

**Town of Arlington
Transportation Advisory Committee
Traffic Calming Guidelines**

Approved by TAC December 8, 2010

1. Purpose of Guidelines

The purpose of these guidelines is to provide a written and uniform framework for the consideration, review, approval, and implementation of traffic calming measures within the Town of Arlington. The TAC's primary objective in establishing these traffic calming guidelines is the safety of its residents and those utilizing Arlington roadways. The guidelines provide guidance to residents, business owners and town officials. They are designed to:

- Provide a process for the review, approval, design and installation of traffic calming measures
- Allow implementation of appropriate and effective traffic calming measures to reduce traffic speeds and, where warranted, traffic volumes
- Provide consistency in the application of measures in all neighborhoods throughout the Town
- Assure adherence to engineering design standards for various traffic calming measures

2. Definition of Traffic Calming

Traffic calming involves changes in street alignment, installation of barriers, and other physical measures to reduce speeds and/or cut through volumes in the interest of street safety, livability, and other public purposes.¹ This definition emphasizes the use of physical measures for the safety of roadways for drivers, bicyclists, and pedestrians by reducing speed and volume of traffic flow. It does not include non-engineering measures, such as increased enforcement and improvements designed to enhance the appearance of a street.

¹ Ewing, R. *Traffic Calming: State of the Practice*, Institute of Transportation Engineers/Federal Highway Administration, Washington D.C, 1999

3. Approval Process

All requests for installation of traffic calming measures must be submitted to the Board of Selectmen (in accordance with the requirements of these guidelines) for the Board's approval. The guidelines provide for TAC review and recommendation to the Board on the merits of the implementation of any requested traffic calming measure.

The guidelines for utilization and implementation of various traffic calming devices—and the process for seeking review and approval—have been instituted after careful consideration and study to ensure equitable treatment throughout Arlington. It is the intention of these guidelines that traffic calming measures adopted pursuant to them are expected to properly and satisfactorily address concerns related to traffic speeds and traffic volumes. Traffic calming measures established prior to adoption of these guidelines will not be affected by these guidelines, except upon request to the Board of Selectmen in accordance with the procedures and guidance herein.

The following steps will be taken to determine what, if any, traffic calming measures will be adopted to address specific issues or a specific request for approval of traffic calming measures (see attached Approval Process flow chart):

- Request to the Board of Selectmen (BoS) from resident(s) or Town officials
- Consideration by BoS and referral to the Transportation Advisory Committee (TAC)
- TAC Review (see TAC Review below)
 - Initial screening
 - Detailed Evaluation, if appropriate
 - Recommendation
- Recommendation to BoS from TAC in coordination with:
 - These Traffic Calming Guidelines
 - Town Engineer review of engineering, construction cost, and maintenance
 - Fire Department review
 - Police Department review
 - Planning Department review
 - Public, neighborhood and abutter input -- As part of its evaluation, the TAC may conduct public meetings with neighborhood residents and abutters to receive input on the issues being addressed and the potential traffic calming measures being considered to address them.

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- Action by BoS at public hearing

Approve, approve with conditions, or disapprove concept. If approve, identify responsibility for:

- Design
- Construction
- Maintenance
- Funding -- Although the Board of Selectmen may approve installation of one or more traffic calming devices, there is no guarantee that the Town will provide funding.

- Town Engineer

Design review and approval for consistency with sound engineering practices and standards:

- Schematic plan
- Construction plan
- Construction inspection

4. TAC Review

4.1 Initial Screening

The TAC will conduct an initial screening of the request for a traffic calming measure. The purpose of the initial screening is to determine if a traffic calming measure at a particular location is needed, practicable and likely to accomplish the desired effect. If that determination is positive, a second more detailed review will be conducted to form the basis of a recommendation to the Board of Selectmen.

The first step in the initial screening process is the analysis of existing conditions to determine if issues at the location being analyzed warrant a traffic calming measure based on the following factors:

- Traffic volume and vehicle classification (number by type)
- Cut-through traffic (if applicable)
- Traffic speed/posted speed
- Crashes
- Existing geometry
- Nearby pedestrian or bicycle generators, such as parks, schools and elderly housing

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If traffic calming is found to be warranted based on the above factors, various traffic calming measures will be evaluated with regard to the following considerations (see Table 1):

- **Applicability** – Identification of specific traffic calming measures applicable to, and effective in, addressing the issue(s) identified in the first step above.
- **Suitability** -- Determination if any of the applicable measures are suited to the specific situation under consideration based on:
 - Roadway type, classification and speed limit
 - Traffic volume
 - Vehicle mix
 - Roadway geometry
- **Feasibility** -- Determine if any physical or engineering constraints exist that would likely make installation of a traffic calming measure infeasible, including:
 - Roadway/right of way width
 - Drainage
 - Slope
 - Horizontal curvature
 - Utilities
- **User and Resident Considerations** – Determine impact on potential roadway users and residents:
 - Vehicles
 - Pedestrians
 - Bicycles
 - Emergency Vehicles
 - Direct Abutters
 - Neighborhood Residents

If traffic calming is deemed warranted and specific traffic calming measures are identified that are applicable, suitable, and feasible for the particular location under consideration, a more detailed review and evaluation will be conducted. If no measures meet the criteria above, the TAC will recommend that the BoS disapprove the request and will provide the basis for its recommendation.

4.2 Detailed Evaluation

4.2.1 Existing Conditions

The detailed review and evaluation of the identified traffic calming measures will include identification of existing geometry, traffic operations, and pedestrian and bicycle

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accommodations for use in identifying the potential impacts of installing particular measures. In addition to the information collected for the initial screening described earlier, the following information may be collected and assembled if applicable:

- Detailed roadway geometry, including pavement width, grade, and horizontal and vertical curvature
- Sight distance
- Study area traffic circulation
- Adjacent land uses (type, density, proximity to roadway)
- Parking and traffic regulations
- Pedestrian and bicycle volumes
- Sidewalks and crosswalks
- School walking routes

4.2.2 Impact of Measures

The impact of selected traffic calming measures on the following will be assessed as applicable:

- Traffic speeds
- Traffic volumes
- Truck traffic
- Diversions to other roadways
- Drainage/utilities
- On-street parking
- Emergency vehicle access
- Public or school bus operations
- Snowplow operations
- Bicycles
- Pedestrian access
- Aesthetics
- Noise

4.3 Recommendation

Based on the evaluation conducted as described above, the TAC will recommend approval, approval with conditions, or disapproval. A recommendation for conditional approval will describe the specific conditions to be included and the reasons for their inclusion. The basis of the recommendation will be included with the recommendation.

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Table 1
Considerations for Traffic Calming Measures

Measure	Description	Applicability		Suitability	Feasibility/Constraints	User Considerations			
		Application	Benefits			Motor Vehicles	Pedestrians	Bicycles	Emergency Vehicles
Mini-Roundabout	Traffic circle with traversable islands	Residential streets Space constrained locations	Reduced Speeds Improved safety Operational efficiency	Minor streets with low traffic and truck volumes	Truck U-Turns Proximity to Major Traffic Generators Other Nearby Traffic Control Steep Grades	Less conflicting traffic More decision time	Crosswalks	Navigate as motor vehicle	Not likely to have difficulty
Roundabout	Traffic circle with larger radii, higher design speeds and capacities, and splitter islands on the approaches	Moderate volume roadways	Improved safety Operational efficiency	Major residential streets and collector roadways	Right-of-way Proximity to Major Traffic Generators Other Nearby Traffic Control Steep Grades	Less conflicting traffic More decision time	Crosswalks	Navigate as motor vehicle or use designated path next to roundabout	Less likely to be delayed by a signal or STOP control
Curb Extension or Neckdown	Extension of curb into the roadway at an intersection corner or crosswalk	Commercial areas or wide roadways with pedestrian crossings	Improved pedestrian safety through shorter crossings and improved visibility	Often used in conjunction with on-street parking	Drainage May reduce number of parking spaces	No impact unless travel lane is narrowed or a turn lane is removed	Shorter crossing distance and increased visibility to drivers	Clearly define bike accommodation Major impact if travel lane is narrowed	No impact unless travel lane is narrowed or a turn lane is removed
Chicane/Lateral shift	Vehicle travel way is shifted or curved within the right-of-way	Local streets and collector roadways	Reduced speed	Low to moderate traffic volumes and posted speeds	Roadway width or right-of-way Sight distance	Potential hazard if shifts not clearly marked and visible some impact if travel way is narrowed	Reduce crossing distance if used with curb extensions	Bicycle bypass lane can be provided Major impact if travel lane is narrowed	Potential hazard if shifts not clearly marked and visible some impact if travel way is narrowed
Pedestrian Crossing Island/Center Island Narrowing	Short section of median island that can provide pedestrian refuge at pedestrian crossing on generally open roadway	Local Street, Collector Roadways and Arterials	Pedestrian Safety Reduced Speed	Roadways with moderate volumes and vehicle speeds	Roadway width or right-of-way Sight distance	Potential hazard if not properly designed, and clearly marked and signed	Provides safety by allowing pedestrian to focus on crossing one direction of traffic	Potential impact if travel lane(s) is narrowed	Potential hazard if not properly designed, and clearly marked and signed
Diverter	Physical barrier to block and divert one direction of traffic flow from entering a	Local streets and collectors	Reduced cut-through traffic	Low volume roadways	Roadway width or right-of-way Drainage Sight Distance	Potential hazard if not properly designed, and clearly marked and signed	Reduced roadway volume would improve	Bicycles can easily circumvent	Could block emergency vehicle access

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Measure	Description	Applicability		Suitability	Feasibility/Constraints	User Considerations			
		Application	Benefits			Motor Vehicles	Pedestrians	Bicycles	Emergency Vehicles
	roadway where two-way travel is otherwise allowed					Could disrupt neighborhood access	pedestrian safety		
Speed Table	A raised section of roadway typically 22 feet long so a car can not straddle it	Local streets and collector roadways	Reduced speed	Moderate traffic volumes and posted speeds	Drainage Parking Potential noise impact on nearby residences	Potential hazard if not properly designed, and clearly marked and signed	No impact	Potential hazard if not properly designed, and clearly marked and signed	Potential hazard if not properly designed, and clearly marked and signed
Raised Crosswalk	A raised section of roadway at a pedestrian crossing	Local streets and collector roadways	Reduced speed pedestrian safety	Moderate traffic volumes and posted speeds	Drainage Parking Potential noise impact on nearby residences	Potential hazard if not properly designed, and clearly marked and signed	Improved safety because of improved visibility to drivers	Potential hazard if not properly designed, and clearly marked and signed	Potential hazard if not properly designed, and clearly marked and signed
Raised Intersection	Raised roadway at an intersection, including crosswalks	Local streets and collector roadways	Reduced speed pedestrian safety	Moderate traffic volumes and posted speeds	Drainage Parking Potential noise impact on nearby residences	Potential hazard if not properly designed, and clearly marked and signed	Improved safety because of improved visibility to drivers	Potential hazard if not properly designed, and clearly marked and signed	Potential hazard if not properly designed, and clearly marked and signed
Speed Hump	Raised section of roadway generally 12-14 feet long and 3-4 inches high with parabolic shape	Local streets and collector roadways	Reduced speed	Low traffic volumes and posted speeds	Drainage Parking Potential noise impact on nearby residences	Potential hazard if not properly designed, and clearly marked and signed	No impact	Potential hazard if not properly designed, and clearly marked and signed	Potential hazard if not properly designed, and clearly marked and signed
Speed Lump	Similar to speed humps except gaps are provided to accommodate wheel tracks of fire trucks	Local streets and collector roadways	Reduced speed	Low traffic volumes and posted speeds	Drainage Parking Potential noise impact on nearby residences	Potential hazard if not properly designed, and clearly marked and signed Use of three lumps requires center line to discourage cars from veering out of travel lane to straddle middle lump	No impact	Potential hazard if not properly designed, and clearly marked and signed Wheel gaps may provide paths for bicycle	Designed to accommodate fire trucks but a potential hazard to police vehicles and ambulances if not properly designed, and clearly marked and signed

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Traffic Calming Measures
Approval Process**

