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Introduction

The Neighborhood Traffic Management Program (NTMP) for residential streets represents the commitment by Baltimore County to promote and maintain the safety and livability of the County's residential neighborhoods. As congestion along the highway network has grown in frequency, magnitude, and duration, resourceful motorists have found bypass routes through local residential streets. Aggressive driving and a diminished respect for other motorists, pedestrians, traffic control devices and general "rules of the road" have become more common. Increased traffic volumes and vehicular speeds have negatively impacted the livability of many residential communities.

In an effort to reduce the negative impact of traffic in our neighborhoods, the Neighborhood Traffic Management Program provides a process for identifying, evaluating and addressing undesirable traffic conditions relating to speed, volume and cut-through traffic in our residential neighborhoods. By working with the community and conducting the necessary traffic engineering studies, the Department of Public Works will assist the community in developing a plan to deal with these undesirable traffic conditions.

Goals

The overall goals of the Neighborhood Traffic Management Program are as follows:

1. Improve neighborhood livability by reducing the speeds and impact of vehicular traffic on residential streets, while providing for the safe, efficient and economical movement of persons and goods through the County.
2. Promote safe and pleasant conditions for residents, pedestrians, bicyclists and motorists on neighborhood streets, while preserving access for emergency vehicles, buses and other users.
3. Encourage and promote citizen involvement in all phases of the Neighborhood Traffic Management Program.
4. Make efficient use of County resources by ranking requested streets according to their Neighborhood Traffic Management Program point assignment scores and other factors.
5. Make periodic evaluations of the policy to ensure the stated goals are being met.

Implementation Procedures

Overview

A number of strategies are available to treat the described motorist behavioral problems. The overall effort is popularly referred to as “traffic calming”. Although “livability” issues are real, a traffic calming program should be needs driven. Traffic calming initiatives must be responsive to identified problems that can be quantified, ranked, and measured against acceptable uniform standards. Many of the traffic calming strategies have potential negative impacts including operational problems, public acceptance, and resource limitations.

A point system has been developed with equal weights given to the three main sources of undesirable traffic on residential streets. From this rating scale, the Department of Public Works will determine the severity of the problem and the appropriate level of response. Once this determination has been made the community must demonstrate adequate support using a petition process before any traffic calming devices will be considered for their street. After final design and community approvals, the Department of Public Works will use the street’s individual rating and available funding to prioritize construction. For streets that do not meet the required ratings or lack community support, alternative passive measures will be identified.

The Neighborhood Traffic Management Program has three phases of evaluation for determining road eligibility and the severity of the problem. The criteria in each phase must be met before advancing to the next phase. Phase II and Phase III require community petitions to be completed and verified. Depending on which phase the request completes and the score of the total evaluation will determine the appropriate traffic control strategies based on minimum requirements described in each phase.

There are three primary strategies to help the community minimize negative traffic impacts to the neighborhood. The levels of traffic control measures include: Passive Measures, Standard Measures, and Physical Alteration Control Measures. Each level of traffic control measures has several options available. The descriptions and limitations of the available options under each category can be found later in the text.

Application Process

Steps for consideration in the Neighborhood Traffic Management Program are listed below. Following the written description of the application process is a flowchart and worksheet that corresponds to each step of the application process. In addition, there are blank forms located in the appendix.

1. The Community requests the Department of Public Works in writing to consider a street in their community for a Neighborhood Traffic Management Program. The request shall include the community representative's address, daytime phone number the street to be studied and the limits of the study. Additionally, a brief description of the community's concerns should also be included. This action initiates Phase I of the evaluation.
2. To complete Phase I of the evaluation and proceed to Phase II, a street must meet four basic requirements. The requirements are as follows:
 - The street must be classified as a **LOCAL** roadway as described in the Federal Highway Functional Classification System. (A list of the ineligible, higher service collector and arterial classified roads on **our web site at www.baltimorecountymd.gov**)
 - The road segment to be studied must be at least 1000' long.
 - Dead end streets and cul-de-sacs will not be considered.
 - The majority of the property adjoining the street must be residential.
 - The street must be within the urban rural demarcation boundary

Streets failing to meet these basic requirements will only be eligible for Passive Traffic Control Measures.

3. After the Department of Public Works has verified the basic requirements of Phase I of the evaluation have been met, the Department of Public Works will schedule Phase II of the evaluation, which consists of measuring traffic volume and average speed for the requested street.
4. Once the speed and volume counts are obtained, they will be analyzed by the Department of Public Works. Points will be assigned for the highest one hour traffic volume and the average speed of all vehicles over a 48hr period. Streets failing to meet the minimum requirements of Phase II will only be eligible for **Passive Traffic Control Measures**.
5. Department of Public Works will contact the community representative to schedule Phase III of the evaluation. Phase III of the evaluation consists of an origin and destination study to be performed by the community and supervised by the Department of Public Works. This study will be used to determine the amount of cut-through traffic that is using the street. If the level of traffic volume determined by the traffic counts makes it obvious that the street has more than 50% cut through traffic points will automatically be assigned.

6. Points will be assigned to Phase III of the evaluation after the origin and destination study is completed and reviewed by the Department of Public Works. In addition, the Department of Public Works will provide other considerations by assigning points for school zones/pedestrian generators on the requested street and for areas lacking sidewalks. The points awarded in Phase II and Phase III will be totaled and a final determination will be made as to whether the street qualifies for Standard Traffic Control Measures or Physical Alteration Control Measures. Minimum points required for Standard Traffic Control Measures is 20. Minimum points required for Physical Alteration Control Measures is 30.
7. The Department of Public Works will develop a custom construction plan for the community's approval. The plan and a map showing which homes need to be petitioned will be sent to the community representative. The petition requires an overall approval rate of 75%. In addition, ALL of the homes immediately adjacent to a proposed calming device being must sign on the plans in favor of the installation.
8. If the required approvals are obtained, the Department of Public Works will proceed with final design and schedule the project for construction using the street's rating and available funding.

Removal of an approved device:

Once calming devices have been installed they will be considered permanent. After the device has been installed for one year the Community may request the County to remove the device. The request must be accompanied by a petition signed by 75% of the community requesting the removal.

Requests for re-study of streets that did not qualify

If the initial study shows that the minimum traffic volume have been met but the average speed requirements were not the community may request the County to re-study the street. The Community shall provide the County with the exact location where the counts should be taken. If the re-study indicates that the street still does not qualify the Community may resubmit an application 9 months after the date of the second study. Streets that did not meet the minimum traffic volume requirements may submit a new application 9 months after the date from the first study.

Community Request to
Department of Public Works

Phase I
Minimum Requirements
(Road Characteristics)

Phase II Evaluation
(Speed & Volume)



Phase III Evaluation
(Cut through traffic)

Develop Concept Plan with
Community

Community Petition
75% Approval

Final Design
and Construction

PHASE I

	YES	NO
1. Is the requested street a local street as determined by the Federal Highway Functional Classification System?	<input type="checkbox"/>	_____
2. Is the requested street at least 1,000' long?	<input type="checkbox"/>	_____
3. Is the requested street a dead end or cul-de-sac?	_____	<input type="checkbox"/>
4. Is the majority of the property adjoining the requested street residential?	<input type="checkbox"/>	_____
5. Is the street inside the urban rural demarcation boundary	<input type="checkbox"/>	_____
* Questions 1 through 5 the highlighted box must be checked to proceed to Phase II. If not, then Passive Traffic Control Measures will be applied to the request.		

PHASE II

1. Traffic Volume
 Traffic Volume is measured by Vehicles per Hour (VPH) for the highest hour in a 24 hour period. Points are awarded based on the level of the VPH.

<u>VPH</u> 100 to 149	<u>VPH</u> 150 to 250	<u>VPH</u> 251 plus	Awarded Points
5 Points	10 Points	15 Points	_____

2. Traffic Speed
 Traffic Speed is measured by the Average Mile per Hour (MPH) for all vehicles. Points are awarded based on the difference between the average speed and the posted speed limit.

<u>MPH</u> 3 to 6	<u>MPH</u> 7 to 10	<u>MPH</u> 11 plus	Awarded Points
5 Points	10 Points	15 Points	_____

* Phase II Point Total must be 20 points or greater to proceed to PHASE III. Phase II Point Total Requests scoring between 20 and 29 points qualify for Standard Traffic Control Devices. _____

PHASE III

1. Cut Through Traffic
 Cut Through Traffic is measured by the percent of total traffic that is non local traffic. Points are awarded based on the percentage of total traffic that is non local traffic.

<u>0 to 49 %</u>	<u>50 to 75%</u>	<u>76 % plus</u>	Awarded Points
0 Points	10 Points	15 Points	_____

2. Other Considerations
 If a School Zone or Pedestrian Generator is present, add 5 Points. _____
 If no sidewalks are present on the requested street, add 5 Points. _____

Phase III Point Total _____

Passive Measures	- Minimum Points Required = 0	
Standard traffic control Measures	- Minimum Points Required = 20	Total Points _____
Physical Alterations	- Minimum Points Required = 30	

Neighborhood Traffic Management Program Point System Criteria

The following point system criteria are used to determine the street's point score:

Traffic Volume – Points are assigned according to the street's Peak Hour Volume (PHV). Peak hourly volumes are normally registered between the hours of 4:00 to 6:00 PM, on average weekdays. Points are given on a graduated scale from 100 to greater than 250. Streets with a PHV of less than 100 will be approved for passive measures only.

Speed – Points are assigned according to how many miles per hour the average speed is measured above the posted speed limit. Points will be assigned on a graduated scale from 3mph above the limit to greater than 11mph. Streets with an average speed below 3mph above the posted limit will only be eligible for passive measures.

Cut-Through Traffic – is defined as a motorist using the street as a short cut and are not destined to a location on the street. The community will perform a license plate survey (supervised by the County) to determine the amount of cut-through traffic using the street. A graduated scale will be used to assign points based on the percentage of cut-through traffic ranging from 50% to greater than 75%.

School Zone / Pedestrian Generators – 5 points will be assigned if a school is located on the street or in the immediate area or if other pedestrian generators such as a community park, shopping center, etc. are in the same area.

Sidewalks – 5 points will be assigned if the street does not have continuous sidewalks on at least one side of the street.

Neighborhood Traffic Management Program Solutions

Passive Traffic Control Measures

Passive measures include educational methods and police enforcement. No minimum criteria must be reached to be eligible for this level. Some examples of measures that can be taken under this level are as follows:

1. Speed notification sign board - this device displays a motorist's speed as they approach the signboard in an effort to educate the driver that their speed might be inappropriate and to raise driver consciousness of their travel speed.
2. Community mailings – a letter sent from the community association to all of the residents of the street asking for their assistance to help control the speed that they travel in the community. This procedure is effective if cut-through problems are not present.
3. Community day out – sidewalk demonstrations during peak travel time to bring attention to passing motorists that your community is concerned about speeding.
4. Police enforcement – periodic radar enforcement.



Standard Traffic Control Measures

Standard traffic control devices include one-way patterns, turn restrictions and pavement markings.

Multi-way stops are not effective in controlling speeds and can oftentimes reduce a street's level of safety when installed at unwarranted locations. Therefore, stop signs are not included in the NTMP.

Minimum Requirements: Local residential roadway, 1000' or longer with a total point value of 20 or greater and a final petition, signed by a least 75% of the affected residence.

One-way patterns: Primarily effective in reducing traffic volumes and cut-through traffic and can also increase the availability of on-street parking. Speeds could also increase due to the lack of opposing motorist's and the potential for wider travel lanes.



Turn Restrictions: Primarily effective in reducing traffic volumes and cut – through traffic. These restrictions could be full time or just during peak travel times when the amount of cut-through traffic is the highest. Turn restrictions require police enforcement to be effective.



Pavement Markings: Using paint to narrow the travel lanes can have a calming effect and provide extra room for bicycles and parked cars. Some communities feel that this type of treatment gives the road a more urban look and is less appealing.



Physical Alteration Control Measures

Physical alterations include Traffic Circles, Chokers, Pedestrian Refuge Islands, Medians and Speed Humps.

Minimum Requirements: Local residential roadway, 1000' or longer with a total point value of 30 or higher and a final petition signed by a minimum 75% of the affected households and by all of residences with a device being installed in front of their homes must sign.

- **Speed Humps** – Speed humps will only be used in a limited fashion. While these devices are effective in reducing speed and are relatively inexpensive to build, they also cause aggravation to motorists and can cause them to divert onto other local streets to avoid them. Therefore, Baltimore County will try to limit the number of speed humps used on individual streets. Only the flat top style speed humps shall be installed which consist of a 6' parabolic approach to a 10' long plateau in the center resulting in a total length of 22'.



- **Chokers/Pedestrian Refuge Islands** – Chokers are the narrowing of streets, either at an intersection or mid-block, to reduce the width of the travel way. Chokers can be designed to widen the sidewalk (bulb design), or an island may be constructed, which would force the traffic toward the curb (island choker). Either way, chokers appear to have the greatest effect in the area of pedestrian safety. By reducing the amount roadway width, the choker dramatically reduces the exposure time that a pedestrian is in the street. Additionally, both chokers break up the appearance of the roadway and may be landscaped to increase the attractiveness of residential neighborhoods.



- **Traffic Circles** – Traffic circles are different from traditional roundabouts in that they are circles placed in an intersection without modifying the outside curbs. As with roundabouts motorists must yield to traffic in the circle. The primary consideration for installing these types of devices will be the effect on emergency vehicles and school buses. They must be designed in a way that these types of vehicles can either turn left by going around the circle or in some cases turn left in front of the circle by driving over mountable splitter islands.



- **Full and Partial Closures** – Closures are islands and other devices that prevent motorists from turning onto a street or making certain turns off of a street. While these types of devices attempt to achieve similar results as turn restriction signing, they do not require the same level of police enforcement to be effective.



Appendix

blank initial request form

blank petition form

Neighborhood Traffic Management Program Request Form

Community Organization (if any):

Community Representative:

Address

City

State

Zip Code

Work Phone

Home Phone

E-mail Address

Requested Street

Address on the street where speeds are the highest (**critical information**)

Description of the Problem

Mail the completed request form back to
Baltimore County Department of Public Works
Traffic Engineering and Transportation Planning
111 West Chesapeake Avenue, Room 326
Towson, Maryland 21204

