DATA COLLECTION AND BENCHMARKING OF THE BIAS POLICING PROJECT

Final Report for the Metropolitan Police Department in the District of Columbia

Written by: Dr. John C. Lamberth
Lamberth Consulting

September 2006

LAMBERTH CONSULTING

Lamberth Consulting was formed in 2000 in an effort to provide racial profiling assessment, training, and communication services to universities, states, counties, cities, civil rights groups, litigators, and communities.

Dr. John Lamberth, CEO and founder of Lamberth Consulting, developed the nation's first racial profiling methodology in 1993. Since that time we have revised and adapted our methodology for highways, urban areas, suburban areas, and pedestrian populations. We have expanded our service offerings to include training solutions targeted towards law enforcement and community members, as well as communication planning services to help educate and inform all parties concerned about racial profiling issues.

Lamberth Consulting, LLC
20 West Miner Street
West Chester, PA 19317
phone   610.358.5700
fax   610.358.2890
on the web www.lamberthconsulting.com
email us at info@lamberthconsulting.com

LAMBERTH CONSULTING

TABLE OF CONTENTS

LIST OF TABLES

LIST OF MAPS

ACKNOWLEDGEMENTS

We would like to thank the Metropolitan Police Department (MPD) for their support and cooperation during the course of this study. From the beginning of the effort, we were able to call upon the resources of the Department for the components that are necessary to complete a study of this nature. For a period of 6 weeks we had surveyors out on the streets of the District of Columbia at all hours of the day or night. The Department provided manned vehicle escort for all survey sessions, which allowed the surveyors to concentrate on their basic task, accurately determining the race/ethnicity of motorists. Each benchmark location was observed in daylight and/or at night, and MPD personnel accompanied us on all of those observational trips.

We worked closely with members of the agency to understand traffic patterns and enforcement. They provided us with information about police activity, special deployments, special circumstances within the City that influenced policing, and many other aspects of their work that would be necessary for us to understand when conducting this study. We thank them for their willingness to share their knowledge of this jurisdiction with us.

The successful identification of benchmark locations and of stop data that accurately reflects traffic in that location is essential to the successful completion of a study of racial profiling. The personnel of the Department who were assigned to this project worked and shared their insight and experience with us and helped to make the study run smoothly. Completing a project of this magnitude in the time frame allotted required superior cooperation from the Department, which we greatly appreciate.

EXECUTIVE SUMMARY

The past decade has seen increased awareness of the issue of racial profiling among lawmakers, law enforcement agencies, and the communities in which they work. As a result, data collection efforts have begun in many jurisdictions. Some efforts are due to threats of litigation or settlements; others have been legislatively mandated, while still others have been voluntary in nature. The Metropolitan Police Department (MPD) data collection efforts fall into this latter category. Collecting traffic stop data is of little use unless some level of analysis of that data is conducted. Further, for the analysis to have meaning, some level of action must be taken resulting from interpretation of the analysis results. If the analysis demonstrates that stop practices are unbiased, then the agency should ensure that community members and other stakeholders are aware of this and the agency and officers should be congratulated for their practices. If the analysis demonstrates that issues exist that may be caused by bias, then the agency should commit real resources to the issue and seek to change the behaviors that led to this concern.

One of the major issues in data analysis to date has been in determining the appropriate benchmark or standard to which the stop data are to be compared. The methodology employed in this study is one that has been employed in several studies across the country and is relied upon by several courts. This methodology employs what we believe to be the only appropriate benchmark for such an analysis; that is, a direct measure of the transient populations (driving populations and pedestrian populations) in specific locations. This allows a comparison of racial/ethnic groups as they are represented in the transient population to police stops of those groups at specific locations.

This study addressed the following questions:

- Is there evidence of racial profiling by the MPD?

- Which minority groups (i.e., Blacks and Hispanics), if any, are targeted?

- In which locations is profiling of any group likely to occur?

- Are Black and/or Hispanic drivers more likely to drive 11mph or more over the speed limit than White drivers?

MPD began collecting data a number of years ago using the PD 76 form. The form was adapted prior to the start of this study and has been adapted during the course of the study. The data utilized for analysis were collected between February 2005 and January 2006. Data on the transient traffic population were collected at 20 locations throughout the city during November and December of 2005. These locations were selected due to the high number of stops at each, traffic patterns that were relatively representative of the jurisdiction[1] and accessibility for surveyors. Traffic surveys, including those for the photo radar and red light camera locations, were conducted by highly trained surveyors on randomly selected days and times at each location over a three-month period. These surveys provided the benchmark data to which stop data for that location were compared. Five locations were also benchmarked for the pedestrian transient population. In addition, the five photo radar locations were not only benchmarked, but the race/ethnicity of those exceeding the speed limit by at least 11 mph was also collected.

The results of this study with respect to traffic are excellent and about as good as can be expected. They provide no evidence of targeting of either Blacks or Hispanics in Washington, DC by the MPD. The proportion of Black and Hispanic motorists stopped at the 20 locations

---

[1] Every effort was made to benchmark locations in all Police Districts in the District.

was virtually the theoretically expected outcome based upon their presence in the transient

population[2].

The pedestrian transient population was monitored at five locations. At three locations

the benchmark data indicated that the transient population was made up of overwhelmingly

Black pedestrians. However, at the location where the pedestrian population was roughly evenly

divided between Black, Hispanic, and White pedestrians, there was a somewhat elevated

tendency to over-stop Black and Hispanic pedestrians. At the location where White pedestrians

were a large majority, there was strong evidence that Black pedestrians were being targeted.

There was no evidence that either Black or Hispanic motorists are more likely to exceed

the speed limit by 11 mph or more than are any other drivers. In fact, slightly fewer Black and

Hispanic motorists than expected were identified as violating speed laws[3].

---

[2] Note that the 20 locations selected for surveying were not randomly selected and results, thus, cannot be generalized to the entire city of Washington DC.

[3] Some have questioned whether an underrepresentation of Black and Hispanic motorists among the motorists egregiously speeding actually means that proportionate representation of motorists stopped by MPD indicates an over-stopping of Black and Hispanic motorists. In our view, speeding is but one violation among hundreds for which motorists can be stopped. In addition, there are at least two potential reasons for stopping minority motorists more than nonminority motorists as explained on pp. 53-54 of this report. Thus, it would not be appropriate to suggest that MPD over-stops black motorists based upon the speeding findings.

INTRODUCTION

Representatives from minority groups have provided anecdotal evidence of racial profiling by law enforcement agencies on the roadways that spans back decades. The specific measurement of the practice, however, was not formalized until 1994. During a criminal litigation case in New Jersey (*State v. Soto* et al.), a group of defendants alleged that New Jersey state troopers were targeting and stopping minorities on the highway, not because of their driving behavior, but because of the color of their skin. During the course of this case, the race and ethnicity of the driving population was observed and recorded on portions of the New Jersey Turnpike[4]. The driving population was then compared to the racial and ethnic make-up of the individuals stopped in New Jersey to determine whether a disproportionate percentage of minority drivers were being stopped relative to their presence on the roadway. This method was also used in Maryland (Lamberth, 1996) during a civil litigation case (*Wilkins v. Maryland State Police*) in which Robert Wilkins alleged that the rental car driven by his cousin on the Maryland State highway was stopped and searched by a drug-sniffing dog due to a "profile" prepared by the Maryland State Police that included Black males driving rental cars.

In the former case, the courts held for the defendants. The latter case was settled, and the issue of racial profiling began to develop greater national attention and exposure. It is important to note that the early work performed in this field, while groundbreaking, was limited because it was conducted within the context of litigation. That is, the issue was reviewed in a combative forum between community and law enforcement participants. The work was completed slowly, and dialogue surrounding the science was limited. A dramatic shift resulting from state

---

[4] Lamberth, J. Revised Statistical Analysis…(1994) Available at
http://www.lamberthconsulting.com/downloads/new_jersey_study_report.pdf

legislation and agency participation and leadership relative to this science began to take place in

the late 1990s. State legislatures have mandated data collection and/or developed laws

prohibiting racial profiling by law enforcement agencies. At the time of this report, 26 states

have enacted legislation relative to this issue. An additional 12 states have legislation pending

on the issue, and agencies in all but 2 states in the nation have undertaken data collection efforts

due to mandate, decree, or of their own volition. Several significant events have occurred

nationally that have influenced this shift in focus and have helped to direct activities in this

field.

In June 1999, the Department of Justice (DOJ) hosted a conference on "Strengthening

Police-Community Relationships." The conference recognized that police are more effective

when they have the trust and cooperation of the residents in their community. However, in many

communities, especially minority communities, a lack of trust remains between law

enforcement and local residents. This tension is exacerbated by allegations of police misconduct

such as racial profiling.

The conference highlighted the need to identify proactive police practices to build trust,

enhance police integrity and reduce police misconduct. Members at the conference determined

that collecting data on traffic and pedestrian stops, analyzing this data, and providing the results

for public review can help to shift debates on racial profiling from anecdotal reports to informed

discussions. By being proactive about recognizing and addressing racial profiling, police

communities can go a long way towards managing perceptions around racial profiling and

strengthening police-community relationships.

In February 2000, the DOJ held a conference entitled "Traffic Stops and Data Collection: Analyzing and using the Data." In this session, more than 75 federal, state, and local police administrators, prosecutors, civil rights advocates, and government officials as well as police labor leaders, researchers, and community leaders gathered to examine the collection, analysis, and use of data on traffic, pedestrian, and other law enforcement stops. Collectively the participants reached several conclusions:

- Traffic stop data collection systems are needed to respond to the perceptions of racial profiling, to measure the reality, and to bridge the gap between minorities and police.

- Core data elements of traffic stop systems should include: date and time, location, race and ethnicity, gender, reasons for initiating the stop, actions taken by the officer, and duration of the encounter.

- Benchmarks for comparing data collected on stops are essential for conducting valid analyses. Without valid control groups, supportable statistical analyses are not possible.

- Data that is complete, accurate, and truthful is critical.

- Analysis of data must be conducted by a capable and credible party.

- Publicizing traffic stop data can help to build trust between public law enforcement agencies and the public.

In August of 2001, the Police Executive Research Forum, under a DOJ grant, held a conference for leading researchers in the field to discuss issues relating to benchmarking for stop data collection and analysis. The conference was attended by social scientists, legal scholars, and practitioners from several police departments. This conference was the first of its kind to bring leading scientists and researchers together to discuss the best methods for analyzing stop data.

In March of 2003, the SOROS Foundation provided support for a conference on racial profiling that was co-hosted by the Institute on Race and Justice at Northeastern University, the

American Civil Liberties Union, the National Organization of Black Law Enforcement

Executives, and Lamberth Consulting. The Conference, "Confronting Racial Profiling in the

21st Century: Implications for Racial Justice," featured 30 of the leading researchers in the

country. The intent of the conference was to bring together researchers, law enforcement

representatives, and community representatives to collectively review the latest and most

progressive methods for stop data collection and analysis. The conference also focused on post-

stop activity, community engagement, and data auditing as primary subject topics.

In November 2003, the Northwestern University Center for Public Safety and the Police

Executive Research Forum held the Third National Symposium on Racial Profiling. The third

day of that conference was given over to discussing issues of data collection and analysis.

Specifically, issues of risk management, benchmarking, post-stop activity, and related topics

were discussed. Observational benchmarks, which were pioneered by Lamberth Consulting,

were cited as the most used and reliable of the strong benchmarks discussed.

In February of 2004, the Office of Community Oriented Policing Services (COPS) of the

Department of Justice sponsored the Western Regional Racially Biased Policing Summit in

conjunction with the City of Sacramento and the Sacramento Police Department. This

conference explored benchmarking, post stop analyses, community police engagement, training,

and a variety of other issues integral to the racial profiling debate.

In the summer of 2004, the COPS Office funded two workshops hosted by the Police

Executive Research Forum on the assessment of Racial Profiling and the best practices for

conducting assessments.

In January 2005, the Open Justice Initiative hosted a workshop in Budapest, Hungary in which ethnic profiling was considered as an issue in several European countries. John Lamberth presented a paper on the methodology utilized in the United States that allowed for the scientific study of racial profiling. Among other outcomes, this initiative led to a monograph, "Ethnic Profiling by Police in Europe," and a study of ethnic profiling in the Moscow metro system.[5]

From these and other conferences, a central and critical focus has become clear. To manage public perception about racial profiling and to strengthen community-police relationships, the method used for collecting and analyzing stop data is critical. Two primary components must be in place to determine whether racial profiling is occurring: benchmarks and complete stop data.

Benchmarks

When a police department develops stop data that designates the race/ethnicity of each motorist stopped, the next necessary ingredient for accurately analyzing those data is the data against which to compare the stops. This has been termed the "denominator" issue by some, but we prefer to refer to this comparison data as the benchmark. Knowing that a police department stops 50% Black motorists does not tell us anything about whether they are targeting Black motorists, because until we know how many motorists who are Black are driving on the streets and highways patrolled by that police department, we are not in a position to assert that police are stopping too many Black motorists, about the right percentage, or too few.

Some researchers in the late 1990s and early 2000s proposed that census data might estimate driving populations reasonably well. Studies were conducted for individual

---

[5] Ethnic Profiling in the Moscow Metro. (2006). Open Society Institute, New York, N.Y.

jurisdictions and for some states using census data as the primary data set for benchmarks. Examples include San Diego[6], Connecticut[7], and the Texas Department of Public Safety[8], 2000. These data were also attractive to other organizations, such as newspapers, which had easy access to census data. Journalists reported on simple percentage comparisons of stop data against census data estimates, often claiming that these differences indicated racial profiling. The field has since learned that census data do not provide a good estimate of driving populations. Today, experienced researchers argue against the use of these data[9], citing, for example, that census data alone do not account for driving populations such as commuter traffic, university populations, and tourists.

The benchmark that has both been relied upon by courts in reaching decisions (Soto, 1996; Wilkins, 1996; Foulkes, 2000) and utilized by other researchers in attempting to validate possible alternative benchmarks[10] (Alpert, Smith & Dunham, 2003, Farrell, et al., 2004) is observations of traffic. Observational surveys of specific locations are reliable measures of the traffic from which police officers select motorists to stop at that location and thus are appropriate benchmarks.

---

[6] Cordner, et al. (2001) Vehicle stops in San Diego, 2001. Available at
http://www.sandiego.gov/police/pdf/stoprpt.pdf

[7] Cox, et al. (2001) Interim report of traffic stops statistics for the state of Connecticut. Available at:
http://www.ocjc.state.or.us/Racial_Profiling/ct.pdf

[8] Traffic Stop Data Report, 2001. Available at:
http://www.txdps.state.tx.us/director_staff/public_information/trafrep2001totals.pdf

[9] Fridell, L. (2004) By the Numbers. Available at:
http://www.policeforum.org/upload/BytheNumbers%5B1%5D_715866088_12302005121341.pdf;

Farrell, et al. (2005). Learning from Research and Practice. Available at:
http://www.racialprofilinganalysis.neu.edu/IRJ_docs/Report_NewChallenges21.pdf

[10] Alpert, et al. (2003) The Utility of Not at Fault Traffic Crash Data in Racial Profiling Research. Farrell, et al. (2003) The Driving Population Estimate Available at:
http://www.racialprofilinganalysis.neu.edu/IRJ_docs/Report_NewChallenges21.pdf

Complete Stop Data

The second set of critical data is the police stop data. These data are a compilation of all traffic stops that are initiated by the officer. This includes stops that result in a citation as well as those that do not. It excludes stops that are made by officers in which they are instructed as to which motorists to stop, such as those made during a DUI checkpoint, or stops made of individuals who fit the description of a suspect in a particular crime (be on the lookout stops). Pedestrian stops are those self-initiated stops made by officers for investigative purposes. Pedestrian encounters that occur because of an officer's wish to talk to and get to know residents in a particular area, but are not investigatory in nature, are not included in the pedestrian stop database.

The MPD collects data on both traffic and pedestrian stops using the PD 76 form. Officers are instructed to fill out the PD 76 form whenever a traffic stop is made, whether it is self-initiated or the result of a spot check. Vehicle spot checks occur during DUI checkpoints and other similar programs in which vehicles at specific points are checked. Generally speaking, the vehicle to be checked is predetermined; i.e., every vehicle, every third vehicle, or some other variant of predetermination that is used for the selection of the vehicles that are actually stopped. For purposes of this report, Lamberth Consulting advised and the MPD agreed that the appropriate stops to analyze were the vehicle stops, not the vehicle spot checks. This is because there is little or no officer discretion involved when a vehicle spot check is made. Pedestrian data are also collected on the PD 76 form with the appropriate notation that the particular stop was of a pedestrian.

Data Analysis Considerations

It should be noted that the question of how to perform data analysis is not simple, nor have all researchers historically agreed on the best methods to conduct the analysis. This makes sense given the relative youth of this discipline and the burgeoning nature of the issue. As mentioned previously, most researchers today agree that the best method for determining transient populations is observational surveys. It is important, however, to discuss some points of current interest and review in the academic community relative to conducting this type of analysis.

Violators

One question facing those attempting to analyze traffic stop data involves the selection of the most appropriate benchmark to use for comparison. A number of measures have been used in the research to date, and an open question remains as to whether using estimates of the population violating traffic laws is an improvement over estimates of drivers operating on a community's roadways. Courts (beginning with the *Soto* and *Wilkins* decisions) have stated that violators represent the appropriate measure, but then quickly changed their focus when it became obvious that the two were virtually synonymous.

Court decisions uniformly support the notion that any motorist violating a traffic law is subject to being stopped by police and are the appropriate group to benchmark. However, to date, empirical evidence supports the contention that traffic and violators are synonymous, and in the *Soto* case the court essentially used traffic and violators interchangeably.

The first scientific measurement of the appropriate comparison number for traffic stops determined both the proportion of Black motorists in the traffic stream and those violating at

least one traffic law (*New Jersey v. Soto, et al.*). The evidence in that case subsequently has

determined that the two are virtually synonymous. First in *Soto* and in *Wilkins v. Maryland State*

Police, virtually every motorist was speeding (98.3% in *Soto* and 93.3% in *Wilkins*). More

recently, Lamberth (2003)[11] reported a study in which police officers were given 5 minutes to

determine whether randomly selected cars were violating some traffic law. The study concluded

that fully 94% of the drivers were violating some law, and it took a mean of 28 seconds for the

officers to spot the violation.

For the reasons stated above, and due to constraints on resources, we have used the

traffic estimates as our benchmarks in Washington, DC. However, we should note that direct

research measuring differences between racial or ethnic groups and driving behavior is very

limited. While empirical evidence suggests that traffic violators and traffic motorists are

virtually identical, a question remains as to whether one racial or ethnic group is more likely to

violate traffic laws egregiously than another. That is, it is theoretically possible, while perhaps

not intuitive, that one racial or ethnic group is more likely to speed excessively, or drive

vehicles with severe vehicle codes violations, or run traffic lights more often, etc. To date,

empirical evidence is scant and mixed on the issue of whether one racial/ethnic group or another

violates traffic laws more egregiously than do others. Two studies commissioned by state police

agencies have found that minorities and particularly Black motorists violate speeding laws more

egregiously than do White motorists. Both of these studies considered excessive speeding

(defined as 15 mph above the limit) as the egregious violation to be studied. These studies have

---

[11] Lamberth, John, "Measuring the racial/ethnic make up of traffic: The how, what and why." Paper presented at *Confronting Racial Profiling in the 21ˢᵗ Century: Implications for Racial Justice.* Boston, March, 2003.

been severely criticized on methodological grounds.[12] One study done under a DOJ grant also

suggests that Blacks speed more egregiously than do Whites. Finally, another study, conducted

by Lamberth Consulting has found that, while slightly more Black motorists apparently violate

the speeding laws more egregiously than do other groups, the differences are small and are

likely caused, at least in part, by the fact that there appear to be more young Black motorists on

the roadway than young White motorists. We feel that this area of research is vitally important

and to that end, with the agreement and support of MPD, designed the present study so that

some of the questions concerning differences in violation of traffic laws by different

racial/ethnic groups could be addressed.

Agency and Community Role

The early studies conducted in the context of litigation were necessarily limited in the

amount of agency and community participation to conduct the work. In more recent work,

researchers have had the benefits of working closely with agencies to conduct these studies.

Indeed, agency support for providing perspective, stop data, deployment patterns, enforcement

activities, crime statistics, policy and procedures, training, and other department information

and activities targeted towards these issues has provided a plethora of valuable information for

---

[12] Lange, et al utilized pictures of motorists who were speeding 15 miles per hour (mph) or more over the speed limit. The major criticism of this study is the large percentage of pictures that could not be reliably classified as to the race of the driver. When the criterion was two out of three raters agreeing on the race of the driver, 32% of the pictures could not be classified. When all three raters had to agree, 60% of the data was unusable. Engle, et al. also argued that Black drivers and what they called non-Caucasian drivers (which included Hispanics, many of whom are Caucasian) were more likely to be speeding at least 15 mph above the speed limit than were white drivers. This study suffered from, among other things, the fact that 1) only drivers who were not in a group were selected to be measured as to their speed, 2) counties in Pennsylvania were not selected randomly for inclusion, 3) after 20 counties were chosen to be included in the study, an additional 7 counties were added and these new additions were much more likely to have Blacks and non-Caucasians as egregious speeders, and 4) the data underlying the study are not available to other researchers.

researchers studying this issue. We found the participation and contributions of the Metropolitan

Police Department invaluable in our efforts to conduct this study.

However, the communities and rank-and-file officers affected by this issue must also be

considered when conducting these studies. Practically speaking, if the results of any analysis

prove favorable to the agency, there may be some community representatives or civil rights

groups that have concerns about the legitimacy of the work produced by a researcher who is

paid by the agency. Conversely, results that reflect negatively upon an agency may be viewed

with skepticism by agency officers who do not engage in biased police practices.

We feel strongly that the best method to reduce the skepticism of both of these groups is

to involve them early and to keep them involved throughout the process. The MPD provided

community representatives an opportunity to learn about the project and methodology at the

outset of the program. In fact, the group that was responsible for reading the proposals

submitted to the City and selecting a researcher to conduct this study included not only

representatives from the City and the MPD but from the community as well. Further, the

Community-Police Task Force has met throughout this project, discussing issues, making

recommendations to the police, and commenting upon developments. We applaud the MPD for

their foresight in recognizing and working with the community. We strongly recommend that

future research efforts, in the city of Washington, DC or elsewhere, include both of these

stakeholder groups in efforts to conduct studies of this kind.

Metropolitan Police Department Initiative

As indicated earlier in this report, there are three ways that stop data collection studies

come about. Historically, the earliest of these were in connection with litigation. Subsequent to

litigation, some agencies have entered into consent decrees with the Department of Justice that have the effect of monitoring the agencies' activities with regard to the race/ethnicity of motorists stopped and whether there are differences in the way that different races/ethnicities are treated subsequent to the stop. Next, voluntary data collection was conducted by agencies dealing proactively with a potential problem. Finally, there are those agencies that collect these data in response to a legislative mandate. The data collection project in Washington, DC falls into the voluntary collection category.

The advent of community policing, which requires working with community members to prevent crime and the fear of crime, began in 1997 in the MPD. The effort was reinvigorated in 1998 when the current Chief, Charles Ramsey, began his tenure by setting the ambitious goal of making Washington, DC the safest city in America. *Policing for Prevention,* which is founded on the police conducting focused law enforcement and systemic prevention activities and entering into partnerships with the community to solve problems and share information, was adopted as the strategy to accomplish this goal.

In 2002 the Biased Policing Project, intended to strengthen partnerships with the community by ensuring that the delivery of police services is free of any bias, began. The first steps involved the development of the Community Police Task Force and Employee Committee, the development and implementation of a comprehensive citizen telephone survey, focus groups with community and agency members and a report on these activities by the Police Foundation. One of the recommendations of that report was that a stop data analysis research study be conducted. The present study is the result of the implementation of that recommendation by the MPD.

When the decision was made in 2005 to proceed with the stop data analysis portion of the Biased Policing Project, bids were solicited from a variety of vendors. The group that reviewed these proposals and decided upon Lamberth Consulting as the vendor consisted of MPD employees (Anne C. Grant and Lieutenant Linda Nischan) and a representative from the Task Force (Ronald Hampton).

The stop data collected for this study were collected using a modification of the existing PD 76 form. This form, which was modified with the input of the Task Force, has been the primary data collection instrument, but not the only one. Computer Assisted Dispatch (CAD) data were utilized in helping to determine the areas of the city where substantial numbers of stops of vehicles and pedestrians occurred. The benchmark data were collected by surveyors under the direction of Lamberth Consulting at various points in the city.

METHODOLOGY: OVERVIEW

The methodology used in this study has been developed and refined based upon experience with similar efforts in determining whether racial profiling is occurring in the states of New Jersey, Maryland, Arizona, Kansas, California, Texas, and Michigan (*State of New Jersey v. Soto*,[13] *Wilkins v. Maryland State Police*,[14] *Arizona v. Foulkes*[15], Lamberth, 2001, 2002, 2003), and through our experience in working with national leaders on this issue in US DOJ conferences and work sessions. Our belief is that the most effective approach is a holistic one and includes the assessment of racial profiling, intervention to train employees and to improve processes and behaviors if the problem exists, and communication with the stakeholder communities and groups that are affected by the practice.

It is not possible to conduct benchmarking in every part of a city or highway to assess racial profiling. The logic of our work, elemental to statistical analysis in other contexts, is to sample certain portions of city drivers on randomly selected days and times of day. This method enables the generalization of the study results to the police department's activity in the areas that we study. The selection of locations to assess in a city is necessarily determined by traffic patterns and police activity in that city. Days and times of day are selected randomly to assure the greatest generalization possible. In this study, we assessed in great detail specific locations within Washington, DC.

---

[13] *State v. Pedro Soto*, A. 734A. 2d 350(N.J. Super: Ct. Law Div. 1996)

[14] *Wilkins v. Maryland State Police, et al.*, Civ. No MJG-93-468

[15] *State v. Barrington Foulkes, et al.*

As previously described, the appropriate standard of comparison, or benchmark, must be established. Existing stop data then must be compared against that benchmark to assess whether any group is stopped more frequently than their presence in the transient demographic would predict. That is, the percentage of minorities stopped by police departments must be compared to the benchmark data to assess whether minorities are stopped at a disproportionate rate to that at which they travel the roadways or walk on the streets. Furthermore, most experts agree that the appropriate benchmark is not city or surrounding area population that can be obtained in census data. The appropriate benchmark is the motoring, or transient, population.

The racial composition of this transient population may or may not mirror the population of the city or county. For example, as shown in Table 1, the Black population residing within the Wisconsin and M census tract is 3.1 percent[16]. If we used this percentage as the benchmark to which to compare the stops made by the MPD in that area, we would significantly underestimate the percentage of Blacks in the driving population (27.3%). However, as Table 1 shows, had census data been used to estimate the Black transient population at 1st and Channing, Black motorists would have been substantially overestimated.

Table 1 provides the percentage of Black motorists in the driving population at each of the traffic locations benchmarked in Washington, DC.

To provide a comparison to census data, the specific census tracts in Washington, DC that corresponded to the intersections that were benchmarked were determined. The Black and Hispanic populations in the census tracts at those intersections were then determined. This gives

---

[16] These data were compiled by identifying the census tracts (i.e., geographic units that average 4,000 residents) contained within the perimeters of each benchmark location. Then, demographics were obtained from the U.S. Census Bureau. In cases where more than one census tract fell within these perimeters, weighted averages were calculated.

the most comparable census vs. traffic data for each minority at each location. Tables 1 and 2

provide both the observational and census data for each traffic location.

Table 1. Comparison of Census Tract and Traffic for Blacks

#	Location	Percent Black Census	Percent Black Benchmark	Comparative Disparity[17]
1.	4th St SE & Chesapeake SE	98.8	95.6	+ 3.2%
2.	1st St NW & M Street NW	93.2	69.8	+25.1%
3.	Alabama Ave SE & Ainger Pl SE	98.9	95.0	+ 3.9%
4.	17th St NW & Euclid St NW	34.1	35.5	- 4.1%
5.	5300 Blk Clay Ter NE	98.8	96.8	+ 2.0%
6.	Georgia Ave NW & Longfellow St NW	79.7	59.8	+25.0%
7.	Georgia Ave NW and Shepherd St NW	71.5	67.6	+ 5.5%
8.	Alabama Ave SE & F St SE	98.7	96.1	+ 2.6%
9.	3200 Blk 23rd St SE	98.8	91.8	+ 7.1%
10.	1st St NW & Channing St NW	92.5	66.7	+27.9%
11.	2700 Blk 13th St NW	65.1	50.4	+22.6%
12.	200 Blk Division Ave NE	98.9	93.6	+ 5.4%
13.	400 17th St NE	97.7	92.3	+ 5.5%
14.	14th St NE & Saratoga Ave NE	97.8	95.5	+ 2.4%
15.	2600 Blk Stanton Rd SE	98.7	93.7	+ 5.1%
16.	Montello St NE & Neal St NE	97.5	91.9	+ 5.7%
17.	11th St NW & Park Rd NW	62.9	53.2	+15.4%
18.	1st St NW & R St NW	92.7	72.9	+ 21.4%
19.	Wisconsin Ave NW & M St NW	3.1	27.3	-780.6%
20.	21st St NE & Maryland Ave NE	97.8	94.2	+ 3.6%

It is obvious that census data for Black residents overestimates the driving population in

18 of the 20 locations benchmarked. Only at Wisconsin and M and 17th and Euclid is this not

true. Washington, DC is a city in which the majority of the population is Black. In addition,

there are a large number of individuals who drive into the city each day from the surrounding

suburbs, and these factors contribute to the results shown in Table 1. The under-representation

---

[17] The comparative disparity is computed by subtracting the benchmark percentage from the census percentage of the minority group and dividing by the census percentage. Therefore, a negative comparative disparity means that the minority is underrepresented by census data when compared to traffic.

of Black drivers by census data at Wisconsin and M is one of the largest that Lamberth

Consulting has encountered in our work around the country.

Table 2 provides the transient benchmark data and census data for Hispanics at the 20

traffic locations benchmarked.

Table 2. Comparison of Census Tract and Traffic for Hispanics

#	Location	Percent Hisp. Census	Percent Hisp. Benchmark	Comparative Disparity
1.	4th St SE & Chesapeake SE	0.5	1.8	-260%
2.	1st St NW & M Street NW	1.1	6.8	-518%
3.	Alabama Ave SE & Ainger Pl SE	0.7	1.6	-129%
4.	17th St NW & Euclid St NW	27.7	23.1	+ 17%
5.	5300 Blk Clay Ter NE	0.7	1.6	- 90%
6.	Georgia Ave NW & Longfellow St NW	15.5	15.1	+ 3%
7.	Georgia Ave NW and Shepherd St NW	25.7	10.4	+ 60%
8.	Alabama Ave SE & F St SE	0.8	2.0	-150%
9.	3200 Blk 23rd St SE	0.6	3.6	-500%
10.	1st St NW & Channing St NW	3.1	6.3	-103%
11.	2700 Blk 13th St NW	23.6	17.3	+ 27%
12.	200 Blk Division Ave NE	0.7	3.1	-342%
13.	400 17th St NE	1.4	3.7	-164%
14.	14th St NE & Saratoga Ave NE	1.5	3.3	-120%
15.	2600 Blk Stanton Rd SE	0.9	1.6	- 78%
16.	Montello St NE & Neal St NE	1.4	3.9	-179%
17.	11th St NW & Park Rd NW	32.5	20.5	+ 37%
18.	1st St NW & R St NW	2.8	5.7	-104%
19.	Wisconsin Ave NW & M St NW	4.5	5.7	- 27%
20.	21st St NE & Maryland Ave NE	1.3	2.7	-108%

Table 2 shows that in 5 of the benchmarked locations, census data overestimates the

Hispanic traffic, and in the other 15 it underestimates that traffic. In the 200 Block of Division

NE, census data underestimates Hispanic traffic by a factor of almost 3.5.

Tables 3 and 4 show the benchmark and census data for each of the five pedestrian

locations that were surveyed.

Table 3. Comparison of Census Tract and Pedestrians for Blacks

#	Location	Percent Black Census	Percent Black Benchmark	Comparative Disparity[18]
1.	4th St SE & Chesapeake SE	98.8	100.0	- 01%
2.	17th St NW & Euclid St NW	34.1	40.9	- 20%
3.	2100 Alabama Ave SE	99.0	99.4	-0.4%
4.	Wisconsin and M Street NW	3.1	13.0	-319%
5.	21st St NE & Maryland Ave NE	97.8	99.8	- 02%

Black pedestrians are underestimated by census data at all five of the locations

benchmarked. Note that four of the five intersections benchmarked for pedestrians were also

benchmarked for traffic. At two of them, Black traffic was underestimated by census data and

was overestimated by those data at the other two. It is equally important to provide an accurate

benchmark of pedestrians if pedestrian stops are to be considered. Note that while the

proportions of Black motorists and Black pedestrians are not largely different at 17th and Euclid,

Black motorists in the traffic stream at Wisconsin and M are more than twice as numerous as

are Black pedestrians.

Table 4. Comparison of Census Tract and Pedestrians for Hispanics

#	Location	Percent Hisp. Census	Percent Hisp. Benchmark	Comparative Disparity
1.	4th St SE & Chesapeake SE	0.5	0.0	+100%
2.	17th St NW & Euclid St NW	27.7	13.6	+ 50.1%
3.	2100 Alabama Ave SE	0.8	0.0	+100%
4.	Wisconsin and M Street NW	4.5	2.9	+ 35.6%
5.	21st St NE & Maryland Ave NE	1.3	0.2	+ 84.6%

---

[18] The comparative disparity is computed by subtracting the benchmark percentage from the census percentage of the minority group and dividing by the census percentage. Therefore, a negative comparative disparity means that the minority is underrepresented by census data when compared to traffic.

Hispanic pedestrians are overestimated by census data at all five locations benchmarked. Of the four locations where both traffic and pedestrians were benchmarked, Hispanic motorists were underestimated by census data at three of the locations and overestimated at the other location.

Clearly, using census data for the city of Washington would have overestimated Black and Hispanic motorists and pedestrians at some locations and underestimated them at others. The discrepancy between the transient population and census data, and among different geographic locations, is fundamental to understanding racial profiling and assessing whether or not it is occurring. It is this precision of measurement—accurately identifying the transient population at specific locations—that the methodology used in this study allows.

Having determined the percentages of minorities in the driving population as the benchmarks, these data are then compared to the percentages of minorities stopped by MPD officers. The data sets that were utilized to determine the proportions of minority stops were provided to us by the MPD.

Red Light and Photo Radar Benchmarking

There was another component of the research in Washington, DC, namely, the issue of whether minority drivers violate traffic laws more egregiously than do nonminority drivers. To assess at least two components of this issue, five red light locations and five photo radar locations were benchmarked. The MPD utilizes both red light cameras to deter the running of red lights at specific locations and photo radar cameras to deter speeding. We will discuss these two related but methodologically different traffic law violation enforcement procedures separately.

Red light cameras are positioned around the city, typically at locations that have shown a relatively large number of accidents caused by motorists running red lights. It is generally agreed that running a red light is an egregious violation because of the high probability of an accident occurring when a motorist violates this traffic signal. To curtail such accidents, cameras are installed that take a picture of the car and the license plate of the car that runs a red light. The camera does not report an infraction unless the light is red when the car enters the intersection. The summons is sent to the owner of the vehicle that violates the law, not necessarily to the driver of the car. This introduces the first caveat to the results obtained here. There may be differences in the race of the owner of the vehicle and the driver of the vehicle. However, while we have no data to support this idea, it seems intuitive that people do not allow a great number of other drivers to use their vehicles and that many if not most of these "others" using the vehicle are family members.

In Washington, DC and Virginia, racial/ethnic statistics are not kept by vehicle owner. However, Maryland does keep racial statistics by vehicle owner. Therefore, the second caveat for analytic purposes is that only those vehicles from Maryland could be included in the analysis. While this certainly would have curtailed our ability to generalize the results that were obtained on Maryland motorists who drive in Washington, DC, in addition to the results observed in this study, we could have compared the red light camera data to Maryland motorists who drive in Montgomery County, MD, where Lamberth Consulting has collected comparable data. While our intentions were to conduct this analysis, we were unable to do so, as is described below.

Five locations were benchmarked for Red Light Camera analysis. These locations were chosen because of the large number of violations recorded. The Red Light Camera locations benchmarked were:

1. New York Ave NW W/B & 4th St NW

2. Rhode Island Ave NE W/B & Reed St NE

3. M St NW W/B & Whitehurst Frwy NW

4. New York Ave NE W/B & Montana Ave NE

5. South Capital St Ramp S/B before I St.

Photo radar cameras are used at a number of locations in the city to help curb excessive speeding. There are mobile and stationary locations for these cameras. Because the mobile locations are not in the same place every day and may be displaced by construction, breakdown in the vehicles that carry the equipment or availability of trained officers on a specific shift, the decision was made to benchmark five of the fixed photo radar locations. At each site, when a vehicle is exceeding the speed limit by 11 mph or more, the equipment detects the violation and takes a picture of the violating vehicle. This means, of course, that there is no one absolute speed at all locations that will trigger the camera, but it is tied to the speed limit at the specific location. The primary requirement for selecting the photo radar sites was a high volume of violations, but also important, since the vehicles benchmarked would be traveling at a relatively high rate of speed, were the number of lanes at the location. Locations with two lanes of traffic in the direction the camera was trained would be ideal.

The speed limit at the five locations selected ranged from 25 to 45 mph, meaning that the vehicles violating would be traveling at a reasonably high rate of speed, a minimum of 36 mph and ranging up to at least 56 mph. This fact would cause difficulties for monitors; therefore, it was decided to monitor only during daylight hours. Thus, the monitoring occurred between the hours of 6:30 AM to 5:30 PM.

In addition, not only were the locations benchmarked, but the surveyors were instructed to benchmark the location for a short period of time and then position themselves so that one of them could get the license plate of offending vehicles each time the strobe light attached to the camera went off while the other observer noted the race/ethnicity of the driver of the vehicle. This would allow a comparison of the observed violations with the license plate numbers of those violating at that location, which in turn would allow the determination of the actual speed of the violator as recorded by the photo radar camera. In this way, a more precise measurement of the actual speed of offending vehicles could be matched with the race/ethnicity of the driver. Other than those violations observed by our monitors, only those motorists from Maryland could be classified as to race/ethnicity. In an attempt to assure that enough violations were observed, the photo radar locations were observed for twice as long as were other locations. Calculations led to the conclusion that there would be at least 100 violations in the time our surveyors were at each location. This was true for photo radar locations but not for red light cameras because on average each photo radar location had far more violations than did each red light location.[19]

The five photo radar locations selected to be benchmarked were:

---

[19] On average each of the 40 photo radar locations recorded 13,125 violations in 2005, while each of the 47 red light locations recorded only 1,748 violations in 2005.

1. 100 Blk Michigan Ave NE

2. 3rd St NW & Massachusetts Ave NW

3. 4700 Blk MacArthur Blvd NW

4. 5400 Blk 16th St NW

5. 600 New York Ave NE W/B.

During the development of the benchmarking plan, Lamberth Consulting and

representatives from the MPD discussed this type of benchmarking and determined to go ahead

with it because of its importance in understanding why there may be racial/ethnic differences in

who is stopped. We understood that both of these types of enforcement relied on pictures of the

license plate of the vehicle that was violating traffic laws and that neither Washington, DC nor

Virginia was able to provide race data based on license plates. However, Maryland does collect

such data, so the decision to proceed with benchmarking these two types of violations was made

with the intention of utilizing those data from Maryland. This would have meant that

approximately half of those individuals who committed either a red light violation or a speeding

violation could have been racially identified. Furthermore, we determined that there were

enough speeding violations for our surveyors to collect racial/ethnic data from the photo radar

locations that were benchmarked. However, the State of Maryland did not provide MPD with

the relevant racial information. Therefore, we are unable to present any data relating to the

violation of red light cameras by the race/ethnicity of the violators. Nevertheless, because the

benchmarking plan called for observing violators of the photo radar cameras that measure

speed, we are able to present race/ethnicity data with regard to those motorists who violated the

speed limit by at least 11 mph.

Site Selection

In observational benchmark work in urban/suburban areas, specific intersections are selected for surveying generally based upon high police activity (known as a deployed analysis), with approximately one-quarter square mile perimeter (polygon) drawn around them. We worked with the MPD to determine which specific locations to survey. The factors that went into these decisions are provided below:

- Location of agency stop activity gathered from a review of existing PD Form 76s

- Computer-Aided Dispatch (CAD) data on police stops

- Agency deployment information (Hot Spots)

- Local demographics at reviewed locations (businesses, schools, etc.)

- Traffic (motorist and/or pedestrian) patterns and volume

- Suitability of site for surveying (safe surveying areas, ambient lighting).

We identified police stop activity using the following sources of information: Historical PD 76 data from 2002-2004; PD 76 data for February, March, and April of 2005; and police CAD data. Using these sources of information, we developed a list of locations that have generated a high volume of stops.

We reviewed each location identified. During these site reviews, we developed a composite of the locations using videotape, recording landmarks, and apparent lighting (direct lighting from streetlamps and ambient lighting from nearby businesses); street direction and number of lanes; and by conducting traffic counts to estimate traffic volume.

Surveyor Training

Teams of surveyors were hired and trained to visually identify and manually record the race and ethnicity of individuals who comprise the transient populations. Training sessions and dry run-throughs were held on Sunday, November 6 for team leaders, and Monday, November 7 for surveyors participating in the first benchmarking schedule for traffic benchmarking. A second training session was conducted for pedestrian, photo radar and red light surveying on Thursday, December 1. Makeup sessions were conducted by team leaders for any surveyors participating in the first or second surveying session who missed the training class.

Survey training is critical to ensure that surveyors understand the surveying process, surveyor positioning, daytime and nighttime surveying guidelines, data recording procedures, quality assurance reviews such as the assessment of inter-rater reliability, and the data cataloguing steps required for this work. During this session, survey team leaders also were trained on survey management tasks such as status reporting, interacting with police department personnel, and supervising surveyors. The survey training consisted of:

1. A high-level overview of the purpose of the Washington, DC study. The intent of this portion of the training was to provide surveyors with a basic understanding of the importance of the study and the critical role that they would play in the study.

2. An explanation of the survey method, schedule, and roles. Additionally, the survey procedures were diagrammed and reviewed. The intent of this portion of the training was to provide surveyors with a basic understanding of how the survey would be conducted.

3. Hands-on practice in the field in which surveyors practiced on location, using the actual data sheets developed for the survey. During this portion of the training, guidance was provided on data capture, review, and feedback to surveyors on the methods and tips for positioning and data recording. Surveyor data sheets were reviewed, and feedback was provided on performance. The intent of this portion of the training was to provide surveyors a chance to practice in a "consequence-free" environment before conducting the actual survey. Inter-rater reliability coefficients

were computed to ensure that surveyors were trained to criterion[20].

4. Dry run-throughs with team leads and with surveyors. The run-throughs served to assist surveyors in determining driving routes, driving timing, break timing, and survey protocol. The intent of the run-throughs was to ensure that surveyors would hit the ground running during surveying.

Motorist Benchmarks

"Motorist Benchmarks" refer to the capture of racial and ethnic data of motorists traveling the roadways. Teams of two surveyors visually identify and record the racial and ethnic composition of motorists traveling at the location surveyed. Most survey locations have four survey directions—North, South, East and West. Each surveyor surveys one lane of traffic at a time for one direction. After surveying the lanes in the first two directions, the surveyors move to survey the third and fourth directions.

During site review, traffic estimates were developed for the number of cars traveling through each location. Estimates are adjusted for time of day (increased during off-peak hours, decreased during rush hour, etc.) The goal is to capture enough observations at each location to conduct a meaningful analysis.

Pedestrian Benchmarks

"Pedestrian Benchmarks" refer to the capture of racial and ethnic data for pedestrians traveling in specific areas. Similar to motorist surveys, teams of two surveyors visually identified and recorded the racial and ethnic composition of pedestrians traveling at the four intersection points of the locations surveyed. Pedestrian populations differ from motorist populations in that motorists travel in one direction and in a direction necessitated by the

---

[20] A minimum inter-rater reliability coefficient (i.e., the percent of agreement between 2 surveyors observing the same car at the same time) of .80 was used as this criterion. This is a commonly accepted standard in social science research.

roadway. Pedestrians are not restricted by traffic lanes and can walk in any direction. To accommodate for this, we divided benchmarking locations into sections within a grid. Race and ethnicity were recorded for individuals entering sections within the grid. Surveyors monitored each section within the grid according to a pre-determined schedule.

The fifth pedestrian location, the 2100 Blk Alabama Ave SE, is primarily made up of a strip mall that includes a liquor store, a fried chicken restaurant, and a convenience store. Consistent with the methodology utilized in other places where a location consists of an area greater than an intersection, surveyors made their observations from a slowly moving vehicle. The procedure was for the vehicle to pass the strip mall with the surveyors enumerating the pedestrians in the strip mall, then to wait for 10 minutes before again driving past the mall and enumerating pedestrians. In all, four passes were made of the mall at approximately 10-minute intervals for each of the eight surveying sessions.

Violator Surveys

Egregious violator surveys were conducted to determine the racial/ethnic makeup of violators within the city. These surveys were conducted using red light cameras and stationary photo radar cameras.

We incorporated photo radar guns to measure speeding and specifically egregious speeding, which is defined as 11 miles an hour or greater over the posted speed limit. A team of two surveyors was used. One surveyor observes the vehicles that the photo radar captures for citation (by observing the camera flash created when a violator is photographed), noting the race/ethnicity of the driver. The second surveyor captures the license plate number and time so that the speeding record can be isolated. These teams were also used to capture the traveling

populations by identifying the race and ethnicity of all motorists during a specified time period

of the same surveying sessions at the same locations.

Benchmarking Locations

The following table provides the traffic locations surveyed. The district and surveying

parameters have been identified for each location.

Tm	Intersection	District	Northbound Road	Int Survey Minutes	Survey Mins/Lane	Survey Lanes			
						N	S	E	W
Team 1	1. Georgia Ave NW & Longfellow St NW	4	Georgia	30	10	2	2	1	1
	2. Georgia Ave NW and Shepherd St NW	4	Georgia	45	15	2	2	N/A	1
	3. 11th St NW & Park Rd NW	3	11th	40	20	1	1	1	1
	4. 2700 Blk 13th St NW	3	13th	30	30	1	1	N/A	N/A
	5. 17th St NW & Euclid St NW	3	17th	60	30	1	1	1	1
				205					
Team 2	1. Wisconsin Ave NW & M St NW	2	Wisconsin	36	9	2	2	2	2
	2. 1st St NW & Channing St NW	5	1st	45	30(15)	1	1	1	N/A
	3. 1st St NW & R St NW	5	1st	48	24	1	1	1	1
	4. 1st St NW & M Street NW	1	1st	30	15	1	1	1	1
	5. 14th St NE & Saratoga Ave NE	5	14th	30	10	2	2	1	1
				189					
Team 3	1. Montello St NE & Neal St NE	5	Montello	60	30	1	1	1	1
	2. 21st St NE & Maryland Ave NE	5	21st	60	30	1	1	1	1
	3. 400 17th St NE	1	17th	30	7.5(15)	N/A	2	1	1
	4. 5300 Blk Clay Ter NE	6	53rd	60	60	Count all cars regardless of road they are on			
	5. 200 Blk Division Ave NE	6	Division	40	40	1	1	N/A	N/A
				250					
Team 4	1. 2600 Blk Stanton Rd SE	7	Douglass	60	60	N/A	N/A	1	1
	2. 3200 Blk 23rd St SE	7	23rd	45	7.5(15)	N/A	2	2	2
	3. Alabama Ave SE & Ainger Pl SE	7	Alabama	25	12.5	2	2	N/A	N/A
	4. Alabama & F St. SE 60	7	Alabama	60	30	1	1	1	1
	5. 4th St SE & Chesapeake SE	6	4th	30	30	1	1	N/A	N/A
				220					

The following table provides traffic locations that were surveyed for red light, photo radar, and

pedestrian surveying. The district and surveying parameters have been identified for each

location.

Tm	Intersection	District	Northbound Road	Int Survey Minutes	Survey Mins/Lane	Survey Lanes			
						N	S	E	W
Team 1	1. 4th St SE & Chesapeake SE	7	4th Street	50	50	1	1	1	1
	2. 17th St NW & Euclid St NW	3	17th Street	50	50	1	1	1	1
	3. 21st St NE & Maryland Ave NE	5	21st Street	50	50	1	1	1	1
	4.2100 Alabama Ave SE	7	Alabama	48	8	N/A	1	N/A	N/A
	5. Wisconsin and M Street NW	2	Wisconsin	30	7.5	1	1	1	1
	Pedestrian Surveying			**228**					
Team 2	1. 4700 Blk MacArthur Blvd NW		MacArthur Blvd	55	*5/45	N/A	2	N/A	N/A
	2. 3rd St NW & Mass. Ave NW	1	3rd Street	55	*5/45	2	N/A	N/A	N/A
	3. 100 Blk Michigan Ave NE	5	Michigan	55	*5/45	N/A	N/A	2/3	N/A
	4. 5400 Blk 16th St NW		16th Street	55	*5/45	N/A	2	N/A	N/A
	5. 600 New York Ave NE W/B	5	N/A	55	*5/45	N/A	N/A	N/A	2
	Photo-radar Surveying			**275**					
Team 3	1. 4700 Blk MacArthur Blvd NW		MacArthur Blvd	55	*5/45	N/A	2	N/A	N/A
	2. 3rd St NW & Mass. Ave NW	1	3rd Street	55	*5/45	2	N/A	N/A	N/A
	3. 100 Blk Michigan Ave NE	5	Michigan	55	*5/45	N/A	N/A	2/3	N/A
	4. 5400 Blk 16th St NW		16th Street	55	*5/45	N/A	2	N/A	N/A
	5. 600 New York Ave NE W/B	5	N/A	55	*5/45	N/A	N/A	N/A	2
	Photo-radar Surveying			**275**					
Team 4	1. NY Ave NW W/B & 4th St NW	1	4th Street	22.5	7.5	N/A	2	2/3	2
	2. Rhode Island Ave NE W/B & Reed St NE	5	Reed	22.5	7.5	N/A	N/A	3	2
	3. M St NW W/B & Whitehurst Frwy NW		Whitehurst Fwy	22.5	7.5	N/A	N/A	3	2
	4. NY Ave NE W/B & Montana Ave NE	5	Montana Ave	22.5	7.5	N/A	N/A	2	3
	5. South Capital St Ramp S/B before I St	1	Capitol St. Ramp	7.5	7.5	N/A	2	N/A	N/A
	Red Light Camera Surveying			**97.5**					

Notes:
* 5/45 - 5 mins surveying each lane for population. 45 minutes surveying for violators captured by photo-radar.

Benchmarking Schedule

Traffic Schedule Construction

Traffic surveying was conducted in 6-hour time blocks. Time blocks were divided into four segments per day – 1) midnight to 6am, 2) 6am to noon, 3) noon to 6pm, and 4) 6pm to midnight. There are fifty-six 6-hour blocks in every 2 weeks (four 6-hour blocks per day, 14 days over 2 weeks.) Each location surveyed was visited eight times. One team can survey five locations across a 2-week time period. Four survey teams were used.

Pedestrian and Violator Schedules

Pedestrians

Pedestrian surveys typically differ from traffic surveys in that normally pedestrians are not out on the streets 24 hours a day. To accurately survey pedestrian activity, it was necessary to tailor the survey times to the times of highest pedestrian and police activity. Therefore, we

selected times for surveying that corresponded with the highest number of pedestrian stops. This means that surveying was conducted between the hours of 5pm and 1am. Each shift began between 5pm and 7pm and lasted from 11pm to 1am accordingly. Each survey location was visited eight times. One team was used across a 2-week time period to survey the five chosen pedestrian locations.

Violators

There are two types of violator surveys that we conducted. First, we surveyed five red light camera intersections. Similar to traffic surveys, time blocks were divided into four segments per day – 1) midnight to 6am, 2) 6am to noon, 3) noon to 6pm, and 4) 6pm to midnight. There are fifty-six 6-hour blocks in every two weeks (four 6-hour blocks per day, 14 days over 2 weeks.) Each location surveyed was visited eight times. One team was used to survey the five chosen red light cameras.

Secondly, we surveyed the activity of stationary photo radar cameras. Five stationary photo-radar camera locations were chosen to survey. Because surveying of this nature involves observing and recording speeding vehicles as determined by the flash of the photo radar cameras, this surveying cannot be conducted at night. Surveying was conducted in two shifts, one beginning at 6:30 am and lasting until 12:30pm, and the second shift beginning at 11:30am and lasting until 5:30pm. Because there would be a smaller volume of captured violators, each location surveyed was visited 16 times. Traffic surveying was also conducted at each of these locations to measure the traveling population. Two teams were used to conduct this surveying.

Benchmarking Schedule

On the following pages, the schedule for conducting benchmarking is provided. Two

schedules have been included. The first schedule corresponds to the traffic surveying locations

and was conducted from November 8 through November 21. The second schedule corresponds

to red light, photo radar and pedestrian surveying and was conducted from December 2 through

December 15.

Note that due to inclement weather or surveyor no-shows, some makeup sessions were

required. The makeup dates are presented following the initial benchmarking schedules.

Traffic Surveying (November 8 – November 21)

Time	Week 1							Week 1						
	Tue	Wed	Thur	Fri	Sat	Sun	Mon	Tue	Wed	Thur	Fri	Sat	Sun	Mon
	11/8	11/9	11/10	11/11	11/12	11/13	11/14	11/15	11/16	11/17	11/18	11/19	11/20	11/21
Midnight to 6:00 AM		yellow	green					red	blue					
6:00 AM to 12 Noon	red	blue/green	yellow		red		green	blue	red/yellow				blue/yellow	
12 Noon to 6:00 PM	yellow			yellow/blue	blue	red	yellow			red/green	blue		red/green	
6:00 PM to Midnight	blue			red/blue	green				green			yellow		green

Team 1 (red)

1. Georgia Ave NW & Longfellow St NW
2. Georgia Ave NW and Shepherd St NW
3. 11th St NW & Park Rd NW
4. 2700 Blk 13th St NW
5. 17th St NW & Euclid St NW

Team 2 (blue)

1. Wisconsin Ave NW & M St NW
2. 1st St NW & Channing St NW
3. 1st St NW & R St NW
4. 1st St NW & M Street NW
5. 14th St NE & Saratoga Ave NE

Team 3 (green)

1. Montello St NE & Neal St NE
2. 21st St NE & Maryland Ave NE
3. 400 17th St NE
4. 5300 Blk Clay Ter NE
5. 200 Blk Division Ave NE

Team 4 (yellow)

1. 2600 Blk Stanton Rd SE
2. 3200 Blk 23rd St SE
3. Alabama Ave SE & Ainger Pl SE
4. Alabama & F St. SE 60
5. 4th St SE & Chesapeake SE

Notes:

1. 1st session for each team starts with intersection 1
2. 2nd session for each team starts with intersection 2
3. Each subsequent session start begins with the next intersection in order

Pedestrian, Red Light and Photo Radar Surveying (December 2 through December 15)

Time	Week 1							Week 1						
	Fri	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Mon	Tues	Weds	Thurs
	12/2	12/3	12/4	12/5	12/6	12/7	12/8	12/9	12/10	12/11	12/12	12/13	12/14	12/15
0100														
0200														
0300														
0400														
0500														
0600														
0700														
0800														
0900														
1000														
1100														
1200														
1300														
1400														
1500														
1600														
1700														
1800														
1900														
2000														
2100														
2200														
2300														
2400														

Team 1 — Pedestrian	Team 2 — Photo-radar	Team 3 — Photo-radar	Team 4 — Red Light Cameras
1. 4th St SE & Chesapeake SE	1. 4700 Blk MacArthur Blvd NW	1. 4700 Blk MacArthur Blvd NW	1. NY Ave NW W/B & 4th St NW
2. 17th St NW & Euclid St NW	2. 3rd St NW & Mass. Ave NW	2. 3rd St NW & Mass. Ave NW	2. Rhode Island Ave NE W/B & Reed St NE
3. 21st St NE & Maryland Ave NE	3. 100 Blk Michigan Ave NE	3. 100 Blk Michigan Ave NE	3. M St NW W/B & Whitehurst Frwy NW
4. 2100 Alabama Ave SE	4. 5400 Blk 16th St NW	4. 5400 Blk 16th St NW	4. NY Ave NE W/B & Montana Ave NE
5. Wisconsin and M Street NW	5. 600 New York Ave NE W/B	5. 600 New York Ave NE W/B	5. South Capital St Ramp S/B before I St

Notes:

1. 1st session for each team starts with intersection 1
2. 2nd session for each team starts with intersection 2
3. Each subsequent session start begins with the next intersection in order

Makeup Dates

Due to inclement weather or logistical issues, some survey dates were rescheduled.

Rescheduled dates were conducted during the same day of the week as the originally scheduled

session, and surveying was conducted in the same time slot. A list of makeup dates is provided

below in the following table.

Table 5. Makeup dates for Schedule 1 (November 8 through November 21

Date	Team	Time	Makeup Date
11/11/05	2	6pm-Midnight	11/18/05
11/17/05	3	12 Noon-6pm	12/8/05

Table 6. Makeup dates for Schedule 2 (December 2 through December 15)

Date	Team	Time	Make up Date
12/3/05[21]	2	6:30am-12:30pm	01/28/06
12/6/05[22]	2	6:30am-12:30pm	01/24/06
12/6/05	1	7pm-1am	12/20/05
12/8/05	1	7pm-1am	12/22/05
12/9/05	3	11:30am-5:30pm	01/20/06
12/10/05	3	6:30am-12:30pm	01/21/06
12/12/05	1	5pm-11pm	01/23/06
12/15/05	4	6pm-Midnight	01/19/06
12/15/05	1	7pm-1am	01/19/06

---

[21] Makeup for 600 New York Avenue NE location only.

[22] Makeup for 100 Blk Michigan Ave NE only.

RESULTS

Traffic-Race

The race of each motorist stopped by MPD was recorded based on the perception of the officer. That is, officers do not ask the motorist to indicate his/her race when the stop occurs. This makes sense for at least two reasons. First, if an officer is targeting motorists based on race, then that targeting occurs based on the perception of the officer. For example, in most instances, prior to the time the stop is made, all the officer knows about the race of the motorist is based upon that officer's perception. The second reason that officers do not ask for the race of the motorist is that in an already tense situation, it is generally agreed that officers should not potentially intensify the situation by asking the motorist what his/her race is.

The stop data for all of the stops in this study were captured by MPD via the PD 76 form[23]. Over the course of this study, MPD required officers to fill out PD 76s for each stop. While MPD has used this form to collect data for several reasons, compliance was required during the course of the study. Indeed, compliance went up as the study progressed so that by the end of the study, there were more than twice as many PD 76s turned in as there were at the beginning at the 20 benchmarked locations for traffic.

---

[23] An important measure in determining the quality of data is the amount of missing data found when the data from the PD 76s are considered. Overall, there were 77,966 PD 76s accumulated during the year of the study. For our purposes, there are three or four crucial variables: type of stop, location, and race of the individual stopped. There were 2,783 PD 76s that did not have one of these variables entered. This means that there was 3.6% missing data in the database for the crucial variables. Additionally, 0.7% of the entries indicated that the officer could not determine the race of the individual. The fact that the officer cannot determine the race/ethnicity of an individual is not the same issue as missing data, but we provide it for the sake of completeness. Finally, the time of the pedestrian stops was important, and 1.8% of those data did not have the time. This means that 96.4% (95.7% if unknowns are included) of the data from traffic stops were useable. Additionally, 94 to 95% (depending upon whether unknowns are included) of pedestrian data were useable. This is a low level of missing data.

One concern is whether the race information collected was materially different early in the study than later because of increased compliance. However, the data do not support this concern. Overall, 72.8% of the stops at the 20 benchmarked traffic locations were of Black motorists. The month with the highest Black motorist stops was July, 81.5%, and the month with the fewest Black motorist stops was August, when 63.6% of the motorists stopped were Black. In other words, the increased compliance efforts by MPD seemed to have little or no effect on the racial composition of those stopped at the locations benchmarked.

During the course of the study, 27,544 traffic stops were made by MPD. The benchmarked locations were selected on the basis of stops known to have occurred from February to May. One of the criteria used to select these locations was the number of stops at each one. Note that it is always possible that police stopping patterns will change for one reason or another over time. Thus, it is always possible that one or more of the benchmarked locations will have fewer minority stops than expected based upon original estimates. This means that it is possible that one or more locations will have so few minority stops during surveying that the data for that location(s) will not be sufficient for purposes of analysis. Our target for stops at any location is generally 100 stops over the course of the year. Of course, the more crucial number is the number of minority stops at a given location. Again, speaking in generalities, Lamberth Consulting prefers to see at least 20 minority stops at each location. While this is not always possible, for Black motorists we achieved 20 minority stops at all 20 benchmarked locations, even though one location did not reach 100 stops.

There were 10,318 stops at the 20 benchmarked locations, or 37.5% of the total number of traffic stops made by MPD. This is a relatively high percentage of the total number of traffic

stops when one considers that the City of Washington, DC has approximately 68 square miles in

its city limits.

The logic of the methodology utilized for this study and other studies that Lamberth

Consulting has conducted is that specific areas of high police activity were identified and then

the traffic at those locations was benchmarked.

The race/ethnicity of those motorists in the traffic stream was then compared to the

race/ethnicity of motorists who are stopped by the MPD. This apples-to-apples comparison is

the best one to make in determining whether a police department is targeting one or more

minority groups and allows for a series of analyses, one for each race/ethnicity, at each specific

area. Consider some of the advantages of conducting this type of analysis:

- Only stops in the specific location are compared to the benchmark at that location. This means that officer stops are compared to the traffic stream at the location in which the stop was made.

- This method controls for differing officer deployment patterns. In studies where greater geographic generalizations are used, higher or lower officer deployment (resulting in more or fewer officer stops) may interfere with overall results.

- Since time of day and day of week are randomly selected, the survey can be generalized to the entire driving or pedestrian population. However, because we notate the times at which surveying occurs, we can detect changes in traffic patterns from, for example, lunchtime and the evening hours. This enables a more accurate comparison of stops made at different times of day to the benchmarks (if they change) from day to night.

- Other data elements used by some researchers are made moot using this method. Information such as crime activity and calls for service are controlled for because we account for deployment patterns and because we exclude calls for service.

- We find this method direct, elegant, and simple to communicate to individuals concerned about these issues.

There were 20 locations identified in Washington, DC, based on police activity that was

benchmarked. The results of these 20 analyses are contained in Table 7.

Table 7. Traffic-Race Analysis

#	Location	Bench N	Bench Black %	Stop N	Stop Black %	Diff [24] %	Odds Ratio
1.	4th St SE & Chesapeake SE	1046	95.6	348	94.8	-0.8	0.8
2.	1st St NW & M Street NW	1338	69.8	889	74.1	+4.3	1.2
3.	Alabama Ave SE & Ainger Pl SE	1845	95.0	504	93.7	-1.3	0.8
4.	17th St NW & Euclid St NW	918	35.5	316	42.7	+7.2	1.5
5.	5300 Blk Clay Ter NE	249	96.8	363	91.2	-5.6	0.3
6.	Georgia Ave NW & Longfellow St NW	1590	59.8	543	58.4	-1.4	1.0
7.	Georgia Ave NW and Shepherd St NW	2403	67.6	837	67.3	-0.3	1.0
8.	Alabama Ave SE & F St SE	304	96.1	386	93.5	-2.6	0.6
9.	3200 Blk 23rd St SE	1750	91.8	1134	94.7	+2.9	1.6
10.	1st St NW & Channing St NW	2131	66.7	228	75.4	+8.7	1.5
11.	2700 Blk 13th St NW	2225	50.4	281	61.9	+11.5	1.6
12.	200 Blk Division Ave NE	1194	93.6	74	93.2	-0.4	0.9
13.	400 17th St NE	455	92.3	638	88.7	-3.6	0.7
14.	14th St NE & Saratoga Ave NE	246	95.5	420	84.3	-11.2	0.3
15.	2600 Blk Stanton Rd SE	762	93.7	316	94.0	+0.3	1.1
16.	Montello St NE & Neal St NE	467	91.9	427	79.9	-12.0	0.4
17.	11th St NW & Park Rd NW	1087	53.2	722	58.7	+5.5	1.3
18.	1st St NW & R St NW	1518	72.9	398	81.2	+8.3	1.6
19.	Wisconsin Ave NW & M St NW	2773	27.3	968	27.8	+0.5	1.0
20.	21st St NE & Maryland Ave NE	788	94.2	339	83.5	-10.7	0.3

Table 7 and the following tables that provide data on benchmark and stop data should be considered with the following information. The first column gives the benchmark and stop location. Each location includes stops within a quarter of a square mile in each direction (generally about three blocks) with the named intersection being the center of the polygon. The second column gives the number of vehicles enumerated during the eight benchmarking sessions conducted, while the third column provides the percentage of minority motorists enumerated at that location during the benchmarking. The fourth column provides the number of MPD stops at that location, with the fifth column providing the percentage of minority motorists stopped. The sixth column is arrived at by subtracting the percentage of minority

---

[24] The difference is the percentage of the minority stopped subtracted from the percentage of the minority enumerated in the benchmark. A negative number means that there are fewer minorities stopped than were captured in the benchmark enumeration.

motorists benchmarked at that location from the percentage of minority motorists stopped at that location. Thus, a negative number in Column 6 means that fewer minority motorists were stopped than would be expected based on the benchmarking. The seventh column is the odds ratio for that particular location.

The odds ratio is best understood by filling in the blank in the following sentence: "If you are a Black motorist/pedestrian, you are _____ times as likely to be stopped as if you are not a Black motorist/pedestrian." If no racial profiling were occurring, all of the ratios would be 1.0. This would mean that Black motorists/pedestrians are no more likely to be stopped than nonminority motorists/pedestrians. Of course, in practice, this rarely occurs, as there is always variability in the data that are collected.

Odds ratios between 1.0 and 1.5 generally are seen as benign. Ratios between 1.5 and 2.0 provide an indication that a review of stops in these locations should be conducted by the MPD. Ratios above 2.0 point to the potential targeting of minority motorists, and further action may be required from the agency. The community demographics and inter-rater reliability must be considered, however, when discussing these guidelines.

At 9 of the 20 locations, MPD stopped fewer Black motorists than would be expected by the percentage of minority motorists seen in the traffic stream, reflected by odds ratios that were less than 1. At three of the locations, MPD stopped the percentage of minority motorists that would be expected based on the traffic stream, or an odds ratio of 1. At eight of the locations, more Black motorists than would be expected were stopped. These are reflected by odds ratios above 1.

It is often helpful from a practical point of view to aggregate the data from all locations and provide an overall odds ratio. We provide this aggregate odds ratio but caution that it is for descriptive, not analytic, purposes, as not all statistical assumptions for further statistical tests can be met with these aggregated data. The weighted (by number of stops) odds ratio for the MPD for Black motorists at all 20 traffic locations is 1.0, which is, of course, the theoretically expected value. To describe the data contained in 7, it is possible to use one of several descriptive approaches. Lamberth Consulting has used two. First, we normally describe how many of the odds ratios were below 1, at 1, and above 1 as was done here. In addition we have presented an aggregate odds ratio weighted by the number of stops by the police at each location. In our view, that is the most accurate aggregate description. In addition, it is possible to provide an unweighted odds ratio, which in these data is .975. In response to an earlier version of this report, one of the Community-Police Task Force members suggested that the aggregate odds ratio should be calculated by determining the percentage of minority motorists that would be predicted by the overall percentage of motorists benchmarked compared to the overall percentage of minority motorists stopped. We strongly reject this approach for several reasons:

1. The benchmark should be seen as a way to determine the expected proportion of minority motorists at a specific location. Then the comparison of the actual proportion of stops of minority motorists is determined from the stop data.

2. The data of most concern are the stop data, and to determine an aggregate odds ratio combining the expected percentage with the actual percentage is in error.

3. The suggested approach, at least in these data, capitalizes on the fact that far fewer

    vehicles were seen during benchmarking sessions in some of the areas that were

    heavily African American. The correlation between benchmark sample size and

    percentage of Black motorists in the sample was (r = - 61, p. <,004). This means that

    as the percentage of Black motorists increases, the sample size decreases.   This, of

    course, we knew going into the study as there were a number of locations that

    contained large numbers of Black motorists but had small numbers of vehicles when

    we planned the benchmarks. We stayed at some of these locations for an hour on

    each of the eight times they were benchmarked. We have found in the past that while

    more vehicles will be viewed if we stay more than eight hours, it makes little

    difference to the racial/ethnic mix of motorists, which is the most crucial data

    obtained from benchmarking.

Traffic-Ethnicity

In addition to categorizing motorists with regard to race, ethnicity was examined,

specifically for Hispanic motorists. There were far fewer Hispanic motorists noted in the

benchmarking at the 20 traffic locations and in the MPD stop data. For example, Hispanics

made up 7.9% of motorists benchmarked and approximately 6.7% of the motorists stopped at

those locations. The data for Hispanic motorists is found in Table 8 below.

Table 8. Traffic-Ethnicity Analysis

#	Location	Bench N	Bench Hisp. %	Stop N	Stop Hisp. %	Diff %	Odds Ratio[25]
1.	4th St SE & Chesapeake SE	1046	1.8	348	0.6	+1.2	N/A
2.	1st St NW & M Street NW	1338	6.8	889	4.4	-2.4	.6
3.	Alabama Ave SE & Ainger Pl SE	1845	1.6	504	0.8	-0.8	N/A
4.	17th St NW & Euclid St NW	918	23.1	316	15.2	-7.9	.6
5.	5300 Blk Clay Ter NE	249	1.6	363	0.6	-1.0	N/A
6.	Georgia Ave NW & Longfellow St NW	1590	15.1	543	22.1	+7.0	1.6
7.	Georgia Ave NW and Shepherd St NW	2403	10.4	837	16.7	+6.3	1.7
8.	Alabama Ave SE & F St SE	304	2.0	386	0.8	-1.2	N/A
9.	3200 Blk 23rd St SE	1750	3.6	1134	0.8	-2.8	N/A
10.	1st St NW & Channing St NW	2131	6.3	228	6.1	-0.2	N/A
11.	2700 Blk 13th St NW	2225	17.3	281	12.1	-5.2	.7
12.	200 Blk Division Ave NE	1194	3.1	74	2.7	-0.4	N/A
13.	400 17th St NE	455	3.7	638	0.8	-2.9	N/A
14.	14th St NE & Saratoga Ave NE	246	3.3	420	4.3	+1.0	N/A
15.	2600 Blk Stanton Rd SE	762	1.6	316	0.0	-1.6	N/A
16.	Montello St NE & Neal St NE	467	3.9	427	2.1	-1.8	N/A
17.	11th St NW & Park Rd NW	1087	20.5	722	18.8	-1.7	.9
18.	1st St NW & R St NW	1518	5.7	398	2.8	-2.9	N/A
19.	Wisconsin Ave NW & M St NW	2773	5.7	968	8.6	+2.9	1.6
20.	21st St NE & Maryland Ave NE	788	2.7	339	1.8	-0.9	N/A

As can be seen by an inspection of Table 8, there are 16 locations where fewer Hispanic motorists were stopped than were in the traffic stream and 4 where there were more Hispanic motorists stopped than were in the traffic stream. There are, however, only seven locations where there were enough Hispanic motorists stopped to analyze the data. In those seven locations, four of them show that there are fewer Hispanic motorists stopped relative to the benchmark of Hispanic motorists at that location, and three of them show more Hispanic motorists stopped at that location than would be expected on the basis of the benchmark.

---

[25] Where there are too few stops of any minority, Lamberth Consulting does not analyze that particular location. While there is no hard and fast minimum number of minority stops that determine when the data should be analyzed, our strategy is to provide the analysis for each location only if there are 20 or more stops of minorities.

The overall odds ratio, provided only for descriptive purposes, for the seven locations analyzed above is 1.1. If, however, we compute the odds ratio for all 20 locations, we find that it is 0.9.

The odds ratios for both Black and Hispanic motorists are what is expected theoretically if there is no evidence of racial or ethnic targeting.

Pedestrians-Race

There were five locations selected on the basis of police activity to benchmark for pedestrian stops. After reviewing the data available when these locations were selected, it was determined that the majority of stops of pedestrians occurred in the late afternoon until the early morning hours. Therefore, benchmarking was limited to 5pm to 1am, as were the stops analyzed. On eight separate occasions, surveyors returned to each location to observe pedestrian traffic. At four of the locations, both traffic and pedestrians were benchmarked. The pedestrian benchmarking sessions were conducted at different times than were the traffic benchmarking sessions and are separate from them.

The comparison of Black pedestrians benchmarked to Black pedestrians stopped is contained in Table 9. At one location, Wisconsin Ave NW & M St NW, the percentage of Black motorists in the traffic stream is more than double the percentage of Black pedestrians.

Table 9. Pedestrian-Race Analysis

#	Location	Bench N	Bench Black %	Stop N	Stop Black %	Diff %	Odds Ratio
1.	4th St SE & Chesapeake SE	223	100.0	176	90.9	-8.9	N/A
2.	17th St NW & Euclid St NW	848	40.9	49	55.1	+14.2	1.8
3.	21st St NE & Maryland Ave NE	429	99.8	162	94.4	-5.8	N/A
4.	2100 Alabama Ave SE	310	99.4	302	95.4	-4.5	N/A
5.	Wisconsin and M Street NW [26]	1765	13.3	77[27]	46.8	+33.5	5.8

The results show that the unweighted odds ratio of stops of Black pedestrians is 1.6.

However, the pattern that is seen in these data suggests that there are two different sets of

results. In the areas where the benchmark shows an overwhelming percentage of Black

pedestrians, there appears to be under-stopping of Black pedestrians. In these locations, there is

no evidence of over-stopping of any racial/ethnic group[28]. In the locations where Black

pedestrians are not in the majority, there is an over-stopping of Black pedestrians.

The stops of Black pedestrians at 17th St NW & Euclid St NW are in the region where

we recommend that the department conduct a review of these stops.

---

[26] Because the random selection of times and travel time for Wisconsin and M did not include benchmarking at 1700 and 1800, the stops analyzed were from 1900 to 0100.

[27] There were nine stops at Wisconsin Ave NW & M St NW that were of such low discretion that Lamberth Consulting suggested that they be omitted, with appropriate explanation for why they were omitted. MPD decided that to be consistent with other locations, they should be included. Three were of pedestrians who were arrested and six for violating the District's panhandling ordinance. All of these individuals were Black, meaning that if these stops had been omitted, the odds ratio would have been lower, although the odds ratio would have still indicated targeting of Black pedestrians.

[28] In response to an earlier version of this report, it was suggested that we not report an odds ratio for the three areas where there is an overwhelming number of Black pedestrians in the benchmark data. That suggestion has been adopted. A question was also raised with regard to the three areas where Black pedestrians were overwhelmingly present: are meaningful analyses possible at these three locations because the benchmark percentages are so high? One important element in racial profiling is the inherent notion that someone of any race/ethnicity may be stopped because they "do not belong" in the area where they are. This often manifests itself in a Black individual being in an area that is overwhelming White. However, it can also manifest itself in a white/Hispanic/Asian individual being in an area that is overwhelmingly Black. First, it is apparent that there are not enough individuals of any one race/ethnicity stopped at any of the three locations to analyze. Secondly, it is apparent that Asians, Whites and Hispanics were stopped at these three locations in roughly equal percentages. Thus, there is no apparent evidence that some race/ethnicity is being targeted in these three areas.

In determining the size of the polygon surrounding 17th St NW & Euclid St NW,
Lamberth Consulting felt that a perimeter that went out .25 miles was too large, as it crossed
over Columbia Road and took in some areas that were clearly different from 17th & Euclid, both
in population and in usage. The odds ratio for Black pedestrians at Wisconsin Ave NW & M St
NW is clearly in the range that indicates targeting of Black pedestrians, absent some explanation
from the department. At Wisconsin Ave NW & M St NW, Lamberth Consulting also utilized a
reduced-size polygon because the area usage changes from commercial to residential within a
block or two from that intersection. As it turned out, the stops within both the larger and the
smaller polygons were substantially the same with regard to race/ethnicity.

The polygons at the other three pedestrian locations were maintained at the .25 mile area
because the areas around those locations appeared to be much more homogeneous with regard
to population and function.

Pedestrians-Ethnicity

At four of the locations benchmarked, there were too few Hispanic pedestrians stopped
to analyze the data. There were no Hispanic pedestrians stopped at 2100 Alabama and four or
five Hispanic pedestrians stopped at three other locations. Only at 17th St NW & Euclid St NW
were there a relatively large number of Hispanic pedestrians stopped. This is not surprising as
there were more than 14 times as many stops of Black pedestrians as there were of Hispanic
pedestrians throughout the city.

Table 10. Pedestrian-Ethnicity Analysis

#	Location	Bench N	Bench Hisp. %	Stop N	Stop Hisp. %	Diff %	Odds Ratio
1.	4th St SE & Chesapeake SE	223	0.0	176	2.2 (4)	+ 2.2	N/A
2.	17th St NW & Euclid St NW	848	13.6	52[29]	24.4	+10.8	2.0
3.	21st St NE & Maryland Ave NE	429	0.2	162	2.4 (4)	+ 2.2	N/A
4.	2100 Alabama Ave SE	310	0.0	302	0.0	0	N/A
5.	Wisconsin and M Street NW [30]	1765	2.9	108	3.8 (5)	+ 0.9	N/A

The stops of Hispanic pedestrians at 17th St NW & Euclid St NW are in the range where

we recommend that the department conduct a review of stops in that area.

Photo Radar-Race

There were five locations where permanent photo radar positions were benchmarked

with respect to traffic. In addition, surveyors determined the race/ethnicity of the driver of the

vehicle when the photo radar camera detected a violation. The benchmarking and the

observation of violators were done in the same session; thus, the violations observed occurred

during the same time of day as the benchmarking. During the time that the surveyors were in

place, there were 642 violations observed at the five locations. In 10.4% (67) of the cases, the

surveyors could not successfully identify the race/ethnicity of the driver. While this is higher

than the normal percentage of unknowns, 37% of the unknowns occurred at 3rd St NW &

Massachusetts Ave NW, the location with the highest posted speed limit. It should be noted that

the surveyors had a relatively difficult task. They positioned themselves so that they could

---

[29] There were two individuals who were arrested and two individuals who were panhandling. As these were low discretion stops, Lamberth Consulting recommended that they not be included in the analysis with appropriate notation that they had been removed. MPD decided for the sake of consistency with other locations that they be included. The odds ratio for Hispanic pedestrians would have been somewhat lower with those stops omitted. Both of the individuals arrested were Hispanic; one of the panhandlers was Black and the other was White. The number of Hispanic pedestrians stopped is below the number generally used to indicate that there are too few stops to analyze. However, the stops of Hispanic pedestrians in the larger perimeter area were quite similar to the percentage of stops in the smaller area, and thus this analysis is presented.

[30] Because the random selection of times and travel time for Wisconsin and M did not include benchmarking at 1700 and 1800, the stops analyzed were from 1900 to 0100.

observe the flash of the photo radar camera, and then they had to determine the race/ethnicity of

the driver of the vehicle that was violating the speed law. At 3rd St NW & Massachusetts Ave

NW, the posted speed limit is 45 mph. Therefore, the vehicle was traveling at a minimum speed

of 56 mph to be targeted by the photo radar camera. Even at this location, there were less than

15% unknowns.

The data for the photo radar locations with respect to Black motorists is shown in Table

11.

Table 11. Photo Radar Cameras for Black Motorists

#	Location	Bench N	Bench Black %	Viol N	Viol Black %	Diff %	Odds Ratio
1.	100 Blk Michigan Ave NE	444	55.4	125	47.2	- 8.2	.72
2.	3rd St NW & Massachusetts Ave NW	873	47.9	143	32.9	-15.0	.53
3.	4700 Blk MacArthur Blvd NW	409	14.7	133	11.3	- 3.4	.74
4.	5400 Blk 16th St NW	914	38.9	52	34.6	- 4.3	.83
5.	600 New York Ave NE W/B	1585	51.1	124	45.2	- 5.9	.79

There were two purposes for the benchmarking of motorists at the photo radar locations.

First, a better understanding of violations by racial/ethnic group would help sharpen our

analysis of whether one or another group was being stopped more than would be expected. The

logic here is that if one racial/ethnic group were more egregiously violating one or more traffic

laws, it would allow us to use this information in our final determination of whether some group

was being targeted. The second reason was to explore the contention that one reason for the

over-stopping of minority motorists is that they more egregiously violate traffic laws than do

nonminorities. An inspection of Table 11 indicates, at least at these locations in Washington,

DC and for 11 miles an hour and above over the speed limit, Black motorists are less likely to

be violating speed laws than would be expected given the motorist population.

The results for Hispanic motorists with respect to photo radar violations are shown in

Table 12.

Table 12. Photo Radar Cameras for Hispanic Motorists

#	Location	Bench N	Bench Hisp. %	Viol N	Viol Hisp. %	Diff %	Odds Ratio
1.	100 Blk Michigan Ave NE	444	6.8	125	3.2	- 3.6	N/A
2.	3rd St NW & Massachusetts Ave NW	873	8.5	143	4.9	- 3.6	N/A
3.	4700 Blk MacArthur Blvd NW	409	5.4	133	3.8	- 1.6	N/A
4.	5400 Blk 16th St NW	914	9.6	52	13.4	+3.8	N/A
5.	600 New York Ave NE W/B	1585	8.3	124	8.9	+0.6	N/A

At three of the five locations, Hispanics were underrepresented among the violators and

were overrepresented at two of the locations. There were, however too few Hispanic violators at

all of the locations to provide odds ratios. Over all the locations, 8.2% of the benchmarked

traffic was Hispanics. This would mean that there would be an expected 47 Hispanic motorists

captured violating speed laws at 11 mph above the speed limit. In actuality, 34 Hispanic

motorists were observed violating by the photo radar cameras during the observation periods,

which indicates, as with Black motorists, that Hispanic motorists are somewhat less likely to

violate the speed laws at these locations by 11 mph and above than would be expected based

upon their presence in the transient population.

CONCLUSIONS

While we have not reported any data by location of stops by gender, because it was not called for in the contract, it should at least be noted that at the 20 locations benchmarked, 64.4% of drivers were male and 35.6% were female. At these same locations, 67.4% of the stops were of males and 32.1% were of females. This suggests that MPD is not targeting either gender.

The results for traffic stops made by MPD at the 20 locations benchmarked are, by any measure, indicative of what both police and the community would hope for—no evidence of profiling. In the work that Lamberth Consulting has done around the country, there is only one other Police Department that has had an odds ratio of 1, and that was only for Hispanic motorists. There were insufficient stops of Black motorists by that other agency to analyze the data. MPD's stops of both Black and Hispanic motorists showed an odds ratio of 1.

Lamberth Consulting was asked by one of the Community-Police Task Force members why odds ratios of 1 to 1.5 were seen as benign. The statistical answer to that question has to do with the standard error of the odds ratio, which is sufficiently large that with the sample sizes normally seen in racial profiling studies, the differences below an odds ratio of 1.5 do not reach statistical significance for smaller differences in odds ratios. There are, however, practical reasons why minority motorists may be stopped somewhat more frequently than nonminority motorists. Some of these may have to do with police activity. That is, there may be specific activities of the police that either end with more or fewer minorities being stopped. To name but two reasons why minority motorists may be more likely to be stopped, poor motorists generally find it more challenging to keep their vehicles in good repair than do more affluent motorists and can be stopped at higher rates for equipment malfunctions. Because minorities are often

overrepresented in the lower socioeconomic strata of the country, their equipment violations

may account for higher than expected stops of minorities. Additionally, studies have shown that

Black motorists, particularly young Black and Hispanic motorists, wear seat belts less

frequently than do other groups[31]. Therefore, variations in the percentages of Black motorists

stopped can be expected at specific locations. However, none of the variations of odds ratios

shown in the distribution in Table 5, which provides the comparisons of benchmarks at the 20

traffic locations and stops at those locations, reach statistical significance.

The MPD is to be congratulated for their evenhandedness in enforcing the traffic laws at

the 20 locations benchmarked within the District of Columbia.

The situation with regards to pedestrians is not so favorable. In areas where there are a

majority of Black pedestrians, there is no evidence of targeting of any racial/ethnic group. In the

three locations where Black pedestrians made up between 99 and 100 percent of the pedestrians,

there could not be an over-stopping of Black pedestrians, nor were there enough stops of any

other race/ethnicity to analyze. However in the 17th St NW & Euclid St NW location, where

Black and Hispanic pedestrians make up about half of the pedestrian population, the odds ratio

with respect to Black pedestrians is 1.8, a level at which we recommend that MPD may wish to

scrutinize the situation. The odds ratio for Hispanic pedestrians is 2.0, which indicates that the

Police Department should scrutinize the situation.

---

[31] Denger, R.L., et al. "1990 Observational Study of Seat Belt Usage in Florida" Bureau of Public Safety Management. Available at : http://agmarketing.ifas.ufl.edu/pubs/1990s/Seatbelt.pdf

 "2005 Summary of Massachusetts Statewide Seat Belt Use". Massachusetts Traffic Safety Research Program. Available at
http://www.ecs.umass.edu/umasssafe/PDFS%20for%20Site/Occupant%20Protection/2005STATEWIDESAFETY
BELTSTUDY.pdf.

The greatest disparity for pedestrian stops occurs at Wisconsin St NW & M St NW, where the pedestrian population is made up of over 70% Whites. The odds ratio for the stops of Black pedestrians is 5.8. An odds ratio of this magnitude is difficult to explain absent targeting of African American pedestrians.

Lamberth Consulting consulted with MPD when it became evident that there were odds ratios that indicated targeting or close to targeting of Black pedestrians at two locations and targeting of Hispanic pedestrians at one location. After extensive reviews of the data, every PD 76 card for both 17th St NW & Euclid St NW and Wisconsin Ave NW & M St NW was pulled and scrutinized. There were a small number of duplicate entries, as well as a small number of entries that were miscoded during the data entry of the PD 76s. These were eliminated, and the data presented are as accurate as possible.

Other possibilities than the targeting of minorities were considered and eliminated as reasons for the stops. These included:

1. Temporal patterns considered as possible explanations for the racial/ethnic disparities:

    a. Did the stops occur at any particular time of year?

    b. Did the stops occur on any particular day of the week?

    c. Did the stops occur on weekends or weekdays?

    d. Did the stops occur at any particular time during the late afternoon/evening?

2. Consideration of stops at Wisconsin Ave NW & M St NW by regular versus reserve officers

3. Review of the number of stops that resulted in arrests (only a handful in the final analysis).

4. Review of the number of stops that came as a result of a directive of the Department or City Ordinance

5. Consideration of reasons for the stops filled in by the officers on the PD 76s that might explain racial/ethnic disparities

After this extensive review of the data, there did not seem to be any temporal patterns or any other conclusions that lent themselves to an easy explanation of the disparate stopping at either of these locations. The conclusion that Black pedestrians are being targeted at Wisconsin and M seems to be the most plausible explanation. At 17th & Euclid, it seems possible that Hispanic pedestrians are being targeted and that MPD may also want to evaluate the situation with Black pedestrians.

RECOMMENDATIONS

The data indicate that while traffic stops show no evidence of targeting of Blacks, there is evidence that Blacks are targeted as pedestrians in areas where they do not make up the majority of those pedestrians. This suggests that while the majority of MPD officers do not base enforcement or contact decisions on their subjective view of an individual's appearance or other characteristics, it is entirely possible that a limited, yet significant number of staff do subscribe to and exercise their discretion in a manner consistent with the definition of racial profiling. In an effort to reduce and eventually eliminate all racial profiling practices, we suggest that MPD conduct the following assessments;

1. MPD should not only collect the stop data from the PD 76 form but should analyze pedestrian data at 17th St NW & Euclid St NW, Wisconsin Ave NW & M St NW and other locations around the city with large numbers of pedestrian stops. The analysis should emphasize locations that have a majority of White pedestrians and/or a minority of Black pedestrians.

2. MPD should monitor stop practices at pedestrian locations that indicate targeting of minorities for an appropriate period of time to measure the effect of changes in practice or policy relative to pedestrian stop practices.

3. MPD should conduct an analysis of searches that are conducted by officers, both of motorists and pedestrians. This analysis should emphasize discretionary searches by officers.

4. MPD should review operational practices relating to pedestrian contacts to determine alignment with the agencies' policy regarding non-biased policing. Elements of operational practices to consider include:

   a. written procedures for initiating pedestrian stops;

   b. comprehension and compliance for completing PD 76 forms for officers assigned to shifts in which pedestrian stops are made;

   c. oversight and review practices for PD 76 Form completion;

   d. communications provided to frontline supervisors and officers regarding the Biased Policing Project, its rationale and goals, and activities and efforts that comprise the project;

   e. receipt of communications by frontline supervisors and officers. Areas to review include comprehension of the biased policing issue and project, beliefs or attitudes about the project, and how the project influences officer stop practices;

   f. rewards or recognition programs relating directly to the biased policing project, and rewards or recognition programs peripherally related to behavior impacting the Biased Policing Project.

5. MPD should provide training for officers with consideration given to the following guidelines:

   a. **Basic Training**- The agency should conduct an examination of both the formal lesson plans used to instruct recruits and the role that instructors play in the relaying of informal teachings and lessons conveyed during the telling of "war stories".

b. **FTO Training**- Traditionally, new police officers learn "what "task they are expected to perform and receive generic instruction on "how" to perform each task during their time spent in the police academy. They learn the specifics of "how" their particular agency wants them to perform tasks and what constitutes acceptable use of officer discretion during their training period from their assigned Field Training Officer. For this reason we feel it is extremely important that the Metropolitan Police Department evaluate the formal and informal lessons taught to new officers by FTOs.

c. **In-Service Training**- Is the Metropolitan Police Department meeting the knowledge and skills needs of their staff as it relates to performing their duties without employing racial profiling practices? An important issue is the selection of training curriculum that specifically targets the areas of need. For example, we have found that basic "sensitivity or diversity" classes or instruction on conducting professional traffic stops falls short of what is required to teach police officers effective methods of exercising discretion during traffic stops or pedestrian contacts without racially profiling. We suggest that when evaluating proposed prevention of racial profiling training curricula, the agency should assure that the following subject matter is included: (1) probably most importantly, an in-depth discussion about the definition of racial profiling and what it means to different groups; (2) an historical perspective of racial profiling and its impact on the service provided by law enforcement; (3) an analysis of racial profiling from the perspective of various stakeholders (community, national law enforcement, courts); (4) strategies for effective enforcement

practices without employing racial profiling practices; and (5) effective

supervisor strategies designed to prevent racial profiling practices.

6. Continue to work with the Community-Police Task Force to provide updates and

   dialogue on agency activities that accompany the Biased Policing Project. Include

   members of the Task Force in educational and training opportunities and solicit

   sponsorship from Task Force members for future community outreach programs.

7. Involve members of the MPD in reviewing the results of this report and actively solicit

   opinions from these individuals about reactions to the report. Engage in dialogue with

   these individuals about mechanisms for discussing the report findings and soliciting

   feedback about the report from agency personnel.

APPENDIX

Maps of Surveyed Intersections

Traffic Intersections

1. 4th St SE & Chesapeake SE
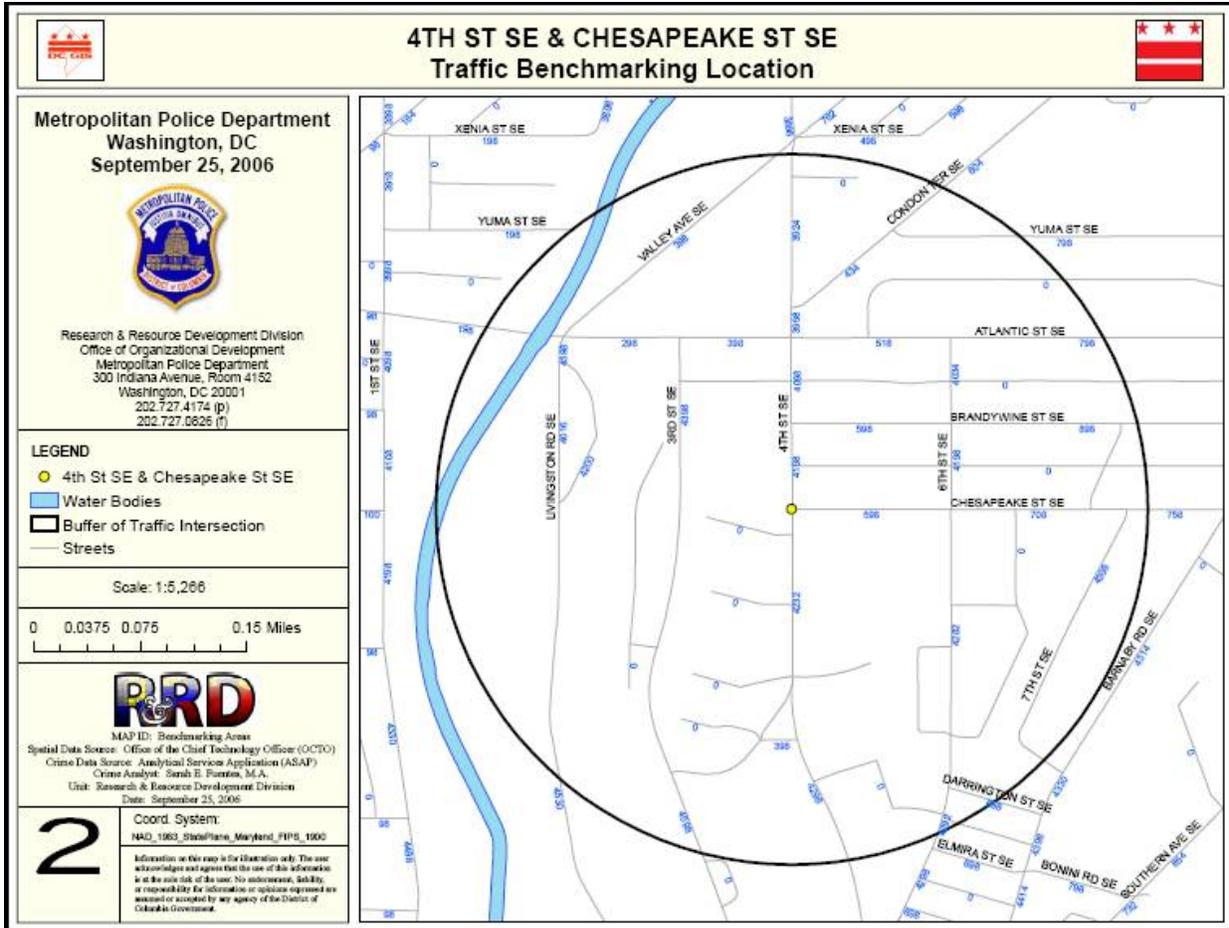
2. 1st St NW & M Street NW
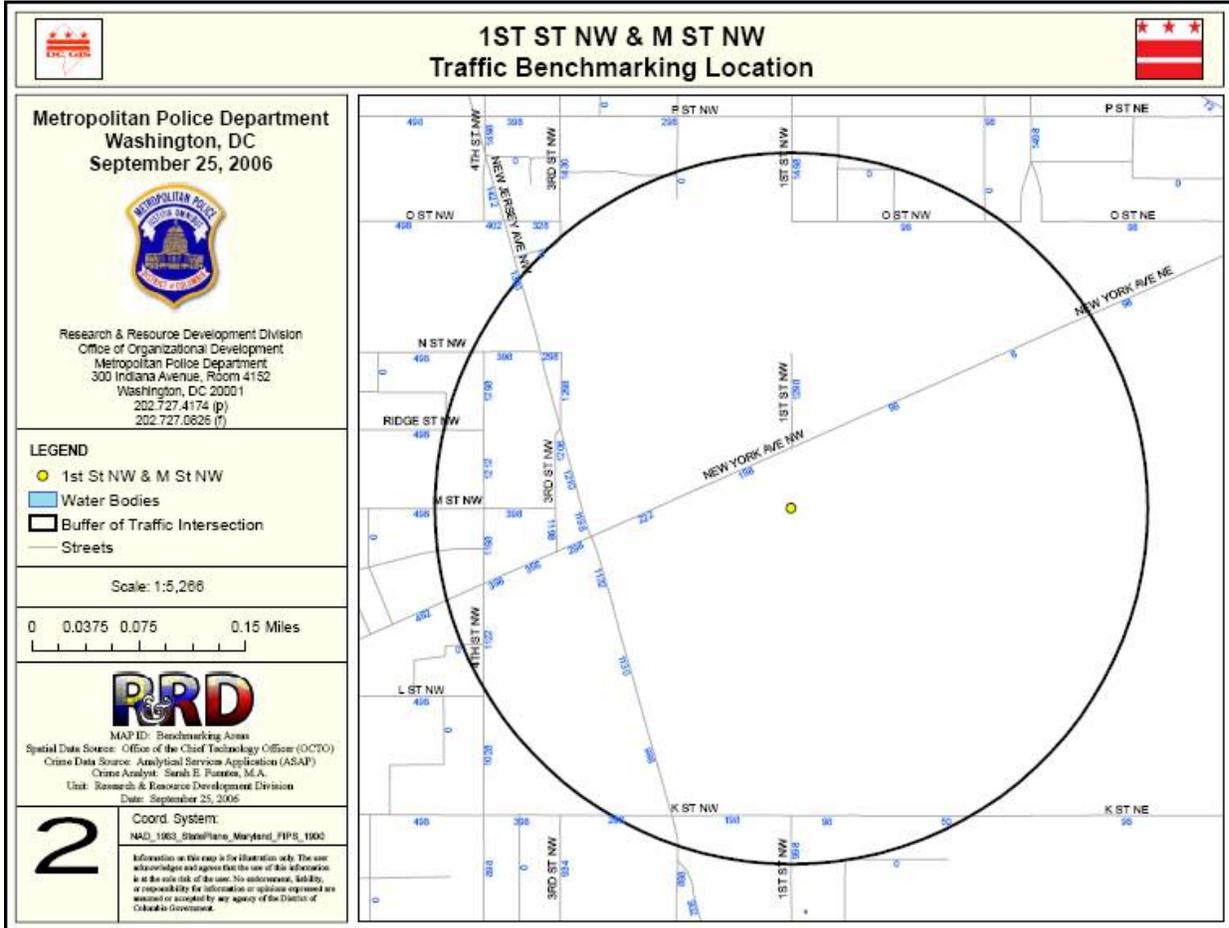
3. Alabama Ave SE & Ainger Pl SE
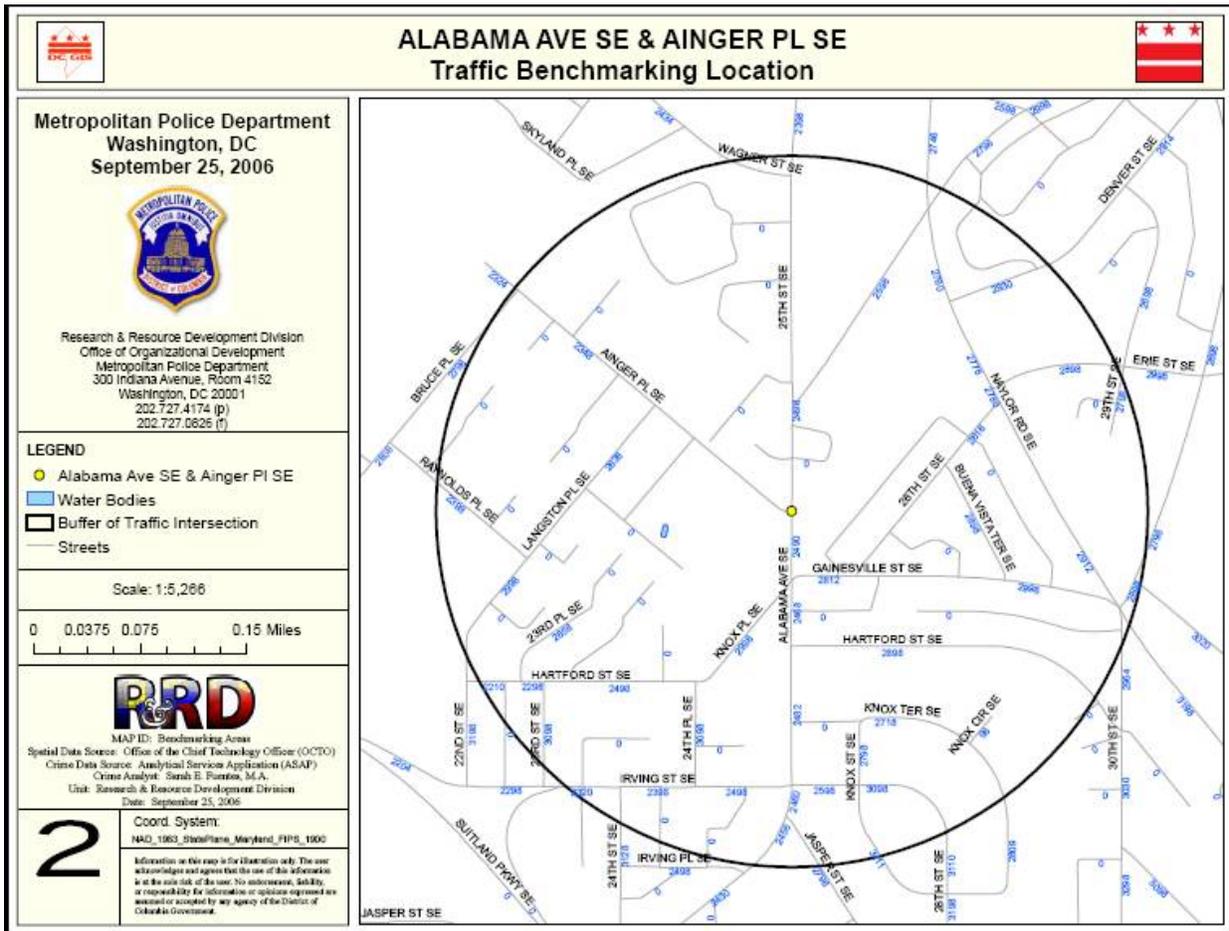
4. 17th St NW & Euclid St NW
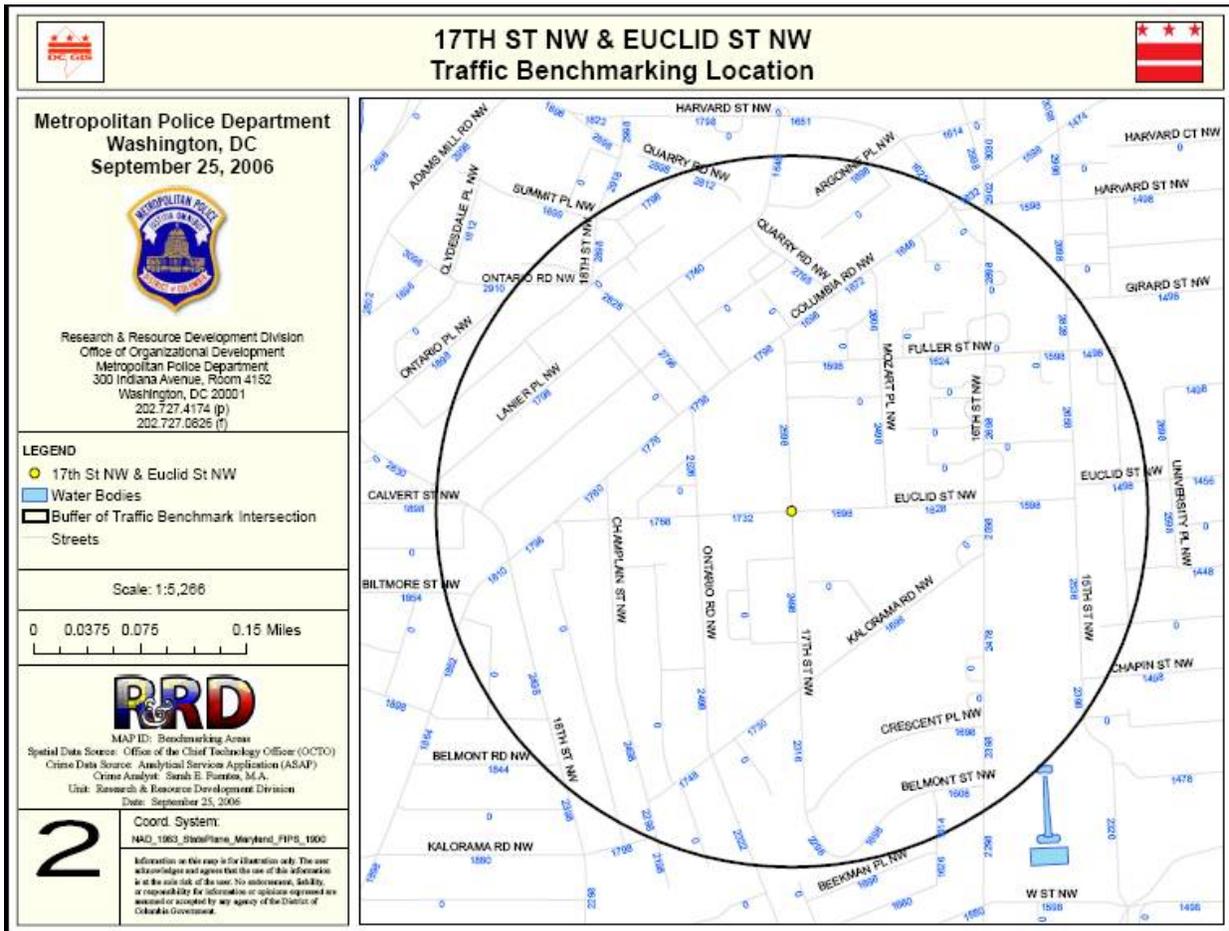
5. 5300 Blk Clay Ter NE
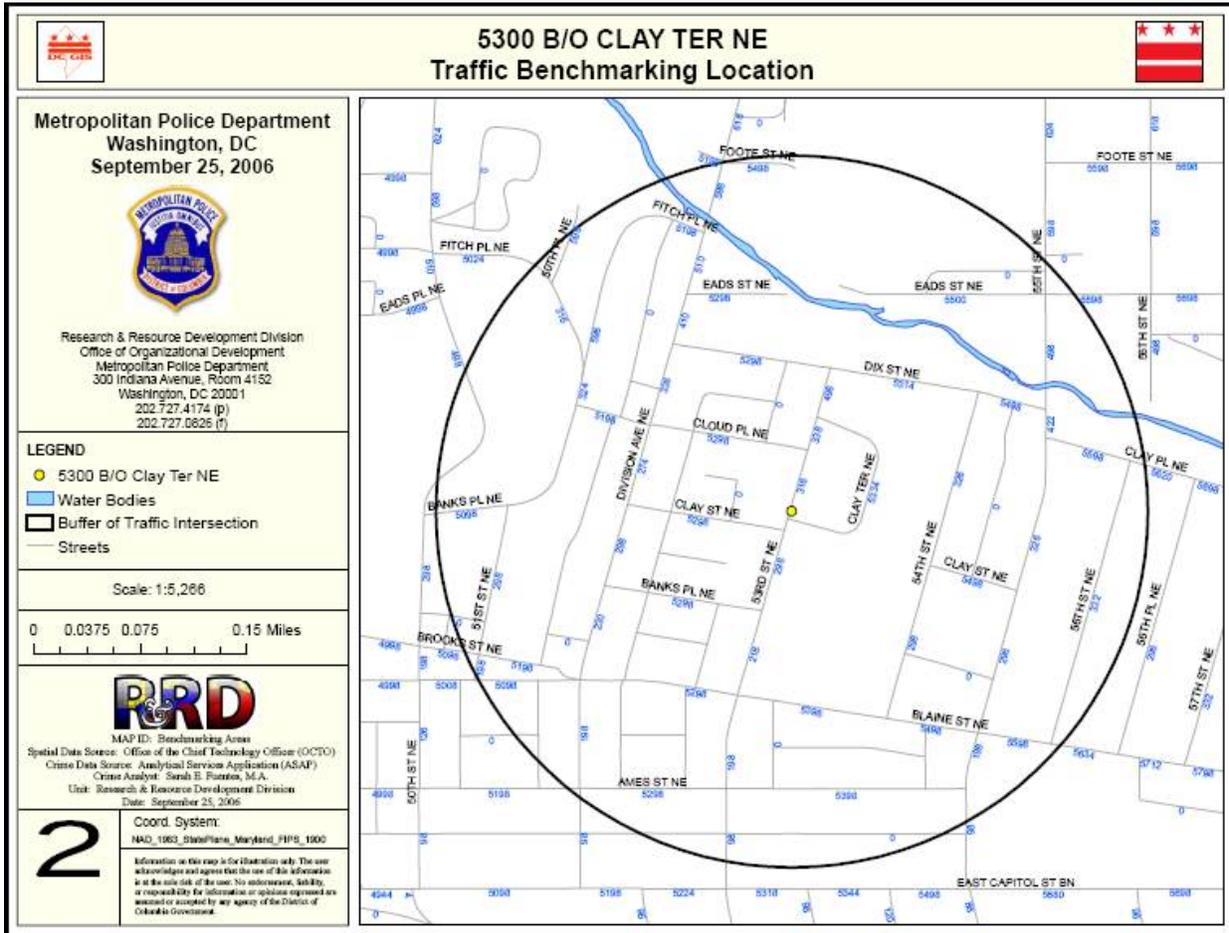
6. Georgia Ave NW & Longfellow St NW
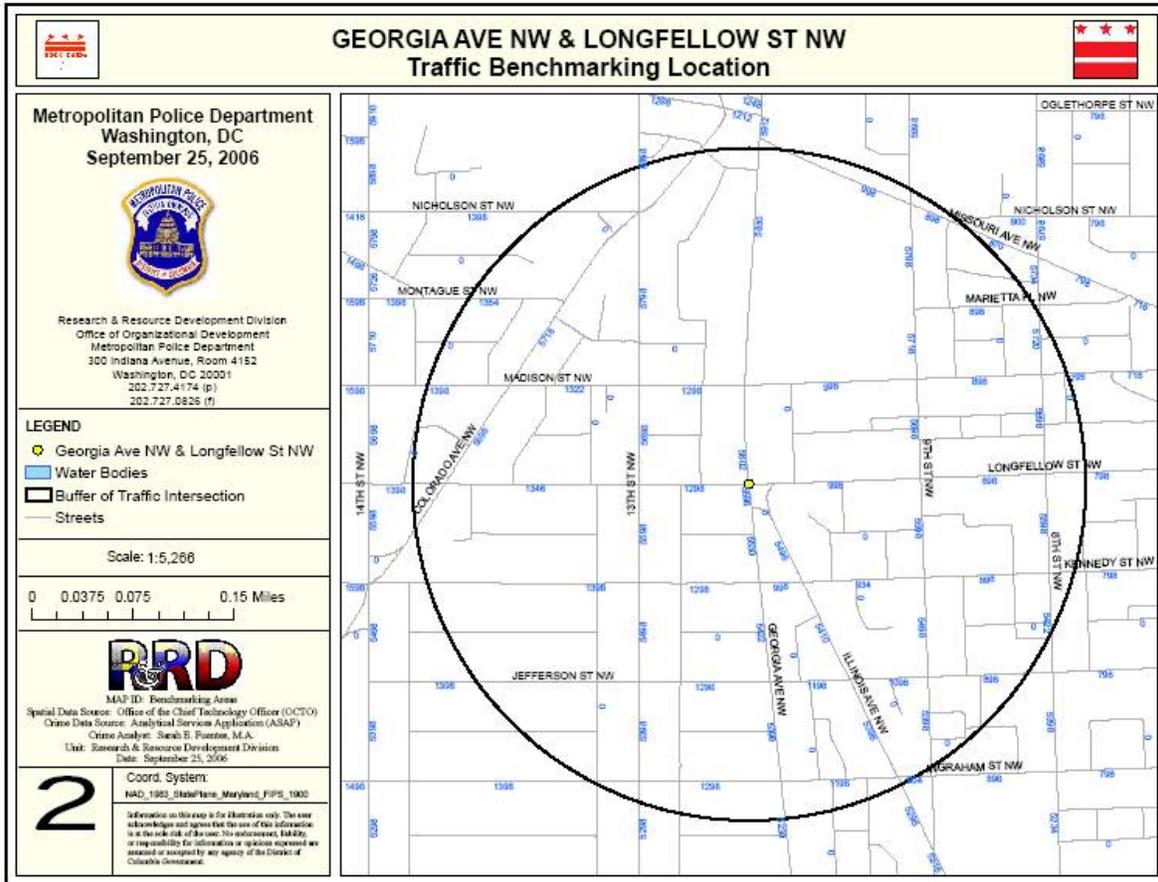
7. Georgia Ave NW and Shepherd St NW
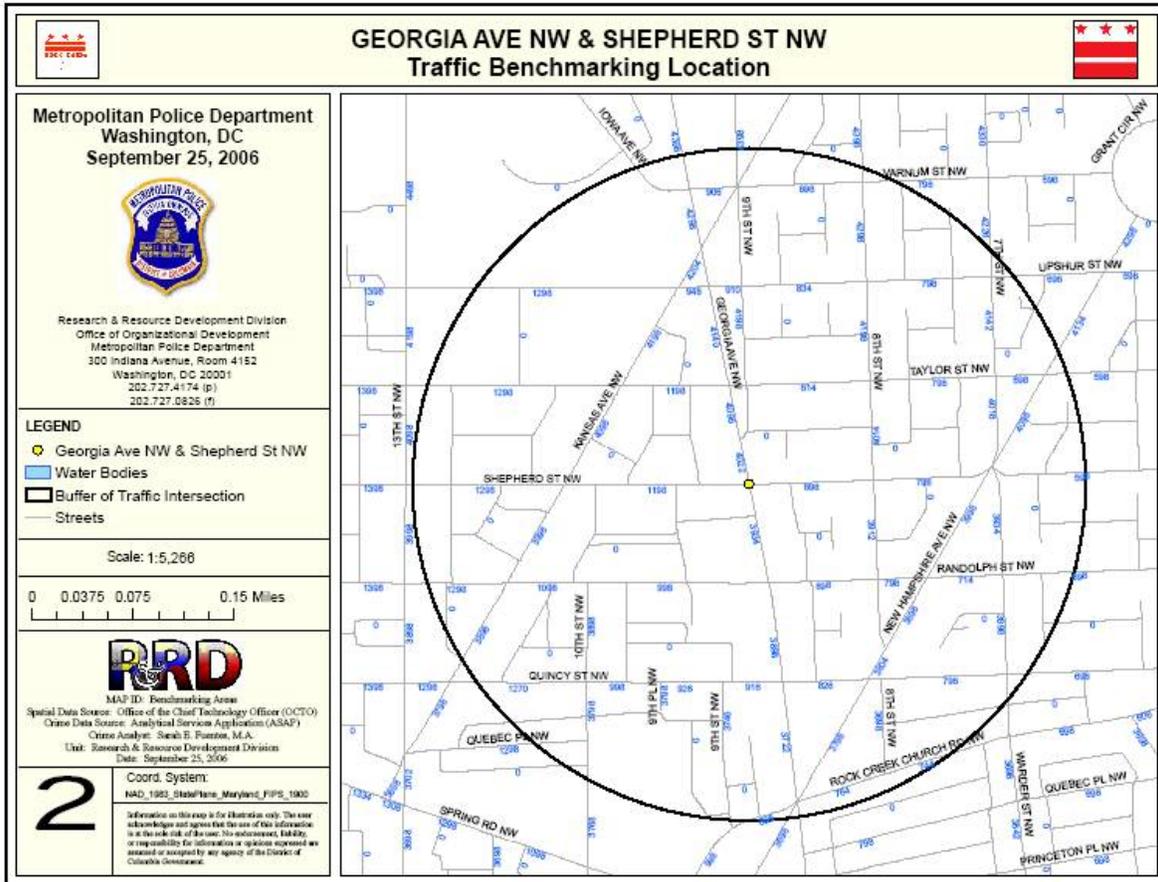
8. Alabama Ave SE & F St SE
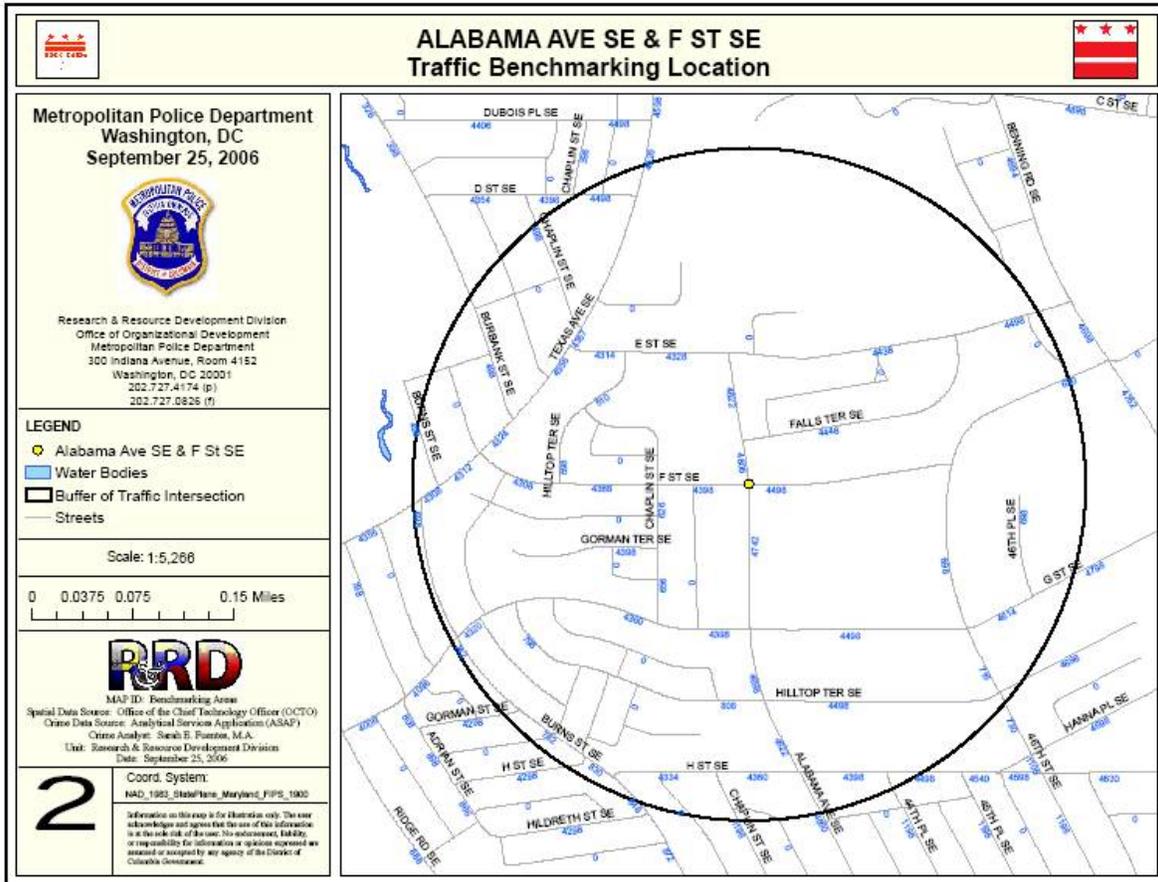
9. 3200 Blk 23rd St SE
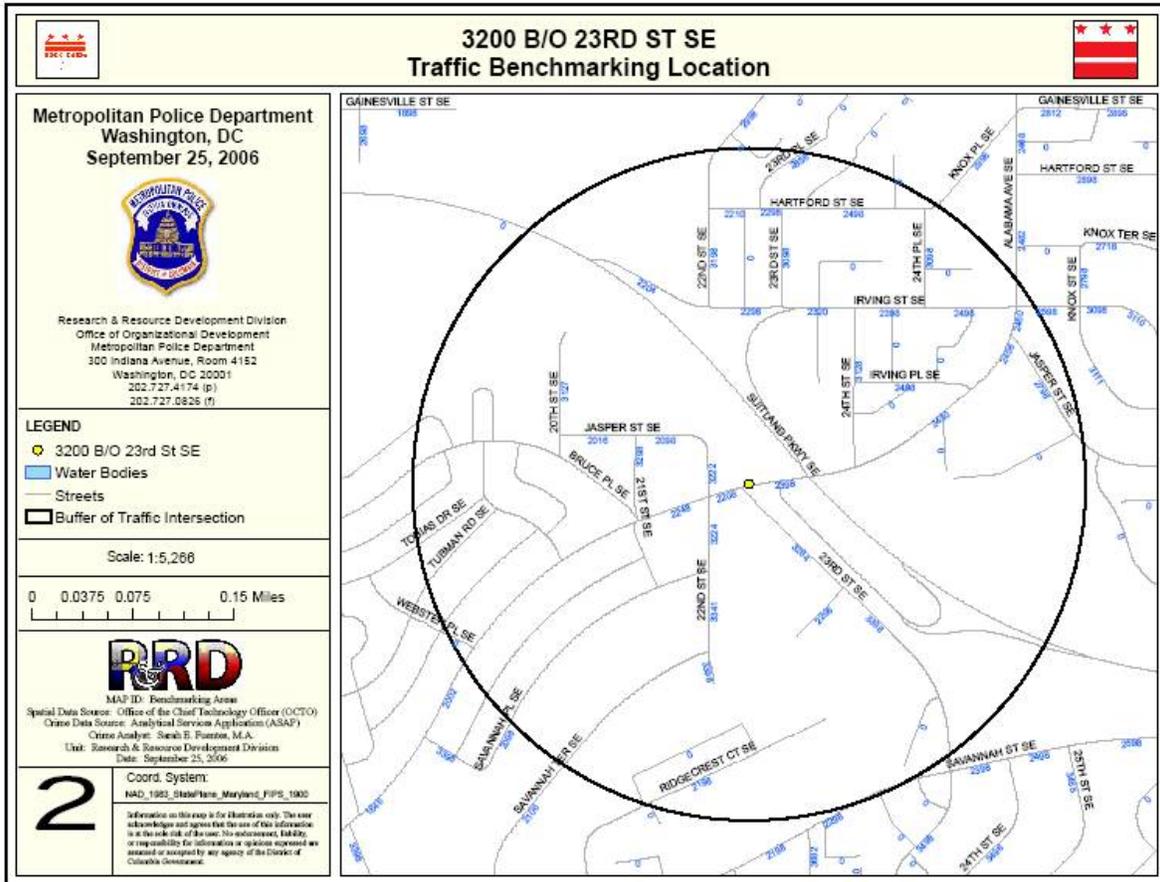
10. 1st St NW & Channing St NW
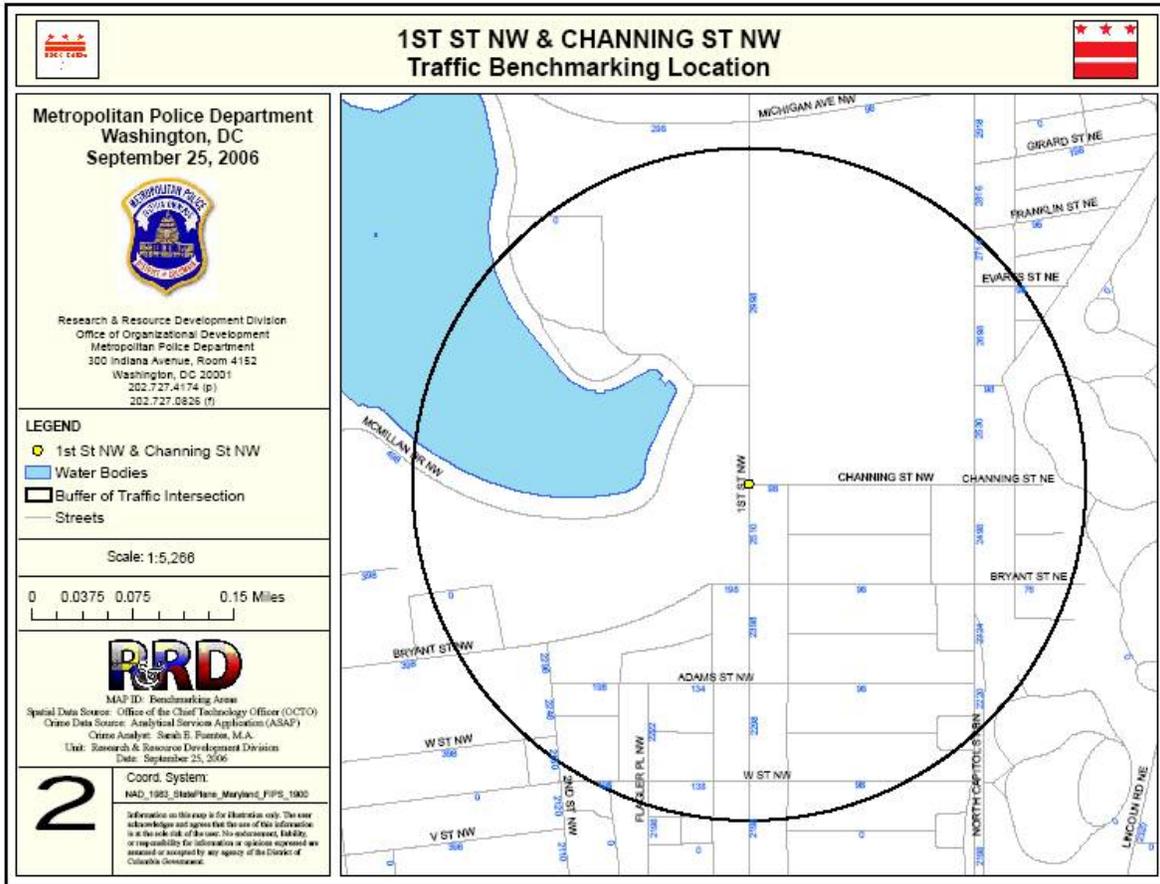
11. 2700 Blk 13th St NW
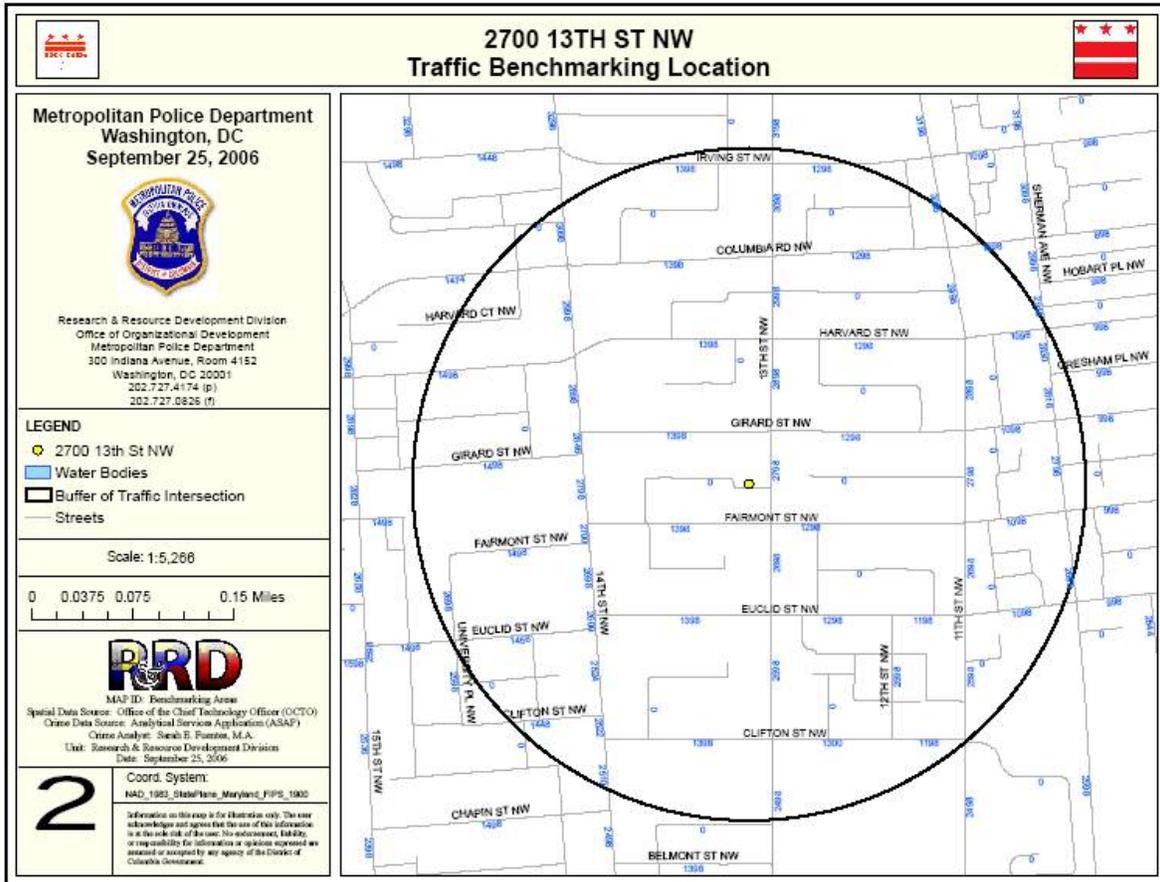
12. 200 Blk Division Ave NE
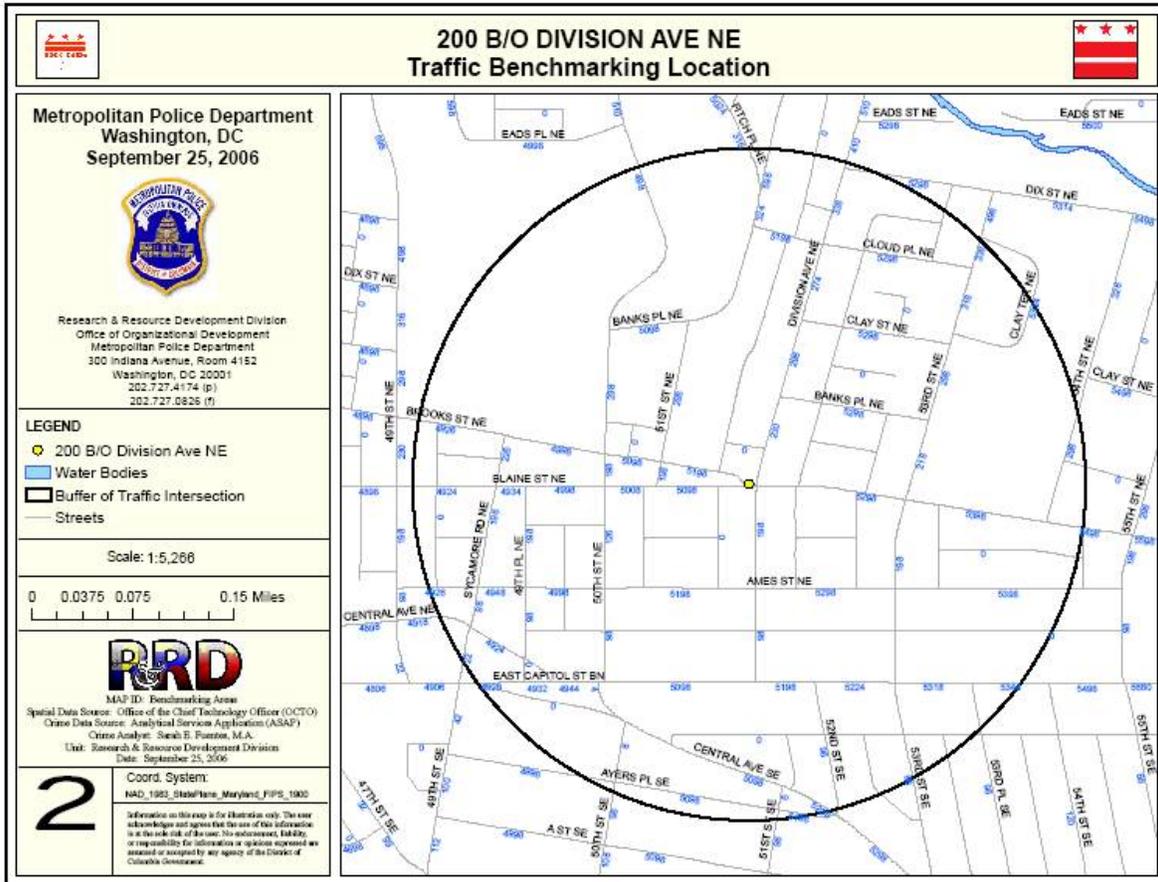
13. 400 17th St NE
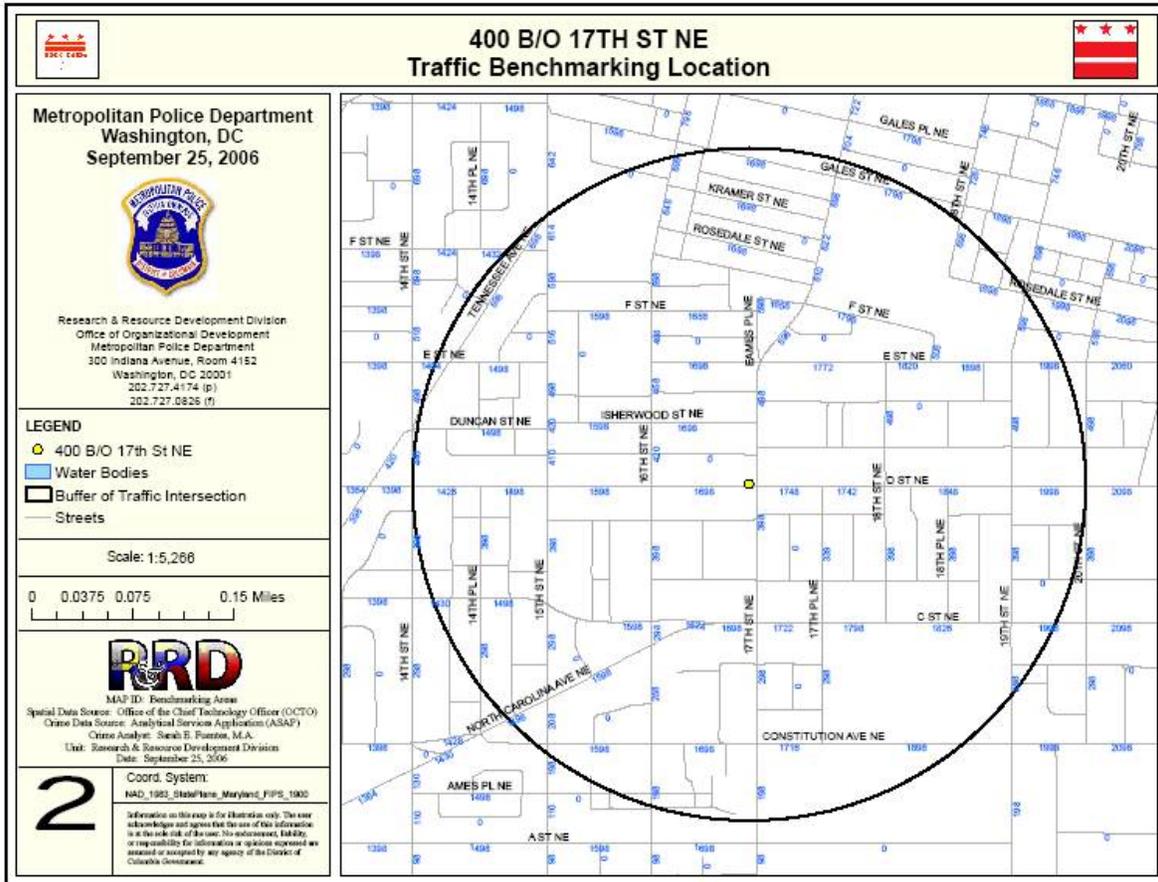
14. 14th St NE & Saratoga Ave NE
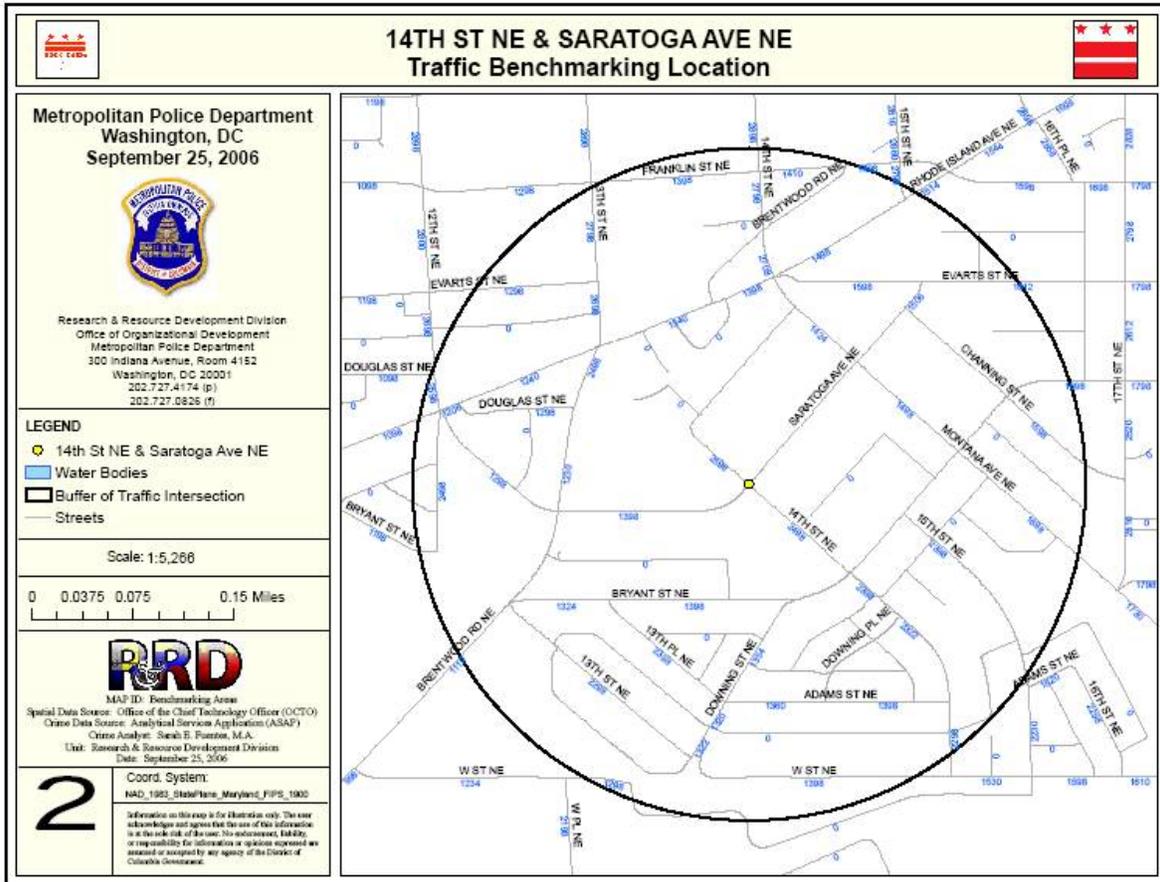
15. 2600 Blk Stanton Rd SE
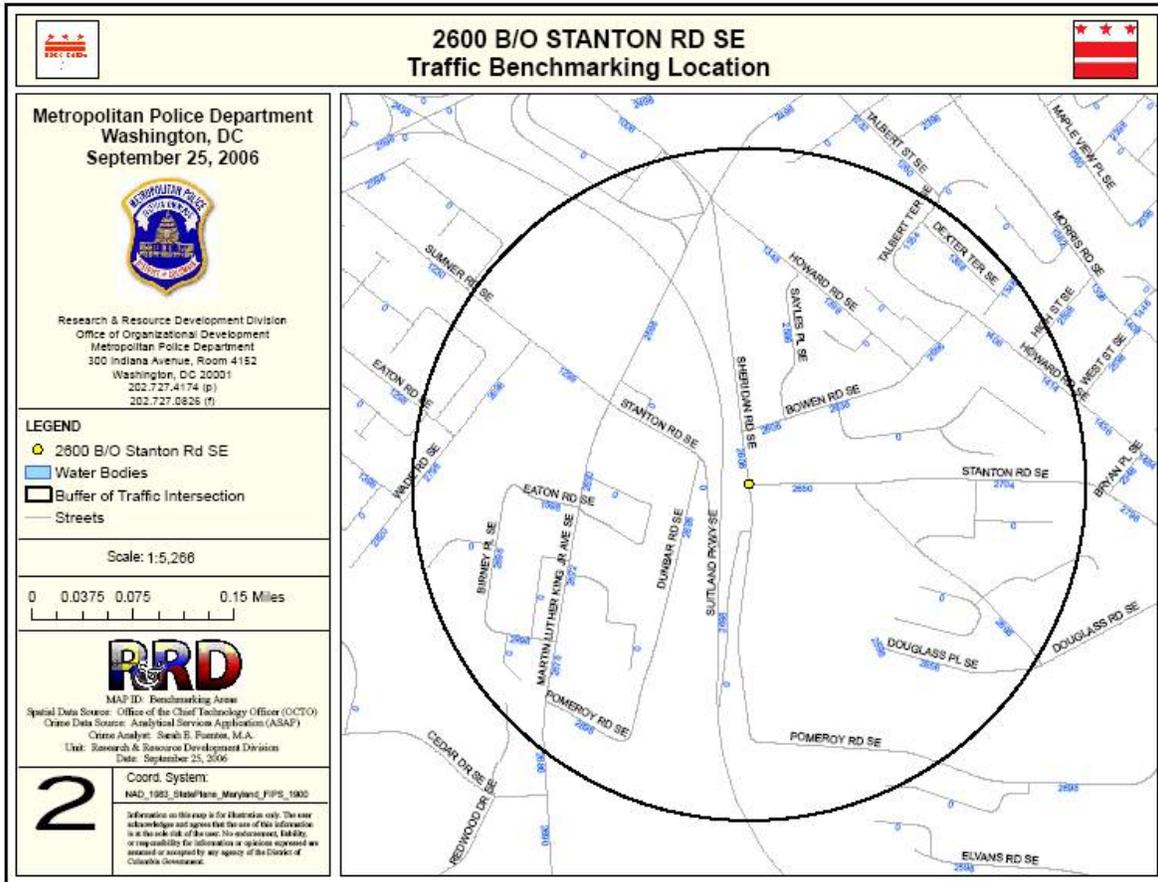
16. Montello St NE & Neal St NE
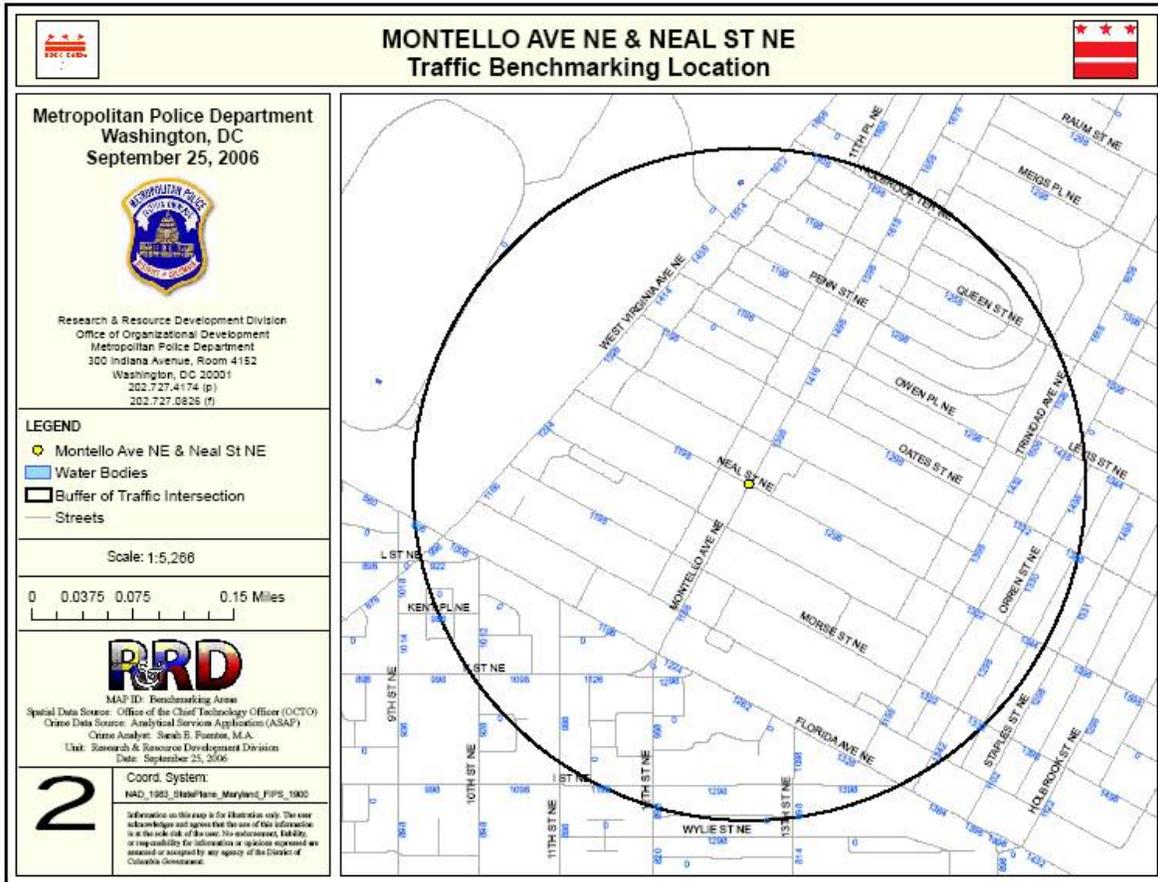
17. 11th St NW & Park Rd NW
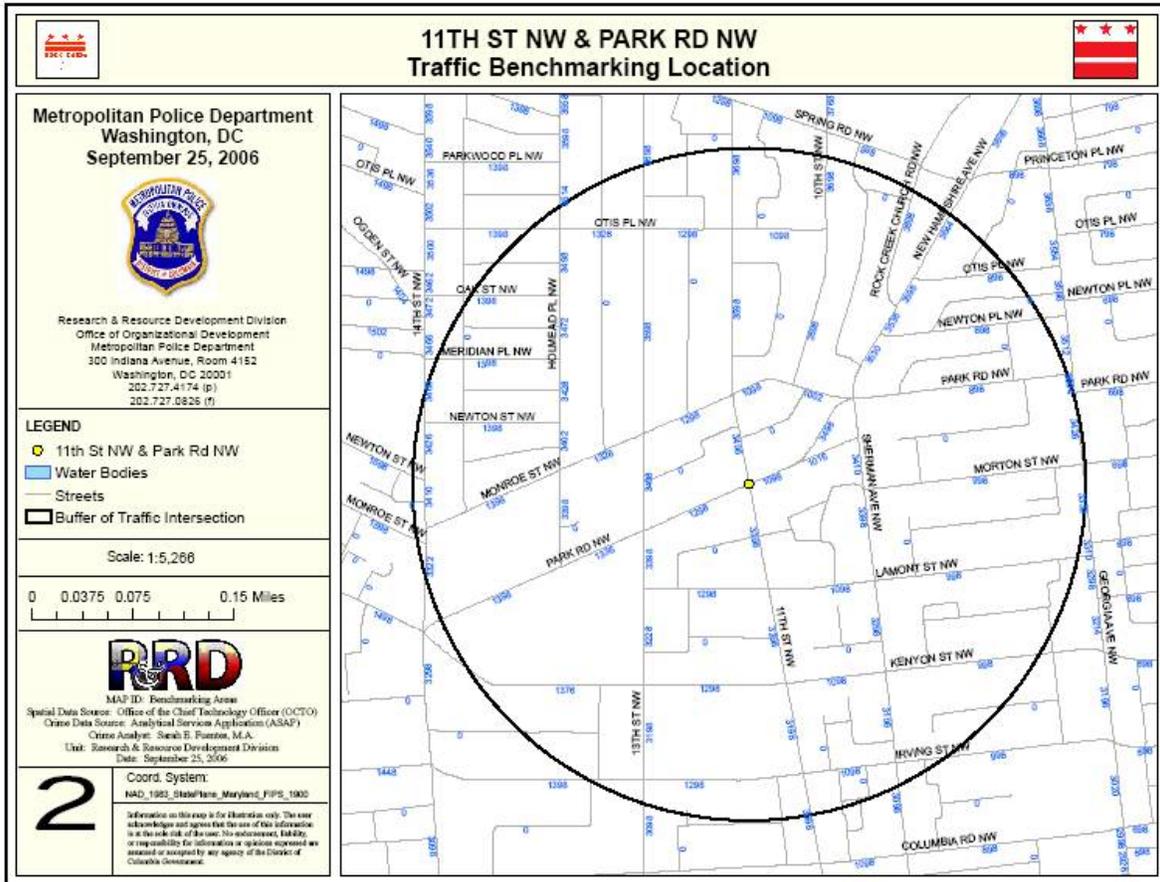
18. 1st St NW & R St NW
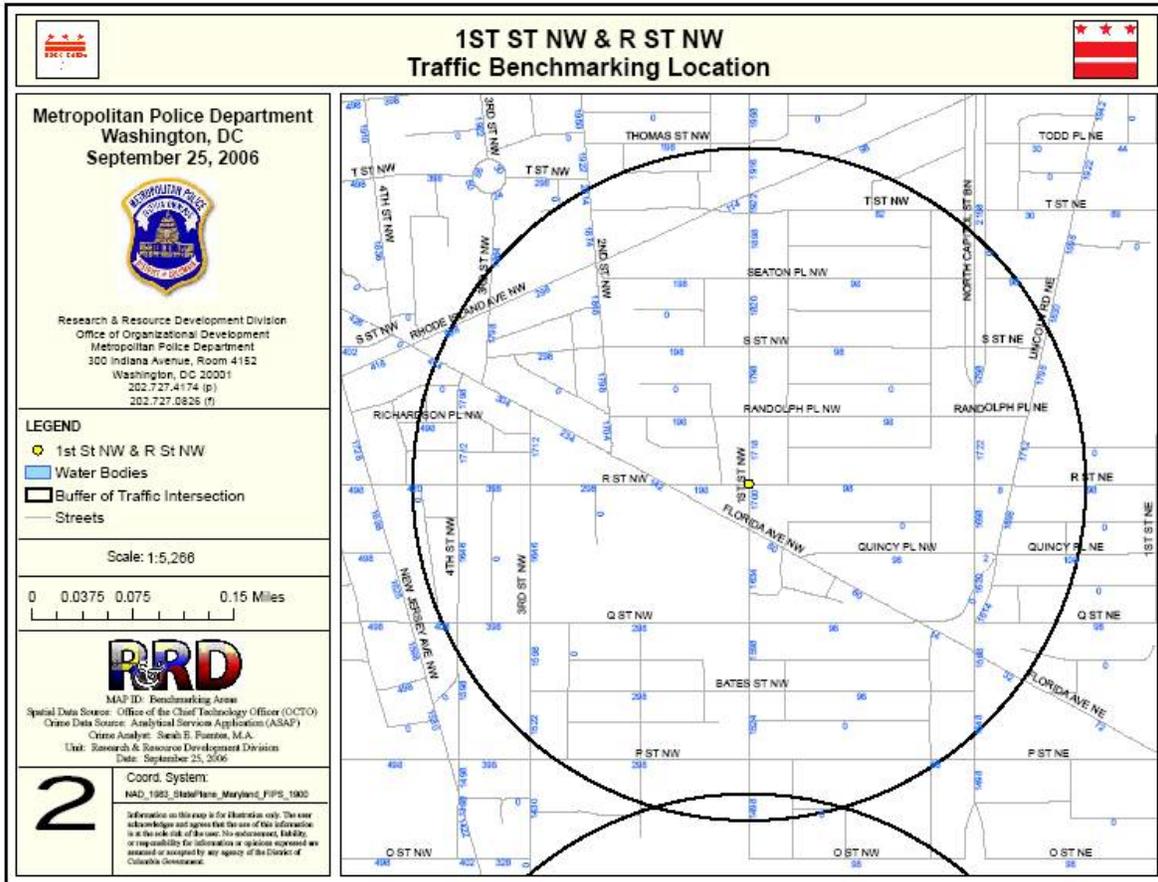
19. Wisconsin Ave NW & M St NW
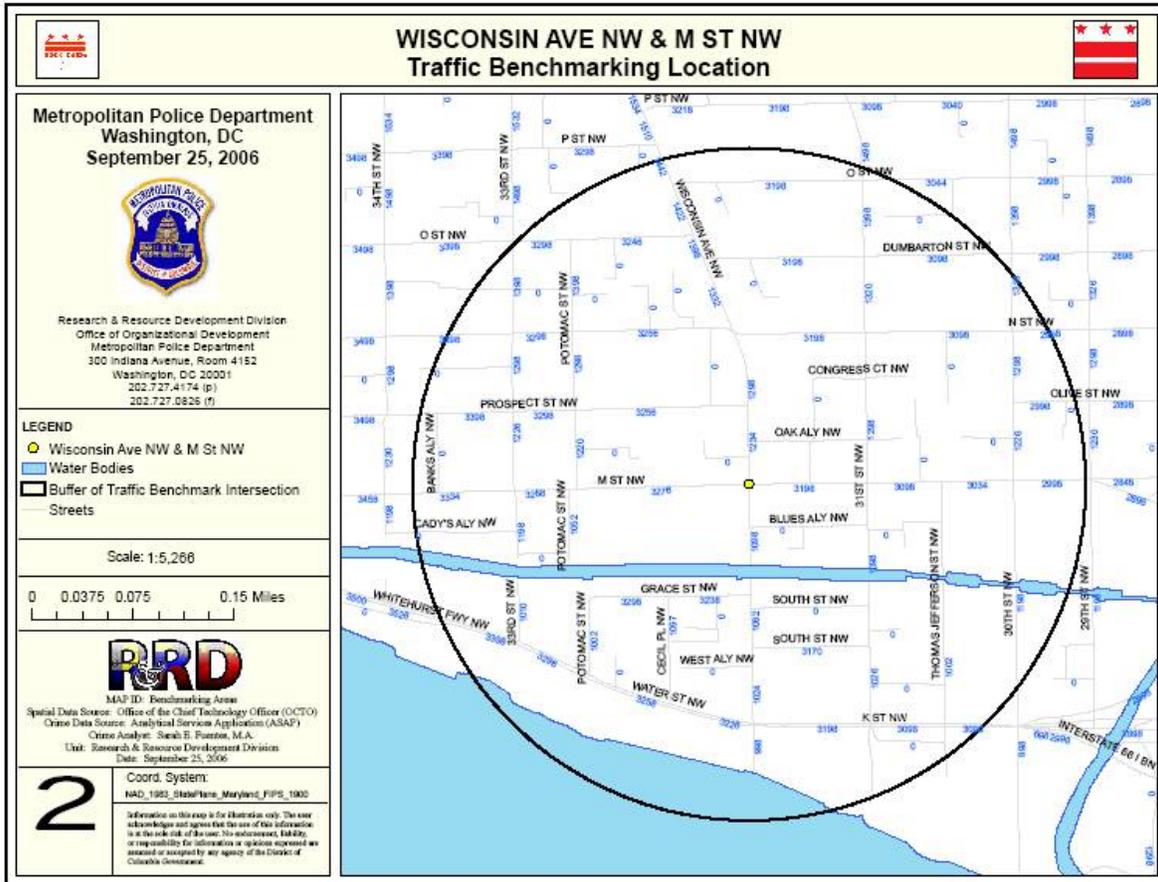
20. 21st St NE & Maryland Ave NE
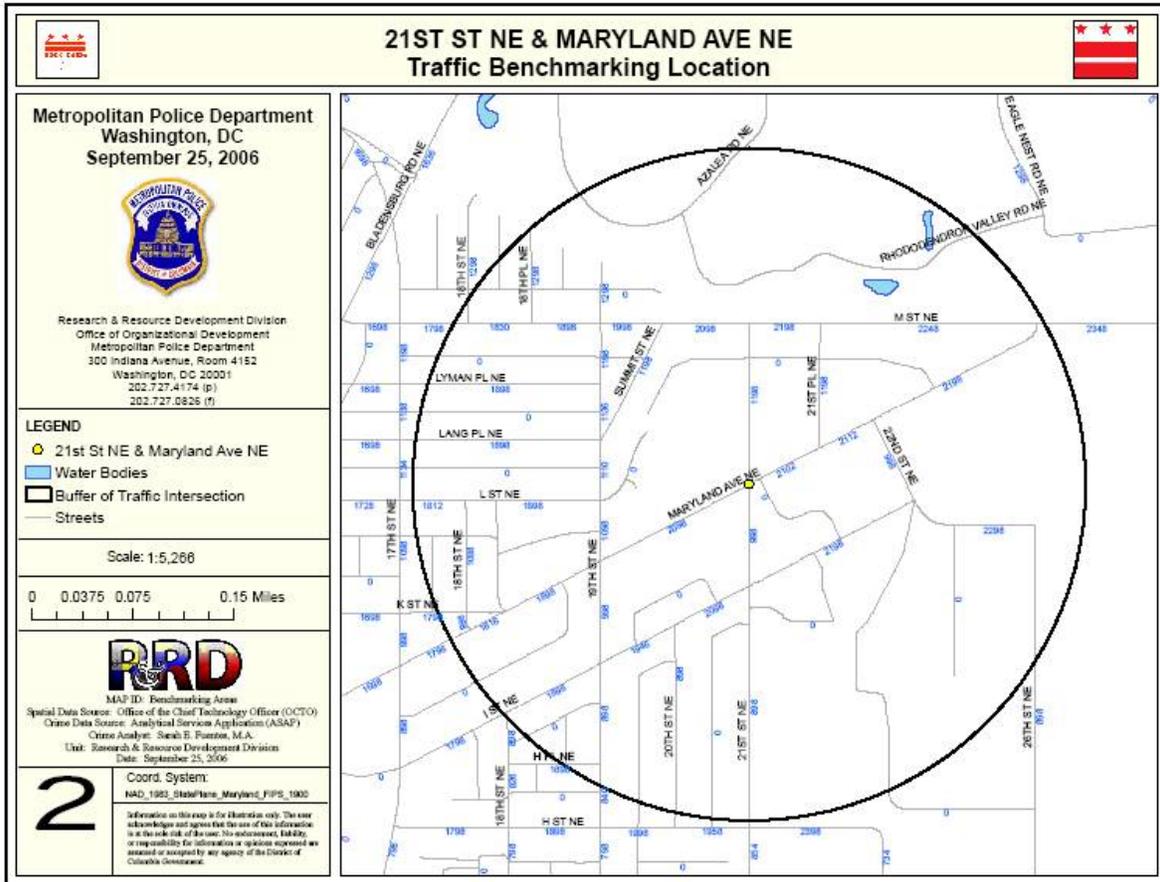
Pedestrian Intersections

1. 4th St SE & Chesapeake SE
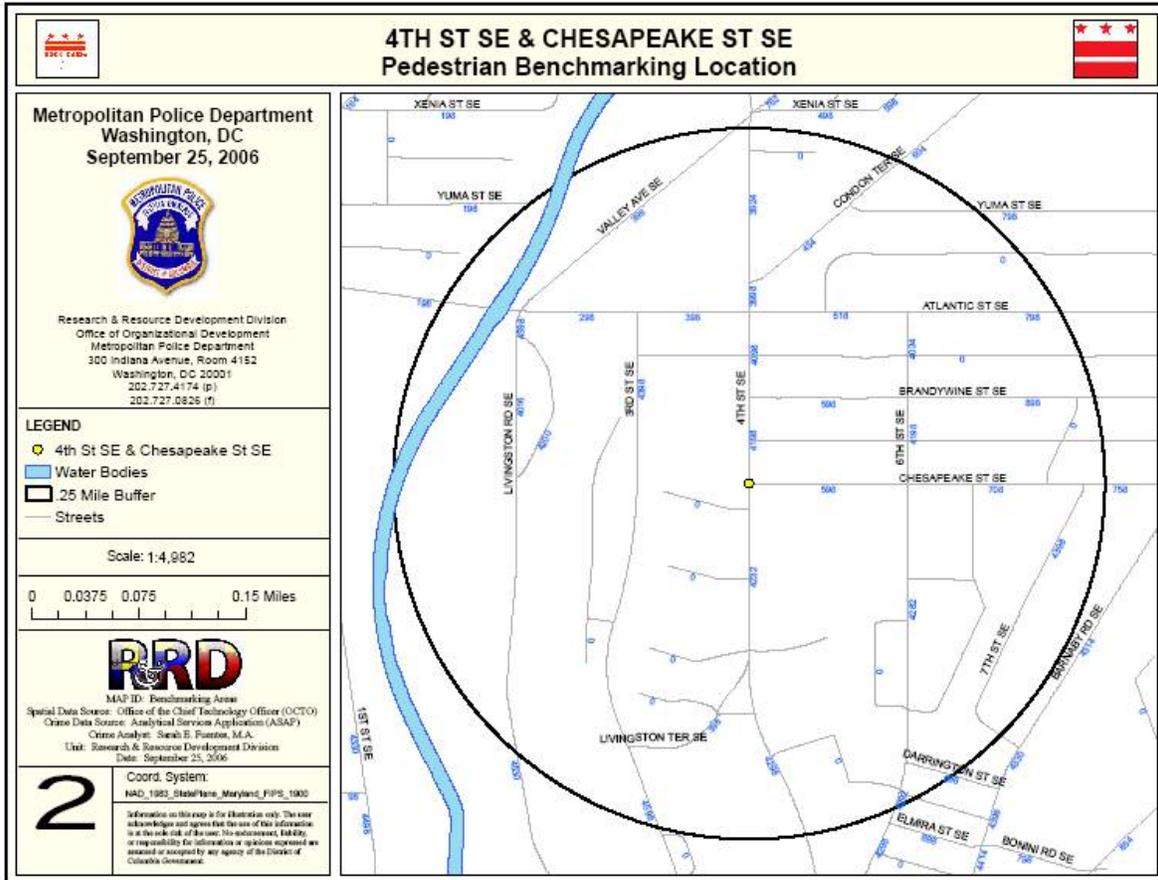
2. 17th St NW & Euclid St NW
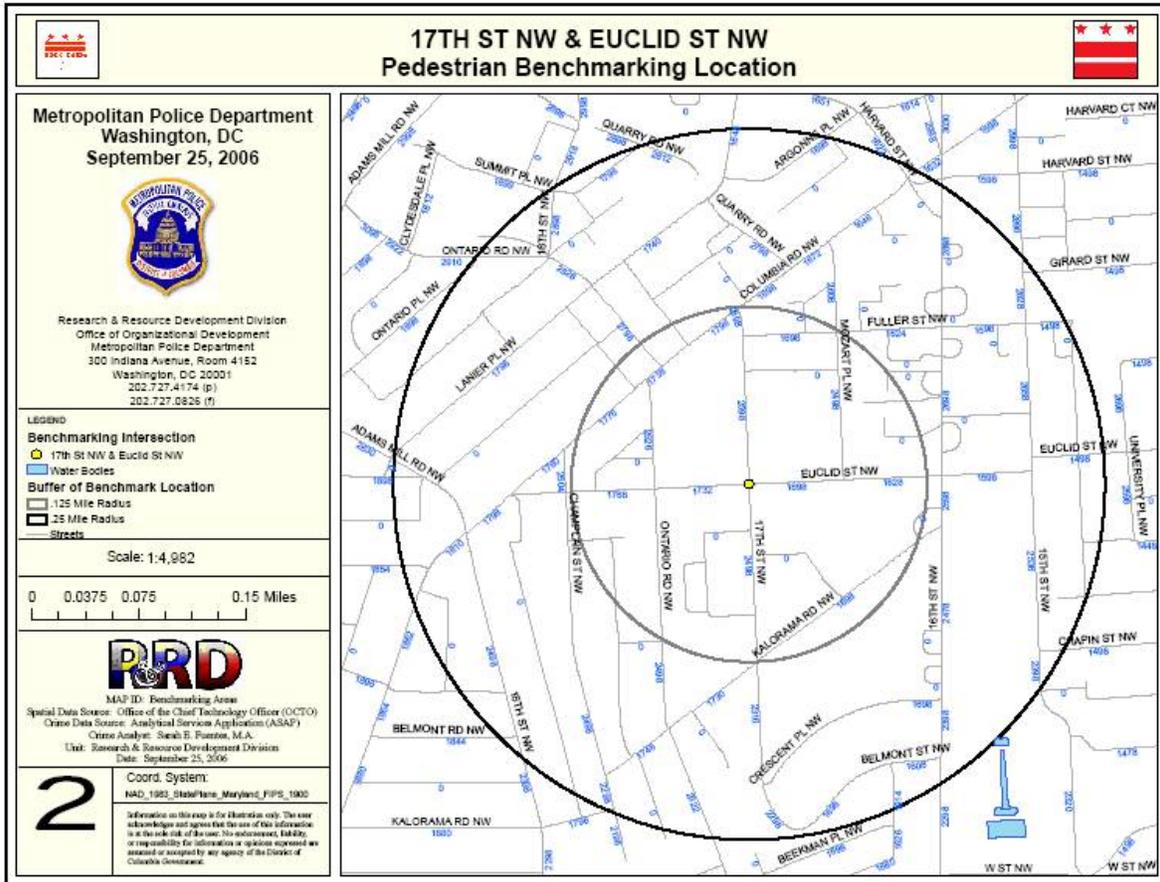
3. 2100 Alabama Ave SE
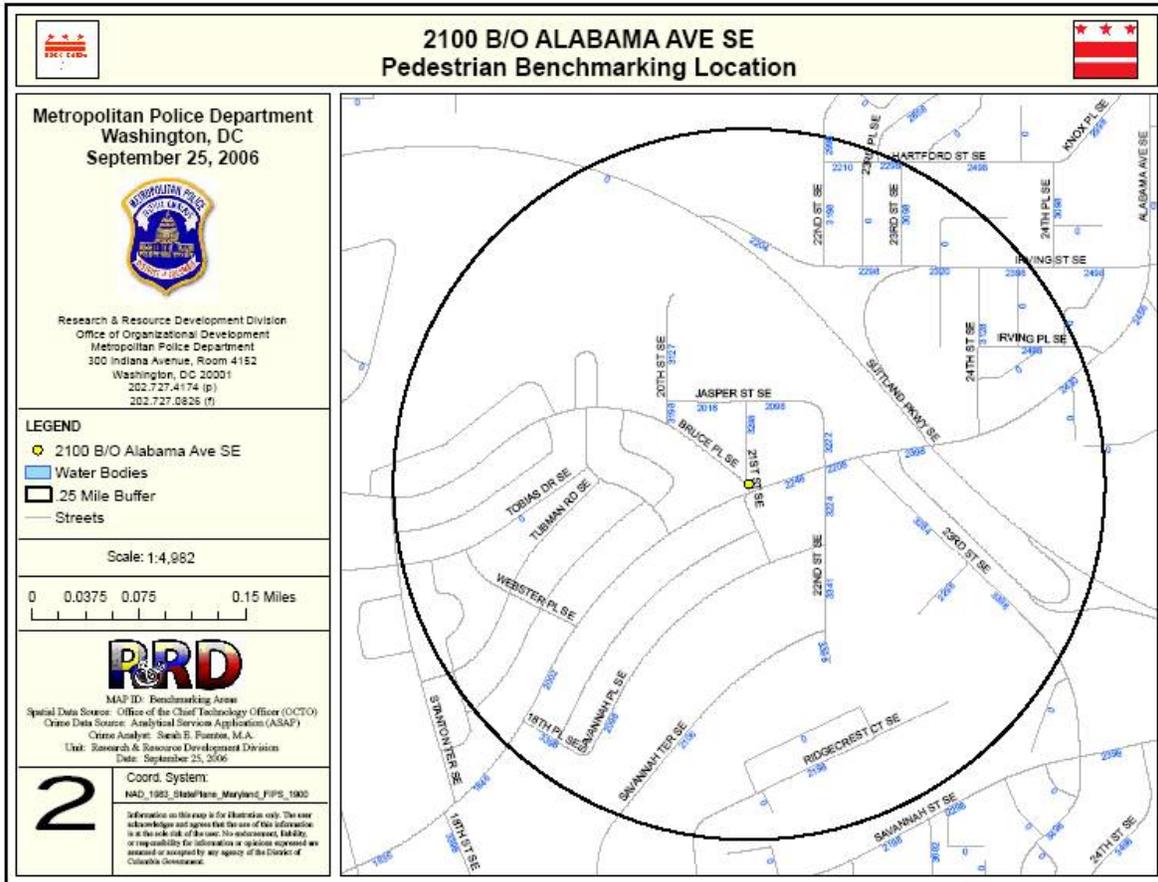
4. Wisconsin and M Street NW
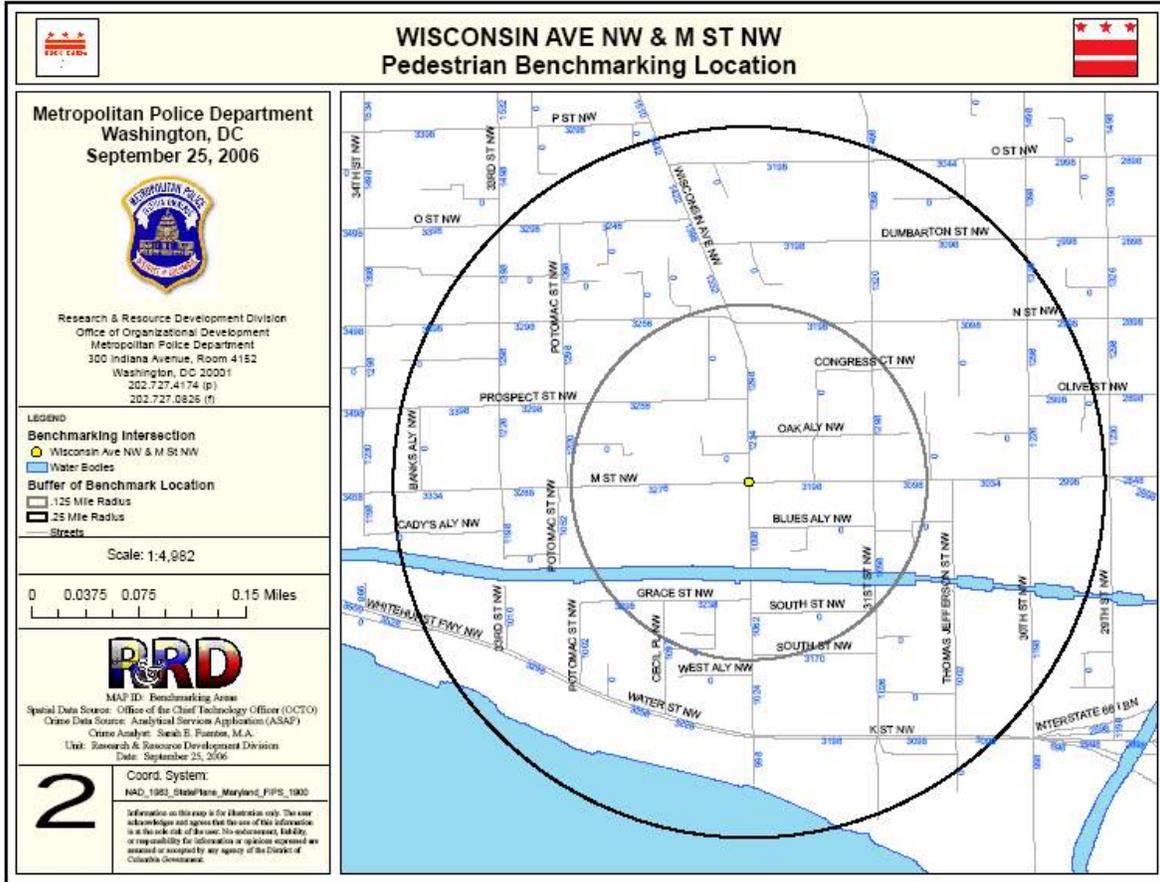
5. 21st St NE & Maryland Ave NE
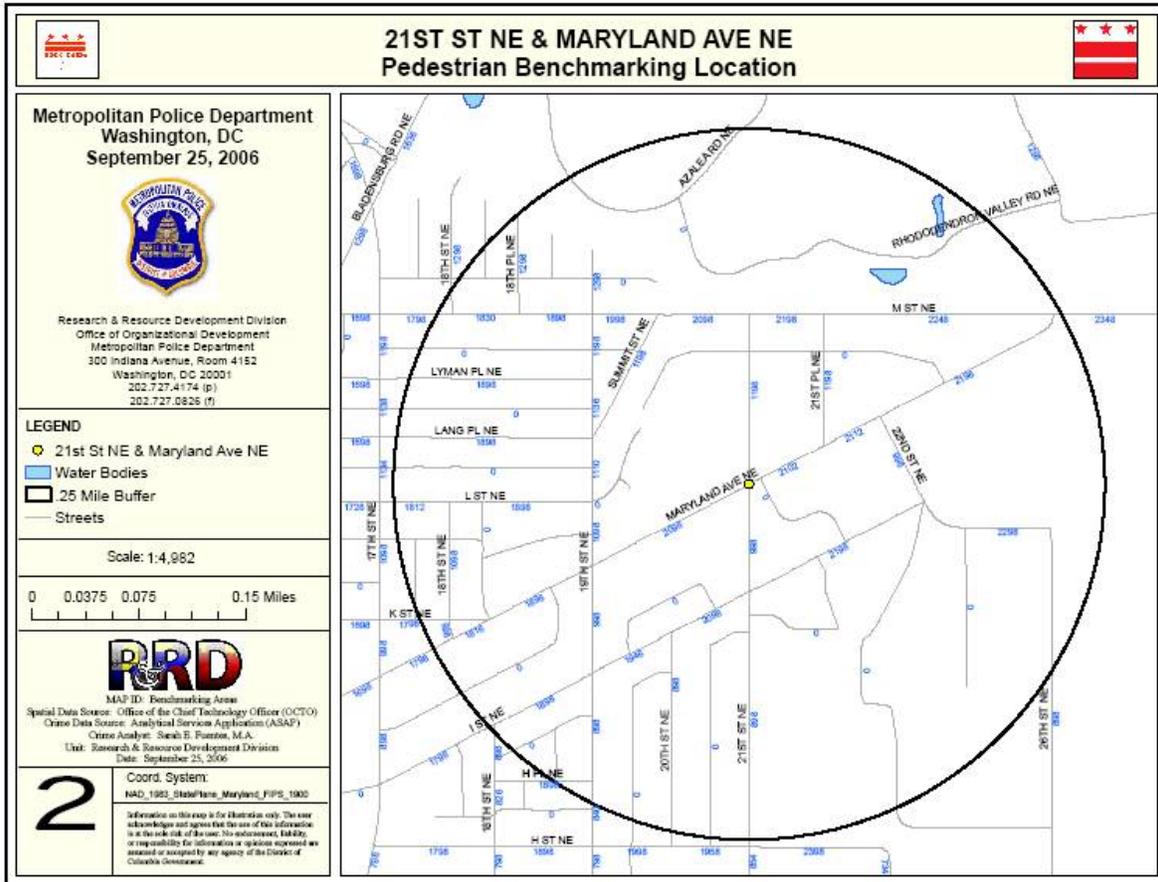
Photo Radar Locations

1. 100 Blk Michigan Ave NE
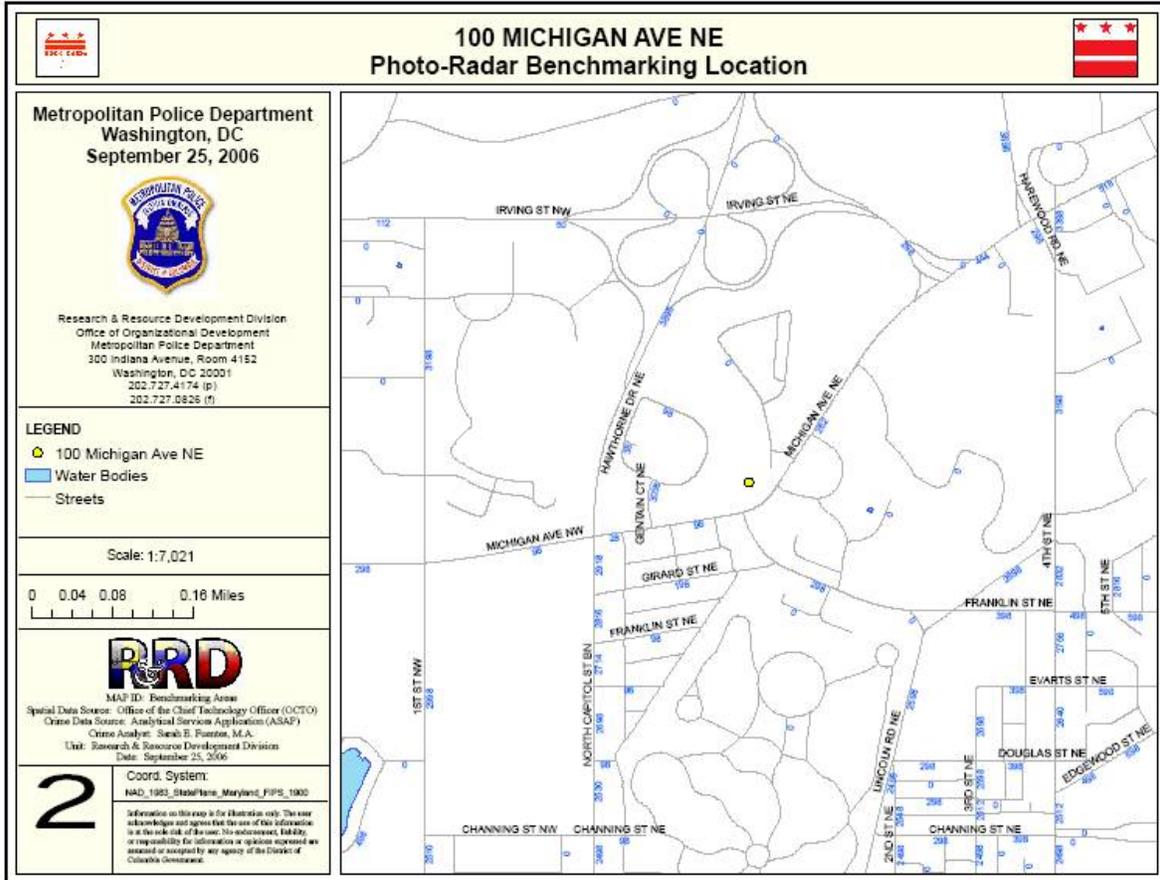
2. 3rd St NW & Massachusetts Ave NW
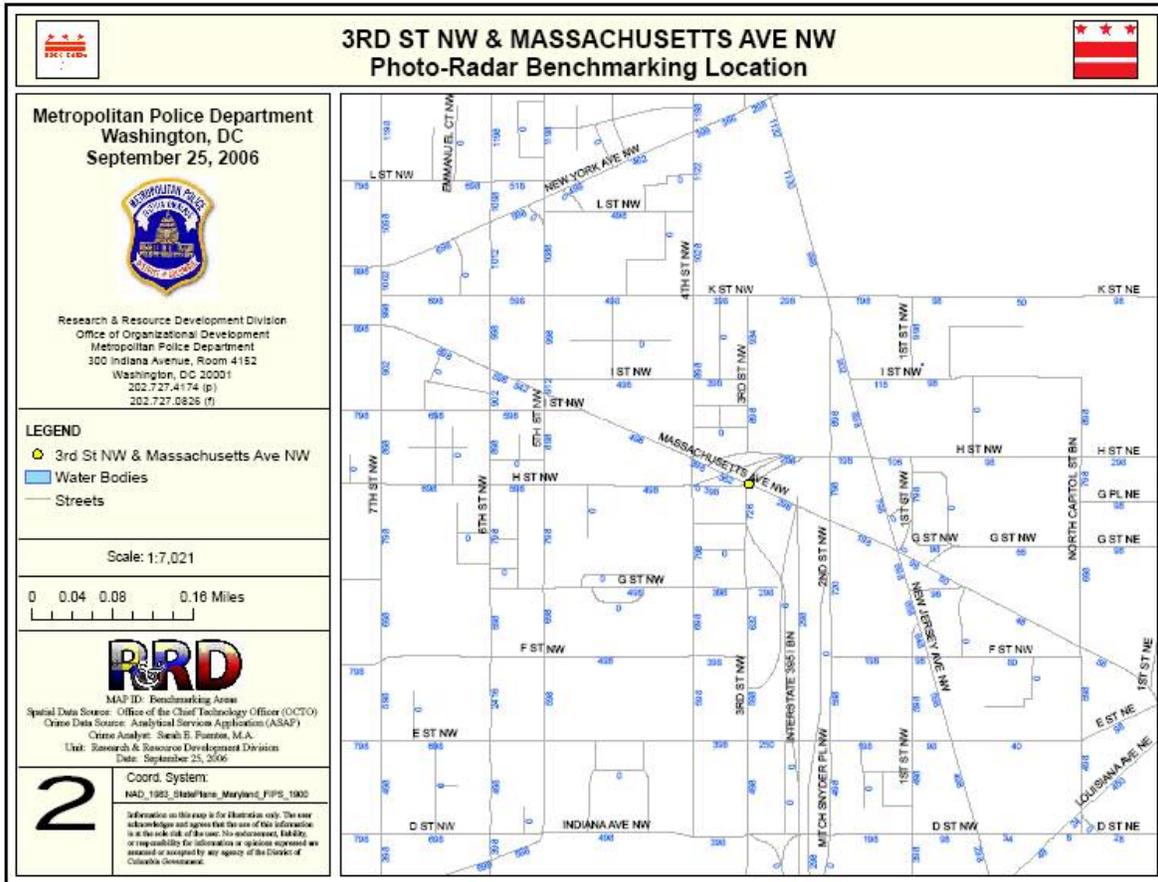
3. 4700 Blk MacArthur Blvd NW
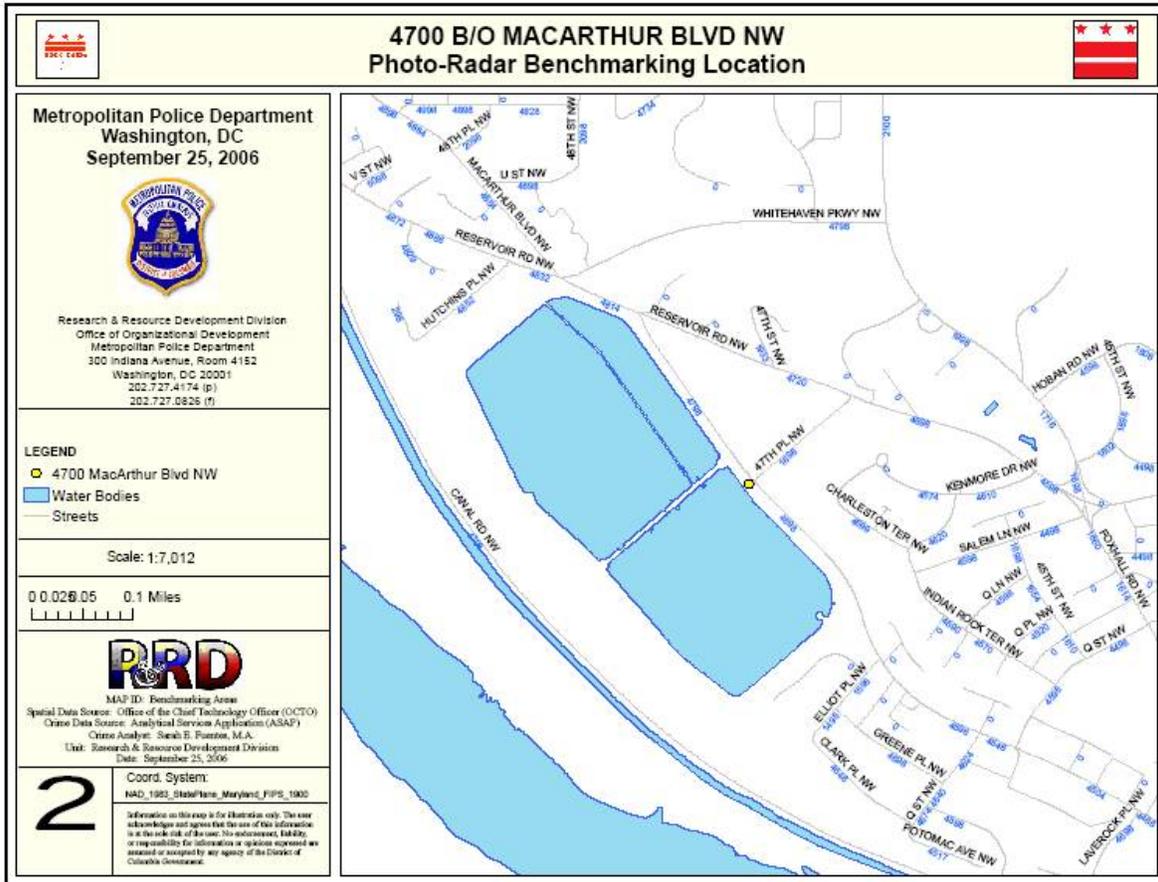
4. 5400 Blk 16th St NW
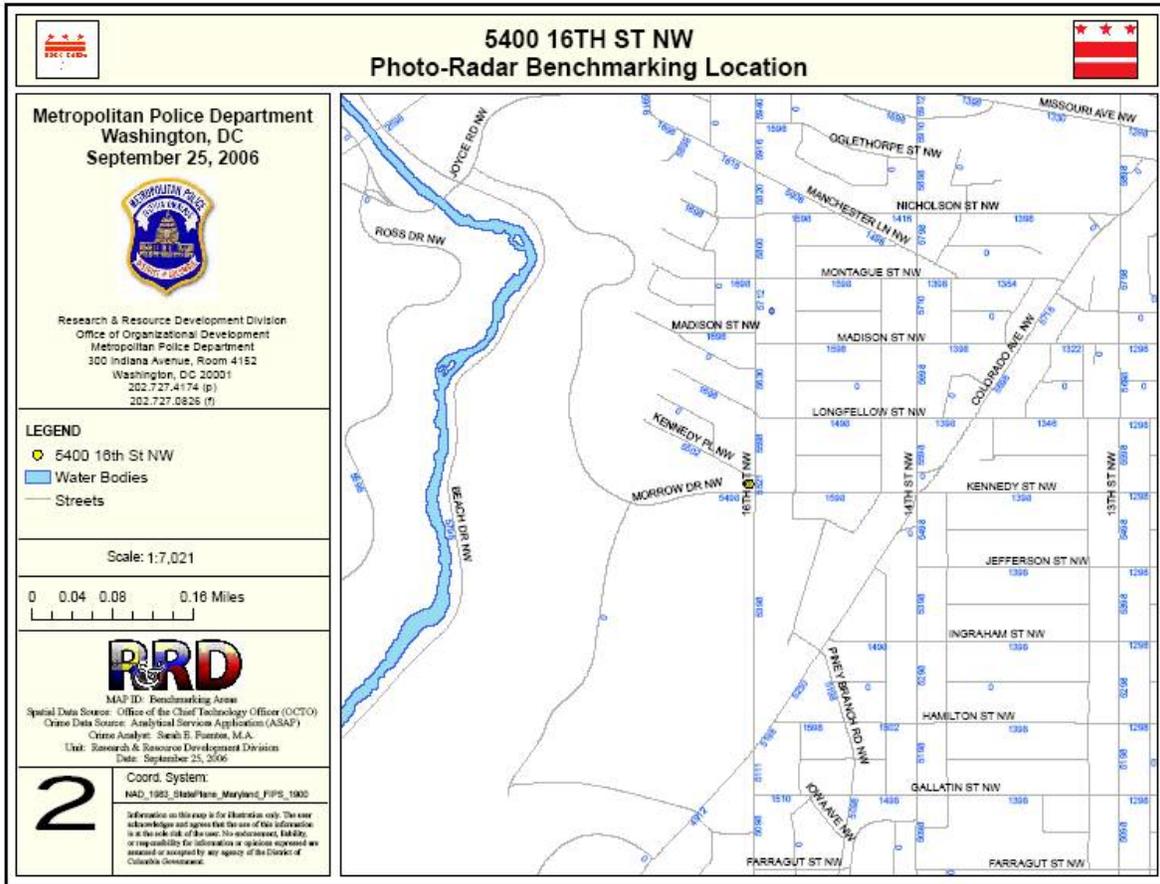
5. 600 New York Ave NE W/B
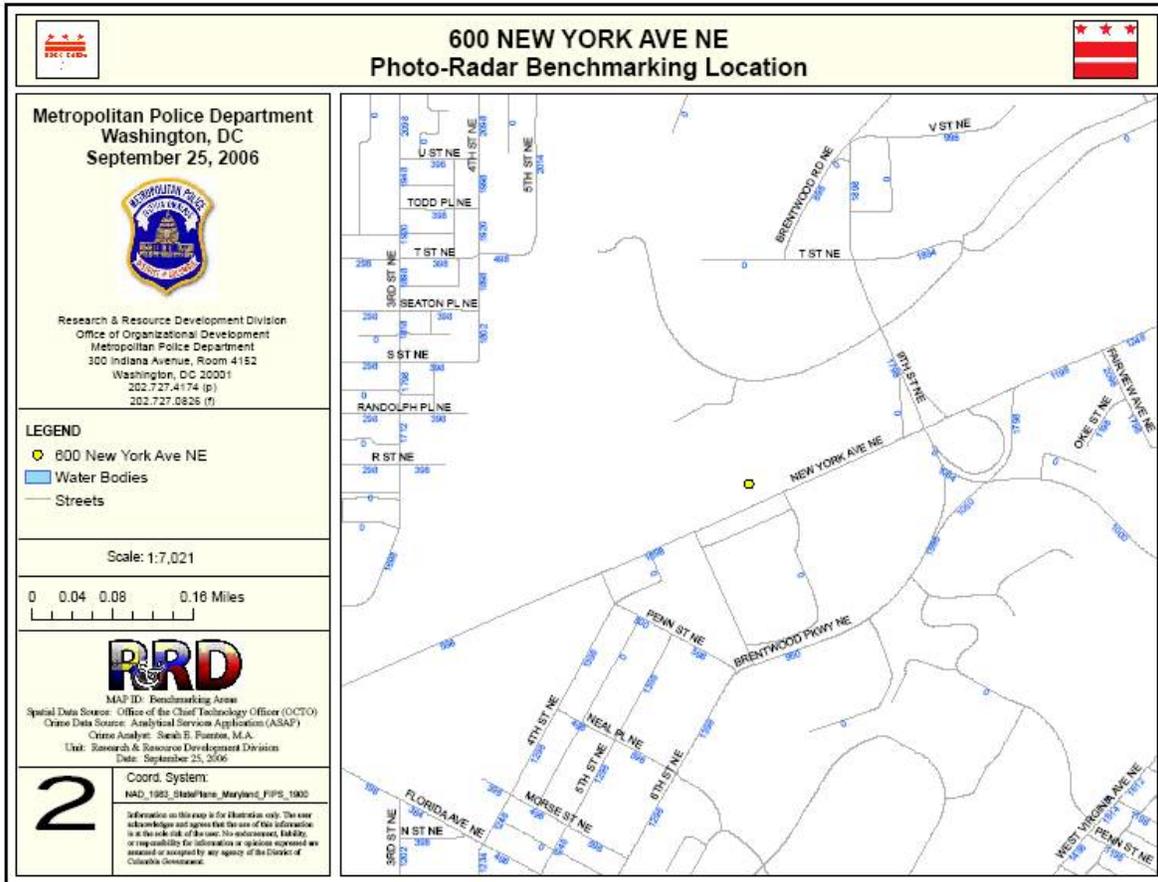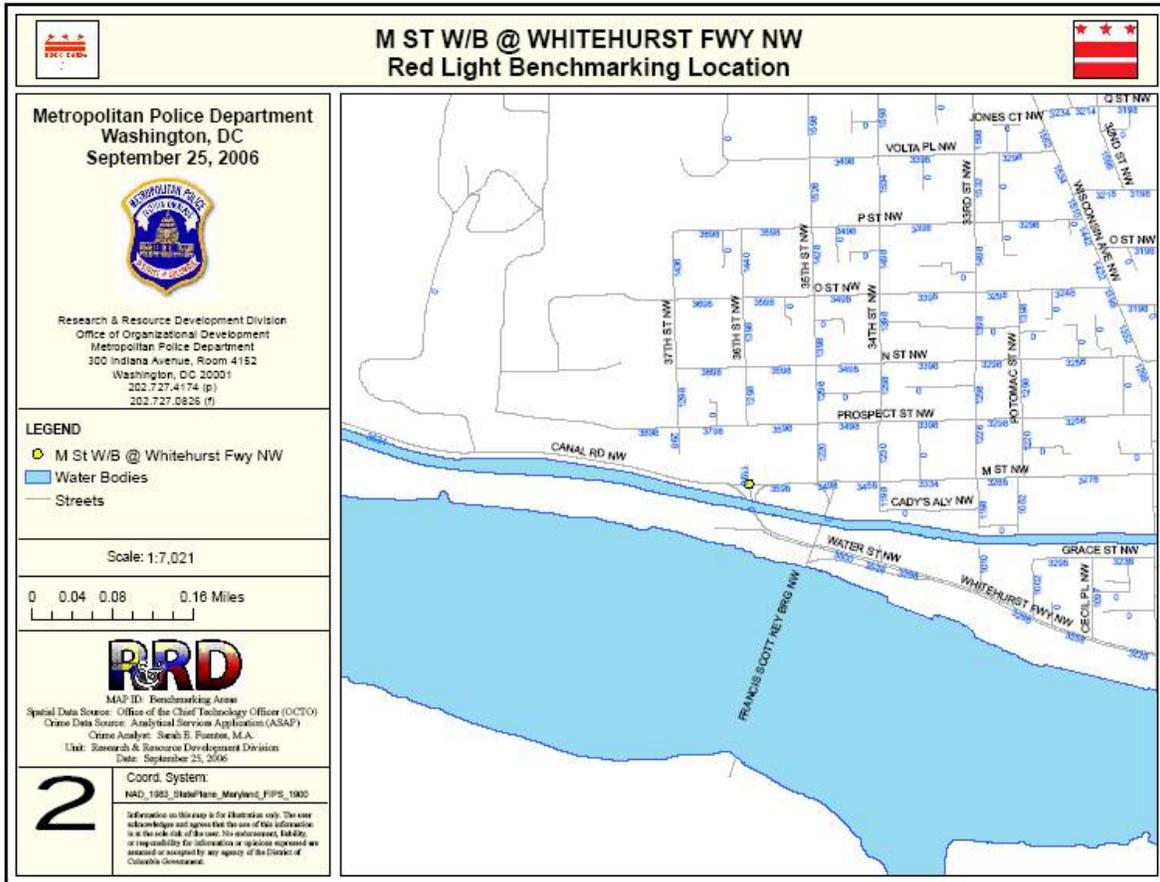
Red Light Camera Locations

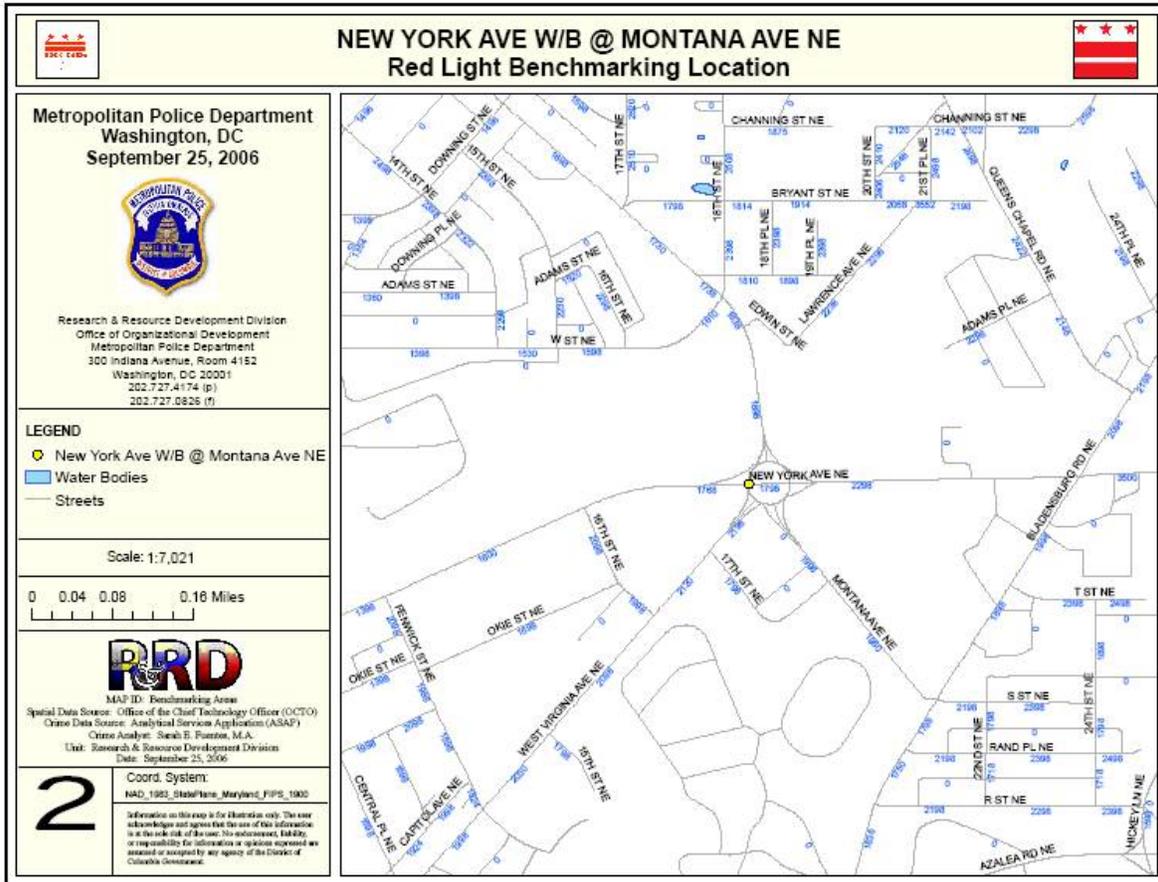**1. New York Ave NW W/B & 4th St NW**

2. Rhode Island Ave NE W/B & Reed St NE

3. M St NW W/B & Whitehurst Frwy NW

4. New York Ave NE W/B & Montana Ave NE

5. South Capital St Ramp S/B before I St