



## TRAFFIC CALMING PROGRAM



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### PROGRAM BASICS

The Town of Mount Pleasant has adopted a traffic calming program for responding to requests for traffic calming measures on local roadways. Traffic calming measures include the installation of **speed cushions, all-way stop controls or radar feedback signs**. The program will operate on a July to July basis and applications will be accepted according to the deadlines outlined below. For speed cushion applications, the eligible

requests will be ranked according to the evaluation factors in order to determine the installation sequence. The ranking will also be used to determine which projects will be financed in the event that more speed cushions are applied for than money is available.

All applicants are also required to notify any homeowner's association that represents their neighborhood of the application being made to the traffic calming program.

NOTE: Dates may vary (a detailed schedule may be provided with the application packet).

- June/July: Applicants may submit a completed traffic calming application, including a location map (provided by staff) where the applicant identifies the street section for which the traffic calming devices are sought. The homeowner's association notification form must also be submitted at this time.
- Sept. Staff is to collect speed data for 72hrs during weekday, school in session
- Nov. 1<sup>st</sup>. Assuming speeds meet minimum thresholds, applicants are to submit the petition (provided by the Town) with the required number of signatures from the project area residents as determined by staff.
- Feb. 1<sup>st</sup>. Staff to present to committee a list of eligible projects for the next fiscal year, as ranked according to the evaluation factors.

(Note) program dates are subject to change.

## **SPEED CUSHIONS**

### **1. INITIAL APPLICATION/ OFFICIAL ELIGIBILITY MAP**

To identify the streets that are eligible for speed cushions, a Traffic Calming Eligibility Map has been adopted (see attachments). Eligible streets:

1. Are classified as local residential or minor collectors, excluding major arterial streets.
2. Contain no more than two lanes, one travelling to each direction.
3. Have a speed limit of 25 miles per hour or less.

The Traffic Calming Eligibility Map will be updated as new street centerline data become available (2-3 times/year). Private streets and streets owned by Charleston County are not eligible for the traffic calming program. (Applications for eligible state-owned streets must conform to the standards of and receive approval from SCDOT.)

When an eligible applicant contacts Town staff with a request for speed cushions, staff will determine the preliminary eligibility of the street for the program based on the Traffic Calming Eligibility Map. If the street qualifies for preliminary eligibility for the program, the applicant will be provided with an application, location map and homeowner's association notification form.

Eligible Applicant: A property owner or a resident/tenant residing in a project area proposed for speed cushion installation, or a representative of the project area or a representative of a Neighborhood/Homeowner's Association.

## **2. DETERMINATION OF THE PROJECT AREA**

After the completed application including the location map and HOA notification has been submitted by August 1st, staff will determine the project area using the following principles:

1. If a speed cushion request is made for a street that functions as a sole ingress/egress for the subdivision, the project area will be determined to consist of the entire subdivision. This principle can also be applied to sections of subdivisions in cases where a request is made for a street that is the sole connector of that section to the rest of the subdivision.
2. If a speed cushion request is made for a street that is not the sole outlet from the subdivision or a section thereof, the project area will be determined to consist of the properties on the street block of the proposed location. If several speed cushions are requested along such street, the project area is determined to consist of the properties on the street blocks of proposed locations, and, if any blocks fall between proposed speed cushions, of the properties on those blocks.
3. In determining the project areas, the guiding principle should be to include properties the residents of which are likely to use the proposed street cushion location as an access route to their residence in absence of reasonable route alternatives.

After a project area has been determined, a project area map will be generated by staff to identify the project area from where signatures for a petition are acquired.

## **3. DATA COLLECTION**

Town staff will conduct an investigation of the operational characteristics of the proposed street section in order to determine if the location meets the minimum traffic qualification criteria for speed cushions. Traffic speed and volume data will be collected, and if there is a neighborhood concern about extensive cut-through traffic, such levels will also be observed. **The minimum traffic qualification criteria require that the observed 85<sup>th</sup> percentile speed shall be at least 5 mph over the established speed limit.** The ADT volume will be used among other criteria, in establishing priority ranking of each project, as well as for SCDOT roadways.

#### **4. PETITION PROCESS AND REQUIREMENTS**

If the 85<sup>th</sup> percentile speed is recorded at or above 30 MPH along an eligible roadway, the application process will move to the petition phase. The Town staff will provide the eligible applicant a package containing a map of the project area, and a petition for collecting signatures from the property owners or residents/tenants in the project area. Signatures shall be obtained from the property owners or residents/tenants as follows:

- 1- One signature per single-family/townhouse residence
- 2- One signature per condominium/apartment unit with primary access to a street within the project area

The eligible applicant must complete and return the petition to the Town staff by the November 1<sup>st</sup> deadline. The petition must show a number of signatures in support of the installation of speed cushion(s) on the identified road section that equals at least 75% of the maximum number of signatures that could be obtained from the project area within the guidelines stated above. After the receipt of the petition, the staff will verify the signature rate, and if acceptable, the eligible applicant will be notified that the petition has been accepted and that the staff will conduct data collection in the project area.

#### **5. WEIGHING OF EVALUATION CRITERIA and PRIORITIZING OF PROJECTS**

Town staff will determine point totals in order to prioritize projects for the next budget year on a Town-wide basis and to ensure proper allocation of the Town's resources. Points are assigned to the projects according to the following criteria:

1. High speed of traffic (Maximum 50 total points)  
Each mile by which the observed 85<sup>th</sup> percentile speed exceeds the speed limit (up to 10 mph) 5 points
2. High volume of traffic (Maximum 30 total points)  
Volumes equal or greater than 4,000 vehicles / day 40 points  
But not greater than 8,000 vehicles / day  
Volume between 3,000 – 3,999 vehicles per day 30 points  
Volume between 2,000 – 2,999 vehicles per day 20 points  
Volume between 1,000 – 1,999 vehicles per day 10 points
3. Other factors (Maximum 30 total points) 5 points each
  - One or more reported, speed related accidents in last 2 years
  - No sidewalks
  - Narrow street (less than 22 feet)

- Street has severe hills and/or curves
- Cut-through traffic (at least 35% of traffic appears to be cut-through)
- Located near a playground, recreational area, daycare center, school, or any other facility that creates an increased presence of children.

Based upon the prioritized project list, staff shall make a recommendation to the Transportation Committee for their consideration. The Transportation Committee shall make a recommendation to Town Council for final approval/disapproval of the request.

**If a project is not approved for funding during a particular budget year due to a low ranking among projects, it will move to the top of the list for the following year. These applications must meet all the program criteria in order to be considered for installations. Speed cushions will be installed as scheduling permits and after installations at higher priority locations have been completed.**

## **6. PREPARATION OF A PROJECT PROPOSAL**

Town staff shall prepare a proposal for speed cushion placement, a process during which the best location(s) for the devices are determined. This proposal should be prepared according to the following guidelines:

1. Speed cushions should generally be placed between 400-600 feet apart, with a minimum spacing of 300 feet.
2. Speed cushions should be placed only on streets with a horizontal curve of 300-foot radius or more.
3. If speed cushions are installed on vertical curves, adequate stopping sight distance must be provided.
4. Speed cushions should be placed only on streets with a grade of 8 percent or less approaching the cushion.
5. The installation of speed cushions should take advantage of existing or planned street lighting.
6. Speed cushions should not be installed in front of driveways.
7. The installation of speed cushions should ensure positive roadway drainage
8. Speed cushions should be located so that increased accident potential is not introduced.

Installation of **speed humps** on **state-owned streets must meet** the following additional design specifications by SCDOT:

1. No more than 5% long wheelbase vehicles.
2. Designed and installed in accordance with SCDOT specifications.

If deemed necessary, the proposed speed cushion installations may be reviewed by the Town's Police, Fire, and Public Works Departments. Staff may also obtain statements

from other potentially affected groups such as school districts or emergency service providers.

### **REMOVAL OF SPEED CUSHIONS/HUMPS**

Requests for removal of speed cushions or humps shall be considered only after the devices have been in place for a minimum of two years. An eligible applicant may request the removal of speed cushion(s) by submitting to the Town staff a signed petition of at least 75% of the project area property owners or residents/tenants approving of the removal of the speed cushion(s). Signatures shall be obtained as follows:

- 1- One signature per single-family/townhouse residence
- 2- One signature per condominium/apartment unit with primary access to a street within the project area

After the receipt of the petition, the staff will verify the signature rate, and if acceptable, the eligible applicant will be notified that the petition has been accepted, and the removal of the speed cushions will take place as soon as scheduling permits.

### **REPLACEMENT OF SPEED HUMPS/CUSHIONS DUE TO RESURFACING**

Town streets on which speed humps are installed will eventually be resurfaced. If milling of the street is included in the resurfacing contract, the Town will need to budget funds for replacement of the speed humps with speed cushions.

On State streets speed cushions are not permitted, so speed humps will be replaced with speed humps.

### **PROJECT FOLLOW-UP**

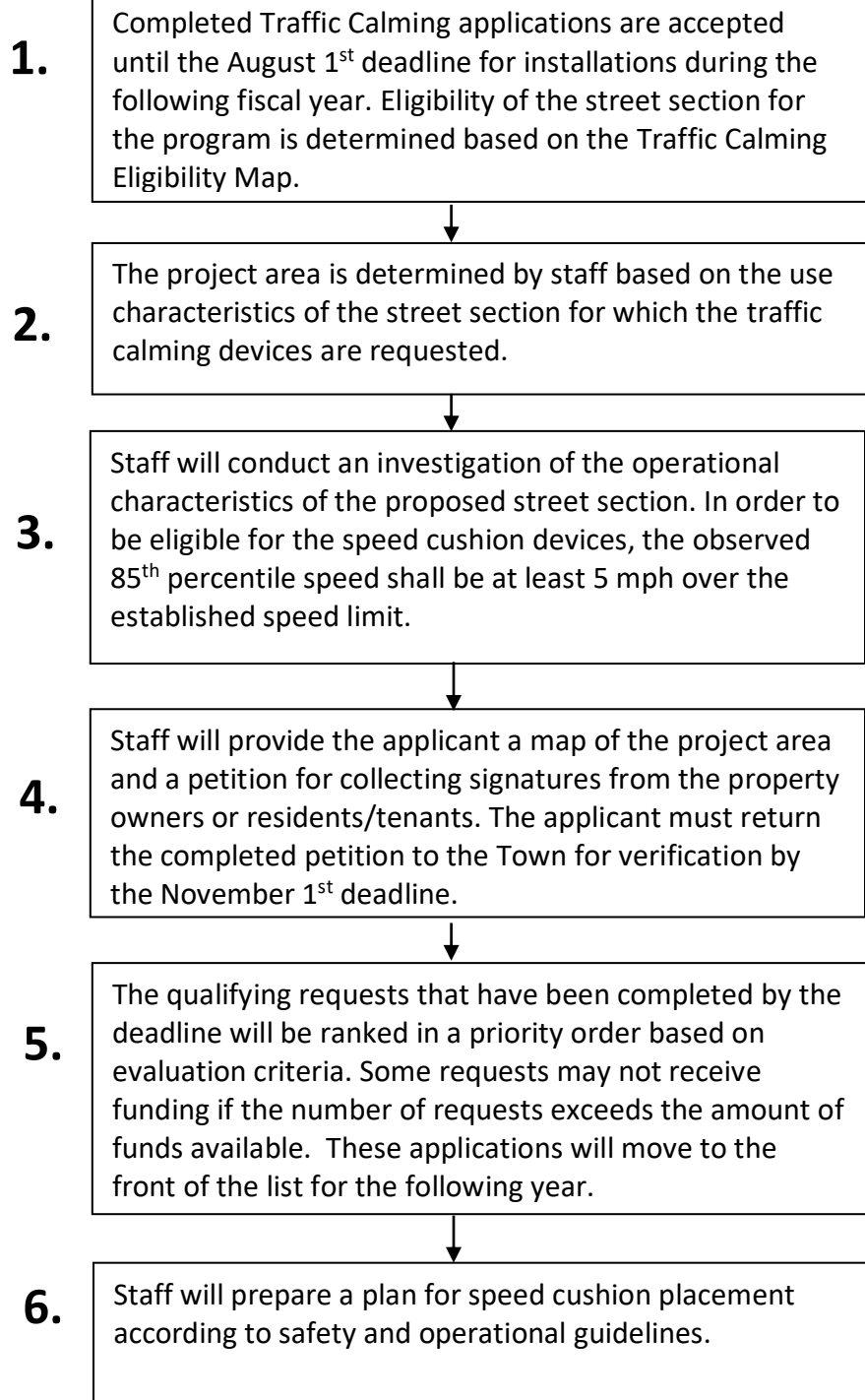
An analysis may be compiled of completed speed cushion projects after one year in place. This analysis includes traffic counts, speed analysis and accident reports, as well as feedback from the property owners. The analyses can be maintained in order to monitor the effectiveness of the speed cushion program. The program is subject to evaluation and/or termination based on the observed results from the completed projects.

**REAPPLYING FOR A PROJECT**

There is a two (2) year waiting period to reapply for a Traffic Calming Project if:

- 1). The required speed criteria is not met. See section 3. Data Collection for criteria.
- 2.) Or the applicant does not provide the required 75 percent affirmative signatures from the petition area. See section 4. Petition Process and Requirements.

**TOWN OF MOUNT PLEASANT, SC  
TRAFFIC CALMING APPLICATION PROCESS**





## **ALL-WAY STOP CONTROLS**

All-way stop controls consist of the installation of stop signs on all approaches to an intersection. Historically, all-way stop sign installations were utilized to assist in the assignment of right-of-way at higher volume intersections where side-street delays were often unreasonable. Both the complexity of turn maneuver decisions as well as driver impatience from unreasonable delays at higher volume intersections often contributed to higher crash rates at these locations. For these conditions, installation of an all-way stop generally led to reduced crash rates. This is supported by a recent South Carolina Department of Transportation review of warranted all-way stop installations.

However, in an effort to provide more flexibility in local traffic control issues, a refined set of operational and volume criteria was established by the South Carolina Department of Transportation for use in local traffic calming programs. The Town of Mount Pleasant utilizes these refined criteria as the basis for use of the all-way stop control as a traffic calming device. It should be noted, however, studies have shown that all-way stop control installations **FOR SPEED CONTROL**:

1. Do **NOT** reduce the overall speed along a street;
2. Do break up the flow of traffic, resulting in slower speeds in the immediate vicinity of the intersection, but only 85'-100' from the intersection;
3. Do re-route some traffic to parallel streets within the network.

**For these reasons, it is not recommended that all-way stop control installations be utilized when the objective is to reduce travel speeds over a longer segment of roadway.** The most appropriate device for this situation would be a speed cushion.

### **ALL-WAY STOP CONTROL CRITERIA**

All-way stop control installations may be permitted for use as a traffic calming device when all of the following criteria are met:

1. The intersection must be located on street that is eligible for traffic calming in accordance with the Traffic Calming Eligibility Map.
2. All-way stop control shall only be installed at the intersection of two or more public streets.
3. The total vehicular volume entering the intersection from all approaches averages a minimum of 200 vehicles per hour for at least any four-hour period during a typical weekday.
4. The vehicular volume entering the intersection from the minor street or streets for the same four hours averages at least 100 vehicles per hour.
5. Both streets shall have residential frontage and existing speed limits of 30 mph or less. Non-residential intersections can only be considered if on a Town roadway.
6. Neither street is classified as a major collector or greater by SCDOT.
7. Neither street exceeds 36' in width (excluding medians).
8. No existing stop sign or traffic signal is located on the free-flow street within a distance of 1,200 feet of the proposed stop location.

9. The intersection legs extend at least 600 feet or more away from the intersection.
10. The total volume of the non-stopped street does not exceed 4,000 vehicles per day.

If all the qualification criteria above are met and engineering judgment dictates denial of an all-way stop installation the Town (and SCDOT if a state roadway) reserves the right to deny the installation.

### **DRIVER FEEDBACK RADAR SPEED SIGNS**

**Driver Feedback Radar Speed Signs** can be applied for through the Traffic Calming Program for neighborhood streets that are designated on the Traffic Calming Eligibility Maps. The road section must have a posted speed of 30 MPH or less.

**Typical road section and sign location.** Applicable road sections are typically ineligible collector roads entering a subdivision or are designated as special consideration on the Traffic Calming Eligibility Maps. The sign structure will typically be located in the in-bound direction entering the neighborhood, which, based on the Town's pilot program have shown to be the next effective in reducing speeds.

**Speed Criteria.** The minimum traffic qualification criteria require that the observed 85<sup>th</sup> percentile speed shall be at least 5 MPH above the posted speed.

**HOA Notification.** HOA notification form must accompany the application.

**Petition Requirement.** Will be similar to the speed cushion; staff will determine the petition area.

### **APPENDIX 1: SPEED CUSHION/HUMPS DESIGN SPECIFICATIONS**

#### **SPEED CUSHIONS (adopted 2018)**

- The placement of Speed Cushions should be considered a priority for each speed control device location before the placement of asphalt speed humps.

#### **DESCRIPTION OF SPEED HUMPS ON STATE (SCDOT) ROADS (per SCDOT specifications)**

- Length = 14 feet, Width = width of the existing pavement and height at the middle = 3 inches
- Speed hump warning and advisory speed signs accompany each hump installation
- Thermoplastic pavement markings installed to enhance visibility of the humps

**LAYOUT STANDARD GUIDELINES:**

The following design standards and guidelines will be used for application consideration and speed cushion placement.

- 1) In general, the minimum of three speed cushions in succession is the Town standard, placed approximately 350' to 600' apart for optimal performance. Note that two speed cushions can be considered at the engineer's discretion and committee of council approval.
- 2) The placement of one (1) speed cushion **will not** be considered.
- 3) Road sections measuring less than 1050' in length **will not** be considered.
- 4) For road sections measuring between 1050' and 1200', placement of two (2) speed cushions can be considered with spacing approximately 350' minimum between speed cushions and road intersections (final placement can vary at engineer's discretion).
- 5) For road sections measuring greater than 1200', three or more speed cushions will be considered and spaced at approximately 350' preferred minimum and a maximum of 600' (final placement can vary at engineer's discretion).

In general, when the geometry of a road section includes a curve, a speed cushion should not be placed in that curve unless the curve radius is greater than 300 feet or at engineer's discretion based on sight distances.

**Program History:**

Williamson Drive speed cushion pilot program	- Approved August 8, 2000
Original Traffic Program	- Adopted September 18, 2001
Revised (program criteria)	- Adopted 2014
Revised (cushion profile dimensions town rds only).	- Adopted 2015
Layout standard guidelines	- Added 2017
Revised (added Driver Feedback Radar Signs)	-Adopted 2018
Revised (added Speed Cushions)	-Adopted 2018

*Revision date July 2019*