City of Wauwatosa

Neighborhood Traffic Management Program Calming Guidelines

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1 Introduction

The City of Wauwatosa Neighborhood Traffic Management Program Calming Guidelines (NTMPCG) are designed to address traffic concerns on the city’s residential streets. The City of Wauwatosa has developed the Neighborhood Traffic Management Program (NTMP) as a Traffic Calming Policy through which residents can request that the City address concerns about traffic safety in their neighborhoods. The Wauwatosa NTMP is intended to address traffic concerns on all neighborhood streets within the City.

The following traffic calming guidelines address the NTMP purpose, how to identify neighborhood traffic concerns, how traffic problem solutions are developed, how traffic calming solutions are implemented, and how the city prioritizes the implementation of recommended solutions. The Neighborhood Traffic Management Program Calming Guidelines (NTMPCG) emphasize neighborhood involvement in the identification, confirmation, and education of potential neighborhood traffic problems and solutions. The NTMPCG focuses on traffic calming as a tool that reduces the negative effects of automobile use, alters driver behavior, and improves neighborhood quality of life for residents, pedestrians, and bicyclists on neighborhood streets.

Once a traffic problem is identified and confirmed the Neighborhood Traffic Calming Guidelines uses a four-step method to direct and modify travel behavior through a neighborhood. These measures are categorized into what is commonly called the “4 E’s:"

- Education
- Enforcement
- Encouragement
- Engineering

The first step involves education, which is directed at informing neighborhood residents and drivers of speed limits and pedestrian awareness. Enforcement takes another step and involves the use of police patrols to usually issue speeding tickets. Encouragement reinforces the first steps by increasing awareness using tools such as yard signs flyers, newsletters, and demonstrations. The final step, engineering, typically involves construction of traffic calming devices.

The most common solutions suggested by community residents for neighborhood traffic issues are requests for stop signs or children at play signs. Appendix A describes the purpose of stop and children at play signs and why they are inappropriate for use as traffic calming measures.

Traffic calming devices described in the Traffic Calming Tool Kit in Appendix B use physical measures to encourage people to drive more slowly. They create physical and visual cues that induce drivers to travel at slower speeds. Traffic calming measures are typically self-enforcing and do not normally require police enforcement to operate successfully.

Most motorists drive roadways based on what they feel are safe and appropriate speeds. The design of a roadway can encourage slower speeds and reduce cut-through traffic. Narrow streets, avoidance of long straight roadways and street network connectivity all contribute to calming traffic on neighborhood streets. While landscaping does not force a change in driver behavior, it can provide the visual cues that encourage people to drive more slowly. Many of these street design principles, including narrow street widths of 26 feet or less, have already been employed in the construction of Wauwatosa’s neighborhood street system.
Typically, traffic-calming measures are targeted to reduce excessive travel speeds, reduce cut-through traffic, and control pedestrian/bicycle conflicts. Physical treatments such as medians, traffic circles, road narrowing, speed tables, and diverters, are used to alter behavior of drivers when they travel through a neighborhood.

1.1 Purpose

This NTMP report documents the policies and procedures for implementing traffic management measures on existing neighborhood streets in the City of Wauwatosa. Roadways are typically classified as arterials, collectors and neighborhood (local) streets. This program only applies to neighborhood streets directly under the City of Wauwatosa’s control and does not apply to arterials or to state or county roadways as identified in Figure 1-1.

The City of Wauwatosa NTMP is consistent with the ‘4E’ principles, initially focusing on education, which involves neighborhood action. In some cases, education will be combined with police enforcement, encouragement, and passive traffic control measures such as the use of radar trailers, signage, or turn restrictions. These are defined as Level One Options. If traffic concerns persist after Level One Options have been implemented, a neighborhood may move on to more substantial engineering measures such as speed tables, traffic circles, roadway narrowing, or other even more restrictive measures that limit neighborhood accessibility such as traffic diverters and cul-de-sacs. These are defined as Level Two Options.

1.2 Benefits

Traffic calming measures can be used to achieve the following goals:

- Increase neighborhood safety
- Increase neighborhood aesthetics (atmosphere and landscaping) and livability
- Decrease neighborhood traffic intrusion (cut-through traffic)
- Improve traffic efficiency throughout the City
- Increase internal and external connectivity of neighborhood street networks
- Increase diversity of street use (e.g. the street is used not only for motor vehicles travel, but also for pedestrians, bicyclists, etc.)
- Increase pedestrian/bicycle use of streets and sidewalk/pathways
- Improve/enhance neighborhood identity (traffic circles, narrowing’s or gateway treatments)
1.3 Public Involvement

Involvement of the community is key to a successful neighborhood traffic management program. Public input and response to the traffic calming program will indicate areas of residential traffic concerns around the City. The input and responses received from local citizens will help the City address and prioritize improvement projects. In Wauwatosa, NTMP City staff works cooperatively with neighborhood communities to help address existing and potential traffic concerns.

Neighborhood support is crucial to successfully implementing and sustaining traffic management strategies. Therefore, whenever practical, residents, businesses, community groups, and institutions should take the lead in initiating requests for traffic calming projects.

To keep the community involved in their requests, the City of Wauwatosa staff will work with community members and groups on how to gather data related to their traffic concern and in the development of traffic management solutions.
2 Neighborhood Traffic Calming Process

Figure 2-1 illustrates the traffic calming process described further in the following document.

**Figure 2-1: Neighborhood Traffic Management Program Process**

1. **Resident** completes NTMP Request Form and submits to DPW or local Alderperson

2. **Police Department** obtains speed, volume, and accident data

3. **Traffic Calming Committee (TCC)** determines if request is eligible for traffic calming consideration

4. **IF NO** – area is not eligible for traffic calming process

5. **Transportation Affairs Committee (TAC) and local Alderperson/s** approve petition

6. **Resident** obtains signatures from at least 50%+1 of property owners within "Impacted Area"

7. **IF YES**
   - TCC defines "Affected Area" and "Impacted Area"

8. **DPW/Local Alderperson/s** schedules neighborhood meeting with residents and potentially coordinate additional data gathering

9. **TCC/TAC/Residents** develop "Proposed Neighborhood Traffic Mgmt Plan"

10. **DPW implements Phase One options and Police Department subsequently collects additional speed and volume data**

11. **Residents** must return ballots with 67% in favor of proposed project within "Affected Area" for project approval

12. **If Phase Two Options are considered** DPW will mail ballots to "affected area"

13. **TCC evaluates effectiveness of Phase One options and presents findings to the TAC to determine if Phase Two Options are to be considered**

14. **City Staff will finalize construction plans and seek final elected official approvals which will include a standard special assessment process and project timelines**

**Legend:**
- **Resident Action**
- **Elected Official Action**
- **City Staff Action**
- **Joint Effort**
2.1 Identification of Traffic Concern and Eligibility

Identifying and eligibility determination of neighborhood traffic concerns is a five-step process that involves:

1. Resident completes NTMP Request Form and submits to DPW or local Alderperson/s;
2. Police Department collects basic speed, volume, and accident data;
3. The City’s Traffic Calming Committee (TCC) determines if concern is eligible for traffic calming process;
4. If eligible, TCC determines “Affected Areas” and “Impacted Areas”;
5. Residents obtain signatures from at least 50% plus 1 of property owners within “Impacted Area” and are placed onto a Transportation Affairs Committee agenda to ask for approval to move onto the next steps.

2.1.1 Resident Completes NTMP Request Form and Submits to DPW or Local Alderperson

The process starts when a resident or community group submits an NTMP Request Form, which can be found on the city website, to a member of the City Department of Public Works (DPW) or one of the local Alderpersons, each responsible for notifying the other of the request. A copy of the NTMP Request form, and accompanying Traffic Study petition form, is included in Appendix C. City staff will determine if the street or intersection of concern is applicable for consideration by the Neighborhood Traffic Calming Guidelines. To be eligible for the program, the street must:

* Be a residential neighborhood or collector street under the City of Wauwatosa’s jurisdiction
* Have traffic volumes ranging from 300 to 5,000 vehicles per day
* Have a posted speed limit of 30 mph or less
* Be at least 1,000 feet in length
* Not be cul-de-saced

Note: The City may choose to provide education and enforcement components of traffic calming on streets that are less than 1,000 feet in length or are cul-de-saced. Streets and roadways servicing emergency response vehicles such as fire trucks may have limits to the implementation of certain traffic calming measures. Additional City coordination will be needed for addressing traffic calming on these roadway segments.

2.1.2 Police Department Collects Basic Speed, Volume, and Accident Data

Once the NTMP Request Form has been reviewed by staff, the next step in the Neighborhood Traffic Management Program Calming Guidelines involves collecting related traffic data to confirm the existence and magnitude of the traffic concern.

Police Department staff will obtain site data including traffic volumes and speeds utilizing a radar speed sign. It is important to note that the sign will appear to be inactive because the sign
display will be turned off so that we can gather accurate data as drivers may alter their normal behaviors if the display were on. The Police Department will also gather any crash history in the area over the past three years.

2.1.3 **City’s Traffic Calming Committee (TCC) determines if concern is eligible for traffic calming process**

Once all data has been collected, the TCC will meet to review all data collected to determine if the NTMP Request is eligible for traffic calming consideration as well as prioritization within the traffic calming program. Prioritizing factors include:

1. First come, first served;
2. Consideration as to whether the district recently had traffic calming measures as a way to ensure equality among districts; and
3. The need of traffic calming in the requested area.

Based on the data collected, traffic problems and eligibility for the program will be confirmed by the TCC based on specific, definable criteria related to:

* **Traffic Speeds**

   As motor vehicle speed increases, noise increases and pedestrian and bicycle safety decrease. Some of the most dangerous traffic safety situations involve infrequent vehicles traveling substantially above the speed limit.

* **Daily Traffic Volume Levels**

   As motor vehicle volume increases, noise increases, and pedestrian and bicycle access decrease. The local function and feel of a street also diminishes. From studies measuring resident opinions, the ideal traffic volume on a local neighborhood street is less than 300 vehicles per day (vpd), and residents generally are able to accept volumes up to 800 vpd.

* **Daily Traffic Composition**

   Neighborhood traffic should principally involve trips with origins and/or destinations within that neighborhood and not include trips that are short-cutting through the neighborhood from destinations outside the neighborhood to destinations outside the neighborhood. This value can will be estimated at this point, however, it may need to be measured by license plate surveys during specific traffic concern time periods. If this would be necessary a resident volunteer may be asked to complete this task.

* **Motor Vehicle Crashes**

   Residential NTMPCG areas with high crash frequency locations may indicate a safety concern that could be mitigated through the NTMPCG program. This data will be provided from City police crash files. Typical collision patterns that are potentially reduced with traffic calming involve left-turn and right angle intersection crashes or crashes related to speeding.
summarizes the traffic concern characteristic thresholds required for a neighborhood street to be considered for traffic calming considerations. One or more of the five thresholds should be met to proceed with traffic calming measures.

**Table 2-1: Neighborhood Street Traffic Calming Thresholds**

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<th>Traffic Criteria</th>
<th>Minimum Threshold</th>
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<td>* 85th Percentile Speed</td>
<td>Greater than 5 mph over the posted speed limit</td>
</tr>
<tr>
<td>* Significant Speeding</td>
<td>10% of traffic at or greater than 10 mph over the posted speed</td>
</tr>
<tr>
<td>* Traffic Composition</td>
<td>10% or greater cut-through traffic (est. only)</td>
</tr>
<tr>
<td>* Daily Traffic Volume</td>
<td>Exceeds 800 vpd on neighborhood streets or 1,500 vpd residential collectors</td>
</tr>
<tr>
<td>* Crashes</td>
<td>Street or intersection averages more than 2 crashes per year over three year time period</td>
</tr>
</tbody>
</table>

If the results of the study conclude that the criteria for traffic calming have not been met, the TCC will conclude that the concern is not eligible for the traffic calming program at this time. The concern cannot be brought back to the City for three years unless something significantly changes existing conditions.

If the TCC reviews the data and verifies that one or more of the thresholds have been met the TCC will determine the “Affected Areas” and “Impacted Areas” as described below.

2.1.4 **City Determines “Affected Areas” and “Impacted Areas”**

After the City receives a traffic concern and determines it is eligible for the NTMP, the TCC will define an “Affected Area” and an “Impacted Area.” An “Affected Area” includes all property directly affected by the traffic issue. An “Impacted Area” includes any property that would be impacted by any proposed traffic management solution.

The size and extent of the impacted area will take into consideration the type of traffic management project being proposed, the type of properties in the vicinity, and the characteristics of the street network surrounding the proposed project site(s).

These areas may include:

- All properties abutting the proposed street segment to be modified.
- All properties on adjacent street(s) with ingress/egress only possible via the modified street segment.
- All properties on adjacent street(s) that have alternative points of ingress/egress but will be otherwise affected by the modified street segment.
2.1.5 Residents obtain signatures from at least 50% plus 1 of property owners within "Impacted Area" and are placed onto a Transportation Affairs Committee agenda to ask for approval to move onto the next steps.

DPW staff will provide a map of the impacted area indicating individual properties in the area to the requester. Requesters must obtain signatures from at least 50% plus 1 of the property owners within the impacted area to move forward with the request for a neighborhood traffic management effort (the petition can be found in Appendix C). Once the DPW receives the signed petition the request will be placed on the future agenda items list for consideration by the Transportation Affairs Committee (TAC). Please note that the TAC may at times have many items on their future agenda list so it may take multiple meeting cycles to be placed onto an agenda.

2.2 Community Data Collection

If the TAC approves the petition they may or may not ask for additional data to be collected for further evaluation during the process.

2.2.1 Data Collection

The neighborhood resident/s and other community members may be requested to assist in the data collection allowing for neighborhood involvement and growth within the community.

When appropriate, City staff will train neighborhood representatives to collect street and traffic data to assist in problem identification. These data may include pedestrian and bicycle activity or a license plate study.

City staff may also contact other stakeholders, including emergency responders and nearby school principals. Emergency response vehicles, school buses, snowplows and street sweepers generally require special consideration in the design of traffic calming measures. These measures can also complement a Safe Routes to School program.

2.2.2 Confirm Area of Potential Effects

After the required additional data is collected (if applicable), the City will confirm the area of potential effect discussed in 2.1.4. Spot-specific concerns will generally relate to a particular intersection or street segment, whereas neighborhood-wide concerns will generally relate to conditions or behaviors affecting the neighborhood street network. The City may elect to treat some spot-specific concerns as neighborhood-wide concerns if it decides that they could be better addressed in the context of the street network system. At the City’s discretion, the potentially affected area for a spot-specific concern may be extended to the entire street block. The potentially affected area for a neighborhood-wide concern should generally be a distinct area that is bounded or bisected by major roadways or geographic features. If the traffic concern influence area (but not the specific street being considered) may impact a larger neighborhood area the City will inform residents of the larger neighborhood area of the perceived problem and potential traffic calming alternatives under consideration.
### 2.2.3 Development of “Proposed Neighborhood Traffic Management Plan”

City staff, in coordination with the local Alderperson(s) will arrange a meeting with the resident, community group, or neighborhood that identified the traffic concern or is affected/impacted by the measures. At the meeting, City Staff will help the neighbors develop a “Proposed Neighborhood Traffic Management Plan.” The Plan will include:

- Evaluation of problems and needs
- Identified goals and objectives
- Suggested Phase One non-construction solutions (education, encouragement, enforcement, and passive traffic control devices), a work plan for implementation, and a plan for post evaluation to determine if the non-construction solutions have been effective.
- Suggested Phase Two traffic calming measures, including general estimated costs and an assessment plan to inform residents of the potential costs associated with the solutions.
- All City departments will have an opportunity to participate in plan preparation.

### 3 Alternative Solutions

#### 3.1 Neighborhood Meeting / Workshops

City staff and the local alderperson should coordinate to establish a date and location for a neighborhood meeting. The City should notify residents in the project area through mail of the meeting. Residents should also encourage their neighbors to attend.

**3.1.1 Develop a Proposed Neighborhood Traffic Management Plan**

At the meeting, City Staff will help the neighbors develop a “Proposed Neighborhood Traffic Management Plan.” The Plan will include:

- Evaluation of Problems and needs
- Identify goals and objectives
- Suggested Phase One non-construction solutions (education, encouragement, enforcement, and passive traffic control devices), a work plan for implementation, and a plan for post evaluation to determine if the non-construction solution have been effective
- Suggested Phase Two traffic calming measures, including general estimated costs and an assessment plan so people will know what it will cost

The City will help participants understand the full range of possible measures, their likely effectiveness, and their costs. Participants articulate their goals for the neighborhood and discuss how NTMPCG tools might help them realize those goals. Concepts or alternatives that should be considered at the workshop are described in the following resources:

- ITE Traffic Calming State of the Practice: [http://www.ite.org/traffic/tcstate.asp](http://www.ite.org/traffic/tcstate.asp)
• TrafficCalming.org, http://www.trafficcalming.org

Appendix B of this report also lists typical traffic calming measures, their appropriate application, and their expected effectiveness.

At the workshop, the participants create a project committee of 3 to 10 residents that work with the City to develop a specific NTMPCG project proposal. The goals, available NTMPCG tools, and committee charter become the NTMP project action plan. Appendix D contains a draft Proposed Neighborhood Traffic Management Plan form.

3.1.2 Plan Assessment

The City reviews and refines the specific project proposal. Bicyclist, pedestrian, emergency vehicle, and maintenance needs may influence the placement and design of specific measures. In addition, the project must be feasible and consistent with safety and engineering principles and judgment.

If the size of the project area has changed since the application, the city adjusts the project area and may require that the resident obtain additional signatories to represent 50% plus 1 of the residents in the larger study area. The City may also adjust the project area if it determines that the proposed measures are likely to cause substantial or undesirable traffic diversions.

3.2 Initial Traffic Management Phase One Solutions

Generally it is desirable to address traffic problems with the least restrictive measures possible and move to more costly geometric solutions only after other measures have proven ineffective. Therefore, city staff may choose to implement fairly low cost, undisruptive initial traffic management solutions before proceeding into more formative calming measures. These solutions fall into four categories: education, enforcement, encouragement, and engineering. The categories are explained below.
3.2.1 Education/Encouragement

The neighborhood can be educated concerning the traffic management problem. This education can include the use of:

* Radar speed trailer
* Brochures/pamphlets describing the problem, including suggestions for what the neighborhood residents can do to improve the situation
* Lawn signs, provided by neighborhood volunteers
* Speed watch programs, staffed by neighborhood volunteers

3.2.2 Enforcement

If police resources are available, regular and random patrol and enforcement activities can address speeding and other traffic control concerns.

3.2.3 Engineering

The city may choose to install enhanced signing or pavement markings to address concerns. Examples of these measures can include:

* Roadway narrowing through pavement marking of medians or bike lanes
* Increased visibility of pedestrian crossing pavement markings
* Additional pedestrian crossing signs
* Appropriate speed limit signs

3.3 Phase Two Solutions

After a predetermined time period, DPW will evaluate the effectiveness of the non-construction elements of the Phase One plan. The results of this study will be presented to the local alderpersons to the Transportation Affairs Committee. If the Phase One efforts are not satisfactory, Phase Two traffic calming techniques will be considered as outlined in the Proposed Neighborhood Traffic Management Plan.

In accordance with the City of Wauwatosa Traffic Calming Countermeasure Guidelines, DPW and the Transportation Affairs Committee will consider Phase Two engineering solutions such as bump outs, chokers, traffic circles, chicane, speed tables, diverters, closings, etc. DPW will analyze the options and make a recommendation for the appropriate engineering countermeasures. DPW will take into consideration such items as snow removal, street sweeping, and the impact to ambulances, fire, and police when determining these solutions. Solutions in the Traffic Calming Toolkit are discussed in Appendix B.

All cost estimates and special assessments will follow the public hearing process in accordance with City Resolution 16-58. Residents in the affected area must achieve a 67% positive vote of
the neighbors in the affected area. There is one vote per property. The ballot and voting process is described in Section 4.0.

Once the project cost is determined and the affected property owner assessment is approved by the Common Council, DPW will finalized construction plans and project specifications, and solicit bids from contractors to construct the traffic calming devices.

3.4 Temporary Measures (Street Continuity Disruptions Only)

In general, temporary traffic calming devices should be avoided. A number of agencies have adopted a policy of installing temporary traffic calming devices to test their effectiveness and the public's acceptance. There are a number of advantages and disadvantages to installing temporary traffic calming devices. Advantages include the cost and the opportunity to field test devices without committing to permanent installations. The disadvantages, however, often outweigh the advantages. Temporary devices such as traffic circles or curb extensions are generally not as effective as permanent installations as they do not have the same level of visual break created by landscaping. In addition, the installations are usually unattractive and reduce the acceptance and support by the general public or neighborhood residents. Most temporary installations also become attractions for road litter adding to the aesthetic problem. If, for example, a city has never installed traffic circles and the citizens are not familiar with circles, temporary installation using bumper blocks or barrels will be their first, and possibly only, exposure to a circle. It becomes difficult for them to imagine that such a device placed on a permanent basis could enhance their neighborhood. In general, programs and plans should be well thought out and the use of temporary installations avoided unless absolutely necessary. If temporary devices are used, care should be taken to address the issues of aesthetics and effectiveness.

For proposals that involve street continuity disruptions (diverters, cul-de-sacs, etc.), the City should implement trial temporary traffic calming measures that simulate the proposal that is being proposed by the neighborhood. The trial measures should be implemented during the non-winter months for the duration of at least four months. Examples of trial implementations include:

* Using concrete barriers or barricades for diverters.
* Using barrels for cul-de-sacs.
* Using barrels or delineators for turn restrictions.

Trial installations help neighbors understand the potential effectiveness of the measures and their effect on traffic patterns.
4 Recommendations

4.1 Neighborhood Informational Meeting

Depending on the participation levels at the neighborhood workshop, neighbors or City staff may feel it is necessary to hold a neighborhood informational meeting to display the project plans and answer questions regarding the proposal. If this is necessary, it should be held prior to the balloting process described in section 4.2 below.

4.2 Balloting

If the project is feasible and meets criteria, the City mails one ballot to each household, business, institution, and nonresident property owner in the project area. A sample ballot is included in Appendix E. Each household, business, and nonresident property owner in the project study area receives one vote per address.

4.3 Decision

To pass the balloting, at least 33 percent of the ballots must be returned to the city within four weeks of the mailing and at least 67 percent of those ballots must be marked in favor of the project. If the project passes, it moves to the implementation stage.

If the project does not pass, the process stops. A typed record of comments (names omitted) received on the ballots is made available for review. At the City’s discretion, the project committee may revise the proposed project for a second balloting without restarting the process. To avoid creating a nuisance to the neighborhood, if the revised project does not pass the second balloting, the NTMPCG program will not consider the issue again for a period of at least three years unless conditions substantial change.

4.4 Implementation Costs

Depending on city staffing constraints to process numerous traffic calming requests the city may not be able to implement all of the traffic calming projects in a single fiscal year. The projects that have been identified through the NTMPCG process for implementation will be ranked by priority as described in Section 5.0 of these guidelines. Should the city not be able to implement all of the traffic calming projects in a single fiscal year the project will automatically go to the top of the city priority list for the following year.
5 Priority Ranking Process

5.1 Scoring

Because of limited resources, the City may not be able to implement all traffic calming projects proposed by the NTMP. The NTMP scoring system allows the city to prioritize traffic calming projects based on the following neighborhood street and land use characteristics. These characteristics include the initial set of traffic calming guideline thresholds plus additional land use and city planning related considerations.

- Traffic speeds
- Daily traffic volumes levels
- Daily traffic composition
- Motor vehicle crashes
- Proximity to schools and parks
- Critical locations
- Pending Road Construction
- Relationship to neighborhood and city plans

5.1.1 85th Percentile Motor Vehicle Speed

The point value for this criterion is equal to the 85th percentile motor vehicle speed (in miles per hour) measured on the subject street, minus 25.

5.1.2 Significant Motor Vehicle Speed

The point value for this criterion is the percentage of traffic that is traveling at least 10 mph above the speed limit.

5.1.3 Average Daily Traffic Vehicle Volume

The point value for this criterion is equal to the average daily traffic vehicle volume (in vpd) divided by 1,000, and rounded to the nearest whole number. If possible, the motor vehicle volume should be measured over a 48-hour period.

5.1.4 Traffic Composition

The point value for this criterion is equal to the percent of through traffic exceeding 10 percent of the total traffic on a specific neighborhood street.

5.1.5 Crash History

The point value for this criteria is the number of crashes that have occurred at this location over the last three years excluding non-correctable crashes such as those involving deer, snow/ice pavement conditions, driver health related seizures, or motorists operating a vehicle under the influence.
5.1.6 Distance from Park or School

Motor vehicle noise can have an adverse impact on parks and schools. In addition, these facilities typically attract pedestrians and bicyclists, especially children. Bicycle and pedestrian volumes (or demand) are typically the highest on streets adjacent to these facilities and decrease as the distance from the facility increases.\(^1\)

The point value for this criterion is equal to one one-hundredth of the difference of 1,000 and the linear street or sidewalk walking distance between the subject street and the nearest park or school. The minimum point value is 0. Other pedestrian-oriented facilities (such as the library or pool) may also be considered for this criterion. For example, if the problem area on the subject street is 400 feet away from a park, the point value associated to this distance will be \((1,000 - 400) \times 0.01 = 6\).

5.1.7 Critical Location

Certain intersections or street segments have the potential for acute conflict between motorized and non-motorized traffic. These “critical locations” may include:

* Multiuse trail crossings.
* Intersections where the minor street is marked as a bicycle route.
* Intersections staffed by a school crossing guard.
* Streets or intersections with high bicycle or pedestrian volumes.
* Streets or intersections with high (unmet) bicycle or pedestrian demand.
* Streets or intersections within a school zone.

A project that improves conditions for bicyclists or pedestrians at a critical location may receive up to 10 points for this criterion, depending on the extent of both the need and the improvement.

5.1.8 Pending Road Construction

Traffic calming measures can be easily implemented at little additional cost when roadway plans are prepared for reconstruction. When residential streets are planned for reconstruction, the City may seek to capitalize on this opportunity and encourage the implementation of traffic calming measures as part of the reconstruction project. To acknowledge this criteria and opportunity, up to 10 points is awarded to the scoring.

5.1.9 Neighborhood and City Planning

Neighborhood-wide projects typically require extra effort and produce more comprehensive traffic management solutions. To acknowledge this effort, the City may award 5 points to a neighborhood-wide project for this criterion. This is a subjective measure.

The score for a neighborhood-wide project is the average of scores for individual project elements rounded up to the next whole number. The addition of 5 points reduces the penalty incurred by individual project elements that score lower than the overall project average but as a

\(^1\) Current pedestrian and bicycle volumes can be a poor indicator of actual pedestrian and bicycle travel demand if roadway and traffic conditions discourage these modes.
system provide a positive synergistic enhancement to calming the neighborhood street network problem.

5.2 Scoring Priority Calculation

Table 5-1 summarizes the scoring criteria, which are explained in the following subsections. The proposed project’s score is the sum of the point values for each of the criteria. Projects with a score of 15.0 or more are eligible for physical traffic calming measures.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Point Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>85th Percentile vehicle speed</td>
<td>85th Percentile motor vehicle speed (in mph) - 25</td>
</tr>
<tr>
<td>Excessive motor vehicle speed</td>
<td>Percent of traffic traveling at least 10 mph over speed limit</td>
</tr>
<tr>
<td>Motor vehicle volume</td>
<td>Average daily motor vehicle volume (in vpd) / 1000</td>
</tr>
<tr>
<td>Distance from school or park</td>
<td>(1,000 - linear distance to nearest school or park in ft)/100</td>
</tr>
<tr>
<td>Critical location</td>
<td>Up to 10 points</td>
</tr>
<tr>
<td>Crash history</td>
<td>Number of crashes in last 3 years</td>
</tr>
<tr>
<td>Pending road construction</td>
<td>Up to 10 points</td>
</tr>
<tr>
<td>Traffic composition</td>
<td>Percent of daily through traffic exceeding 10%</td>
</tr>
<tr>
<td>Neighborhood planning</td>
<td>5 points</td>
</tr>
</tbody>
</table>

This score is used to prioritize the projects under implementation consideration. The project is placed on the NTMPCG project list, and its score is compared to other projects that have been proposed but not yet implemented. If the project receives a high score that places it near the top of proposed projects, the process continues. If an advocate group volunteers to pay for the project it automatically goes to the top of the city priority list of the following year. Unimplemented projects remain on the NTMPCG list for three years. Every three years, the advocate is notified and may submit a new application to keep the project on the list for an additional three years.

5.3 Formal Review

DPW reviews the project and makes a recommendation to the City Council. This review includes the project score, the project action plan, the proposed measures, the results of any temporary installations (if applicable), and the results of the balloting.

The Council determines will make the final determination on the affected property owner assessments and decision to implement the project.
5.4 Implementation

City staff directs implementation of the permanent measures approved by the Council.

Many traffic management measures include landscaping. The City may add trees as part of the project. Other vegetation may be included if a volunteer or organization commits to its maintenance.

5.5 City Implements Project

Affected area property owner resident assessments, or neighborhood donations will be used to construct the recommended traffic calming project. After City Council property assessment approval the city public works department will install the project, either using city forces or by enlisting the services of consultants and contractors.

5.6 Traffic Calming Device Construction Costs

The cost to construct traffic calming devices for most devices ranges between $2,000 to $20,000. Appendix F lists the cost estimates of selected typical calming devices. It is noted that depending on the neighborhood street length or study impact area street network several devices may need to be constructed as a part of a system of calming devices increasing the total cost to effectively calm traffic.

5.7 Maintenance and Evaluation

The City Department of Public Works maintains the traffic management measures, and the City Parks, Recreation and Forestry Department maintains any trees in the right-of-way. If other landscaping is not maintained by the volunteers, it will be removed at the discretion of the City.

The city collects traffic data one year after implementation. The data should include motor vehicle speeds, motor vehicle volumes, crash rates, and pedestrian and bicycle usage. This data can then be used to determine the ‘success’ of the project and in the implementation of future traffic calming projects.
Appendix A
Inappropriate Traffic Calming Solutions

The most common request by residents of a community to reduce speeding, and cut-through traffic in residential neighborhoods is to install ‘Stop’ or ‘Children at Play’ signs on their neighborhood streets.

Stop Signs

Because a stop sign causes a substantial inconvenience it should only be used where warranted. A stop sign is a valuable and effective traffic control device when used under appropriate conditions. They are meant to help drivers and pedestrians at an intersection decide who has right-of-way. National studies have shown:

1. that crashes can increase at intersections where stop signs are installed even though they are not warranted.
2. that speeds can actually increase between stop signs by 3 to 5 mph, particularly when they are used inappropriately.
3. compliance at inappropriate stop sign locations is poor, resulting in a false sense of security and accidents involving motorists and pedestrians expecting cross traffic to stop.
4. the proliferation of stop signs at inappropriate locations creates a lack of respect for stop signs that are warranted.

Stop signs can be used for two-way or four-way stop conditions. According to the Manual of Uniform Traffic Control Devices stop signs are used for:

Two-Way Stop Signs

* Where a local street enters a through street: or
* Where a safe approach speed is less than 10 mph due to permanent visibility conditions – such as buildings, trees, shrubs or terrain: or
* Where crash history indicates three or more reported crashes in a 12 month period, and the crashes could have been avoided by the use of a stop sign; or
* Where circumstances and crash history indicate that observing the normal right-of-way rule could still be hazardous, resulting in crashes.

Four-Way Stop Signs

* Where traffic signals are needed; four-way or all-way stops may be used as an interim measure; or
* On local streets, where there has been an average of five or more reported crashes per year and these crashes would likely have been prevented by an all-way stop; or

* Where the number of vehicles entering an intersection averages at least 500 vehicles per hour for any eight hours of the day, and the combined vehicular and pedestrian volumes on the minor street averages at least 200 per hour for the same eight hours.

**Children at Play Signs**

Signs are used to guide and direct motorists. Unnecessary signs can confuse, distract and irritate motorists. Studies have shown that Children at Play signs normally have no effect on driver behavior. The MUTCD discourages the use Children at Play Signs. The Children at Play sign is unclear and unnecessary. It suggests to a driver that:

* If no such sign is present on another street, children will not be playing there, therefore it is OK to speed or be less careful.

* Other drivers might wonder what time of day will children be present or are they always present?

* When no children are seen by a driver in many cases they will assume the sign is not pertinent anymore.

* It gives parents and children a false sense of safety.

* It can give children the impression that it’s OK to play in the street.

Almost all neighborhood streets have children, which would require signs to be placed on all streets adding to sign proliferation problems if implemented.

Specific warning signs are recommended in the MUTCD for school zones and pedestrian crossing locations where they clearly serve a purpose
B.01 Traffic Calming and Traffic Management

There are two basic elements involved in Neighborhood Traffic Calming Guidelines. They are classified as traffic calming and traffic management. Both elements use physical devices to change driver behavior. Traffic calming measures affect driver characteristics by slowing traffic speeds and/or discouraging through traffic from using neighborhood streets. In comparison, traffic management measures change street system use patterns by diverting traffic to arterial streets and balance neighborhood street system use.

Many neighborhood residents consider traffic calming to involve the installation of stop signs or ‘Children at Play’ signs. Studies have shown that, in most cases, these devices actually have no effect or in some cases can increase traffic speeds within neighborhoods and provide a false sense of safety.

Traffic calming measures are physical devices that change driver behavior. Traffic calming measures can be used to mitigate traffic safety problems or reduce speeding and cut-through traffic problems. For this report, traffic calming measures are organized into the following categories:

**Traffic Calming Measures**
1. Vertical deflection speed control devices
2. Horizontal deflection speed control devices
3. Gateways and intersection treatments
4. Reduced corner radii

Traffic management measures physically alter accessibility so that existing traffic patterns are required to change. These measures are quite extreme because they change route patterns, may increase emergency vehicle response times, affect local municipal service routes and potentially increase traffic volumes on adjacent neighborhood streets. The following are examples of traffic management measures:

**Traffic Management Measures**
1. Intersection turn restrictions
2. Intersection traffic diverters
3. Partial street closures
4. Full street closures

These measures should be implemented only as a last resort. If they are implemented, residents on all affected neighborhood streets should be part of the decision process.
B.02 Traffic Calming Measures

B.02.1 Vertical Deflection Speed Control

A vertical deflection speed control device causes drivers to slow down by requiring them to drive over a roadway obstruction. **Speed Humps** are elongated, parabolic humps constructed across a street, perpendicular to the flow of traffic. They are usually 3 to 4 inches high and 12 to 14 feet wide. Their elongated design allows travel speeds in the range of 15 to 20 miles per hour. Often their height tapers toward the edge of the curb or shoulder to allow water to drain along the gutter and permit bicycles to travel over them unimpeded. Speed humps should not be confused with the abrupt speed bumps that are often found in retail parking lots.

**Speed Tables** follow the same principles and are similar design as speed humps except they have a flat top that is sometimes easier to construct and can also serve as a pedestrian crosswalk connection to parks or schools located in residential neighborhoods.

**Speed Cushions** are similar to speed humps and tables but has a width of 8 feet when measured in the direction perpendicular to traffic flow. The cushions are positioned in the center of each travel lane. Passenger cars must travel over the cushion and therefore are required to reduce speed, but vehicles with wide wheelbases such as trucks and emergency vehicles are able to straddle the cushion maintaining their travel speed.

There are some considerations with speed humps and other vertical control devices. Generally, to be effective they must be installed as a series or system with specifics spacing requirements of not more than 300 feet apart. Speed hump spacing and width have been shown to reduce traffic speeds. For example, a 12-foot speed hump spaced at 200 to 250 feet have been shown to reduce 85th percentile traffic speeds to 20 mph. In comparisons, a 400 to 450 foot spacing has been shown to result in speeds of 25 mph and an 800 to 850 foot spacing has resulted in speeds of 30 mph.

Studies have also shown the following typical 85th percentile speed relationships to speed hump width:

- 12 ft. speed hump ..........15 to 20 mph
- 14 ft. speed hump ..........18 to 23 mph
- 22 ft. speed table .......... 25 to 30 mph

Speed humps or tables should not be used on sharp grades or curves. Grades should generally be less than 6 percent. Curves should have a radius greater than 400 feet with an angle of 60 degrees or less. Extra consideration should be given to street drainage, emergency vehicles, snow plowing and street sweeping equipment limitations. Also speed humps and tables should be properly designed with tight profile tolerances to provide the correct ‘ride’ and not create undue driver discomfort. ITE has a new publication on the design of speed humps.

**B.03 Horizontal Deflection Speed Control**

A horizontal deflection speed control device causes drivers to slow down by requiring them to drive around a roadway obstruction.

**Single-lane Slow Points** sometimes called a ‘choker’, is a narrowing of the pavement that reduces the street width to one lane. This is typically accomplished by realigning the edge of pavement or adding landscape areas along the edge of the street they effectively create pinch points along the street. Slow points can be installed at midblock locations or used at intersections creating a gateway effect for an entering street.

Slow points require opposing motorists to yield to each other as they approach the slow point. In order to function effectively, the width of the traveled way cannot be wide enough for two cars to pass, generally 16 feet or less.

**A Chicane** horizontally diverts traffic through alternating roadside islands from the left to the right. A similar application to a chicane is an angled two-lane slow point. Chicanes can be subtle or quite restrictive depending on the design and angles (tapers) used. Shifting a travel lane will decrease speeds if the taper is not so gradual that motorists can comfortably maintain their speed. For traffic calming, the taper lengths may be as little as half of those typically used in a standard design.

Similar to a chicane, traffic can also be horizontally diverted by shifting parking from one side to the other when there is only roadway width for parking on one side of a street or by building landscaped islands in the center of a street, which also serve as a roadway narrowing.
There are several considerations for chicanes and slow points. They should be used only on low-volume, low-speed residential streets. Emergency response providers and sanitation collectors should be consulted before setting the widths. Chicanes and slow points may reduce the availability of on-street parking.

If landscape islands are installed, good visibility should be maintained by planting only low shrubs or trees with high canopies. Also, design efforts should be made to ensure bicycle safety and mobility are not diminished.

Roadway narrowings reduce the width of the traveled way and, by doing so; increase the driver’s desire to travel at a slower speed.

**Bulb-outs** create a roadway narrowing at a street intersection. In many ways, they are a gateway or threshold treatment. Bulb-outs often are coupled with a median island to further reduce the available width of the traveled way. One advantage of placing bulb-outs near intersections is that they reduce the crossing distance for pedestrians. Also, they prevent on-street parking near the intersection, which can increase the intersection sight distance if appropriate landscaping is used.

**Two-Lane Slow Points** are similar to the single-lane slow point where the street is narrowed yet two lanes are maintained. It differs from the angled two-lane slow point in that there is no horizontal deflection introduced into the travel lane alignment. Sometimes a median is used to further constrict the traveled way. If the travel lane widths are unchanged at the location of the slow point, it will have a minimal effect on speed.

There are several considerations with road narrowing measures. If a parking lane is provided, and there are periods of the day when there are few parked cars, the visual effect of roadway narrowing will be minimized. For this reason, it is desirable to have several bulb-outs into the parking lane to physically reduce roadway width during times when there are no parked cars. As with the other traffic calming measures, road narrowings must consider roadway drainage, bicycle, bus, emergency service and truck design vehicles.
**Neighborhood Traffic Circles** are circles placed directly in the center of an intersection. Traffic circles do not have stop sign controls. A neighborhood traffic circle differs from a modern roundabout in that its main purpose is not to keep traffic moving but to slow traffic. (Note: Roundabouts are an effective intersection treatment for collectors and arterials, but not for residential streets.) Much like horizontal deflection speed control devices, Neighborhood Traffic Circles reduce vehicle speeds by forcing motorists to maneuver around them. Drivers desiring to make a left turn are directed to go on the far side of the circle (3/4 of the way around the circle) prior to making the turn. Signs should be installed directing motorists to proceed around the right side of the circle before making a right turn off of the circle. Neighborhood traffic circles are commonly landscaped with bushes, flowers, or grass, most often at locations where neighbors have agreed to maintain the plants. In locations where landscaping is not feasible, traffic circles can be enhanced through special pavement materials.

**B.04 Gateways/Intersection Treatments**

A gateway is a geometric change in the roadway that signals a change in environment from a higher speed arterial or collector street to a lower speed residential area. Gateways often place a high emphasis on aesthetics and are frequently used in addition to distinctive signing to identify neighborhoods. Gateways may be a combination of roadway narrowings, bulb-outs, medians, signing, archways, roundabouts, or other treatments. Gateways should send a clear message to drivers that their environment has changed. Many gateway and intersection treatments have been discussed in the preceding paragraphs such as, raised pedestrian crossings, narrowings, and bulb-outs positioned at intersections. Gateway treatments can also include the use of traffic circles, distinctive arches or public art at street entrances to neighborhoods.

**B.05 Traffic Management Measures**

As mentioned previously, traffic management measures physically alter the street so that traffic patterns cannot remain the same. They tend to have much more pronounced traffic effects, both positive and negative. Careful planning with all potentially affected neighborhoods should take place before implementing a measure that will alter traffic patterns.
Traffic Diverters are islands built at an intersection that prevents certain through and/or turning movements. Diverters are a very severe traffic management measure because they change traffic patterns and the transportation system by restricting movements. Traffic diverters greatly affect people living in the neighborhood and should be considered only when less restrictive measures are not appropriate.

There are several types of diverters: diagonal, forced turn, and star. A diagonal diverter breaks up cut-through movements and forces right or left turns in certain directions. A forced turn diverter mandates a certain traffic movement, typically through the placement of channelization or roadway closures. The most frequent applications of this are right-in/right-out islands and left-turn in only islands. A star diverter is a star placed in the center of the intersection that forces right turns from every approach.

There are many implications that should be considered before constructing any type of diverter. Less restrictive measures should be considered first. Neighborhood traffic patterns must be evaluated to see how the diverter will affect other adjacent streets, and a diverter should have very strong neighborhood support before it is implemented. Diverters should be designed to allow full movements by bicycles and pedestrians. Finally, diverters disrupt the transportation system, which may affect emergency response times to portions of the neighborhood. For this reason, emergency response providers must be involved in the design process.

Partial Street Closures use a semi-diverter to physically prevent vehicles from entering a street at an intersection. A partial street closure could involve closing one direction of a two-way street. As mentioned, partial street closures at the entrance to a neighborhood must consider the traffic flow pattern of the surrounding streets, as these streets will probably experience increased traffic volumes. Partial street closure design should incorporate full (two-way) access for bicyclists and pedestrians. A partial street closure provides better emergency access than a full closure.
## B.06 Comparison of Devices

As mentioned, various treatments accomplish different objectives. Table B.06.1 illustrates the likely effects from the application of different treatments. The table is derived from the City of Las Vegas Neighborhood Traffic Management Program Manual.

### Table B.06.1 Effects of Traffic Calming Applications

<table>
<thead>
<tr>
<th>Traffic Calming Treatment</th>
<th>Vehicle Volume</th>
<th>Vehicle Speed</th>
<th>Noise</th>
<th>Vehicle Conflicts</th>
<th>Traffic Diverted to Other Residential Streets</th>
<th>Ped/Bike Safety</th>
<th>Emergency Vehicle Access</th>
<th><strong>3.1.1.1 Recommended For</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicanes/Slow Points</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td>Residential Streets</td>
</tr>
<tr>
<td>Narrowings</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td>Residential/Collector Streets</td>
</tr>
<tr>
<td>Crossing Islands</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Collector Streets</td>
</tr>
<tr>
<td>Bulb-outs</td>
<td>↓</td>
<td></td>
<td>↑²</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td></td>
<td>Residential/Collector Streets</td>
</tr>
<tr>
<td>Diverters</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td>Residential Streets</td>
</tr>
<tr>
<td>Gateways/Thresholds</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td></td>
<td></td>
<td>Residential/Collector Streets</td>
</tr>
<tr>
<td>Partial Turn Diverters/</td>
<td></td>
<td></td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td></td>
<td></td>
<td>Residential/Arterial Streets</td>
</tr>
<tr>
<td>Speed Humps/Tables/Cushions</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td>Residential Streets</td>
</tr>
<tr>
<td>Neighborhood Traffic Circle</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td>↑³</td>
<td>↓</td>
<td></td>
<td></td>
<td>Residential/Collector Streets</td>
</tr>
</tbody>
</table>

Table B.06.2 illustrates the effectiveness of several traffic calming measures in reducing traffic volumes. Table B.06.3 illustrates the effectiveness of several traffic calming measures in reducing traffic speeds. Table B.06.4 illustrates the effectiveness of several traffic calming measures in reducing traffic crashes.

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2 Vehicle conflicts may increase for turning movements of large trucks.

3 Ped safety may decrease if motorists are swerving around circles instead of slowing down.
Table B.06.2 Average Volume Reduction

<table>
<thead>
<tr>
<th>Calming/Control Measure</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-ft humps</td>
<td>-18</td>
</tr>
<tr>
<td>14-ft humps</td>
<td>-22</td>
</tr>
<tr>
<td>22-ft table</td>
<td>-12</td>
</tr>
<tr>
<td>Neighborhood traffic circles</td>
<td>-5</td>
</tr>
<tr>
<td>Narrowings</td>
<td>-10</td>
</tr>
<tr>
<td>One-lane slow points</td>
<td>-20</td>
</tr>
</tbody>
</table>


Table B.06.3 85\(^{th}\) Percentile Speed Reduction

<table>
<thead>
<tr>
<th>Calming/Control Measure</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-ft humps</td>
<td>-22</td>
</tr>
<tr>
<td>14-ft humps</td>
<td>-23</td>
</tr>
<tr>
<td>22-ft table</td>
<td>-18</td>
</tr>
<tr>
<td>Raised intersections</td>
<td>-1</td>
</tr>
<tr>
<td>Neighborhood traffic circles</td>
<td>-11</td>
</tr>
</tbody>
</table>


Table B.06.4 Safety Impacts Average Number of Crashes

<table>
<thead>
<tr>
<th>Calming Measure</th>
<th>Before</th>
<th>After</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 ft. humps</td>
<td>2.7</td>
<td>2.4</td>
<td>-11%</td>
</tr>
<tr>
<td>14 ft. humps</td>
<td>4.4</td>
<td>2.6</td>
<td>-41%</td>
</tr>
<tr>
<td>22 ft. tables</td>
<td>6.7</td>
<td>3.7</td>
<td>-45%</td>
</tr>
<tr>
<td>Traffic circles</td>
<td>2.2</td>
<td>0.6</td>
<td>-73%</td>
</tr>
<tr>
<td>All Measures</td>
<td>2.6</td>
<td>1.3</td>
<td>-50%</td>
</tr>
</tbody>
</table>
Appendix C
Neighborhood Traffic Management Program
Application Forms
SUBJECT: Neighborhood Traffic Management Information Request

Dear Wauwatosa Resident:

Thank you for contacting the City of Wauwatosa about the traffic safety concerns in your neighborhood. Enclosed your will find information on the City’s Neighborhood Traffic Management Program (NTMP).

To move forward to the next step – to have the City conduct the initial traffic study to determine if a problem exists on your street – please complete and return the enclosed application form. After staff receives this form, the Police Department will conduct a traffic study in the block(s) identified in your application and we will then use that information to determine if this area is eligible for the traffic calming program.

If the traffic study indicates there is a problem with cut-through traffic and/or speeding, City staff will work with you and your neighbors to identify Level 1 Options before Level 2 Options are pursued:

**Level 1 Options** – low cost ways to address the neighborhood’s concern(s) such as appropriate signs and/or pavement markings, placement of a temporary digital radar signage on your street, and targeted traffic enforcement.

**Level 2 Options** – making physical changes to the street to address traffic safety issues that could not be effectively addressed with Phase 1 Options (e.g., speed humps/tables, traffic circles).

If your neighborhood moves forward with a traffic calming project using Level 2 Options, the **construction costs are assessable to property owners** in the project area.

If you have any further questions, please contact me at 414-831-0799 or dsimpson@wauwatosa.net.

Sincerely,

City of Wauwatosa

David Simpson, P.E.
Director of Public Works
CITY OF WAUWATOSA
NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM
APPLICATION FORM

To request NTMP assistance from the City of Wauwatosa for traffic safety concerns on local residential streets, please complete this application and return it to:

City of Wauwatosa
Department of Public Works
Attn: David Simpson
11100 W. Walnut Road
Wauwatosa, WI 53226-3042
414-471-8469 (fax)
dsimpson@wauwatosa.net (Scan and email)

Date: _________________ Aldermanic District Name or #: ________________________________

Street Name(s), Including Block Number(s) or Cross Streets: ______________________________________

Contact Name: ____________________________________________

Mailing Address: _____________________________________________

Contact’s Phone: _________________ Contact’s Email: _________________________

Reason(s) for Request (e.g. cut-through traffic, speeding, difficult to cross street, frequent crashes):

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

School(s) on the street? If so, please list: __________________________________________

__________________________________________________________________________

Park/community facility on the street? If so, please list: _____________________________

__________________________________________________________________________

Any additional information you want to provide? ______________________________________

__________________________________________________________________________
CITY OF WAUWATOSA
NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM (NTMP)
REQUEST FOR TRAFFIC STUDY PETITION

We the undersigned residents, are requesting the City of Wauwatosa conduct a traffic study on ___________________________ Insert Street Name and Block Number

and/or at the intersection of ___________________________ and ___________________________

We the undersigned, understand that this petition is to initiate the City’s neighborhood traffic management program to discuss a potential traffic management plan. This petition is not intended to authorize the approval or construction of any traffic calming treatments or other changes to the street. Data will be evaluated and the results will be discussed at a future Transportation Affairs Committee meeting to determine if a significant safety problem(s) exists and if the street/intersection should be considered for traffic calming improvements.

This petition should only be utilized after the City’s Traffic Calming Committee has determined your area is eligible for traffic calming and you have been given the “Impacted Area” for signature purposes. Please collect signatures from at least 50% +1 of the homes within the “Impacted Area”. Please print as many sheets as needed and note the number of pages at the bottom. Please write legibly.

<table>
<thead>
<tr>
<th>NAME (PRINTED)</th>
<th>STREET ADDRESS</th>
<th>EMAIL</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

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Appendix D

Proposed Neighborhood Traffic Management Plan
City of Wauwatosa
Neighborhood Traffic Calming Committee Charter

Committee Name: ____________________________________________________________

Neighborhood Area Represents: ________________________________________________

Date: _______________________

Committee Goals:
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Anticipated Activities to be Conducted by the Committee:
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
Appendix E

Neighborhood Traffic Management Program Ballot
City of Wauwatosa
Neighborhood Traffic Calming Program
BALLOT

Family or Business Name _______________________________________________________

Check One:  
Owner ___  Renter ___

Address _________________________________________________________________

Phone Number ______________________________

Date ______________________________

(name and address will be kept confidential)

Description of measure being proposed (Drawing attached)

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

We support the proposed traffic calming measure ____
We oppose the proposed traffic calming measure ____

Comments:
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

Return to ___________________ by __________________________
Appendix F

Typical Neighborhood Traffic Calming Device Construction Cost Estimates
## Typical Traffic Calming Device Construction Costs Estimates

<table>
<thead>
<tr>
<th>Device</th>
<th>Typical Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Speed Humps</td>
<td>$2,000 - $2,500</td>
</tr>
<tr>
<td>* Speed Tables</td>
<td>$3,000 - $3,500</td>
</tr>
<tr>
<td>* Traffic Circles</td>
<td>$4,000 to $20,000</td>
</tr>
<tr>
<td>* Gateway Treatments</td>
<td>$5,000 to $20,000</td>
</tr>
<tr>
<td>* Bulbouts</td>
<td>$10,000 to $15,000</td>
</tr>
<tr>
<td>* Diagonal Diverters</td>
<td>$100,000 and up</td>
</tr>
<tr>
<td>* Full Closures</td>
<td>$120,000 and up</td>
</tr>
</tbody>
</table>