Town of Lexington
Traffic-Calming Policy
November 2, 2009

A. Statement of Traffic-Calming

The Town of Lexington is committed to:

- Improving the livability and safety of Lexington 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 where appropriate, 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 beyond acceptable levels;
- Encouraging citizen input in neighborhood traffic management;
- Influencing driver behavior through education and design;
- Ensuring that Town resources are utilized in a cost-effective and efficient manner.

To achieve these objectives, several procedures will be available depending on the nature and potential funding of needed improvement. Requests may be initiated by Town boards, committees, individuals or group entities. The Traffic Safety Advisory Committee (TSAC) will be the main evaluator of traffic calming issues. They may adopt written procedures that supplement this Policy Statement, and will use the Mass Highway Design Manual and Mass Highway Traffic Calming Guidelines as a basis for review and evaluation, except that they may supersede certain procedures and criteria by determining and publishing locally-based modifications.

Streets in Lexington are defined by Mass Highway and further detailed by the Federal Highway Department under the Federal functional classification system. The Town will identify candidate streets by the Mass Highway Area Type when warranted.

The Town may from time to time establish transportation plans for various sections of Town. Such plans may include traffic calming provisions that will form the basis for specific traffic calming implementations in that area.

Neighborhood Traffic Calming on Local, Collector and Arterial Streets:
The following procedures will be followed when considering requests for and in developing, designing and implementing neighborhood traffic calming measures

on Lexington local, collector and arterial streets. These procedures provide for the submittal of traffic calming requests and their evaluation by Town Boards, staff or consultants, and approval by the Board of Selectmen; the evaluation of alternative traffic calming measures and development of alternative plans by an interdepartmental team; and the continued involvement and review of measures by the affected neighborhood and appropriate Boards and Committees. These are general guidelines the Town of Lexington will follow for traffic-calming requests, but cannot handle all traffic problems or situations in town.

This policy addresses existing conditions on local roads and conditions that have evolved over time.

- The need for traffic calming measures as a result of new development and redevelopment would be handled by the Special Permit Granting Authority and included within the traffic studies and mitigation proposed for the project. Any new projects that are proposed for development will consider traffic-calming on any streets that will be impacted by the development. The SPGA is encouraged to get feedback from TSAC.

- If a road is programmed for reconstruction, TSAC will look at the appropriate data to determine if traffic-calming should be considered for that location.

B. Problem Identification and Needs Assessment

1. **Request for Neighborhood Traffic Calming Measures:** A preliminary request containing signatures from at least ten households or 50% of the residences or businesses on the street, whichever is less, shall be required for the town to begin consideration of a traffic-calming plan. Preliminary requests for traffic calming measures on a specific street or streets may be made by (a) a resident, with the required signatures; (b) a business or property owner, with the required signatures; or (c) any Town Department, board or committee All requests must be made in writing and forwarded to the Police Department (Public Safety Officer) and TSAC (staff liason to committee) for consideration. To the extent possible, each request should identify the street(s) or area of concern and describe the nature of the problem.

2. **Clarification and Preliminary Evaluation of Traffic Calming Requests:** Upon receipt of a request (and after the initial evaluation) for neighborhood traffic calming, the town staff will forward the request to the Traffic Safety Advisory Committee (TSAC). The TSAC will discuss the request at its next regular scheduled meeting. Prior to the TSAC meeting, data will be collected and analyzed (if necessary, to be determined by Police Department) by town staff on traffic speeds and accident reports. Staff may require additional time to collect the data prior to the TSAC meeting.

Following the discussion and analysis of the traffic and safety problems that triggered the request, TSAC may determine that the request merits further consideration under these procedures. If data that is collected and analyzed demonstrates a need for a Needs Assessment (Section 3), then the project should move forward. If TSAC feels the data does not support futher analysis, then the process is complete and the request for traffic-calming is denied with the rationale for denial in writing.

If a request is made for traffic calming on an arterial, the toolbox of options will be limited and will be decided on a case-by-case basis. Streets in Lexington are defined by Mass Highway and further detailed by the Federal Highway Department under the Federal functional classification system. The TSAC will consider the availability of Town resources and give priority to addressing traffic and safety concerns in the following areas:

- Streets that provide access to a public or private school, or represent major walk-to-school or bicycle-to-school routes;
- Streets that are heavily traveled by pedestrian and bicycle populations seeking access to a public park, public/government building, or private facility;
- Streets that have been programmed for reconstruction in the near future and thereby present opportunities to realize cost savings by undertaking all construction work simultaneously.

If a road is already programmed for reconstruction, TSAC will look at the appropriate data to determine if traffic-calming should be considered for that location. No additional action may be required under this policy on requests that can be readily and consistently addressed by the following traffic-calming measures: expanded enforcement of existing traffic and parking regulations, and/or low-cost engineering and signage improvements, and/or other on-going/planned projects. Town staff or its consultants will prepare a Needs Assessment for those issues deserving further study and evaluation.

In the case of new development, the developer may be required to pay for traffic calming on streets affected by the new development (and may also need to pay for the needs assessment, plan development and public outreach).

3. **Preparation of Needs Assessment:** Following the initial review and data collection, Town staff will develop and implement a scope of work designed to establish baseline conditions in a clearly defined study area and more definitively describe the traffic or safety problem(s) to be addressed. As appropriate, the following traffic data and information may be collected and analyzed:

- Street classification and Area Type
- Traffic volumes (average weekly by direction for each street)
- 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
- Status of each street as emergency vehicle, bus, truck, or bicycle route
- Extent of cut-through traffic on street (if applicable)
- Pedestrian crossing volumes (peak hours)

The study area will encompass all streets and intersections identified as problem areas, as well as all reasonably adjacent streets and intersections that might be indirectly affected by the diversion of traffic resulting from the installation of various traffic calming measures. Consultant services may be retained, from time to time, to assist town staff in the collection and evaluation of the necessary data and information.

Upon timely completion of the above data collection effort, a Needs Assessment Report will be prepared and submitted to the TSAC. This report will summarize the findings of the above field inventory and data collection effort. The baseline conditions described in the Needs Assessment Report will provide the basis for the identification of those traffic-calming measures likely to be most effective in addressing the traffic problems confirmed to exist on each street(s).

4. **Determination of Need:** Based on the findings of the Needs Assessment, the TSAC will determine if the conditions found warrant a detailed evaluation of alternative traffic calming measures. There may be areas in which an increased police enforcement presence, improved signage, and/or driver education will be sufficient to address the problems identified by neighborhood residents and confirmed to exist by the Needs Assessment. Where physical modifications to the roadway environment are determined to be unnecessary, the town staff will work with neighborhood representatives to address their concerns and no further review under this policy will be required. In the event that traffic-calming measures are deemed necessary, a traffic calming plan development process will be established.

C. Plan Development

1. Screening of Alternative Traffic Calming Measures: Based upon the findings of the Needs Assessment, town 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, neck downs, chicanes, center islands, raised crosswalks, raised intersections, roundabouts, traffic circles, speed humps, speed tables, textured pavement, one-way street designations, forced turn islands, median barriers, curbing, striping, etc. A description of each measure is provided in **Attachment A**.

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, and maintenance.

A Traffic Calming Report that contains the findings of this evaluation will be prepared and submitted to the TSAC. This report will identify the traffic calming measures determined to be both feasible and effective in addressing the problems established in the Needs Assessment. It will also identify the likely impacts on traffic flow, traffic speeds, and different user groups that implementation of each feasible measure is likely to create. Estimates of construction and maintenance costs will also be included in the report.

2. Development of Conceptual Traffic Calming Plans: Based on the information collected in the screening report, town staff will develop a conceptual traffic calming plan (or plans) for the impacted street(s). When developing alternative traffic-calming plans, the following general guidelines will apply:

a. The Director of Public Works/Engineering or designee (in conjunction with the Police and Fire Departments) will determine the design, location and spacing of all traffic-calming measures (devices, signs, markings). All 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.

b. The parking needs of residents must be balanced with the equally important functions of traffic, emergency vehicle access, and pedestrian safety. The design and installation of traffic-calming devices should avoid the removal of parking spaces wherever possible.

   A traffic-calming plan report that contains the schematic plans including a preferred plan will be prepared and submitted to the TSAC. This report will identify the type, location, and design of those individual traffic-calming measures determined to be both

feasible and effective in addressing the traffic and safety problems found on the specific street. Each optional traffic-calming plan will impose different types of impacts and benefits on different groups, and will therefore require difficult tradeoffs if selected for implementation.

Town staff will present the conceptual plan to the Board of Selectmen prior to finalizing the plan.

D. Public Meeting

A public meeting will be held by the TSAC to review the alternative traffic calming plans and seek further input on neighborhood preferences. The neighborhood input received at this public meeting will be used to clarify the choices between alternative plans, and identify the extent to which different user groups would either support or oppose their implementation.

Town staff will mail notification of this public meeting to all abutters (residents and businesses) within 300 feet of proposed measure.

1. **Selection of Preferred Traffic Calming Plan.** The TSAC will consider the comments received at the public meeting in selecting a preferred traffic- calming plan that balances the neighborhood protection objectives of those residing along the affected street(s) with the mobility and economic development objectives of the town. When determining which traffic control measures should be included in the preferred plan, the TSAC will utilize the following criteria:
   - Expected benefits to safety and quality of life
   - Neighborhood preference
   - Maintenance needs
   - Cost of construction
   - Technical feasibility:
     - Space constraints
     - Geometric constraints
     - Drainage requirements
     - Emergency service access

   If the installation of a specific traffic-calming device contained in the preferred traffic calming plan allows for the use of optional materials differing in quality and cost, the preferred traffic-calming plan selected by the TSAC must specify the definitive materials to be used.

E. Plan Implementation and Evaluation

The recommended traffic-calming plan with preliminary cost estimates will be forwarded to the Board of Selectmen for review and approval. The Town Engineer or designee will prepare detailed design plans and cost estimates for each element of the approved plan. When appropriate, implement measures on a temporary or trial basis for a pre-determined time to confirm the effectiveness in addressing problems. This allows for adjustments and relocations prior to full implementation. The bid and contract documents will be prepared and made available to possible contractors. If the traffic-calming plan is part of a road reconstruction project, the Town Engineer will designate the amount of funding for the approved traffic-calming device.

The town staff will monitor implementation (and report back to TSAC) of the approved traffic-calming plan for compliance with final design plans. To ensure that the approved traffic-calming plan achieves its intended effect, the town staff will also evaluate the effectiveness of each completed traffic-calming project within six months of device installation. This evaluation will include, at a minimum, a review of the project's impact on traffic volumes, vehicle speeds, and safety.

Upon a finding by the Director of Public Works that a hazardous condition has been created by a traffic-calming plan, such condition will be remedied by notifying the TSAC 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 TSAC of a petition describing their specific concerns. The TSAC will review the conditions surrounding said petition at a public meeting and recommend appropriate action to remedy all legitimate safety concerns.

F.Definitions

1. Minor residential street (not a through way): the lowest classification of residential street designed to serve not more than four proposed, potential or existing dwelling units. It carries only the traffic that has its origin or destination on the lots, which have access to the street. In nearly every case, the limitation of not more than four proposed, potential or existing dwelling units served means the street will be a dead end.
2. Local Street: the next lowest street designed to serve five to fourteen proposed, potential or existing dwelling units. It carries traffic that has its origin or destination in the immediate neighborhood, such as on the lots that have access to the street and from minor residential streets, which connect to it. "Not a through way" streets with more than five proposed, potential or existing dwelling units are classified as local streets.
3. Collector Street: Streets designed to serve 15 or more existing, proposed or potential dwelling units, or a commercial development in a commercial subdivision, and to act as a connection to other streets. It conducts and

distributes traffic between lower classification streets and higher classification streets. In larger residential developments, a collector street may be necessary to carry traffic from one neighborhood to another adjoining neighborhood or from the neighborhood to other areas in the Town.

4. Arterial Street: the highest classification street designed primarily to carry through-traffic that does not have its origin or destination within a proposed subdivision. It carries traffic to and from commercial districts within Lexington, residential neighborhoods in Lexington that are a mile or more away, and to and from activity centers in adjoining cities and towns. Private access and frontage should be discouraged and limited to higher volume generators of traffic such as large commercial or multifamily residential developments.
5. Traffic Calming Plan: a combination of traffic management measures determined from an appraisal of traffic conditions to be effective and feasible in reducing vehicle speeds or traffic volumes and enhancing safety on a specific street or streets.
6. Traffic Count: a manual or automated count of the number of vehicles traversing a specific point in a given time period. When necessary, the number of vehicles may be broken down into vehicle classes (i.e. cars, trucks) and include bicycles and pedestrians.
7. TSAC: Traffic Safety Advisory Committee
8. Traffic Calming: The combination of policies and measures that help correct the negative effects of motorized vehicle use on individuals and society in general by changing the design and role of streets to serve a broad range of transportation, social and environmental objectives.

Attachment A: Description of Traffic-Calming Measures

1. Speed Humps: Speed humps are raised devices, parabolic in shape, placed across the road to slow traffic. 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.
2. Traffic Logix rubber solutions: specifically designed to be used on a permanent basis. Engineered to perform without deforming, are sturdy, long lasting, highly visible, and can withstand large traffic volumes continuously.
3. Speed Tables: Flat-topped speed humps, which are generally, long enough for the entire wheelbase of a passenger car to rest on top. The design of speed tables allows for more gradual slowing of vehicle speed than humps. This makes speed tables the ideal solution for roads with typical residential speed limits.
4. Curb Extension/Medians: Curb extensions can be used to create a variety of horizontal traffic-calming measures such as roundabouts, chicanes, neck downs and chokers.
5. Speed Cushions: Speed cushions are the newest available traffic-calming device, and perhaps the most innovative. They have several distinct advantages. Designed as three small speed humps, speed cushions force pedestrian vehicles to slow down. However, the wider axle of emergency vehicles allows them to pass without slowing down. In addition, speed cushions are more affordable than speed humps or tables since they require less material.
6. Neighborhood traffic circles (roundabouts): Raised islands, placed in the middle of an intersection, directing all traffic in the same direction. Usually larger than roundabouts.
7. Chicane: A series of narrowing or curb extensions that alternate from one side of the roadway to the other, forming s-shaped curves.
8. Choker: Curb extensions at midblock or intersection corners that narrow a street by extending the sidewalk or widening the planting strip.
9. Center island narrowing: Raised islands located along the centerline of a roadway that narrow the width at that location.
10. Bulbouts/Neckdowns: Curb extensions at intersections that reduce curb-to-curb roadway travel lane widths.
11. Diverters: Barriers placed diagonally across an intersection, blocking certain movements.
12. Forced Turn Lanes: Raised islands located on approaches to an intersection that block certain movements.
13. Raised Intersection: Flat raised areas covering entire intersections, with ramps on all approaches and often with brick or other textured materials on the flat section and ramps.
14. 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.

Sources: U.S. Department of Transportation Federal Highway Administration

Traffic Calming Measures

Descriptions and Pictures of Traffic Calming Devices and Techniques		
Devices and Techniques	**Descriptions**	**Pictures**
Bike Lanes	A portion of a roadway, which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.	
Bulbouts/Neckdowns/ Chokers	Curb extensions at intersections that reduce curb-to-curb roadway travel lane widths.	
Center Islands	Raised islands located along the centerline of a roadway that narrow the width at that location.	
Chicanes/Lateral Shifts	Curb extensions that alternate from one side of the roadway to the other, forming s-shaped curves.	
Closures (Cul-de-sacs)	Barriers placed across roadways to completely close through vehicle traffic.	
Diverters	Barriers placed diagonally across an intersection, blocking certain movements.	

Education	Instructions given to the residents on safe on-street vehicle travel.	
Forced Turn Lanes	Raised islands located on approaches to an intersection that block certain movements.	
Median Barriers	Raised islands located along the centerline of a roadway and continuing through an intersection to block cross traffic.	
Police Enforcement	Involve employing the services of law enforcement agencies to impose the local safe vehicle laws, including those for posted speeds and traffic signal/signs.	
Realigned Intersections	Changes in alignments that convert T-intersections with straight approaches into curving roadways meeting at right angles.	
Roundabouts	Barriers placed in the middle of an intersection, directing all traffic in the same direction.	
Speed Humps	Rounded raised pavement devices placed across roadways to slow and/or discourage traffic.	

Speed Tables/ Textured Pavement/ Raised Crossings	Flat-topped speed humps often constructed with a brick or other textured material to slow traffic.	
Traffic Circles	Barriers placed in the middle of an intersection, directing all traffic in the same direction. Usually larger than roundabouts.	

Sources: Traffic Calming, Selected Practices, Lessons Learned and Reed Ewing, Rutgers University, Center for Urban Policy Research.

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