



**Town of Framingham  
Board of Selectmen**

## **Policy on Traffic Calming Measures**

**Issue date: January 15, 2013**

**Type of policy: New ( x )    Amendment ( )**

**Effective date: January 15, 2013**

**Level: Department ( )    Division ( )    Town Wide ( x )**

### **Policy Statement**

The Institute of Transportation Engineers defines traffic calming as, “the combination of mostly physical measures that reduces the negative effects of motor vehicle use, alters driver behavior, and improves conditions for non-motorized users.” The Town of Framingham’s Policy on Traffic Calming Measures is designed to enable community support for traffic education, facilitate the identification of specific traffic concerns, collect data, develop solutions, and evaluate the impact of these solutions. The primary focus of any initial traffic calming changes will be to change driver behavior, and doing so with tools that tend to be less controversial and less expensive. This includes: neighborhood traffic safety campaigns (mailers distributed to surrounding areas, communication with DPW and Public Safety departments in communities sourcing cut through traffic), speed display units, targeted police enforcement, pavement marking changes, and/or signage. Further traffic calming tools may be used if these tools fail to address the identified traffic issues. These additional tools may include: chokers, bulbouts/neckdowns, raised crosswalks, raised intersections, roundabouts, speed humps, speed tables, speed lumps/cushions, center islands, textured pavement, and on-street parking treatments, or other physical alterations warranted and in compliance with recognized traffic calming standards as identified by MassDOT, Institute of Transportation Engineers and AASHTO. The Framingham Traffic and Roadway Safety Committee (TRSC) will monitor the results of any traffic calming installation. The TRSC working through the DPW may remove any installed traffic calming devices if they are no longer deemed necessary.

The Town of Framingham is committed to:

- Improving the livability and safety of Framingham neighborhoods by mitigating the impacts of traffic and promoting safer conditions for residents, motorists, bicyclists, and pedestrians;
- Installing traffic calming measures on streets where their implementation will reduce traffic speeds, minimize cut-through traffic, or improve the safety of movements by pedestrians and bicyclists;
- Implementing traffic calming techniques that are both effective and compatible with the character of the affected neighborhoods and improve public safety without jeopardizing emergency response needs, creating hazards, or reducing mobility;
- Encouraging citizen involvement in all phases of neighborhood traffic management;
- Influencing driver behavior through education and design;
- Ensuring that limited Town resources are utilized in a cost-effective and efficient manner.

To achieve these objectives, the following procedures will be followed when considering requests for, developing, designing, and implementing neighborhood traffic calming measures on Framingham streets. These procedures provide for the submittal of traffic calming requests and their evaluation by Town Boards, staff or consultants; the evaluation of alternative traffic calming measures and development of alternative plans by an interdisciplinary team; and the continual involvement and review of measures by the affected neighborhood and appropriate Boards and Committees.

## References

Town of Framingham Bylaws, Article VI, Section 7. Obstructions of Public Ways

Town of Framingham Traffic Rules and Orders, Adopted September 1973 as amended

M.G.L. Chapter 82A. Excavation and Trench Safety

Traffic Calming – State of the Practice, Institute of Transportation Engineers, Washington, D.C., August, 1999.

Project Development and Design Guide, Massachusetts Department of Transportation Highway Division, Boston, MA, January 2006.

Massachusetts Amendments to the Manual on Uniform Traffic Control Devices and the Standard Municipal Traffic Code, Massachusetts Department of Transportation Highway Division, January 2012

Traffic Calming, Federal Highway Administration, U.S. Department of Transportation, Washington, D.C., May 2001.

U.S. Traffic Calming Manual, Reid Ewing and Steven J. Brown, American Planning Association in association with the American Society of Civil Engineers, 2009

North American Design Guidelines for Traffic Calming Measures, American Public Works Association, Kansas City, MO, 2006.

<http://www.massdot.state.ma.us/planning/GISMapsandDataProducts/FunctionalClassification.aspx>

## Special Terms

**Local Street** – A one- or two-lane street that provides access to abutting land with little or no emphasis on mobility. The term “local street” should not be confused with local jurisdiction. Most, though not all, functionally classified local streets are under Town jurisdiction. Roadways classified as local streets are identified in the Town of Framingham Road Inventory File maintained by the Massachusetts Department of Transportation.

**Collector Street** – A two- or four-lane street that links an arterial street with another collector street or local street. Collectors provide some level of both mobility and access. Roadways classified as collector streets are identified in the Town of Framingham Road Inventory File maintained by the Massachusetts Department of Transportation.

**Arterial Street** – A two- or four-lane street that provides the highest level of mobility at the greatest vehicular speed for the longest uninterrupted distances and are not intended to provide access to specific locations.. Arterials are further subdivided into Principal Arterials and Minor Arterials. Roadways classified as arterial streets are identified in the Town of Framingham Road Inventory File maintained by the Massachusetts Department of Transportation.

**Cut-Through Traffic** – Traffic that travels local streets in a residential neighborhood but has no origin or destination within the neighborhood.

**Traffic and Roadway Safety Committee** – A 7-member committee, created by the Board of Selectmen, as an advisory committee in regards to safety matters on the Town’s roadways. This Committee will investigate potential traffic calming projects and assign the responsibility to develop a feasible and effective traffic calming plan.

**Speed Study** – A study using data collection to measure and statistically analyze the speeds of vehicles traveling on a street.

**Traffic Calming Measure** – An element of a traffic calming plan selected from among a list of actions and devices deemed to be effective in reducing vehicle speeds, changing traffic flows, or altering driver behavior so as to improve the safety and quality of life on a specific street or streets.

**Traffic Calming Needs Assessment** – A report based on various data collection points used to establish baseline conditions in a clearly defined study area used to determine whether traffic or safety concerns exist that warrant implementation of a traffic calming plan.

**Traffic Calming Plan** – A combination of traffic calming measures determined from an appraisal of traffic conditions (traffic calming needs assessment) to be effective and feasible in reducing vehicle speeds or traffic volumes and enhancing safety on a specific street or streets.

**Traffic Count** – A manual or automated count of the number of vehicles traversing a specific point in a given time period.

**85th Percentile Speed** – The speed at or below which 85% of drivers travel on a street over a given time period.

### **Traffic Calming Elements**

**Speed Bumps** – Speed bumps are often the devices which come to mind when discussing traffic calming devices. A rounded raised mound of pavement, approximately 3 to 6 inches high and 1 to 3 feet wide, placed across the path of vehicle travel. Narrow and abrupt, they cause a jolt to the vehicle and its operator. Speed bumps were used in previous generations of traffic calming and are no longer considered an acceptable traffic calming device on public roads. Today they are most often found along private roadways and within parking lots.

**Speed Humps** – Speed humps are raised devices, parabolic in shape, placed across the road to slow traffic. Typically 3 to 3.5 inches in height and 12 to 14 feet long, they have been shown to slow vehicles to 20-23 mph to traverse. They are often considered the most traditional traffic calming solution. Speed humps slow traffic more gradually than speed bumps, although less so than speed tables. *Generally applicable for Local Streets which experience less than 4,000 vehicles per day and with speed limits equal or less than 30 mph. May be deemed suitable for Collector Street upon completion of traffic calming needs assessment, not applicable for Arterial Streets.*

**Speed Tables** – Flat-topped speed humps, which are generally, long enough for the entire wheelbase of a passenger car to rest on top. Speed tables are also typically 3 to 3.5 inches in height but are generally 22 feet long (10 foot plateau and two 6 foot ramps). They have been shown to slow vehicles to 25-30 mph to traverse. The design of speed tables allows for more gradual slowing of vehicle speed than humps. The flat top allows a higher design speed and smoother ride than humps. Speed tables are more desirable to emergency vehicles than speed humps as they are less jarring. When used in conjunction with a crosswalk speed tables are considered raised crosswalks. *Generally applicable for Collector and Local Streets which experience less than 7,500 vehicles per day and with speed limits equal or less than 35 mph. Not applicable for arterial streets.*

**Curb Extension** – Curb extensions are a physical narrowing of the roadway width from curb to curb. When placed at intersections these devices are referred to as bulbouts or neckdowns and when applied at midblock locations curb extensions are referred to as chokers. Chokers force vehicles to slow while maneuvering through narrow points along the roadway while bulbouts/neckdowns at an intersection lead to tighter turning radii, also forcing vehicles to slow.

Both devices offer additional safety benefits to pedestrians by reducing crossing width and creating refuge areas.

**Chicanes** – Chicanes are S-shaped curve realignments of a normally straight roadway, which encourages slower speeds. *Generally applicable for Collector and Local Streets which experience less than 5,000 vehicles per day and with speed limits equal or less than 35 mph. Not applicable for Arterial Streets.*

**Gateway** – Gateway features can be used to identify a change in the roadway environment for vehicles entering the traffic calming management area. Monuments, alternative pavements or other landscaping devices can be used to signify a change in the area type. Gateways are often combined with other traffic calming elements. *Generally applicable for all roadway types.*

**Speed Lumps/Cushions** – Speed lumps/cushions are speed humps with the wheel base of an emergency vehicle removed so these vehicles can proceed unimpeded. While these devices introduce the possibility of calming traffic without introducing additional delay to emergency response times, these devices are a relatively new form of traffic calming and the industry knowledge is still forming as to their effectiveness. *Generally applicable for Local Streets which experience less than 4,000 vehicles per day and with speed limits equal or less than 30 mph. May be deemed suitable for Collector Street upon completion of traffic calming needs assessment, not applicable for Arterial Streets.*

**Neighborhood Traffic Circles /Roundabouts** – Neighborhood traffic circles/Roundabouts consist of placing raised islands within an intersection around which traffic circulates in a counterclockwise direction. These devices have been shown to reduce vehicle speeds and improve safety. Neighborhood traffic circles usually have 4-way stop control. Roundabouts (which have additional design characteristics) are often deployed at higher volume intersections. *Neighborhood Traffic Circles are generally applicable for Local Streets which experience less than 7,500 vehicles per day and with speed limits equal or less than 35 mph. Neighborhood Traffic Circles may be deemed suitable for Collector Street upon completion of traffic calming needs assessment are not applicable for Arterial Streets. Roundabouts are generally applicable for Arterial and Collector Streets which experience less than 18,000 vehicles per day and with speed limits equal or less than 45 mph. Roundabouts are not applicable for Local Streets.*

**Choker** – Curb extensions at midblock locations that force vehicles to slow while maneuvering through narrow points along the roadway created by extending the sidewalk or widening the planting strip. *Generally applicable for Collector and Local Streets which experience less than 20,000 vehicles per day and with speed limits equal or less than 35 mph. Use on Arterial Streets must be carefully studied by a professional engineer before application.*

**Bulbouts/Neckdowns** – Curb extensions at intersections that reduce curb-to-curb roadway travel lane widths and tighten turning radii forcing vehicles to slow. *Generally applicable for Collector and Local Streets which experience less than 20,000 vehicles per day and with speed limits equal or less than 35 mph. Use on Arterial Streets must be carefully studied by a professional engineer before application.*

**Center Island** – Center islands are raised medians along the roadway centerline. They typically narrow the travel lanes, separate opposing traffic movements and may introduce a slight travel path deflection. When landscaped, they can improve the aesthetics of the corridor. Center islands may also be painted, but these are less effective than raised center islands, since vehicles can traverse a painted island. *Generally applicable for Collector and Local Streets which experience less than 20,000 vehicles per day and with speed limits equal or less than 35 mph. Use on Arterial Streets must be carefully studied by a professional engineer before application.*

**Raised Crosswalk** – Terminology for a speed table implemented in conjunction with a crosswalk. *Generally applicable for Collector and Local Streets which experience less than 7,500 vehicles per day and with speed limits equal or less than 35 mph. Not applicable for arterial streets.*

**Raised Intersection** – A raised intersection is a raised plateau implemented throughout an entire intersection with ramps along all approaches. While considered to be the most expensive of traffic calming options, these devices have the benefit of calming two roadways at one location. These devices also increase pedestrian safety throughout the entire intersection. *Generally applicable for Collector and Local Streets which experience less than 7,500 vehicles per day and with speed limits equal or less than 35 mph. Not applicable for arterial streets.*

**Police Enforcement** – Employing the services of law enforcement agencies to impose the local safe vehicle laws, including those for posted speeds and traffic signal/signs.

## **Policy Description**

### **HOW WILL TRAFFIC CALMING BENEFIT FRAMINGHAM?**

Reduced vehicle speeds and increased driver attentiveness obtained through the appropriate use of traffic calming measures offer Framingham the following benefits:

- Reduction in the probability and severity of accidents.
- Increased safety for other drivers, including those entering/exiting roadways at intersections or driveways.
- Increased safety for pedestrians, bicyclists and other forms of sustainable modes of transportation.
- Reduction of dangerous driving behaviors.
- Potential improvement to the attractiveness of streets and neighborhoods by incorporating aesthetic traffic calming features.
- Increased attractiveness of walking and biking as a safe transportation alternative throughout the town.

To be viable, the benefits of any traffic calming project must outweigh its potential negative impacts including reduced emergency response times, noise impacts, and increased maintenance requirements.

### **HOW IS TRAFFIC CALMING ACHIEVED?**

Successful traffic calming requires a comprehensive approach that does not rely on any single solution (e.g. speed humps) or strategy. While there are various techniques that Framingham will look to deploy, a sound approach revolves around Education, Enforcement, and Engineering.

**Education:** Informs motorists how they can ease traffic impact through behavioral changes, and advises them about traffic management activities and opportunities for involvement.

**Enforcement:** Engages the Framingham Police Department to focus traffic and speed enforcement efforts in areas of particular concern.

**Engineering:** According to ITE, “installation of traffic control devices that provide specific regulatory, warning, or guide messages to motorists. Lastly one should look at the installation of geometric design features that manage the physical movement of vehicles or pedestrians within the roadway or within a neighborhood. These should be used as a remedial technique only when the above methods are proven ineffective.”

The Massachusetts Department of Transportation’s Highway Division divides traffic calming into three (3) major categories of design measures:

1. Narrowing the real or apparent width of the street through:
  - Presence or placement of trees along the street;
  - Street furniture including lights, benches, and other elements;
  - Edge treatment of the pavement, including raised curbs; and
  - Pavement cross-section including pavement narrowing, bike lanes, travel lanes, auxiliary lanes, medians, and islands.
2. Deflecting the vehicle path from an otherwise straight path through:
  - Deflection measures including chicanes, center islands and neighborhood traffic circles; and
  - Intersection measures including roundabouts, neighborhood traffic circles, curb extensions and crossing islands.
3. Altering the street profile through:
  - Speed humps and speed tables;
  - Raised crosswalks and intersections; and
  - Textured pavement (e.g., pavers, stamped concrete, rumble strips, etc.)

## **OBJECTIVES OF THE FRAMINGHAM TRAFFIC CALMING POLICY**

The primary objective of Framingham’s Policy on Traffic Calming Measures is the safe usage of Framingham’s public roadways by motor vehicles, cyclists and pedestrians, together. Additional objectives include:

- Improve the safety and livability of Framingham’s streets and neighborhoods by using appropriately designed and implemented traffic calming measures to mitigate the impacts of traffic while creating safer streets for residents, motorists, pedestrians, and bicyclists;
- Maintain a traffic calming project selection process guided by objective, needs-driven criteria to ensure that limited town resources are utilized in a cost-effective and efficient manner;
- Implement traffic calming measures that are appropriate and effective for a given situation or roadway and improve public safety without jeopardizing emergency response needs, creating hazards or nuisances, or impeding public transit or commercial truck routes;
- Seek public support in the affected neighborhood(s) before it is implemented; and welcome citizen input and involvement in all phases of the program.

### **PROCESS FOR INITIATING A TRAFFIC CALMING REQUEST**

The Policy on Traffic Calming Measures is designed to provide a strong, consistent framework to guide traffic calming efforts, and to ensure:

- A formal and consistent process for evaluating requests for traffic calming
- A forum for public involvement in the process
- A formal and consistent process for evaluating the efficacy of traffic calming efforts
- Maximum community awareness and support for traffic calming
- A clear funding strategy to implement recommended traffic calming measures

The following process will be followed when considering requests for developing, designing, and implementing traffic calming measures on Framingham roadways. This process provides for the submission of traffic calming requests, their evaluation by the town and input by the affected neighborhood and the appropriate town boards/ departments. The process does not apply to:

1. Traffic calming measures that are required on town streets to comply with State and Federal standards or warrants;
2. Temporary changes in traffic patterns needed to stage special events;
3. Experimental traffic calming measures installed temporarily for research and evaluation by the town;
4. Installation of traffic control devices (e.g. signals, stop signs, etc.);
5. The installation of traffic calming devices that may be required on a Framingham roadway as mitigation for a commercial, residential, mixed-use, or other development project; and
6. Town roadway maintenance and Capital Improvement Projects.

### **SUBMISSION OF TRAFFIC CALMING REQUESTS**

For a traffic calming plan to be considered, a “Traffic Calming Request Form” must be completed and submitted to the TRSC c/o DPW – Engineering Division, 100 Western Avenue, Framingham, MA 01702.

[http://www.Framinghamma.gov/Pages/FraminghamMA\\_DPW/TRAFFICCALMINGREQUESTFORM.pdf](http://www.Framinghamma.gov/Pages/FraminghamMA_DPW/TRAFFICCALMINGREQUESTFORM.pdf)

A Traffic Calming Request Form must contain signatures from at least ten (10) households or 50% of the residences or businesses on the street, whichever is less, for the town to begin consideration of a traffic calming plan.

A Traffic Calming Request Form may be made by: a resident, with the required signatures; a business or property owner, with the required signatures; or any town department, board or committee.

### **PRELIMINARY EVALUATION OF TRAFFIC CALMING REQUESTS**

Traffic calming requests meeting the criteria above will be put on the agenda of the earliest available TRSC meeting. The TRSC shall notify the petitioner(s) and property owners in the affected area of the date of said meeting to allow for greater public input. At this meeting, the TRSC will determine if additional data is needed to consider the petitioners' request for traffic calming measures, or deny the petitioners' traffic calming request with reason(s) stated on the record. If the TRSC determines that additional data is needed, it will request that the Framingham Police Department complete a traffic assessment (speed, volumes, accident history) for the affected area (unless such a study has been completed within the previous 18 months). The timing of this assessment will be based on the availability of measurement equipment, queue of previous traffic calming requests, and town budget to conduct the necessary analyses. Upon completion of the traffic assessment, the results will be made available to the public and the TRSC's review of the traffic assessment will be placed on the agenda of the next available TRSC.

No further action may be required under this policy on requests that can be reasonably addressed by the following traffic-calming measures: expanded enforcement of existing traffic and/or parking regulations and new signage or markings. In these cases, the DPW, Police Department, or other town departments and boards with relevant jurisdiction (e.g. Board of Selectmen, Historic District Commission) will pursue agreed upon solutions and provide periodic updates to the TRSC on their progress, as required.

The TRSC will then make a determination as to whether or not the request for traffic calming merits further consideration, or deny the petitioners' traffic calming request with reason(s) stated on the record. If the TRSC determines that the traffic assessment demonstrates a need for a "Traffic Calming Needs Assessment", then the project will move forward and it shall request that the DPW prepare a Traffic Calming Needs Assessment report within ninety (90) days, unless prevented by weather, budget limitations, pre-existing queue of assessments, or other mitigating circumstances, for presentation at the earliest available TRSC meeting upon completion.

### **TRAFFIC CALMING NEEDS ASSESSMENT**

In making a determination that a Traffic Calming Needs Assessment is warranted, The TRSC will consider the availability of town funding and resources and give priority to addressing traffic and safety concerns in the following areas:

1. Streets that provide access to educational institutions, or represent major walk-to-school or bicycle-to-school routes;
2. Streets that are/could be heavily traveled by pedestrians and bicyclists seeking access to a public park, senior center, public/government building, downtown or commercial area, or other facility; and
3. Streets that lack a wide shoulder, sidewalk, or other means of separating pedestrian and bicycle traffic from vehicular traffic; and
4. Streets that have been scheduled by the DPW for reconstruction in the near future and thereby present opportunities to leverage reconstruction efforts to simultaneously undertake traffic calming installation. If a road is already scheduled for reconstruction, the TRSC will look at the appropriate data to determine if traffic calming should be considered for that location.
5. Date of receipt of submitted proposal.

As appropriate, the following traffic data and information may be collected and analyzed as part of the Traffic Calming Needs Assessment:

- Street classification and Area Type;
- Traffic volumes;
- Traffic speeds;
- Posted speed limits and other signage;
- Physical data (# of lanes, width, grade and alignment, parking);
- Location of nearest community facilities, schools, parks, and businesses;
- Accident data reports, and other relevant reports;
- Status of each street as emergency vehicle, bus, truck, or bicycle route;
- Extent of cut-through traffic on street (where obtainable);
- Pedestrian crossing volumes; and
- Other field observations, as needed.

The DPW will determine the necessary boundaries of the study area which will encompass the identified problem area, and may also include adjacent streets and intersections that might be indirectly affected by the potential diversion of traffic resulting from the installation of various traffic calming measures. Consultant services may be retained, from time to time, to assist the town in the collection and evaluation of the necessary data and information. This report will summarize the findings of the above field inventory and data collection effort. Additionally, the Town's Public Safety officials (Police and Fire) will be consulted and may provide guidance on any proposed recommendations to ensure the continued safety of Public Safety officials when responding to emergencies.

## **REVIEW OF TRAFFIC CALMING NEEDS ASSESSMENT AND FINAL RECOMMENDATION**

Following the above data collection effort, a Traffic Calming Needs Assessment report will be prepared and submitted to the TRSC. The DPW will present the findings and recommendations of its Traffic Calming Needs Assessment to the TRSC. Once again, the petitioner(s) and affected neighborhood property owners will be given advance notification of said presentation. Additional public comment will be accepted by the TRSC during this meeting. Upon review and discussion of the Traffic Calming Needs Assessment report, the TRSC may elect to vote to “Recommend” or “Not Recommend” that the requested traffic calming project be placed on the Town of Framingham’s “Priority List of Traffic Calming Projects”. Alternatively, the TRSC may opt to pursue other mitigation methods that a majority of the TRSC deems appropriate.

Based on the input received during public review of alternative traffic calming measures, Department of Public Works staff will develop a conceptual traffic calming plan (or plans) for the impacted street(s). Depending on the extent of the recommended traffic mitigation, the TRSC may require a full engineering assessment from a consultant to ensure safety, and that any potential drainage, grade, snow removal, impacts to emergency response times or other specific concerns are properly addressed. Funding for such assessment must be granted as part of the Town’s annual capital planning process.

In the event that the TRSC does not have sufficient information to make a final recommendation or a traffic problem first merits a test of experimental traffic calming measures, a vote on the matter may be tabled for a period not to exceed ninety (90) days. Traffic calming requests that receive a “Not Recommend” vote remain eligible for future consideration, but must wait at least two (2) years before they can be resubmitted from the date of the “Not Recommend” vote.

Recommendations for traffic calming projects will be provided to the Board of Selectmen for discussion at their earliest available meeting.

### **LIST OF TRAFFIC CALMING PROJECTS, BUDGET, AND IMPLEMENTATION**

The Town of Framingham will likely have more potential traffic calming projects than it has funding and staff to implement in a given year. A priority ranking of traffic calming projects will be created and maintained by the TRSC, with review and approval by the Board of Selectmen. This priority ranking will be based on a set of objective needs-driven criteria, as determined by the Committee, developed during the data collection phase of the Traffic Calming Needs Assessment. These criteria will guide the prioritization of traffic calming projects. Plans that involve the installation of traffic calming devices on streets where other capital improvements have been planned and programmed may receive higher priority for funding and implementation.

Each fiscal year, as part of the annual Town capital budget process, the Board of Selectmen will seek a general funding request for traffic calming measures to include the design and/or construction of projects. The Priority List of Traffic Calming Projects will be used to implement projects as funding is available. Funding of traffic calming projects, like all other capital budget items, will be subject to the available funding as approved at the annual Town Meeting.

Proponents of traffic calming measures are encouraged to seek funds from private sources, or from public sources other than the Town of Framingham Capital Improvement Program (CIP) budget, as a way to facilitate the implementation of a specific traffic calming project.

A public meeting will be conducted with the neighborhood for projects that receive design and construction funding to discuss the specific locations of traffic calming features.

### **ELIGIBILITY AND DESIGN CRITERIA**

To be eligible for traffic calming devices that require physical alteration to the roadway or other installation, the following must be considered:

- Street must be a public roadway. Private roadways are not eligible for Town traffic calming efforts, as these are not Town-owned roadways.
- Street may not have more than two travel lanes and the street should desirably have a posted speed limit of 30 mph or less.
- The impact on emergency response will be taken into consideration. Vertical traffic calming devices that reduce emergency response times may not be installed on primary emergency response routes as determined by the Traffic and Roadway Safety Committee in collaboration with the Framingham Fire Chief and Police Chief.
- Roadways classified as collectors or arterials may not be eligible for some traffic calming features if these result in a significant change to previously established and accepted traffic flow patterns in Framingham.
- Major bus routes for school transportation will be taken into consideration.
- The design and installation of traffic calming devices should avoid the removal of parking spaces wherever possible.

With any type of modification to the roadway, drainage in the area must also be investigated and addressed. Other factors that need to be investigated include the expected benefits to safety and quality of life, maintenance needs, cost of construction, and the technical feasibility of the proposed traffic calming measure.

Re-routing traffic from a higher classification street to a lower classification street as the result of traffic calming is unacceptable. Traffic may be re-routed from one street to another of equal classification if it provides a more equal distribution of the traffic burden, and it does not increase traffic volumes on the affected street by greater than 10%. If a traffic calming plan could increase traffic on a street by more than 10% of its existing peak hour volumes, such street will also be considered for traffic calming.

The Town Engineer will determine the design, location and spacing of all traffic calming measures (devices, signs, markings). All traffic calming devices will be planned and designed in conformance with sound engineering practices and standards, and in consultation with other communities having experience with their implementation and maintenance.

Based upon the findings of the Needs Assessment, Department of Public Works staff (or its consultants) will identify and evaluate the applicability and likely effectiveness of a variety of traffic calming measures (individually and in combination) in addressing the identified traffic or

safety problems confirmed on each street. Alternative traffic calming measures will include, but may not be limited to, such actions and devices as: chokers, bulbouts/neckdowns, raised crosswalks, raised intersections, roundabouts, speed humps, speed tables, speed cushions, center islands, textured pavement, and on-street parking treatments. The alternative traffic calming measures will be evaluated using the best information available on their applicability and effectiveness in addressing a specific problem, the technical feasibility of installing the devices properly within the constraints of the existing right-of-way, the relative costs of their construction, and the impacts they may have on emergency vehicle access, drainage, noise impacts and maintenance.

### **REMOVAL OF TRAFFIC CALMING DEVICES**

The TRSC will monitor implementation of the approved traffic calming plan. Upon a finding by Town staff that a hazardous condition has been created by a traffic calming plan, such condition will be remedied by notifying the TRSC and immediately modifying or removing the contributing traffic control device or devices. Property owners, residents and occupants of properties in the area impacted may also request removal of a traffic calming device or devices by submission to the TRSC of a petition describing their specific concerns. The TRSC will review the conditions surrounding said petition at a public meeting and recommend appropriate action to remedy all legitimate safety concerns.

### **RESUBMISSIONS OF TRAFFIC CALMING REQUESTS**

Any traffic calming request that is denied at any stage of the process described above may not be re-submitted for a minimum of two (2) years from the time that the request was denied by the TRSC. However, the TRSC may initiate a review within two (2) years if the TRSC determines a new review is warranted.