

Neighborhood Traffic Calming Program

Introduction

The Neighborhood Traffic Calming Program (NTCP) for residential roads represents the commitment by Charles County Government to promote and maintain the safety and livability of the County's residential neighborhoods. In an effort to reduce the impact of traffic on our neighborhoods, the NTCP provides a process for identifying, evaluating, and addressing undesirable traffic conditions related to speeding and excessive traffic volumes in residential subdivisions.

The Neighborhood Traffic Calming Program has four primary goals:

- Improve neighborhood livability by reducing the speeds and impact of vehicular traffic on residential roads, while providing for the safe, efficient, and economical movement of persons and goods throughout the County.
- Promote safe and pleasant conditions for residents, pedestrians, bicyclists, and motorists on neighborhood roads, while preserving access for emergency-vehicles, buses, and other users.
- Encourage and promote citizen involvement in all phases of NTCP.
- Make efficient use of County resources based on need by ranking requested roads according to their NTCP point assignment scores and other factors.

By conducting the appropriate traffic engineering studies and by soliciting the input of a community's residents, County staff can determine the type and severity of traffic problems occurring on a particular residential road. With the NTCP's point assignment system, requested streets can be evaluated and rated according to their individual point scores, which reflect the prevailing traffic conditions on the street.

This document describes traffic calming measures that can be implemented and the process whereby citizens and the County government work together to improve neighborhood traffic conditions through NTCP. Eligible roads with community approval will receive funding for construction of traffic calming devices based on the point score and as funds become available.

Eligibility and NTCP Point Assignment System

For the purposes of NTCP, a residential road is defined as a County-maintained roadway with substantial residential development and medium-to-small sized lots fronting both sides of the road. This residential road cannot function as a major collector or as an arterial road. Five eligibility criteria must be met before continuing with traffic study and point assignment.

Please refer to the Point Assignment Worksheet attached to this document.

The following information is used to develop a numerical score for each requested residential road. Scores are used to rate the requested roads according to their prevailing traffic conditions and to determine which level of NTCP measures is appropriate for the subject road. A high score, available funding, and other factors are used to determine which roadways will proceed to the next NTCP phase, which may involve direct community participation in educational measures such as the Speed Awareness Program or obtaining the required community approval for the installation of such measures as speed humps and traffic circles.

ELIGIBILITY CRITERIA

The initial step in determining a requested road's eligibility is to identify the road classification. NTCP is allowed for two categories of residential roads. Road classifications are defined by the Department of Planning & Growth Management.

- Local Road – A 24-foot-wide (or narrower) local access road.
- Minor Collector Road – A 26'-30' wide road which functions as a main access point to a neighborhood or as a through road, but does not directly connect two major roads

The roadway posted speed must be 30 mph or less and the length of the road must be at least 1500' long. Traffic calming also cannot be placed on an emergency response route. Finally, traffic calming is appropriate for moderately dense communities with smaller lot frontage, where the ratio of road length (in feet) to number of homes is 80 or less.

If all of the above preliminary eligibility criteria are met, then the Department will determine the petition area and provide petition forms to a community representative. A minimum of 50% of the households (one resident per household) must sign the petition before continuing with the point system process. The preliminary eligibility criteria are shown at the top of the Point Assignment Worksheet following this section.

POINT SYSTEM CRITERIA

If the road meets the preliminary eligibility criteria, then a point system using nine criteria is used to determine the road's score.

1. Speed

Points are assigned according to how many miles per hour the measured 85th percentile speed on the requested road is over the posted speed limit. The 85th percentile speed indicates that 85 percent of vehicles on a particular road are traveling at this speed or below, as measured by a spot speed study. The 85th percentile speed is a nationally recognized standard.

35 points maximum score

2. Traffic volume

Points are assigned according to the road's category and the desirable AWDT for that category. The desirable AWDT is based on the road's width, function, and the type of traffic which it should handle, considering the overall local roadway network. Points are assigned according to how much greater (by percentage) the current AWDT volume on the requested road is than the desirable AWDT volume for the road category into which it falls (see the Neighborhood Traffic Calming Program Point Assignment Work Sheet for details about the traffic volume and other criteria).

30 points maximum score

3. Traffic accidents

Points are assigned based on the road's accident rate (accidents per million vehicle miles) for the three most recent years for which accident data is available. Adjustment factors of 2 and 1.5 are used, respectively, for converting accident rates into score points for local and minor collector residential roads. Additional points are given if there is a record of pedestrian or fatal accidents in that time period.

30 points maximum score

4. Elementary school or playground on the roadway

Ten (10) points are assigned to a road on which an elementary school or a playground is located.

10 points maximum score

5. Is this a walk-to-school route?

Ten (10) points are assigned to a road providing a walking route assigned by the Board of Education for a walking school.

10 points maximum score

6. Major pedestrian generators

Five (5) points are assigned to a road which has one or more major pedestrian generators within one-quarter mile of the road. Major pedestrian generators include schools, libraries, parks, playgrounds and stores. This point assignment would not be used if pedestrian activity is already captured by use of criteria # 4 or #5.

5 points maximum score

7. Sidewalk

Points are assigned according to how much (by percentage) of the road does not have sidewalk. The points are calculated by multiplying the percentage of the road without sidewalk by 10. For example: 80% (without a sidewalk on either side) x 10 = 8 points.

10 points maximum score

7. Limited sight distance

Five (5) points are assigned to a road with uncorrectable and extensive sight distance limitations due to such conditions as vertical or horizontal curves.

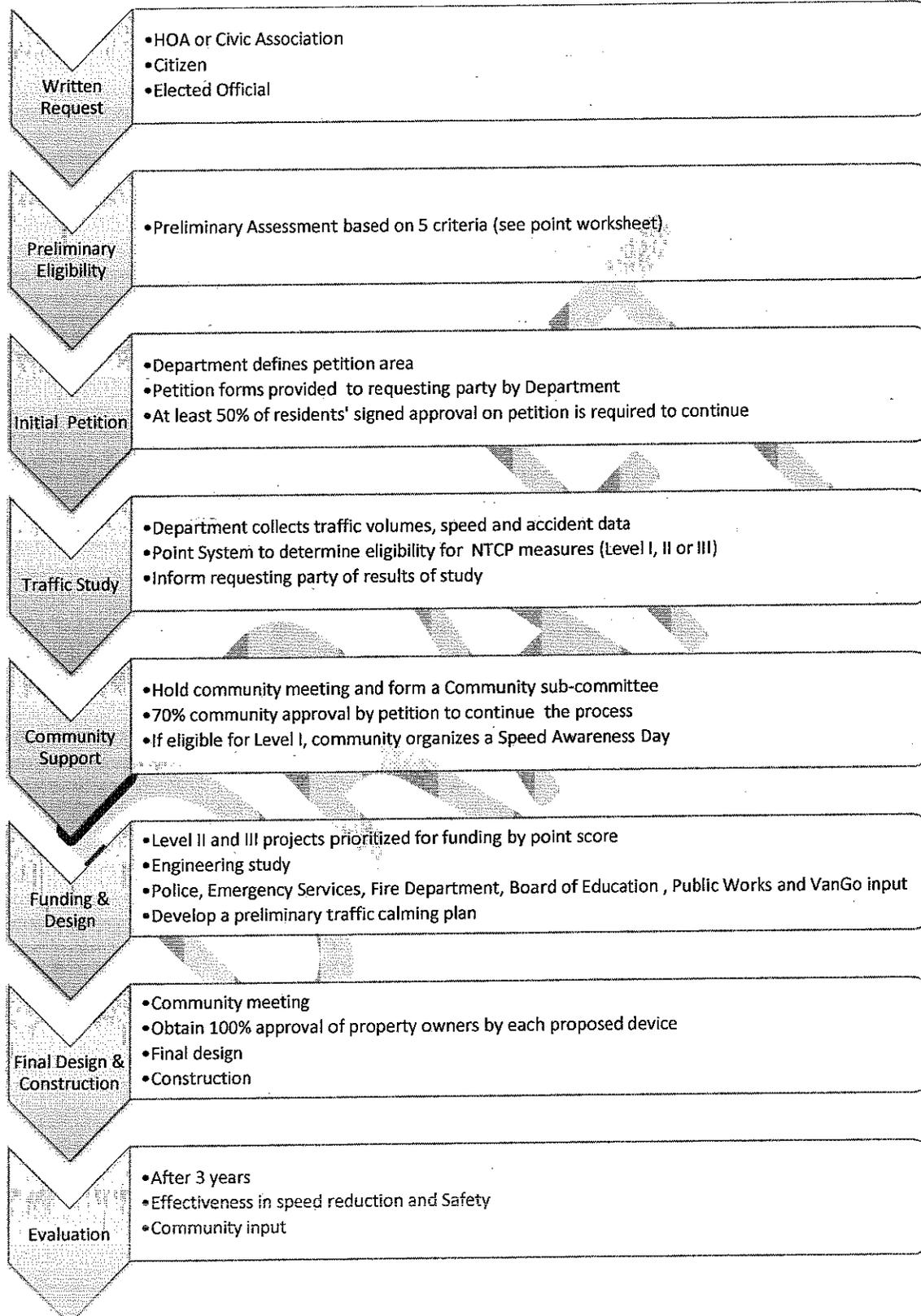
5 points maximum score

8. Cut-Through Traffic

Ten (10) points are assigned to a road on which a majority of the current AWDT volume is comprised of non-local (cut-through) traffic. It is expected that non-local motorists (typically commuters) may not be as sensitive to a neighborhood's safety needs as the neighborhood's residents. In addition, non-local motorists may be less receptive to neighborhood-sponsored educational measures such as the Speed Awareness Program.

10 points maximum score

The Neighborhood Traffic Calming Process



TRAFFIC CALMING REQUESTS AND DEPARTMENT RESPONSE

Written requests for neighborhood traffic calming can be made by individual citizens, elected officials or by the home owners association or civic associations. The request shall include the name of the citizen, HOA or community representative, address, daytime phone number, name of the street to be studied and detailed concerns of the community. The request is made to the Director of the Department of Planning & Growth Management.

When a request is received, the Department will conduct a preliminary assessment for eligibility. If the road meets the preliminary eligibility criteria, a petition area will be defined that includes homes that would be affected by traffic calming measures, both on the street in question and on side streets. The citizen or community representative will be provided with petition forms and at least 10 households or 50% of the residents, whichever is less, must request traffic calming in order to continue the process.

At that time, the Department will begin a traffic study of the requested road in order to obtain traffic speed, volume and accident information. In addition, information on pedestrian safety and the road's physical conditions will be gathered. The Department will review this information and assign points to the studied road, as described in the preceding section, NTCP's Point Assignment System.

According to the road's point score and the study's overall findings, the staff will recommend the appropriate level of NTCP measures to address the road's prevailing conditions. (A minimum score of 50, 60, or 80 points is required for a road to be eligible for Level I, II, or III, respectively.) The original requestor will be informed in writing of the study's results.

COMMUNITY MEETING

If the score is less than 50, enforcement and education measures will be recommended. If the score is 50 or more, and the community chooses to proceed for Level I, II or III measures, then a community meeting will be held. At this meeting, details about the various NTCP educational measures (such as the Speed Awareness Program), the installation of physical traffic calming devices (traffic circles, speed humps, etc.) or the implementation of traffic diversion measures (one-way road patterns, turn prohibitions, etc.) will be discussed. The required neighborhood approval process (by agreement, petition, and/or public hearing) for the selected measure will also be discussed.

If a road is found not to be eligible for any level of NTCP measures, the staff will always review such a road to ensure that all of the appropriate traffic control devices are in place in accordance with the *Manual on Uniform Traffic Control Devices*. The community must wait two years to re-apply.

A sub-committee will be formed from the community meeting. The sub-committee will obtain the minimum 70% community approval on the petition forms and provide the original forms to the Department. If Level I NTCP is recommended, the community will organize a Speed Awareness Day with the Department's and Sheriff's Office support.

DESIGN PROCESS INVOLVING COMMUNITY AND DEPARTMENT

At this point, the road has been found to be eligible for NTCP measures, with 70% community support. If eligible for Level II or III NTCP, funding for further review and design will be made available to eligible projects prioritized by their point scores. The community sub-committee will assist the Department during the study period. A study will be made to determine if the road's physical conditions (horizontal curvature, grade, drainage, etc.) will allow the safe installation of physical traffic calming devices. The Charles County Sheriff's Office, the Emergency Services Department, the Volunteer Fire Department, the Board of Education, the Public Works Department and VanGo will be consulted to ensure that proposed devices will not impose an undue hardship on the operation of emergency-vehicles, snow plowing equipment and buses. Also to be assessed at this point is the probability that the installation of traffic calming devices on a particular road may divert traffic onto other residential roads. If a significant volume of traffic is expected to be diverted onto other roads, those roads will be identified and evaluated for possible installation of traffic calming devices.

A final community meeting will be scheduled to review the proposed locations and types of management devices, shown on a preliminary design plan. With 100% approval by property owners immediately adjacent to any planned devices, the Department will proceed to final design and construction of the recommended traffic control measures.

It should be noted that the NTCP approval process also requires input from the Charles County Sheriff's Office, the Emergency Services Department, the Volunteer Fire Department, the Board of Education, the Public Works Department and VanGo in terms of their impact on emergency response time in the serving area, bus service and road maintenance issues. The representatives from these Departments are invited in the community meeting, organized by the community, to provide their input on how the possible measures will impact the community. This is to ensure that the community makes an informed decision about emergency services in their respective area before sending the petition to the Department. We reserve the right not to proceed with the installations if there are negative impacts expressed by the other Departments.

IMPLEMENTATION OF APPROVED NTCP MEASURES

When the Department receives the required neighborhood agreement to participate in educational measures or the required approval for either the traffic calming devices or traffic diversion plans, implementation will proceed as follows:

1. For educational measures, Level I NTCP, schedule and coordinate Speed Awareness Days;
2. For traffic diversion measures, Level III NTCP, install the appropriate traffic control devices (signs) to establish one-way roads or turn prohibitions;
3. For the installation of physical traffic calming devices, place the eligible road on a candidate list for installation, which will be prioritized according to each road's point score, the initial date of request for the road, available funding, schedule of resurfacing of that particular road, and other factors.; and
4. Three years after the described traffic calming devices have been installed, the Department will evaluate the effectiveness of the NTCP measures and their impact on the surrounding road network. The Department will conduct a "post" speed study, collect "post" accident data and monitor the project road. Community input will also be requested for the evaluation.
5. After installation, the Department reserves the right to remove any traffic calming devices which do not improve the safety of the roadway. The community should assume that the devices will be permanent, but if the community changes its mind after the 3-year trial and wishes to petition that the devices be removed, then 70% of the residents must sign the petition for removal and the community must pay for the removal.

Traffic Calming Measures

All County roads qualify for traffic control devices in accordance with the *Manual on Uniform Traffic Control Devices*, the use of which is mandated by State law. This manual, prepared by a national joint committee of municipal, county, and state officials, describes conditions or warrants which should be present prior to the installation of traffic control devices, including the multi-way stop control.

NTCP traffic calming measures for residential neighborhoods have been classified in three levels, each progressively more restrictive to motorists using the road. This section describes these measures

Note that the multi-way stop control, one of the most frequently requested traffic control devices, is not included. The multi-way stop control may be warranted at locations with significant and approximately equal volumes on all approaches, where a correctable accident problem exists that cannot be solved using other means or as an interim measure where a traffic control signal is urgently required. Due to the significant volumes required, a multi-way stop control is seldom warranted within residential neighborhoods. The multi-way stop has been shown to be ineffective in providing the desired state of reasonable and consistent speeds throughout the roadway, is detrimental to air and noise quality due to the number of starts and stops, and can cause safety problems due to the high incidence of non-compliance.

TRAFFIC CALMING MEASURES:

LEVEL I

Speed Awareness Program
Special Pavement Markings
Signs, including Speed Limit Signs

LEVEL II

One-Way Roads
Turn Prohibitions
Speed Humps
Traffic Circles
Roundabouts
Semi-Diverter
Chokers

LEVEL III

Diagonal Diverter
Full Closures

LEVEL 1 MEASURES (REQUIRED POINTS

SCORE = 50 POINTS)

Level 1 measures are passive in nature and include educational methods and special pavement markings. For some of these measures to be implemented, a civic association's involvement is required. Residents may also be required to participate in the educational measures.

Speed Awareness Program

The Speed Awareness Program is an educational measure intended to increase motorists' awareness of the speed at which they travel on neighborhood roads and to provide residents a positive outlet to show their concerns regarding speeding in their neighborhood. The program provides a Speed Monitoring Device, SMD, which includes a radar unit, a speed limit sign, and a digital speed display board that shows motorists the speed at which they travel. SMD is used during Speed Awareness Day events scheduled and attended by at least 10 members of a participating HOA or civic association.

The purpose of the Speed Awareness Program is to assist citizens' organizations throughout the County in addressing chronic speeding conditions on specific roadway sections by participating in "Speed Awareness Day" events.

A Speed Awareness Day is a 4- to 6-hour event during which a group of citizens (minimum 10 persons) assembles at a safe location adjacent to the targeted roadway to demonstrate their concern about speeding conditions. Typically, groups draw attention by conveying a positive message to passing motorists (e.g. "Safe at 25 MPH," "No Need to Speed," etc.) through the use of preprinted signs and apparel. It is the sole responsibility of the citizens' organization to plan, schedule, and publicize the event and to provide the necessary signs, T-shirts, etc.

For its role, the Department provides and monitors a SMD and provides loaner safety vests for the participants. The Department will also request that at least one Charles County Sheriff's Office representative be present during the event.

Requests for scheduling of Speed Awareness Day events are coordinated through the Department's Roads Division.

Special Pavement Markings

Special pavement markings involve the installation of shoulder/parking lanes and center left-turn lanes to narrow the travel path in an effort to better control speeds. These special lanes are used on roadways which are at least 36 feet wide, and they have the greatest benefit on roads where limited on-road parking occurs.

LEVEL II MEASURES (REQUIRED POINTS SCORE = 60 POINTS)

Level II measures include traffic control devices and physical measures which control access to neighborhoods, change travel patterns, and regulate the flow of traffic through the neighborhood. Prior to implementation of a Level II measure, a petition must be signed by the affected residents.

One-Way Roads

One-way roads are used to deter cut-through traffic by changing the traffic pattern in a neighborhood. They should be implemented only after careful study, as they may cause speeding conditions due to the lack of opposing traffic, and they may increase emergency-vehicle response times. To be implemented, one-way roads require a convenient parallel roadway and approval by residents of both roads. They should not be implemented on roads wider than 26 feet or when alternative routes are not available.

Turn Prohibitions

Turn prohibitions are used to deter cut-through traffic by prohibiting entry into and out of a neighborhood on roads which primarily experience a peak hour through-traffic problem. Turn prohibitions should be implemented only after careful study as they may divert traffic to nearby residential roads or to intersections with an existing congestion problem. Turn prohibitions shall not be considered for residential collector roads. Turn prohibitions require police enforcement to be effective.

Speed Humps

Speed humps are raised sections of pavement designed to reduce speeds on residential roads. They may also reduce through traffic volumes where suitable alternative routes are available. Speed humps are not to be confused with speed bumps: humps have a more gradual rise and have not been found to create safety or operational problems. Humps are used in a series and are usually spaced from 400 to 600 feet apart. They should not be installed on roads less than 1,500 feet in length or on cul-de-sacs and dead-end roads. Speed humps should also not be installed at driveways, on severe grades or curves or on roads wider than 40 feet. Locations without curb and gutter must be considered carefully as such locations may encourage motorists to use the shoulders to avoid the hump. Speed humps should be located at least 200 feet away from intersections or sharp horizontal or vertical curves which restrict sight lines. The type of speed hump currently used by the Department is the flat-top profile, which is designed for use on roads with an Average Weekday Traffic (AWDT) of fewer than 5,000 vehicles. Locations with an AWDT of more than 5,000 vehicles must be studied carefully prior to installation of any feasible device. Flat-top humps appropriately spaced have been shown to reduce speeds to between 24 and 30 MPH throughout the entire roadway.

Traffic Circles

Traffic circles are raised islands placed at four-way and T-intersections. Used only on residential roads, circles are intended to reduce the speed of traffic by reducing the road's width and forcing motorists from their normal travel path. The circles are installed in a series and are spaced from 600 to 1,000 feet apart to maintain a reasonable speed throughout the road. Traffic circles offer the neighborhood an opportunity for beautification, as landscaping may be placed within the raised islands. (Prior to installation of circles, the citizens' group needs to agree to maintain the landscaped area) Traffic circles differ from roundabouts (see below) in that motorists turning left at traffic circles are not required to drive around the island placed within the intersection. This type of operation is required due to the difficulty experienced by truck operators in making left-turn movements when they are required to drive around the island. Stop signs are retained on the minor road approaches, and the normal right-of-way rules prevail. To limit the number of conflicts within the intersection, it is recommended that the greater of the minor roads' AWDT be limited to fewer than 1,000 vehicles per day and that the road's width not exceed 36 feet. Traffic circles may be supplemented by other raised traffic islands on a road where unevenly spaced intersections

would lead to improperly spaced traffic circles. These islands (which vary in shape) are placed at T-intersections and mid-block locations; they cause a lateral (horizontal) shift in traffic, thereby slowing motorists.

Roundabouts

Like traffic circles, roundabouts have a circular raised island in the center of an intersection. In addition, divisional islands are used on some or all of the approaches to prevent traffic from making direct left-turn movements in front of the center island. Roundabouts are large enough for trucks and buses to traverse, and KEEP RIGHT and ONE WAY signs are placed to establish a counter-clockwise flow of traffic around the island. Roundabouts are appropriate where traffic circles are desired but the minor road AWDT exceeds 1,000 vehicles per day, and on roadways wider than 36 feet. Roundabouts have YIELD signs on each approach and provide the added benefit of reducing delays to side-road traffic by giving equal vehicular right of way. They also reduce intersection related accidents by slowing approaching motorists and eliminating direct left turns.

Semi-Diverter

Semi-diverters are the narrowing of road approaches to intersections. In conjunction with Do Not Enter signs, these devices are used to prevent access into a neighborhood. Semi-diverters are installed to address through traffic problems by modifying traffic patterns in the same manner as one-way roads while still allowing two-way traffic beyond the prohibition. Because of their effect on traffic patterns, semi-diverters should be installed only on roads which have an adequate alternative route to serve diverted traffic. Because they can be easily violated, police enforcement is required to obtain the full benefits of semi-diverters.

Chokers and Center Medians

Chokers are the narrowing of roads, either at an intersection or midblock location, to reduce the speed of motorists. The narrowing is usually accomplished by reconstructing the curb line to extend into the road in a "bulb" fashion, but can also be achieved by providing an island in the center of the road (center median or reverse choker). Chokers are similar in appearance to semi-diverters, but two-way traffic is maintained. The primary advantages of chokers are safer pedestrian movements due to a reduction in the distance and time it takes to cross the road, and an improved neighborhood appearance when properly landscaped. Chokers are often combined with other physical measures such as traffic circles or roundabouts.

LEVEL III MEASURES (REQUIRED POINTS SCORE = 80 POINTS)

Level III measures are used solely for the purpose of addressing severe through-traffic problems. These measures have the greatest detrimental impact on the residents of the neighborhood and should be considered only after all other measures have been shown to be

ineffective. In addition to requiring a petition (as in Level II), Level III measures require a public hearing to give the general public an opportunity to express their concerns. Due to the severe impact on travel patterns, Level III measures should not be considered on residential collector roads.

Diagonal Diverters

Diagonal diverters are raised curbed and landscaped areas placed diagonally at intersections. These devices convert the intersections into two unconnected roads with sharp turns. They are strategically located to prevent direct movements through a neighborhood while still allowing the through movement to occur over a longer distance. The additional time it takes to traverse the neighborhood discourages through traffic. Diverters should only be used as part of a system of neighborhood traffic calming devices, as individual installations do not benefit the neighborhood as a whole.

Full Closures

Full closures are the most effective, but also the most restrictive, neighborhood traffic calming devices used to deter through traffic. They involve removing or completely blocking the paved area at a strategic point and constructing turnarounds. Full closures should only be considered when all other traffic calming devices have been found to be ineffective in addressing the neighborhood's problem. Full closures should only be considered at locations where a reasonable alternate route exists and where the impacts to the neighborhood and the general traveling public are considered acceptable.

Note: The Department reserves the right to implement or install NTCP measures to address critical safety concerns directly attributable to excessive traffic speeds or volumes, even if the generally required citizen support is not received. In addition, once any NTCP physical measure is installed, it shall only be removed or modified with 70% of community support and full community funding or if it is determined that the measure is the direct cause of a traffic safety problem.

NEIGHBORHOOD TRAFFIC CALMING PROGRAM

POINT ASSIGNMENT WORKSHEET

ROAD NAME _____

FROM _____ TO _____

LENGTH _____ (FT)

NUMBER OF HOMES WITH DRIVEWAYS ON ROAD _____ RATIO _____

STAFF _____ DATE _____

PRELIMINARY ELIGIBILITY CRITERIA:

	Yes	No
Is the requested road a two-lane residential neighborhood road classified as a minor collector or local road?		
Is the posted speed limit 30 mph or less?		
Is the road at least 1,500' long?		
Is the requested road NOT an emergency response route?		
Is the ratio of (road length in ft.)/(number of homes with driveways on road) 80 or less?		

If above criteria are not all answered "yes", then education and enforcement measures will be utilized.

POINT ASSIGNMENT:

- 1. Traffic Speeds:** _____ **POINTS**
 Traffic Speeds based on 85th percentile speeds above the posted limit (Max. 35)

0-6 mph	7-10 mph	11-14 mph	15 mph or greater
Education, enforcement	15 points	25 points	35 points

- 2. Traffic Volumes:** _____ **POINTS**
 Volumes based on two-way Average Weekday Daily Traffic (AWDT) (Max. 30)

Road Category	Current ADT			
	(0 points)	(10 points)	(20 points)	(30 points)
Local Road	400-599	600-800	801-1,000	>1,000
Minor Collector	400-1999	2,000-2,500	2,501-3000	>3,000

If traffic volume is less than 400 ADT then education and enforcement measures will be utilized.

- 3. Accident Rate** _____ POINTS
 Accident rate points = $\frac{(\#Accidents\ in\ 3\ yrs) \times (Road\ Factor) \times 1,000,000}{1095 \times AWDT \times (Road\ Length\ in\ miles)}$ + (5 pedestrian) + (10 fatal) (Max. 30)
Road factor: 2.0 for Local Road and 1.5 for Minor Collector
 (5 or 10 points for occurrence of pedestrian and/or fatal accidents in the most recent 3 yr. period)
- 4. Elementary School or Playground on Roadway** _____ POINTS
 (10 if yes)
- 5. Is this a walk-to-school route?** _____ POINTS
 (10 if yes)
- 6. Major Pedestrian Generators** _____ POINTS
 Schools, libraries, parks, playgrounds, stores, community centers, etc.
 within ¼ mile radius of subject road (5 if yes)
- 7. Sidewalk or Surfaced Pedestrian Path** _____ POINTS
 % of roadway without sidewalk or hard-surfaced pedestrian trail on at least one side multiplied by 10 (example: 80% x 10 = 8 points) (Max. 10)
- 8. Limited Sight Distance** _____ POINTS
 Uncorrectable and extensive sight distance conditions due to vertical or horizontal curve (5 if yes)
- 9. Cut Through Traffic** _____ POINTS
 Over 50% of current AWDT (10 if yes)

SHEET 1 TOTAL: _____ POINTS

SHEET 2 TOTAL: _____ POINTS

TOTAL SCORE: _____ POINTS

Level 1 Measures (required points score = 50 points)

Level 2 Measures (required points score = 60 points)

Level 3 Measures (required points score = 80 points)

Descriptions of the point system criteria are contained in the *Neighborhood Traffic Calming Program*

COUNTY COMMISSIONERS OF CHARLES COUNTY, MARYLAND

2013 Legislative Session

Legislative Day # _____

**ROAD ORDINANCE TEXT AMENDMENT
(Version 9-3-13)**

Bill No. 2013-XX

Introduced by: Charles County Commissioners

Date introduced:

Public Hearing:

Commissioners Action:

Commissioner Votes: CK: __, RC: __, KR: __, DD: __, BR: __

Pass/Fail: _____

Effective date: 12:01 a.m.

Remarks: _____

NOTE: CAPITALS indicate language added to existing law.
[Brackets] indicate language deleted from existing law.

COUNTY COMMISSIONERS OF CHARLES COUNTY, MARYLAND

2031 Legislative Session

Bill No. 2013-XX

Chapter No: 276

Introduced by: Charles County Commissioners

Date of Introduction:

BILL

1 AN ACT concerning
2 CHAPTER 276 - CHARLES COUNTY ROAD ORDINANCE
3
4 FOR the purpose of
5 Establishing a Neighborhood Traffic Calming Program
6
7 BY adding to
8 Chapter 276 – Streets, Roads and Sidewalks
9 Article II DEFINITIONS
10 *Code of Charles County, Maryland*
11 (June, 2011 Edition)
12
13 BY repealing and reenacting, with amendments
14 Chapter 276. Streets, Roads and Sidewalks
15 Article III MINIMUM DESIGN STANDARDS
16 Section 2.B and 3.D.1
17 Article IV DRAINAGE
18 Article V PERMITS
19 Section 3
20 *Code of Charles County, Maryland*
21 (June, 2011 Edition)
22

NOTE: CAPITALS indicate language added to existing law.
[Brackets] indicate language deleted from existing law.

1 SECTION 1. BE IT ENACTED BY THE COUNTY COMMISSIONERS OF CHARLES
2 COUNTY, MARYLAND, that the Laws of Charles County, Maryland read as follows:

3
4 **Chapter 276. STREETS, ROADS AND SIDEWALKS**

5
6 **Article II Definitions:**

7
8 **NEIGHBORHOOD TRAFFIC CALMING PROGRAM (NTCP): A PROGRAM FOR**
9 **RESIDENTIAL LOCAL AND MINOR COLLECTOR ROADS TO PROMOTE AND**
10 **ENCOURAGE SAFETY AND LIVABILITY BY REDUCING SPEEDS AND/OR TRAFFIC**
11 **VOLUMES IN RESIDENTIAL NEIGHBORHOODS. PROGRAM DETAILS ARE**
12 **CONTAINED IN APPENDIX H OF THIS ORDINANCE.**

13
14 **SPEED CONTROL MEASURES: MEASURES USED TO CONTROL SPEED IN**
15 **RESIDENTIAL NEIGHBORHOODS. DURING THE ROAD DESIGN PROCESS THIS CAN**
16 **INCLUDE ROAD CURVATURE, ROAD NETWORKS (FOR EXAMPLE: MORE ROADS**
17 **THAT END IN A T-INTERSECTION INSTEAD OF LONG, THROUGH ROADS), CIRCLES**
18 **AND ROUNDABOUTS. IT CAN ALSO INCLUDE LEVEL 2 TRAFFIC CALMING**
19 **MEASURES AS DESCRIBED IN THE NEIGHBORHOOD TRAFFIC CALMING PROGRAM**
20 **(NTCP) CONTAINED IN APPENDIX H OF THIS ORDINANCE.**

21
22 **Article III, Section 2. Design Controls:**

23
24 **B. Design Speed**

25
26 Design speed is the maximum safe speed that can be maintained over a given section of
27 road when the traffic volume is so low that the geometrics of the roadway control speed.
28 All elements should be in balance consistent with a specified design speed. Stopping
29 sight distance, horizontal and vertical alignment, and superelevation are among the
30 roadway elements which are controlled by design speed. The minimum design values
31 for the various elements required for a given design speed should be used only where

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1 controls such as topography and property damages dictate their use.

2
3 [However, on] **ON local AND MINOR COLLECTOR residential streets it is desirable**
4 **to keep speeds low and care must be exercised that the design does not encourage high**
5 **speeds without sacrificing any of the design standards included herein. SPEED**
6 **CONTROL MEASURES SHALL BE INCORPORATED INTO THE DESIGN OF**
7 **ALL ROADS WHICH MEET THE PRELIMINARY ELIGIBILITY CRITERIA**
8 **OF THE NEIGHBORHOOD TRAFFIC CALMING PROGRAM, APPENDIX H.**

9
10 Unless otherwise approved by the County, the minimum design speeds listed in tables
11 2.01.01 and 2.01.02 shall be used for the design of roads. For existing County roads
12 whose classification is unknown the design speed shall be the posted speed plus 10 mph.

13
14 **Article III, Section 3. Horizontal and Vertical Alignment:**

15
16 **D. General Controls for Horizontal Alignment**

17
18 In addition to the specific criteria presented in previous sections, the following general
19 controls shall be utilized:

- 20
21 1. In selecting the alignment for a given design speed, use of the maximum
22 curvature (**I.E. MINIMUM RADIUS**) for that speed should be avoided
23 **EXCEPT WHERE BENEFICIAL FOR TRAFFIC CALMING PURPOSES.**

24
25 **Article III, SECTION 15. NEIGHBORHOOD TRAFFIC CALMING PROGRAM**

26
27 **ROADWAYS PLANNED WITHIN NEW RESIDENTIAL SUBDIVISIONS SHALL**
28 **INCLUDE STREET GEOMETRICS THAT MAKE ROADS LESS DESIRABLE FOR**
29 **SPEEDING AND CUT-THROUGH TRAFFIC. SPEED CONTROL MEASURES**
30 **WITHIN RESIDENTIAL NEIGHBORHOODS SHALL BE PROVIDED ON NEW**
31 **ROADWAYS WHERE THE NEW ROADWAYS MEET THE PRELIMINARY**

NOTE: CAPITALS indicate language added to existing law.
[Brackets] indicate language deleted from existing law.

1 ELIGIBILITY CRITERIA OF THE NEIGHBORHOOD TRAFFIC CALMING
2 PROGRAM (NTCP) AS SHOWN IN APPENDIX H. USE OF ROAD CURVATURE, T-
3 INTERSECTIONS, TRAFFIC CIRCLES AND ROUNDABOUTS IS ENCOURAGED
4 OVER THE USE OF SPEED HUMPS AND CHOKERS ON NEW ROADS. THE
5 COUNTY SHALL APPROVE ALL TRAFFIC CALMING DEVICES.

6
7 ON NEW ROADS WHICH MEET THE ELIGIBILITY CRITERIA OF THE NTCP,
8 SPEED CONTROL POINTS SHALL BE SPACED APPROXIMATELY 500' APART ON
9 A LOCAL ROAD AND 600' APART ON A MINOR COLLECTOR ROAD, BUT NO
10 FARTHER APART THAN 750'.

11
12 A SPEED CONTROL POINT IS DEFINED AS ANY ONE OF THE FOLLOWING:

- 13
14 A. ANY DESIGN CONDITION THAT REQUIRES A COMPLETE STOP, SUCH AS
15 AT A T-INTERSECTION. UNWARRANTED STOP-SIGN CONTROL AT AN
16 INTERSECTION WILL NOT BE PERMITTED; OR
17
18 B. A HORIZONTAL CURVE WITH A DEGREE OF CURVATURE OF 51
19 DEGREES OR GREATER AND THE MINIMUM RADIUS; OR
20
21 C. A SPEED CONTROL DEVICE, AS IDENTIFIED AS A LEVEL II TRAFFIC
22 CALMING MEASURE IN APPENDIX H. THE TYPE OF DEVICE AND
23 DESIGN IS SUBJECT TO REVIEW AND APPROVAL BY THE HIGHWAY
24 ENGINEER.

25
26 WHERE PROPOSED RESIDENTIAL SUBDIVISIONS ARE REQUIRED TO PROVIDE
27 ROADWAY CONNECTIONS TO EXISTING RESIDENTIAL NEIGHBORHOODS,
28 THE COUNTY MAY REQUIRE THE DEVELOPER TO INSTALL SPEED CONTROL
29 DEVICES ON AN EXISTING ROAD.

30
31 EXISTING RESIDENTIAL NEIGHBORHOOD ROADS MAY QUALIFY FOR SPEED
32 CONTROL DEVICES IN ACCORDANCE WITH THE CRITERIA IDENTIFIED IN

NOTE: CAPITALS indicate language added to existing law.
[Brackets] indicate language deleted from existing law.

Neighborhood Traffic Calming Program – Costs

A. ESTIMATE NUMBER OF PROJECTS PER YEAR:

At start-up: 22 requests, 13 roads meeting eligibility, resulting in 7 projects with 41 speed humps per year

1. Requests: Prince Georges County received approx. 130 requests their first year. Their population was 863,420 in 2010. Charles County population (146,551) was 17% of the Prince George's County population. We could assume we receive $130 * .17 = 22$ requests our first year.
2. Number meeting preliminary eligibility criteria would be approximately 60% of the requests = 13. Assume half of those would have the points needed to warrant traffic calming devices = 6.5.
3. The number of humps could be $6.5 * 6.3$ humps/community = 41 humps at start-up.

After the first few years: 11 requests, 7 roads meeting eligibility, resulting in 3-4 projects with 22 speed humps per year

4. According to Prince Georges County's experience, the average numbers of requests should level off to half of the start-up numbers, so we could expect 11 annual requests with 7 community roads meeting the preliminary criteria. Then, approximately half of them would have the point totals needed for traffic calming. Assuming 6.3 speed humps per subdivision (based on Gwinnett County GA experience), that would equate to 22 speed humps in an average year. This might be a high number since PG County installed 37 humps last year, so it was compared in a pro-rated manner to another community.
5. Compare to another community: Gwinnett County, GA has an aggressive traffic calming program: 377,628 avg. population (1985-2002 over 17 yrs). They averaged 7.4 subdivisions with traffic calming installed per year. Reducing this number proportionally based on Charles County's population ($146,551/377,628=39\%$), we could expect to install speed humps in 2.9 communities per year, or 18 humps per year. This estimate of 18 is in the ballpark of the 22 estimated above.

B. ANNUAL COST BREAKDOWN:

Assume work would be done completely in-house as follows:

	Details	Unit Cost	Annual cost
Personnel:			\$76,000- \$101,800
PGM - One Traffic Engineer, experienced in traffic data collection and analysis, to conduct 7-13 detailed studies for roads that meet the preliminary eligibility criteria, supervise 3-7 projects with 22-41 humps installed.	Responsibilities: Initial contact, Preliminary assessment, Response, Data collection, Point worksheet, Report, 2 community meetings per study, verify petitions, coordinate with other divisions and agencies, preliminary design to mark tentative locations on a scaled aerial photograph, coordinate with other PGM staff and contract consultant to finalize design, mark final locations in field with signs, contract for and inspect final installation	One full-time staff member: \$50,000-\$60,000 plus fringe of 34%	\$67,000- \$80,400
Contract Services	Survey, Design plans & Stakeout	\$1,500	\$4,500- \$10,500
Community officer from CCSO	2 community meetings for each of the 3-7 projects, plus 7-13 Speed Awareness Days	\$500-\$700 per project plus \$300 per Speed Awareness Day	\$3,600-\$8,800
Volunteer Fire Department, Emergency Services –	VFD or Emergency Services: a representative should attend the first community meeting for each of the 3-7 projects; also review & comment on plans	VFD is volunteer, so no monetary cost for their input; \$300 for Emergency Services (assuming cost of \$90/hr.) for each project	\$900-\$2,100
Board of Education, Public Works and/or Van-Go	review and comment on plans	limited time required from other agencies for design review	Would not be significant for most locations
Equipment:			\$2,435 +
Data-collection units, need 2 so we have a back-up	Collect speed & volume data, replace every 4 yrs.	\$3,000 each	Start-up \$6,000, annual=\$1,500
Safety vests	For community use in Speed Awareness Days – assume 40 needed (10 extra for loss)	\$11 ea., repl. every other yr.	\$220

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9/5/13

Neighborhood Traffic Calming Program

County fully-funded
(examples: Prince Georges, St. Marys, Harford & Carroll County)

HOA or Community Shares or Fully-Funds Implementation Costs
(example: Anne Arundel requires min. 40%, max. 100% community funding)

Funding Option #1:

County fully-funded

No cost to individual community

Pros:

- Simpler funding process

Cons:

- Need to prioritize projects if more projects qualify for traffic calming than can be funded
- Entire county bears the cost but only a few benefit

OR

Funding Option #2:

Payment by HOA or Civic Group prior to installation

Entire cost of traffic calming is paid prior to installation

- Ensures full community support of project
- Could help minimize funding delays
- Fairness by ensuring that those who benefit are the ones who pay

- Less affluent communities could be under-served, although this has not been a problem in Anne Arundel Co.
- Not fair if cut-through traffic is the problem, so an option for County to waive payment would be helpful
- More financial burden on HOA

OR

Funding Option #3:

Assessment per Property

Establish taxing area
Public Hearing
Add to tax bill

- By adding to tax bill it ensures that even those delinquent in HOA dues are assessed
- Can be spread over several years
- Can include a perpetual fee for maintenance

Same as above plus:

- Implementation delay due to Public Hearings required
- Cost to Fiscal Services to add to tax bills