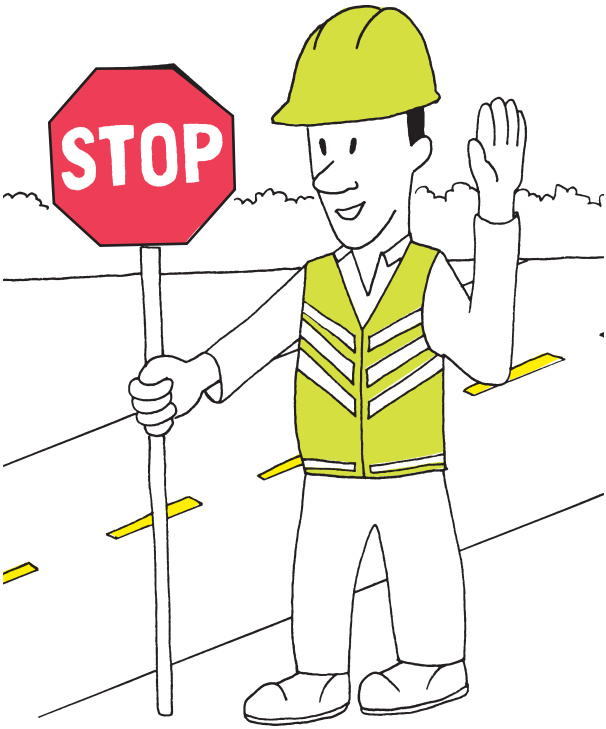
Flagger's Handbook

March 2011

Name

Flagger's Safety



Your safety, the safety of your co-workers, and the safety of the public is critical and depends on your alertness and your ability to control traffic

The information in this manual is intended to illustrate the principles of proper flagging, but it does not establish standards or warrants. Part 6 of the MUTCD and the Wisconsin MUTCD Supplement contain the standards for proper flagging. These standards are highlighted in yellow in the text of this handbook.

The original document has been modified. Table 6C-1 Recommended Advance Warning Sign Minimum Spacing from Part 6 of the MUTCD has been added to page 22 and a reference to it has been added to page 5.

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Introduction

As a flagger, you have a very important job. It should be carried out with authority and dignity, using proper flagging techniques. Your co-workers and the motoring public are relying on you to safely control traffic.

You have been chosen because your supervisor believes that

- You have good sight, hearing, mobility, and physical stamina.
- You are alert and able to react quickly in a dangerous situation to warn your co-workers and keep yourself safe.
- You have the personal presence and people skills to gain respect and motorist compliance.
- You have been properly trained in flagging procedures and they have become second nature to you.

The Basic Functions

- To guide traffic safely through the work area.
- To protect the lives of workers.
- To avoid unreasonable delays to motorists.
- To answer questions courteously.

Courtesy is important. Your actions reflect on you and your employer.

Equipment

The STOP/SLOW paddle is your primary traffic control device. The sign shall be octagonal, at least 18" x 18" with 6" high letters and shall be mounted on a rigid handle. A 5' minimum mounting height is required on state construction jobs. A 6' or 7' mounting height makes it easier to see.

To make the paddle more visible, an octagonal 24" x 24" sign with 8" high letters may be used. A larger sign may be harder to handle on windy days. The stop/slow paddle may have either white or red flashing lights on the stop face and either white or yellow flashing lights on the slow face. Standards for the flashing lights, arrangements, patterns, flash rates are in MUTCD 6E.03.

You shall wear a vest, shirt, or jacket that is either fluorescent orange-red or fluorescent yellow-green that meets ANSI Std. 107-2004 Class 2. For night flagging ANSI Std. Class 3 should be considered. Some agencies or companies may require a specific color or ANSI class.

A brightly colored hat may make you more visible. Hard hats may be required by your agency.

Uniformed law enforcement officers/first responders shall wear ANSI Std. 107-2004 or 207-2006 when flagging.

Safe and appropriate footwear should be worn.

Flaggers must be able to communicate with each other. Two-way radios are best.

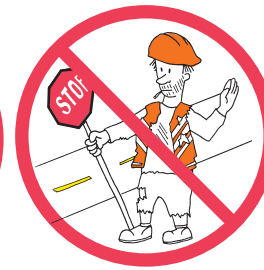
An air horn can be used to alert co-workers.

Except in emergency situations, proper signs shall be in place before flagging begins, and removed, covered, or laid flat when not flagging.

Night flagging requires auxiliary lighting and all traffic control devices to be retroreflectorized.

Flags should only be used in emergency situations. (DETAILS ON PAGE 18) Experience has shown that it is very difficult to direct motorists by waving a flag.

Appearance & Attention

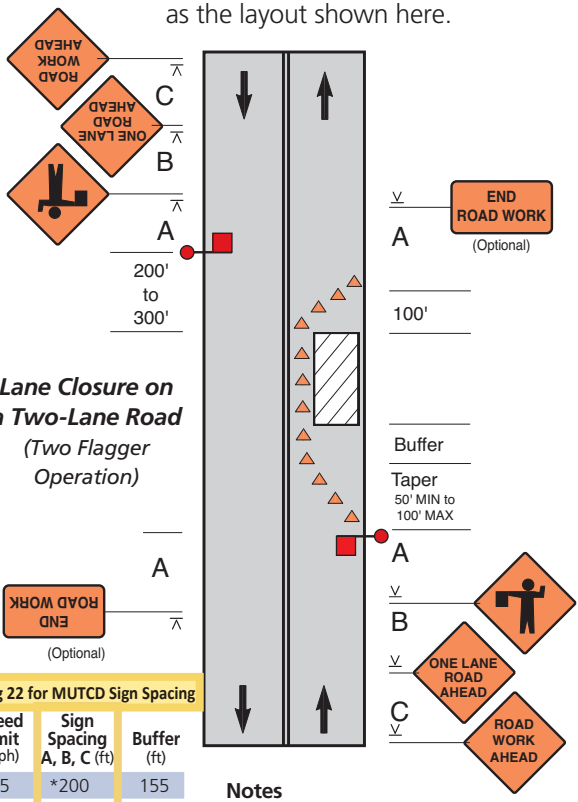


Your appearance and attention are critical to gaining motorist respect and compliance.

- Maintain a neat appearance—do not wear attire that could distract motorists.
- Remain alert—do not be distracted by portable electronic devices or reading material.

Advance Warning Signs

Except in emergencies, flagger stations shall be preceded by proper advanced warning signs, such as the layout shown here.



Lane Closure on a Two-Lane Road
(Two Flagger Operation)

See pg 22 for MUTCD Sign Spacing

Speed Limit (mph)	Sign Spacing A, B, C (ft)	Buffer (ft)
25	*200	155
30	*200	200
35	350	250
40	350	305
45	500	360
50	500	425
55	500	495

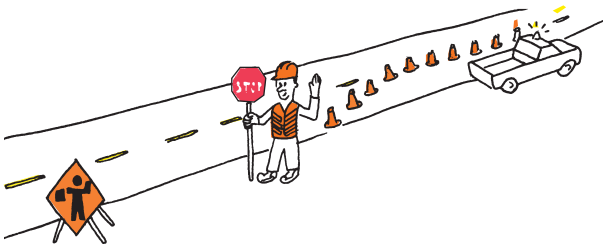
* On low-speed urban streets, sign spacing may be as short as 100 feet when field conditions dictate.

Notes

1. The flaggers shall use approved flagging procedures according to the MUTCD.
2. For short duration work (60 minutes or less), the ROAD WORK AHEAD sign may be omitted.
3. BE PREPARED TO STOP sign may be used between the ONE LANE AHEAD and FLAGGER sign.

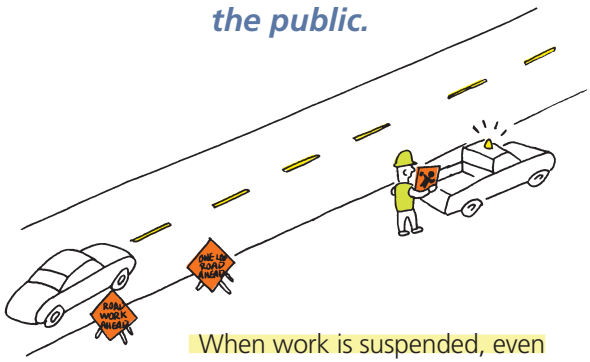
Sign Placement

Except in emergencies, do NOT begin flagging until advance warning signs are in place.



Sign Removal

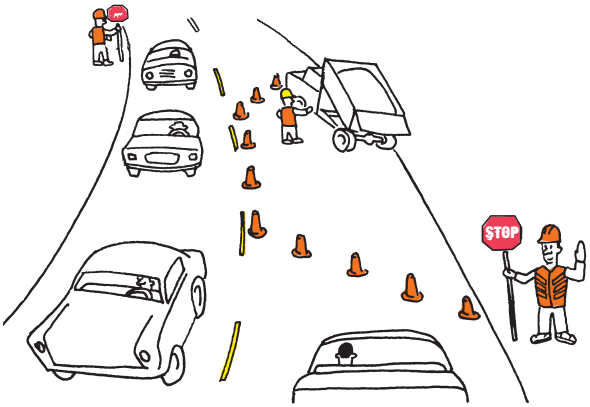
Do NOT mislead the public.



When work is suspended, even for short periods of time, signs that are no longer appropriate shall be removed, covered, or laid flat.

Position

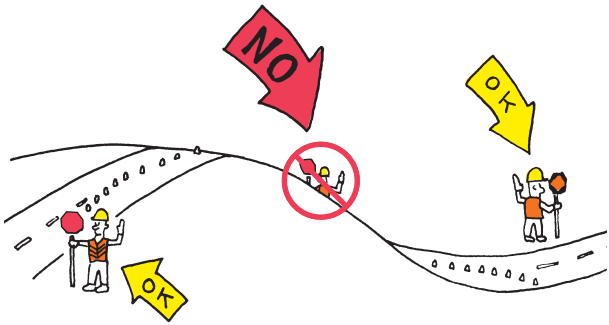
You should stand on the shoulder adjacent to the traffic being controlled and be clearly visible to traffic. You should stand alone and never allow workers to gather around you. Normally, after you have stopped the first vehicle, you will remain on the shoulder. If additional vehicles arrive and they cannot clearly see your paddle, you may walk toward the center of the road so they can. Stay at least 2 to 3 feet away from the centerline. Remember to watch out for traffic that may be coming from behind you.



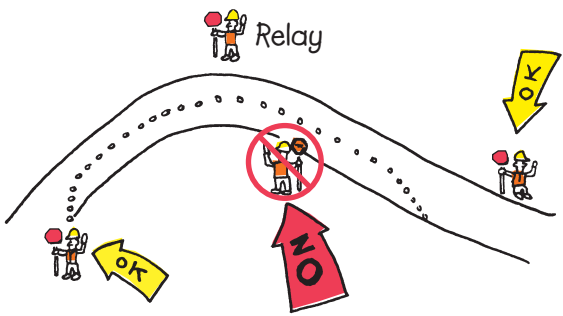
Never stand in the path of or turn your back on traffic. Always plan and maintain an escape path.

Hills and Curves

When flagging near a hill or curve, take a position in advance of the hill or curve. Make sure you are visible to approaching traffic. A longer buffer space may be used over the hill or around the curve as shown.



Never take a position over the crest of a hill or around a sharp curve.



Communication between flaggers is critical under these conditions. The best way to maintain communications is two-way radios, but relay flaggers, a pilot car, or the flag-carrying method could also be used.

Signals

Stopping Traffic

Stand in a safe position on the shoulder facing traffic.

Hold the paddle away from your body and placed on or near the edge of the travel lane with the STOP sign facing traffic. Raise your free hand above shoulder height with the palm facing the approaching vehicle and make eye contact with the driver.

Change to the STOP only if an approaching vehicle has plenty of distance to gradually stop. Avoid screeching halts.

Walking into the Road

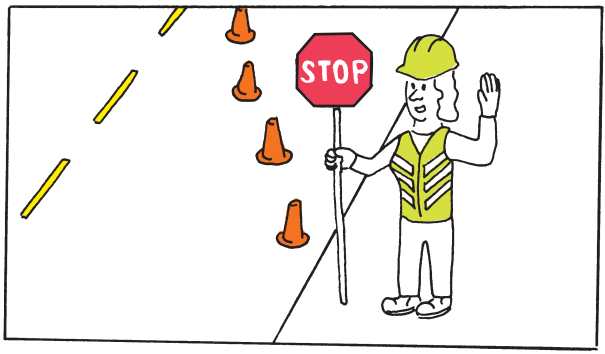
After you have stopped the first vehicle, you will usually remain on the shoulder of the road in your normal flagging location. If additional vehicles arrive and they cannot clearly see your STOP paddle, then you may walk out toward the center of the roadway.

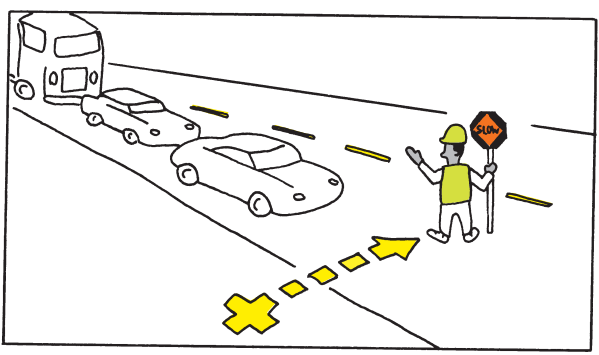
Do not cross the centerline. Stay at least 2 to 3 feet away from the centerline and remember to watch out for traffic that may be coming from behind you.

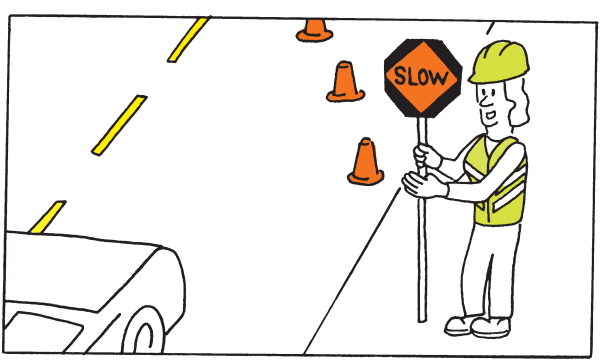
To prepare to release traffic, move back to your normal position on the shoulder with the paddle remaining on STOP.

Releasing Traffic – Closed Lane

Stand on the shoulder of the closed lane with your paddle turned to STOP facing traffic. Wait for an "all clear" signal from the other flagger.


STOP


SLOW


SLOW

Once the "all clear" is received, turn the paddle to SLOW and with your free arm, signal drivers to proceed into the open lane. Be direct and clear with your hand signal. Point to the vehicle and then to the open lane.

Releasing Traffic – Open lane

Stand on the shoulder of the open lane with your paddle turned to STOP, wait for the "all clear" signal from the other flagger. Once the "all clear" is received, take a step or two back from the edge of the traffic lane and turn the paddle to SLOW. With your free arm, signal drivers to proceed in the open lane. Be direct and clear with your hand signal. Point to the vehicle and then to the open lane. After traffic clears, turn your paddle to STOP before returning to the shoulder position.

Slowing Traffic

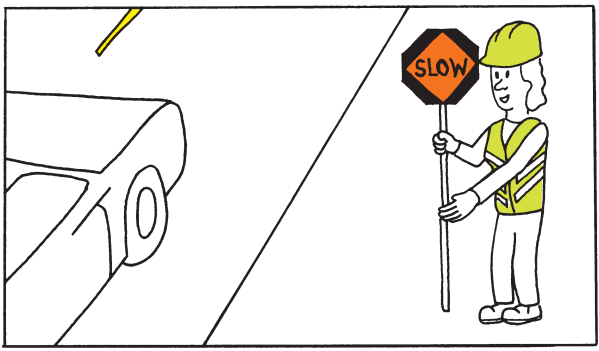
Stand on the shoulder facing traffic.

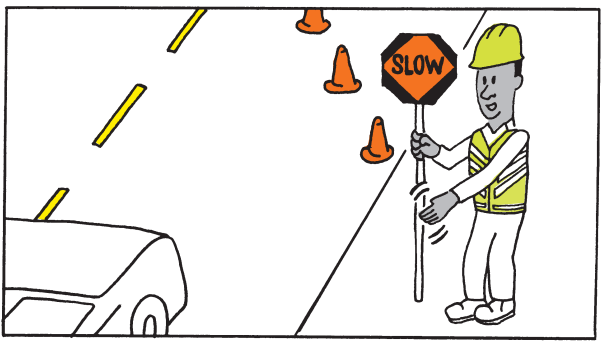
With the SLOW sign turned toward traffic, you may slowly raise and lower your free arm with the palm facing down in front of your paddle.

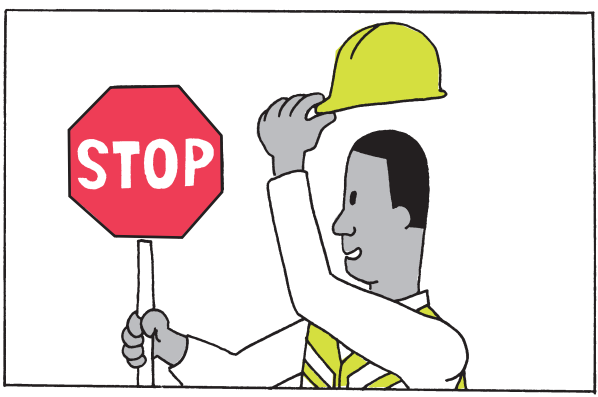
"All Clear" Signal

When two or more flaggers are used, they must always be able to communicate with one another. Two-way radios are preferred, but visual signals, a pilot car, or the flag-carrying method may be used.

If visual contact is possible, then the "all clear" signal can be given by lifting your hat or paddle. When you give this signal, you are telling the other flagger that you have traffic stopped and it is okay to release traffic.


SLOW


SLOW


STOP

Flagging Operations

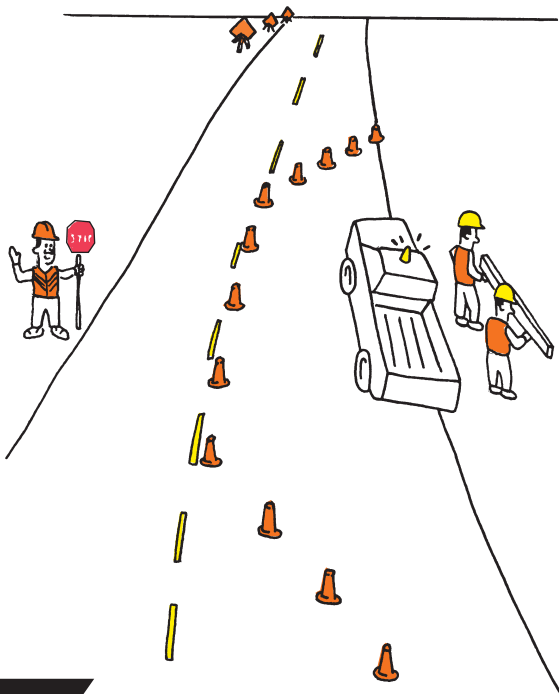
Single Flagger

For low volume situations (no more than three vehicles passing through the work site in a five-minute period) and short work areas on straight roads, a single flagger may sometimes be used to control traffic.

The flagger must be visible to both directions of traffic.

Standing on the shoulder opposite the work area, the flagger directs traffic with the STOP/SLOW paddle.

When visibility is poor, or when one flagger cannot control traffic, use two flaggers.



Two Flaggers

Using a flagger on each end of the work zone to control traffic is the most common operation. One flagger should be designated lead flagger to coordinate the operation.

Begin with both flaggers displaying STOP to approaching traffic. The lead flagger decides which direction to release first. Communication between flaggers is critical and can be maintained by:

Visual contact Flaggers must be close enough to read each other's STOP/SLOW paddles and see each other's "all clear" signals. Use signals that can not be mistaken for flagging signals. Lifting the hat or raising and lowering the STOP/SLOW paddle are proper "all clear" signals.

Two-way radio The best means of communication, even when there is visual contact.

Flag transfer The driver of the last vehicle in the platoon is given a flag and instructed to give it to the flagger at the other end. This route should be one mile or less.

Relay flagger A relay flagger is positioned to be seen by both of the other flaggers and relays the signals between flaggers.

Only after the "all clear" signal comes from the other flagger should you release traffic. If in doubt, stop all traffic!

Pilot Car

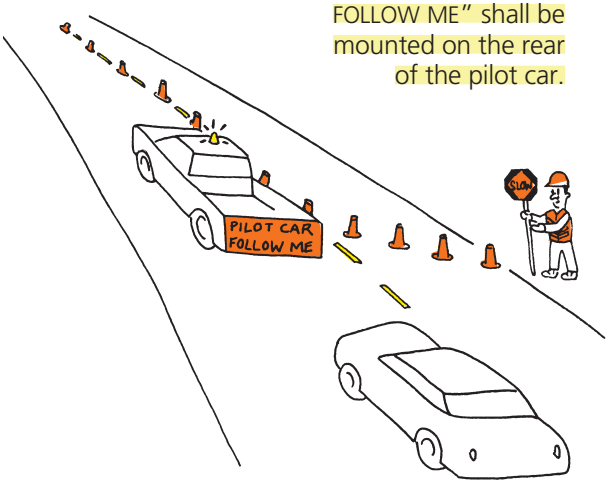
A pilot car may be used to guide a train of vehicles through a work area or detour. This operation uses a flagger at each end of the one lane section. Control of traffic at side roads and intersections also needs to be considered when using a pilot car.

This method works best when the route is particularly long or unclear for the motorist or where the work area changes often.

In this operation, the flaggers hold all traffic on each end of the work area until the pilot car arrives and leads the traffic through the work zone. Provisions should be made so that the flagger at the other end can identify the last vehicle in the train. Do not allow a late vehicle to try to catch up.

A safe turn-around location should be provided for the pilot car at each end of the work zone.

A sign with "PILOT CAR FOLLOW ME" shall be mounted on the rear of the pilot car.



Night Flagging

Night flagging procedures are generally the same as daytime except for some equipment changes:

- Retroreflectorized STOP/SLOW paddles shall be used.
- High-visibility apparel meeting ANSI Std. Class 3 should be considered.
- A flashlight with red glowcone may be used to provide additional guidance to motorists
- Except in emergency situations, night flagging stations shall be illuminated by auxiliary lighting.
- Flashing yellow warning lights may be used on the advanced warning signs and flares can be used.

To stop vehicles, stand on the shoulder and face traffic with the stop sign in the right hand and flashlight with red glowcone, if used, in the left hand. Slowly wave the flashlight back and forth in front of your body. Don't let the arc extend beyond the base of the paddle staff.

To release traffic, point from the driver to the open lane with the flashlight and hold in that position. Do not wave the flashlight when releasing traffic—this may confuse the driver.

One-direction Control

When work vehicles occasionally block one lane of a two-lane, two-way road, such as when loading or unloading, a flagger can control just one direction of traffic. The other direction of traffic is not stopped.

Stop traffic in the usual manner, and release the vehicles when work does not block the lane.

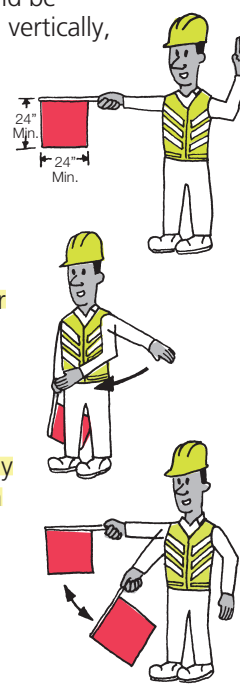
When releasing traffic, turn the paddle a quarter-turn so that the word STOP faces you. This way, the STOP message will not confuse the traffic coming from either direction.

Emergency Flagging

Flags may be used to control traffic during emergency work operations until STOP/SLOW paddles can be obtained. STOP/SLOW paddles give drivers more positive guidance than flags.

Use of hand movements alone are prohibited except for law enforcement personnel or first responders.

When used, flags shall be at least 24 inches square, of red or fluorescent orange/red material, and be attached to a staff approximately 36" long. The free edge of the flag should be weighted so the flag will hang vertically, even in heavy winds.



To stop traffic, stand on the shoulder of the road and extend the flag across the traffic lane. Raise your free hand to the stop position.

To release traffic, lower the flag to your side and with your free arm motion traffic to proceed. Do not use the flag to motion traffic through.

To alert and show traffic, extend the flag staff and slowly move the flag up and down in a sweeping motion between shoulder height and straight down. Keep your free hand down.

Replace flags with STOP/SLOW paddles as soon as possible.

The Do's of Flagging

Do Stay alert at all times.

Do Use clear and distinct hand signals when directing traffic.

Do Stand on the shoulder of the road out of the path of oncoming traffic.

Do Have a good idea of the day's work schedule to answer motorist's questions.

Do Treat motorists courteously.

Do Use proper equipment and warning signs.

Do Wear proper clothing and shoes.

Do Stand alone to be visible.

Do Plan an escape route.

Do Report vehicles that violate the traffic controls.

Do Consult your Flagger's Handbook or your supervisor, if you have questions about your flagging duties.

The Don'ts of Flagging

Don't Stand in an open lane.

Don't Make unnecessary conversation with workers, pedestrians, or motorists.

Don't Give flagging directions against a traffic signal.

Don't Stand in the shade, over the crest of a hill, or around a sharp curve.

Don't Sit down or flag from a vehicle.

Don't Leave your station until someone takes your place.

Don't Daydream or read while on duty.

Don't Leave flagger signs in place when not flagging.

Don't talk on a cell-phone or text while on duty.

Don't Bring radios or MP3 players.

Don't Stand near equipment or vehicle, including your own.

Don't Stand with a group of people.

Don't Stand next to a bridge railing, barrier, or wall.

Don't Turn your back on traffic.

Acknowledgements

Previous editions of the ***Flagger's Handbook*** were adapted for use in Wisconsin by the Wisconsin Department of Transportation (WisDOT) and the Wisconsin Transportation Information Center (TIC) from one produced by the Institute for Transportation Research and Education (ITRE) at North Carolina State University. This new edition includes changes contained in the 2009 MUTCD and the Wisconsin Supplement.

The Wisconsin team that produced this edition included representatives of the construction, maintenance, and traffic sections of WisDOT, TIC workzone training instructors, and the University of Wisconsin–Madison Transportation Information Center.

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The original document has been modified. Table 6C-1 Recommended Advance Warning Sign Minimum Spacing from Part 6 of the MUTCD has been added to page 22 and a reference to it has been added to page 5.

Table 6C-1 from MUTCD

	Distance Between Signs		
Road Type	**A**	**B**	**C**
Urban (low speed)	100 feet	100 feet	100 feet
Urban (high speed)	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet

Table 6C-1 provides the Recommended Advance Warning Sign Minimum Spacing from the 2009 MUTCD

Information and Training

For information, copies of this pocket guide, and training opportunities in work zone traffic control, flagging, or other street and highway design, operation and maintenance topics, contact the Wisconsin Transportation Information Center, a project of the University of Wisconsin–Madison Department of Engineering Professional Development, funded as a Local Transportation Assistance Program by the Federal Highway Administration, Wisconsin Department of Transportation, and UW–Extension.

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