

4 TRAFFIC DATA

4.1 TRAFFIC CHARACTERISTICS

Traffic characteristics data were obtained for the locations shown on Figure 1- 6. Comprehensive manual and automated machine traffic counts were conducted at locations marked with a double green bar. Turning movement counts were conducted at intersections marked with a blue circle. Data for locations marked with a dotted blue circle were obtained from previous studies and reports, which included the Brentwood Report and the Columbia Heights Study. Data collection was halted during the atypical periods, such as holidays and during summer time.

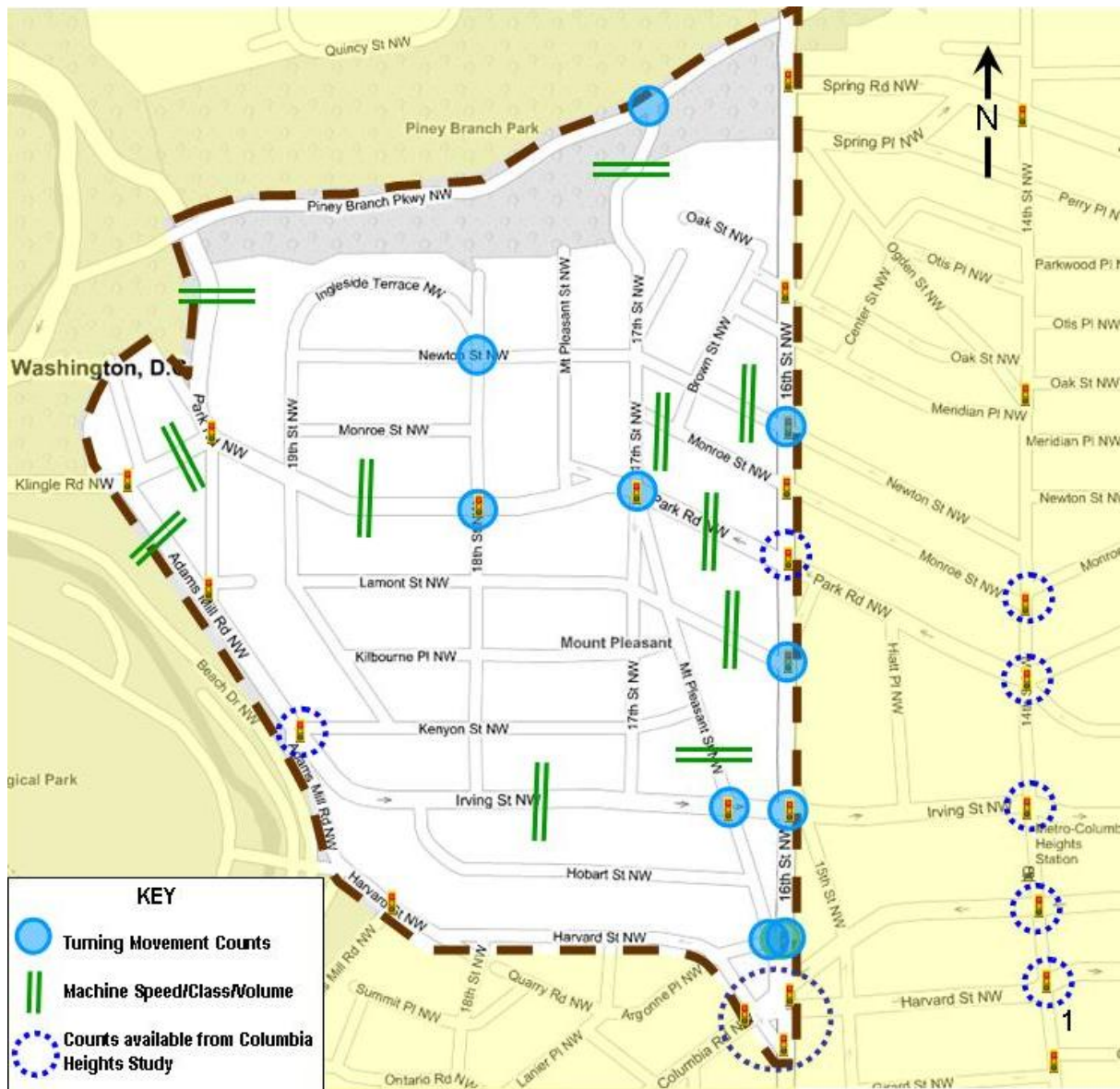


Figure 1- 6 Manual and Machine Count Locations

4.1.1 Turning Movement Counts

Manual turning movement data were collected at 10 intersections, listed in Table 1-3. Data for 3 additional locations were obtained from the Columbia Heights Study, locations 11, 12, and 13 marked with an asterisk (*) on the table. Turning movement data for cars, bus, trucks, bicycles, and pedestrians were collected in 15-minute intervals during weekday a.m. and p.m. peak periods. Detailed data are presented in Appendix B in customary DDOT format

Table 1- 3 Turning Movement Count Locations

No.	Intersection Location	Signalized
1	16 th Street and Irving Street NW	Yes
2	16 th Street and Harvard Street (on north side), NW	Yes
3	16 th Street and Lamont Street, NW	Yes
4	16 th Street and Newton Street, NW	Yes
5	Mt. Pleasant Street and Harvard Street, NW	No
6	Mt. Pleasant Street and Irving Street, NW	Yes
7	Mt. Pleasant Street, Park Road and 17 th Street	Yes
8	17 th Street and Piney Branch Parkway, NW	No
9	18 th Street and Park Road	Yes
10	18 th Street and Newton Street, NW	No
11*	16 th and Park Road NW	Yes
12*	Adams Mill Road, Kenyon Street and Irving Street, NW	Yes
13*	16 th Street and Columbia Road NW	Yes

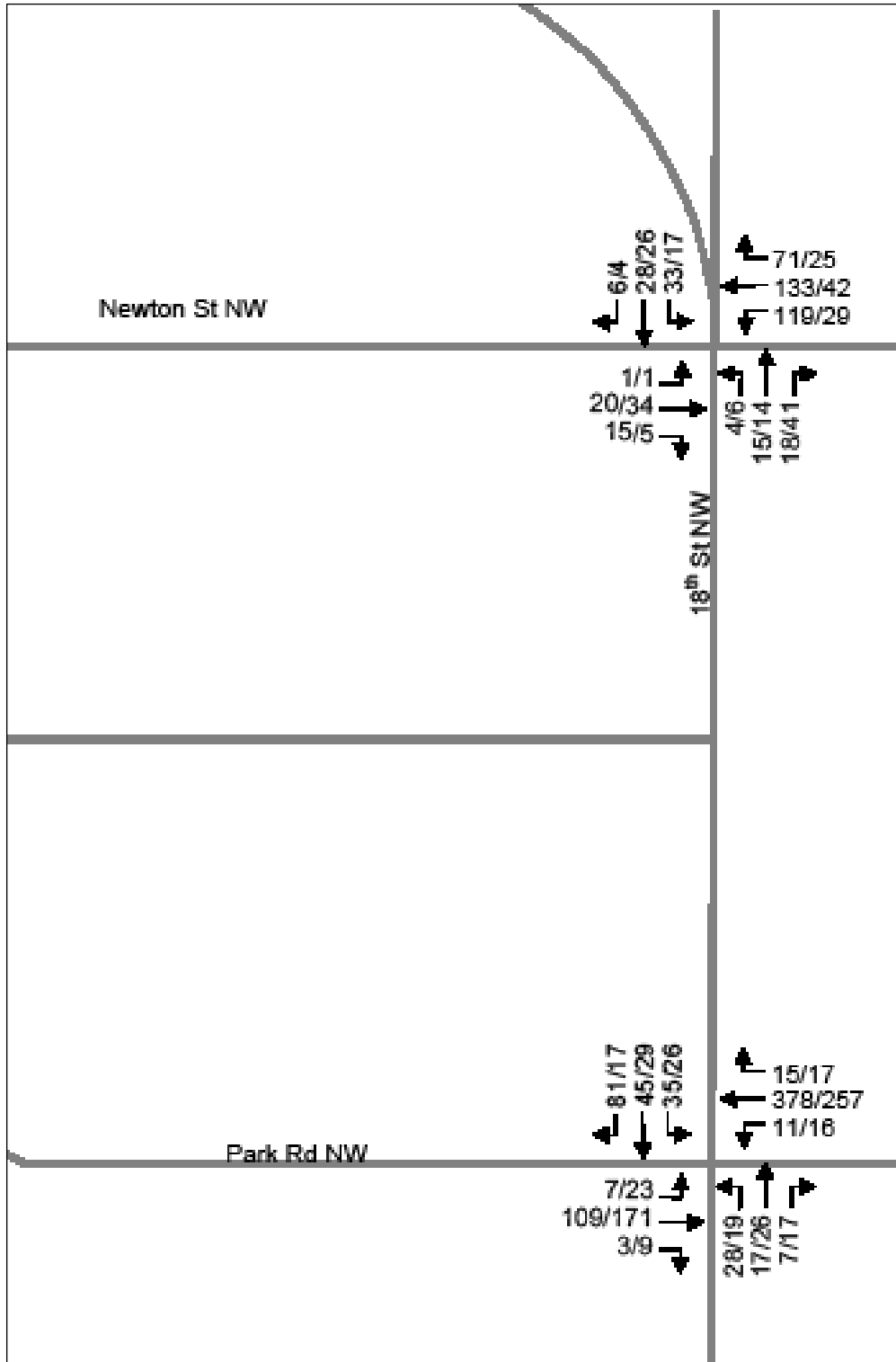


Figure 1- 7 Turning Movement Counts 16th Street, Park Road, and Newton Street

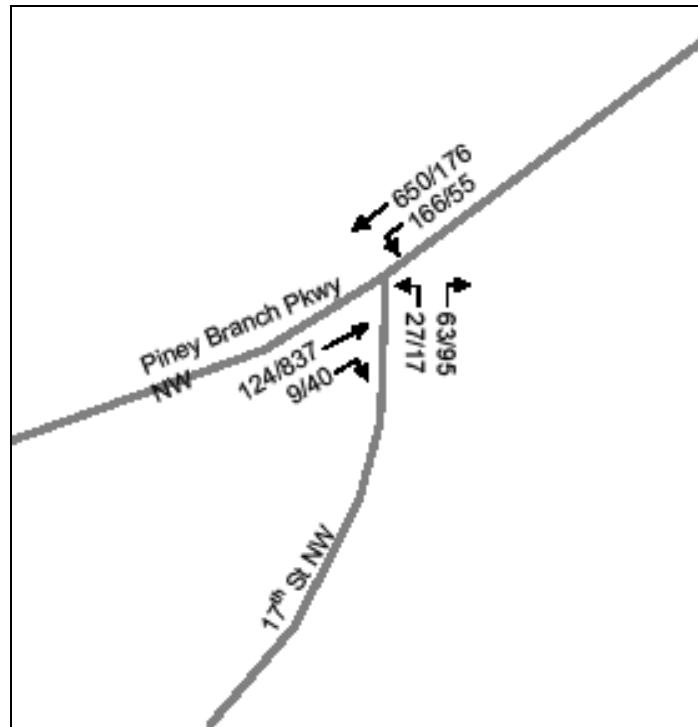


Figure 1- 8 Turning Movement Counts at Piney Branch Pkwy and 17th Street

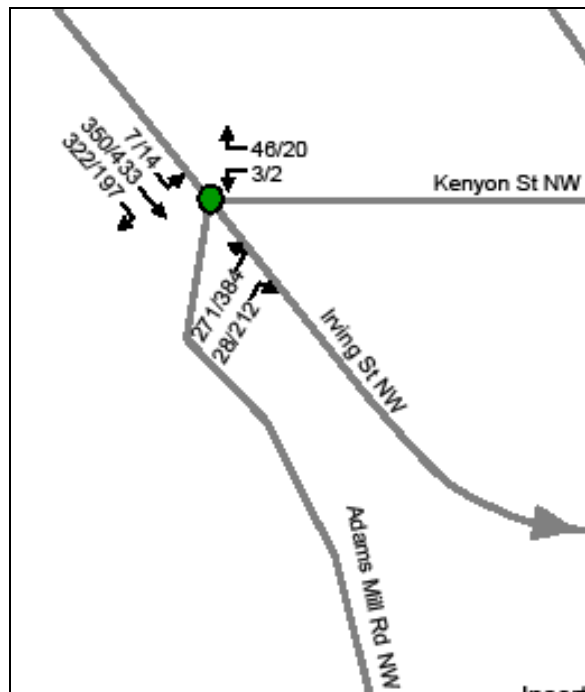


Figure 1- 9 Turning Movement Counts at Kenyon St, Irving Street, Adams Mill Road

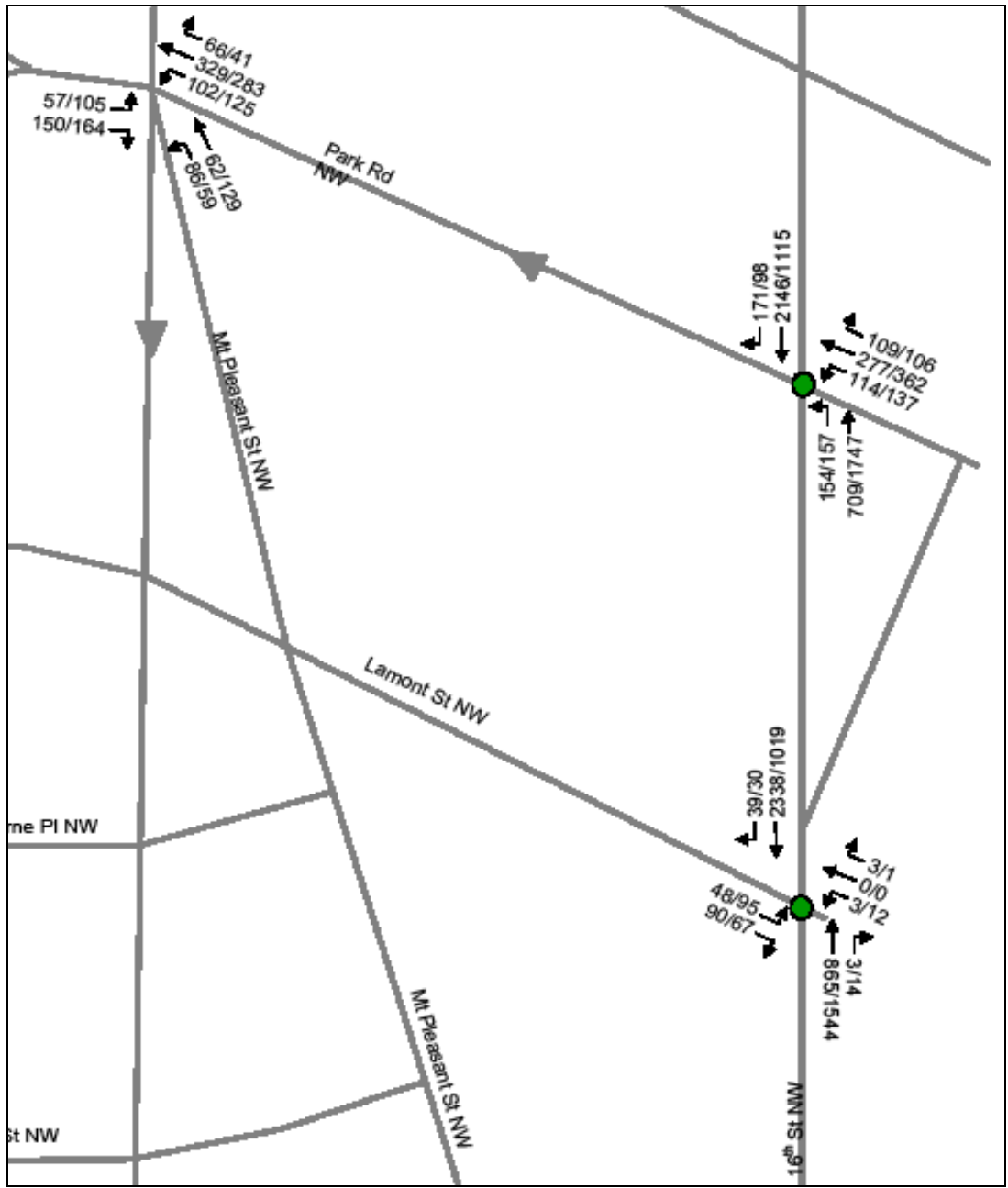


Figure 1-10 Turning Movement Counts 16th Street and Park Road

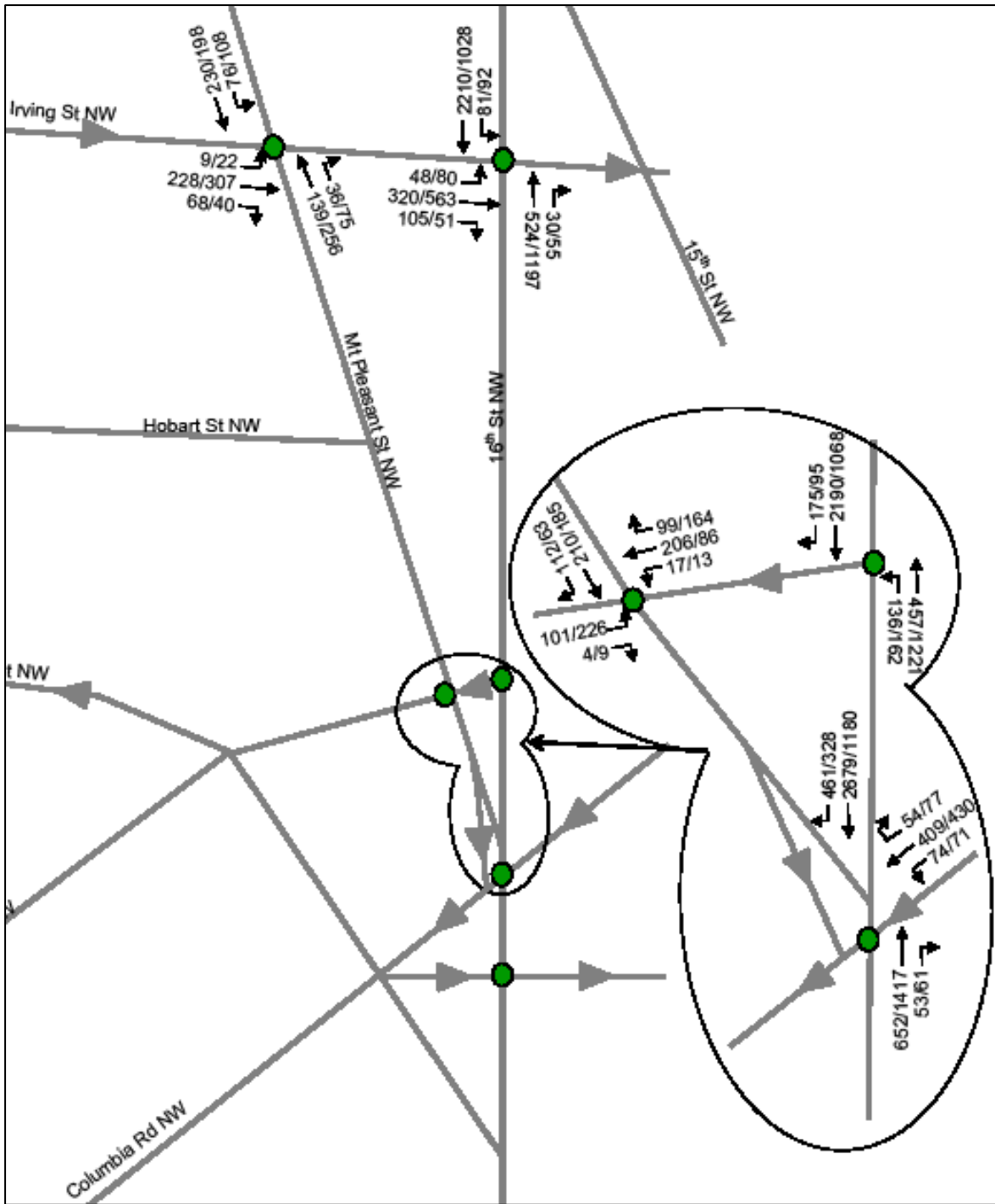


Figure 1-11 Turning Movement Counts for Mount Pleasant Street and 16th Street

4.2 MACHINE CLASSIFICATION, SPEED AND VOLUME COUNTS

The original task scope called for machine classification, speed, and volume counts at two locations to assess the general speed and vehicle type profile within the study area. Data collection efforts were expanded to include a total of eleven locations in response to community concerns regarding vehicle speeds and other traffic considerations. The locations studied are identified in Table 1- 4.

Table 1- 4 Traffic Classification, Speed and Volume Count Locations

<i>No</i>	<i>Location</i>	<i>Between</i>
1	Mt. Pleasant Street, NW	Irving Street and Kenyon Street
2	Lamont Street, NW	16 th Street and Mt. Pleasant Street
3	Park Road, NW	16 th Street and Mt. Pleasant Street
4	Monroe Street, NW	16 th Street and 17 th Street
5	Newton Street, NW	17 th Street and Brown Street
6	17 th Street, NW	Newton Street and Piney Branch Parkway
7	Irving Street, NW	17 th Street and 18 th Street
8	Park Road, NW	18 th and 19 th Street
9	Park Road, NW	Park Road/Klinge Road and Piney Branch Parkway
10	Adams Mill Road, NW	Klinge Road and Lamont Street.
11	Klinge Road, NW	Adams Mill Road and Walbridge Road

Data were collected in 15-minute intervals for a one-week period. The classification data were collected using the FHWA F Classification Scheme⁽¹⁾. This scheme identifies 13 classifications based on vehicle type and axle length devised by the FHWA. Speed data collection bins were customized for DDOT⁽²⁾. These studies are conducted mid-block; between intersections. Traffic counting equipment was placed at locations where the highest travel speeds were likely to occur. Complete data are provided in Appendix C.

1 Traffic Monitoring Guide, Federal Highway Administration, 2001.

2 DDOT Speed bins (in MPH) are defined as: 0-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-55, 56-60, 61-65

4.3 AVERAGE DAILY TRAFFIC

Average daily traffic along key routes is summarized in Table 1- 5.

Table 1- 5 Average DailyTraffic

Serial	Direction	Machine Count Location	ADT	Buses		Trucks	
				%	No.	%	No.
1	NB & SB	17th St. NW Between Newton St. NW and Piney Branch Pkwy	2129	0.0%	0	0.0%	0
2	NB & SB	Adams Mill Rd NW Between Klingle Rd NW and Kenyon St. NW	5444	1.4%	76	1.0%	54
3	EB	Irving St. NW Between 18th St. NW and 17th St. NW	4637	1.0%	46	1.0%	46
4	EB & WB	Klingle Rd NW Between Park Rd NW and Adams Mill Rd NW	4142	2.2%	91	0.9%	37
5	EB & WB	Lamont St. NW Between Mt. Pleasant St. NW and 16th St. NW	2383	0.2%	5	0.5%	12
6	EB	Monroe St. NW Between 16th St. NW and Brown St. NW	1757	0.0%	0	0.4%	7
7	NB & SB	Mt. Pleasant St. NW Between Irving St. NW and Kenyon St. NW	6526	3.9%	255	1.3%	85
8	EB & WB	Newton St. NW Between 17th St. NW and Brown St. NW	2269	0.1%	2	0.4%	9
9	WB	Park Rd NW Between 16th St. NW and Mt. Pleasant St. NW	5980	0.5%	30	1.5%	90
10	NB & SB	Park Rd NW Between Klingle Rd NW and Piney Branch Pkwy	7059	0.1%	7	0.4%	28
11	EB & WB	Park Rd NW Between 18th St. NW and 19th St. NW	7302	1.6%	117	0.9%	66

4.4 SPEED STUDY RESULTS

The results of the speed studies and posted speed limits for each study location are presented in Appendix C. While 85th percentile speeds are used according to accepted engineering practice, average speeds are also presented in the table at the request of community residents. The 85th percentile values are presented on Figure 1-12.

The regulatory speed limit is 25 mph on all roadways in the study area. A 15 mph Advisory Speed (yellow sign) is posted on 17th Street near Piney Branch Parkway. The observed 85th percentile speed at that location was 28 mph. The highest 85th percentile speed (34 mph) was observed at Adams Mill Rd (north of Lamont Street) and Park Road (north of Klingle Road).

Table 1- 6 Speed Study Results

Location	Between	Direction	Speed Limit (MPH)	Observed 85th Percentile Speed (MPH)	Observed Mean Speed (MPH)
Mt. Pleasant Street, NW	Irving St - Kenyon St	NB	--	25	17
		SB	--	22	14
Lamont Street, NW	16 th St - Mt. Pleasant St	EB	25	23	16
		WB	--	21	13
Park Road, NW	16 ^t St - Mt. Pleasant St	WB	--	26	19
Monroe Street, NW	16 th St – 17 th St	EB	25	19	12
Newton Street, NW	16 th St. - 17 th St.	EB	--	21	16
		WB	25	22	16
17 th Street, NW	Newton St - Piney Branch Pkwy	NB	15	28	23
		SB	15	28	22
Irving Street, NW	17 th St - Hobart St	EB	25	31	25
Park Road, NW	18 th St. - 19 th St	EB	25	31	26
		WB	25	31	26
Park Road, NW	Klinge Rd – Piney Branch Pkwy	NB	--	34	29
		SB	25	34	28
Adams Mill Road,	Klinge Rd Lamont St.	NB	25	34	28
		SB	25	32	27
Klinge Road, NW	Adams Mill Rd Walbridge Rd	EB	--	24	15
		WB	--	27	19

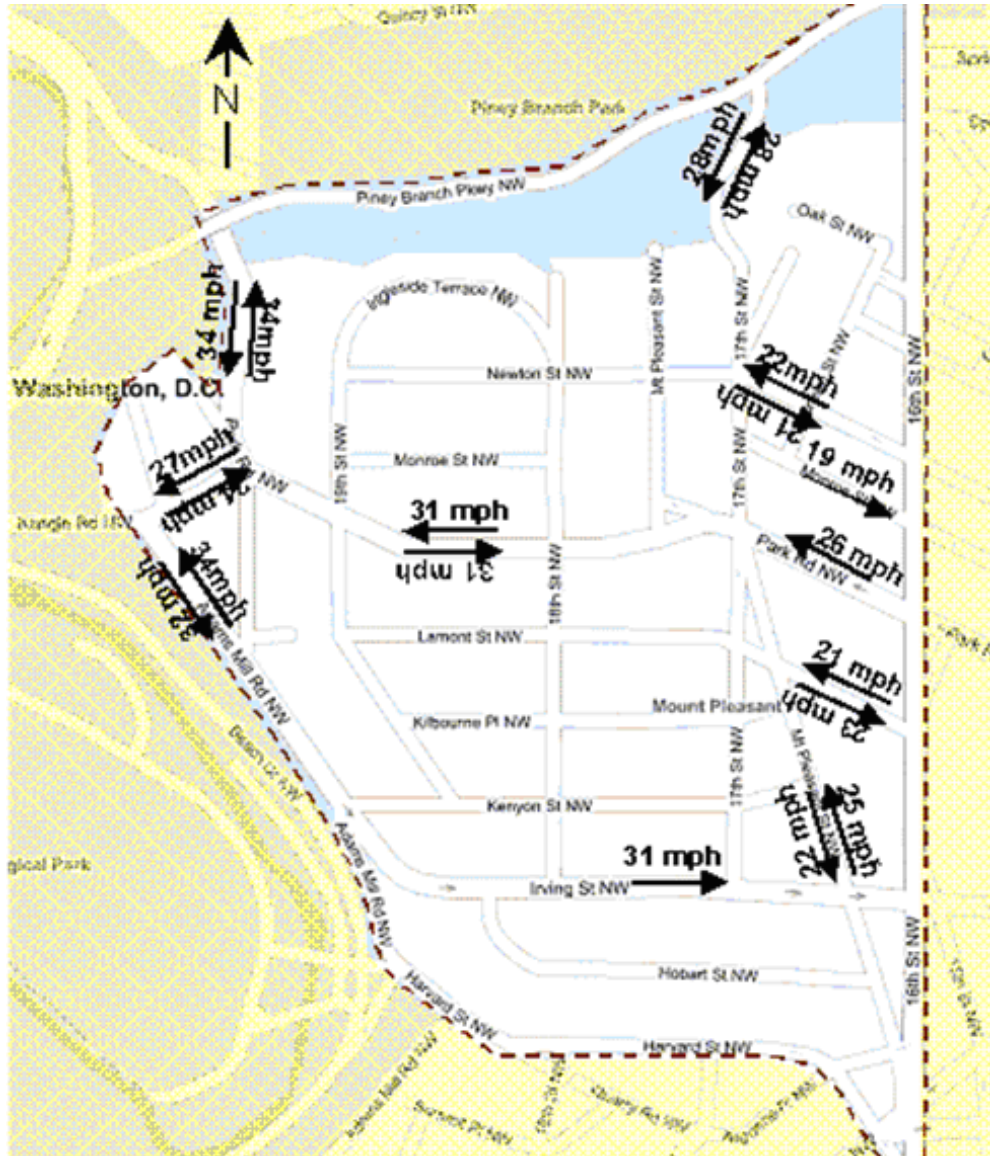


Figure 1-12 Observed 85th-Percentile Speeds

4.5 STUDY OF CUT-THROUGH TRAFFIC ON 17TH STREET

A limited origin-destination study was conducted in response to community concerns about cut-through traffic on 17th Street traveling from or to Piney Branch Parkway. Piney Branch Parkway is designated as a *local* street. The specific objective of this study was to estimate the potential magnitude or proportion of pass-through traffic that may be diverting to that segment of 17th Street near Piney Branch Parkway. The License Plate Matching method was used to determine the origins and destinations. Two portal points were used to collect license plate data:

1. **Station A -North:** 17th Street South of Piney Branch Road
2. **Station B -South:** 17th Street North of Newton Street

License plates numbers were recorded for vehicles passing each survey station in both inbound and outbound directions for 15 minutes during weekday a.m. peak, off-peak and p.m. peak periods. Plate numbers were matched to determine the number of vehicles traveling past the stations in each direction (Stations A to B and B to A)

The results of the study are presented in Table 1- 7. These data suggest that a substantial proportion of the traffic may be pass-through traffic. It is important to stress that the findings of this limited study may be overestimating the proportion of cut-through traffic. Because of the placement of stations, estimates of “pass-through” traffic also include motorists from the neighborhood (such as Newton Street). It suggests a follow-up O-D analysis may be necessary for a longer O-D pair to determine the proportion of 17th Street traffic that is traveling through the Mt. Pleasant neighborhood.

Table 1- 7 Cut-Through Traffic -17th Street between Piney Branch Road and Newton Street

Time Period	Travel Direction	Entering		Exiting		Matching (Cut-Through)	Out-In Trip	In-Out Trip	Total Local (Out-In + In-Out)	Total Vehicles	% Cut-Through Traffic	% Local Traffic
		Station*	Vehicles	Station*	Vehicles							
8:30 AM	NB	B	18	A	13	13	5	0	5	18	72%	28%
8:45 AM	SB	A	33	B	38	27	6	11	17	44	61%	39%
11:00 PM	NB	B	11	A	10	8	3	2	5	13	62%	38%
11:15 PM	SB	A	3	B	6	3	0	3	3	6	50%	50%
4:15 PM	NB	B	27	A	23	19	8	4	12	31	61%	39%
4:30 PM	SB	A	17	B	19	12	5	7	12	24	50%	50%

* Station A = 17th Street, right south of Piney Branch Road

Station B = 17th Street, right north of Newton Street

4.6 QUEUING AT SCHOOLS DURING PICK-UP AND DROP-OFF PERIODS

Queuing and congestion in the vicinity of schools in Mount Pleasant was cited by the community as a concern. The problem was thought to be particularly severe during brief periods of time when school was about to begin for the day, and again when classes were finished for the day.

The locations of schools in the Mount Pleasant Study area are identified on Figure 1-13. This map show only schools officially designated by the District of Columbia. It does not include day-care, pre-school, and uses that may be educational in nature. The Study Team conducted field reconnaissance visits to each school location to survey the general characteristics of the school site and areas adjacent to the schools. Sacred Heart School was selected as a location to conduct a case study during the student drop-off and pick-up periods.

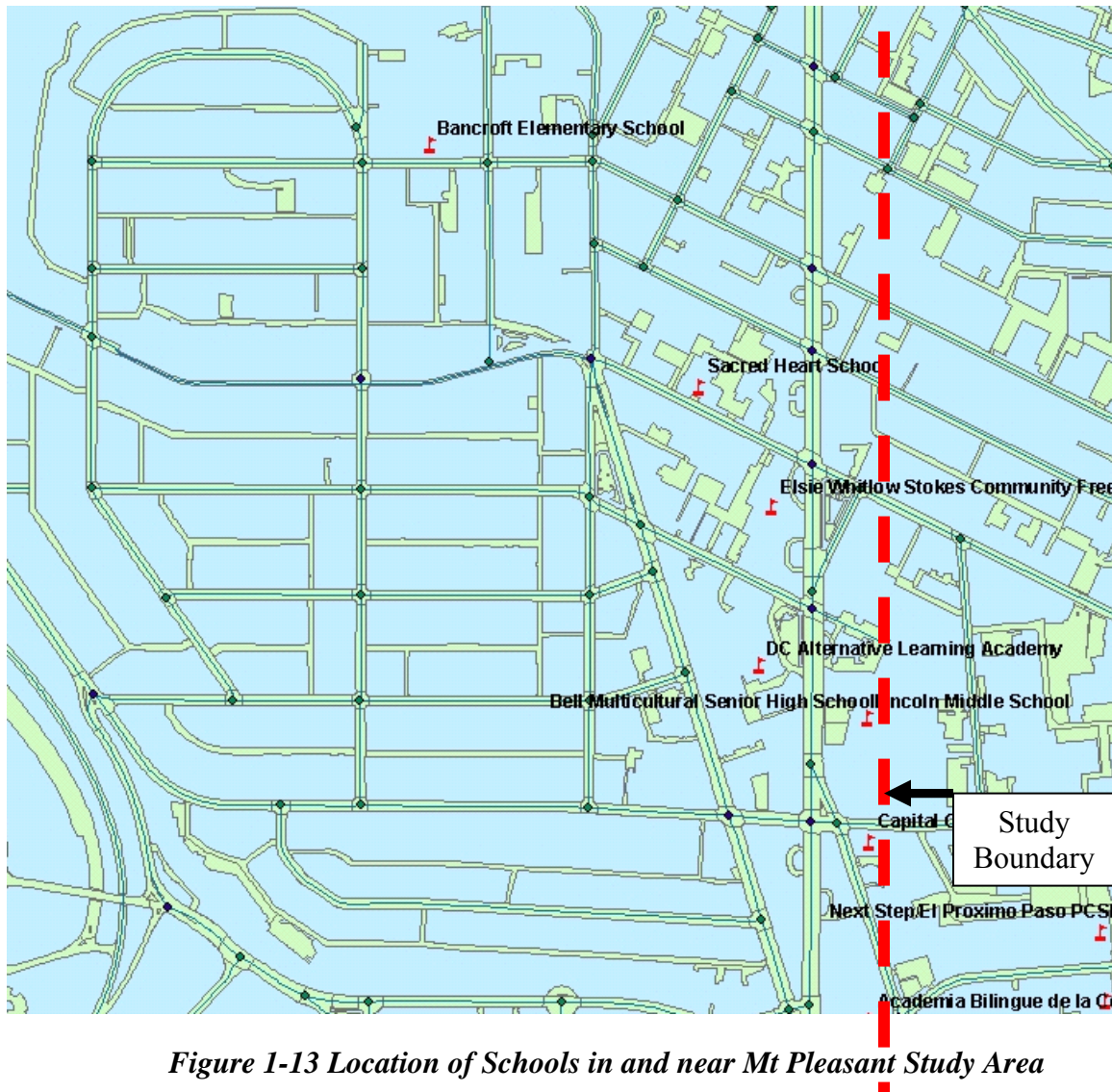


Figure 1-13 Location of Schools in and near Mt Pleasant Study Area

For the Sacred Heart study, the study team conducted a detailed field reconnaissance. A study to observe vehicle queues was made on a school day during peak a.m. drop-off and p.m. pick-up periods. The results are summarized in Table 1- 8.

During the study, vehicle queues extended from the school site to 16th Street for a 3 minute period between 7:59 a.m. and 8:01 a.m. and for 11 minutes between 3:25 p.m. and 3:35 p.m. The school has a small pickup area on site. Vehicles enter through the front entrance into an open paved area/parking lot, go around the school building and exit through an alley back onto Park Road. No motorists were observed using this route to drop off or pick up students. This location does not appear to be viable as a pick up and drop-off location. In part, because of vehicles parked in the alley. Additional information regarding Mount Pleasant Schools is provided in Volume 2.

Table 1- 8 Vehicle Queues at Sacred Heart School

Time Period	On-site parking and pick-up area		Vehicle Queuing on Park Road	
	Vehicles Entering	Vehicles Exiting	Maximum Vehicles Queued (Number/Time)	Queue back-up to 16th St
7:30-7:45 AM	11	3	8 (7:41 AM)	No
7:45-8:00 AM	7	0	12 (7:59-8:00 AM)	Yes (7:59-8:00 AM)
8:00-8:15 AM	8	5	12 (8:01 AM)	Yes (8:01 AM)
2:45-3:00 PM	1	0	3 (2:56-2:57 PM)	No
3:00-3:15 PM	1	4	5 (3:13-3:15 PM)	No
3:15-3:30 PM	0	9	20 (3:27-3:30 PM)	Yes (3:25-3:30 PM)
3:30-3:45 PM	3	7	21 (3:31 PM)	Yes (3:31-3:35 PM)
3:45-4:00 PM	3	4	4 (3:47-3:49 PM)	No
5:15-5:30 PM	4	11	2 (5:19-5:21 PM)	No