

City of Manitowoc

Stop Sign Policy & Guidelines

Introduction

The City of Manitowoc wishes to ensure that its streets are as quiet and safe as possible, particularly those in residential areas. As it relates to this, the City often receives requests for the installation of stop signs to address concerns of interested citizens. In order to provide a predictable and consistent method for responding to these requests, the City has established this Policy and Guidelines document for Stop Sign Installation. This policy also addresses standards which are commonly used by staff for considering such requests and describes the methods adopted by the City for responding to citizen requests and ultimately installing stop signs on Manitowoc Streets.

Policy Usage and Guidelines

It is the objective of this Policy to consider requests and the installation of stop signs where appropriate, based upon engineering analysis and sound judgement.

This document is intended to be used in conjunction with professional engineering judgement and best practices. In addition, due to the fact that most every street in the City of Manitowoc has its own unique characteristics, these guidelines do not constitute either final or complete design, or evaluation criteria for a complete traffic calming plan. Local site conditions must be evaluated for all traffic calming installations, and terrain, roadway, traffic or land use characteristics, sight distance conditions, and / or any other unusual conditions may require case specific modifications or exceptions.

The City of Manitowoc reserves the right, at its own discretion, to analyze and implement traffic calming measures including, but not limited to stop signs, at specific locations should it deem necessary to increase safety.

Traffic Calming Methodology

The Institute of Traffic Engineers (ITE) defines traffic calming as *“the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non – motorized street users.”* In other words, traffic calming is the

use of physical changes either on or adjacent to the street in order to improve safety for motorists, pedestrians, and cyclists.

Typical examples of physical changes aimed at traffic calming may include: stop signs, yield signs, warning signs, radar speed feedback signs, crosswalks, special striping, narrow lanes, on – street parking, median islands, roundabouts, turn prohibition signs, and diagonal diverters, forced turn channelizations, and median barriers. The majority of these measures are implemented within non – residential areas, and as previously mentioned are typically evaluated on a case by case basis through engineering studies and analysis.

The most common residential traffic calming measure used at intersections is stop signs.

Guiding Principles & Stop Sign Criteria

It is important to emphasize that stop signs are not appropriate for all intersections. Principles to be aware of prior to making a request include the following:

- A. Stop signs are intended to control vehicular traffic conflicts at intersections and are not to be used as a device to control speed or solely for the identification of pedestrian crosswalks
- B. Individual stop signs should not be installed to control traffic, but may be installed as part of an overall neighborhood traffic calming effort.
- C. Stop signs should not be installed against the major flow of traffic unless special circumstances or design guidelines dictate such installation to address special safety considerations
- D. Stop signs are not substitutes for other traffic control devices.
- E. Warrants recommended by the Manual on Uniform Traffic Control Devices (MUTCD), including the amount of daily traffic, the amount of pedestrian and bicycle activity, high traffic speed, restricted sightlines, accident records, unusual site conditions, and geometrics will be used by staff when evaluating any stop sign requests.
- F. Accidents shall be used as the primary warrant for the installation of stop signs.
- G. Stop signs shall only be installed at intersections where drivers cannot safely apply the right of way rule as defined by the State of Wisconsin.

Factors that must be considered when determining the need for a stop sign at a particular intersection include:

- A. Because stop signs can cause a substantial inconvenience to motorists, disrupt traffic flow, and can result in increased icing conditions in winter, they should only be used where warranted.

- B. Stop signs are not typically encouraged to guide right of way because the minimal safety gains are outweighed by the substantial traffic delays and congestion created.
- C. Accidents may increase following the installation of stop signs if motorists are not aware of the new traffic regulation.
- D. If a motorist consistently observes that cross street traffic is light, the motorist is more likely to question and ultimately ignore the stop sign thereby decreasing intersection safety. According to the FHWA, excessive use of stop signs has been shown to reduce stop sign compliance by as much as 25%.
- E. The installation of unwarranted stop signs may create new speeding problems. Many studies, including FHWA, have shown that motorists tend to accelerate to higher speeds to make up for the time lost at stop signs.
- F. Excessive uses of stop signs may encourage drivers to use alternative routes to avoid the stop controlled intersections, thus increasing traffic volumes and relocating the need for traffic calming measures.
- G. Any installation of stop signs should only occur after a review of its potential impacts on neighboring streets and whether the stop control is compatible with the overall traffic management concept for the area.

Additionally, stop signs need to meet warrants to justify installation. The Federal Highway Administration Manual on Uniform Traffic Control Devices describes the warrants as follows:

Section 2B.05 STOP Sign Applications

Guidance:

STOP signs should be used if engineering judgment indicates that one or more of the following conditions exist:

- A. Intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law;
- B. Street entering a through highway or street;
- C. Unsignalized intersection in a signalized area; and/or
- D. High speeds, restricted view, or crash records indicate a need for control by the STOP sign.

Standard:

Because the potential for conflicting commands could create driver confusion, STOP signs shall not be installed at intersections where traffic control signals are installed and operating except as noted in [Section 4D.01](#).

Portable or part-time STOP signs shall not be used except for emergency and temporary traffic control zone purposes.

Guidance:

STOP signs should not be used for speed control.

STOP signs should be installed in a manner that minimizes the numbers of vehicles having to stop. At intersections where a full stop is not necessary at all times, consideration should be given to using less restrictive measures such as YIELD signs (see [Section 2B.08](#)).

Once the decision has been made to install two-way stop control, the decision regarding the appropriate street to stop should be based on engineering judgment. In most cases, the street carrying the lowest volume of traffic should be stopped.

A STOP sign should not be installed on the major street unless justified by a traffic engineering study.

Support:

The following are considerations that might influence the decision regarding the appropriate street upon which to install a STOP sign where two streets with relatively equal volumes and/or characteristics intersect:

- A. Stopping the direction that conflicts the most with established pedestrian crossing activity or school walking routes;
- B. Stopping the direction that has obscured vision, dips, or bumps that already require drivers to use lower operating speeds;
- C. Stopping the direction that has the longest distance of uninterrupted flow approaching the intersection; and
- D. Stopping the direction that has the best sight distance to conflicting traffic.

The use of the STOP sign at highway-railroad grade crossings is described in [Section 8B.08](#). The use of the STOP sign at highway-light rail transit grade crossings is described in [Section 10C.04](#).

The use of STOP signs on the minor-street approaches should be considered if engineering judgment indicates that a stop is always required because of one or more of the following conditions:

- A. *The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per day;*
- B. *A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway; and/or*
- C. *Crash records indicate that three or more crashes that are susceptible to correction by the installation of a STOP sign have been reported within a 12-month period, or that five or more such crashes have been reported within a 2-year period. Such crashes include right-angle collisions involving road users on the minor-street approach failing to yield the right-of-way to traffic on the through street or highway.*

Generally speaking, stop signs should only be considered for intersections when supported by adequate traffic counts. Studies have shown that placing stop signs at intersections where they are not justified decreases safety as motorists tend to roll through them without actually stopping, while the cross street traffic tends to pay less attention as they assume traffic will obey the stop sign and come to a complete stop.

Stop Sign Request Process

Citizens may request a stop sign be placed at a particular intersection by completing the attached Stop Sign Request Form found on the City of Manitowoc website.

Upon receipt of the request, staff will gather data and determine whether the intersection meets MUTCD stop sign warrants. Data used in the determination of applicability shall include, but not be limited to:

- Traffic counts for the primary and intersecting streets
- Accident history
- Existing pedestrian accommodations
- Surrounding property uses such as schools, churches, and other gathering spaces, that impact traffic and pedestrian volume
- Analysis of the Overall Traffic Pattern of the larger area

If standards are not met, staff will contact the citizen making the request and explain why a stop sign is not recommended. No further action will be taken. If standards are met, a work order for the sign installation will be issued, and the sign will be installed within a reasonable time frame.

In general, a stop sign installation may be recommended if the following warrants are met:

A. Accidents

- a. Five (5) or more reported accidents occur within a twelve (12) month period which would likely have been avoided by the installation of an all way stop.
- b. Three (3) or more reported accidents occur within a twelve (12) month period or five (5) or more reported accidents occur within a twenty four (24) month period that would likely have been avoided by the installation of a two way stop.

B. Minimum Traffic Volumes and Speed

- a. A stop sign is warranted if the number of vehicles entering the intersection from all approaches averages at least three hundred (300) vehicles per hour for any eight (8) hours of an average day, and ;
- b. The combined vehicular, bicycle and pedestrian volume from the minor street averages at least two hundred (200) units per hour for the same eight (8) hours.

C. Visibility

- a. A stop sign is warranted where visibility is limited at the minor street approach, causing motorists to reduce speed.
- b. The minimum sight distance shall be maintained based on the roadway speed and the criteria described in the latest edition of the AASHTO publication “A Policy on Geometric Design of Highways and Streets.”

City of Manitowoc Stop Sign Request Form

In accordance with the City of Manitowoc's adopted Policy and Procedure for Stop Sign Installation Requests, citizens interested in requesting the installation of a stop sign shall complete and submit this form to the Engineering Department. After receiving the completed form, staff will review the proposed stop sign location using the above mentioned policy procedures, which includes discussion with the applicant. Completed forms shall be submitted to:

City of Manitowoc
Engineering Division
900 Quay Street
Manitowoc, WI 54220

They may also be emailed to: gminikel@manitowoc.org

Please attach additional sheets containing pictures, maps, or additional text if the space provided is insufficient.

1. Requestor's Information:

- a. Name: _____
- b. Address: _____
- c. Phone: _____
- d. Email: _____

2. Location of the Traffic Concern _____

3. Describe the nature of the traffic problem that is of concern (if possible, please provide pictures and map): _____

4. Why do you feel a stop sign will resolve the traffic concern: _____

5. Is there neighborhood support for your request? Can you demonstrate this support if asked / required? _____

6. Are there any facilities, such as churches, schools, businesses, etc., near this location that generate a high concentration of vehicle and / or pedestrian traffic? _____
