d.
District Department of Transportation

MT. PLEASANT TRANSPORTATION STUDY

VOLUME 1: EXISTING CONDITIONS REPORT

Prepared for:

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Transportation Policy and Planning Administration
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1 INTRODUCTION AND OVERVIEW

1.1 STUDY PURPOSE

The District Department of Transportation (DDOT) initiated the Mount Pleasant Transportation Study to examine existing traffic conditions in the study area, recommend improvements to address existing transportation problems, and to develop area-wide transportation alternatives to meet the following primary objectives:

- Enhance efficiency of all modes of transportation
- Promote safety of vehicles, bicycles and pedestrians
- Enhance streetscape consistent with the area
- Address bicycle and pedestrian transportation needs
- Address transit needs

The Mount Pleasant Transportation Study focuses on transportation within the Mount Pleasant neighborhood. A map of the study area is shown in Figure 1- 1. The findings and recommendations presented in this report are confined to the study area, however the potential traffic impacts of development and transportation conditions and improvements in the surrounding neighborhoods may have on transportation in Mount Pleasant are considered, where appropriate.

Figure 1- 1 Map of the Study Area

1.2 STUDY PROCESS

As shown in Figure 1- 2 Study Process, this project was conducted in 2 phases. The primary objectives of phase 1 were to identify the elements, characteristics, and condition of existing transportation systems in the study area; identify transportation-related problems, issues, and concerns of Mount Pleasant residents and the business community; and to collect, organize, and analyze the information and data needed to understand and evaluate specific transportation-related issues and problems to be developed during the 2nd phase of the project.

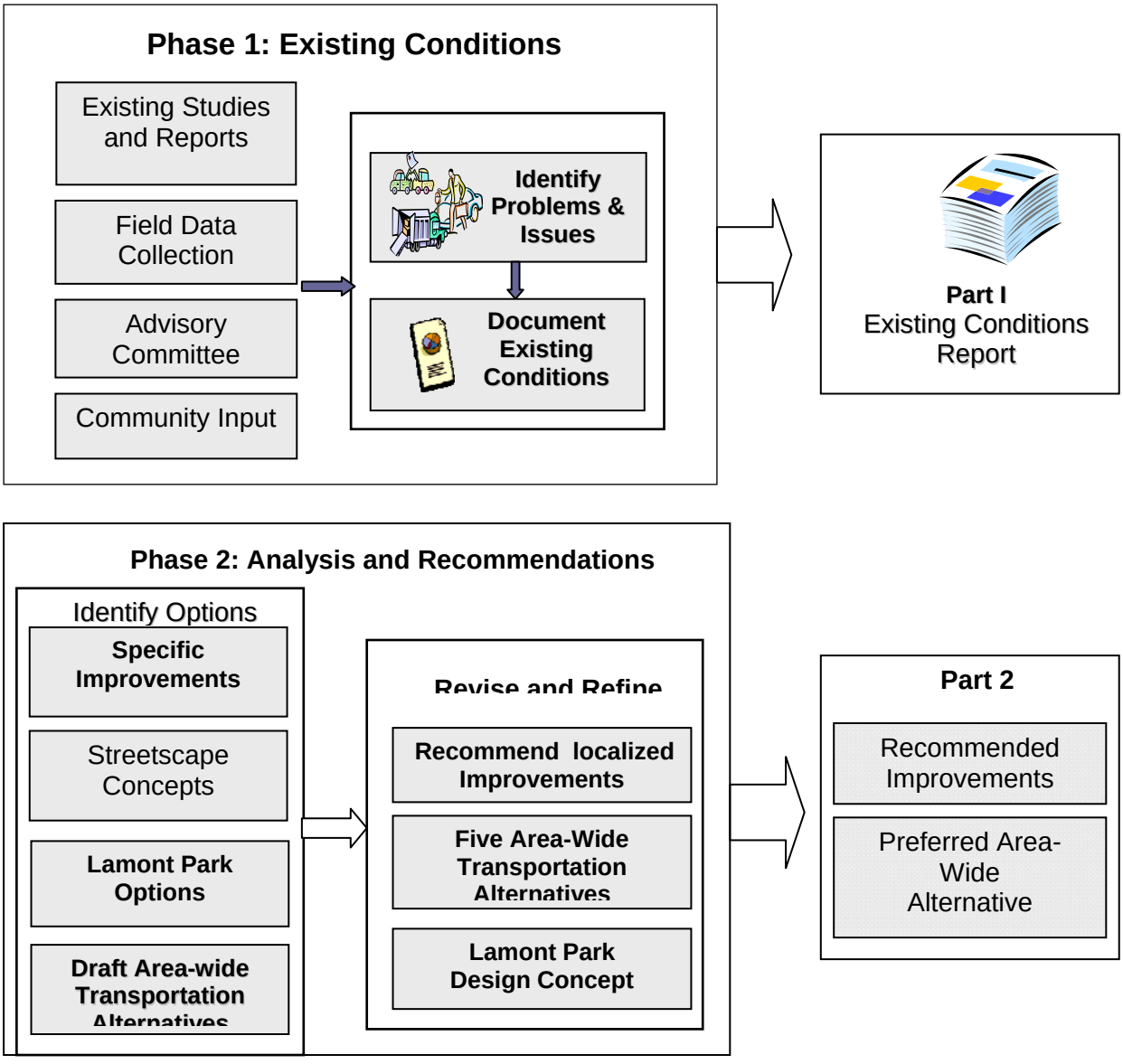

Figure 1- 2 Study Process

1.3 ORGANIZATION OF VOLUME 1

The results of this study are presented in two parts. Volume 1 describes existing conditions within the study area. Volume 2 presents recommendations and alternatives based on the material presented in this document.

This section of the report is organized as follows**:** **Chapter 2** provides a summary of existing land use and transportation system inventory. **Chapter 3** provides an overview of the issues and concerns voiced by the community. **Chapters 4, 5, 6,** and **7** describe the studies and data collected during Phase I. **Chapter 8** identifies planned developments and improvements in and around the study area and **Chapter 9** presents the results of traffic impact analyses under existing conditions for the current year (2008), and for 10 and 20 years in the future.

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2 LANDUSE AND TRANSPORTATION INFRASTRUCTURE

This chapter describes the study area and documents existing conditions with respect existing land use, road network characteristics (functional classification of roadways), inventories of the transportation infrastructure, and a summary of crash data for the past three years. Inventories related to pedestrian and bicycle facilities, transit, and other system characteristics are presented in later chapters on those subjects.

2.1 EXISTING LAND USE

A physical survey was conducted to identify key land-use and use and transportation system elements relevant to this study. Land-use zoning for Mount Pleasant area is presented in Figure 1- 3.

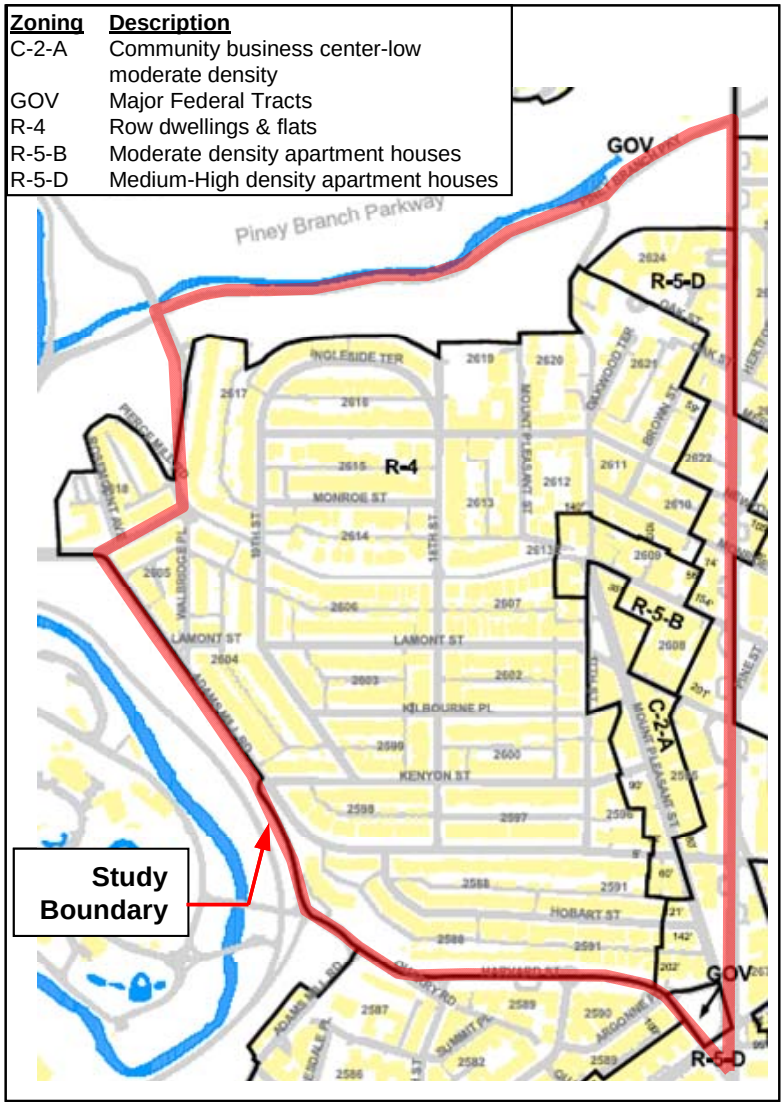

Figure 1- 3 Zoning Map of the Study Area

2.2 ROAD NETWORK CHARACTERISTICS

Functional classifications are based on the "function" or "use" of the roadway and the traffic volumes those roadways are expected to carry. Functional Classifications of roadways in the Mount Pleasant study are presented graphically on Figure 1- 4. Principal arterials are shown in green, minor arterials are shown in turquoise, collector roads are shown in yellow, and local streets are shown in white. Roadway designations are also summarized in Table 1- 1.

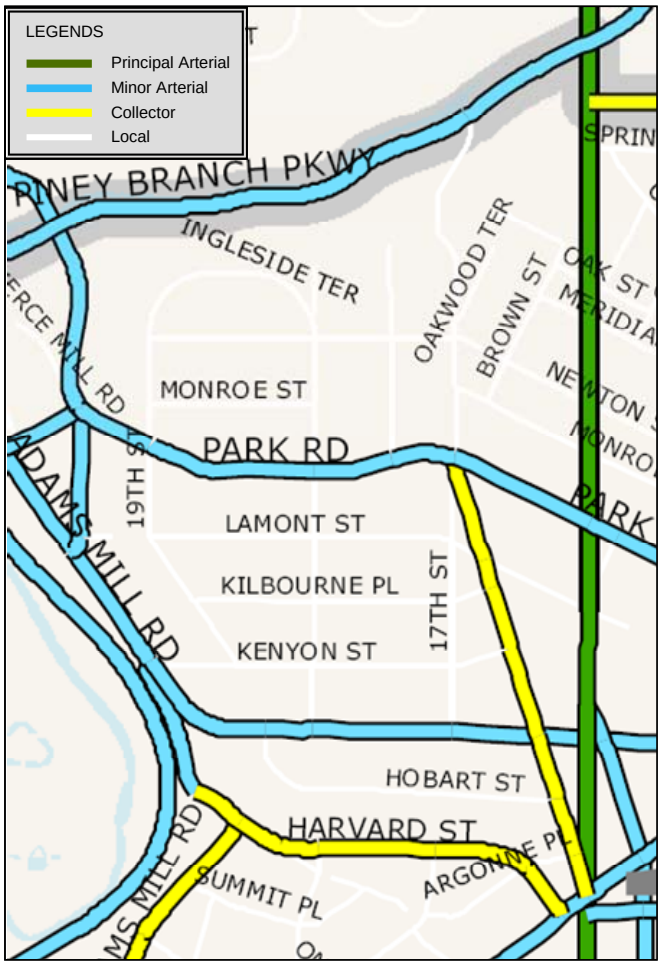

Figure 1- 4 Functional Classification of Study Area Road Network

16th Street, classified as a *Principal Arterial, is* an important commuter route which provides access to downtown Washington for cross-town traffic as well as for Mount Pleasant residents. Piney Branch Parkway, Adams Mill Road, Irving Street and Park Road are classified as *Minor Arterials.* Park Road and Irving Street serve as commuter routes for cross-town traffic, and provide access to the North Capitol area, including the hospital facilities and Catholic University located there.

Mount Pleasant Street, designated as a *Collector Street*, provides access to the commercial hub of the neighborhood. *Local Roads*, shown in white, provide access to residential units.

Table 1- 1 Roadway Functional Classifications in the Study Area

Road Classification	***Roadways***	***Characteristics****	***Traffic Volume, Average Daily Traffic (ADT)*** **
Principal Arterial	16th Street	Serves the major centers of activity of a metropolitan area, the highest traffic volume corridors, and the longest trips.	Greater than 15,000
Minor Arterial	Piney Branch Parkway Adams Mill Road Park Road Irving Street	Interconnects with and augments the urban principal arterial system and provides service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials.	8,000 to 15,000
Collector	Mount Pleasant Street	Provides land access service and traffic circulation within residential neighborhoods, commercial and industrial areas.	2,000 to 8,000
Local	All others	Serves primarily to provide direct access to abutting land and access to the higher order systems. It offers the lowest level of mobility and usually contains no bus routes.	Less than 2,000

* US DOT/Federal Highway Administration Guideline
** DC Practice

2.3 INFRASTRUCTURE INVENTORY

A comprehensive inventory of the characteristics and condition of the existing roadway system was conducted and are included in Appendix A. Information collected included, but was not limited to: a) roadway and sidewalk width, b) number and width of lanes (including parking lanes), c) condition of roadway, sidewalk, signs and markings and other roadway elements, and d) the presence of tree-space. Inventories of transit, bicycle, and pedestrian-related elements are described in Chapters 1-6 and 1-7.

2.4 CRASH DATA

Crash data for the years 2004 through 2006 were retrieved from the DDOT' TARAS crash database. The total number of reported crashes and crashes involving pedestrians and/or bicycles are presented by intersection in Figure 1- 5. Mid-block crashes are aggregated with data for the nearest intersection. Additional information related to pedestrian and bicycle-involved crashes is provided in Chapter 6.

DDOT Highway Safety Improvement Program (HSIP) focuses on identifying and correcting high crash locations. For this study, these crash data and their characteristics are used in combination with other information to develop recommendations and alternatives.

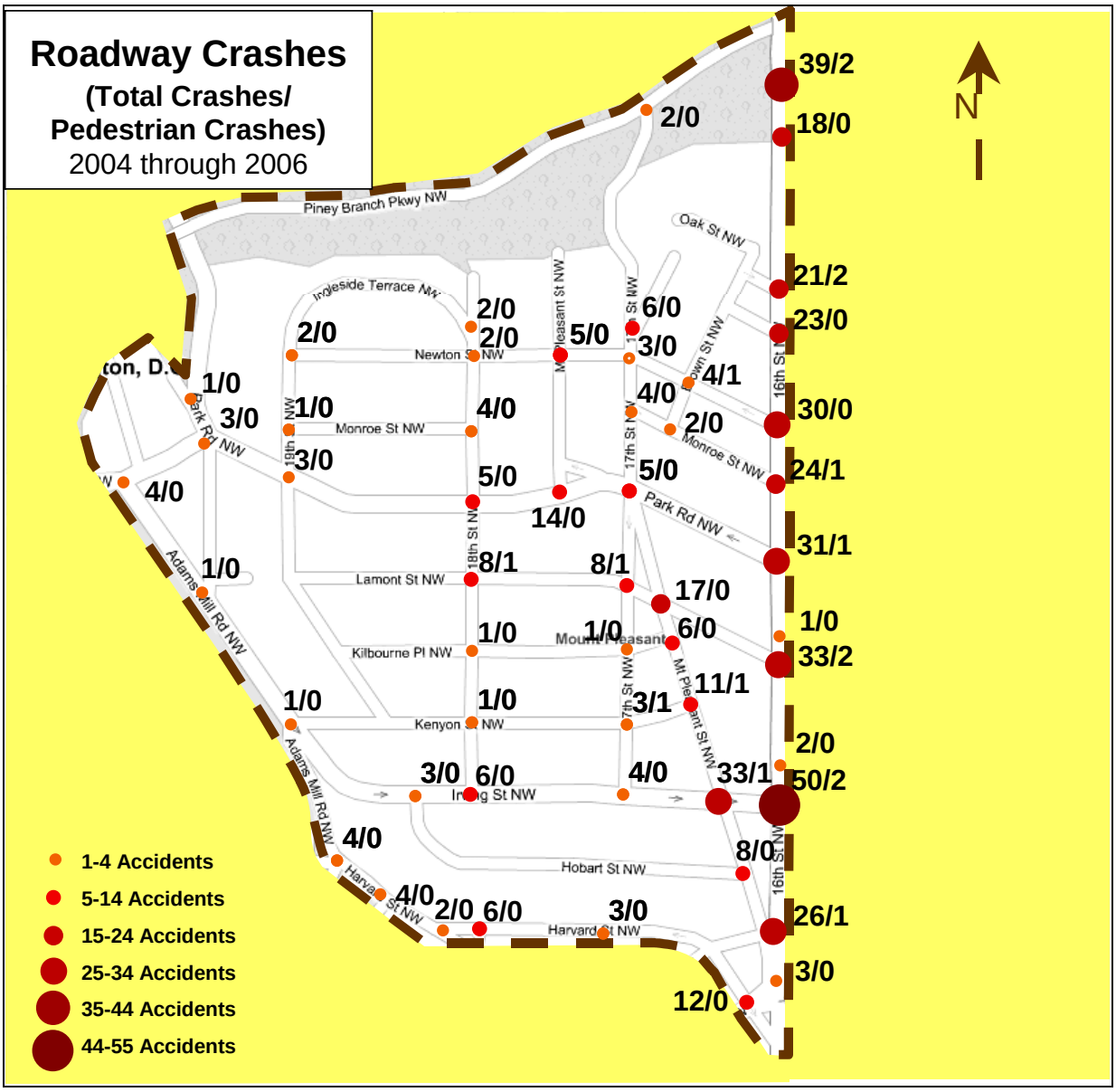

Figure 1- 5 Crash Data (2004-2006)

3 COMMUNITY-IDENTIFIED PROBLEMS AND ISSUES

Community involvement in the development of transportation plans typically takes place after the study team has gathered basic data and formulated an initial set of transportation alternatives. However, for this study, this project began with a community walk-though, and included community input at each stage of the project. This process is described further in Volume 2.

During Phase I, the community was encouraged to identify and discuss problems, issues, and concerns about transportation in the Mount Pleasant area. Following an initial meeting to introduce the project, input was solicited during a community walk-through, advisory committee meetings, and two public meetings. Additional information was also obtained from a number of sources, including DDOT, previous studies, Advisory Neighborhood Commission (ANC), informal conversations and discussions with residents and business owners, and feedback directly to the project and to the Mount Pleasant Community discussion site.

Through this interaction, the study team identified specific deficiencies and problems, gained valuable insight with regard to longer-term issues, concerns, and priorities of various elements of the community. The team also received a number of recommendations and ideas for short and long-term alternatives for addressing current and future transportation-related issues. Since these do not represent the existing conditions, they are not reported in this document. However these items have been properly noted, and will be used as a resource as the team develops and evaluates potential recommendations and alternatives during the next phase of this study.

Involving the community much earlier in the process, offers some advantages. Early interaction with the Advisory Committee supported a problem-focused approach to data collection. Based on this input, initial data collection was expanded to ensure that the necessary field data were collected. This, in turn, helped the study team identify and analyze issues and problems of interest to the community that may have been overlooked in a more data-driven approach. Residents are an excellent source of information about how they actually use the transportation system, and are helpful in identifying problems and issues that may not be evident from engineering and planning studies.

Early and more frequent interaction with the advisory committee and the public provided the study team with valuable insight with regard to the issues and differing priorities within the Mount Pleasant Community. This information is reflected in the range of alternatives explored and presented to the community for discussion.

3.1 ISSUES, PROBLEMS, AND CONCERNS

Key highlights garnered from this process are summarized in Table 1- 2. A more extensive summary list of issues, ideas, and concerns documented through community involvement is provided in Appendix E.

A map of the Mount Pleasant Neighborhood was used during community outreach activities to graphically identify locations where specific existing or potential future problems and areas of concern identified by the community. Specific deficiencies and problems related to various elements of the transportation system were logged in and cross-matched with the inventories and

field surveys conducted through this study. The order in which topics are presented does not reflect their importance within the community.

Table 1- 2 Highlights from Community Input

Traffic Speeds	Traffic speeds were of concern to residents at a number of locations in the neighborhood. Residents feel that many vehicles are traveling at speeds that are not appropriate for the environment.
Pedestrian Safety	Residents do not feel safe crossing some of the more heavily traveled. Of particular concern was the need to improve pedestrian access to the Columbia Heights Metro station. Specific concerns include increasing pedestrian safety crossing 16th Street, and their sense of personal security walking on streets with limited lighting.
Impact of New Development	The community expressed a wide range of concerns about how traffic generated by new development taking place in Columbia Heights may impact traffic conditions within Mount Pleasant, and what alternatives may be available for mitigating potential negative impacts on traffic volumes and speed. Transportation decisions may affect the viability of Mount Pleasant businesses, and provide opportunities or barriers to community interests in enhancing the "livability" and attractiveness of Mount Pleasant.
Traffic Circulation	The Community recognizes the challenges faced by urban neighborhoods in balancing the needs of residents and businesses within the community with the need to provide access into and through the community; particularly on roadways designated as principal and minor arterials, which are both residential streets which also support cross-town access for commuters, bus routes, and other traffic. The existing roadway network and circulation patterns have evolved over decades. While this legacy present some formidable challenges with respect to transportation; it is also an important factor that created and to some extent, sustains the urban neighborhood feel that residents value.
Neighborhood Identity	The community places a high priority on addressing problems and opportunities for improving the streetscape and appearance of Mount Pleasant, in a way that recognizes and celebrates the historic character of the community, and will help Mount Pleasant evolve and reach its full potential as a viable, vibrant, urban neighborhood.
Streetscape	Improving the streetscape, particularly in and around the Mount Pleasant Street business area is important to the community. Improved, attractive sidewalk surfaces, street lighting, trash receptacle, tree boxes, increased green space, and other elements are essential to creating a more attractive, comfortable environment. Public seating in parks and among Mount Pleasant Street would benefit businesses and encourage pedestrian activity.
Parking	Lack of adequate parking in neighborhoods and in the Mt. Pleasant business area were frequently cited as important issues. Specific problem areas identified included making more effective use of existing parking resources, seeking options for increasing the supply of parking for residents and to support the current and future needs of business owners, employees and patrons. Parking turn-over and enforcement, particularly for short-term and metered parking were cited as concerns by residents and business owners.

Multi-Modal Transportation	The community identified the need to support and encourage decreased dependence on motor vehicles, and move towards an approach to transportation that balances the needs of all elements of the community and all modes of travel.
School Areas	Maintaining the safety of school children, while maintaining mobility in and around schools is also an issue. Traffic congestion associated with picking up and dropping off students in the morning and evening.
Parks and Public Spaces	Additional public spaces are needed in Mount Pleasant. Existing parks are too small to support a community the size of Mount Pleasant. Parks, (including Lamont Park and Harvard Park) are poorly maintained and need repair. Problems include the condition, design and availability of seating in the park, lighting in and near the park, increased green space in the park, lack of bicycle paths, and improvements that would increase the health and appearance of trees and other landscaping features. By virtue of its location, Lamont Park is a key element in efforts to improve the streetscape and appearance of the community. Possible expanded functions to enrich community life include outdoor movies, farmers markets, festivals, and allowing commercial uses, such as vendors serving coffee or selling magazines and flowers at key times of the day. Public restrooms should also be considered.
Delivery and Service Vehicle Access	Delivery and service vehicle access along Mount Pleasant Street is a high-priority concern for business owners and residents. Delivery trucks and service vehicles (like trash trucks) contribute to traffic snarls and safety issues along that street. A shortage of metered (short term) parking is an on-going problem for patrons and employees of businesses.

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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.

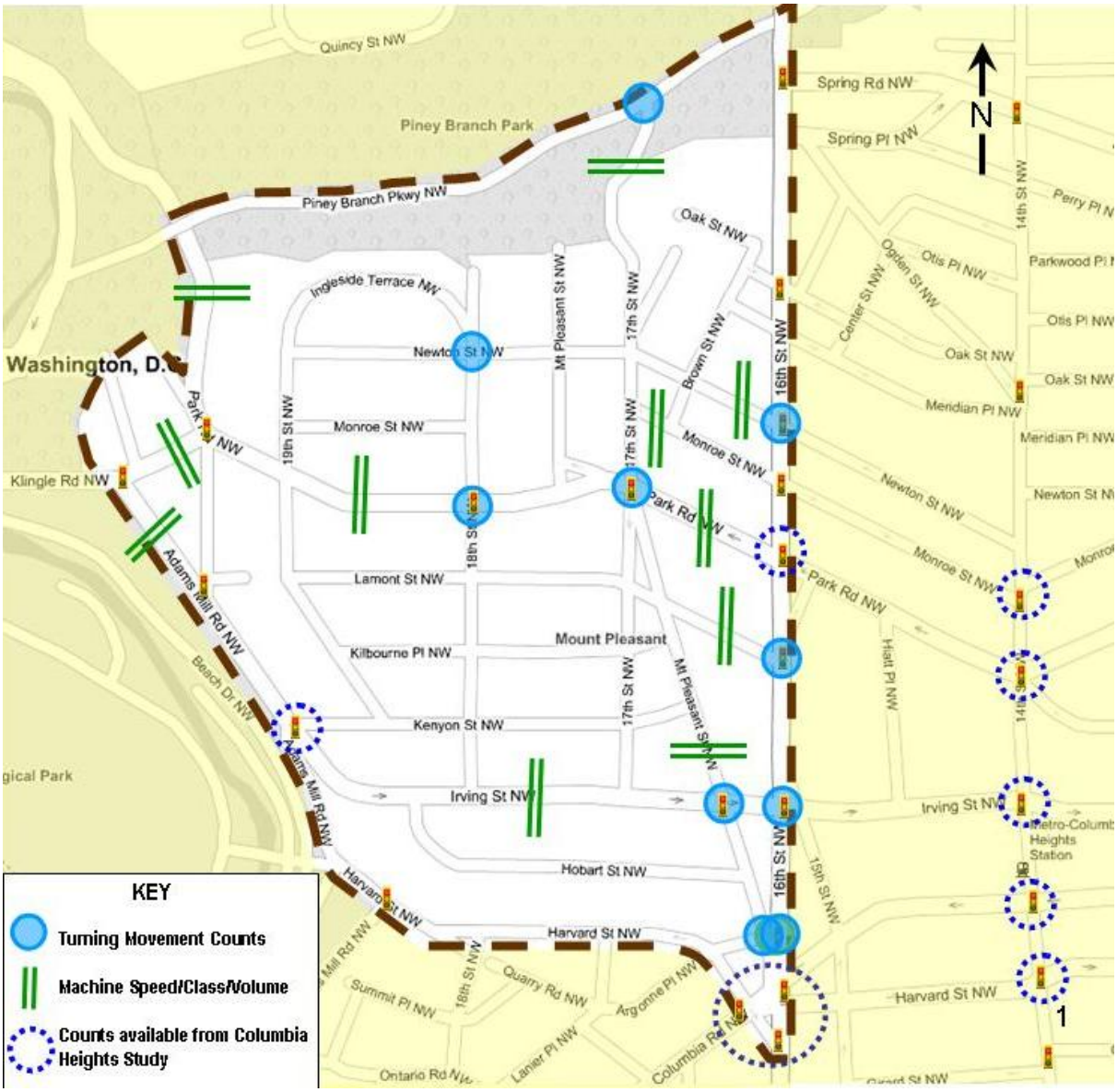

Figure 1- 6 Manual and Machine Count Locations

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	16th Street and Irving Street NW	Yes
2	16th Street and Harvard Street (on north side), NW)	Yes
3	16th Street and Lamont Street, NW	Yes
4	16th 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 17thStreet	Yes
8	17th Street and Piney Branch Parkway, NW	No
9	18th Street and Park Road	Yes
10	18th Street and Newton Street, NW	No
11*	16th and Park Road NW	Yes
12*	Adams Mill Road, Kenyon Street and Irving Street, NW	Yes
13*	16th Street and Columbia Road NW	Yes

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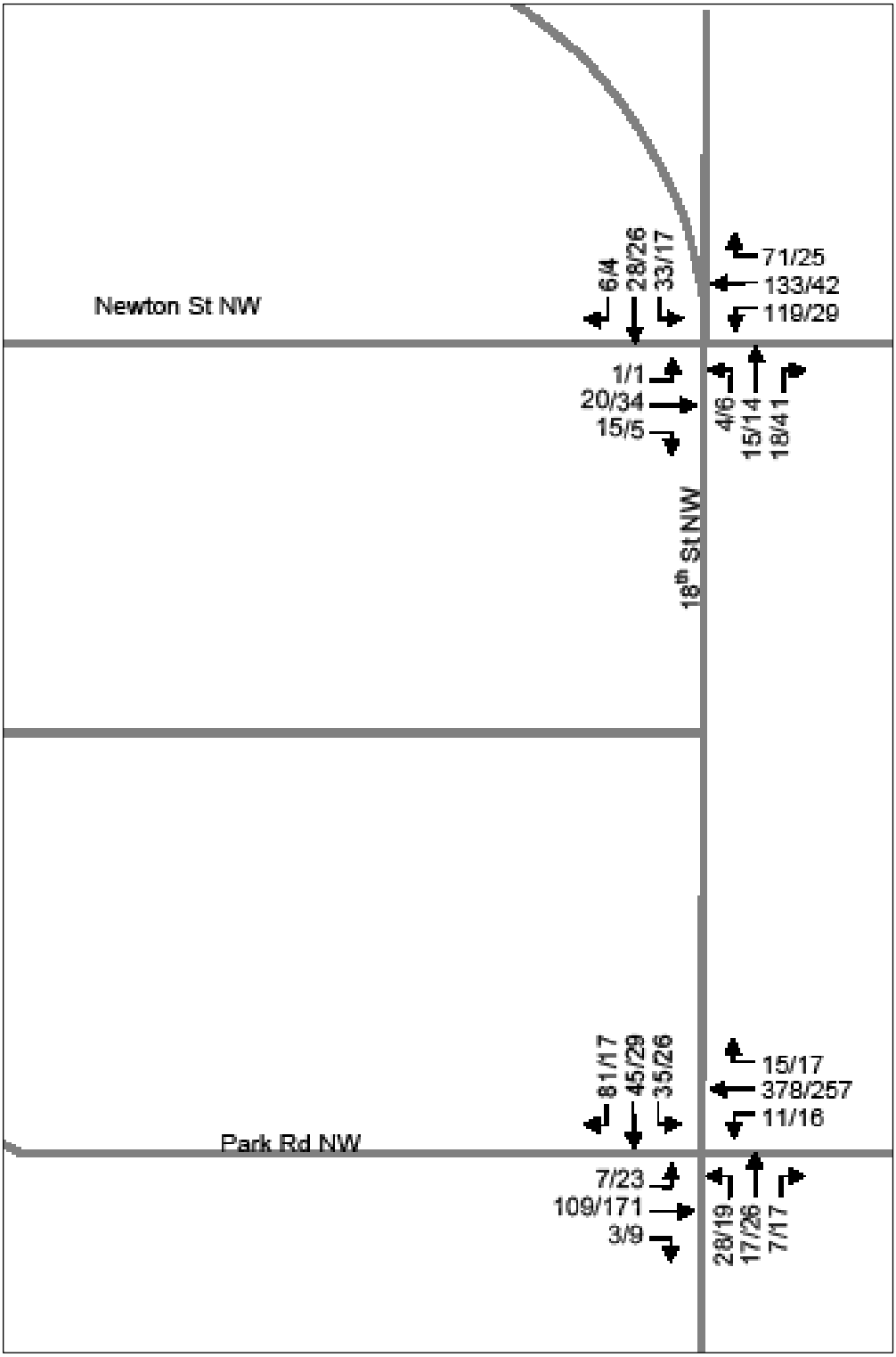

Figure 1- 7 Turning Movement Counts 16th Street, Park Road, and Newton Street

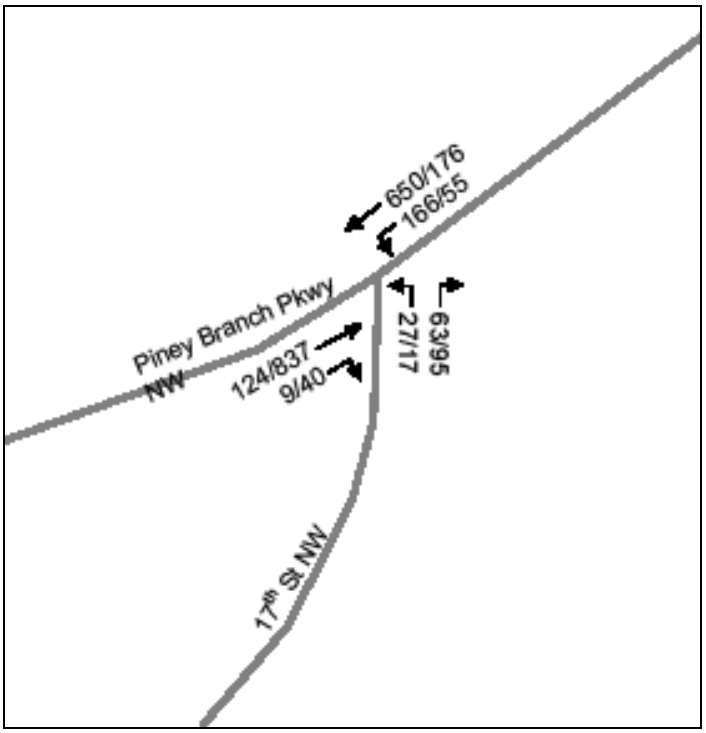

Figure 1- 8 Turning Movement Counts at Piney Branch Pkwy and 17th Street

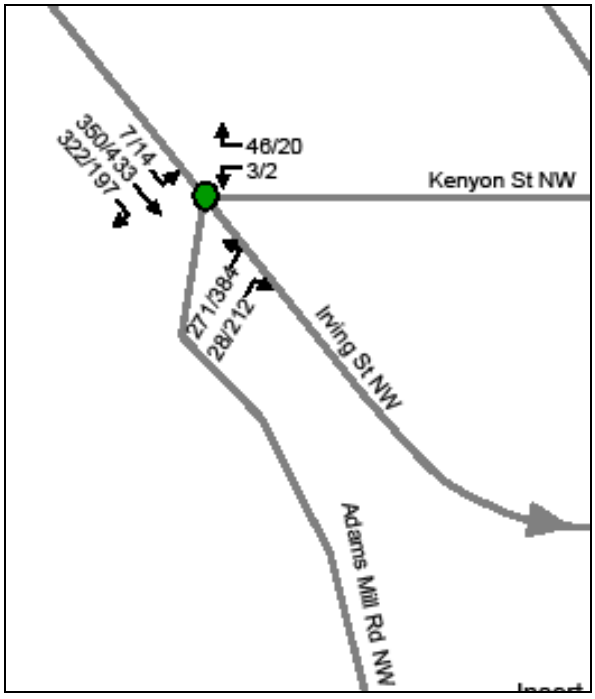

Figure 1- 9 Turning Movement Counts at Kenyon St, Irving Street, Adams Mill Road

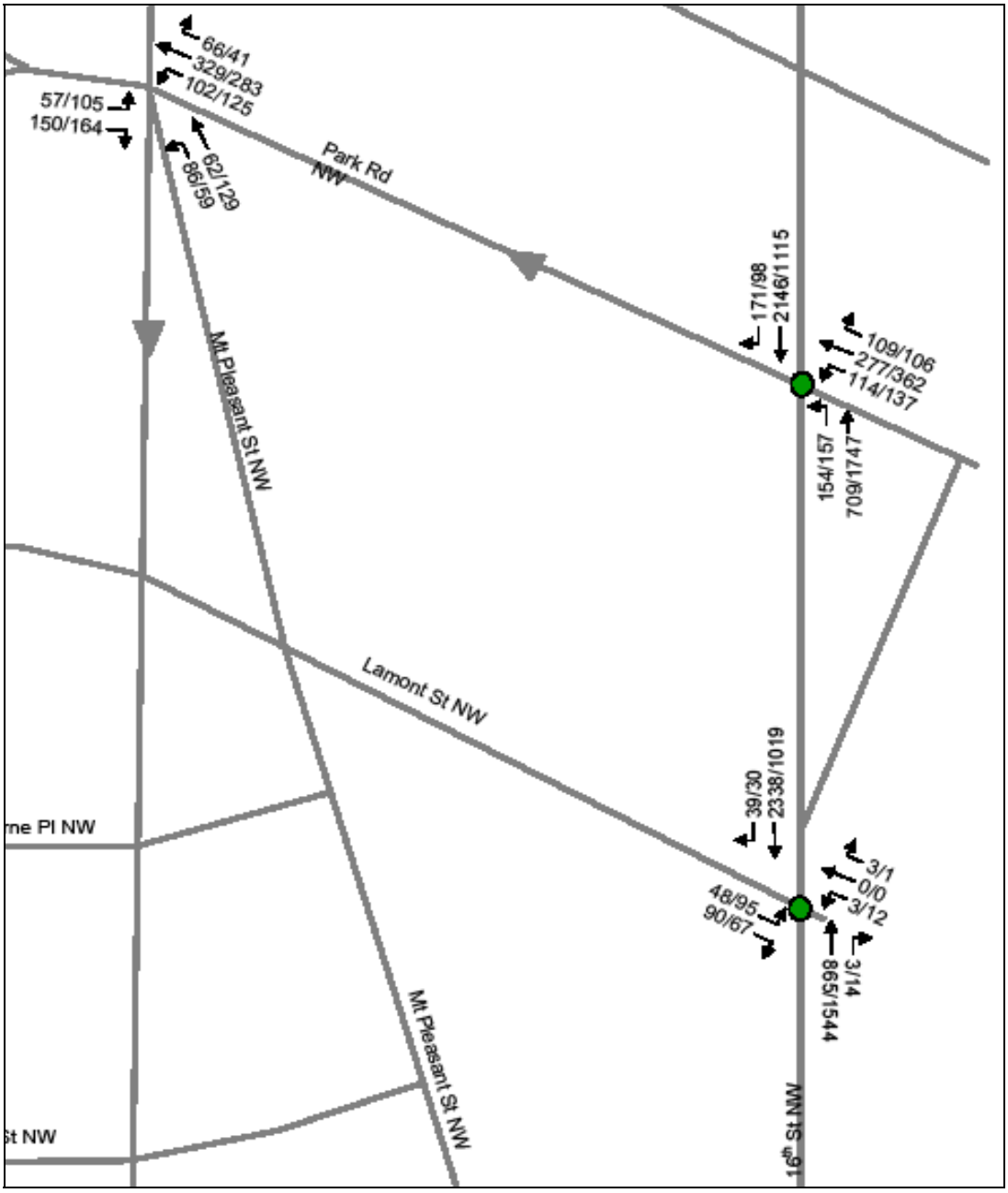

Figure 1-10 Turning Movement Counts 16th Street and Park Road

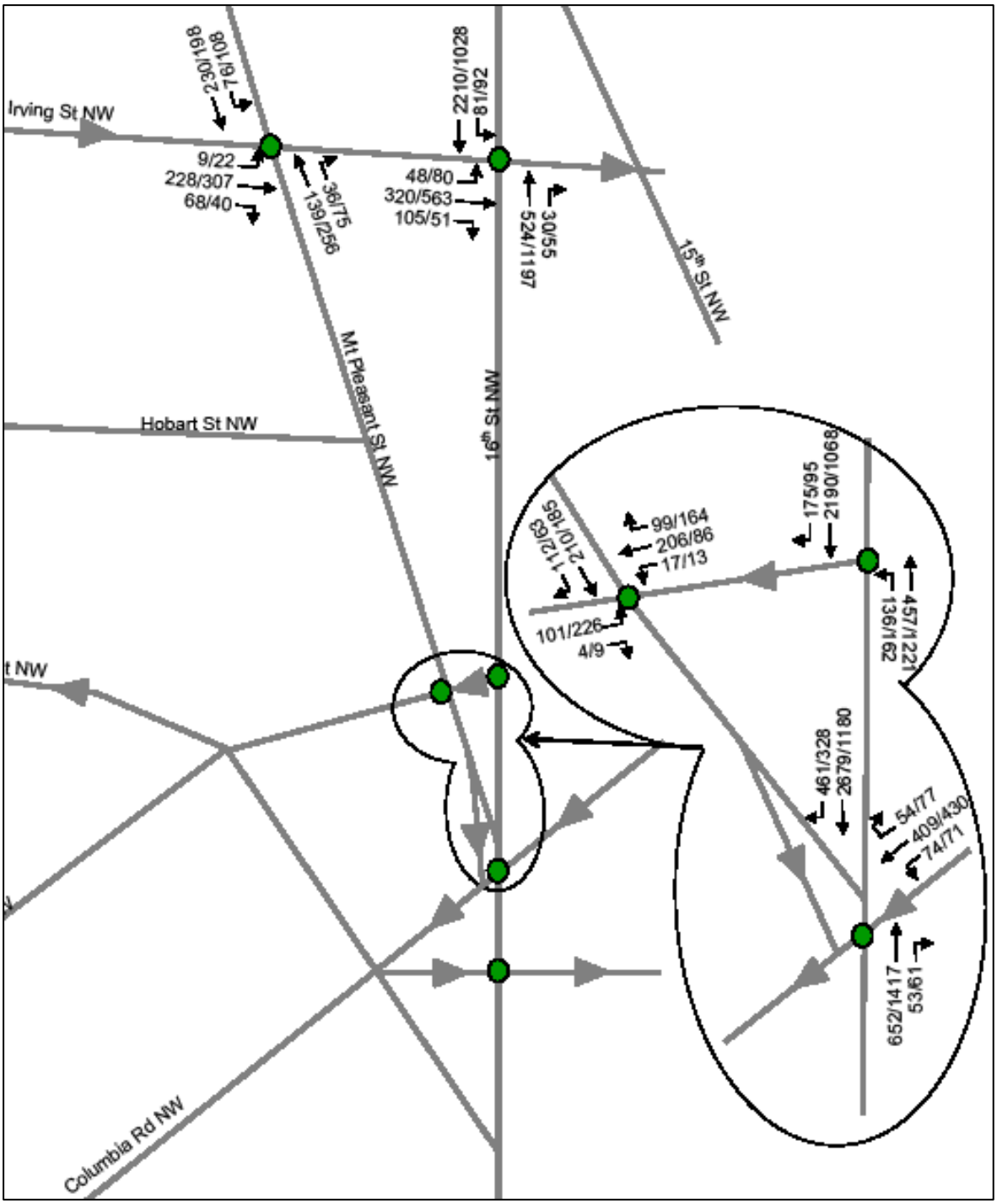

Figure 1-11 Turning Movement Counts for Mount Pleasant Street and 16th Street

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

No	*Location*	*Between*
1	Mt. Pleasant Street, NW	Irving Street and Kenyon Street
2	Lamont Street, NW	16th Street and Mt. Pleasant Street
3	Park Road, NW	16th Street and Mt. Pleasant Street
4	Monroe Street, NW	16th Street and 17th Street
5	Newton Street, NW	17th Street and Brown Street
6	17th Street, NW	Newton Street and Piney Branch Parkway
7	Irving Street, NW	17th Street and 18th Street
8	Park Road, NW	18th and 19th Street
9	Park Road, NW	Park Road/Klingle Road and Piney Branch Parkway
10	Adams Mill Road, NW	Klingle Road and Lamont Street.
11	Klingle 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	16th St - Mt. Pleasant St	EB	25	23	16
		WB	--	21	13
Park Road, NW	16t St - Mt. Pleasant St	WB	--	26	19
Monroe Street, NW	16th St – 17th St	EB	25	19	12
Newton Street, NW	16th St. - 17th St.	EB	--	21	16
		WB	25	22	16
17th Street, NW	Newton St - Piney Branch Pkwy	NB	15	28	23
		SB	15	28	22
Irving Street, NW	17th St - Hobart St	EB	25	31	25
Park Road, NW	18th St. - 19th St	EB	25	31	26
		WB	25	31	26
Park Road, NW	Klingle Rd – Piney Branch Pkwy	NB	--	34	29
		SB	25	34	28
Adams Mill Road,	Klingle Rd Lamont St.	NB	25	34	28
		SB	25	32	27
Klingle Road, NW	Adams Mill Rd Walbridge Rd	EB	--	24	15
		WB	--	27	19

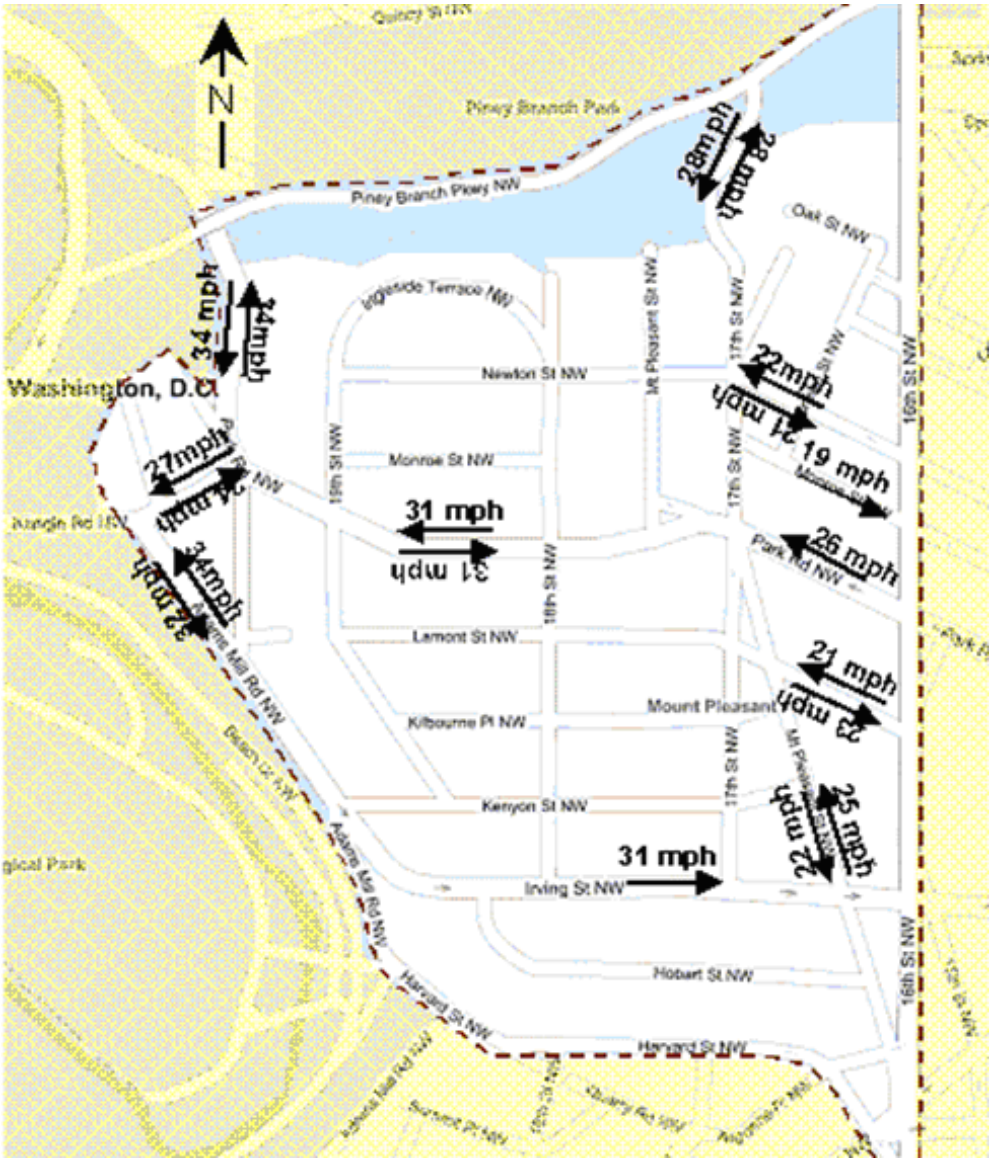

Figure 1-12 Observed 85th-Percentile Speeds

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 - 8:45 AM	NB	B	18	A	13	13	5	0	5	18	72%	28%
	SB	A	33	B	38	27	6	11	17	44	61%	39%
11:00 PM - 11:15 PM	NB	B	11	A	10	8	3	2	5	13	62%	38%
	SB	A	3	B	6	3	0	3	3	6	50%	50%
4:15 PM - 4:30 PM	NB	B	27	A	23	19	8	4	12	31	61%	39%
	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.

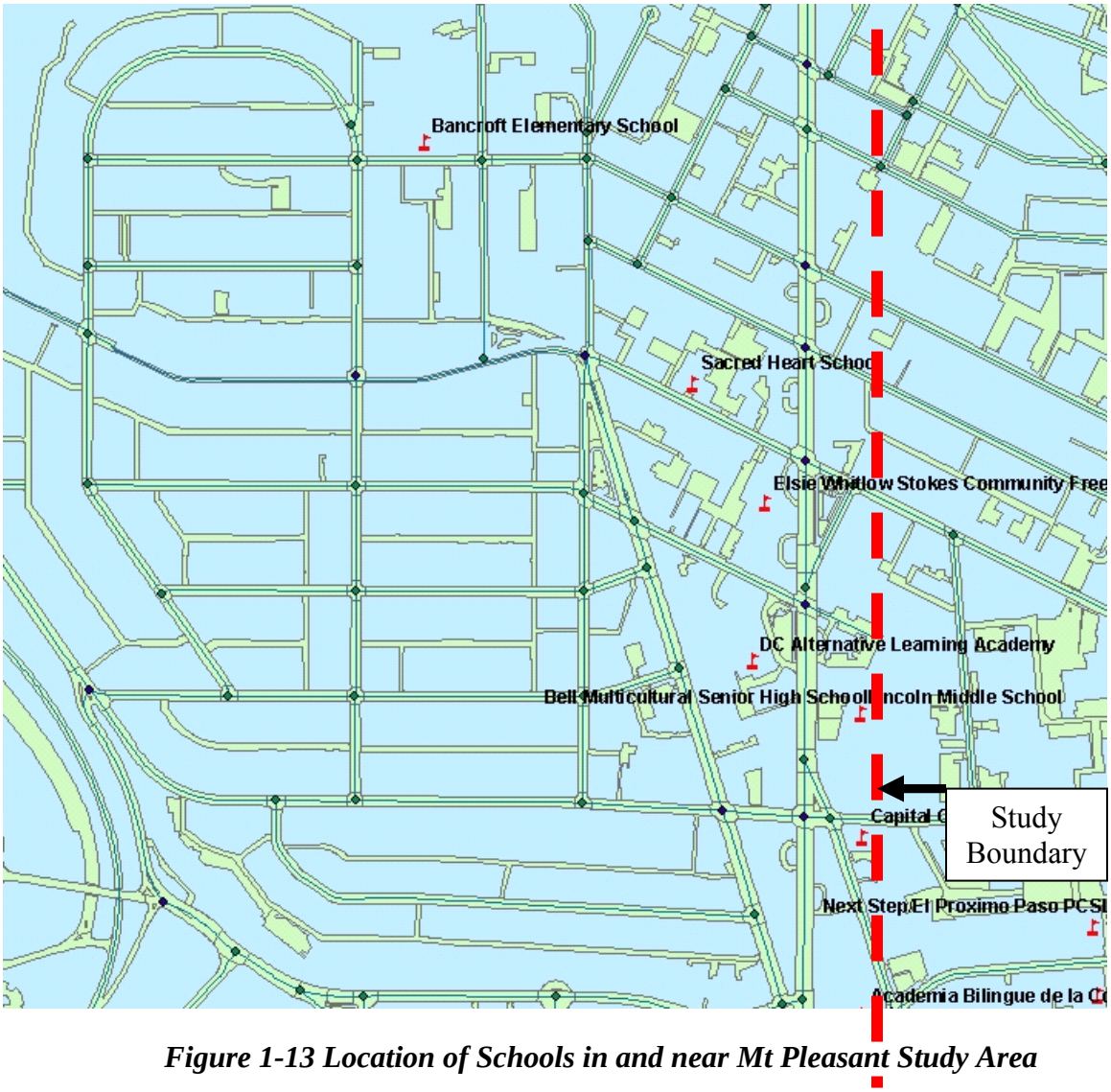

Figure 1-13 Location of Schools in and near Mt Pleasant Study Area

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

	On-site parking and pick-up area		Vehicle Queuing on Park Road	
Time Period	**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

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5 PARKING

5.1 PARKING RESTRICTIONS

Public parking in the area is on-street parking. Types of on-street parking includes: metered parking, residential parking permits, loading zones, no parking, and unregulated parking. Figure 1-14 illustrates parking restrictions for Mt. Pleasant. Metered parking is located on Mt Pleasant St and many of the surrounding blocks. The time limit for metered parking is typically 2 hours. Parking restrictions at bus stops and spaces reserved for loading are not shown on these maps.

Figure 1-14 Parking Time Restrictions

5.2 PARKING DURATION STUDY – METERED PARKING

A parking duration study was conducted on a weekday from 9:00 AM to 8:00 PM. Partial license plate numbers were recorded for each metered space, at one-hour intervals. The results are summarized in Table 1- 9. Violation rates on seven of the twelve blocks that have 2-hour meters exceed 50%. Metered spaces are also occupied over 78% of time. Time occupied is the number of hours during the study when spaces were occupied during the 11 hour data collection period.

Table 1- 9 Summary -Metered Parking Duration Study

Street Name	Between Blocks		Dir	# Spaces	Vehicles Over Time Limit	% Over Time Limit	Avg. Time Occupied (Hours)	Avg. Percent Occupied
Mt. Pleasant St.	Irving St	Lamont St.	NB	12	50	59%	11	88%
Mt. Pleasant St.	Lamont St	Park Rd	NB	14	72	63%	11	90%
Mt. Pleasant St.	Park Rd	Lamont St.	SB	6	37	40%	10	86%
Mt. Pleasant St.	Kilbourne St.	Kenyon St.	SB	6	34	32%	9	78%
Mt. Pleasant St.	Kenyon St.	Irving St.	SB	9	52	50%	11	94%
Mt. Pleasant St.	Irving St.	Hobart St	SB	5	29	51%	12	98%
Mt. Pleasant St.	Hobart St	Harvard St	SB	2	5	90%	10	83%
Lamont St.	16th St.	Mt Pleasant.	EB	11	45	60%	10	83%
Lamont St.	17th St.	Mt Pleasant.	WB	2	11	40%	10	83%
Kilbourne St.	Mt. Pleasant St.	17th St.	WB	5	33	46%	11	90%
Kenyon St.	Mt Pleasant St	17th St.	WB	3	17	21%	10	81%
Kenyon St.	17th St.	Mt Pleasant St.	EB	3	13	59%	10	81%

5.3 PARKING OCCUPANCY STUDY-NON-METERED PARKING

A parking survey was conducted to determine number of curb spaces available for parking. Occupancy studies for on-street, non-metered parking were conducted on a weekday from 9:00 AM to 8:00 PM. The theoretical maximum number of spaces for each block was determined by dividing the available curb space by 22 feet (the typical length for a parking space). Where spaces are not marked, vehicles may be parked closer together. If the actual number of cars exceeded the theoretical number of available spaces, the actual number of cars counted was used as the maximum number of parking spaces available. The percent of the parking spaces occupied varied by street and time of day. Results of this study are presented in Appendix C.

6 PUBLIC TRANSPORTATION ACCESS

Good public transportation is vital to the economic survival of the Mt. Pleasant community. Access to bus and rail enhances the quality of community life and provides viable transportation alternatives for the community as a whole. Every transit trip begins and ends with pedestrian travel. All transit facilities in general need to be safe, convenient, and accessible to create a transit-oriented development where mix use, compact development, walking access, neighborhood focal point/s, and pedestrian orientation co-exist.

To assist in determining the extent of public transportation accessible to the community a bus circulation, bus stop placement, and metro rail review was conducted.

6.1 BUS CIRCULATION

The Mt. Pleasant community is well served by public bus transportation and all bus lines are generally accessible to within ¼ mile. Figure 1-15 shows the metro lines serving the Mt. Pleasant community. The major bus routes in the study area are H2, H3, H4, S1, S2, S4 and 42. The bus lines are concentrated on 16th Street, Mt. Pleasant Street, Park Road, Adams Mill Road, Klingle Road, Irving Street and Harvard Street.

Figure 1-15 Mt. Pleasant Area Metro Bus Routes

The Cross-town Line -H2, H3, and H4 connects the Brookland-CUA Metro Station, Columbia Heights Metro Station, Cleveland Park Metro Station, VANNESS-UDC Metro Station and TENLEY TOWN-AU Metro Station and provide the community with good access to areas east and west of the District.

The 16th Street lines (S1, S2, S4) connect the Silver Spring Metro station in the north to Federal Triangle Station in the south. This line provides the community with easy access to areas north and south of Mt. Pleasant.

The Mt Pleasant Line (# 42) not only serves the Mt Pleasant community but extends to other communities including Adams Morgan, DuPont Circle, and Chinatown. Mt. Pleasant is its most northerly point extending south as far as gallery Place Station.

The bus lines W47, H1 and H8. W47 (Wilson High School line) operate only on weekdays when the public schools are open. The bus lines allow for bus-to-bus transfer, or bus-to-rail transfer improving the mobility of the Mt. Pleasant residents.

6.2 BUS STOPS

Bus stop locations were inventoried to determine the accessibility of bus lines serving the Mt. Pleasant community. The results are presented in the land use map in Figure 1-16. Exceptional accessibility is achieved through closely spaced bus stop locations on Park Road, Mt. Pleasant Street, Harvard and Adams Mill Road.

6.3 METRORAIL ACCESS

The nearest Metro Station to the study area is the Columbia Heights Metro Station at 14th Street and Irving Street just one block east of the 16th Street. Numerous bus lines from the Mt Pleasant community provide easy access to this metro station including H2, H3, H4, H8 and W47 bus lines.

The Mt. Pleasant community is within reasonable access (½ mile) of the Columbia Heights Metro station as shown in Figure 1-16. This close proximity to metro as well as bus transportation makes the community very attractive to residential and commercial development. Columbia Heights metro station is moving towards this type of transit oriented development and has the ability within the next 5-10 years to transform the community into a vibrant thriving area. As the high density development around the metro station continues pedestrian and bicycle access on Irving Street needs to be improved. This improvement is required to service not only the Mt. Pleasant community but all communities accessing the metro and its related activities.

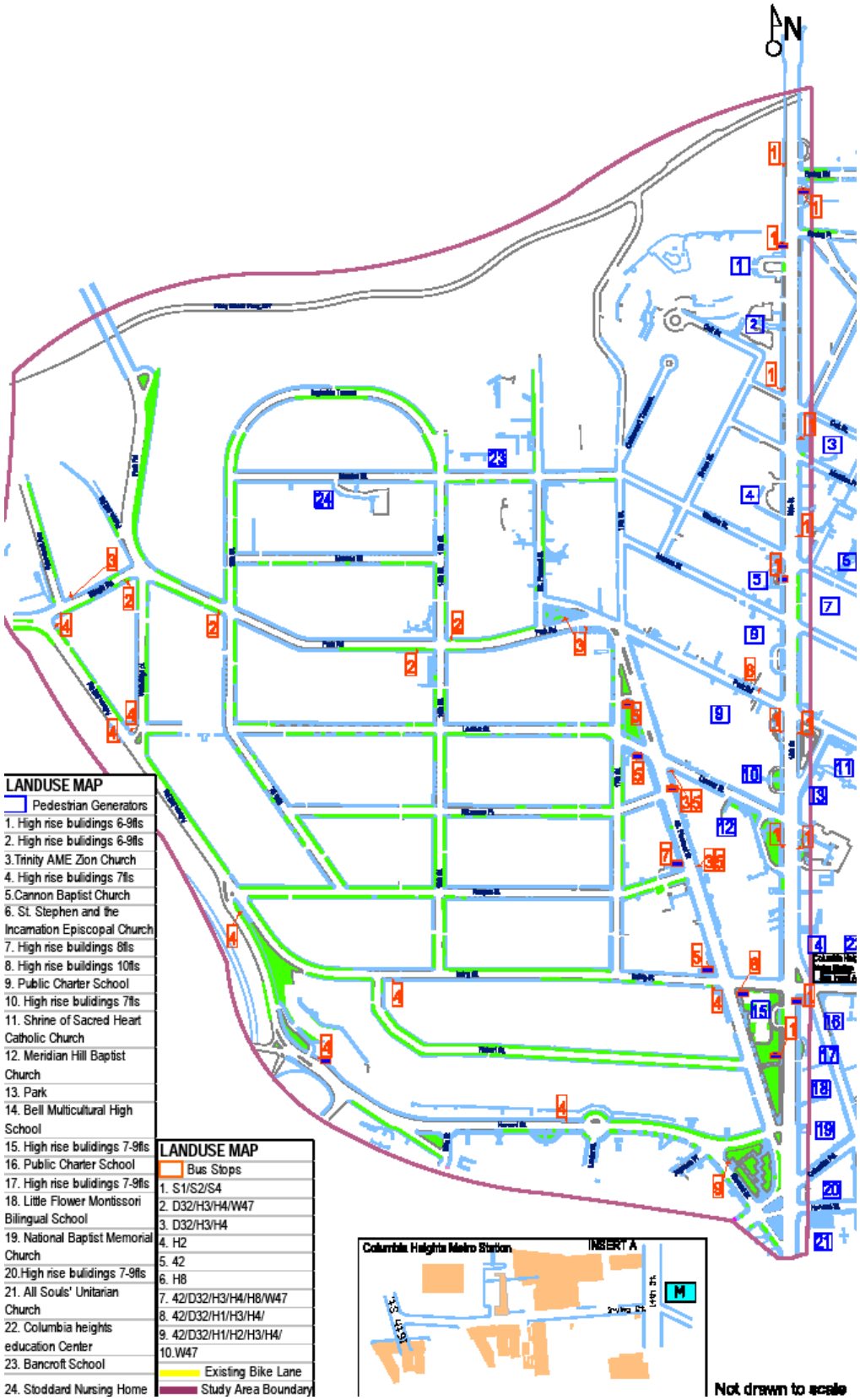

Figure 1-16 Land Use and Bus Stop Inventory

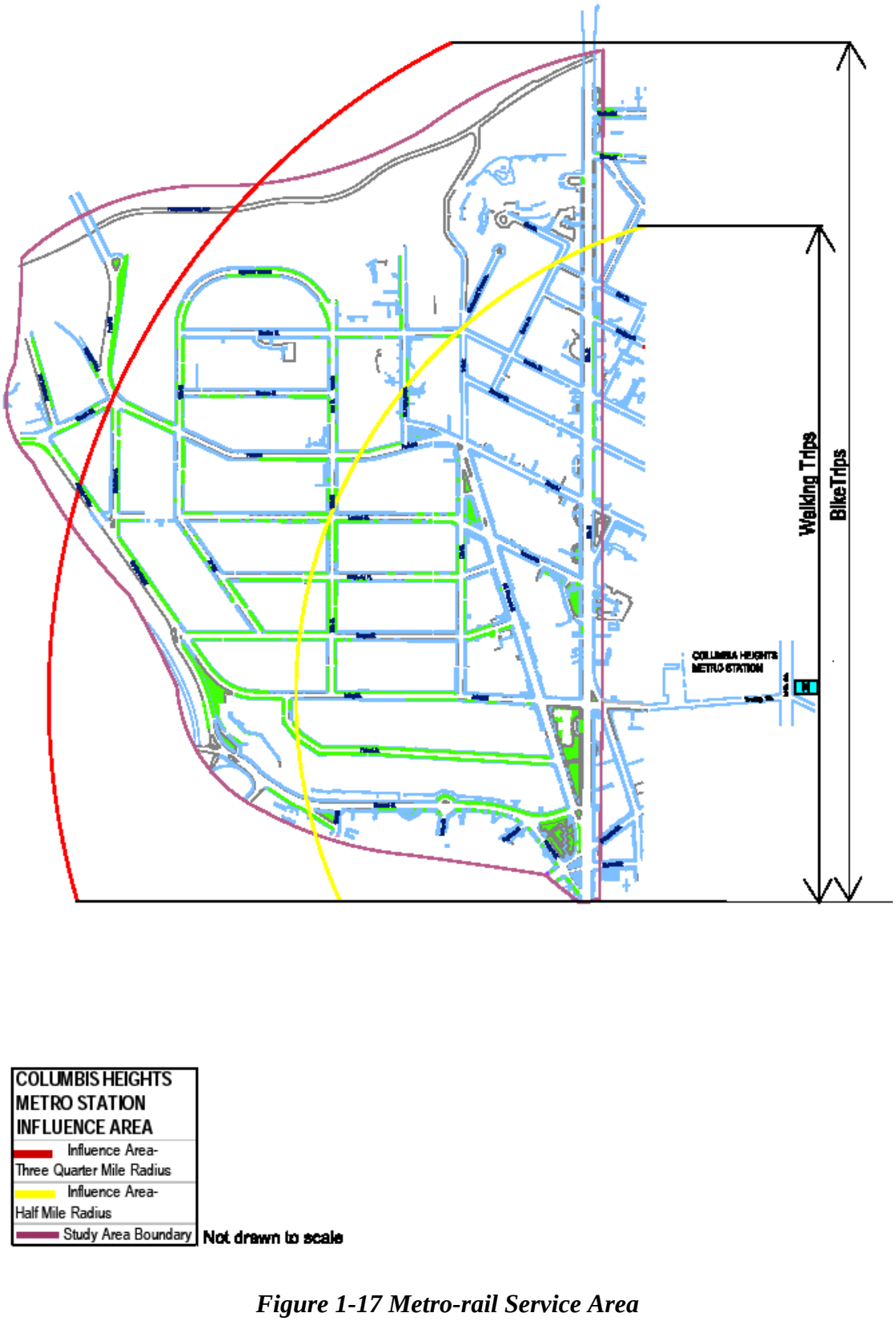

Figure 1-17 Metro-rail Service Area

7 PEDESTRIAN AND BICYCLE DATA

Good pedestrian and bicycle facilities often make the trip to and from any destination more enjoyable and improve the overall quality of life. It is also easier for people to choose alternate modes of transportation for work, shopping, or other activities. The Mt. Pleasant community is unique, in that it is a "walking and biking" community unlike other neighborhoods that rely on the "motor vehicle" as their primary source of transportation. Their choice to walk and bike is reflected in the community togetherness, pride, and vitality.

The moderate to high pedestrian activities in the Mt Pleasant study area are due to the presence of shopping, business centers, and schools facilitated by a good network of bus lines and metro rail access. While pedestrian access is well developed the bike facilities are lagging behind. The presence of dedicated bike facilities is almost non-existent apart from short bike lane segments along Park Road from Pierce Mill Road towards the Piney Branch Parkway and Irving Street from Kenyon Street to 17th Street as shown in the. Bike racks and other basic bicycle facilities are under provided within the community.

To assist in determining the extent of pedestrian and bicycle facilities within the community the following surveys were conducted:

1. Pedestrian and bicycle volumes on key roadways
2. Crash data assessment
3. Sidewalk inventory
4. Pedestrian/Bicycle signing and crosswalk inventory

Following this assessment, a "Pedestrian Level of Service (PLOS) and Bicycle Level of Service (BLOS)" were undertaken. The PLOS assess the relative comfort of pedestrians walking along the street while the BLOS assess the comfort level of bicyclists on the roadway given the existing infrastructure and traffic operational conditions. PLOS and BLOS, calculated by direction and for each road segment, provide a clear picture for future pedestrian and bicycle improvements in the Mt Pleasant area.

7.1 PEDESTRIAN AND BICYCLE VOLUMES

Manual counts during peak periods were done on weekdays at 9 locations to determine pedestrian and bike volumes. These pedestrian counts included direction of travel on each sidewalk, and the number of pedestrians and bicycles crossing at intersections. Count locations included key intersections along 16th Street, 17th street, 18th Street, Mt. Pleasant Street, and Park Road,

The intersections along Mt. Pleasant Street and 16th Street all have high pedestrian crossing movements (in excess of 300 persons per peak hour) as shown in Table 1-10. The Irving Street corridor is exceptional averaging well over 600 pedestrians crossing per peak hour. This high volume is due to persons accessing the Columbia Heights metro rail station located on 14th Street.

Table 1-10 Average Peak Period Pedestrian Volumes

Intersection	Average AM Peak Hour	Average PM Peak Hour
16th Street and Harvard Street	450	451
16th Street and Irving Street	652	913
16th Street and Newton Street	250	238
Mt. Pleasant Street and Irving Street	399	676
Mt. Pleasant Street and Park Street	370	306

Bicycle volumes are relatively constant along most of the Mt. Pleasant Street and 16th Street corridors, and average 30-50 bicyclists during the peak hour. However, toward the southern end of Mt. Pleasant Street, in the vicinity of Irving Street, the average volume increases to well over 60 bicyclists per peak hour as shown in Table 1-11. This increase can be attributed to the higher density residential character of the southern part of the study area.

Table 1-11 Average Peak Period Bicycle Volumes

Intersection	Average AM Peak Hour*	Average PM Peak Hour*
16th Street and Harvard Street	106	99
16th Street and Irving Street	42	60
16th Street and Newton Street	35	41
Mt. Pleasant Street and Irving Street	66	58
Mt. Pleasant Street and Park Street	32	23

* Bicycles per hour

7.2 CRASH DATA

The number of crashes involving pedestrians and/or bicyclists is plotted on Figure 1-18. These data (2004 to 2006) were provided by the District of Columbia Safety Office.

The pedestrian/bicycle crash map indicates few crashes within the study area, most of which are generally concentrated on 16th Street and Mt. Pleasant Road. The intersections of 16th Street with Spring Road, Oak Street, Park Road, Lamont Road, Irving Road and Mt. Pleasant Road appear to be most critical, in that a large number of pedestrian and bicycle conflicts were observed on 16th Street, Mt Pleasant Street, Park Road, Irving Street and Harvard Street. Conflicts are defined as pedestrian, bicyclist, or driver taking evasive action to avoid a collision. The crash database (TARAS) includes only reported crashes.

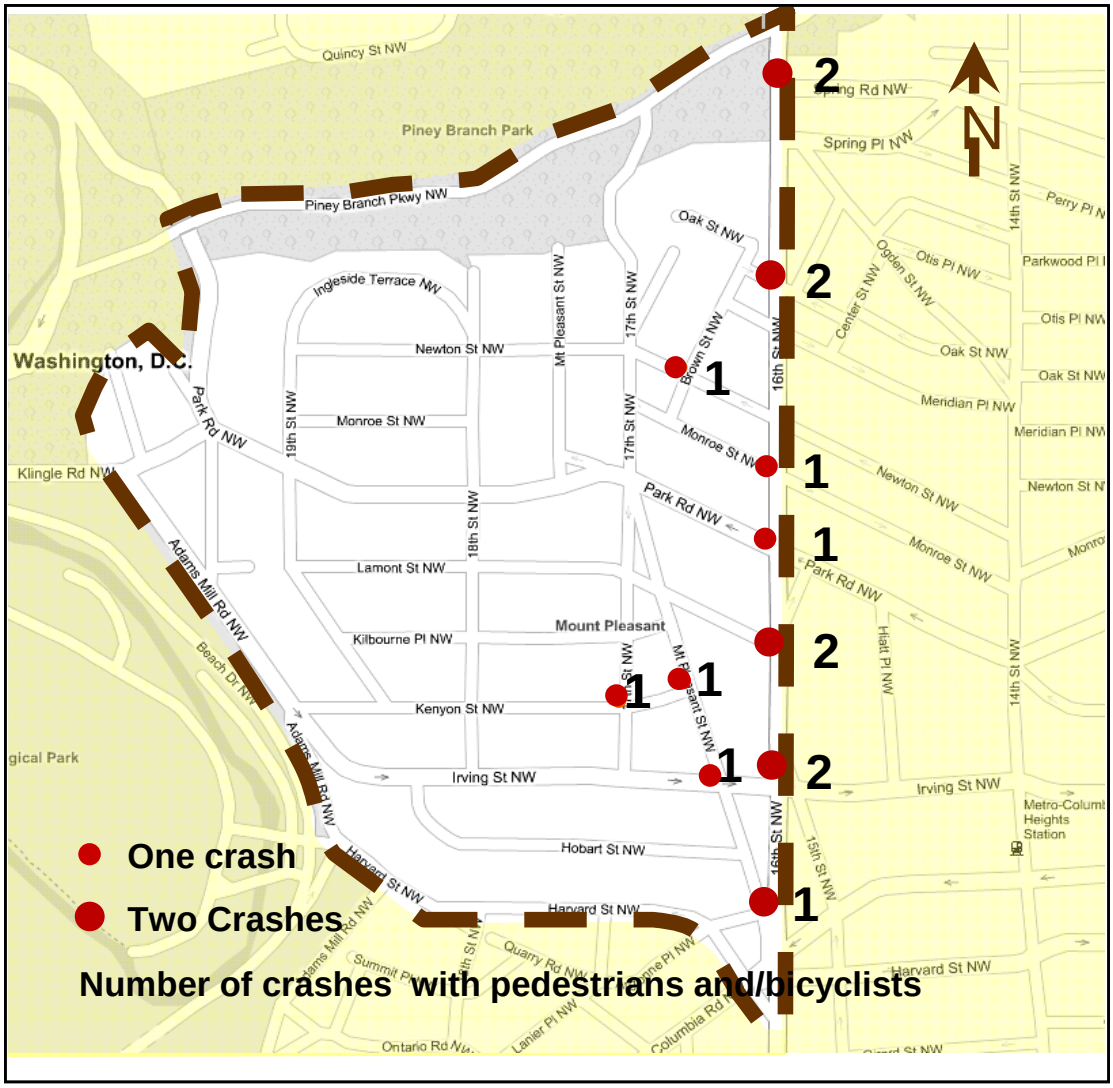

Figure 1-18 Pedestrian/Bicycle Crashes, Mt. Pleasant Study Area, 2004-2006

7.3 SIDEWALK INVENTORY

As stated earlier, every bus trip begins and ends with pedestrian travel. If pedestrians and bicyclists do not feel safe and comfortable accessing the metro rail stations or bus stops as part of their multi-modal trip, they are likely to choose other means of travel, such as the car.

The sidewalk inventory picked up information on presence and direction of curb ramps, location of missing, cracked or damaged sidewalks, the presence and condition of pedestrian facilities at signalized intersections, and other infrastructure and man-made barriers to pedestrian travel. The results of the inventory are presented in Figure 1-20 and Figure 1-21

Figure 1-20 provides information on the sidewalk deficiencies within the study area. Deficiencies observed were categorized as:

1. General deficiencies – Narrow, broken and/or cracked sidewalk
2. Specific deficiencies – Sidewalk elevated due to tree root, etc.

"Specific deficiencies" was called out because this type of deficiency prevents sidewalk access for pedestrians who use wheel chairs and must be considered a higher priority as it relates to remedial action. Generally few deficiencies to pedestrian access were observed within the study area. These were generally concentrated in the upper north-east quadrant of the Mt. Pleasant study area.

Part of the sidewalk assessment included a curb ramp assessment as shown in Figure 1-21. Curb ramps are fundamental in ensuring that the Mt Pleasant community is accessible to all pedestrians regardless of their disability. The curb ramp assessment classified curb ramps into three groups:

1. Presence of curb ramps
2. Curb ramp with detectable warning
3. No curb ramp

The ideal curb ramp is one that has a slope not greater than 8.3 percent and with detectable warnings installed at the base. Detectable warnings are essential for alerting a vision impaired pedestrian either that they are entering the street or the sidewalk infrastructure changes so they can take extra precaution. Generally, locations with no curb ramps must be given a higher priority than those with.

7.4 PEDESTRIAN/BICYCLE SIGNING AND CROSSWALK INVENTORY

Signing and road markings provide valuable information to drivers and pedestrians. An inventory was conducted to assess the condition of these facilities and to determine if devices mere missing, outdated, or required maintenance. The results of the inventory are presented in Figure 1-22.

Generally pedestrian warning signs and school crossing signs are posted at critical locations along 16th Street, Mt Pleasant Street, Irving Street and Park Road. However pedestrian crossing or warning signs were not posted at the many intersections within the study area as shown in Table 1-10 and Table 1-11.

7.5 PEDESTRIAN AND BICYCLIST LEVEL OF SERVICE

The relative comfort of pedestrians walking along the street, represented as the Pedestrian Level of Service (PLOS) is shown in Figure 1-23.

Generally, the PLOS for most of the residential area is rated C (average) or better, however the PLOS for areas just west of 16th Street, Park Road, and Harvard Street are all below average. This is due, in part, to multiple factors including traffic speed, traffic volume, street width, and the condition (or absence) of sidewalks..

The Bicycle LOS (BLOS) or the comfort level of bicyclists on the main routes given the existing infrastructure and operational conditions is shown in Figure 1-24. The BLOS is below average (C) on almost all the streets in the study area. Irving Street and segments of Park Road indicates a better level of service due to the presence of on-street bicycle lanes. The lack of lateral separation between the bicyclist and vehicular traffic, lack of paved shoulders, percentage of heavy vehicles, number of travel lanes, traffic volume and speed all contribute to very poor BLOS values.

Overall, the below average pedestrian environment can be upgraded quickly and within the short term to PLOS of at least C. However, the biking environment will require significant policy and infrastructure changes to have at least an average BLOS of C in the short term. Recommendations for addressing deficiencies and improving pedestrian and bicycle levels of service will be provided in the next stage of the study.

Figure 1-19 Existing Bicycle Facilities -Mt Pleasant Study Area

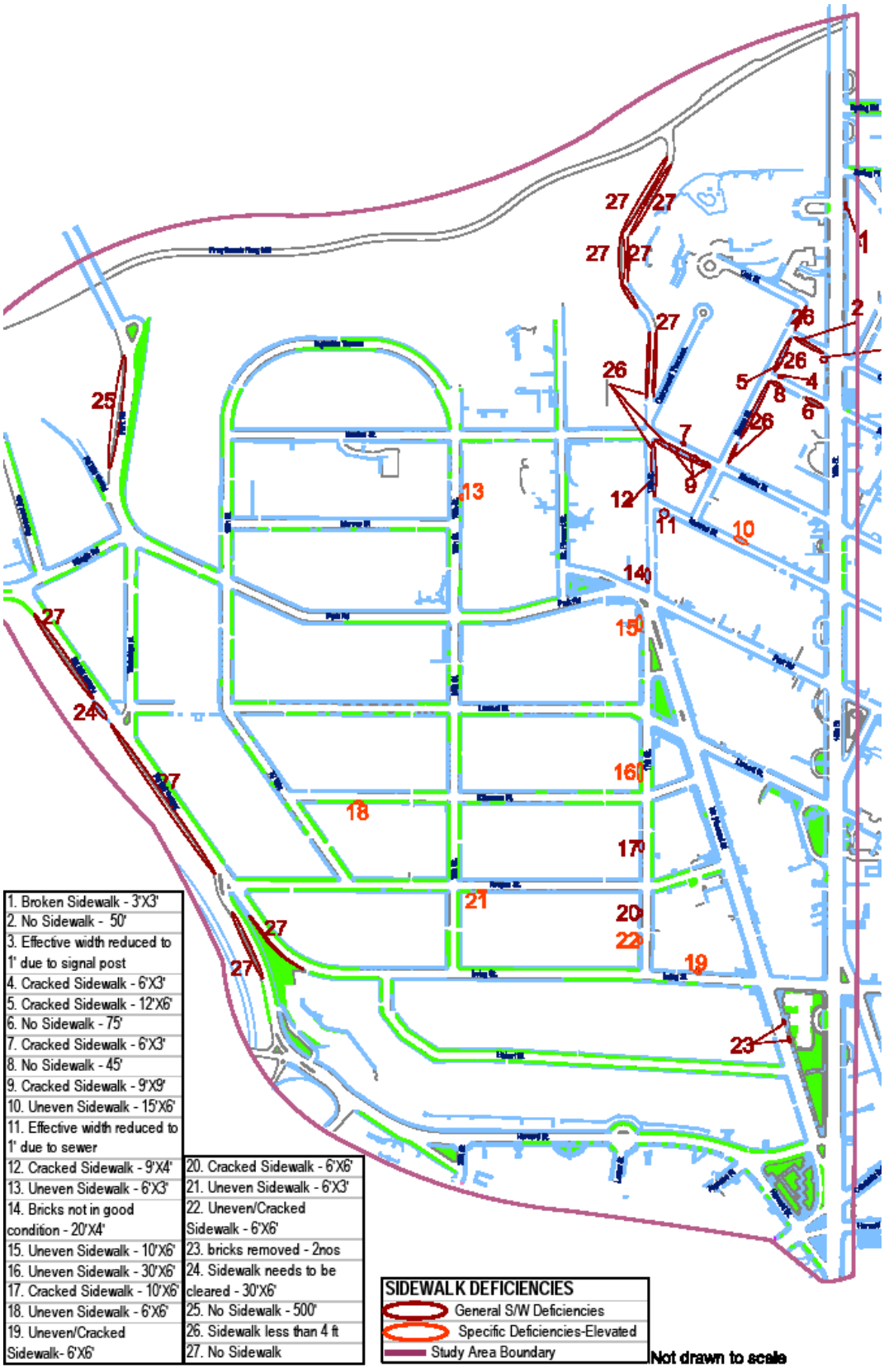

Figure 1-20 Sidewalk Deficiencies -Mt. Pleasant Study Area

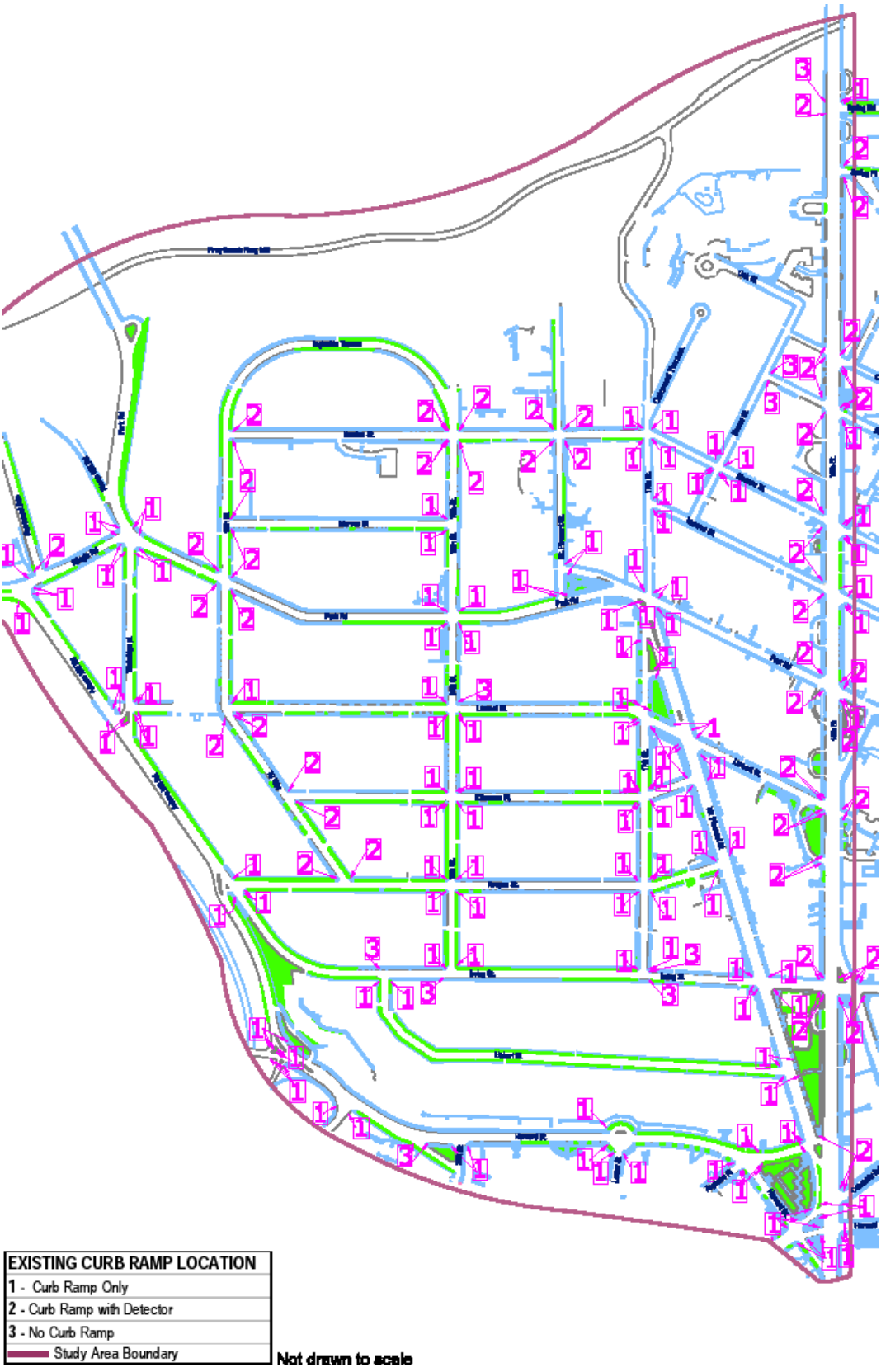

Figure 1-21 Existing Curb Ramp Locations

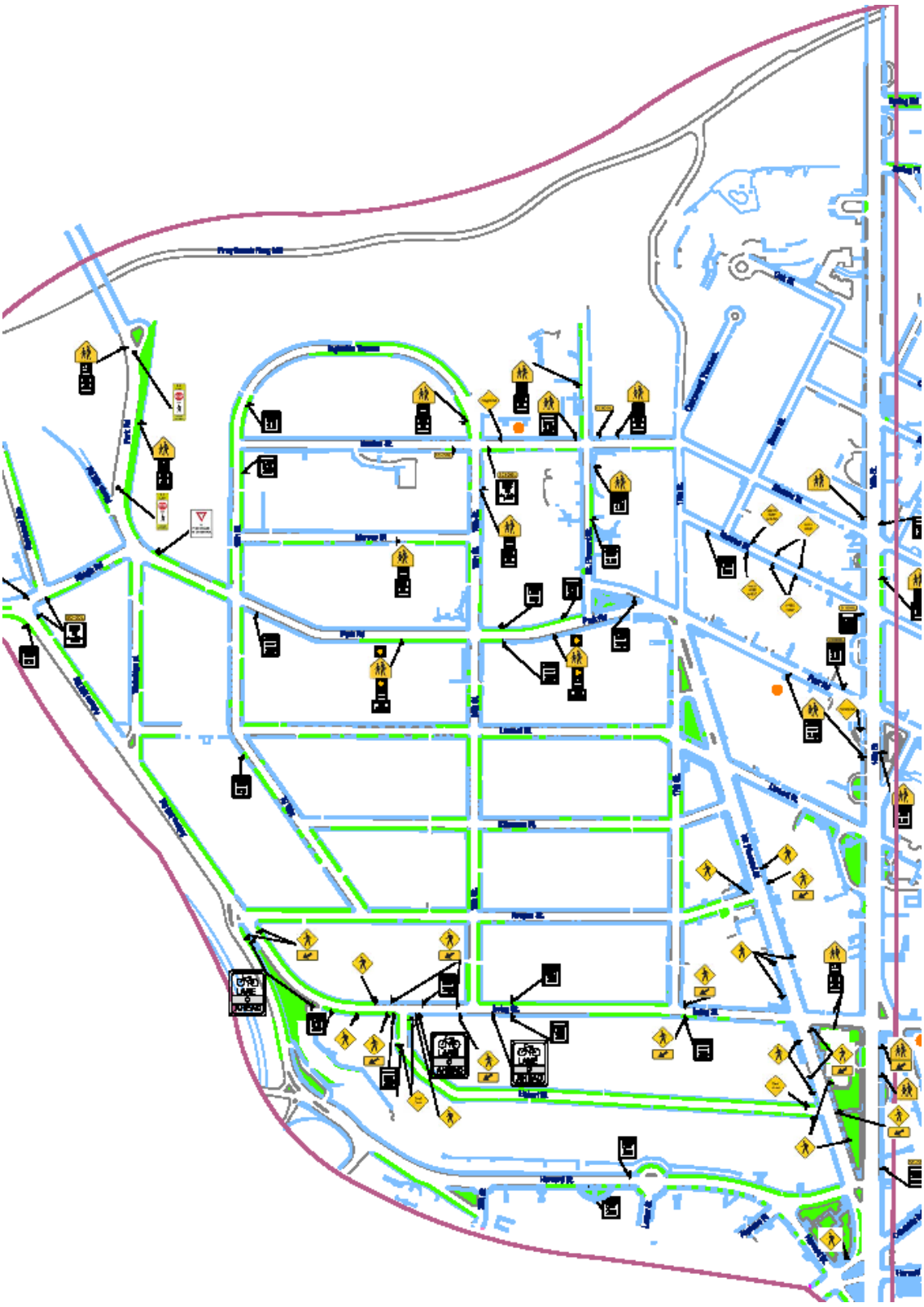

Figure 1-22 Inventory of Pedestrian/School Related Signs and Markings

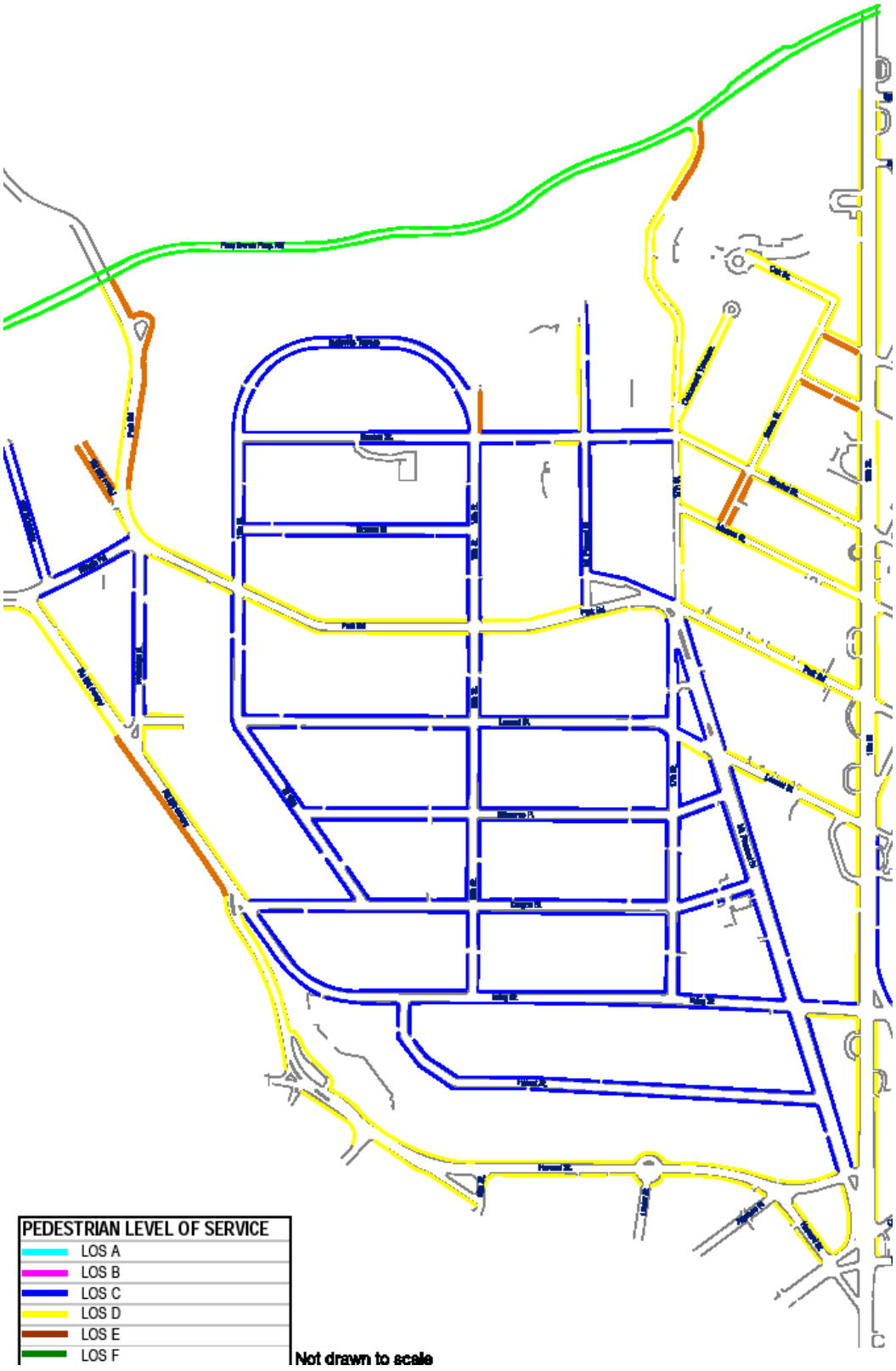

Figure 1-23 Pedestrian Level Of Service

Figure 1-24 Bicycle Level of Service

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8 PLANNED DEVELOPMENTS

There are no planned developments within the study area. However, new development is taking place just outside of the study area in Columbia Heights. A list of approved projects with planned delivery days in 2007, 2008, and 2009 are in Table 1-12.

Table 1-12 Planned Developments

Square	Developer	Location	Site Size	Use	Parking	Delivery
2674	Grid Properties	3100 14th St, NW	445,000 sq. ft.	Commercial	1000	2008
2678	Metro Properties	3460 14th St, NW	353,792 sq. ft.	Residential	247	2009
2672	CHV/Donatelli (Highland Park)	3000 14th St, NW	183,624 sq. ft.	Residential	278	2008
2572	Kalorama West	2480 16th St, NW	99,000 sq. ft.	Residential	150	2010
2578	Castleton Holdings	1601 Fuller St, NW	96,000 sq. ft	Residential	0	10/ 2007
2684	Trinity AME Zion Church	1400 Meridian Pl	41,000 sq. ft.	Residential	120	10/2007
2827	N&C Construction	3505-3509 14th St, NW	12,893 sq. ft.	Residential/ Commercial	7	2008

Source: www.wdcep.com/development/search.php

Grid Properties is developing the retail space referred to as DC USA. This development, which will have 445,000 square feet of commercial space and 1,000 parking spaces, is located across from the Columbia Heights Metro Station. A Traffic Impact Analysis conducted by a consultant in October 2004 concluded that the traffic generated by DC USA will not substantially degrade traffic conditions in Mount Pleasant. The LOS for overall intersections and individual approaches will remain in the acceptable range. The analysis notes that individual approaches and intersection delays increase, some to LOS E, but delays of this magnitude are common in downtown environments. Given that the property is being built at locations with high levels of transit service it is expected that half of all trips will be generated by means other than automobile.

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9 TRAFFIC IMPACTS

This chapter presents the results of an analysis of the Level of Service (LOS) at ten signalized and two unsignalized intersections in the Mount Pleasant study area. These intersections are listed in Table 1-14. This analyses presented in this report address existing (baseline) conditions, and estimates for a 10 year and 20 year horizons. The network LOS analysis was conducted based on the AM and PM peak periods for specific intersections.

9.1 BASIS FOR EXISTING CONDITIONS ANALYSIS

Existing conditions analysis typically involves an analysis of how specific intersections or roadway sections are currently operating, as well as estimates of how the same locations are likely to operate in future years.

Analysis of baseline (currently existing) conditions uses current (existing) roadway geometrics, intersection traffic movement configurations, and the existing traffic control (signals, stop signs, and current traffic demand (traffic volume) data for each location. Existing (current) traffic demand estimates are based on data collected in the field. Because this analysis is intended to assess actual, current conditions, it does not address potential impacts of traffic from developments or projects that are not yet completed.

A similar analysis is being performed to assess how well the existing transportation system (as it is currently configured) is expected to function in the future years, based on projected increases in traffic demand. The analysis conducted for this study will examine: 1) the short term impacts expected by the opening of the DC USA development, and (2) the expected traffic conditions in ten and twenty years.

Projections for future years assume that traffic demand due to local and regional growth will increase at a 1% annual rate. These projections also reflect estimates of additional traffic generated by any planned (and approved) developments in the nearby areas that are likely to affect the study area network.

The results reported in this draft report are based on traffic projections available in December 2007. DDOT has undertaken studies to update the estimated traffic impacts in the Columbia Heights area, including the impacts of the DC USA development. The analysis presented in this report will be updated when the results of these current studies are available. Revised results will be reflected in the final report for this project.

9.2 LEVEL OF SERVICE ANALYSIS

Signalized and unsignalized intersections were analyzed using Synchro, a traffic signal analysis software program. Synchro estimates the congestion at each signalized intersection, defined by Level of Service (LOS). LOS is a qualitative assessment of road user's perceptions of roadway quality of traffic flow and is represented by the letters A through F. LOS A represents the most favorable conditions and LOS F represents the least favorable. The definition of LOS for

signalized intersections is shown in Table 1-13. LOS C or D are widely regarded as the desirable design objective for urban intersections.3 It is important to note that the approach Synchro uses for estimating LOS for signalized and unsignalized intersections differs somewhat from the approach presented in the Highway Capacity Manual[3]. In this document, the LOS reported for an unsignalized intersection is based on the intersection capacity utilization as computed by Synchro.

Table 1-13 Definition of Level of Service (LOS) for Signalized Intersections

LOS	Description	Control Delay Per Vehicle (seconds)
A	Free flow	≤10
B	Stable flow with slight delay	>10 and <20
C	Stable flow with acceptable delay	>20 and <35
D	Approaching unstable flow with tolerable delay	>35 and <55
E	Unstable flow. Congestion with intolerable delay.	>55 and <80
F	Unstable flow. Heavy congestion. Total breakdown with stop-and-go operation.	>80

9.3 YEAR 2007

Table 1-14 presents the existing intersection LOS and average vehicle delays at individual intersections during the AM and PM peak periods.

Table 1-14 Intersection LOS and Average Delay for Existing Conditions

Intersection	Existing LOS and Average Delay (seconds per vehicle)	
	AM Peak Hr	PM Peak Hr
18th Street, NW and Newton Street, NW	A*	A*
18th Street, NW and Park Road, NW	A/8.0	A/7.7
Mt. Pleasant Street, NW and Irving Street, NW	B/18.9	C/22.9
Mt. Pleasant Street, NW and Harvard Street, NW	F/481.7	F/583.8
Adams Mill Road, NW and Kenyon Street, NW	C/23.4	F/159.5
16th Street, NW and Newton Street, NW	B/11.2	C/28.6
16th Street, NW and Park Road, NW	E/65.7	E/75.5
16th Street, NW and Lamont Street, NW	B/19.0	A/8.8
16th Street, NW and Irving Street, NW	B/14.8	C/22.6
16th Street, NW and Harvard Street, NW	A/3.5	A/6.8
17th Street, NW and Piney Branch Parkway, NW	C*	C*
17th Street, NW, Park Road, NW, and Mt. Pleasant Street, NW	A/8.5	A/7.3

* An ICU-based LOS (not based on HCM); intersection is unsignalized.

3 Highway Capacity Manual, Transportation Research Board, Washington, DC, 2000.

Ten of the 12 intersections studied currently operate at LOS D or better during the morning and 9 during evening peak periods (as shown in Figures I-25 and I-26). Intersections that are operating at LOS E or F are:

- 16th Street, NW and Park Road, NW (morning and evening peak periods)
- Mt. Pleasant Street, NW and Harvard Street, NW (morning and evening peak period)
- Adams Mill Road, NW and Kenyon Street, NW (evening peak period)

The intersection of Park Road, NW and 16th Street, NW currently operates with an overall LOS E during both the AM and PM peak periods. The northbound and southbound approaches of the intersection do not experience significant delay. LOS on northbound and southbound approaches during AM/PM peak periods was found to be B/C and D/B, respectively. Through and left-turning traffic on the westbound approach of Park Street, NW, experience the most delay. Since, the northbound and southbound approaches handle significantly higher traffic volume than the westbound. The current signal timing provides longer green interval for these high-volume approaches. This strategy minimizes overall intersection delay, but results in proportionally longer delays for the westbound approach.

The intersection of Harvard Street, NW and Mt. Pleasant Street, NW currently operates with a LOS F during both the AM and PM peak periods. The exceptionally long delay experienced by the southbound approach is largely due to the existing signal timing and shared lane configuration. The traffic on Mt. Pleasant Street, NW moving south or making a right turn on to Harvard Street, NW shares a single lane at this intersection. The turning movement data collected for this intersection shows that the number of vehicles on the southbound approach is comparable with the number of vehicles using the eastbound and westbound approaches. However, the existing signal timing allocates significantly less green time for the southbound approach, resulting in very heavy delays for southbound vehicles on Mt. Pleasant Street.

The intersection of Adams Mill Road, NW and Kenyon Street, NW performs reasonably well during the AM peak period with an overall intersection LOS C. During the PM peak period, the southbound traffic on Adams Mill Road turning left on to either Kenyon Street, NW or Irving Street, NW experience significant delay. The existing signal timing is responsible for the heavy delays. The turning movement data collected at the intersection shows that the volume of traffic turning left from the southbound Adams Mill Road during the PM peak period is higher than the AM peak volume. The existing signal timing, however, allocates considerably shorter green interval for the protected left turning movements from the southbound approach during the PM peak as compared with AM peak period.

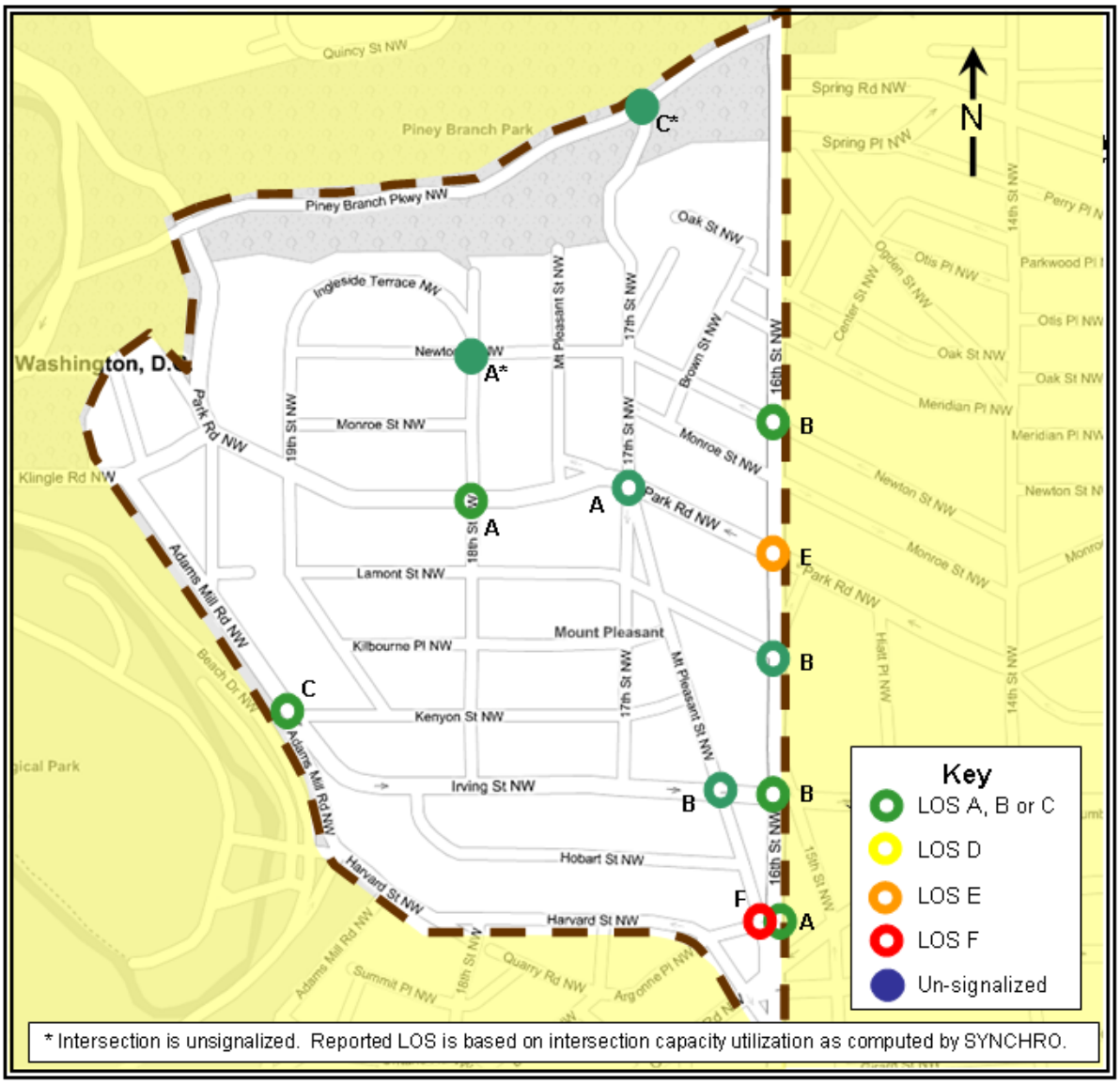

Figure 1-25 Level of Service for Baseline Traffic During Morning Peak Period

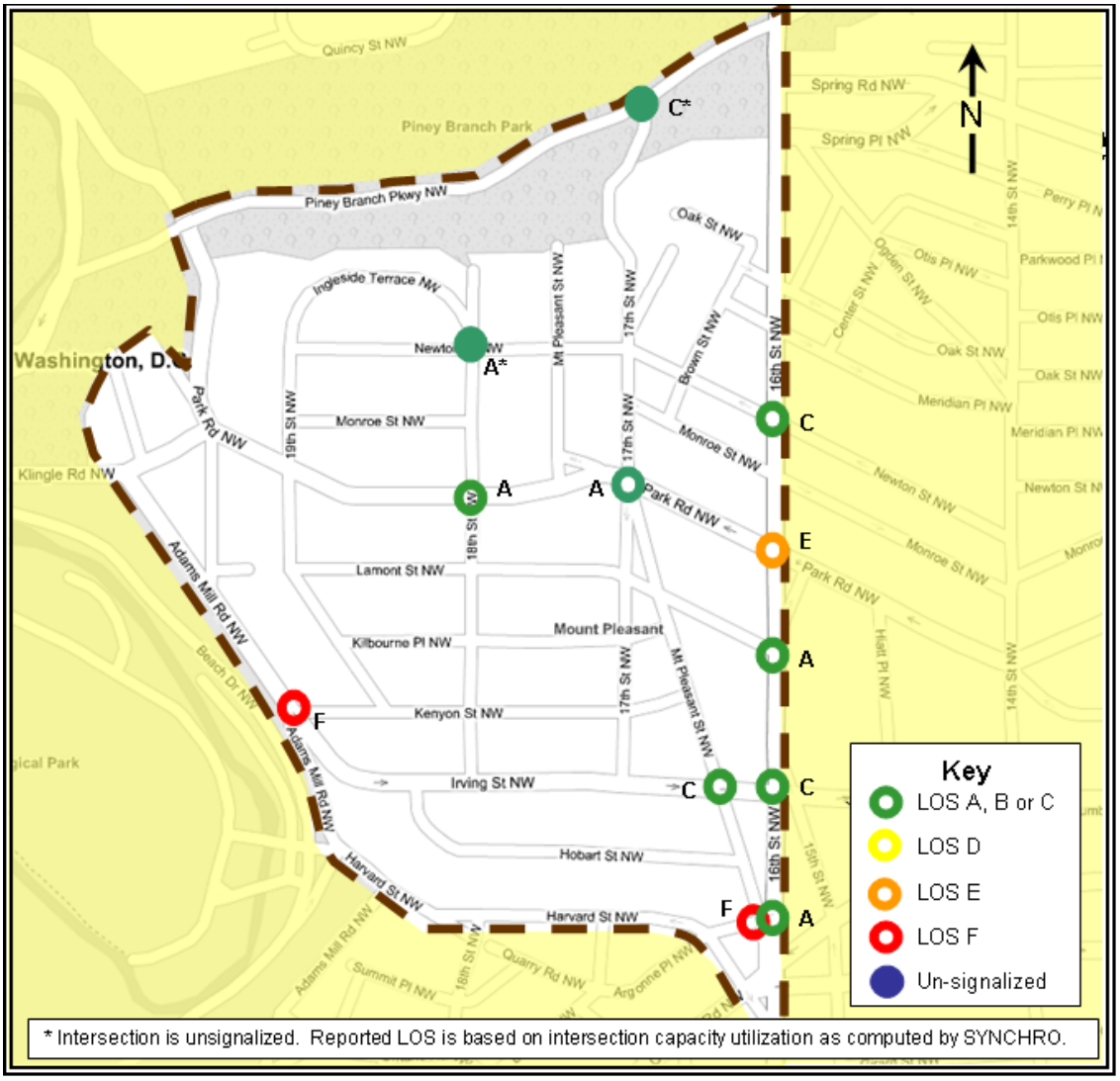

Figure 1-26 Level of Service for Baseline Traffic During the Evening Peak Period

9.4 TRAFFIC IMPACTS-10 YEAR HORIZON

A regional growth rate of one percent for 10 years was applied to current traffic volumes, which includes projected traffic from the proposed developments in the study area. The levels of service for the intersections in the area were determined for the morning and evening peak periods as shown in and Figure 1-27 and Figure 1-28, respectively. The levels of service for eight intersections remained at LOS D or better. The intersections with LOS E or worse are:

- 16th Street NW and Park Road NW (morning and evening peak periods)
- Mt. Pleasant Street NW and Harvard Street NW (morning and evening peak period)
- Adams Mill Road NW and Kenyon Street NW (evening peak period), and
- 16th Street NW and Irving Street NW (morning peak period)

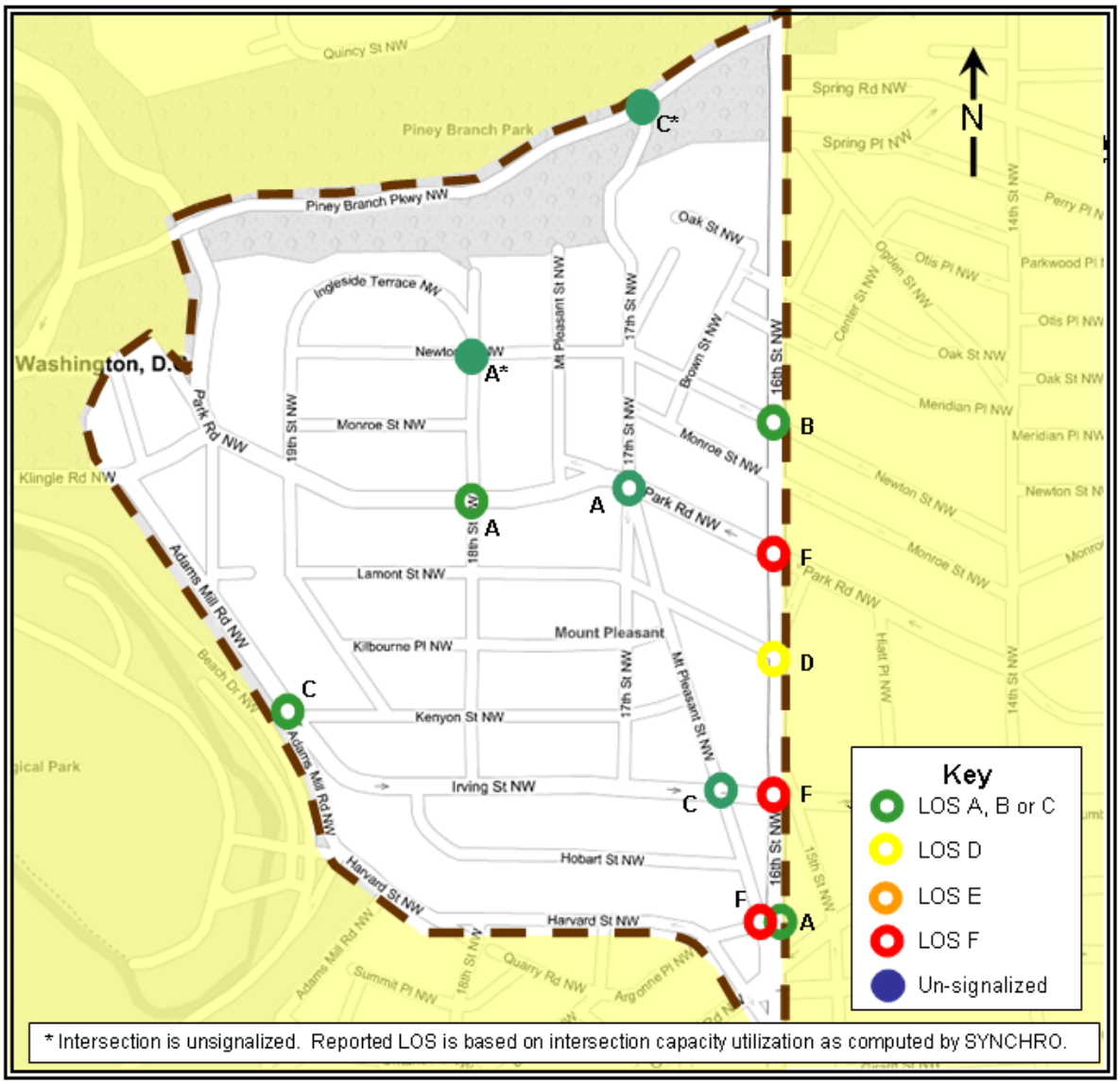

Figure 1-27 Level of Service for 10-Year Horizon During Morning Peak Period

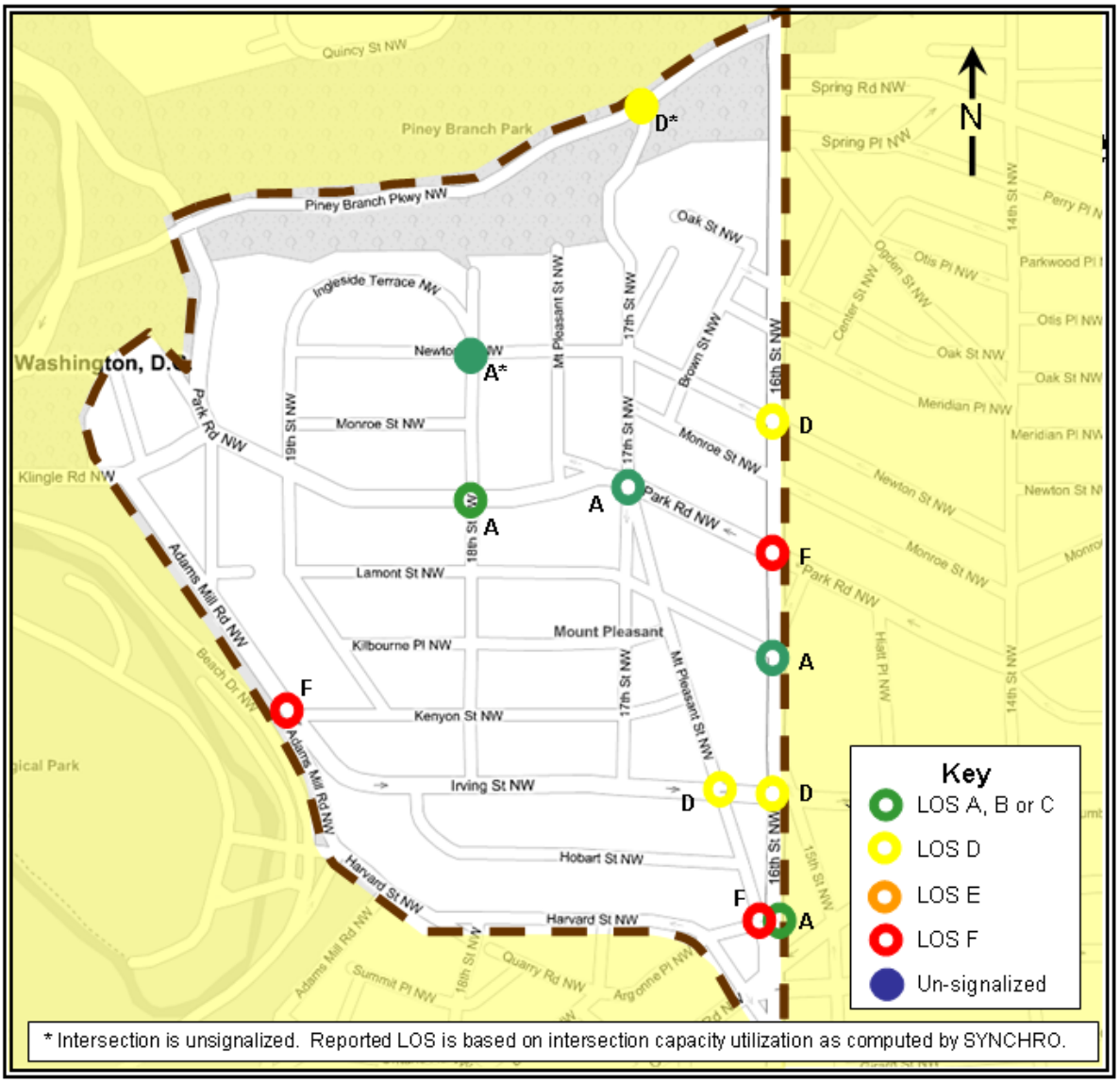

Figure 1-28 Level of Service for 10-Year Horizon During Evening Peak

9.5 IMPACTS IN 20-YEAR HORIZONS

A growth rate of one percent for 20 years was applied to the current traffic volumes, which includes projected traffic from the proposed developments in the study area. The levels of service for the intersections in the area were determined for the morning and evening peak periods as shown in Figure 1-29 and Figure 1-30. The levels of service for a number of intersections on 16th Street became LOS E or worse.

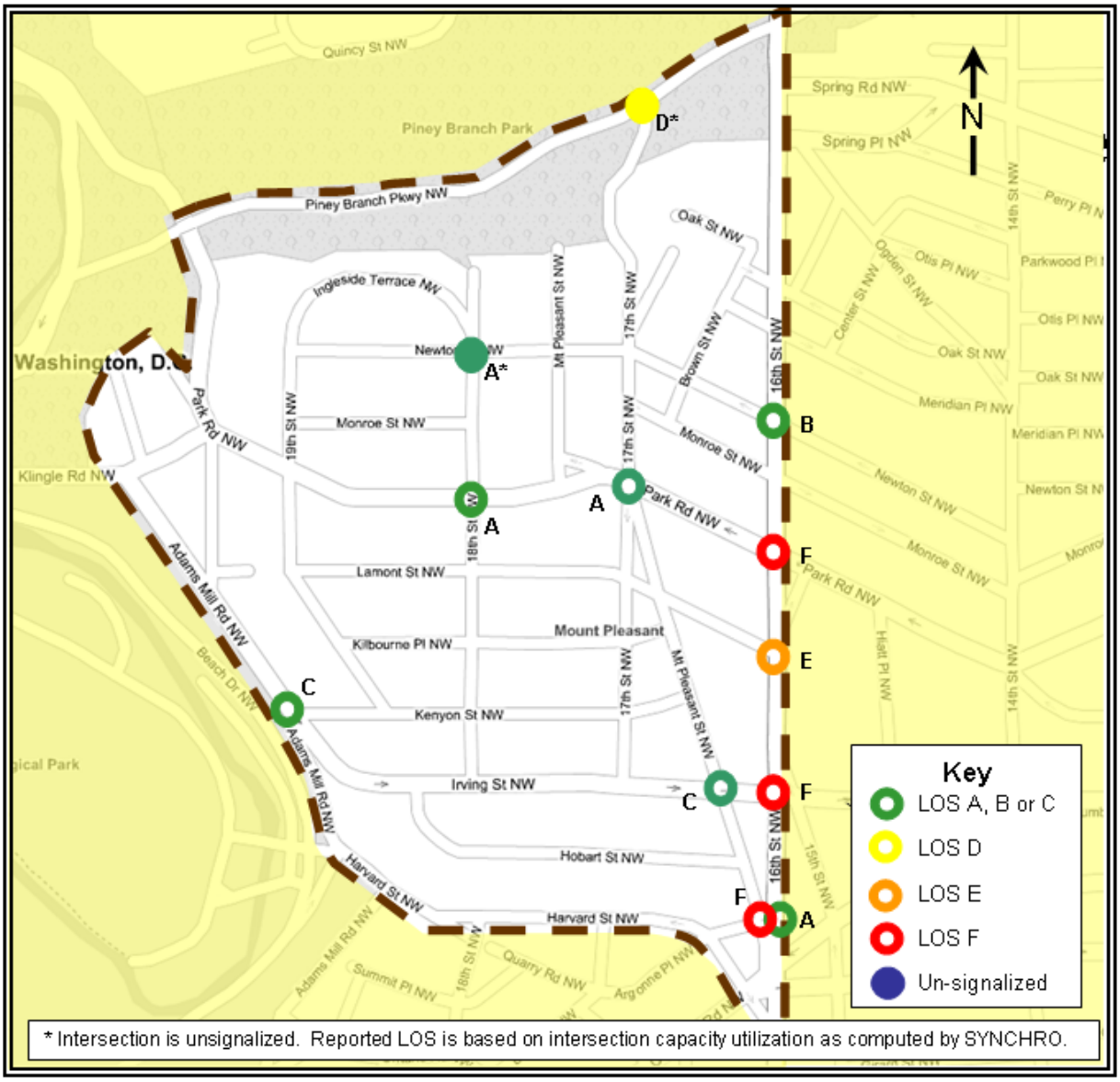

Figure 1-29 Level of Service for 20-Year Horizon during Morning Peak Period

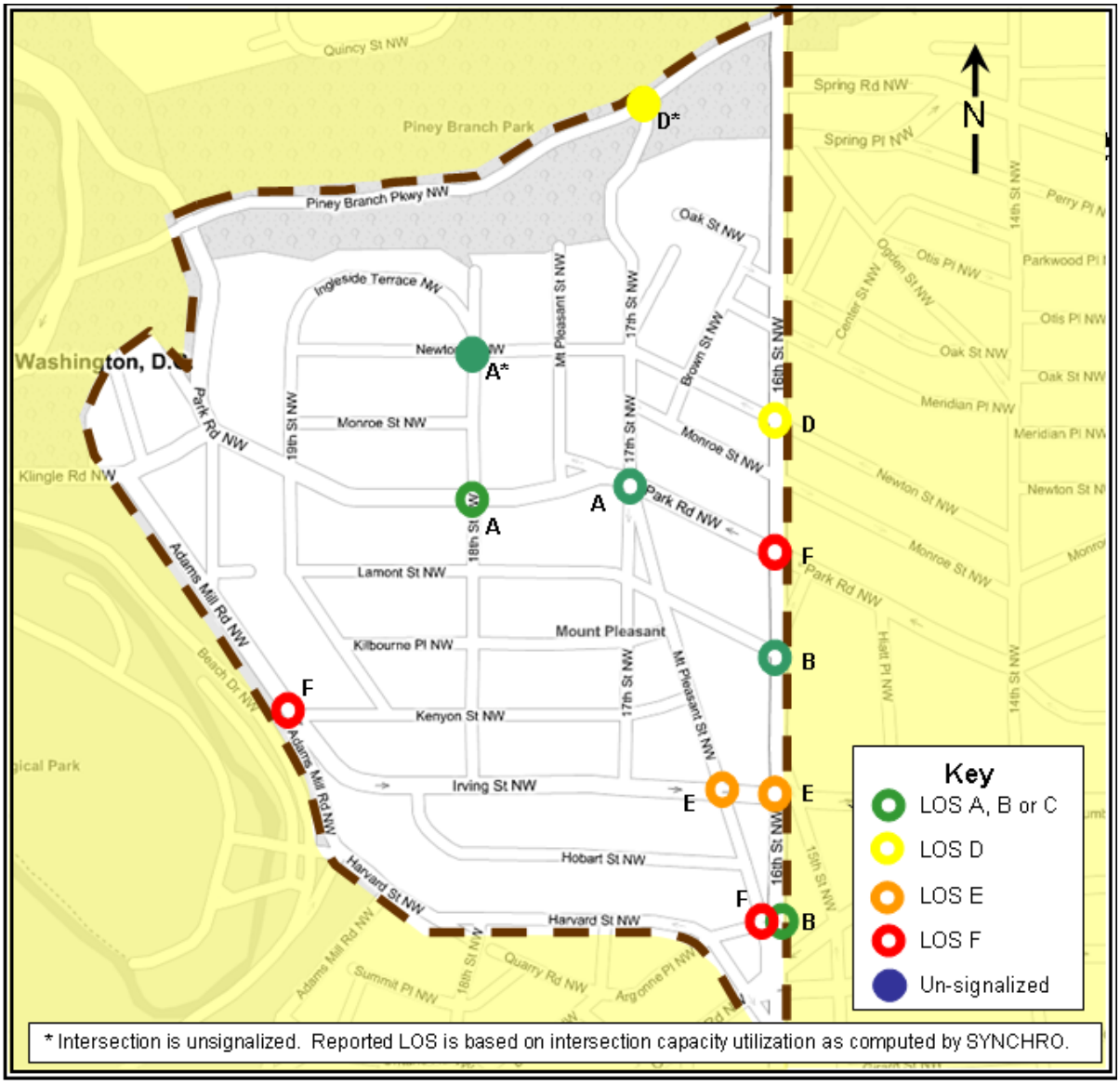

Figure 1-30 Level of Service for 20-Year Horizon during Evening Peak Period

9.6 SUMMARY

Table 1-15 presents a summary of the intersection LOS for existing conditions in 2007 and for 10-and 20-year horizons. A comparison indicates that the intersection LOS of 16th and Irving Streets will degrade to LOS E at 10-year (for morning peak) and 20-year (for afternoon peak) horizons. Similarly, the intersection LOS of 16th and Lamont Streets will degrade to LOS E at 20-year (for morning peak) horizon.

Table 1-15 LOS Summary for Existing Conditions, 10-Year and 20-Year Horizons

Intersection	AM LOS			PM LOS		
	2007	10-Year Horizon	20-Year Horizon	2007	10-Year Horizon	20-Year Horizon
18th Street, NW and Newton Street, NW	A*	A*	A*	A*	A*	A*
18th Street, NW and Park Road, NW	A	A	A	A	A	A
Mt. Pleasant Street, NW and Irving Street, NW	B	C	C	C	D	E
Mt. Pleasant Street, NW and Harvard Street, NW	F	F	F	F	F	F
Adams Mill Road, NW and Kenyon Street, NW	C	C	C	F	F	F
16th Street, NW and Newton Street, NW	B	B	B	C	D	D
16th Street, NW and Park Road, NW	E	F	F	E	F	F
16th Street, NW and Lamont Street, NW	B	D	E‡	A	A	B
16th Street, NW and Irving Street, NW	B	F‡	F	C	D	E‡
16th Street, NW and Harvard Street, NW	A	A	A	A	A	A
17th Street, NW and Piney Branch Parkway, NW	C*	C*	D*	C*	D*	D*
17th Street, NW, Park Road, NW, and Mt. Pleasant Street, NW	A	A	A	A	A	A

* An ICU-based LOS (not based on HCM); intersection is un-signalized.

‡ Intersection LOS dropping to E from a better LOS