



STOP CONTROLS AT CROSSWALK

The goal of controlling intersections is to provide the safest, most efficient means to move people across an intersection, whether walking, riding a bicycle, taking transit, or driving. Specific attention should be given to more vulnerable roadway users, such as pedestrians and bicyclists.

There are several different types of controls, as outlined below. Use of these approaches should be only in appropriate locations based on engineering judgement, keeping in mind maintenance, operations, and effectiveness.

- **Stop signs** indicate that all road users on their approach to the intersection are required to come to a complete stop before entering the intersection and then may proceed if there are no other users close to or within the intersection.
- **Pedestrian signals** should be provided at all signalized intersections in all directions. Pedestrian signal indications are Walk, flashing Don't Walk, Don't Walk, or walking person and raised hand symbols.

- **High-Intensity Activated Crosswalk (HAWK) signals** are often used at midblock crossings and crosswalks at major streets to increase driver awareness of pedestrians. A red HAWK beacon is not illuminated until it is activated by a pedestrian, triggering the warning flashing beacon phase while the pedestrian is crossing.

USE

- Marked crosswalks should be installed at each leg of all signalized intersections, unless otherwise determined by an engineering study.
- Marked crosswalks should be installed at each leg of all stop-controlled intersections near pedestrian generators.
- Marked crosswalks should be installed at each leg of a roundabout intersection.

DESIGN

- Stop lines should be striped at signalized intersections no less than four feet and no more than 30 feet from the crosswalk to discourage motorists from encroaching in the crosswalk.
- Stop lines should be striped at stop-controlled intersections no less than four feet and no more than 30 feet from the approach of crosswalks, unless determined otherwise by an engineering study.

SPECIAL CONSIDERATIONS

- Engineering judgment should be used to establish the most appropriate controls on a site-specific basis. The following factors should be considered when determining intersection controls:
 - Vehicular, bicycle, and pedestrian traffic volumes on all approaches
 - Number and angle of approaches
 - Approach speeds
 - Sight distance available on each approach
 - Reported crash experience
 - Land uses in the area,
 - Location of transit stops
- Depending on the type of intersection and the selected control devices, it may not always be appropriate to mark crosswalks at all legs of an intersection. Alternate treatments may be necessary to optimize safety and visibility.
- Staggered stop bars may be appropriate where occlusion is present.
- Mid-block crossings should be considered in appropriate areas that would enhance pedestrian safety

REFERENCES

- AASHTO: Guide for the Development of Bicycle Facilities, 2012
 - Section 4.12.7: Bicycles and Traffic Management
- MMUTCD, 2011
 - Part 2 Signs: Chapter 2B. Regulatory Signs, Barricades, and Gates http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdpart2b_2011.pdf
 - Part 2 Signs: Chapter 2C. Warning Signs http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdpart2c_2011.pdf
 - Part 3 Markings: Chapter 3B. Pavement and Curb Markings
 - Section 3B.16: Stop and Yield Lines http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdpart3_2011.pdf
 - Part 4 Highway Traffic Signals: Traffic Control Signals – General
 - Section 4B.04: Alternatives to Traffic Control Signals http://mdotcf.state.mi.us/public/tands/Details_Web/mmutcdpart4_2011.pdf

DETAILS

- MDOT Pavement Marking Standards
 - PAVE-945-C Intersection, Stop Bar and Crosswalk Markings http://mdotcf.state.mi.us/public/tands/Details_Web/mdot_pave-945-c.pdf

