To: Section 5 Residents
From: The Council
Date: Sep. 23, 2015

As we indicated in the Newsletter, we are publishing the County's Leland Street Traffic Report for your information.

The Council is in the process of commissioning our own study of this proposal with particular attention to the effect this proposal would have on other streets in Section 5 and Chevy Chase generally.

We will keep you informed of developments on this matter. In the meantime, if you have any thoughts on this subject, please send them to the manager by email at manager@chevychasesection5.org

COMMUNITY DISCUSSION PAPER

DETERMINATION OF ACCESS RESTRICTION ELIGIBILITY

LELAND STREET

March 2015

Montgomery County Department of Transportation
Division of Traffic Engineering and Operations
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I. INTRODUCTION

Executive Regulation 17-94 "Through Traffic Volume Access Restrictions in Residential Areas" was authorized to aid in the County's efforts to "enhance neighborhood traffic safety and maintain 'livable' residential environments by providing a procedure for reducing excessive volumes of through traffic." The policy attempts to balance the needs of all impacted parties while maintaining the efficient and appropriate use of County streets and public rights of way.

The Department of Transportation assists communities in developing a *Through Traffic Volume Management Plan* by designing and evaluating the impacts of access restrictions. The Department then reports its preliminary assessment in a "Community Discussion Paper (CDP)", which will serve as the basis for discussions with residents and other potentially impacted parties. The purpose of this CDP is to determine access restriction eligibility for the Hamlet community, as well as evaluate proposed access restrictions.

II. REGULATORY PROCESS

The development of, criteria for, public comment on, and approval process for installation of access restrictions in residential areas follows seven sequential steps:

1) **Application & Eligibility**

2) **Project Development**

3) **Community Assessment**

4) **Final Plan:** Based on the feedback received during the Community Assessment phase, the preliminary plan may be revised by the Department to address concerns and a final plan will be produced.

   Public Hearing: After completing a final plan, a public hearing will be held, with ample (15 days) notice and hearing announcements posted, and a hearing officer will decide on behalf of the Executive whether or not to support the plan.

   Adaptation: Once the plan is recommended by the Executive for implementation, the applicant will be asked to collect a petition from determined eligible properties (one adult signature per property) to move forward. A simple majority (51% or more) will be required to adopt the Plan; a non-response will be considered a no vote.

5) **Implementation**

III. GLOSSARY OF TERMS

Definitions for common terminology used in this report are presented below.

Access Restriction – a full or part-time regulatory prohibition or physical barrier preventing full or directional entry into or through a particular street.

Arterial – A roadway that functions primarily to facilitate high volume vehicular traffic connections between, collector streets and major thoroughfares such as expressways and freeways; and secondarily to provide access to abutting land uses.

Average (Weekday) Daily Traffic (AWDT) – the average total number of vehicles in one or more direction of travel in a 24-hour (weekday) period passing a given point on a roadway.

Collector – An intermediary street that funnels vehicular traffic to and from local streets and arterials, providing moderate access to adjacent land uses.

Community Association - Any incorporated or unincorporated common ownership or Civic Association which represents the interests of the subdivision in which the street being considered for access restrictions is located.

Community Discussion Paper – A formal study typically including 1) technical and quantitative analysis of existing traffic conditions such as traffic volumes, 2) the development of a plan for implementing one or more access restriction measures, and 3) the assessment of potential consequences of such actions.

Cut-through or Non-local traffic – through traffic diverted from arterial and collector streets onto local residential streets to avoid congestion and/or longer trips, with both an origin and destination external to the neighborhood and/ or traffic shed boundaries as documented in a license tag survey sample or other appropriate measure.

Vehicles which cross a collector or arterial road from an originating local street, and continue to another local street in the same destination direction of the collector/arterial road, without a destination on that local street, may be considered part of the non-local traffic in some cases depending on the exact boundaries of the traffic volume management area.

Functional Classification – is the process by which streets and highways are grouped into classes, or systems, according to the character of traffic service that they are intended to provide. There are four highway functional classifications: highway, arterial, collector, and local roads. All streets and highways are grouped into one of these classes, depending on the character of the traffic (i.e., local or long distance) and the degree of land access that they allow.

Major Highway – a roadway with limited or controlled access that carries high through traffic volumes between freeways, central business districts and other major traffic generators. Major highways provide a high level of traffic service and a low level of direct access to local development.

Management Plan – that group of traffic controls, which may include signs, pavement markings, and physical devices or barriers, designed to reduce, divert or discourage non-local traffic in a particular neighborhood or on a particular neighborhood street.

Neighborhood Traffic Committee – an ad hoc group of residents formed in the absence of an active Community Association, which represents the interests of the subdivision in which the street being considered for speed humps is located.

Residential Street – a neighborhood street providing direct access to abutting residential land uses, not intended to service traffic traveling beyond or through a neighborhood. Residential streets can be sub classified as follows:

- Primary Residential Street: a neighborhood street serving as a collector for local traffic from secondary and tertiary residential roadways, designed to feed traffic to arterial and major highways. Primary roadways provide a moderate level of traffic service and a high level of direct residential property access. Can also be defined as a Master Plan primary street so designated in a Master or Sector plan.

- Secondary residential street – a neighborhood street providing a high level of direct residential access and a limited level of traffic service; not intended to provide for traffic traveling through the neighborhood.

- Tertiary residential roadway – a neighborhood street with similar function to a secondary street but having a narrower right-of-way and typically ending in a cul-de-sac.

Study Intersections/ Study Area: A geographic area which includes all critical intersections along arterials or major highways that connect to each other or local collector and residential streets within the traffic shed or traffic volume management area and which may need to be analyzed to determine potential impacts of access restrictions.

Traffic Shed – A geographic area defined by an interconnected network of local primary, secondary and tertiary streets within a neighborhood or portion of a neighborhood that feed into the same arterials or major highways

Traffic Volume Management Area – An area defined by natural or physical/ transportation boundaries, typically encompassing one or a portion of a neighborhood or traffic shed, within which residents, businesses and other visitors may be required to change their travel patterns to reach a local origin or destination within the traffic volume management area with the implementation of access restrictions on one or more streets.

85th-Percentile Speed – The speed at or below which 85% of the vehicles are moving, and is a common measure of the speed at which a majority of motorists consider safe and reasonable based on the prevailing geometric and traffic conditions on a particular roadway. Studies have demonstrated that drivers who travel either slower or faster than the 85th-percentile speed of the traffic stream have a higher rate of crash involvement rate than those drivers whose speed is close to the 85th-percentile speed. The measured 85th-percentile speed indicates that only 15% of drivers exceed it.

IV. STUDY AREA LOCATION AND PURPOSE

Study Area

Residents of the Hamlet Community in Montgomery County, state that non-local drivers are using Leland Street during commuter rush hours. Residents believe this cut-through traffic is

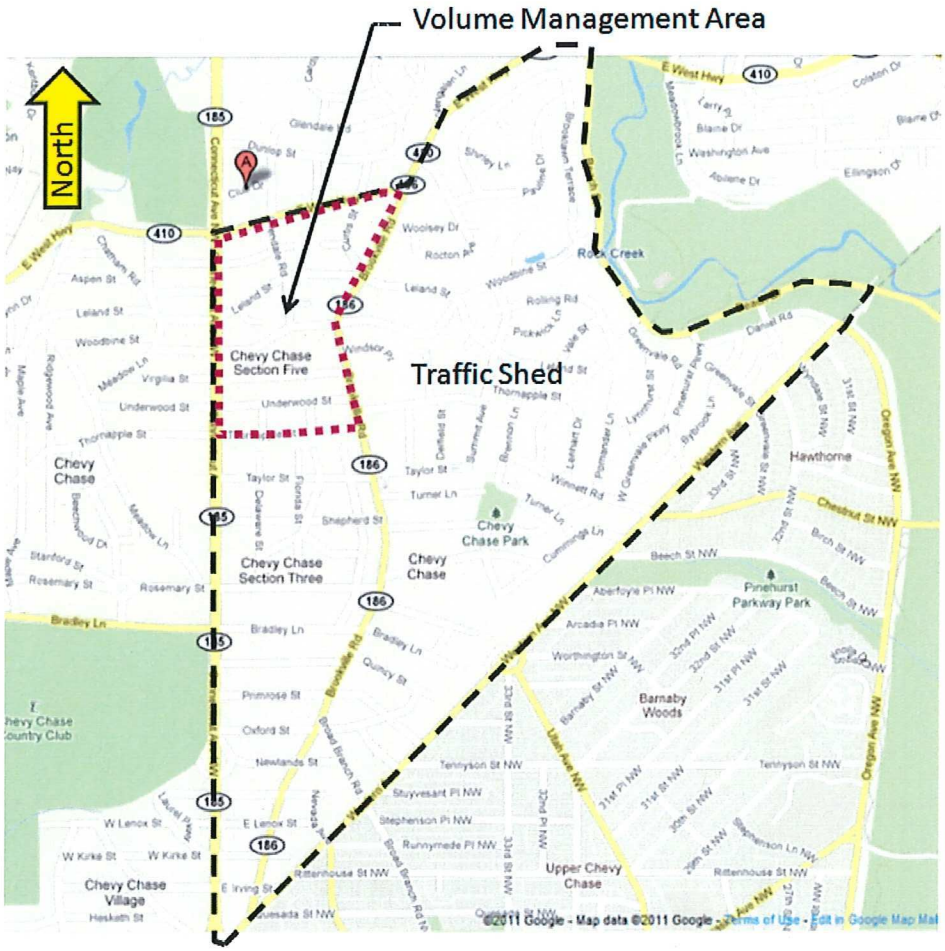
using local neighborhood streets to avoid congestion and delays on MD 185 (Connecticut Avenue), MD 186 (Brookville Road), and MD 410 (East West Highway). The community is represented by the Hamlet Civic Association and its Traffic Committee and therefore the study was initiated by a petition signed by more than 15% of households along the subject roadways. Letters to the County and State from the community expressed concerns regarding non-local traffic in the community. Detailed correspondence is included in **Appendix A**.

Definitions of key areas for this study are as follows:

- The ***Traffic Shed*** is bounded by MD 185 (Connecticut Avenue), Beach Drive, MD 410 (East West Highway), and Western Avenue.
- The ***Traffic Volume Management Area*** is bounded by MD 185 (Connecticut Avenue) MD 410 (East-West Highway), MD 186 (Brookville Road), and Thronapple Street.
- ***Study Intersections*** will include intersections within traffic volume management area.

A map of the traffic shed and traffic volume management area is shown below in **Figure 1**.

Figure 1. Traffic Shed and Volume Management Area.



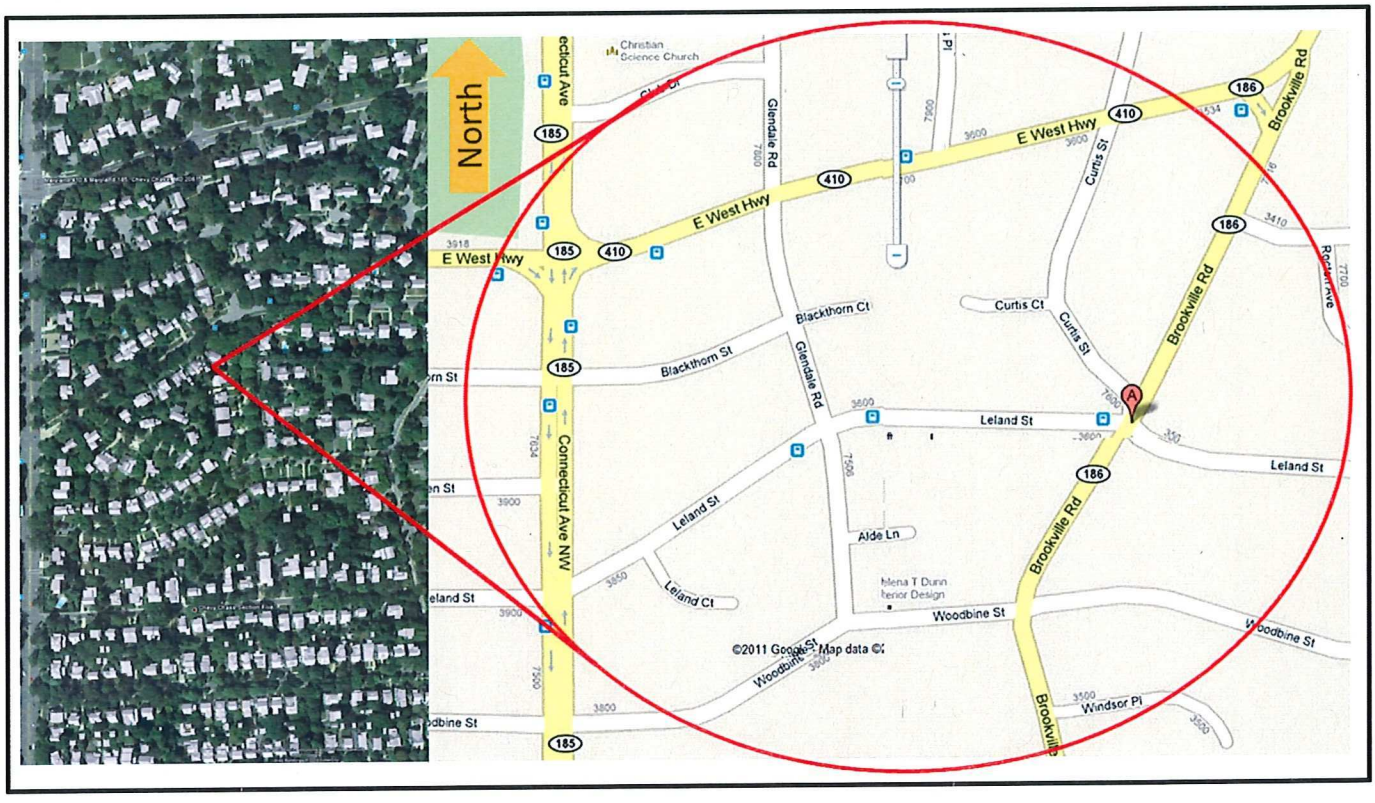
History

The community has noted that the excessive cut-through traffic through the Hamlet neighborhood has negatively impacted the quality of life and safety of residents. This is potentially due to recurring congestion along MD 185 (Connecticut Avenue) and MD 410 (East West Highway), motorists may perceive it is faster to cut through the neighborhood than to remain on the State highways.

Location

The study area is situated on the southeast corner of MD 185 (Connecticut Avenue) and MD 410 (East West Highway) and bounded by MD 186 (Brookville Road) to the east, thereby, nestled between three State roadways under the Maryland State Highway's (SHA) jurisdiction. The neighborhood is comprised of County and Chevy Chase Section 5 maintained roads. An area map is shown in **Figure 2**.

Figure 2. Location Map (Not to scale)



Purpose

The purpose of the study is to document the volume of non-local through traffic utilizing the study roadways to avoid congestion on MD 185 (Connecticut Avenue), MD 410 (East-West Highway) and MD 186 (Brookville Road), and, if eligible, develop and implement an access restriction plan after evaluating the potential impact of that plan on the roadway network and

community. This paper summarizes the results of a technical analysis including existing conditions, traffic volumes, capacity analysis, license plate surveys, travel time, and field observations.

V. EXISTING CONDITIONS ANALYSIS

A. Roadway Network, Land Use, Community Resources, and Existing Restrictions

The following section describes the study area roadway network and its characteristics, existing land use mixture, community resources such as public spaces, and vehicular access restrictions that are already in place.

The Montgomery County Master Plan of Highways classifies MD 185 (Connecticut Avenue) and MD 410 (East-West Highway) as major highways. MD 186 (Brookville Road) is classified as a residential primary. MD 185 (Connecticut Avenue) is a three-lane (in each direction) divided roadway between the District of Columbia and mid-Montgomery County. The speed limit along MD 185 (Connecticut Avenue) within the study area is 30 miles-per-hour (MPH); there are two traffic signals along MD 185 (Connecticut Avenue) within the study section. MD 410 (East West Highway) is an undivided two three lane (in each direction) roadway between Prince George's County and Bethesda. The speed limit along MD 410 (East West Highway) within the study area is 40 MPH. MD 186 (Brookville Road) is a one-lane (in each direction) roadway between MD 410 (East West Highway) and Western Avenue.

The Chevy Chase Master Plan classifies Leland Street as a secondary residential road. It should also be noted that the properties sited on Leland Street as bounded by Connecticut Avenue and Glendale Road, the homes on Glendale Road as bonded by Leland Street and Woodbine Street, and the homes on Leland Court and Alden Lane fall within Chevy Chase Section 5.

Bus stops for the Ride On Route 1 bus are located along Leland Street at Glendale Road and at MD 186 (Brookville Road). The Route 1 bus has peak-hour service Monday through Friday and weekend service. The public Ride On bus Route 11, and Washington Metropolitan Area Transit Authority (WMATA) Routes J2 and J3 run east-west along MD 410 (East West Highway). School Bus Stops are primarily outside of the neighborhood except for a school bus stop at MD 186 (Brookville Road) and Leland and Curtis Street at Curtis Court.

Land uses within the study area are exclusively residential. The designated schools, Chevy Chase ES and Rosemary Hills ES, Westland MS, and BCC High School are all located outside of the community. A Fire Station and Library are located north of the study area along MD 185 (Connecticut Avenue). A Country Club is located adjacent to the MD 185 / MD 410 intersection (Northwest quadrant). There is one local commercial strip with a coffee shop along MD 186 (Brookville Road) south five blocks south of Leland Street between Turner Street and Summit Avenue.

There are many ***traffic control restrictions*** via signage or geometrics within the defined traffic volume management area. The ***Existing traffic restrictions*** and controls for the Hamlet community include:

- Left turns along MD 185 (Connecticut Avenue) northbound are prohibited at streets south of MD 410 (East West highway), while right turns are prohibited southbound between 7:00 – 9:00 AM. These restrictions keep motorists from turning into the neighborhood across MD 185 (Connecticut Avenue) from the volume management area.

- Along westbound MD 410 (East West Highway) right turns are restricted between MD 186 (Brookville Road) and MD 185 (Connecticut Avenue), while left turns are prohibited at MD 410 (East West Highway) westbound at Glendale Road between 7:00 - 9:00 AM and 4:00 – 6:00 PM.

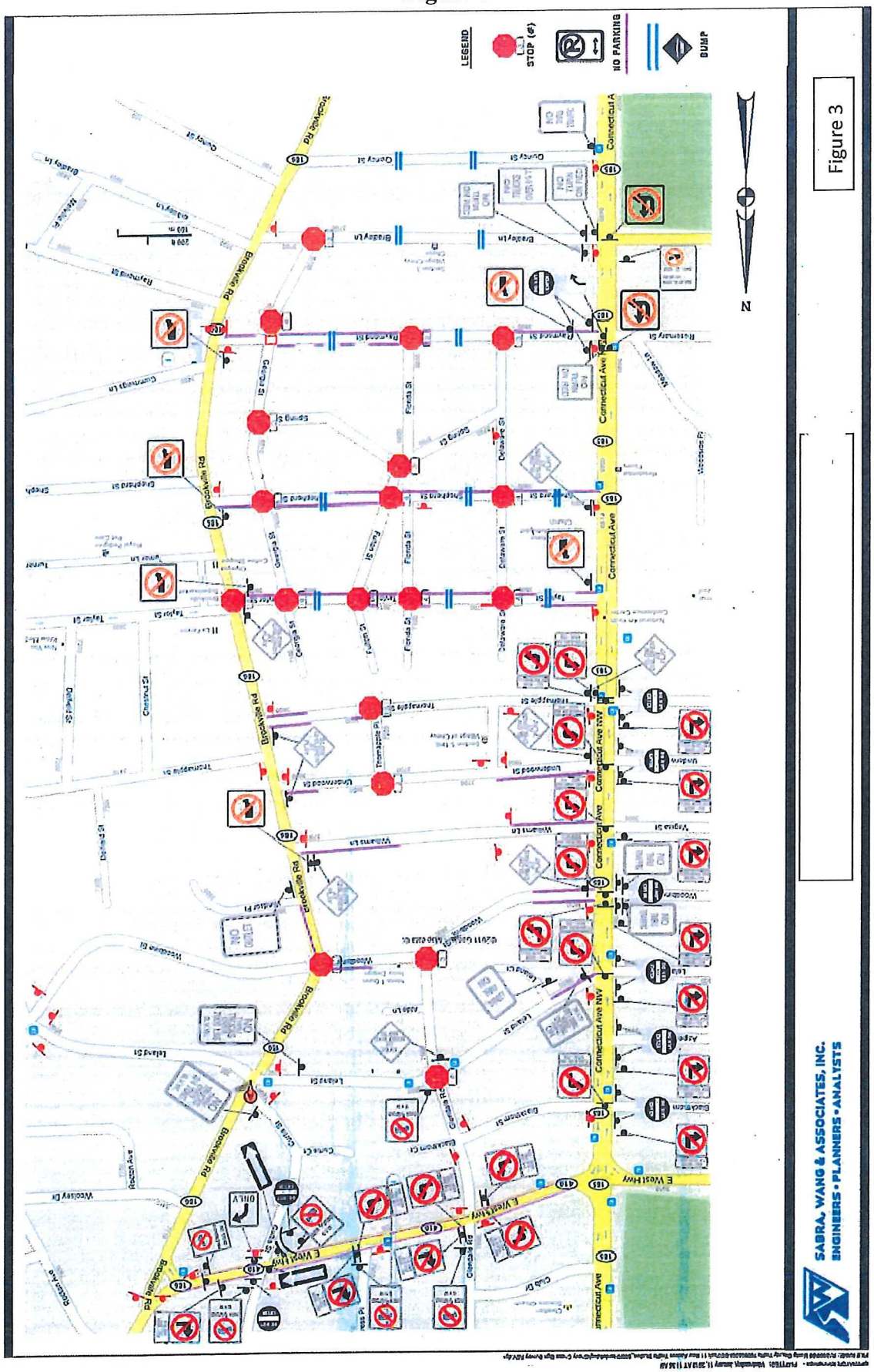
- "No Thru Trucks Signs" are posted for the streets north of MD 410 (East West Highway)and westbound movements from MD 186 (Brookville Road) to Curtis Street, Leland Street and Williams Lane.

- "Do Not Enter Signs" are posted for streets west of MD 185 (Connecticut Avenue) from 7:00 – 9:00 AM.

A detailed map of all access restrictions is shown in **Figure 3** on the next page.

Existing traffic calming:
Chevy Chase Section 5 on Leland Street approximately at 263 ft., east of MD 185 (Connecticut Avenue) installed a speed hump. This portion of Leland Street between MD 185 (Connecticut Avenue) and 528 ft. east of Connecticut Avenue falls under the jurisdiction of Chevy Chase Section 5.

Figure 3


LEGEND
STOP (#)
NO PARKING
BUMP
N
Figure 3
SABRA, WANG & ASSOCIATES, INC.
ENGINEERS • PLANNERS • ANALYSTS
Brookville Rd
Connecticut Ave
E West Hwy

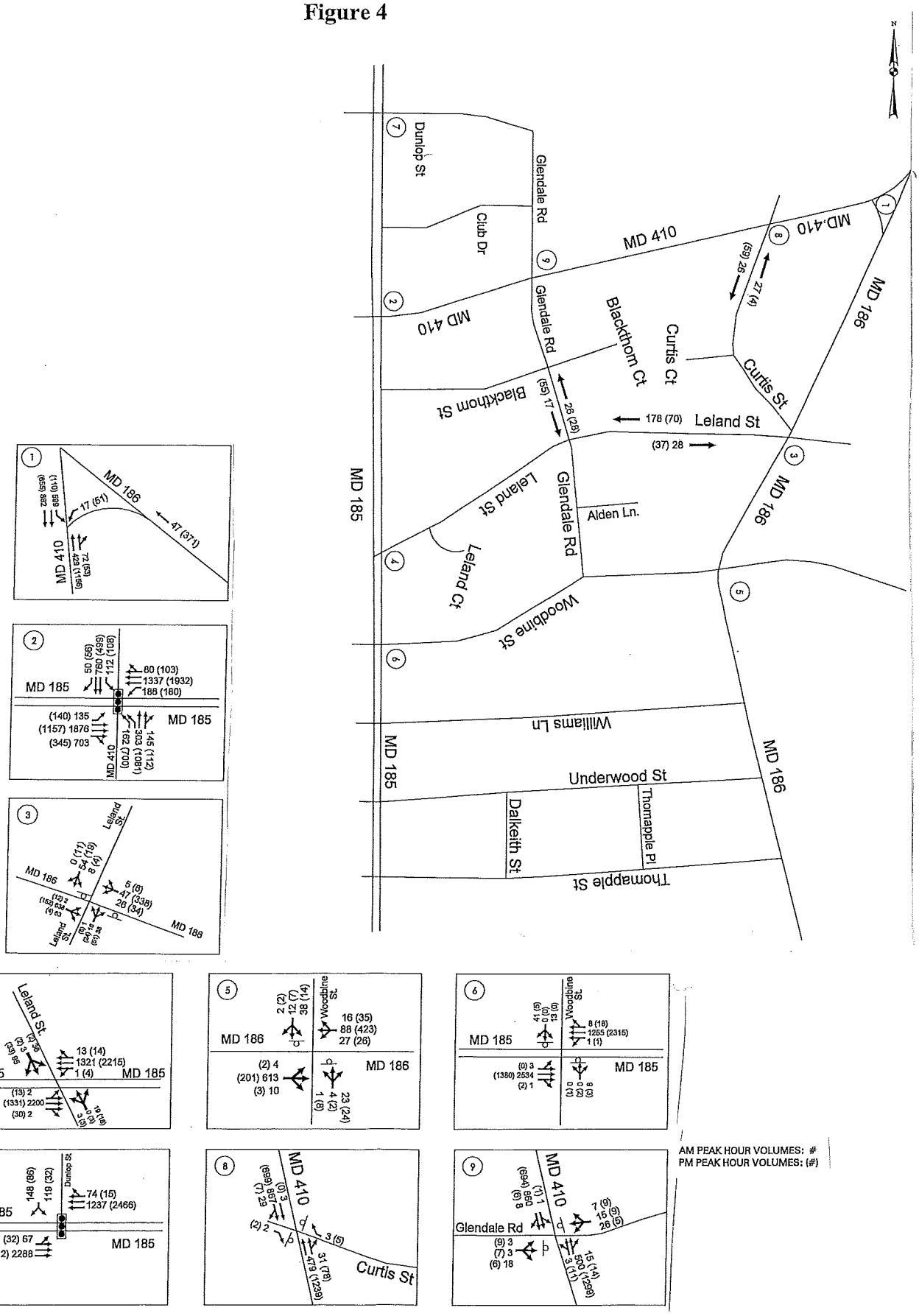
B. Traffic Volumes

Peak hour intersection traffic data for the study area intersections was summarized from the Maryland State Highway Administration (MDSHA) and Montgomery County counts. Mid-block peak hour volumes were acquired using data collected from portable multi-day automated traffic counting machines. Volume data was collected for Curtis Street, Leland Street, and Glendale Road on September 23rd, 2010, and January 5th, 2011, respectively. Intersection turning movement counts were provided by MDSHA, and were performed on the study area intersections between March, 2001 and November 2011. To accurately depict traffic volumes from different sources and times, **Figure 4** illustrates peak hour balanced volumes at study intersections. Detailed traffic data is included in **Appendix B**. **Table 1** summarizes the most conservative volumes for the weekday AM and PM peak hour bi-directional traffic volumes along the study roadway segments.

Table 1. Peak Hour Bi-Directional Traffic Volumes AM (PM) [Total Daily]

Roadway	*Westbound/ Northbound*	*Eastbound/ Southbound*	*Total Peak Hour Volumes*	*Total Daily Volume*
Leland Street between MD 186 and Glendale Road	178 (70) [439]	28 (37) [941]	206 (107)	1380
Glendale Road between Leland Street and MD 410	17 (55) [412]	26 (28) [431]	43 (83)	843
Curtis Street between MD 186 and MD 410	26 (57) [655]	27 (64) [41]	53 (121)	696

Figure 4


Dunlop St
Glendale Rd
Club Dr
MD 410
MD 410
Glendale Rd
Blackthorn Ct
Curtis Ct
Curtis St
MD 786
Blackthorn St
(55) 17
26 (28)
178 (70) Leland St
(37) 28
MD 185
Leland St
Glendale Rd
Alden Ln.
Leland Ct
MD 786
Woodbine St
Williams Ln
MD 185
MD 186
Underwood St
Dalkeith St
Thomapple Pl
Thomapple St
MD 186
17 (51)
47 (371)
MD 410
MD 185
MD 185
(140) 135
(1157) 1876
(345) 703
80 (103)
1337 (1932)
188 (160)
MD 185
MD 410
Leland St
MD 186
MD 188
Leland St
Leland St.
MD 185
MD 185
13 (14)
1321 (2215)
1 (4)
MD 185
MD 186
MD 186
16 (35)
88 (423)
27 (26)
(2) 4
(201) 613
(3) 10
MD 186
23 (24)
1 (8)
MD 185
MD 185
8 (16)
1255 (2315)
1 (1)
(0) 3
(1380) 2634
(2) 1
MD 185
MD 185
74 (15)
1237 (2466)
(32) 67
(1712) 2288
MD 185
Dunlop St
MD 410
3 (5)
31 (78)
473 (1239)
Curtis St
MD 410
Glendale Rd
7 (9)
15 (14)
26 (5)
500 (1259)
AM PEAK HOUR VOLUMES: #
PM PEAK HOUR VOLUMES: (#)

C. Capacity Analysis

The Critical Lane Volume Analysis (CLV) methodology was used to evaluate capacity and level of service for the selected intersections during the AM and PM peak hours. Performance measures of effectiveness include critical lane volume, volume-to-capacity ratio, and level of service.

The critical lane volume for each peak period is found by combining the critical lane volumes for the NB/SB movements and EB/WB movements. The critical lane volumes indicate the highest volume for a given approach lane configuration in a given direction. The volume-to-capacity ratio (v/c ratio) is the ratio of current flow rate to the capacity of the facility. This ratio is often used to determine how sufficient capacity is on a given roadway. Generally speaking, a ratio of 1.0 indicates that the roadway is operating at capacity. A ratio of greater than 1.0 indicates that the facility is failing as the number of vehicles exceeds the roadway capacity.

The level of service (LOS) is a letter designation that corresponds to a certain range of roadway operating conditions. The levels of service range from *A* to *F*, with *A* indicating the best operating conditions and *F* indicating the worst, or a failing, operating condition. Level of service thresholds are summarized in **Table 2**, the results of the capacity analyses are summarized in **Table 3.** Detailed capacity worksheets for existing conditions are included in **Appendix C.**

Table 2. Critical Lane Volume Level of Service Parameters

LOS	Volume (veh.)	Expected Problems at Intersection
A	≤ 1000	Very low delay
B	>1000 and ≤ 1150	Short delay
C	>1150 and ≤ 1300	Number of vehicles stopping is significant
D	>1300 and ≤ 1450	Influence of congestion becomes more noticeable
E	>1450 and ≤ 1600	Limits of capacity, moderate to excessive delay
F	>1600	Oversaturated traffic conditions, excessive delay

(Source: MD State Highway Administration.)

Table 3. Summary of Existing External Intersection Capacity Analysis AM (PM)

Intersection	Critical Lane Volume	Volume-to-Capacity Ratio	Level of Service
MD 186 at MD 410	922 (1,146)	0.58 (0.72)	A (B)
MD 410 at MD 185	1,760 (1,718)	1.10 (1.07)	F (F)
MD 186 at Leland Street[1]	793 (481)	0.50 (0.30)	A (A)
MD 185 at Leland Street	1,026 (953)	0.64 (0.60)	B (A)
MD 186 at Woodbine Street	721 (561)	0.45 (0.35)	A (A)
MD 185 at Woodbine Street	1,076 (941)	0.67 (0.39)	B (A)
MD 185 at Dunlop Street	1,316 (1,172)	0.82 (0.71)	D (B)
MD 410 at Glendale Road	636 (464)	0.40 (0.29)	A (A)
MD 410 at Curtis Street	498 (729)	0.31 (0.46)	A (A)

1 – The Curtis Street approach was not included for this intersection

D. Non-Local Traffic

A license plate survey was performed in March 2011 to determine the percentage of cut-through traffic along Leland Street between Glendale Road and MD 410 (East West Highway). The purpose of the license plate study is to determine the percentage of non-local traffic currently utilizing the neighborhood streets, i.e. those vehicles without either an origin or destination within the defined traffic shed. The evaluation was conducted by recording license plate data in the field and then entering them into a database to match tag between survey points as well as perform a record search of the vehicle's registered address.

Based on one hour (8:00 AM – 9:00 AM) of morning data the following was found:

In the morning hour of 8:00 AM – 9:00 AM it was reported that of 39 vehicles entering Leland Street from MD 185, 11 were local and 26 were non-local (67%). Likewise, in the morning hour of 8 AM – 9 AM it was reported that of 205 vehicles exiting from Leland Street onto MD 185 (Connecticut Avenue), 51 were local and 145 were non-local (71%).

Table 4 below illustrates the license plate study vehicles survey and the resultant percentage of traffic determined to be cut-through.

Table 4. License Plate Study

Location	*Date*	*Time*	*Within 4000 Ft Boundary*	*Outside 4000 Ft Boundary*	*Total Vehicles With Available Lic. Plate Info.*	*Remarks*
Leland Street between Glendale Road and MD 185	3/15/2011	8-9 AM	62	171	244	=70% >50% Cut Through Traffic. Meets Criteria
TOTAL			62	171	244	

E. Travel Time Analysis

Detailed field investigations of travel times along the existing neighborhood streets, and along the adjacent primary roadways were performed during a typical midweek day (October 11th and 13th, 2011) during the AM (6:00 – 9:00), while school was in session. The purpose of this analysis is to document relative travel times, including delay at signalized intersections, over routes that diverted traffic may experience if access restrictions were implemented on westbound Leland Street west of MD 186 (Brookville Road). Three travel time runs were conducted for Routes 1-3 listed below, and one run was conducted for Routes 4-6. The starting and ending points were the same for each route and compare likely cut-through routes with the same trip along study area roadways for the AM peak hours observed. **Table 5** illustrates a summary of the average travel times recorded during the AM peak hours. Detailed travel time information for each route can be found in **Appendix D.**

AM Routes

- ***Route 1 (Northwest-bound Baseline)*** In the morning (6:00 – 9:00 AM) from MD 186 at Leland Street; northbound along MD 186 to MD 410 westbound to the intersection of MD 410 and MD 185; right to MD 185 and Dunlop Street. The average duration of the **Baseline route in the AM is 8 minutes and 9 seconds.**

- ***Route 2 (Leland Street)*** In the morning (6:00 – 9:00 AM) from MD 186 at Leland Street; westbound along Leland to a right turn at MD 185; northbound through MD 410 and MD 185 to Dunlop Street. The duration of **Route 2 in the AM is 2 minutes and 39 seconds.**

- ***Route 3 (Leland Street and Glendale Road)*** In the morning (6:00 – 9:00 AM) from MD 186 at Leland Street; westbound along Leland to a right turn at Glendale Road; straight across MD 410 along Glendale; turning left at Glendale Road and Dunlop Street; turning right to MD 185 northbound. The duration of **Route 3 in the AM is 3 minutes and 0 seconds.**

- ***Route 4 (Southwest-bound Baseline)*** In the morning (6:00 – 9:00 AM) from MD 410 at MD 186; westbound along MD 410; to a left turn at MD 185 and following MD 185 south to Woodbine Street; The duration of **Route 4 in the AM is 9 minutes and 9 seconds.**

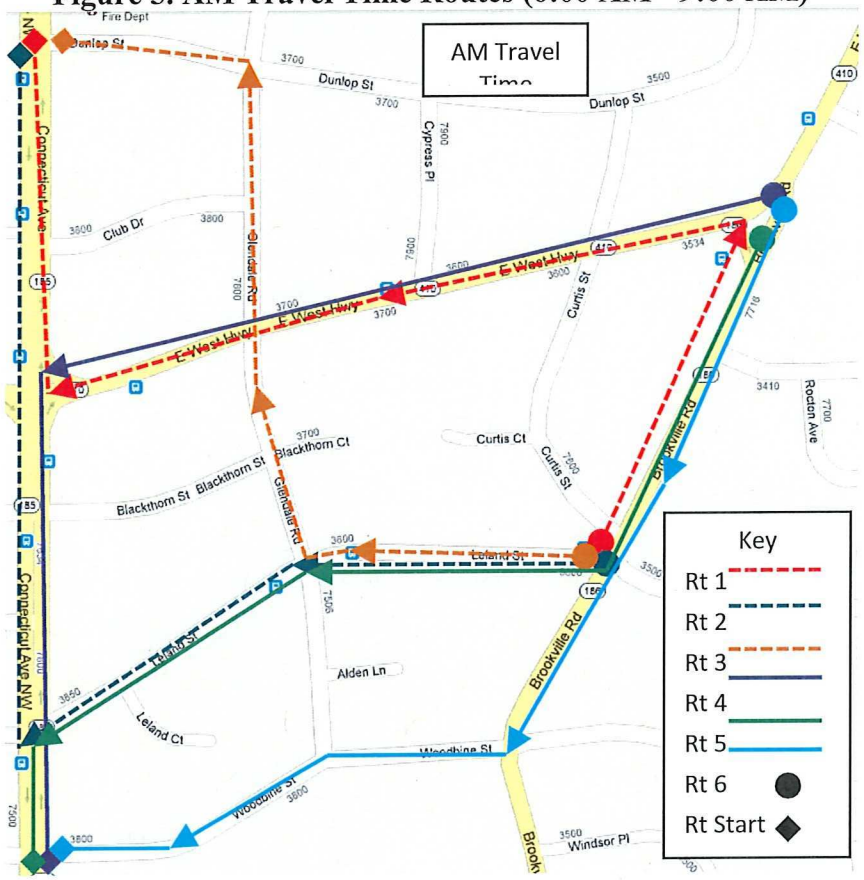
- ***Route 5 (Leland Street SB)*** In the morning (6:00 – 9:00 AM) from MD 410 at MD 186; left onto MD 186; southbound to Leland Street; right turn and continuing to MD 185; left turn and continuing southbound to Woodbine Street The duration of **Route 5 in the AM is 3 minutes and 44 seconds.**

- ***Route 6 (Woodbine Street)*** In the morning (6:00 – 9:00 AM) from MD 410 at MD 186; left onto MD 186; southbound to Woodbine Street; right turn and continuing to MD 185; The duration of **Route 6 in the AM is 2 minutes and 22 seconds.**

Table 5. Summary of AM Travel Time Routes

Direction	Route No.	Route Description	Travel Time
NB	1	Baseline	8 minutes, 9 seconds
NB	2	Leland Street	2 minutes, 39 seconds
NB	3	Leland Street and Glendale Road	3 minutes, 0 seconds
SB	4	Baseline	9 minutes, 9 seconds
SB	5	Leland Street	3 minutes, 44 seconds
SB	6	Woodbine Street	2 minutes, 22 seconds

Figure 5. AM Travel Time Routes (6:00 AM - 9:00 AM)



In summary, the increase in travel time for the diverted trips that will be forced to travel using major arterials or state highways because of access restriction will be approximately 5-1/2 minutes or greater.

F. Field Observations

A Professional Traffic Engineer observed the study area in October 2011 on a weekday during the morning peak, specifically focusing on driver behavior, traffic patterns and queues, geometry, and overall traffic operations. The following summarizes the observations:

- Heavy westbound traffic was present at the MD 410 (East West Highway) at MD 185 (Connecticut Avenue) intersection. Queues stretching back to MD 186 (Brookville Road) were observed along with multiple cycle failures (e.g. not all westbound vehicles along MD 410 (East West Highway) queued at the MD 185 (Connecticut Avenue) intersection able to clear during one green signal indication) One driver in such a queue was observed making a U-turn to cut through the neighborhood;
- school children were observed walking along the roadway along Leland Street and Glendale Road;
- School bus traffic was also observed along Leland Street and Glendale Road.

VI. ACCESS RESTRICTION ELIGIBILITY ANALYSIS

According to Executive Regulation 17-94AM, the eligibility requirements and satisfaction thereof are summarized below in **Table 7**. The evaluation focused on Leland Street.

Table 7 - Summary of Leland Street Access Restriction Eligibility Analysis

Criteria	Description	Hamlet Existing Condition	Satisfied?
Street Classification	Access volume restrictions limited to tertiary, secondary and primary residential streets	All of the study streets in Hamlet community are classified as secondary residential streets	**Yes**
Measured Traffic Volumes	A minimum two-directional volume: > 400 vehicles per hour for at least one hour of a weekday peak or off-peak time period on a **primary street** with one unobstructed travel lane in each direction > 250 vehicles per hour on a **non-primary residential street** with one unobstructed travel lane in each direction > 100 vehicles per hour on **any residential street** with one unobstructed travel lane serving both directions.	Based on the secondary roadway classification, the measured traffic volumes exceed the 100 total two-way volume per hour on Leland Street.	**Yes**
Estimated Non-Local Traffic	Non-local traffic must exceed 50 percent of the highest hourly volume, as documented by a license plate survey	Non-local traffic is above 50% for the highest hourly volume	**Yes**

Findings

The Hamlet Community Association in Montgomery County petitioned for a determination of access restriction eligibility to address a perceived cut-through traffic problem. The results of a technical analysis confirm the following findings:

- The land use (Hamlet) is single family residential, and serves internal (Hamlet local traffic) traffic.
- Existing traffic restrictions are present along the surrounding roadways adjacent to Hamlet but they do not cover the traffic shed of Hamlet.
- Based on the capacity analysis results under the existing conditions, the MD 186 (Brookville Road) at MD 410 (East West Highway) un-signalized intersection operates at an acceptable level of service and the MD 185 (Connecticut Avenue) at MD 410 (East West Highway) signalized intersection operate at an unacceptable level of service during the AM and PM peak hour. Both the MD 186 (Brookville Road) at Leland Street and the MD 185 (Connecticut Avenue) at Leland Street intersections operate at an acceptable during the AM and PM peak hour.
- A license tag survey documented 70% (171 vehicles) during the morning peak period were non-local traffic on Leland Street.

- Based on the above findings, Leland Street is eligible for access restrictions.

VII. ACCESS RESTRICTION PLAN IMPACT ANALYSIS

An access restriction plan must balance the needs of both the neighborhood and the prevailing traffic conditions. An access restriction plan may not include traffic calming measures such as speed humps or small traffic circles, nor does it permit a complete roadway closure. The plan may include signs and/ or physical barriers that "establish turn or entry restrictions, one-way residential streets, or mandatory turns".

The evaluation of access restriction plans should include the consideration of impact of ***diverted traffic*** on other roadways such as residential and arterial streets, impact on ***access to public facilities and community resources*** such as schools, parks, libraries, religious institutions or shopping centers, and lastly ***compatibility with area Master Plans***.

A. Preliminary Access Restriction Plan Impacts

The proposed plan, which was developed in collaboration with the Hamlet, is designed to limit through access for non-local cut-through traffic on roadways in the study area, while maintaining access for local residences and business in the community. The proposed recommendations include the following:

- Install a new sign reading, "Do Not Enter 7:00 – 9:30 AM Monday – Friday Except Buses" on westbound Leland Street at Brookville Road (MD 186).

B. Impact to Other Roadways

It is assumed that all traffic during AM rush hours on westbound Leland Street, west of Brockville Road (MD 186) will be re-directed to Brookville Road (MD 186) and then East West Highway (MD 410). Though, it is possible that some motorists may use Woodbine Street in order to avoid congestion at MD 410 (East West Highway) at MD 186 (Brookville Road) and at MD 410 (East West Highway) and MD 185 (Connecticut Avenue). However, the narrow road width and 20 MPH posted speed may discourage motorists to use Woodbine to cut-thru. Even so, Chevy Chase Section 5 officials may install the similar restrictions as on Leland and this matter is left to their discretion.

The additional diverted volume was added to the existing CLV volume for each affected intersection and is summarized below in **Table 8**. The results indicate that ***the additional diverted traffic volumes would not significantly impact existing levels of service at any of the adjacent critical intersections during the morning peak hour.***

Table 8. Future External Intersection Capacity Analysis AM (PM)

Intersection	Existing Critical Lane Volume	Existing Level of Service	Future Level of Service with AM restriction	Future Critical Lane Volume with restriction
MD 186 at MD 410	922 (1146)	A (B)	B (B)	1018 (1146)
MD 410 at MD 185	1760 (1718)	F (F)	F (F)	1784 (1718)
MD 186 at Leland Street	793 (481)	A (A)	A (A)	733 (481)
MD 185 at Leland Street	1026 (953)	B (A)	B (A)	1036 (953)
MD 186 at Woodbine Street	721 (561)	A (A)	A (A)	750 (561)
MD 185 at Woodbine Street	1076(941)	B (A)	B (A)	1084 (941)

C. Impact to Public and Community Facilities

The proposed access restriction on westbound Leland Street is only limited to morning peak hours to discourage commuter traffic that is cutting thru the neighborhood. However, the proposed restriction will not impact access to the schools and parks that are within vicinity of the study area. It is to be noted that there are no public and community facilities within the Hamlet. Therefore, the proposed access restriction will not adversely affect any other destination.

D. Master and Sector Plan Compatibility

The proposed access restriction plan would comply with the existing master and sector plans for this area.

VIII. SUMMARY AND RECOMMENDATION

The Hamlet community in Montgomery County petitioned for a determination of access restriction eligibility to address a perceived cut-through traffic problem. The results of a technical analysis confirm the following findings:

- A comparison of field-measured travel times along the three adjacent arterials and the study area has identified Leland Street during morning peak hours indicate a significant savings in travel time and distance for non-local traffic to cut-through the Hamlet community from MD 186 (Brookville Road) to MD 185 (Connecticut Avenue).

- The occurrence of non-local traffic on Leland Street is the result of commuters cutting through the neighborhood to avoid the queues at the intersection of MD 410 (East West Highway) and MD 185 (Connecticut Avenue).

- This study has determined the excessive volume of non-local traffic along Leland Street warrant the use of peak period restrictions to limit access through the community, with the intent to move the non-local traffic back onto the arterial streets or major highways.

- Leland Street meets the County's requirement for access restrictions.

- The access restriction proposal

  Do Not Enter 6-9:30AM, Mon-Fri. on westbound Leland Street at MD 186 (Brookville Road).

on Leland Street may affect streets that are parallel located on the south side under the jurisdiction of Chevy Chase Section 5. Moreover, the adjacent parallel streets may experience additional cut thru traffic. However, the restriction will not have significant impact on adjacent communities located on the north, east and west side of Leland Street. In addition, there will be no impact to public facilities or community resources and the proposed restriction was found to be consistent with the area Master Plan.

It is therefore recommended to proceed with the new access restriction measures proposed for Leland Street. However, the proposed access restrictions must be reviewed and approved by the Town Manager of Chevy Chase Section 5.