VILLAGE OF WESLEY HILLS PLANNING BOARD

ROCKLAND TREE EXPERT CO., INC.
d/b/a IRA WICKES/ARBORISTS
SPECIAL PERMIT AND SITE PLAN

FULL ENVIRONMENTAL ASSESSMENT FORM
PART 3

Exhibit 11

Traffic Impact Information: review of RC Highway Department data and traffic study conducted for Yeshiva Darchei Noam

Traffic Summary
Attachment TS-1
Rockland County Highway Department Data

The following stations are monitored by the County of Rockland for traffic in the project area:

Sta.	Road	Route	Location
403	New Hempstead	80	just west of Route 45
418	Grandview	80	just east of Route 306
492	McNamara	67	between East Willow Tree and New Hempstead

However, the Rockland County Highway Department website does not have any recent (less than 10 years old) data for these roads.

Upon inquiry it was determined that data were collected in 2005 on McNamara Road, Station 492, on August 24 and 25th. The location is just west/north of the project site. These data were collected using a "Nu-Metrics Traffic Analyzer". Details are as follows:

Item	Northbound (away from New.Hemp.Rd.)	Southbound (towards New.Hemp.Rd.)
Total 48-hr volume	3,067	3,020
AADT (per direction)	1,534	1,510
Peak 15 min (5pm)	42	
Peak 15 min (7:45am)		44
Headway during peak	20.9 secs	20.0 secs
Percent cars	97.0	97.2
Percent trucks/buses	0.7	0.7
Percent small trucks	2.1	1.8

So, the peak morning hour would be 176 vehicles (4 times 44). [This converts to 3 a minute which matches with the headway count).

Using these data, the impact of Ira Wickes/arborists on the traffic is as follows:

General — These measurements were taken while the facility was in operation, which is the same as currently proposed. Therefore, there is no impact on these measurements and no potential increase in impact.

AM Peak	The AM peak hour, if extrapolated, would be from 7:30 to 8:30 am. The EAF calls for a peak trip generation of 30 per hour, which would occur prior to and at the start of the peak AM hour. Assuming half of Wickes trucks leave during the peak hours, less than 9% of the measured traffic belongs to Wickes. During school periods, this percentage will be less.
PM Peak	Generally, during summer operations, truck returns to the site are scattered and are later than the PM Peak hour. Obviously, the opposite occurs during the shorter and colder days. In addition, trucks can return from either direction so their component of the measured traffic is a lower percentage.
Conclusion	Traffic generation from this site was included in the Rockland County Traffic Study, and is less than 2% of the measured vehicle counts. Therefore, there is no potential increase in impact.

Traffic Summary
Attachment TS-2
Traffic Impact and Access Analysis for Darchei Noam School

TRAFFIC IMPACT & ACCESS ANALYSIS

Darchei Noam School
New Hempstead Road
New Hempstead, New York

Prepared for:
Yeshiva Darchei Noam

Prepared by:
FREDERICK P. CLARK ASSOCIATES, INC.
Rye, New York • Fairfield, Connecticut

January 2003

EXISTING CONDITIONS

This section of the report describes field surveys, existing peak hour traffic hour volumes for weekday School-related peak periods and Sunday mornings to coincide with peak arrival and departure times for Sunday morning classes. This section also provides a discussion of accident history along New Hempstead Road, capacity analysis procedures and results.

Roadways

As previously noted, the subject property is located along the southerly side of New Hempstead Road (designated County Route 80) in the Village of New Hempstead, New York. This roadway is a two-way, two-lane, east-west roadway in the immediate vicinity of the subject property. This road begins to the west as a continuation of Union Road in the immediate vicinity of Grandview Avenue, which continues as County Route 80 to the west. It continues to the east intersecting Summit Park Drive (County Route 51)/Hempstead Road and North Main Street, designated New York Route 45. This road continues to the east and intersects at a full-movement interchange at the Palisades Interstate Parkway. The road has a posted speed limit of 30 miles per hour and most intersections are controlled with STOP signs on the side street local approaches, except for the intersection of Summit Park Drive/Hempstead Road, which is controlled with a two-phase traffic signal and the intersection with North Main Street, which is controlled by a multi-phase traffic signal.

North Main Street is a north-south, two-lane, two-way, State-maintained roadway located to the east of the subject property. This road has a posted speed limit of 45 miles per hour. Summit Park Drive is also a north-south, County-maintained roadway located to the east of the subject property.

Hempstead Road is a continuation of Summit Park Drive; however, a Village-maintained roadway. it is a narrow, two-lane road with a posted speed limit of 30 miles per hour and a sidewalk provided along the westerly side.

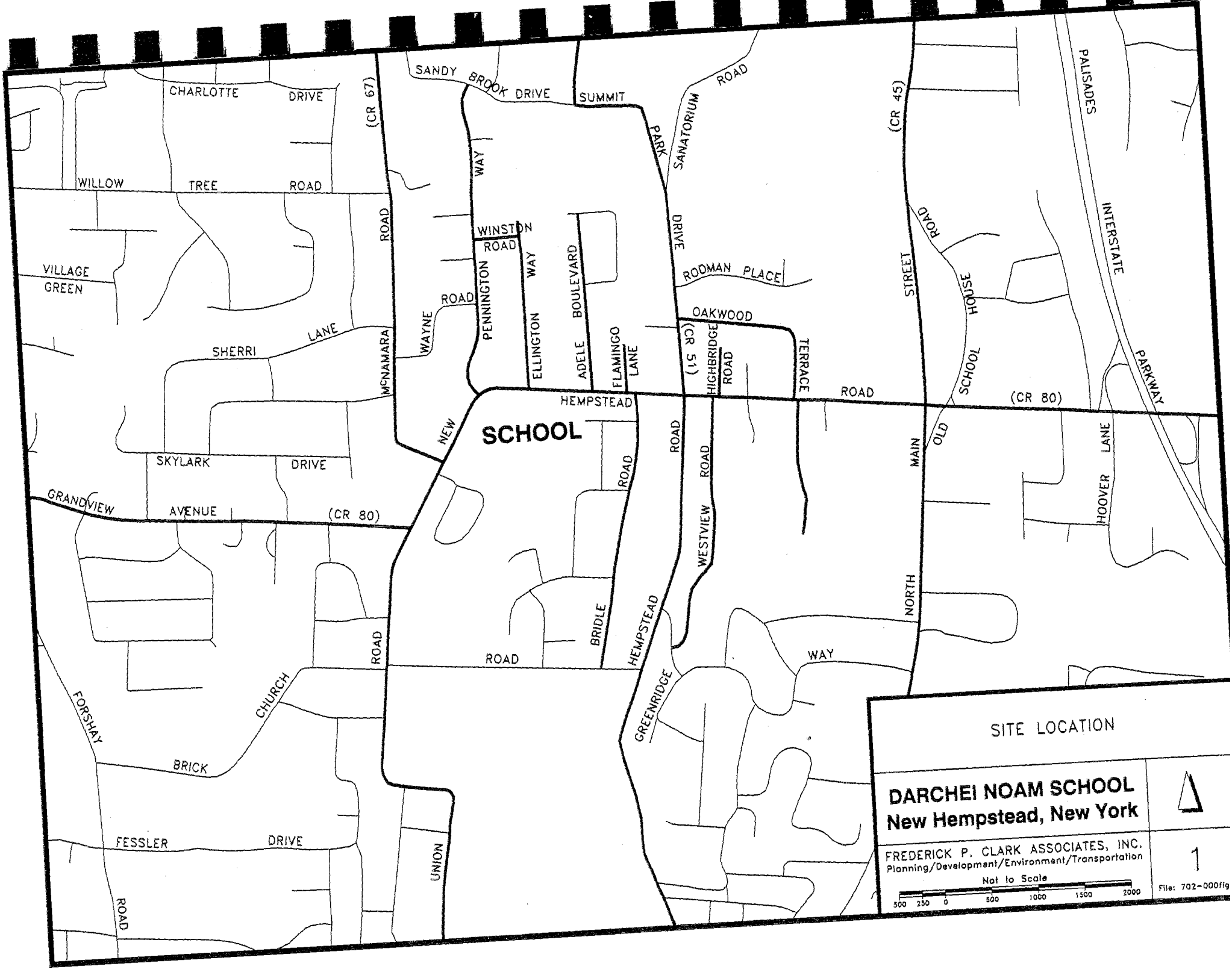
McNamara Road is generally a north-south, County-maintained roadway, which is designated County Route 67, beginning at New Hempstead Road and located west of the subject property. This two-lane road provides access to surrounding areas north of the property. It begins at New Hempstead Road at a STOP sign-controlled intersection.

Grandview Avenue (designated County Route 80) is an east-west, two-lane, two-way roadway beginning at the Union Road/New Hempstead Road intersection. As noted above, this road is a continuation of County Route 80 on New Hempstead Road. It has a posted speed limit of 30 miles per hour.

Pennington Way is a local, north-south, two-lane, two-way local roadway beginning at New Hempstead Road and immediately west of the subject property. This road is controlled with a STOP sign at New Hempstead Road. This road also provides a sidewalk along the westerly side. It is important to note that most roads in the Study Area do not include sidewalks.

Ellington Way is a local Village-maintained roadway beginning at New Hempstead Road directly opposite the proposed access drive to the School. It is a road that serves a residential development and intersects Winston Road, which intersects Pennington Way. Ellington Way is a wide roadway controlled with a STOP sign at the New Hempstead Road intersection.

Other roads, which intersect New Hempstead Road, include Adele Boulevard, Flamingo Lane and Bridle Road. Other roadways identified by residents along New Hempstead Road and east of the Summit Park Drive/Hempstead Road intersection include the intersections of Westview Road, Highbridge Road and Oak Wood Terrace. However, it is important to note that there are other local roadways east of the Oak Wood Terrace intersection, which intersect New Hempstead Road. Figure 1 shows the site location in relation to regional and local roadways. Figure 2 shows a summary of roadway inventory and photographs are included in the Appendix of area roadways. To develop baseline traffic conditions on area roadways and nearby intersections, manual traffic volume surveys were conducted by Frederick P. Clark Associates, Inc. at the following intersections along New Hempstead Road:


CHARLOTTE DRIVE
(CR 67)
SANDY BROOK DRIVE
SUMMIT
PARK
SANATORIUM ROAD
(CR 45)
PALISADES
INTERSTATE
PARKWAY
WILLOW TREE ROAD
WAY
WINSTON ROAD
DRIVE
RODMAN PLACE
STREET
ROAD
HOUSE
SCHOOL
VILLAGE GREEN
ROAD
PENNINGTON
WAY
ELLINGTON
BOULEVARD
ADELE
FLAMINGO LANE
OAKWOOD
(CR 51)
HIGHBRIDGE ROAD
TERRACE
ROAD
(CR 80)
SHERRI LANE
McNAMARA
WAYNE ROAD
HEMPSTEAD
NEW
SCHOOL
ROAD
ROAD
WESTVIEW ROAD
MAIN
OLD
HOOVER LANE
SKYLARK DRIVE
GRANDVIEW AVENUE
(CR 80)
ROAD
BRIDLE
HEMPSTEAD
NORTH
WAY
FORSHAY
CHURCH
BRICK
ROAD
ROAD
GREENRIDGE
FESSLER DRIVE
UNION
ROAD
SITE LOCATION
DARCHEI NOAM SCHOOL
New Hempstead, New York
FREDERICK P. CLARK ASSOCIATES, INC.
Planning/Development/Environment/Transportation
Not to Scale
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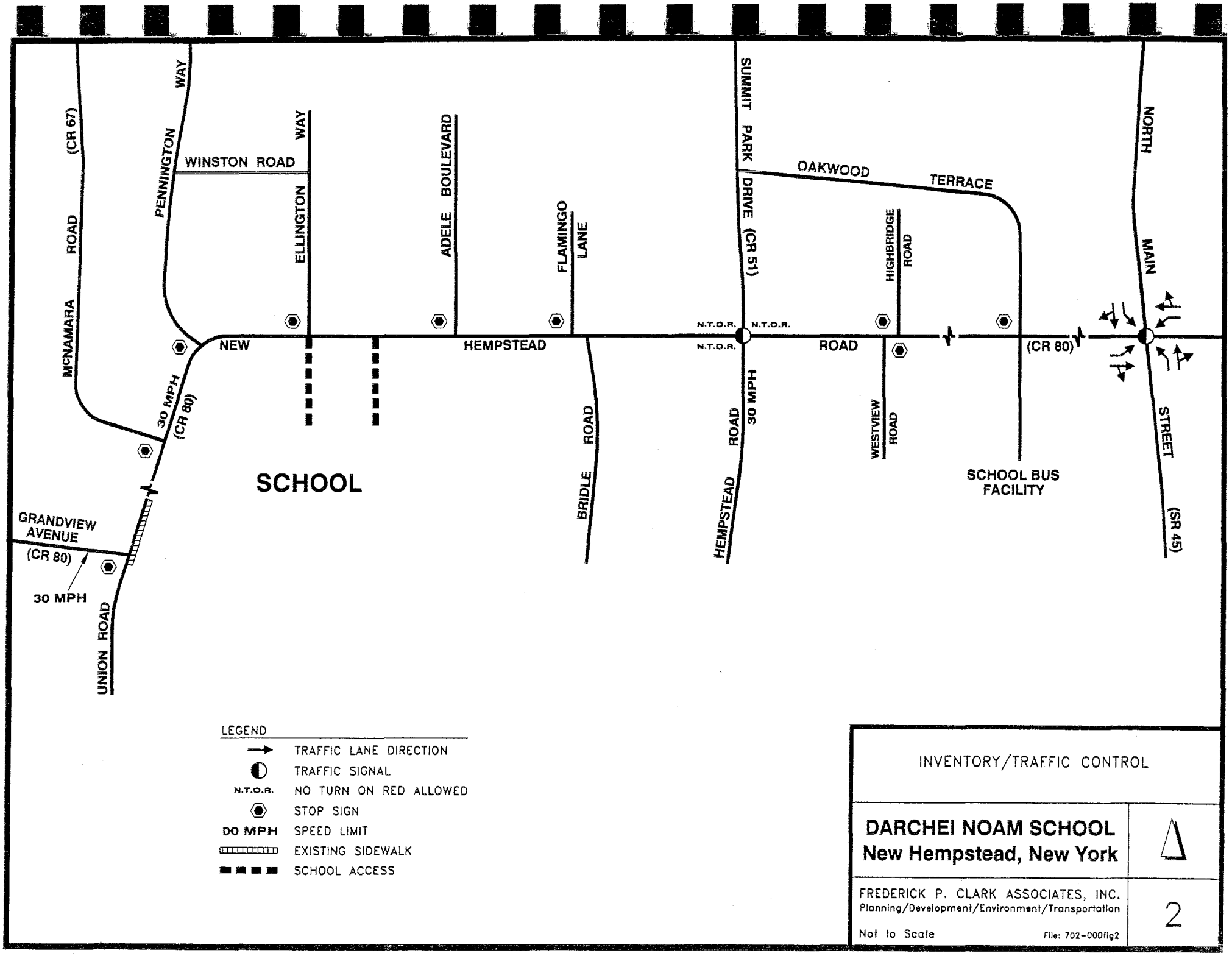
1
File: 702-000fig



INVENTORY/TRAFFIC CONTROL

DARCHEI NOAM SCHOOL
New Hempstead, New York

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Planning/Development/Environment/Transportation

Not to Scale

File: 702-000fig2

2

- North Main Street (Route 45);
- Oakwood Terrace/School Bus facility;
- Highbridge Road;
- Westview Road;
- Summit Park Drive/Hempstead Road;
- Bridle Road;
- Flamingo Lane;
- Adele Boulevard;
- Ellington Way;
- McNamara Road; and,
- Grandview Avenue.

These field surveys were conducted during typical weekdays and at major intersections on Sunday mornings to coincide with the anticipated hours of activity for the proposed School. Therefore, the weekday surveys were conducted from 7:00 to 9:00 A.M. and from 2:00 to 7:00 P.M. The Sunday morning surveys were conducted from 8:30 to 10:00 A.M. and from 11:00 A.M. to 1:30 P.M. These field surveys were conducted in 15-minute increments to identify peaking characteristics and peak hour conditions. Also, to coincide with the anticipated peaking characteristics of the School-related traffic, peak hour volumes were identified for these intersections for both the morning, weekday afternoon, Sunday morning and Sunday midday conditions.

For the purposes of identifying peak hour conditions for the weekday morning, traffic volumes for 8:00 to 9:00 A.M. were identified to coincide with the anticipated peaking characteristics for drop-off activities for the School. For the weekday afternoon, the 3:15 to 4:15 P.M. time period was selected to coincide with the majority of students anticipated to be dismissed. However, in both time periods, it is important to note a certain level of students will either be dropped off or dismissed outside the identified peak hour for the School. It is anticipated that extra-curricular School activities will be

spread out over a period of time to reduce the impact on area roadways. Again, this is discussed in a later section.

Based on the results of the field surveys identifying peak hour conditions, two-way volumes for New Hempstead Road and other area roadways were identified. It was found that New Hempstead Road carries the highest two-way volume adjacent to the subject property during the weekday morning time period with 926 vehicles. For comparison purposes, Route 45 has a two-way volume, north of the New Hempstead Road intersection of 892 vehicles during this same time period. Other roadways, such as Ellington Way, has a peak two-way volume of 38 vehicles during the weekday afternoon peak hour. Table 1 shows a more detailed breakdown of recorded two-way volumes for each of the four peak hours identified for the purposes of conducting this traffic analysis. Figures 3 through 6 show peak hour volumes by turning movements at each of the 12 intersections included in this traffic analysis.

Accident History

Accident history was obtained from the New York State Department of Transportation (NYSDOT) for a three-year period beginning May 1, 1998 through April 30, 2001. The Study Area included New Hempstead Road from Union Road to Route 45. During the 36-month period there were 65 reported accidents with 45 accidents occurring at intersections. it was found that approximately 33 percent involved rear-end collisions, 27 percent involved right-angle accidents and 15 percent included left turning vehicles. There were no accidents reported at the Ellington Way intersection. As many as 9 accidents occurred at the Summit Park Road/Hempstead Road intersection in one year. Table 2 lists each accident and Table 3 summarizes accidents by intersection.

Capacity Analysis Procedures – Signalized and Unsignalized Intersections

Procedures have been established by the Transportation Research Board through which roadway segments and intersections can be tested to determine their ability to accommodate traffic volumes. These procedures are described in this section.

Table 1
2002 EXISTING TWO-WAY VOLUMES – PEAK HOURS
Darchei Noam School
New Hempstead, New York

ROADWAY SEGMENT	VEHICLES			
	Weekday Morning	Weekday Afternoon	Sunday Morning	Sunday Midday
New Hempstead Road (C.R. 80) east of Route 45	1,175	1,168	456	813
New Hempstead Road (C.R. 80) at site	926	896	323	623
Grandview Avenue (C.R. 80) west of Union Road	560	467	199	345
Route 45, north of New Hempstead Road	892	1,062	350	662
Summit Park Drive (C.R. 51), north of New Hempstead Road	300	390	58	101
Ellington Way, north of New Hempstead Road	27	38	17	25
McNamara Road, north of New Hempstead Road	331	210	102	191
Union Road, south of C.R. 80	642	467	199	345

Frederick P. Clark Associates, Inc.

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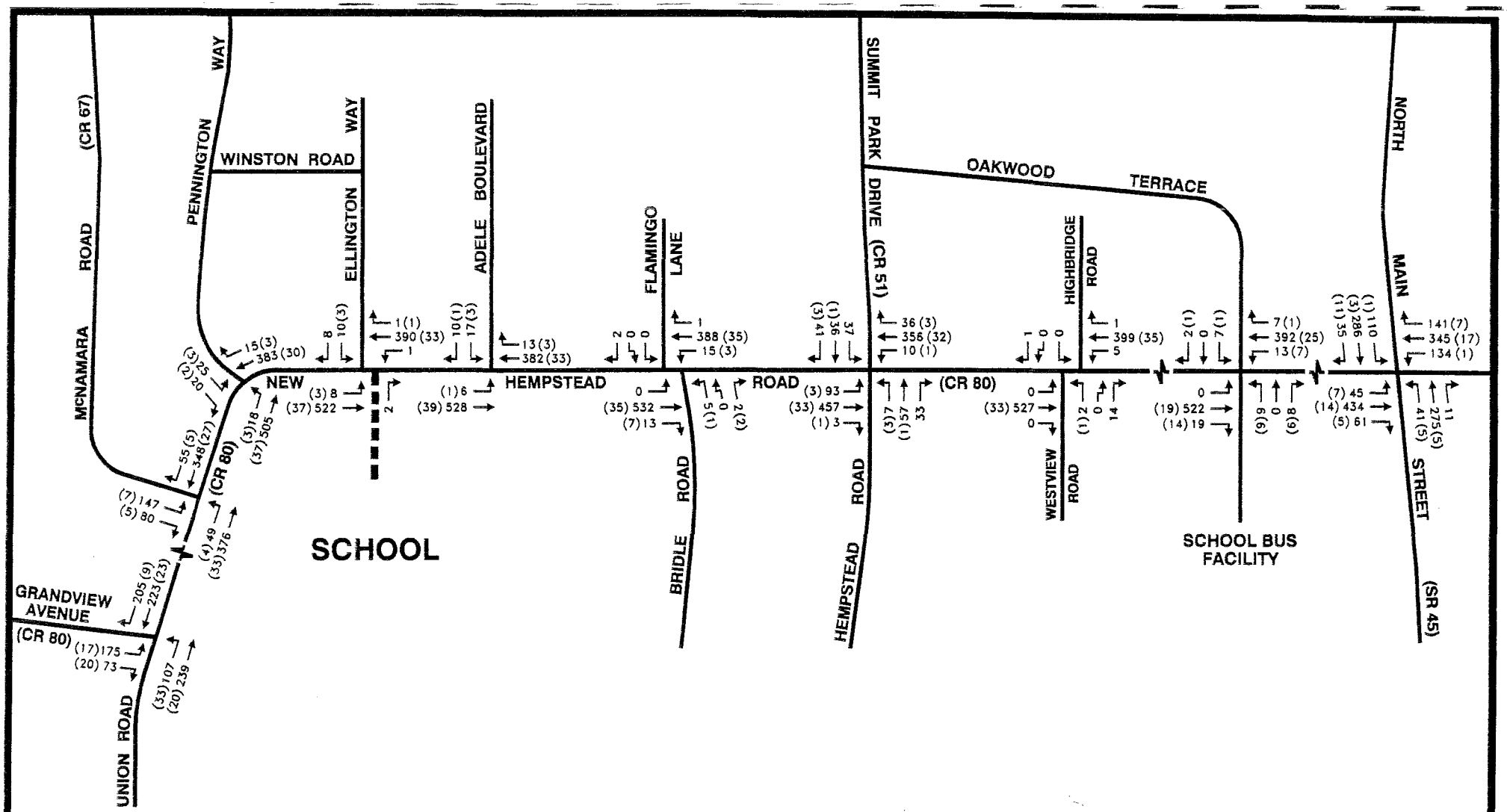

Note: Field surveys conducted on Wednesday, September 18, Tuesday October 29, Wednesday October 30, and Monday November 4, 2002.

LEGEND

00	ALL VEHICLES
(00)	SCHOOL BUSES
■ ■ ■	SCHOOL ACCESS

2002 EXISTING TRAFFIC VOLUMES
WEEKDAY MORNING SCHOOL PEAK HOUR
(8:00 - 9:00 AM)

DARCHEI NOAM SCHOOL
New Hempstead, New York

FREDERICK P. CLARK ASSOCIATES, INC.
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Not to Scale

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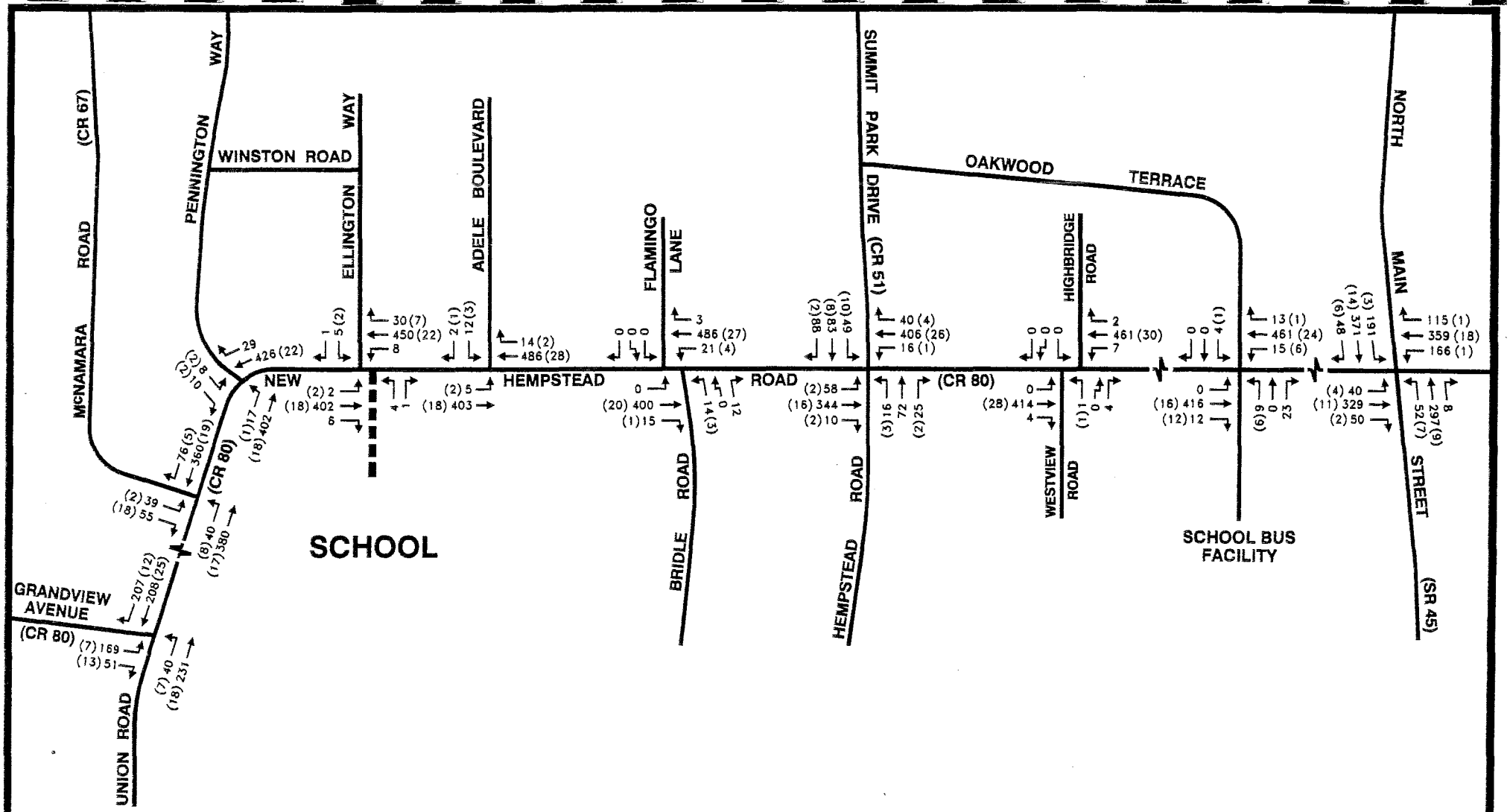

Note: Field surveys conducted on Wednesday, September 18, Tuesday October 29, Wednesday October 30, and Monday November 4, 2002.

LEGEND

00	ALL VEHICLES
(00)	SCHOOL BUSES
■ ■ ■ ■	SCHOOL ACCESS

2002 EXISTING TRAFFIC VOLUMES
WEEKDAY AFTERNOON SCHOOL PEAK HOUR
(3:15 – 4:15 PM)

DARCHEI NOAM SCHOOL
New Hempstead, New York

FREDERICK P. CLARK ASSOCIATES, INC.
Planning/Development/Environment/Transportation

Not to Scale File: 702-000fig4

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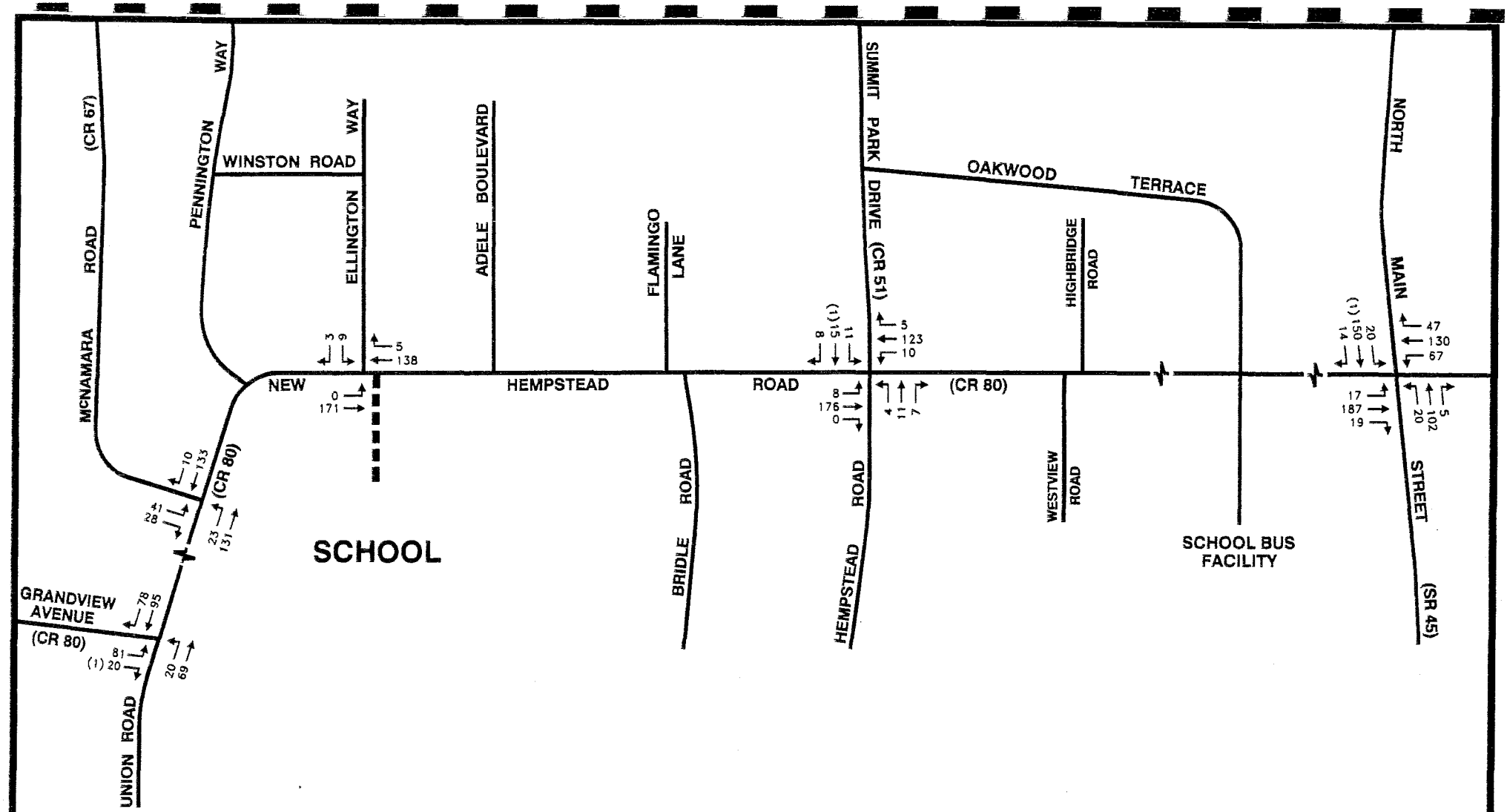

Note: Field surveys conducted on Sunday, November 3, 2002.

LEGEND

00	ALL VEHICLES
(00)	SCHOOL BUSES
■ ■ ■ ■	SCHOOL ACCESS

2002 EXISTING TRAFFIC VOLUMES
SUNDAY MORNING ARRIVAL PERIOD
(8:30 – 9:30 AM)

DARCHEI NOAM SCHOOL
New Hempstead, New York

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FREDERICK P. CLARK ASSOCIATES, INC.
Planning/Development/Environment/Transportation

Not to Scale

File: 702-000fig5

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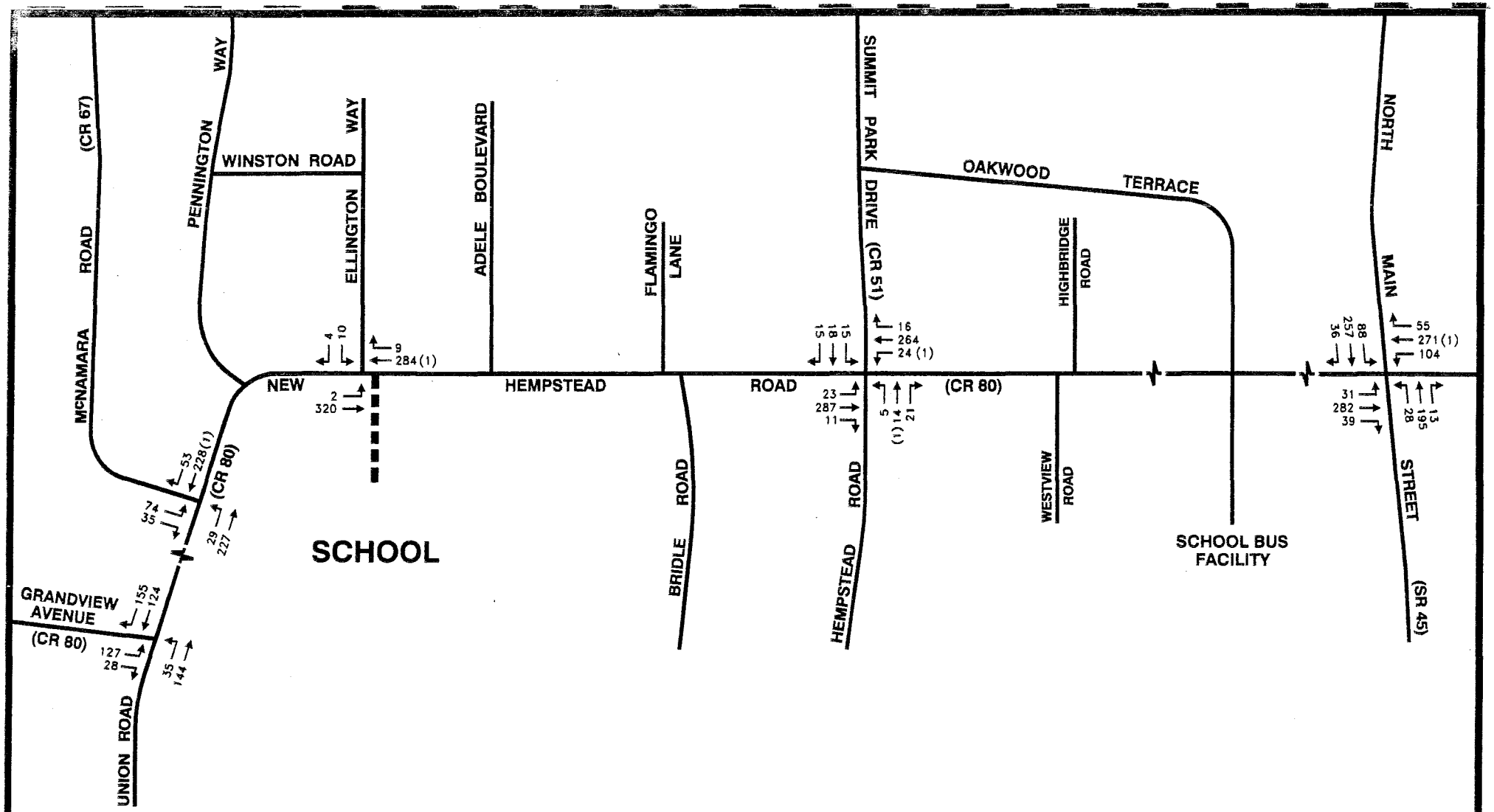

Note: Field surveys conducted on Sunday, November 3, 2002.

LEGEND

00	ALL VEHICLES
(00)	SCHOOL BUSES
▬ ▬ ▬	SCHOOL ACCESS

2002 EXISTING TRAFFIC VOLUMES
SUNDAY MIDDAY DISMISSAL HOUR
(12:30 – 1:30 PM)

DARCHEI NOAM SCHOOL
New Hempstead, New York

FREDERICK P. CLARK ASSOCIATES, INC.
Planning/Development/Environment/Transportation

Not to Scale

File: 702-000fig6

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Table 2
ACCIDENT SUMMARY – COUNTY ROUTE 80
Darchei Noam School
New Hempstead, New York

LOCATION	DAY/DATE	INJURIES	VEHICLES INVOLVED	ROAD CONDITIONS	WEATHER	TIME	TYPE OF ACCIDENT	PROBABLE CAUSE
Route 80 between Sansberry Lane and Union Road	Monday 12/20/99	0	1	Snow/ice	Cloudy	7:00 AM	Fixed object	Pavement slippery
Route 80 between Sansberry Lane and Union Road	Thursday 12/24/98	0	3	Snow/ice	Snow	6:00 AM	Rear-end	Pavement slippery
Route 80 at Union Road	Wednesday 5/20/98	0	2	Dry	Cloudy	1:00 PM	Rear-end	Unsafe speed
Route 80 at Union Road	Friday 8/21/98	1	2	Dry	Clear	5:00 PM	Left turn	Failed to grant right-of-way
Route 80 at Union Road	Thursday 12/3/98	0	2	Dry	Cloudy	2:00 PM	Right angle	Driver inattention
Route 80 at Union Road	Wednesday 1/13/99	0	2	Wet	Cloudy	9:00 AM	Left turn (same direction)	Unknown
Route 80 at Union Road	Thursday 6/17/99	2	2	Wet	Cloudy	11:00 PM	Rear-end	Unsafe speed
Route 80 at Union Road	Tuesday 3/21/00	1	2	Dry	Cloudy	2:00 PM	Right angle	Failed to grant right-of-way
Route 80 at Union Road	Wednesday 6/14/00	1	2	Dry	Cloudy	1:00 PM	Left turn (same direction)	Failed to grant right-of-way
Route 80 at Union Road	Sunday 9/3/00	1	2	Dry	Cloudy	7:00 AM	Right angle	Failed to grant right-of-way
Route 80 at Union Road	Monday 9/25/00	0	2	Dry	Clear	11:00 AM	Right angle	Failed to grant right-of-way
Route 80 at Union Road	Monday 3/12/01	1	2	Dry	Clear	8:00 AM	Right turn	Unknown
Between Union Road and Fairway Oval	Thursday 11/26/98	1	2	Wet	Cloudy	7:00 PM	Right angle	Failed to grant right-of-way
Route 80 at Fairway Oval	Wednesday 1/31/01	1	2	Dry	Clear	4:00 PM	Right angle	Failed to grant right-of-way
Route 80 at McNamara Road	Tuesday 9/8.98	0	2	We	Cloudy	4:00 PM	Right angle	Failed to grant right-of-way
Route 80 at McNamara Road	Thursday 2/18/99	0	2	Wet	Cloudy	4:00 PM	Right angle	Failed to grant right-of-way
Route 80 at McNamara Road	Sunday 4/4/99	0	2	Dry	Cloudy	11:00 AM	Left turn	Improper turn
Route 80 at McNamara Road	Monday 4/26/99	0	2	Dry	Clear	5:00 PM	Rear-end	Following too close

Table 2 (cont'd.)

LOCATION	DAY/DATE	INJURIES	VEHICLES INVOLVED	ROAD CONDITIONS	WEATHER	TIME	TYPE OF ACCIDENT	PROBABLE CAUSE
Route 80 at McNamara Road	Wednesday 5/19/99	1	3	Wet	Rain	6:00 PM	Fixed object	--
Route 80 at McNamara Road	Monday 11/22/99	1	2	Wet	Cloudy	9:00 AM	Rear-end	Unsafe speed
Route 80 at McNamara Road	Monday 9/4/00	1	2	Dry	Cloudy	4:00 PM	Right angle	Failed to grant right-of-way
Between McNamara and Pennington Way	Tuesday 11/10/98	1	1	Wet	Rain	11:00 AM	Fixed object	Tire failure/pavement slippery
Between McNamara and Pennington Way	Thursday 12/14/00	0	3	Snow/Ice	Snow	8:00 AM	Unknown	Unknown
Between McNamara and Pennington Way	Thursday 1/25/01	0	2	Dry	Clear	11:00 AM	Right turn	Unknown
Between McNamara and Pennington Way	Tuesday 3/6/01	0	1	Snow/ice	Snow	Unknown	Fixed object	Slippery pavement
Between McNamara and Pennington Way	Friday 3/9/01	0	2	Snow/ice	Snow	8:00 AM	Rear-end	Following too close
Route 80 at Pennington Way	Friday 11/27/98	1	2	Dry	Clear	11:00 AM	Rear-end	Following too close
Route 80 at Pennington Way	Tuesday 3/16/99	1	1	Dry	Clear	8:00 AM	Fixed object	Unknown
Route 80 at Pennington Way	Wednesday 11/1/00	1	3	Dry	Clear	3:00 PM	Unknown	Glare
Between Pennington Way and Flamingo Lane	Friday 4/27/01	1	1	Dry	Clear	10:00 AM	Pedestrian/bicyclist	Driver lane use improper
Between Bridle Road and Hempstead Road	Wednesday 9/23/98	1	4	Dry	Clear	6:00 PM	Rear-end	Following too close
Between Bridle Road and Hempstead Road	Wednesday 1/13/99	0	2	Snow/ice	Freezing rain	5:00 PM	Head-on	Unsafe speed
Between Bridle Road and Hempstead Road	Tuesday 8/3/99	0	2	Dry	Clear	8:00 AM	Rear-end	Glare
Between Bridle Road at Hempstead Road	Saturday 9/16/00	0	2	Dry	Clear	7:00 AM	Right angle	Glare, view obstructed
Route 80 at Hempstead Road	Monday 5/18/98	3	2	Dry	Clear	11:00 AM	Left turn	Failure to grant right-of-way
Route 80 at Hempstead Road	Wednesday 10/20/99	0	2	Wet	Cloudy	3:00 PM	Rear-end	Following too close
Route 80 at Hempstead Road	Tuesday 1/25/00	0	1	Slush	Snow	9:00 AM	Fixed object	Unknown (turning)
Route 80 at Hempstead Road	Friday 10/27/00	0	1	Dry	Cloudy	8:00 AM	Fixed object	Improper turn

Table 2 (cont'd.)

LOCATION	DAY/DATE	INJURIES	VEHICLES INVOLVED	ROAD CONDITIONS	WEATHER	TIME	TYPE OF ACCIDENT	PROBABLE CAUSE
Route 80 at Hempstead Road	Sunday 12/24/00	1	2	Wet	Cloudy	11:00 PM	Right angle	Pavement slippery
Route 80 at Hempstead Road	Wednesday 12/27/00	3	2	Dry	Clear	12:00 PM	Right angle	Traffic control disregarded
Between Hempstead Road and Westview Road	Tuesday 9/21/99	1	2	Wet	Rain	12:00 PM	Rear-end	Pavement slippery, following too close
Between Hempstead Road and Westview Road	Wednesday 11/17/99	0	1	Unknown	Unknown	3:00 PM	Fixed object	Avoiding object in road
Route 80 at Westview Road	Sunday 3/25/01	0	2	Dry	Clear	2:00 PM	Overtaking	Following too close
Between Westview and Highridge Road	Sunday 3/4/01	0	1	Snow/ice	Snow	4:00 PM	Fixed object	Pavement slippery
Route 80 at Highridge Road	Tuesday 10/26/99	3	3	Dry	Clear	7:00 PM	Rear-end	Following too close
Route 80 at Highridge Drive	Monday 11/20/00	0	1	Wet	Rain	6:00 PM	--	Avoiding object in road
Route 80 at Apple Gate	Tuesday 12/8/98	0	2	Wet	Rain	4:00 PM	Rear-end	Pavement slippery; following too close
Between Apple Gate and Route 45	Thursday 6/22/00	2	3	Dry	Clear	6:00 PM	Rear-end	Following too close
Between Apple Gate and Route 45	Thursday 6/22/00	2	3	Dry	Clear	6:00 PM	Rear-end	Following too close
Between Apple Gate and Route 45	Sunday 11/12/00	1	1	Dry	Clear	4:00 AM	--	Avoiding object in road
Route 80 at Route 45	Saturday 8/29/98	0	2	Dry	Clear	7:00 PM	Rear-end	Driver inattention
Route 80 at Route 45	Thursday 5/20/99	1	2	Dry	Clear	10:00 AM	Overtaking	Failure to yield right-of-way
Route 80 at Route 45	Tuesday 7/13/99	2	2	Dry	Clear	4:00 PM	Rear-end	Following too close
Route 80 at Route 45	Monday 9/27/99	2	2	Dry	Cloudy	11:00 AM	Rear-end	Following too close
Route 80 at Route 45	Saturday 12/4/99	0	2	Dry	Clear	3:00 PM	Rear-end	Driver inattention
Route 80 at Route 45	Wednesday 12/8/99	1	2	Dry	Clear	7:00 PM	Left turn	Traffic control disregarded
Route 80 at Route 45	Sunday 1/30/00	3	2	Snow/ice	Snow	8:00 PM	Rear-end	Unsafe speed
Route 80 at Route 45	Wednesday 3/29/00	1	3	Dry	Cloudy	12:00 PM	Rear-end	Driver inattention

Table 2 (cont'd.)

LOCATION	DAY/DATE	INJURIES	VEHICLES INVOLVED	ROAD CONDITIONS	WEATHER	TIME	TYPE OF ACCIDENT	PROBABLE CAUSE
Route 80 at Route 45	Monday 4/24/00	1	2	Dry	Clear	2:00 PM	Right angle	View obstructed, limited
Route 80 at Route 45	Sunday 5/7/00	1	2	Dry	Clear	4:00 PM	Right angle	Failure to yield right-of-way
Route 80 at Route 45	Wednesday 5/17/0-0	2	2	Dry	Clear	11:00 AM	Rear-end	Following too close
Route 80 at Route 45	Wednesday 9/20/00	0	2	Dry	Clear	2:00 PM	Right angle	Failure to yield right-of-way
Route 80 at Route 45	Wednesday 9/20/00	0	2	Dry	Clear	4:00 PM	Rear-end	Driver inattention
Route 80 at Route 45	Thursday 12/28/00	1	2	Dry	Clear	1:00 PM	Left turn (against)	Failure to yield right-of-way
Route 80 at Route 45	Monday 4/16/01	0	2	Dry	Cloudy	10:00 AM	Right turn (with)	Passenger distraction

Source: New York State Department of Transportation, time period from May 1, 1998 through April 30, 2001

Frederick P. Clark Associates, Inc.

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Table 3

CHARACTERISTICS OF ACCIDENTS AT INTERSECTIONS – MAY 1, 1998 – APRIL 30, 2001

Darchei Noam School

New Hempstead, New York

INTERSECTION	REAR END	RIGHT ANGLE	LEFT TURN	RIGHT TURN	OVER-TAKING	FIXED OBJECT	ANIMAL	UNKNOWN	TOTAL
May 1, 1998 – April 30, 1999									
New Hempstead Road/ Grandview Avenue/Union Road	1	1	2						4
New Hempstead Road at McNamara Road	1	2	1						4
New Hempstead Road at Pennington Way	1					1			2
New Hempstead Road at Summit Park Drive/ Hempstead Road			1						1
New Hempstead Road at Westview Road/Highridge Road									0
New Hempstead Road at Route 45	1								1
YEARLY TOTAL	4	3	4	0	0	1	0	0	12
May 1, 1999 – April 30, 2000									
New Hempstead Road/Grandview Avenue/Union Road	1	1							2
New Hempstead Road at McNamara Road	1					1			2
New Hempstead Road at Pennington Way									0
New Hempstead Road at Summit Park Drive/Hempstead Road	1					1			2
New Hempstead Road at Westview Road/Highridge Road	1								1
New Hempstead Road at Route 45	5	1	1		1				8
YEARLY TOTAL	9	2	1	0	1	2	0	0	15
May 1, 2000 – April 30, 2001									
New Hempstead Road/Grandview Avenue/Union Road		2	1	1					4
New Hempstead Road at McNamara Road		1							1
New Hempstead Road at Pennington Way								1	1
New Hempstead Road at Summit Park Drive/Hempstead Road		2				1			3
New Hempstead Road at Westview Road/Highridge Road					1	1	1		3
New Hempstead Road at Route 45	2	2	1	1					6
YEARLY TOTAL	2	7	2	2	1	2	1	1	18
Three-Year Totals									
New Hempstead Road/Grandview Avenue/Union Road	2	4	3	1	0	0	0	0	10
New Hempstead Road at McNamara Road	2	3	1	0	0	1	0	0	7
New Hempstead Road at Pennington Way	1	0	0	0	0	1	0	1	3
New Hempstead Road at Summit Park Drive/Hempstead Road	2	4	1	0	0	2	0	0	9
New Hempstead Road at Westview Road/Highridge Road	1	0	0	0	1	2	1	0	5
New Hempstead Road at Route 45	8	3	2	1	1	0	0	0	15
GRAND TOTAL	15	12	7	2	2	5	1	1	45

Source: New York State Department of Transportation

Includes accidents within 50 feet of listed intersections

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Two methods of analysis are needed to evaluate intersections. These methods are based on procedures found in the Highway Capacity Manual (Special Report No. 209, Fourth Edition, 2000 update) and are described below.

Signalized Intersections - Capacity at signalized intersections is defined for each lane group. Lane group capacity is the maximum hourly rate at which vehicles may pass through the intersection under prevailing traffic, roadway, and signalization conditions. The flow rate is generally measured or projected for a 15-minute peak period, and capacity is stated in vehicles per hour.

Traffic conditions include volumes on each approach, the distribution of vehicles by movement (left, through, right), the vehicle type distribution within each movement, the location and use of bus stops within the intersection area, pedestrian crossing flows, and parking movements within the intersection area.

Roadway conditions include the basic geometry of the intersection, including the number and width of lanes, grades, and lane-use allocations (including parking lanes). Signalization conditions include a full definition of the signal phasing, timing, type of control, and signal progression on each approach.

Level of Service for a signalized intersection is defined in terms of the average control delay per vehicle for each lane group and approach and for the intersection as a whole during a peak 15-minute period during a peak 1-hour period. Six Levels of Service from A to F have been established as measures of vehicle delay. These levels and their related delay terms are as follows:

LEVEL OF SERVICE	CONTROL DELAY (SECONDS PER VEHICLE)
A	≤ 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	more than 80.0

More specific definitions of the six levels are best given by the Highway Capacity Manual:

Level of Service A - describes operations with very low delay, i.e., less than or equal to 10.0 seconds per vehicle. This occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delays.

Level of Service B - describes operations with delays in the range of 10.1 to 20.0 seconds per vehicle. This generally occurs with good progression and/or cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average delay.

Level of Service C - describes operations with delay in the range of 20.1 to 35.0 seconds per vehicle. These higher delays may result from fair progression and/or short cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.

Level of Service D - describes operations with delay in the range of 35.1 to 55.0 seconds per vehicle. At Level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high

volume to capacity (V/C) ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level of Service E - describes operations with delay in the range of 55.1 to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.

Level of Service F - describes operations with delay in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e. when arrival flow rates exceed the capacity of the intersection. It may also occur at high V/C ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Unsignalized Intersections – Highway Capacity Manual 2000, Chapter 17, analyzes the capacity and level of service of two-way STOP-controlled (TWSC) and all-way STOP-controlled (AWSC) intersections. Level of service (LOS) for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. Control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time the vehicle departs from the STOP line. Control delay includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Control delay per vehicle for AWSC is computed for each lane and each approach. The approach delay is the weighted average of the delay on each lane and the intersection delay is the weighted average of the delay on each approach.

LEVEL OF SERVICE	CONTROL DELAY (SECONDS PER VEHICLE)
A	≤ 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	more than 50.0

Capacity Analysis Results

Results of the analysis of the two signalized intersections along New Hempstead Road, which were included in the traffic analysis, show both operate at acceptable levels of service during each of the peak hours included for purposes of evaluating impact from the proposed School. The New Hempstead Road/Route 45 intersection operates at overall Level of Service "C" or better during the weekday time periods and an overall Level of Service "B" during both the morning time periods. The New Hempstead Road/Summit Park Drive/Hempstead Road intersection operates at an overall Level of Service "B" or better during each of the four peak hours analyzed.

The unsignalized intersections along New Hempstead Road, which were included in the analysis, focus on the intersections with the highest volumes recorded on the side street approaches, results show that each operates at Levels of Service "D" or better during the peak hours analyzed, except for the eastbound Grandview Avenue approach to New Hempstead Road. This approach operates at Level of Service "F" during the morning peak hour; however, Level of Service "C" or better during each of the other three time periods. Table 4 shows the results of the analysis for existing conditions.

Table 4
EXISTING CONDITIONS – LEVEL OF SERVICE SUMMARY – PEAK SCHOOL HOURS
Darchei Noam School
New Hempstead, New York

INTERSECTION	APPROACH/ MOVEMENT		EXISTING CONDITIONS Weekday Morning	Weekday Afternoon	Sunday Morning	Sunday Midday
New Hempstead Road (CR 80) at New York State Route 45 (Signalized)	EB	L	B/17.0	B/16.2	B/14.7	B/15.1
		TR	D/35.9	C/21.7	B/16.8	B/18.8
	WB	L	B/17/5	B/13.8	A/8.0	B/10.7
		TR	B/10.8	B/10.3	A/7.9	A/8.8
	NB	L	B/18.4	C/26.0	B/15.7	B/16.5
		TR	C/21.5	C/22.3	B/16.9	B/19.0
	SB	L	C/23.3	D/47.9	B/15.7	B/18.6
		TR	C/23.8	C/31.9	B/18.1	C/21.7
	Overall		C/22.6	C/23.1	B/14.2	B/16.4
New Hempstead Road (CR 80) at Summit park Drive (CR 51)/Hempstead Road (Signalized)	EB	LTR	B/12.9	A/9.1	A/7.0	A/7.8
	WB	LTR	A/8.5	A/9.1	A/6.7	A/7.7
	NB	LTR	B/16.7	B/7.1	B/15.7	A/15.9
	SB	LTR	B/17.3	C/21.5	B/15.9	A/16.1
	Overall		B/12.1	B/12.1	A/8.2	A/8.7
New Hempstead Road (CR 80) at Ellington Way/Site Entrance Drive (Unsignalized)	EB	L	A/8.8	B/10.3	A/7.5	A/8.0
	WB	L	A/8.6	A/8.3	A/7.6	A/8.0
	NB	LTR	B/11.9	C/19.5	N/A	--
	SB	LTR	C/19.1	C/22.5	B/10.4	B/14.3
New Hempstead Road (CR 80) at Pennington Way (Unsignalized)	NB	L	A/8.4	A/8.6		
	EB	LR	C/16.7	C/16.0	N/A	N/A
New Hempstead Road (CR 80) at McNamara Road (CR 67) (Unsignalized	NB	L	A/8.5	A/8.8	A/7.6	A/8.0
	EB	LR	D/34.7	C/17.3	B/10.4	B/14.5
New Hempstead Road (CR 80)/Grandview Avenue (CR 80)/Union Road (Unsignalized)	NB	L	A/9.5	A/8.6	A/7.6	A/7.9
	EB	LR	F/76.0	C/21.4	B/10.7	B/13.6

Level of Service/Average Vehicle Delay.

EB =Eastbound NB = Northbound L = Left turn R = Right turn
WB =Westbound SB = Southbound T = Through

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