parents would not be able to leave their cars unattended in this area. In conjunction with this, parking on the left side of the road between the crosswalks should be prohibited to provide for a smoother flow of traffic in this area. This may force some parents to park further east on Hewlett.

It is important that parents do not stop in the travel area adjacent to this new drop off/pick up area because this would impede traffic flow and could also result in children cutting between parked cars. It is also imperative that the parents respect the neighbors and do not block the driveways of the neighbors.

Along the pick up/drop off side along Hewlett, there should be a curb installed as this area becomes very muddy during wet weather, which causes parents dropping off/picking up children not to pull all the way over so that the children are not getting out of the car into the mud. This area used to be grass but now has turned to dirt as a result of cars pulling up on this area.

To further enhance the use of this pick up/drop off area, it would be desirable to add a stairway in the middle of the drop off area, which would lead to the school entrance near the office/gym. This would essentially eliminate pedestrian conflicts with vehicular traffic, especially if vehicular traffic is discouraged from utilizing the fire lane.

Extend One-Way Section of Hewlett Avenue

Currently, Hewlett Avenue is one-way during pick up and drop off times from Milton Road to Fairway Avenue. On the stretch between Fairway and Forest Avenue that is currently two-way, parents are parking on both sides of the roadway while facing in the eastbound (towards Forest) direction (see Picture No. 28). Thus, with the parking on both sides, the travelway on Hewlett becomes essentially one lane. Therefore, it is

recommended that the one-way pattern be extended along Hewlett Avenue from Fairway Avenue to Forest Avenue during the pick up and drop off times.

It is not recommended that the one-way operation exists for twenty-four hours a day. Generally it is not desirable to have a roadway one-way for only a limited portion of the time. However, Hewlett Avenue has been operating safely and efficiently as a temporary one-way roadway for a number of years. It should be noted that a few vehicles were observed traveling the wrong way on Hewlett during the one-way periods.

Stop Sign/Crosswalk on Fairway Avenue

A STOP sign should be installed on Fairway Avenue at its intersection with Hewlett Avenue (see Picture No. 23). A crosswalk across Fairway Avenue should also be provided.

Parking Modification on Fairway Avenue

Parents are currently parking on both sides of Fairway Avenue, narrowing the travelway. Parents were also observed parking adjacent to the fire hydrant located along Fairway. Because of this limited travelway and since there are no sidewalks on Fairway, parking should be limited to the east side of Fairway during school pick up and drop off times (see Picture No. 23).

Signage at Parking Lot and Fire Lane

Signage should be provided to discourage parents from entering and using the staff parking lot to pickup and drop off children. These parents are then trying to turn around and are conflicting with the student pedestrians. Parents were also observed using and parking in the fire lane. There should also be signage discouraging the use of the fire lane. (The Fire Lane is discussed further below.)

Staff Lot

The School is currently reviewing additional parking spaces in the parking lot. These additional spaces should be installed.

POTENTIAL LONG RANGE IMPROVEMENTS FOR MILTON SCHOOL

Utilization of Fire Lane

It is not recommended at this time to utilize the fire lane as a pick up/drop off roadway. This creates conflict points with pedestrians (see Pictures No. 26 and 27). However, if after testing of the previous recommendations, this option could be considered. It would be recommended that the fire lane be utilized by only the lower grades or when students have to carry large items into school. However, this would be difficult to control, especially during rainy days. It would also be imperative that people did not park in the fire lane. The road would need to be widened which may require a retaining wall. Other

possibilities for this fire lane is to possibly provide the handicapped parking in this area. Ambulances may utilize the fire lane, so it is important that a travel lane remain clear.

6.4 OSBORN SCHOOL

IMPROVEMENTS RECOMMENDED FOR OSBORN SCHOOL

Switch the Teacher and Visitor Spaces in Front Lot/Extend Queue Area

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Currently the teachers park on the west side of the front parking and visitors park on the east end. Visitors are not supposed to angle-park there during the drop off and pick up periods but there are often cars there during these periods, thus disrupting the queue of vehicles arriving. Since the teachers arrive/leave before the parents, and since cars are generally parked here rendering the lanes ineffective, it is recommended that the teachers park on the east side (adjacent to the field) and the parents park on the west end, with no parking permitted during pick up and drop off times. In conjunction with this, the pick up/drop off point should be shifted further to the west to provide a longer queuing area. An extension of the canopy would help in bad weather. Some teachers like parking in their current area because they can see their cars from the office and/or their classrooms.

Shift the Rear School Driveway to Align with Sonn Drive

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During the recent modifications to the Osborn Home Retirement Community, a triangular piece of property was provided to the school for this re-alignment (see Picture No. 33). In conjunction with this shift, the driveway should be widened to provide two lanes exiting, a left-turn/through lane and a right-turn lane (see Figure 6.3.1).

There are two main advantages to this improvement. The school driveway would now be properly aligned with Sonn Drive. The current off-set caused confusion between vehicles turning left out of the school driveway and vehicles turning left out of Sonn Drive. Thus, safety would be increased. A second advantage of this improvement is that vehicles would now be able to turn left out of the driveway. A number of parents are currently making this turn illegally now. In addition, it will allow parents to travel in the direction they desire, as well as, more importantly, no longer force traffic back to the main intersection of Boston Post Road/Osborn Road/Oakland Beach Avenue. The left-turn maneuver from the driveway is currently prohibited because of the long delays experienced by vehicles turning left. Since there was only one exiting lane, vehicles desiring to turn left would have to wait. With the two lanes, vehicles desiring to turn right would be able to by-pass the left-turning vehicles. With the recent installation of the flashing beacons lowering the speed limits during school hours, in conjunction with increased police enforcement, the left-turn maneuver should be able to be made easier.

A disadvantage of this is that the crossing area in front of the driveway becomes wider for pedestrians. A second disadvantage is the cost, including modification to the wall.

Provide Additional Parking Spaces along Rear School Driveway *See*

In conjunction with the shifting/realignment of the driveway, provide additional angled parking spaces along the southern side of the driveway (the field side) (see Figure 6.3.1). This will provide some of the additional parking required. A disadvantage to this is that the parking would slightly encroach towards the field and conflicts with the Rye Recreation Master Plan Study, which calls for a potential widening of the field.

Clear Vegetation along Sidewalks *JC*

Vegetation along portions of the sidewalks along the Boston Post Road should be cleared so that the sidewalk regains its full walking area (see Pictures No. 29, 34, 35, and 37). Also, some sidewalks in this area are in need of maintenance (see Pictures No. 36).

Provide Crosswalk along Old Post Road across Thruway Access Drive *JC*

Parents have asked for a crosswalk along Old Post Road across the Thruway Access Drive. Since there is a crosswalk along Old Post Road at Playland Access Drive, providing a crosswalk here would be appropriate. Cars do not stop on the Access Drive until they reach where the children are walking. Pulling the stop bar back before a crosswalk will tend to get the cars to stop slightly earlier. The cars will then roll up before they turn. This is the path some children take to Osborn School. One problem with this path to school is that the sidewalk on the Old Post Road Bridge over Playland Parkway is very narrow.

POTENTIAL LONG-TERM IMPROVEMENTS FOR OSBORN SCHOOLUse of Osborn Home Property

An improvement recommended above was the construction of additional parking spaces along the rear driveway. However, this places the cars closer to the playground and field area. It also conflicts with the Rye Recreation Master Plan, which had proposed to expand the field area. A potential long-range improvement would be to purchase or lease property from Osborn Home to provide an additional parking area. This area would be away from the playground and field. However, it is questionable whether this property would be available.

Providing Parking Lane on Osborn Road *JC*

If the other improvements do not relieve the parking/traffic problems at the school, consideration should be given to providing a parking lane along Osborn Road. This will move these cars out of the travel-way, as parked vehicles now are impeding traffic in the westbound direction. However, with road-widening, right-of-way from the school may be required, the sidewalk would be shifted closer to the school, several trees would be lost, and drainage would be impacted. Providing parking cut outs along Osborn Road, and thus avoiding the major trees has generally the same disadvantages (except for the

loss of some of the trees), and would result in less parking spaces being added (see Figure 6.3.1).

Modifications to Front Property

Certain modifications to the front parking aisles could be performed to add some parking spaces. This would result in the loss of green space and some trees. Also, modifications to the front circle, extending it toward Theall Road, would help the queue and also provide some additional parking. This will also result in the loss of green space and possibly some trees. There are various alternatives that could be performed here but each one would encroach on the field or the green space next to the School, and possibly the loss of trees (see Figures 6.3.1, 6.3.2 and 6.3.3).

Converting Osborn Road to One-Way

It is not currently recommended to convert Osborn Road to a one-way roadway. Osborn Road has different operating characteristics than Hewlett Avenue. Osborn Road, besides providing access to the school, also provides access to/from Harrison as well as serving various commercial properties. It would be more desirable to remove the parking from Osborn Road (as described above through the staggered start times, additional on-site parking areas or through widening to provide a parking lane). However, this is an option that could be considered in the future.

The benefit of making the roadway one way is that vehicles would be able to park along the roadway. There would also be less conflicting traffic. To be able to have on-street parking, the one-way roadway pattern would need to be from Boston Post Road to Harrison, possibly to Theall Road. Thus, students would not have to cross traffic. However, from a traffic flow standpoint, it would be more desirable to have traffic flow in the opposite direction.

There are problems associated with making this roadway one-way. Traffic currently utilizing this roadway would now be forced to divert through another area. If this traffic diverted through the Glen Oaks area, additional vehicles would then be traveling through a residential neighborhood. Depending upon the direction of flow, these vehicles would then have to make a left turn onto the Boston Post Road at an unsignalized intersection. In addition, families that live in the Glen Oaks area who are driving to school would now also be required to make the left turn onto the Post Road if the one-way pattern began at Boston Post Road. Vehicles circling from the school exit driveway to the entrance driveway would not be able to turn left out of the driveway.

IMPROVEMENTS NOT CURRENTLY RECOMMENDED AT OSBORN SCHOOL

Crosswalk at School Rear Driveway/Sonn Drive

Some parents, either through the surveys or through the parent conferences, had asked about a crosswalk across Boston Post Road between the School Driveway and Sonn Driveway, or if a traffic signal could be installed in this location. Providing a mid-block

crosswalk at an unsignalized location is not recommended from a safety standpoint even though the flashing beacons have been installed reducing the speed limits to 20 mph, and that vehicles are supposed to stop for pedestrians in crosswalks. Some parents/children were observed crossing at this location. In addition, these people have a viable alternative of walking one block along the Boston Post Road and crossing at the traffic signal that is accompanied by a crossing guard and equipped with a pedestrian signal. It is recommended that the vegetation be cut back along the Boston Post Road to provide for a more appealing area to walk.

It is also not recommended installing a traffic signal at this location since it does not meet traffic signal warrants. Having a traffic signal operating during only peak school hours is not desirable.

A traffic signal would not meet the New York State Department of Transportation traffic signal warrant criteria based on volumes and the spacing between the two other signals located on Boston Post Road at Osborn Road and at Old Post Road.

Installing Guiderail Along Boston Post Road

Some parents have asked for a guiderail along Boston Post Road, separating the sidewalk from the road. It is recommended that the clearing of the vegetation and the enforcement measures, combined with the traffic calming measures be tried first.

6.5 RYE MIDDLE SCHOOL

IMPROVEMENTS RECOMMENDED FOR MIDDLE SCHOOL

Widening of Fire Lane/Travel Lane

The travel lane in the Middle School Parking Lot also serves as the fire lane. Because of the limited visitor parking, vehicles were observed parking in this lane. It is recommended that the parking lot be extended towards Parsons Street and Boston Post Road, with the additional area being converted to parallel parking for visitors. Because of the hill, the grades adjacent to the lot going towards Blind Brook would need to be reviewed in detail. If desirable, time restrictions (i.e., no parking during pick-up/drop-off periods) could be considered (see Figure 6.5.2 under Rye High School).

Visitor Parking

There is currently very little visitor parking at the Middle School. Thus, visitors are parking in the fire lane (as discussed above) or in front of the chains blocking the pedestrian area/fire lane along the front of the High School (see below). Since it is critical that these areas be kept free, alternative proper locations should be provided. This could be done in the possible new lots as described for the High School. Another possibility is the widening of the existing lot as described above. A third possibility is since the teacher/staff parking spaces are assigned and numbered, a visitor could park at a temporary parking space and then proceed to the office for a parking space number of a

staff parking space that may be available that day. A card with a number could then be given to the visitor to be placed on the car's dashboard. Visitor spaces could be striped on Parsons Street also with a two-hour time limit, if necessary, although these would be harder to keep available.

Re-establish Emergency Access

Access for emergency vehicles at the Middle School (and the High School) has been hindered due to the locations of vehicles parking in the lots. As previously stated, vehicles are sometimes parking in the fire lane in the Middle School lot on the Parsons Street and the Boston Post Road sides, thus partially blocking access to the rear of the school. Also, parking is occurring in front of the chains that separate the High School and Middle School parking lots from the pedestrian area/fire lane in front of the High School offices, thus blocking emergency access. No vehicles are supposed to park in these areas. Thus, parking should be prohibited here. If it was only prohibited on one side (i.e., the Middle School side but not the High School side) then the emergency vehicle would have no place to turn around, unless a turn-around area was created. Turning around would slow the response of an ambulance getting to the hospital. A potential modification would be to provide a soil stabilizer such as "grasscrete" access to the grassed area in front of the schools. This would result in the loss of some parking on Parsons Street and would need to maneuver past the trees, requiring some re-grading and tree trimming possibly.

Also, a concern raised by the Fire Department is the chain for the small access to the rear of the school. It is recommended that during school operating hours or when activities are occurring on the fields, the chain be taken down and the driveway be blocked by cones so that an ambulance can get through quickly.

Relocation of Fire Hydrant

Just west of the Middle School Driveway along the south side of Parsons Street is a fire hydrant. No parking is permitted within 15 feet of a fire hydrant (see Picture No. 21). However, there is enough room for a vehicle to park between the hydrant and the driveway. Since, as previously discussed, there is the need to stripe/sign a "No Parking Here to Corner" area at the driveway, it may be possible to relocate the fire hydrant to this area since no parking is permitted adjacent to the hydrant. However, utility plans would need to be reviewed to determine the impact of moving the hydrant. The cost for relocating the hydrant may not be economically feasible in relationship to the one parking space gained. If the hydrant is not moved, sight distance will be increased.

Modify Drop-off Area/Methodology

The Middle School drop-off area for vehicles travelling eastbound on Parsons Street extends across the area between the Middle School and High School Driveways. Vehicles traveling westbound on Parsons Street drop off in the same area, but on the opposite side of the street. Parents are not permitted to turn into the Middle School parking area in the morning, although some were observed doing this, especially during

rainy days. Vehicles turning left into and out of the Middle School Driveway were causing congestion. The main problem with the existing drop off is that vehicles traveling east on Parsons Street are not using the whole drop-off area, just the beginning, since this is the area closest to the Middle School (see Picture No. 19). This is causing traffic to back up to the Boston Post Road. A second problem is vehicles turning into the Presbyterian Church to turn around.

There are a couple of possibilities to improve this drop off condition. If the drop off method is to remain similar, either the drop-off area should be relocated to before the Middle School Driveway, the crosswalk could be moved closer to Milton Road or parents should be directed to move up to utilize the entire drop-off area. The concern of shifting the drop-off area towards Boston Post Road is that it could continue to cause a vehicle back up towards the Boston Post Road, similar to what currently is occurring, so this would not be the desired option.

It is recommended to modify the drop off methodology at the Middle School. Parents have asked for the ability to pull into the school driveway. This could be accomplished by permitting vehicles traveling east on Parsons Street could be permitted to make a right turn into the parking lot and circulate around the lot. When exiting, these vehicles would be required to make a right turn out of the driveway onto Parson Street. Other vehicles traveling east on Parsons Street could still use the existing drop off area if so desired. Vehicles traveling west on Parsons Street would continue to drop off as they currently are and would not be permitted to turn into the driveway. Since cars would then be traveling in the parking area, it would be important to provide a clear pedestrian path from the Parsons Street drop off area to the School entrance, possibly with paint or cones.

Modify Pick Up Flow {S...}

Some of the other improvements will improve flow during the pick up period. One problem is that when parents circle around and their children are not ready, they tend to stop near the entrance/exit driveway instead of merging with the entering traffic. These vehicles were observed blocking vehicles trying to exit onto Parsons Street. Because people are parked in the visitor parking spaces (and sometimes in front of the visitor spots), people cannot reach the driveway to exit. Therefore, it may be necessary to prohibit parking in the visitor space from 2:45-3:30 PM and to stripe out the area in front of this spot. If the driveway radius is slightly modified with the widening of the fire lane, this may not be necessary. In addition, parents could park in staff parking spaces after 2:30 PM.

Repair Sidewalk on Parsons Street {...}

The sidewalk along the Presbyterian Church property along Parsons Street should be repaired. Trees have uprooted parts of this sidewalk. (See Picture No. 18)

Bicycle Racks

Some students stated that they no longer ride their bicycles to school because the bicycles were either vandalized or stolen at the school. Possible additional supervision or relocation of the bicycle storage area should be considered.

Prohibit left turns to/from Presbyterian Church Driveways

Left turns from the Presbyterian Church Driveway onto Boston Post Road should be prohibited on weekdays from 7:30-8:30 AM and from 2:30-3:30 PM. This will prevent the conflicts from vehicles making a right turn from Parsons Street onto the Boston Post Road and limit vehicles cutting through the Church property. Also, during the same time periods, left turns from Parsons Street should be prohibited into the westerly Church driveway as this blocks the flow of traffic during the drop off and pick up periods.

IMPROVEMENTS NOT RECOMMENDED AT THIS TIME

Converting Parsons Street To One-Way

It is not recommended to convert Parsons Street to a one-way roadway at this time. This may become an alternative at a later date if the other recommendations do not improve conditions enough. If Parsons Street became one way from the Boston Post Road to Milton Road (to allow drop off on the right side of road), there could still be queuing problems for the Middle School drop off, extending back towards the Boston Post Road. If the road was to have traffic flow from Milton Road to the Boston Post Road, the drop off would be on the left side of the street. Either way, there are two other problems associated with this. One is that it could place a large burden at other intersections including the end locations of Parsons Street (i.e. additional people making left turns onto Boston Post Road or Milton Road). Also, there are no clear/direct paths to get to the end of Parsons Street from certain areas of the City.

Additional Driveway to Middle School

It was suggested to have a new entrance to the parking lot for the Middle School lot. This is not recommended because it would push the driveway entrance along Parsons Street closer to the Boston Post Road, which could possibly result in more queuing towards the Boston Post Road.

6.6 RYE HIGH SCHOOL

IMPROVEMENTS RECOMMENDED FOR RYE HIGH SCHOOL

Provide Additional Student Parking

The surveys from the High School overwhelmingly stated that more student parking is required. However, without the construction of a deck, which would be very expensive, no additional parking spaces can be provided without the loss of green space.

There are a few places where additional parking could be provided, as follows:

- (1) One site is adjacent to the football field where the buses park for football games. A limited number of spaces could be provided here. An advantage to this lot is that the students or staff that would park there would not have to cross any streets to reach the school. A driveway to this area already exists, but may have to be slightly widened. Based on discussions with the City Engineer, the driveway may have to be restricted to right turns in and right turns out. A disadvantage to this lot, besides the loss of green space, is that the area gets very wet during heavy rains. The Planning Commission has expressed a concern about increasing the impervious area in this location. Concrete pavers such as grasscrete could possibly be used in this area, although not as desirable. Although not completely necessary, an additional pedestrian bridge over Blind Brook could be constructed here to serve this lot, especially if the gate on the main bridge to the football field is closed.
- (2) A second site is the "snow field" on the west side of the Boston Post Road opposite the football stadium. This lot is currently used for overflow parking during football games. Based on discussions with the City Engineer, the driveway may have to be restricted to right turns in and right turns out. A disadvantage of this lot is that people parking in the lot would have to cross the Boston Post Road. Fencing would need to be provided to force pedestrians to cross at a certain point along the Boston Post Road where sight distance is optimized. Vegetation should be provided for aesthetic screening of the parking area.
- (3) A third potential site is an expansion of the parking lot that currently exists between the High School and Milton Road. This will remove a significant portion of the green space along Milton Road. In addition, there are significant trees that the parking lot would have to be constructed around.
- (4) A fourth potential site for additional parking would be in the vicinity of the new gym along Milton Road. This will also result in the loss of green space, including some field space, and will place parking in the vicinity of a residence. The School District's Architect is currently reviewing this area for a potential parking area.
- (5) A fifth location that has been suggested by students is replacing the tennis courts as a parking lot. However the tennis courts are utilized for various school activities.
- (6) A sixth potential area is along the Boston Post Road adjacent to the football field. The City recently hired an engineering firm to review modifications to the Boston Post Road including eliminating one of the northbound lanes as part of a traffic calming initiative to slow traffic on the Boston Post Road. Providing a parking area at this location could be considered in conjunction with the City's Study.

Parking in this area is not recommended unless it is in conjunction with other modifications to the Boston Post Road.

(See Figures 6.5.1 and 6.5.2.)

Other locations were reviewed for additional parking such as utilizing some of the parking at the Presbyterian Church but were deemed to not be feasible, for various reasons such as the Nursery School at the Presbyterian Church. Allowing students to park at Playland and shuttling them over would also have problems working.

One disadvantage about adding more parking is that there will be a loss of green space. The only way to add parking without losing green space would be to add a deck, which would be very expensive and not fit in aesthetically.

A second disadvantage about adding parking is that it may not relieve the problem of parking on the adjacent streets. One of the comments received from some of the High School students was that they did not drive because there was no place to park. Thus, if more parking spaces are added, there could be some additional students driving to school.

A third concern is that if the lot is too remote, it could become too much of a hangout area that is hard to control. If it is a teacher lot, it will be harder to patrol since it is farther away.

Permit Parking

Depending upon the decisions made regarding the provision of additional parking at the High School, the provision of parking permits could be considered. However, these should only be considered for certain streets, such as Parsons Street and Apawamis Avenue, which would impact a limited number of residences and are currently fully occupied by parked vehicles. Permits could be required for portions of Milton Road and the Boston Post Road, but then it would be hard to distinguish between vehicles that are for the Presbyterian and Resurrection Churches, Resurrection School, and Blind Brook Lodge. An ordinance would most likely be required for the establishment of a permit program, since these are public streets. The permit program could possibly be based on travel distance or high school grade, but special exceptions would be required. In the surveys, reasons from the parents and students on why they drive was for after-school jobs, they participate in sports that practice/play a significant distance from their home, they have to pick up their brothers or sisters at the elementary school, distance, injury, weather, and no other way to get to school. Vans to drive students to the practice venues that are farther away may be helpful, but then parking will be needed for the vans. This may save a few parking spaces.

For the program to be successful, there must be enforcement with appropriate penalties. Midland Avenue, south of Apawamis Avenue, is very wide and can support parking, and should not require permits. However, since there are the Playland/Beach parking restrictions from May to October, there is officially no parking allowed on Apawamis

Avenue and Midland Avenue. Consideration should be given to revising the ordinance to allow parking on these streets during school days.

The New York State Legislature is currently debating raising the age limit before teenagers are allowed to drive on their own, which could eliminate the need for a permit program.

Widening Milton Road Driveway

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Consideration should be given to widening the High School Driveway on Milton Road to permit vehicles to enter. This would remove some of the traffic from the Milton Road/Parsons Street intersection. However, delays are currently experienced at this location also. This may also require modifications of the parking lot and circulation but could possibly be combined with the potential parking area in this area.

Location of Buses

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The location of the loading of the buses for sports teams and other after school buses should be reviewed upon completion of the gym construction, especially when the buses are present at 3:00 pm during pick up time. The future location should minimize the impacts on the pedestrian and traffic flow while maintaining safe access for the students entering the buses. A location on Parsons Street could possibly be utilized.

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