



# NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM (NTMP) MANUAL

## OBJECTIVES, POLICIES AND PROCEDURE

*Prepared for  
The City of Madison  
Pedestrian/Bicycle/Motor Vehicle Commission*

*By  
Madison Traffic Engineering Division*

*Adopted by  
Madison Common Council*

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# TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>1</b>
Objectives .....	2
Policies .....	2
Procedure	
Step 1 Apply to Participate.....	4
Step 2 Develop Plan.....	5
Step 3 Priority Rank Projects .....	5
Step 4 Develop Final Plan.....	6
Step 5 Neighborhood Approves Installation .....	7
Step 6 Common Council Action.....	7
Step 7 Board of Public Works.....	8
Step 8 Construct Permanent Traffic Management Device(s) .....	8
Step 9 Maintenance.....	8

## APPENDICES

Appendix A – Vision and Mission Statement of the City Madison.....	9
Appendix B –Survey Area Template.....	11
Appendix C – Point Assignment for Ranking of NTMP Requests .....	14
Appendix D – Traffic Management Devices	
1. Street and Lane Narrowing.....	16
2. Bicycle Lanes.....	18
3. Raised Street Sections or Speed Humps .....	18
4. Full or Partial Road Closures [Semi-Diverter/Diverter/ Cul-de-sac].....	20
5. Chicanes.....	20
6. Traffic Circles .....	20
Stop Signs.....	22
Appendix E – Flow Chart Summarizing NTMP Process.....	23
Appendix F – Glossary .....	25
Appendix G – Resolutions Related to NTMP	
Substitute Resolution 21663 adopting program.....	28
Substitute Resolution 29873 change re. speed humps.....	30
Substitute Resolution 60269 Revisions to reflect experience.....	32

## INTRODUCTION

The City of Madison places a high value on neighborhood livability<sup>1</sup>. Although livability can have several definitions, it can be generally thought of as encompassing the following characteristics:

- The ability of residents to feel safe and secure in their neighborhood.
- The opportunity to interact socially with neighbors without distraction or threats.
- The ability to experience a sense of home and privacy.
- A sense of community and neighborhood identity.
- The ability to conveniently, safely, and enjoyably walk, bike, drive and take transit.
- The ability of parents to feel that their children's safety is not at risk when playing in the neighborhood.
- A balanced relationship between the multiple uses and needs of a neighborhood.

Neighborhood traffic conditions can have a significant impact on these characteristics.

As population and employment in the City of Madison and Dane County continue to grow, Madison streets can be expected to experience increased pressure from traffic. One of several goals of the City of Madison is that this growth be managed to balance our economic, social and environmental health and to maintain a sustainable city. Quality neighborhoods are the fundamental building blocks of a sustainable city, and to maintain this quality, Madison neighborhoods should be protected from the negative impacts of traffic. We insure this by the use of design and management tools which enable people to travel in and between neighborhoods safely, efficiently, and economically as a pedestrian, bicyclist, motorist or transit rider with minimal conflict or disruption to the residents or other travelers.

Many Madison neighborhood groups are concerned about the effects of traffic on their streets. Restraining traffic has become a common goal of concerned residents. A vision now being promoted for local streets is that motorists should respect the quality of life aspect in the neighborhoods they drive through and behave accordingly. Many city streets used to be multi-purpose places which not only provided physical access but also encouraged social links within a community. Now, the balance has changed so that the main function of many streets has become the accommodation of traffic – some of it unrelated to the residents themselves.

There are several forms of “unwanted traffic” recognized on residential streets:

- Traffic using the street as a shortcut, detour or overflow from a congested arterial.
- Traffic travelling at excessive speeds.
- Use of curb parking spaces (with related vehicle movements in searching for and leaving such spaces) by inattentive drivers.

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<sup>1</sup>See Appendix A for the Vision and Mission Statement of the City of Madison.

At the same time, traditional Traffic Engineering means of controlling traffic – speed zoning, stop signs, and traffic signals – have little effect in management of driver behavior. Police enforcement is an effective tool to reinforce motorist behavior. However, it is recognized that providing an enforcement level that is effective in modifying driver behavior will require a significant commitment of Police resources.

The City of Madison is committed to developing an effective approach to managing neighborhood traffic. Neighborhood involvement is an important component of this approach.

To maximize neighborhood involvement in improving local traffic conditions, the City of Madison Pedestrian/Bicycle/Motor Vehicle Commission, with assistance from the Traffic Engineering Division, has developed a Neighborhood Traffic Management Program (NTMP) for Madison neighborhoods.

## ***Objectives***

The objectives of the Neighborhood Traffic Management Program are derived from existing City policies and the mission of the Madison Department of Transportation.

1. Improve neighborhood livability by mitigating the negative impact of motor vehicle traffic on residential neighborhoods.
2. Promote safe, reasonably convenient, accessible and pleasant conditions for bicyclists, pedestrians, motorists, and residents on neighborhood streets.
3. Encourage citizen involvement in Neighborhood Traffic Management activities.
4. Use City resources efficiently by prioritizing Traffic Management requests.

## ***Policies***

The following policies are established as part of the Neighborhood Traffic Management Program for local streets. In addition, some collector streets will be considered on a case-by-case basis.

1. Neighborhood cut-through traffic should be routed to arterial streets as designated in the *Highway and Street Functional Classification Map*, published by the Madison Traffic Engineering Division.
2. Some traffic may be redirected/diverted from one local service street to another as a result of an NTMP project. The amount of rerouted traffic that is acceptable should be defined on a project-by-project basis by the Neighborhood Traffic Committee and City Pedestrian/Bicycle/Motor Vehicle Commission.
3. Emergency and service vehicle access and circulation must be preserved.

4. NTMP projects should encourage and enhance pedestrian and bicycle mobility and access within and through the neighborhood and also facilitate easy neighborhood access to public transit. Adequate local automobile access should also be maintained.
5. The City shall employ traffic management and traffic control devices to achieve the NTMP's objectives. Traffic management devices including traffic circles, speed humps/tables, diverters, medians, curb extensions and others shall be planned and designed in keeping with sound engineering and planning practices. The City Traffic Engineer shall direct the installation of traffic control devices (signs, signals, and pavement markings) as needed to accomplish the project, in compliance with the Madison General Ordinances. [Refer to Appendix D for a detailed description of traffic management devices.]
6. To implement the NTMP, certain procedures will be followed by the Traffic Engineering Division. Traffic management requests will be processed in accordance with applicable codes and related policies and within the limits of available and budgeted resources. At a minimum, the procedures shall provide for submittal of project proposals along with a project area household and business petition<sup>2</sup>; evaluation of requests/proposals by the Pedestrian/Bicycle/Motor Vehicle Commission and City staff; citizen participation in plan development; installation of temporary devices if needed; a final survey of affected residents and property owners; and appropriate Pedestrian/Bicycle/Motor Vehicle Commission, Common Council and Board of Public Works review before installation of traffic calming devices. [See NTMP Process Flow Chart in Appendix E.]
7. A city street is functionally classified based upon the volume of traffic it serves and more importantly by the location and connections it makes within the City's transportation system. Streets are classified as either: Arterials, Collectors or Local Streets. The NTMP is intended primarily to reduce traffic problems found on City local streets. Consideration, however, can be given to applying NTMP to collector streets. Each collector street is unique and a determination of the need for and type of traffic calming will be made on a case-by-case basis.
8. In the interest of furthering racial equity and access to the NTMP by neighborhoods with residents who have historically not been involved in City processes the City may waive &/or modify the petition and survey requirements in consultation with the District Alderperson. These neighborhoods are typically areas with higher concentrations of low income residents, people of color or within Neighborhood Resource Team areas.

## ***Procedure***

The Neighborhood Traffic Management Program provides a mechanism for neighborhood groups to work with the City. This section describes in detail the steps involved in participating in the program from the initial application for involvement, to developing a traffic management plan, to installing one or more traffic management devices. [See Appendix E for a flow chart of the process.]

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<sup>2</sup>The petition requirement may be waived by the City Traffic Engineer with input from the District Alder.

The Neighborhood Traffic Management Program process is intended to ensure that all neighborhood stakeholders are provided the opportunity to be involved. This ensures that consideration of traffic problems on the study street do not result in the relocation of traffic problems to adjacent neighborhood streets.

## ***Step 1. Apply To Participate***

Neighborhood associations or groups, alderpersons representing a neighborhood, and neighborhood business associations are eligible for participation in NTMP. Individuals are also encouraged to apply, and form a working group of residents in their area of concern. Application for participation in the NTMP will be made through the City of Madison Pedestrian/Bicycle/Motor Vehicle Commission by submitting a “Neighborhood Petition of Support for Traffic Calming” to the Traffic Engineering Division. The petition form is available from City Traffic Engineering.

The area petitioned shall be defined on the petition form. The petition area shall be contiguous and should include the area of influence of any proposed traffic calming features (as described in Appendix B). The petition area may be larger than the area of influence of the proposed traffic calming features. The petition process is used by the City Traffic Engineer only to determine if there is sufficient neighborhood support to expend staff resources on a project. The City Traffic Engineer may modify both the petition and petition area to address unique circumstances.

Signatures representing a majority of the households and businesses within the petition area are required for a street to be enrolled in the program. Each home or business is entitled to one signature.

Upon completion of a successful petition, Traffic Engineering staff will collect background, preliminary information about current conditions. This will include location, description of the problem and may include preliminary collection of traffic crash data, bicycle volume, pedestrian activity, traffic speed, and traffic volume.

NTM projects are intended to respond to traffic issues related to speeding and/or excessive through-traffic on one local or collector street or intersection within a neighborhood. Solutions may include modifications to the street to slow traffic or to completely or partially divert traffic off the subject street to a nearby arterial street. NTM projects will only be considered insofar as they do not divert a significant volume of traffic from the study street to another local street. What is to be considered a significant volume of traffic will be decided by the participating neighborhood group or association and the Pedestrian/Bicycle/Motor Vehicle Commission with Traffic Engineering staff assistance. An NTMP plan which is estimated to cause significant diversion will be required to involve a wider geographic area.

In all instances, the City will notify the project requestor of the status of their request, as appropriate.

## ***Step 2. Develop Preliminary Plan***

With the project requestor/project area traffic committee, the City may facilitate an initial public meeting in the project area. This meeting is to describe the process and to gather additional information about traffic issues and related neighborhood needs.

Project development consists of the following:

- Assessment of issues;
- Identification of project goals and objectives; and
- Development of a potential plan

The first two steps in the project development are accomplished through discussions or public meetings. The City will propose a solution based on citizen input and sound engineering principles. In addition to considering traffic management and control devices, plans developed in the NTMP will also consider the positive effects of education and enforcement.

The proposed project may then be submitted to the City Pedestrian/Bicycle/Motor Vehicle Commission for consideration. The Commission will consider the project with respect to public safety, local neighborhood traffic, pedestrian, bicyclist and transit access as well as to the positive and negative consequences of traffic diversion, emergency and service vehicle access and service delivery. The Commission will also consider whether the neighborhood identified goals and objectives are expected to be met by the proposed project.

If the plan does not receive preliminary approval from the Pedestrian/Bicycle/Motor Vehicle Commission, it may be referred for revision or further study.

### ***Step 3. Priority Rank Projects***

To allocate limited construction resources, each project will be priority ranked.

Using data collected by TE (crash history, proximity of pedestrian attractions, traffic speed and traffic volume), the individual project(s) will be assigned points, as detailed in Appendix C "Point Assignment for Ranking NTMP Requests." A minimum of 30 points is required for a project to be considered eligible to compete against other NTMP requests for funding.

Projects will be ranked citywide, based on point score. The highest ranking projects will usually be undertaken first. The number of projects initiated each year will depend on City resources. The City may consider racial equity, social justice and other compelling issues to determine project priority and scheduling.

The City will notify the project requestor of the status of their request after this step.

Once ranked, a project is considered in the annual priority ranking step for up to three years. If, after three years, a project has not received a high enough priority to proceed, the project requestor will be notified it will no longer be eligible for consideration. This time limitation ensures that the project requests continue to remain a neighborhood priority as well as reflecting the most current data.

The project requestor will be notified when the three-year limit expires. At that time, a new request may be made to re-enter the project in the program.

#### ***Step 4. Develop Final Plan***

Once a plan reaches the top of the priority list and funding is available and is approved by the City Pedestrian/Bicycle/Motor Vehicle Commission, City staff will develop the final plan.

Depending on the complexity of the project, the City may install a temporary device for up to 30 days. For most projects, a temporary installation will not be required.

The City will not forward a project to the survey stage if a temporary device was installed and it was found to be unsafe or if it violated NTMP or other City policies.

#### ***Step 5. Neighborhood Survey***

To forward the project to Common Council action (Step 6), final approval from households, businesses and non-resident property owners within a defined area must be obtained via a mail survey administered by the City.

The survey area will typically be the same as the initial petition to apply area<sup>3</sup>. If the scope of the project has changed significantly from the time of the original petition, the survey area will be revised accordingly. For projects that are expected to result in traffic diversion resulting in a traffic volume increase on other streets (that is, at least 75 percent of the maximum acceptable increase as determined by the Project Area Traffic Committee and Pedestrian/Bicycle/Motor Vehicle Commission during Step 2), households, businesses and property owners on these other affected streets will be included in the survey area.

For all projects, an approval rate of 60 percent of those surveys that *are returned* to the Traffic Engineering Division typically within four weeks after they were distributed must be in favor of the project for it to proceed for Common Council action. All surveys returned within the identified return period will be counted. Surveys post-marked after this date will not be tallied.

Each household, business, and non-resident property owner is entitled to one survey.

#### ***Step 6. Common Council Action***

Based on the project evaluation and positive survey results, City staff prepares a recommendation for Common Council consideration.

#### ***Step 7. Board of Public Works***

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<sup>3</sup> See Step 1 for the determination of the petition area. **NOTE:** A survey area may be larger than original petition area if diversion to other non-arterial area streets is anticipated.



After the project has been approved by the Common Council it will be referred to the Board of Public Works. Before project(s) can be let for bidding by construction companies, the project plans and construction fund expenditures must be approved by the Board of Public Works. If a project is not approved, it will be referred back to Traffic Engineering staff to consider the Board's concerns.

### ***Step 8. Construct Permanent Traffic Management Device(s)***

Construction is administered by the City and is generally completed during the following construction season.

### ***Step 9. Maintenance***

The City Engineering and Streets Divisions of the Department of Public Works are responsible for the construction and maintenance of any traffic calming device implemented as part of this program. The City Traffic Engineering Division is responsible for any traffic signing and pavement marking or delineation. Any trees planted within the right-of-way are the responsibility of the Parks Division and any landscaping (not including trees) is the responsibility of the neighborhood association or landscape volunteer.

# **APPENDIX A**

## **VISION AND MISSION STATEMENT OF THE CITY OF MADISON**

The City of Madison is located approximately 150 miles northwest of Chicago and 75 miles west of Milwaukee. Madison is Wisconsin's second largest city with a 2000 population of 208,054.

### **Vision Statement**

The vision of the City of Madison is to be a safe and healthy place to live, work, learn and play. Madison will be a place where:

- Diversity is valued;
- Freedom of expression is encouraged and protected;
- Everyone has the opportunity to realize his/her full potential;
- The beauty of the urban environment and natural environment is preserved.

### **Mission Statement**

The City of Madison, through the efforts of dedicated employees and elected officials, will deliver the highest quality services and provide a fair and orderly system of governance for our citizens and visitors.

### **Service Philosophy**

- Put our customers as the focus of everything we do.
- Educate first, regulate when necessary.
- Support and inspire each other.
- Continuously improve the City's services.

One of the several Goals, Strategies and Objectives adopted by the Madison Common Council include:

### **GOAL: GROWTH MANAGEMENT**

Madison must be economically, socially and culturally vibrant for the City and the region to thrive. To be vibrant and to maintain its vitality, Madison should share in the growth that is occurring in Dane County. This growth must be managed in such a way to balance our economic, social and environmental health and maintain a sustainable city.

### **GOAL: NEIGHBORHOODS**

Madison should be a series of quality neighborhoods in which people will want to work, to recreate and, most importantly, to live now and in the future. Residents, City government, property owners, employers and other government institutions have shared responsibility for achieving this goal.

For purposes of this goal, a neighborhood is an area in the city whose character is defined by boundaries, common issues, design elements and transportation connections. Each neighborhood offers a sense of local identity and place, yet contributes to the health of the community.

**Strategy:** Work with existing neighborhoods to maintain and improve them.

**Strategy:** Identify neighborhoods in need and give special emphasis to working with residents of those neighborhoods.

**Strategy:** Plan new residential and commercial neighborhoods at the periphery to be quality urban environments.

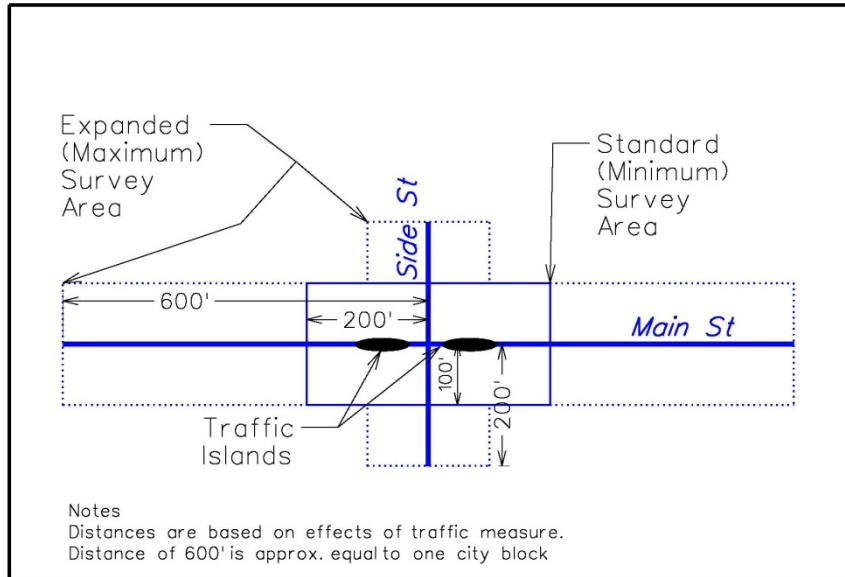
**Strategy:** Facilitate the continuing improvement and vitality of the downtown area.

## ***APPENDIX B***

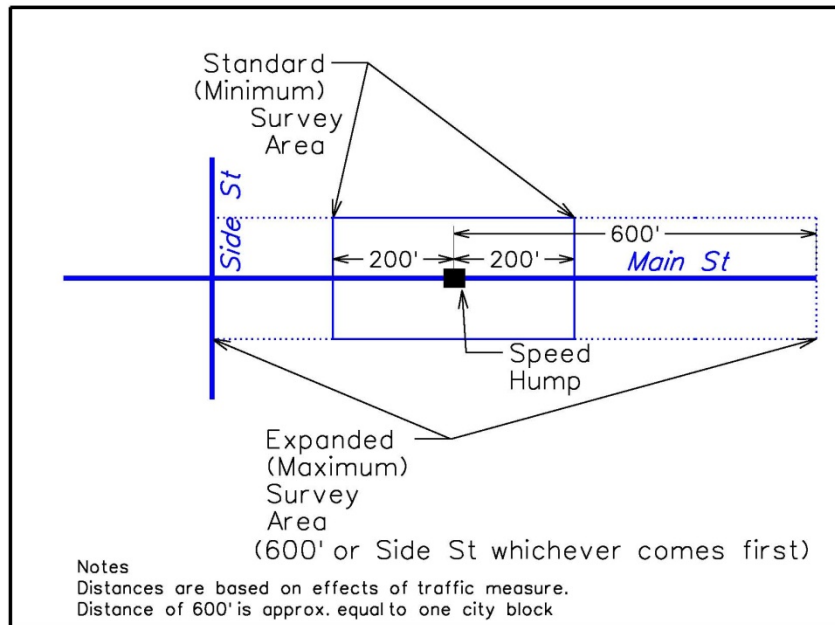
### ***PETITION AREA TEMPLATE***

Templates to be used as guidelines. Special circumstances, for example, one-way streets, dead-end side streets, or other unusual street configurations would be brought to the Pedestrian/Bicycle/Motor Vehicle Commission upon request of the alder.

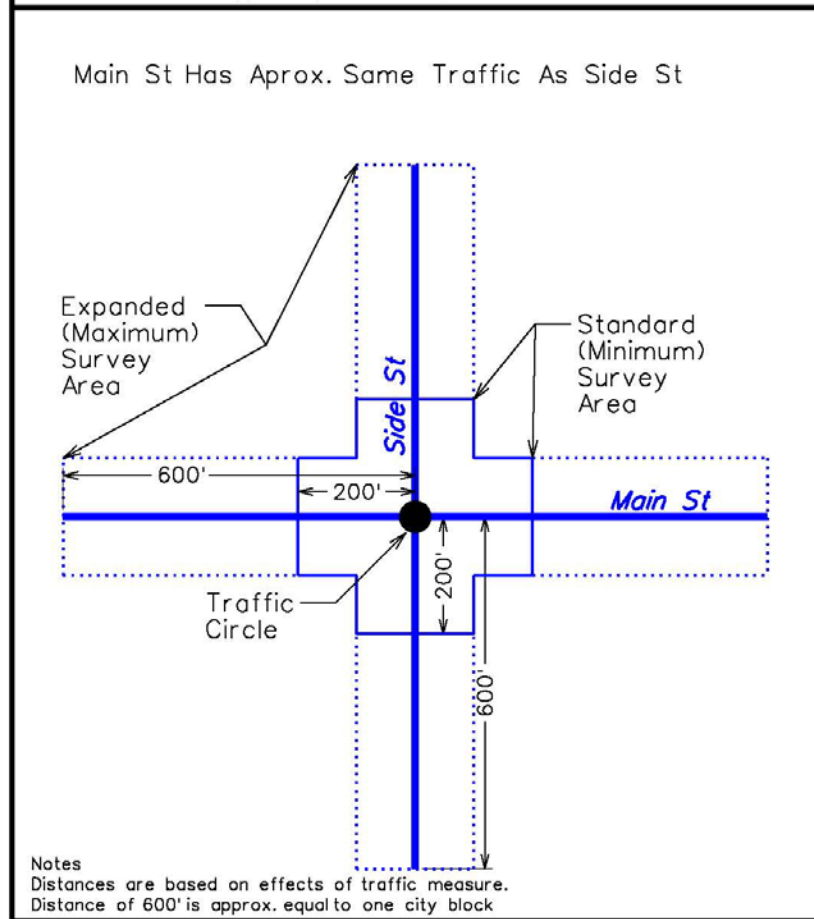
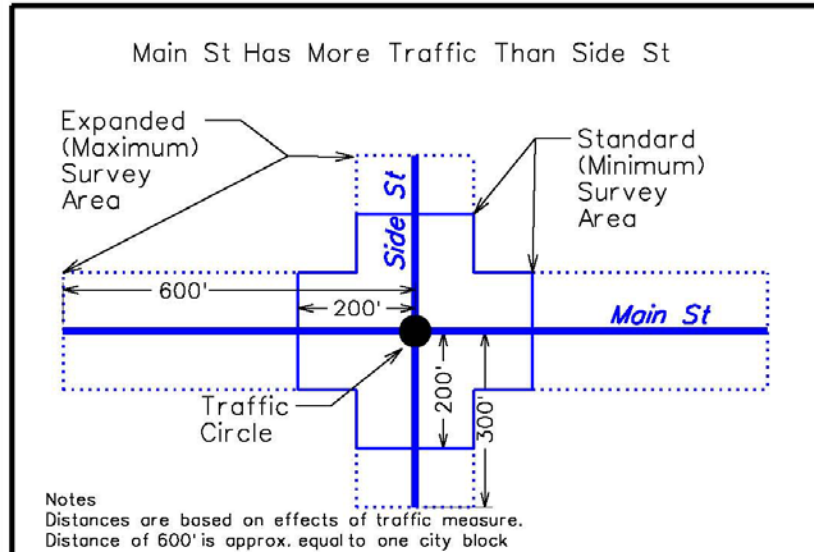
## Proposed Survey Area for Traffic Islands



## Proposed Survey Area for Speed Humps



# Proposed Survey Area for Traffic Circle





# **APPENDIX C**

## **POINT ASSIGNMENT FOR RANKING NTMP REQUESTS**

### **1. Average Daily Traffic Volume**

(On the segment of the project street having the highest volume) divided by 100.

- 30 points Maximum Score

### **2. Speed**

Percent of vehicles 5 mph over the posted or statutory speed limit

(On the segment of the project street having the highest percentage over the limit), divided by 3.

- 30 points Maximum Score

### **3. Crash Record (Police Reported)**

Number of crashes per block segment multiplied by 5.

Mid-block crashes count as 1.

Intersection crashes counts as one-half cross street.

- 30 points Maximum Score

### **4. Elementary, Middle and High Schools**

- 5 points for a public or private elementary, middle or high school within one-quarter mile of the petition area.

### **5. Other High Pedestrian Generating Areas**

- Up to 5 points for each pedestrian oriented facility, such as an ambulatory elderly housing development, library, or a City park on the street or within one-quarter mile of the petition area.
- For pedestrian oriented facilities grouped together on the subject street or within one-quarter mile of the petition area, up to 5 points for the group.
- 10 points Maximum Score

### **6. School Walk Route**

- 5 points will be added if the petition area includes one or more Recommended School Walk Routes as designated by MDOT. School walk routes are defined for elementary level schools.

### **7. Designated Bicycle Routes**

- 5 points for a subject street designated as a bicycle route by MDOT.



#### **8. Scheduled Road Reconstruction**

- To take advantage of a pending street reconstruction project, a traffic calming project which is desired for a street that is to be reconstructed will be ranked with others on its own merits, and decisions on whether or not to proceed will be decided by the Pedestrian/ Bicycle/Motor Vehicle Commission on a case-by-case basis.

#### **9. Time on Project List**

- Two points will be added to any project which has been on the NTMP priority ranking list for the previous two (or more) years. This provides recognition for the length of time a neighborhood project has been on the ranking list.

#### **10. Neighborhood Resource Team Project**

- Five points will be added to any project which has been forwarded for inclusion in the NTMP in a Neighborhood Resource Team (NRT) area or through an NRT.

A project must score 30 or more points to be considered eligible for further inclusion in the NTMP.

The point total is considered along with other information including use of the Race, Equity and Social Justice (RESJ) tool (fast track version) when determining the priority of a project.

# APPENDIX D

## TRAFFIC MANAGEMENT DEVICES

Traffic calming relies upon physical changes to streets to slow motor vehicles or to reduce traffic volumes. These changes are designed to affect drivers' perceptions of the street and to influence driver behavior in a manner that is self-enforcing. Unlike traditional methods of traffic management, traffic calming does not rely primarily upon the threat of police enforcement for its effectiveness. Items which may be considered as traffic calming devices and which may be applied in a NTMP project are shown in Table 1.

### 1. Street and Lane Narrowing

Motorists tend to drive at speeds they consider safe and reasonable and tend to drive more slowly on narrower roads and traffic lanes than wider ones. Reducing road widths by widening boulevards or sidewalks intermittently, introducing medians, or striping bike lanes can reduce traffic speeds. The judicious placement of parking (protected by curbs and made more visible by landscaping) can achieve the same effect, if there is evidence that the on-street parking will be used. Road narrowings have the added advantage of reducing the expanse of road to be crossed by pedestrians, thus reducing pedestrian crossing time.

Other criteria to be applied and considered prior to street narrowing include:

- ⇒ **Bicycle Accommodations:** On local streets designated as a bike route or servicing a significant volume of bicycle traffic, a sufficiently wide bicycle lane should be provided through the narrowed area. Where traffic and/or bicycle volumes are sufficiently low, exclusive bicycle lanes may not be required.
- ⇒ **Snow Removal:** The pavement width of streets shall not be narrowed to a point where it becomes an impediment to snow removal.
- ⇒ **Parking Restrictions:** In most cases on local access streets, street narrowing, such as with the installation of a pedestrian refuge island at an intersection, will require the prohibition of parking at all times along the street curb the full length of the narrowed section plus approximately 20 feet.



Typical parking restriction  
for a pedestrian refuge island  
(N. Baldwin St. at Mifflin St)

TABLE 1: NEIGHBORHOOD TRAFFIC MANAGEMENT DEVICES

Devices	Safety	Speed Reduction	Pedestrian, Bicyclists Access	Traffic Diversion	Noise	Exhaust Emissions	Emergency Services	Acceptable for Traffic Management
Police Enforcement	Improvement	Depends on Amount	Possible Improvement	No Effect	No Effect	No Effect	No Effect	Yes
Speed Humps	Unknown	Yes	Mixed Results	Possible	Increase	Small Increase	Possible Problem	Yes
Education	Possible Improvement	Possible	Possible Improvement	N.A.	N.A.	N.A.	No Effect	Yes
Entrance Treatments	Possible Improvement	Unlikely	Possible Improvement	Mixed Result	No Effect	No Effect	Possible Problems	Yes
Curb Extensions	Improve Ped Crossing	Unlikely	Yes	No Effect	No Effect	No Effect	Possible Problems	Yes
Partial diverters/ Diverters/Cul-de-Sac	Possible Improvement	Possible	Possible	Yes	Possible Reduction	No Effect	Possible Problems	Possible
Chicanes	Possible Improvement	Possible	Possible	Possible	No Effect	Small Increase	Possible Problems	Yes
Traffic Circles	Improved	Yes	Possible	Possible	No Effect	No Effect	Possible Problems	Yes
One-way Streets	Possible Improvement	No	Mixed Results	Possible	No Effect	No Effect	Possible Problems	Yes
Median Barrier	Possible Improvement	No	Mixed Result	Possible	No Effect	No Effect	Possible Problems	Yes
Improve Arterial Streets	Possible Improvement	Unlikely	Possible Improvement	Possible Improvement	Possible Improvement	Possible Decrease	No Effect	Limited
<b>Traffic Control Devices: e.g. Prohibitory Signing</b>	Possible Improvement	Unlikely	Possible Improvement	Yes	Possible Improvement	No Effect	No Effect	Possible

- ⇒ Landscaping: Median landscaping can be selected by the neighborhood association from an approved landscaping materials list provided by the City. Initial landscaping will be provided and installed by the City and will be maintained by the neighborhood association or landscape volunteer. If the landscaping is not maintained, the median will be topped with an asphalt or concrete pavement.
- ⇒ Median Width/Lane Width: Where medians are used to narrow streets, the preferred minimum width for medians is six feet, but actual width will be determined based on existing circumstances. Travel lanes shall not be narrowed to a width less than nine feet, exclusive of gutter. Bicycle lanes where required shall be four feet wide exclusive of gutter. If parking is allowed, the parking and bicycle lane combination shall be a minimum of 13 feet.

## **2. *Bicycle Lanes***

Lane widths available to motorists can be reduced on some streets by the installation of bicycle lanes, either next to curb (preventing stopping or parking by motor vehicles) or adjacent to parking. The space needed for bicycle lanes introduced on an existing street may reduce the width or number of general traffic lanes or the amount of parking. Bicycle lanes shall be constructed to the standard specifications of the Madison Department of Transportation, Traffic Engineering Division.

## **3. *Raised Street Sections or Speed Humps***

Raised street sections or speed humps can reduce vehicle speeds on local streets. The hump is a raised area, generally 3.5 inches high, extending transversely across the street. Speed humps typically are constructed with a longitudinal length of 22 ft.

Other criteria to be applied prior to installation of speed humps include:

- ⇒ **Signing; Marking**  
Speed humps are required to be signed with a combination of signs and/or pavement markings to warn motorists and bicyclists of their presence.
- ⇒ **Traffic Safety and Diversion**  
Any use of speed humps must take into consideration the impact the installation will have on long-wheel-based vehicles (fire apparatus, ambulances, buses) and the potential to divert traffic to other adjacent streets.
- ⇒ **Street Functional Classification**  
Speed humps should only be installed to address documented problems or traffic concerns supported by traffic engineering studies. Speed humps can be considered on local and neighborhood collector streets as functionally classified by MDOT with traffic volumes up to 3,000 vehicles per day. Consideration of speed humps on collector streets with traffic volumes between 3,000 and 5,000 vehicles per day will be based on a case-by-case review, considering traffic volume and Madison Metro and Madison Fire Department operations.
- ⇒ **Street Width**  
Speed humps should be used only on streets with no more than two travel lanes and less than or equal to 32 feet in width. In addition, the pavement should have good surface and drainage qualities.

- ⇒ **Street Grade**  
Speed humps should only be considered on streets with grades of 8% or less approaching the hump.
- ⇒ **Street Alignment**  
Speed humps should not be placed within severe horizontal or vertical curves that might result in substantial horizontal or vertical forces on a vehicle traversing the hump. Humps should be avoided within horizontal curves of less than 300 feet centerline radius and on vertical curves with less than the minimum safe stopping sight distance. If possible, humps should be located on tangent rather than curve sections.
- ⇒ **Sight Distance**  
Speed humps should generally be installed only where the minimum safe stopping sight distance (as defined in AASHTO's *A Policy on Geometric Design of Streets*) can be provided.
- ⇒ **Traffic Speeds**  
Speed humps should generally be installed only on streets where the posted or prima facie speed limit is 25 mph or less. Speed humps should be carefully considered on streets where the 85th percentile speed is in excess of 40 mph.
- ⇒ **Traffic Volumes**  
Speed humps should typically be installed only on streets with 5,000 vehicles per day or less. Madison Metro and Madison Fire Department need to be consulted before speed humps can be installed on streets with traffic volumes between 3,000 and 5,000 vehicles per day.
- ⇒ **Emergency Vehicle Access**  
Speed humps should not be installed on streets that are defined or used as primary or routine emergency vehicle access routes.
- ⇒ **Transit Routes**  
Speed humps may be considered for use along streets serving as Madison Metro bus routes and meeting the following criteria:

Functional Class	Local and neighborhood collector streets as determined by MDOT. <sup>4</sup>
Bus Stops	Speed humps should not be installed at locations on streets where Metro vehicles must transition from the travel lane across a speed hump to the curb bus stop. On streets with Metro bus routes, speed humps should be located in consultation with Madison Metro in such a way as to insure that transit vehicles can traverse the speed hump perpendicular.

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<sup>4</sup> Neighborhood collectors may be considered on a case-by-case basis with consultation with Madison Metro, Traffic Engineering and Madison Fire Department.

#### 4. Full or Partial Road Closures [Semi-Diverter/Diverter/Cul-de-sac]

Roads can be closed to motor vehicles at intersections, preventing through movement and requiring access to be gained from other streets. Closure should be undertaken in such a way as to avoid simple displacement of traffic to adjacent residential streets. It will usually be possible and desirable to retain pedestrian and bicycle access.

- ⇒ Partial intersection closures can be achieved by narrowing a street to one lane at an intersection and instituting an entry restriction. Another technique is to introduce a “diagonal diverter” or barrier diagonally across an intersection which forces traffic off a favored short-cut. Gaps can be left to allow access by pedestrians and bicyclists.
- ⇒ Partial Closures  
Partial roadway closures at intersections will require consideration of pedestrian and bicycle access and lane width requirements similar to those defined under *Street and Lane Narrowing*.

#### 5. Chicanes

Chicanes are a form of curb extension which alternate from one side of the street to the other. The road is in effect narrowed first from one side then the other and finally from the first side again in relatively short succession. Chicanes break up the typically long sight lines along streets and thus combine physical and psychological techniques to reduce speeds.

- ⇒ Lane Width: Where chicanes are used, the travel lanes shall not be narrowed to a width less than nine feet, exclusive of gutter. Bicycle lanes where required shall be four feet wide exclusive of gutter.
- ⇒ Snow Removal: Chicanes shall be designed to minimize the accumulation of snow piles and trash in the gutter interface between existing curb and gutter and chicane.
- ⇒ Landscaping: Landscaping will typically consist of grass. Other landscaping may be selected from an approved landscaping list provided by the City. Initial landscaping will be provided and installed by the City and will be maintained by the neighborhood association or landscaping volunteer. Landscaping will not be approved which will obstruct the driver's vision of approaching traffic, pedestrians or bicyclists.

#### 6. Traffic Circles

Traffic circles are circles of varying diameter formed by curbs. Motorists must drive around the circle or in the case of longer vehicles drivers may drive slowly onto and over a mountable concrete curb forming the circle. Traffic circles reduce motor vehicle speeds through the intersection, depending on the current intersection controls in place.

Other criteria to be applied and considered prior to installation include:

- ⇒ Design Considerations  
For each intersection the size of the circle will vary depending on the circumstances for that specific intersection. In general, the size of the circle will be determined by the geometrics of the intersection with the largest circle that meets the design considerations being constructed. *Note that in most instances the circle constructed will be smaller to accommodate snow removal equipment.*

⇒ Design Considerations for “T” Intersections

For “T” type intersections, all of the above design considerations apply. In addition, curb extensions (or curb bulbs) may be included along the top of the “T” at the entrance and exit to the intersection.

⇒ Signage

Signs will be used to identify and delineate traffic circles. Normally, one sign facing each vehicle approach shall be installed. An object marker sign shall be installed on a post whenever practical. The post shall be installed in the circle and offset – approximately one foot from the center of the roadways. Other signs as may be appropriate may also be used in connection with a circle.

⇒ Markings

Yellow retro-reflective lane line markers may be placed on top of the circle at its outer edge. Silver retro-reflective lane line markers shall be placed on the top of the curb for any curb extensions. These shall be placed at about five-foot spacings.

⇒ Parking Removal

Normally, parking will not be prohibited in the vicinity of the circle beyond that which is prohibited by the City of Madison, i.e., “within the intersection” or “within 15 ft. of crosswalk area” [Sec. 12.125(6)]. However, where special circumstances dictate, such as where the circle is on a response route for the Fire Department or to accommodate snow removal, or in an area where there is an unusually high use by trucks, additional parking may be prohibited as needed.

⇒ Sign Removal

At intersections where circles are to be installed, any previous right-of-way controls may be removed at the time of circle construction completion.

⇒ Landscaping

Landscaping will be selected by the neighborhood association or citizen traffic committee from an approved landscaping materials list provided by the City. Initial landscaping will be provided and installed by the City and will be maintained by the neighborhood association. If the landscaping is not maintained, the traffic circle will be topped with an asphalt pavement.

Volunteer Required: Plant material will only be installed at traffic circles where a local resident or the neighborhood association has volunteered to maintain the plant material. This maintenance will include watering, weeding and litter pick-up, as needed. All volunteers will be provided with information on maintenance of the plant material and common problems.

Points at which volunteers will be required: During initial contact, the person or neighborhood association requesting participation in the NTMP will be informed of the need for a volunteer for landscaping. In the notice of the neighborhood meeting before construction, all residents in the project area will be informed of the need for a maintenance volunteer. This will be reiterated at the meeting if no one has volunteered. If no one has volunteered by the time that the circle is constructed, a special letter will be distributed to all residents in the project area informing them of the need for a volunteer. A final notice to the residents will be included in the cover letter for the “after” survey of the residents.

Plant Replacement: Where the Engineering Department had installed plant material in a traffic circle, the Department will replace any plant material which is damaged by traffic or

vandalism or which dies due to planting, for a period of one year after the initial planting. If such damage is a persistent problem, the Department may decide to cover the circle with an asphalt topping rather than continue to replace plant materials.

## ***Stop Signs***

In some instances stop signs can be used as an effective traffic management and safety device. However, in most instances stop signs are not used as a traffic management device within the NTMP.

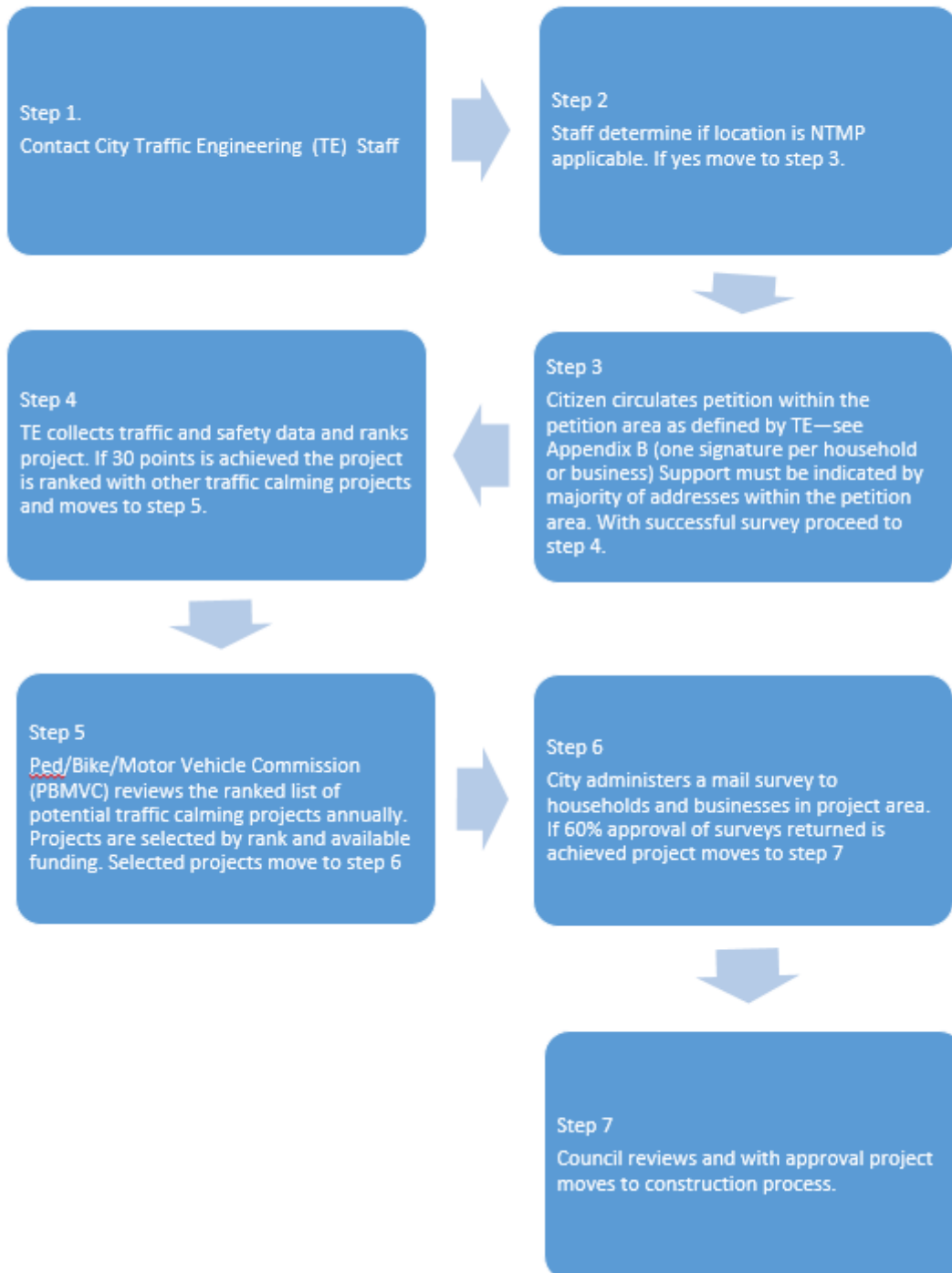
Stop signs are used to assign the right-of-way at an intersection. They are installed at intersections where a crash problem is identified, where unremovable visibility restrictions exist (such as buildings or topography), and/or where volumes are high enough that the normal right-of-way rule is unduly hazardous.

Stop signs are generally not installed to divert traffic or reduce speeding. Studies from other jurisdictions show that such use of stop signs seldom has the desired effect. In fact, the use of stop signs solely to regulate speed typically causes negative traffic safety impacts (non-compliance with the signs and increased crashes as well as mid-block speeding).



## APPENDIX E

### Neighborhood Traffic Management Program Process Flow Chart



## APPENDIX F

### GLOSSARY

The following are brief descriptions of terms and techniques commonly used to describe and measure traffic conditions.

1. **Street Classification.** All of the streets under the jurisdiction of the City of Madison are classified by the City's Department of Transportation. These classifications designate a hierarchy of streets to serve different kinds of trips, and different volumes of traffic, traveling at different speeds. The street classifications and policies are not a strict guideline for current operation of Madison's street system; thus some streets may not now be operating in accordance with their classification.

**Local service streets** make up the great majority of Madison's street system. These streets serve local circulation needs – auto, bicycle, and pedestrian – and provide access to land uses located along the street. Local service streets should not carry significant volumes of through traffic. Many reported neighborhood traffic problems are concerned with the interactions of autos and residential livability on local service streets.

**Collectors** are intended to be the links between the local service streets and major city traffic streets. Shorter trips and access to commercial uses should also be emphasized in the design of neighborhood collectors.

**Standard Arterial streets** are similar to neighborhood collectors, except they serve larger geographical areas and/or more concentrated development.

**Primary Arterial streets** are designed to serve trip movements between different districts of the City and to allow access to abutting properties without disrupting traffic flow.

**Principal Arterials** are intended to serve heavy volumes of regional traffic and are access-restricted facilities, such as the Beltline.

2. **Volume** is another of the most commonly reported local traffic problems. Volume refers to the number of vehicles that cross a given section of roadway during a specified time period. In Madison, volumes are normally measured on weekdays for at least 24 hours.
3. **Crash History** information is used to determine safety problems at a given location. Crashes, particularly at low-volume residential intersections, are often random. An average of less than one reported crash per year usually does not indicate a safety hazard. An average of one or more reported crashes per year can be significant, particularly if there is a pattern of several similar crashes having occurred. When a pattern is apparent, the problem can be identified and appropriate solutions developed.

***APPENDIX G***

***RESOLUTIONS RELATED TO NTMP***

A SUBSTITUTE RESOLUTION\_

Adopting the Pedestrian-Bicycle-Motor Vehicle Commission's report entitled "Neighborhood Traffic Management Program" and directing the City Traffic Engineer to develop and to implement a Neighborhood Traffic Management Program

Drafted By: Roger A. Allen  
Assistant City Attorney

Date: May 28, 1997; revised  
7/22/97

Fiscal Note: No direct costs associated with adopting this resolution. However, there will be costs related to the implementation of the Neighborhood Traffic Management Program; Common Council approval of those costs would be required in the future

Presented June 3, 1997

Referred CCOC, Ped/Bicycle/MV Commission

Rereferred CCOC, PBmvc (7-15)

Reported Back 7-15; 8-19-97

Adopted \_\_\_\_\_ x \_\_\_\_\_ POF

Rules \_\_\_\_\_ Suspended

Public \_\_\_\_\_ Hearing

APPROVAL OF FISCAL NOTE IS NEEDED  
BY THE COMPTROLLER'S OFFICE  
Approved By

Comptroller's Office

SUBST. RESOLUTION NUMBER 54,443

ID NUMBER 21663

SPONSORS: Aids. Ken Golden, July Olson and Barbara Vedder

WHEREAS, the City of Madison places a high value on neighborhood; and

WHEREAS, traffic volume and traffic speed can have serious and negative impacts upon the quality of life in residential neighborhoods; and

WHEREAS, police enforcement of traffic laws and public education regarding traffic laws are but part of the solution to improving citizens' concerns regarding traffic speeds and traffic volumes within their neighborhoods; and

WHEREAS, the Pedestrian-Bicycle-Motor Vehicle Commission has previously studied and evaluated other mechanisms/  
devices/techniques available to the City Traffic Engineer which would reduce traffic speeds and traffic volumes in residential neighborhoods; and

WHEREAS, the Pedestrian-Bicycle-Motor Vehicle Commission has found that these mechanisms/devices/techniques have been successfully employed in other cities and states; and

WHEREAS, the Pedestrian-Bicycle-Motor Vehicle Commission has reported its findings to the Council; and

WHEREAS, the Pedestrian-Bicycle-Motor Vehicle Commission has attached to its report a copy of the

Neighborhood Traffic Management Program drafted by the City Traffic Engineer and his staff; and

WHEREAS, the Neighborhood Traffic Management Program is a plan for incorporating into the City's traffic management plans those traffic management mechanisms/devices/techniques studied and reported upon by the Pedestrian-Bicycle-Motor Vehicle Commission;

NOW THEREFORE BE IT RESOLVED That the Common Council does hereby adopt the Pedestrian-Bicycle-Motor Vehicle Commission's report entitled "Neighborhood Traffic Management Program";  
BE IT FURTHER RESOLVED That the City Traffic Engineer is hereby directed to continue to develop and, where appropriate, implement a Neighborhood Traffic Management Program consistent with the Pedestrian-Bicycle-Motor Vehicle Commission's Report;

BE IT FURTHER RESOLVED That the objectives of the Neighborhood Traffic Management Program shall be: 1) the improvement of neighborhood livability through mitigation of the negative aspects of vehicular traffic on residential streets, 2) the promotion of safe, convenient, pleasant and accessible conditions for pedestrians, motorists, bicyclists and residents on neighborhood streets; 3) citizen involvement in neighborhood traffic management planning; and 4) promoting the efficient use of City resources by prioritizing neighborhood traffic management requests;

BE IT FINALLY RESOLVED That appropriate City departments and divisions be directed to cooperate in the City Traffic Engineer's development and implementation of the Neighborhood Traffic Management Plan.

**CITY OF MADISON, WISCONSIN**

**A SUBSTITUTE RESOLUTION**

**Revising the Neighborhood Traffic Management Program (NTMP) as it relates to speed humps being considered on local streets serving Metro bus routes**

Drafted by: **David C. Dryer, CTE**

Date: **6/27/01/Rev 7/12/01**

Fiscal Note: No direct costs associated with adoption of this resolution. However there will be costs related to the implementation of the NTMP. Council approval of those costs would be required in the future.

PRESENTED 7/3/01  
REFERRED PBMVC,\* TPC, CC  
8/7/01

REREFERRED \_\_\_\_\_

REPORTED BACK 8/7/03

ADOPTED X POF \_\_\_\_\_

RULES SUSPENDED \_\_\_\_\_

PUBLIC HEARING \_\_\_\_\_

APPROVAL OF FISCAL NOTE IS NEEDED  
BY THE COMPTROLLER'S OFFICE

Approved By

\_\_\_\_\_  
Comptroller's Office

SUBS. RESOLUTION NO. 58579

ID NUMBER 29873

**SPONSORS: Aids. Bellman, Borchardt and Sloan**

(At the request of the Pedestrian-Bicycle-Motor Vehicle Commission)

**P R E A M B L E**

Since its approval in 1997, the City's NTM program has restricted the use of speed humps to streets which do not serve as Madison Metro bus routes. This restriction was enacted because speed humps of certain design can significantly impact long-wheel based vehicles, e.g., Metro coaches, Fire engines and their occupants.

This policy has precluded the City from using speed humps to address speeding/traffic problems on local residential street—ones which also serve as Metro bus routes. When originally developed the NTM program precluded the use of speed humps on these street because both existing speed hump design and practice at that time found unacceptable jolts to bus coaches and riders. Since the NTM program's inception, staff has worked with and adopted a speed hump design<sup>5</sup> which at reasonable speeds does not jolt Metro coaches or its riders. This design has been used both on Manitou Way and Yuma Drive.

Traffic Engineering staff have met with Metro staff to discuss concerns they may have with operating over local streets with speed humps. A field trial was conducted with a Metro coach on both Manitou Way and Yuma Drive and the coach was driven over these speed humps at varying speeds. From this trip, it was the consensus of Metro staff that operating over the standard 22 ft. long speed hump at a speed between 20 and 25 mph did not pose problems to their operation.

Recognizing that on local streets Metro can be accommodated, the current policy is felt to be overly restrictive. Therefore, staff is recommending the policy be changed to allow speed hump application to select streets which also serve as Metro routes.

**NOW THEREFORE BE IT RESOLVED** That the last item under 3. *Raised Street Sections or Speed Humps*, pages 18-19 of the

<sup>5</sup> The City uses a 22 ft. long speed hump consisting of a 6 ft. ramp up to a 3.5" high 10 ft. long flat table and back down to existing pavement with another 6 ft. long ramp.

NTMP Proposed Objectives, Policies and Procedures, Version 5, which currently reads:

*Transit Routes: Speed humps should not be used along streets with established transit routes.*

Be revised to read:

*Transit Routes: Speed humps<sup>6</sup> may be considered for use along local streets serving as Madison Metro bus routes and meeting the following criteria:*

*Functional Class  
Bus Stops*

*Local as determined by MDOT<sup>7</sup>  
Speed humps should ~~typically~~ not be  
installed ~~in street sections~~ at locations on  
streets where Metro vehicles must  
transition ~~between~~ from the travel lane  
~~and across a speed hump to the curb bus~~  
stop. To the extent possible, On streets  
with Metro bus routes, speed humps  
should be located in consultation with  
Madison Metro in such a way as to insure  
that transit vehicles can traverse the speed  
hump perpendicular.*

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<sup>6</sup> On transit streets only the 22-foot long 3.5-inch high-speed hump will be used.

<sup>7</sup> Neighborhood collectors may be considered on a case-by-case basis with consultation with Madison Metro, Traffic Engineering and Madison Fire Department.

A SUBSTITUTE RESOLUTION

**Revising the Neighborhood Traffic Management Program (NTMP) to reflect program experience over the past five years**

Drafted By: **Arthur Ross, Pedestrian-Bicycle Coordinator**

Date: **December 5, 2002**  
Revised **February 25, 2003**

Fiscal Note: No direct costs associated with adoption of this resolution. However there will be costs related to the implementation of the NTMP. Council approval of those costs would be required in the future.

PRESENTED January 7, 2003  
REFERRED CC 1/21/02

REREFERRED \_\_\_\_\_

REPORTED BACK Mar 04 2003

ADOPTED X POF \_\_\_\_\_  
SUSPENDED RULES \_\_\_\_\_  
ID NUMBER \_\_\_\_\_

APPROVAL OF FISCAL NOTE IS NEEDED  
BY THE COMPTROLLER'S OFFICE  
Approved By

\_\_\_\_\_  
Comptroller's Office

RESOLUTION NUMBER 60270  
ID NUMBER 33164

SPONSORS: **Alders Bellman, Borchart, and Sloan**  
(At the request of the Pedestrian-Bicycle-Motor Vehicle Commission)

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**P R E A M B L E**

Since its approval in 1997, the Neighborhood Traffic Management Program has been revised only once, in 2001, and then only in a very specific way related to Madison Metro bus routes. Traffic Engineering staff and the Pedestrian-Bicycle-Motor Vehicle Commission have completed a review of the NTM program and have drafted a revised process to reflect experiences over the past five years of implementing the NTM program. The changes are minor, primarily intended to streamline and clarify the process, and should result in better projects, improved communication with those affected by NTM projects, and projects being completed in a more timely manner.

**NOW THEREFORE BE IT RESOLVED** That the Common Council does hereby adopt the Pedestrian-Bicycle-Motor Vehicle Commission's report entitled *Neighborhood Traffic Management Program*, Version 7b, ~~December 2002~~ February 25, 2003;

**BE IT FURTHER RESOLVED** That the City Traffic Engineer is hereby directed to continue to develop and, where appropriate, implement a Neighborhood Traffic Management Program consistent with the Pedestrian-Bicycle-Motor Vehicle Commission's Report.



**SEE LEGISTAR ITEM 01191**  
**SUBSTITUTE RESOLUTION REVISING THE NTMP TO ALLOW FOR THE USE OF SPEED HUMPS**  
**ON LOCAL OR COLLECTOR STREETS WITH VOLUMENS OF 5000 VPD OR LESS**

**ENACTMENT NUMBER RES-05-00984**  
**ENACTMENT DATE: 12/19/2005**

TEXT OF LEGISLATIVE FILE 01191:

**...Fiscal Note**

No direct costs associated with adoption of this resolution. However, there will be costs related to the implementation of the NTMP. Council approval of those costs would be required in the future.

**...Title**

SUBSTITUTE – Revising the Neighborhood Traffic Management Program (NTMP) to allow for the use of speed humps on local or collector streets with volumes of 5,000 vpd or less

**...Body**

**PREAMBLE**

Since its approval in 1997, the Neighborhood Traffic Management Program has been revised two times, once in 2001 and then again in 2003. Changes have been made generally in a narrow manner related to Madison Metro routes and to simplify and streamline the process. Traffic Engineering staff and the Pedestrian-Bicycle-Motor Vehicle Commission at the request of residents within the Regent Neighborhood have recently completed a review of the NTM program, and specifically reviewed the application of speed humps on higher order collector streets (streets with average weekday traffic in excess of 3,000 vehicles). The changes proposed in the revision allow the use of speed humps on a greater number of streets, specifically streets with 3,000 to 5,000 vpd or less.

**NOW THEREFORE BE IT RESOLVED** That the Common Council does hereby adopt the Pedestrian-Bicycle-Motor Vehicle Commission’s recommendation to revise the report entitled “Neighborhood Traffic Management Program, Version 8, March 22, 2005,” to allow the use of speed humps on local or collector streets, specifically streets with 3,000 to 5,000 vpd or less, following review by the Fire Department and Madison Metro.

**BE IT FURTHER RESOLVED** that the City Traffic Engineer is hereby directed to continue to develop and, where appropriate, implement a Neighborhood Traffic Management Program consistent with the NTMP Program Objectives, Policies and Procedures.