Flagger Handbook

VERSION 04-15





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This handbook includes section 6E of the 2009 MUTCD.

This handbook has been developed consistent with the latest edition of Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD), and in cooperation with FHWA, AASHTO, and other agencies and associations.

Introduction

To You, The Flagger

You have been chosen for the job of flagger because your supervisor feels you are physically able, mentally alert and sufficiently commanding in appearance to properly control traffic through construction, maintenance, and utility work areas.

As a flagger, your duties are to protect project personnel and provide safe, courteous and authoritative directions to traffic seeking passage through the work area. Yours is an important position to be carried out with authority and dignity.

This handbook has been prepared to assist you in understanding your duties and is to be properly studied and available for ready reference. Remember, they (your fellow workers and the traveling public) depend on you.

Equipment

Apparel (Clothing)

For daytime work, the flagger's apparel (vest, shirt, or jacket) shall be either fluorescent orange-red or a fluorescent yellow-green as defined in the standard. For nighttime work, similar outside garments shall be retroreflective. The retroreflective material shall be either orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 ft. The retroreflective clothing shall be designed to clearly identify the

wearer as a person. ANSI 107 Class 2 apparel shall be worn during the day. Class 3 apparel is recommended for nighttime flagger operations.

Don't forget to check with local agencies for other apparel and equipment requirements (for example, steel-toed shoes or special colored hard-hats).

Immodest or sloppy dress should not be permitted! Remember, a neat appearance helps gain respect and makes your job more effective.



Hand Signaling Devices

Flaggers should have standard combination "STOP"/"SLOW" paddles, which are at least 18 inches wide with letters at least 6 inches high. Flashing white lights may be used on the "STOP" face of the paddle. In emergencies, a bright red flag at least 24 inches square, on a 36-inch long staff may be used.

When used at night, flags shall be retroreflectorized red. Night time flagging requires proper illumination of the flagger and equipment. Except in emergency situations, flagger stations shall be illuminated at night. The stop/slow paddle may be modified to improve conspicuity.

Hand signaling devices, such as STOP/SLOW paddles, lights, and red flags, are used to control road users through TTC zones.

The STOP/SLOW paddle is the primary and preferred hand-signaling device because the STOP/SLOW paddle gives road users more positive guidance than red flags. Use of flags is limited to emergency situations.

Flags, when used, shall be a minimum of 24 inches square, made of a good grade of red or fluorescent orange/red material, and securely fastened to a staff that is approximately 36 inches in length.

The free edge of a flag should be weighted so the flag will hang vertically, even in heavy winds.

When used at nighttime, flags shall be retroreflectorized red.

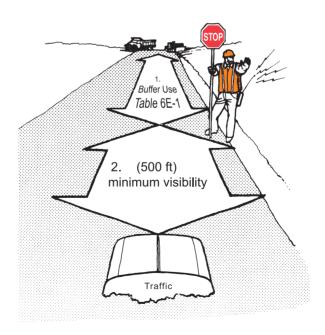
The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. STOP/SLOW paddles shall be at least 6 inches high and should be fabricated from light semi-rigid material. The background of the STOP face shall be red and white letters with border. The background of the SLOW face shall be orange with black letters and border. When used at night, the STOP/SLOW paddle shall be retroreflectorized.

The STOP/SLOW paddle may be modified to improve conspicuity by incorporating either white or red flashing lights on the STOP face, and either white or yellow flashing lights on the SLOW face. The flashing lights may be arranged in any of the patterns described in Appendix 1.



Flagger's Position

- While on duty as a flagger you must be alert at all times and be on your feet facing oncoming traffic.
- Always stand in a highly visible location but never directly in the path of an approaching vehicle.
- Approaching traffic must be able to see you in plenty of time to react safely (see figure on next page), usually 500 feet.
- The flagger should stand either on the shoulder adjacent to the road user being controlled or in the closed lane prior to stopping road users.
- A flagger should be clearly visible to the first approaching road user at all times.
- The flagger also should be visible to the other road users.
- The flagger should be stationed sufficiently in advance of the workers to warn them (for example, with audible warning devices such as horns, whistles, etc.) of approaching danger by out-of-control vehicles.
- The flagger should stand alone, never permitting a group of workers to congregate around the flagger station.



When two flaggers are working together (one on either end of the work area), they should always be able to see each other or use two-way radios for proper communication. In such cases, one flagger is always in charge and the other flagger must coordinate his or her activities accordingly.

When performing as a flagger, always stand alone; never mingle with the work crew, the traveling public, or other people. To avoid hindering the sight distance for motorists or causing other obstructions, flaggers should park their personal vehicles well off the roadway and not close to the flagger station.

In certain instances the nature of the work may be such that only one flagger is required (minor shoulder repair, guardrail installation, or other work conditions where the length of the work space is short and traffic approaching from either direction can easily see the flagger). In such instances you, as a "single flagger," should generally operate from the roadway shoulder, directly opposite from the work space and in a position highly visible to approaching traffic from either direction (see figure below).

The figure on the previous page shows a typical flagger position.

Remember: Arrow boards (displaying arrows or chevrons) <u>shall not</u> be used in conjunction with flagger operations.

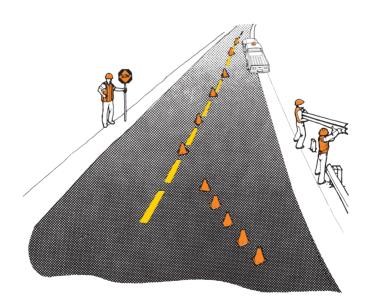


Figure 6H-10. Lane Closure on a Two-Lane Road Using Flaggers (TA-10)

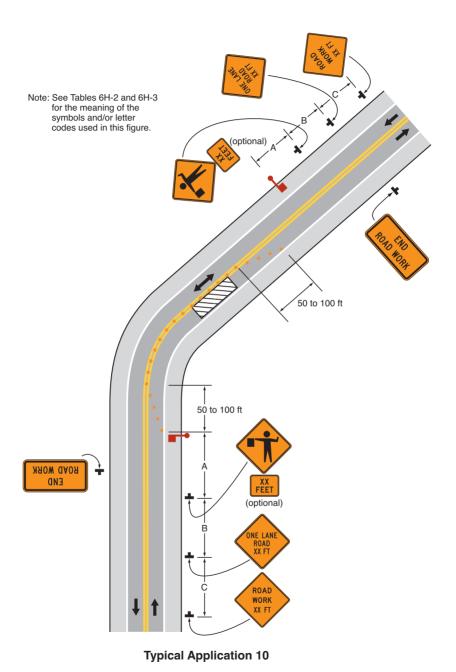


Table 6C-1. Recommended Advance Warning Sign Minimum Spacing

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

^{*} Speed category to be determined by the highway agency

Advance Warning Area

The advance warning area is the section of highway where road users are informed about the upcoming work zone or incident area.

The advance warning area may vary from a single sign or high-intensity rotating, flashing, oscillating, or strobe lights on a vehicle to a series of signs in advance of the TTC zone activity area.

On urban streets, the effective placement of the first warning sign in feet should range from 4 to 8 times the speed limit in mph, with the high end of the range being used when speeds are relatively high. When a single advance warning sign is used (in cases such as low-speed residential streets), the advance warning sign can be as short as 100 ft. When two or more advance warning signs are used on higher-speed streets, such as major arterials, the advance warning area should extend a greater distance (see Table 6C-1).

Since rural highways are normally characterized by higher speeds, the effective placement of the first warning signs in feet should be substantially longer—from 8 to 12 times the speed limit in mph. Since two or more advance warning signs are normally used for these conditions, the advance warning area should extend 1,500 ft. for open highway conditions (See Table 6C-1).

Warning Sign Sizes

TTC warning signs shall conform to the Standards for warning signs presented in Part 2 and in FHWA's "Standard Highway Signs" book (see Section 1A.11). TTC warning signs shall be diamond shaped with a black legend and border on an orange background, except for the W10-1 sign which shall have a black legend and border on a yellow background, to have fluorescent yellow-green backgrounds.

Because of their importance, advance warning signs for higher-speed locations shall have a size of 48 x 48 in. Check your local standards.

^{**} The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

Where speeds and volumes are moderately low, a minimum size of 36 x 36 in. may be used for advance warning signs.

On secondary roads or city streets where speeds are very low, signs smaller than the standard size, but not less than 24×24 in., may be used for warning signs having short word messages or clear symbols.

Advance warning signs larger than the minimum standards may be used for additional emphasis of the TTC zone.

Advance Flaggers

Certain situations may require that "advance flaggers" also be used where there is limited sight distance to the temporary traffic control area, or when traffic volume is such that distance between the first vehicle in line and the last vehicle in line is great.

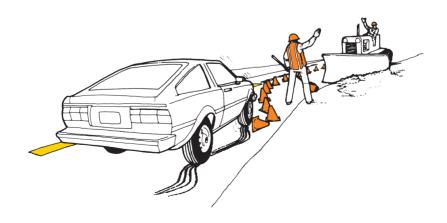
The decision to use an advance flagger should be made at the Supervisor level consistent with the agency's or organization's temporary traffic control plan.

As an advance flagger, you should stop each vehicle as it approaches and advise the driver of the work ahead and actions required such as: "fresh oil ahead, drive slowly," "keep to the right and stay in the line," etc. Be considerate and alert, and avoid unnecessary conversation.

Pay Attention to Your Job

Remember, your job is handling traffic. Do not otherwise assist the work crew, watch construction operations instead of traffic, or engage in any other activity in addition to your duties as a flagger.

If you need a break tell your supervisor so that a proper replacement may be brought in. Never leave your post.



Flagger Procedures

The use of paddles and flags is illustrated in figure 6E-1.

The following methods of signaling with paddles shall be used:

- A. To stop road users, the flagger shall face road users and aim the STOP paddle face toward road users in a stationary position with the arm extended horizontally away from the body. The free arm shall be held with the palm of the hand above shoulder level toward the approaching traffic.
- B. To direct stopped road users to proceed, the flagger shall face road users with the SLOW paddle face aimed toward the road users in a stationary position with the arm extended horizontally away from the body. The flagger shall motion with the free hand for road users to proceed.
- C. To alert or slow traffic, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body.

To further alert or slow down traffic, the flagger holding the SLOW paddle face toward the road users may motion up and down with the free hand, palm down.

The following methods of signaling with a flag shall be used:

- A. To stop road users, the flagger shall face road users and extend the flag staff horizontally across the road users' lane in a stationary position so that the full area of the flag is visibly hanging below the staff. The free arm shall be held with the palm of the hand above the shoulder level toward approaching traffic.
- B. To direct stopped road users to proceed, the flagger shall stand parallel to the road user movement and with flag and arm lowered from the view of the road users, and shall motion with the free hand for road users to proceed. Flags shall not be used to signal road users to proceed.
- C. To alert or slow traffic, the flagger shall face road users and slowly wave the flag in a sweeping motion of the extended arm from shoulder level to straight down without raising the arm above a horizontal position. The flagger shall keep the free hand down.



Typical Situation

To Stop Traffic

Hold the stop sign erect and away from your body, look directly at the approaching driver, and with the free arm upraised and the palm of the hand exposed to the driver, bring the first vehicle to a full stop. Do not wave the paddle!

After the first vehicle has been stopped, move to a spot where you can be seen by other approaching vehicles, preferably near the centerline of the roadway, and stop all remaining vehicles in the same manner. Remain in this position with the "STOP" sign facing traffic until you can permit travel through the work area. Remember, never stand in the path of an approaching vehicle, and never turn your back on traffic.

When flagging at night, wave a flashlight or lantern in a semi-circle arc in order to attract the driver's attention and use a reflectorized paddle (see figure on page 2). Except in emergency situations, flagger stations shall be illuminated at night.

Remember that a motorist requires considerable time to see and understand your signals; therefore, make clear and precise signals that can be easily seen and understood.

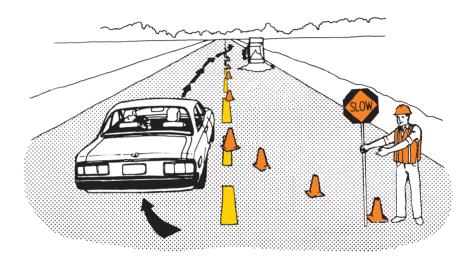
Release of Traffic

To Release Traffic into Left Lane

(One-Way Traffic)

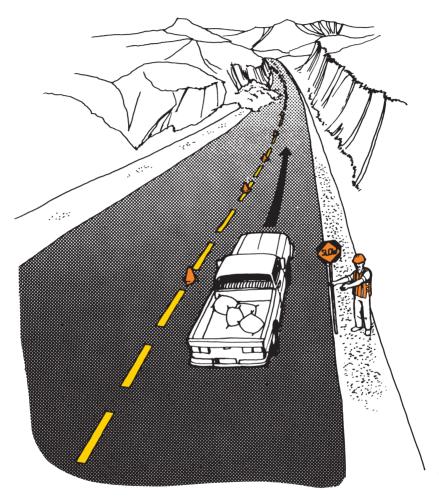
While standing to the front and right of stopped traffic, turn the "SLOW" side of the sign to face the vehicles and with your free arm signal the drivers to proceed to the left lane (see figure below).

Never wave the sign! After all the vehicles have passed, return to your original position on the shoulder to await the next vehicle.



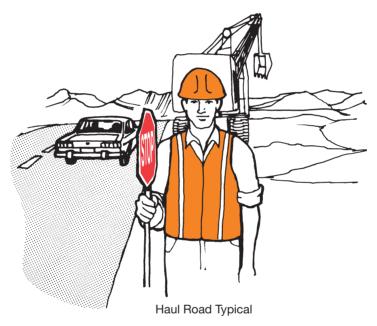
To Release Traffic into Right Lane (One-Way Traffic)

Return to your position on the shoulder, display the slow sign to the drivers and with your free arm motion the drivers to proceed (see figure below).



To Release Traffic on Right Lane (Two-Way Traffic)

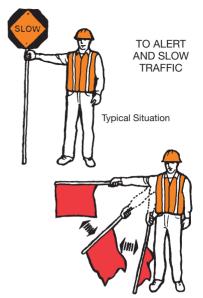
When releasing traffic on a two-lane highway where traffic is stopped temporarily in only one lane, (such as for loading or unloading operations), the sign standard should be turned a quarter-turn so that the letters "STOP" face you as the flagger (see figure below). In this position, the sign should be parallel to the shoulder of the road so that neither "STOP" nor "SLOW" can be read by motorists approaching from either direction. The "STOP" message then will not confuse continuous traffic traveling the opposite direction. When releasing the stopped traffic the flagger may initiate movement with a positive motion. This motion may be continued if hesitancy by the motorist is indicated.



To Slow Traffic

When slowing traffic or funneling traffic into other lanes, only the "SLOW" side of the paddle should be shown to approaching traffic, then motion with your free hand for the motorists to proceed (see figure below). You should operate from the shoulder of the roadway when no approaching traffic lanes are closed. Never stand in the path of oncoming traffic.

In cases of temporary lane closures, a transition consisting of cones, barricades, or other channelizing devices designating the activity area should be established.



Emergency Situation

Traffic Control at Haul Road (Construction Entrance)

Generally, traffic control procedures are the same for haul road intersections as for the other work areas. Should trucks be making a right turn onto the highway, only one flagger would be required (see figure below). If trucks have the right of way and are crossing the highway or making a left turn, two flaggers will be necessary to control traffic from each direction.



Flag-Carrying Method

Flag-carrying may be effective when the route is well defined and non-hazardous. It should be used only when the one-way traffic is confined to a relatively short section of roadway, usually not more than 1 mile in length.

The driver of the last vehicle proceeding into the one-lane section is given a clean, dry red flag (or other item) and instructed to deliver it to the flagger at the other end. Instruct the driver not to pass other vehicles in the work area. The opposite flagger, upon receipt of the flag, then knows it is safe to allow traffic to move in the other direction. Hold all traffic until the flag is returned to you or the "all clear" signal is given.

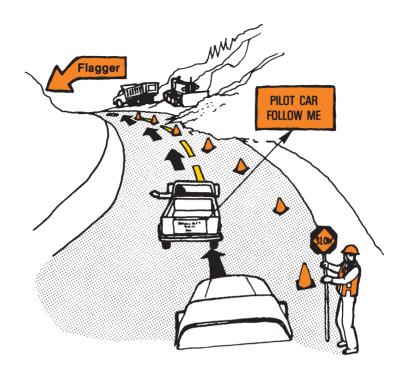
A variation of the above flag carrying method is use of an "official" vehicle which always follows the last vehicle through the work area. The use of an official car eliminates the possibility of losing the flag or of the flag-carrying car passing other vehicles.

Pilot Car Operations

Work is often performed over a long section of highway. When the flagger at the opposite end is not visible to you, a pilot car may be used to escort vehicles through the work area. You are to stop vehicles in the approved manner as they approach, and detain them until the pilot car arrives from the opposite direction.

After stopping the first vehicle, move to a position near the centerline of the roadway so as to be easily seen by approaching drivers. Be alert to prevent vehicles from pulling out of line and trying to pass other waiting vehicles, as this would seriously congest the traffic holding area and endanger or impede opposing traffic.

After the pilot car arrives and has pulled into position at the head of your column, wait until the last vehicle has arrived with the flag. Then step back onto the shoulder and, with the "SLOW" sign extended, motion the pilot car driver and others to proceed. Unless otherwise instructed, stop the last car in the column and give the driver a flag (or other item) with instructions to deliver it to the flagger at the other end of the work area. Release the vehicle, then assume your proper position for stopping the next vehicle as before.



Additional Aids

Where companion flaggers are far apart or out of sight of each other, two-way radio communications between stations are required. Also, two-way radio communications with the work crew supervisor may be helpful (communicating periodic road closings of short duration, new caution instructions to be given motorists regarding road conditions, etc.).

Always use appropriate advance warning signs, giving particular attention to sign visibility, legibility and placement.

Remember, always remove signs or completely cover the sign messages when they do not apply to present temporary traffic control conditions.

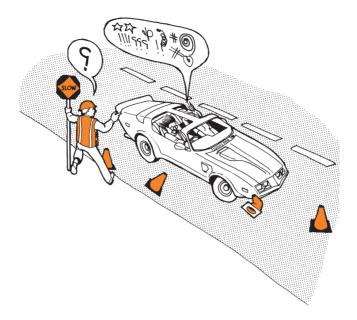




Rules of Conduct

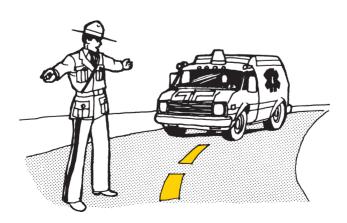
- 1. If the instruction to the motorist is to "STOP," you should tell the first driver the reason for the delay if it is not apparent. (Do not abandon your post at the head of the traffic line to advise other drivers. This duty should be taken care of by an "advance flagger" if deemed necessary by your supervisor). Information should be given in a few brief but courteous words, such as, "There is a culvert out ahead," "We have a motorgrader working just around the corner," etc.
- 2. Do not lean on the vehicles and talk to the occupants. Be friendly and polite but do not become preoccupied with small talk. Your job demands full and complete concentration.
- 3. Never engage in arguments with the occupants of a vehicle. It is important that you be courteous, yet brief and factual in your conversation with them.
- 4. If a driver refuses to obey instructions, you shall record a general description of the car and driver, the vehicle license number and the circumstances involved, then report this information to the supervisor as soon as possible without deserting your post.

5. All signs indicating a flagger is on duty must be removed or covered when you or your replacements are not actually flagging.



6. You should always be alert to the needs of emergency vehicles and crews. Special care should be used to allow safe passage of such vehicles and crews, and other vehicular or pedestrian traffic as possible. Remember, however, that these "priority rights" should never ignore basic rules of safety first. (A wrecked ambulance is usually worse than no ambulance at all).

Each agency or organization should have developed a standard emergency vehicle and safety plan of operation. Discuss with your supervisor what you should do in case of emergencies.



Emergency Procedures

So far what you've been reading has been about your responsibilities in assisting motorists, pedestrians, and co-workers while in or going through a worksite. How about your responsibility to yourself? As a flagger you can do no good for anyone if you become injured while flagging. PROTECT YOURSELF!

Once you have selected or been assigned your flagger position by your supervisor, look over the area for one or more methods or routes of escape - a place to get to in order to avoid being injured by a vehicle heading your way, regardless of the reason.

Should you observe a vehicle heading your way, protect yourself first – THEN warn the crew. It's a good idea to have some sort of warning device that is capable of being heard by the crew above the construction noise. Perhaps a police whistle might suffice if the work site is close and the noise level low. A portable air horn, such as those used on boats, clipped to your belt may be better. Whatever you use, make sure the crew is aware of your signals and knows what to do when you sound the warning.

Finally, when all previous life saving actions have been taken, try to get the vehicle and driver description and any other helpful information and notify your supervisor without leaving your flagging position unless properly relieved. The supervisor can then follow up with the local law enforcement agency.

For the Supervisor

Successful execution of traffic control is dependent upon proper supervision. One of the first and most important steps in supervision is the issuance of all necessary instructions to the foreman, crew chief and flagger who must undertake the responsibility for traffic control. It must not be assumed that employees will understand their duties without careful and complete instructions. An uninformed flagger can cause confusion and accidents instead of preventing them. On the other hand, proper instructions will increase his or her interest, encourage better performance, develop sound judgment for use in difficult situations, and enhance better public relations.

Remember that lasting impressions are made, and public opinion is quickly formed, during the brief contact the motorist has with our maintenance, construction and engineering forces.

It is impractical to attempt in this booklet to cover the vast number of situations that will arise during the course of work that may require special traffic control. We must therefore depend upon supervisory personnel to plan each particular action and supervise the placement of signs, other traffic control devices, and flaggers. The safety of the work crew and the motoring public is more important than the construction or maintenance operations you are performing.

As a reminder of a few of the more important things to consider, and in an effort to obtain more uniformity of traffic control, the following standards are established.

1. The supervisor shall decide which situations require a flagger or flaggers. The common complaint that flaggers are not available because of insufficient help is not an acceptable excuse for exposing workers and highway users to the danger of being maimed or killed.

Do not use a flagger unless you need one. In some situations, the use of a flagger where one is not needed could result in more danger to the motorist, or the worker.

2. The selection of persons to be employed as flaggers and the assignment of persons already employed in this duty are clearly the responsibility of the supervisor. ATSSA flagger certification is available and may even be required in your jurisdiction. See Flagger Workbook for additional information.

Do not simply select the person who is least qualified for other jobs. Remember, the safety of you and other workers could depend on the flagger.

- 3. Flaggers must be thoroughly instructed in the importance of the work they are to perform before being allowed to assume full responsibility for flagging operations. In addition to oral instructions the flagger is to be handed a copy of this manual and made to understand that it is his or her duty to read it and follow its instructions. (It may be necessary to conduct formalized training sessions or certification programs for all persons who are assigned traffic control responsibilities).
- 4. Flaggers should be provided with the proper apparel and equipment at least an orange safety vest and an orange hat if possible, and a "STOP"/"SLOW" paddle in good condition. Materials used at night shall be retroreflective. A flag should be used only in emergency situations and should be replaced with a paddle as soon as possible.
- 5. Traffic control should be handled in a uniform manner throughout your area of supervision.
- 6. Flaggers should be relieved periodically during the course of work to provide ample rest breaks or diversions. This is very important to maintain proficient flagging operations.
- 7. Those in charge of work must make certain that all required warning signs, channelizing devices, flags, flaggers, and equipment are in place, and that all precautionary measures to safeguard the public and employees have been taken before work is started. They shall see that such warnings are properly placed and maintained during the progress of the work.
- 8. Each work project will require special study before a flagger is placed to be sure that he or she is properly located. It is important that the flagger stand where he or she can see the workers if possible, and where the approaching driver can see the flagger in plenty of time to interpret and react to the signals to slow down or stop if required.
- 9. When the traffic control devices and flaggers have been established, the supervisor should, as soon as possible, drive through the work area at the anticipated speed of the motorists in order to determine the effectiveness of the total traffic control system.

- 10. Should a flagger report that a close call or near accident has occurred after the control has been set up, you will take it as a warning that something is wrong and investigate at once. After the necessary adjustments have been made, do not leave the job until you have studied the behavior of traffic to assure yourself that the problem has been corrected.
- 11. Serious traffic control violations should be reported to the police as soon as possible. Provide them with the license number, description of vehicle, type and time of violation, and description of driver. It is advised that pen and paper be a part of one's equipment.
- 12. All advance warning signs shall be removed or covered during the noon hour, at quitting time, and any other time when work is interrupted and the equipment is clear of the traveled way. The confidence of the traveling public in these warning devices must be maintained.
- 13. Advance warning signs and STOP/SLOW "paddles" shall be turned in for refurbishing, resheeting or replacement when the colors become dull or worn.
- 14. All temporary traffic control signs shall be in accordance with the "Manual on Uniform Traffic Control Devices. "Home made" or poorly repaired signs are often confusing and lead to disrespect for our traffic control efforts.
- 15. A pilot car should be used in addition to the flagger where traffic must be kept in line or at reduced speed over particularly hazardous, or long sections of roadway. The pilot car driver should travel at a speed that is safe and that can be maintained by all vehicles in the convoy.

Extreme caution must be used in turning around. Wait until all vehicles have cleared. Pilot car vehicles must have as much visibility as possible. Only passenger cars, carryalls or open pickups are to be used.

It is the duty of the supervisors to see that the instructions in this booklet are followed. You and your crew should not hesitate to identify and correct any carelessness or case of neglect that may lead to an accident.

Before work begins, the safety measures to be taken should be discussed and formulated in detail with immediate supervisors by the supervisor in charge of the work. The selection of persons suitable for traffic control operations should be included in this discussion.

The projected traffic control plan should provide specific instructions for traffic control throughout the project limits. Particular attention should be given to proper training and awareness of each individual responsible for the temporary traffic control and to special items such as the proper treatment of emergency vehicles and crews, the correct response to an accident (both with and without bodily injury), etc.

Be proud of your position as a supervisor and be proud of your flaggers and the job they are doing. Be effective in your decisions and continue to give our "boss," the traveling public, the safest and most efficient system of highways possible.

Appendix 1

The following pages are from Part 6E of the 2009 Manual on Uniform Traffic Control Devices (MUTCD)

FLAGGER CONTROL

Section 6E.01 Qualifications for Flaggers

Guidance:

01 Because flaggers are responsible for public safety and make the greatest number of contacts with the public of all highway workers, they should be trained in safe traffic control practices and public contact techniques. Flaggers should be able to satisfactorily demonstrate the following abilities:

- A. Ability to receive and communicate specific instructions clearly, firmly, and courteously;
- B. Ability to move and maneuver quickly in order to avoid danger from errant vehicles;
- C. Ability to control signaling devices (such as paddles and flags) in order to provide clear and positive guidance to drivers approaching a TTC zone in frequently changing situations;
- D. Ability to understand and apply safe traffic control practices, sometimes in stressful or emergency situations; and
- E. Ability to recognize dangerous traffic situations and warn workers in sufficient time to avoid injury.

Section 6E.02 High-Visibility Safety Apparel

Standard:

01 For daytime and nighttime activity, flaggers shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107–2004 publication entitled "American National Standard for High-Visibility Apparel and Headwear" (see Section 1A.11) and labeled as meeting the ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. The apparel background (outer) material color shall be fluorescent orange-red, fluorescent yellow-green, or a combination of the two as defined in the ANSI standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. The retroreflective safety apparel shall be designed to clearly identify the wearer as a person.

Guidance:

02 For nighttime activity, high-visibility safety apparel that meets the Performance Class 3 requirements of the ANSI/ISEA 107–2004 publication entitled "American National Standard for High-Visibility Apparel and Headwear" (see Section 1A.11) and labeled as meeting the ANSI 107-2004 standard performance for Class 3 risk exposure should be considered for flagger wear.

Standard:

03 When uniformed law enforcement officers are used to direct traffic within a TTC zone, they shall wear high-visibility safety apparel as described in this Section.

Option:

04 In lieu of ANSI/ISEA 107-2004 apparel, law enforcement personnel within the TTC zone may wear high-visibility safety apparel that meets the performance requirements of the ANSI/ISEA 207-2006 publication entitled "American National Standard for High-Visibility Public Safety Vests" (see Section 1A.11) and labeled as ANSI 207-2006.

Section 6E.03 Hand-Signaling Devices

Guidance:

01 The STOP/SLOW paddle should be the primary and preferred handsignaling device because the STOP/SLOW paddle gives road users more positive guidance than red flags. Use of flags should be limited to emergency situations.

Standard:

02 The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. STOP/SLOW paddles shall be at least 18 inches wide with letters at least 6 inches high. The STOP (R1-1) face shall have white letters and a white border on a red background. The SLOW (W20-8) face shall have black letters and a black border on an orange background. When used at night, the STOP/SLOW paddle shall be retroreflectorized.

Guidance:

03 The STOP/SLOW paddle should be fabricated from light semi-rigid material. Support:

04 The optimum method of displaying a STOP or SLOW message is to place the STOP/SLOW paddle on a rigid staff that is tall enough that when the end of the staff is resting on the ground, the message is high enough to be seen by approaching or stopped traffic.

Option:

05 The STOP/SLOW paddle may be modified to improve conspicuity by incorporating either white or red flashing lights on the STOP face, and either white or yellow flashing lights on the SLOW face. The flashing lights may be arranged in any of the following patterns:

- A. Two white or red lights, one centered vertically above and one centered vertically below the STOP legend; and/or two white or yellow lights, one centered vertically above and one centered vertically below the SLOW legend;
- B. Two white or red lights, one centered horizontally on each side of the STOP legend; and/or two white or yellow lights, one centered horizontally on each side of the SLOW legend;

- C. One white or red light centered below the STOP legend; and/or one white or yellow light centered below the SLOW legend;
- D. A series of eight or more small white or red lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in an octagonal pattern at the eight corners of the border of the STOP face; and/or a series of eight or more small white or yellow lights no larger than 1/4 inch in diameter along the outer edge of the paddle, arranged in a diamond pattern along the border of the SLOW face; or
- E. A series of white lights forming the shapes of the letters in the legend.

Standard:

- 06 If flashing lights are used on the STOP face of the paddle, their colors shall be all white or all red. If flashing lights are used on the SLOW face of the paddle, their colors shall be all white or all yellow.
- 07 If more than eight flashing lights are used, the lights shall be arranged such that they clearly convey the octagonal shape of the STOP face of the paddle and/or the diamond shape of the SLOW face of the paddle.
- 08 If flashing lights are used on the STOP/SLOW paddle, the flash rate shall be at least 50, but not more than 60, flashes per minute.
- 09 Flags, when used, shall be red or fluorescent orange/red in color, shall be a minimum of 24 inches square, and shall be securely fastened to a staff that is approximately 36 inches in length.

Guidance:

10 The free edge of a flag should be weighted so the flag will hang vertically, even in heavy winds.

Standard:

11 When used at nighttime, flags shall be retroreflectorized red.

Option:

12 When flagging in an emergency situation at night in a non-illuminated flagger station, a flagger may use a flashlight with a red glow cone to supplement the STOP/SLOW paddle or flag.

Standard:

- 13 When a flashlight is used for flagging in an emergency situation at night in a non-illuminated flagger station, the flagger shall hold the flashlight in the left hand, shall hold the paddle or flag in the right hand as shown in Figure 6E-3, and shall use the flashlight in the following manner to control approaching road users:
- A. To inform road users to stop, the flagger shall hold the flashlight with the left arm extended and pointed down toward the ground, and then shall slowly wave the flashlight in front of the body in a slow arc from left to right such that the arc reaches no farther than 45 degrees from vertical.

- B. To inform road users to proceed, the flagger shall point the flashlight at the vehicle's bumper, slowly aim the flashlight toward the open lane, then hold the flashlight in that position. The flagger shall not wave the flashlight.
- C. To alert or slow traffic, the flagger shall point the flashlight toward oncoming traffic and quickly wave the flashlight in a figure eight motion.

Section 6E.04 Automated Flagger Assistance Devices

Support:

01 Automated Flagger Assistance Devices (AFADs) enable a flagger(s) to be positioned out of the lane of traffic and are used to control road users through temporary traffic control zones. These devices are designed to be remotely operated either by a single flagger at one end of the TTC zone or at a central location, or by separate flaggers near each device's location.

02 There are two types of AFADs:

- A. An AFAD (see Section 6E.05) that uses a remotely controlled STOP/SLOW sign on either a trailer or a movable cart system to alternately control rightof-way.
- B. An AFAD (see Section 6E.06) that uses remotely controlled red and yellow lenses and a gate arm to alternately control right-of-way.

03 AFADs might be appropriate for short-term and intermediate-term activities (see Section 6G.02). Typical applications include TTC activities such as, but not limited to:

- A. Bridge maintenance;
- B. Haul road crossings; and
- C. Pavement patching.

Standard:

- 04 AFADs shall only be used in situations where there is only one lane of approaching traffic in the direction to be controlled.
- 05 When used at night, the AFAD location shall be illuminated in accordance with Section 6E.08.

Guidance:

06 AFADs should not be used for long-term stationary work (see Section 6G.02).

Standard:

- 07 Because AFADs are not traffic control signals, they shall not be used as a substitute for or a replacement for a continuously operating temporary traffic control signal as described in Section 6F.84.
- 08 AFADs shall meet the crashworthy performance criteria contained in Section 6F.01.

Guidance:

09 If used, AFADs should be located in advance of one-lane, two-way tapers and downstream from the point where approaching traffic is to stop in response to the device.

Standard:

- 10 If used, AFADs shall be placed so that all of the signs and other items controlling traffic movement are readily visible to the driver of the initial approaching vehicle with advance warning signs alerting other approaching traffic to be prepared to stop.
- 11 If used, an AFAD shall be operated only by a flagger (see Section 6E.01) who has been trained on the operation of the AFAD. The flagger(s) operating the AFAD(s) shall not leave the AFAD(s) unattended at any time while the AFAD(s) is being used.
- 12 The use of AFADs shall conform to one of the following methods:
- A. An AFAD at each end of the TTC zone (Method 1), or
- B. An AFAD at one end of the TTC zone and a flagger at the opposite end (Method 2).
- 13 Except as provided in Paragraph 14, two flaggers shall be used when using either Method 1 or Method 2.

Option:

- 14 A single flagger may simultaneously operate two AFADs (Method 1) or may operate a single AFAD on one end of the TTC zone while being the flagger at the opposite end of the TTC zone (Method 2) if both of the following conditions are present:
- A. The flagger has an unobstructed view of the AFAD(s), and
- B. The flagger has an unobstructed view of approaching traffic in both directions.

Guidance:

15 When an AFAD is used, the advance warning signing should include a ROAD WORK AHEAD (W20-1) sign, a ONE LANE ROAD (W20-4) sign, and a BE PREPARED TO STOP (W3-4) sign.

Standard:

16 When the AFAD is not in use, the signs associated with the AFAD, both at the AFAD location and in advance, shall be removed or covered.

Guidance:

- 17 A State or local agency that elects to use AFADs should adopt a policy, based on engineering judgment, governing AFAD applications. The policy should also consider more detailed and/or more restrictive requirements for AFAD use, such as the following:
- A. Conditions applicable for the use of Method 1 and Method 2 AFAD operation,
- B. Volume criteria,

- C. Maximum distance between AFADs,
- D. Conflicting lenses/indications monitoring requirements,
- E. Fail safe procedures,
- F. Additional signing and pavement markings,
- G. Application consistency,
- H. Larger signs or lenses to increase visibility, and
- I. Use of backplates.

Section 6E.05 STOP/SLOW Automated Flagger Assistance Devices Standard:

01 A STOP/SLOW Automated Flagger Assistance Device (AFAD) (see Section 6E.04) shall include a STOP/SLOW sign that alternately displays the STOP (R1-1) face and the SLOW (W20-8) face of a STOP/SLOW paddle (see Figure 6E-1).

Legend NOBK Direction of travel Work space Channelizing device ■ Sign 1012 O B AFAD with recommended gate PREPARED Flashing beacon (optional) (optional) R1-7 R1-8 R1-8 SLOW 90TS SLOW 90TS NO NO NO NO W20-8 401S R1-1 OR Note: See Table 6H-3 for the values of the A. B. and C dimensions WAIT WAIT GO Channelizing ON ON ON 0N devices on ST₀P SLOW ST₀P SLOW center line (optional) R1-8 R1-8 (optional) (optional) RF PREPARED TO STO NF LANE ROAD AHEAD ROAD WORK Note: Shown as Method 1 with two AFADs

Figure 6E-1. Example of the Use of a STOP/SLOW Automated Flagger Assistance Device (AFAD)

- 02 The AFAD's STOP/SLOW sign shall have an octagonal shape, shall be fabricated of rigid material, and shall be mounted with the bottom of the sign a minimum of 6 feet above the pavement on an appropriate support. The size of the STOP/SLOW sign shall be at least 24 x 24 inches with letters at least 8 inches high. The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be diamond shaped and orange with black letters and border. Both faces of the STOP/SLOW sign shall be retroreflectorized.
- 03 The AFAD's STOP/SLOW sign shall have a means to positively lock, engage, or otherwise maintain the sign assembly in a stable condition when set in the STOP or SLOW position.
- 04 The AFAD's STOP/SLOW sign shall be supplemented with active conspicuity devices by incorporating either:
- A. White or red flashing lights within the STOP face and white or yellow flashing lights within the SLOW face meeting the provisions contained in Section 6E.03; or
- B. A Stop Beacon (see Section 4L.05) mounted a maximum of 24 inches above the STOP face and a Warning Beacon (see Section 4L.03) mounted a maximum of 24 inches above, below, or to the side of the SLOW face. The Stop Beacon shall not be flashed or illuminated when the SLOW face is displayed, and the Warning Beacon shall not be flashed or illuminated when the STOP face is displayed. Except for the mounting locations, the beacons shall comply with the provisions of Chapter 4L.

Option:

05 Type B warning light(s) (see Section 6F.83) may be used in lieu of the Warning Beacon during the display of the SLOW face of the AFAD's STOP/SLOW sign.

Standard:

06 If Type B warning lights are used in lieu of a Warning Beacon, they shall flash continuously when the SLOW face is displayed and shall not be flashed or illuminated when the STOP face is displayed.

Option:

07 The faces of the AFAD's STOP/SLOW sign may include louvers to improve the stability of the device in windy or other adverse environmental conditions.

Standard:

08 If louvers are used, the louvers shall be designed such that the full sign face is visible to approaching traffic at a distance of 50 feet or greater.

Guidance:

09 The STOP/SLOW AFAD should include a gate arm that descends to a down position across the approach lane of traffic when the STOP face is displayed and then ascends to an upright position when the SLOW face is displayed.

Option:

10 In lieu of a stationary STOP/SLOW sign with a separate gate arm, the STOP/SLOW sign may be attached to a mast arm that physically blocks the approach lane of traffic when the STOP face is displayed and then moves to a position that does not block the approach lane when the SLOW face is displayed.

Standard:

- 11 Gate arms, if used, shall be fully retroreflectorized on both sides, and shall have vertical alternating red and white stripes at 16-inch intervals measured horizontally as shown in Figure 8C-1. When the arm is in the down position blocking the approach lane:
- A. The minimum vertical aspect of the arm and sheeting shall be 2 inches; and
- B. The end of the arm shall reach at least to the center of the lane being controlled.
- 12 A WAIT ON STOP (R1-7) sign (see Figure 6E-1) shall be displayed to road users approaching the AFAD.

Option:

13 A GO ON SLOW (R1-8) sign (see Figure 6E-1) may also be displayed to road users approaching the AFAD.

Standard:

- 14 The GO ON SLOW sign, if used, and the WAIT ON STOP sign shall be positioned on the same support structure as the AFAD or immediately adjacent to the AFAD such that they are in the same direct line of view of approaching traffic as the sign faces of the AFAD. Both signs shall have black legends and borders on white backgrounds. Each of these signs shall be rectangular in shape and each shall be at least 24 x 30 inches in size with letters at least 6 inches high.
- 15 To inform road users to stop, the AFAD shall display the STOP face and the red or white lights, if used, within the STOP face shall flash or the Stop Beacon shall flash. To inform road users to proceed, the AFAD shall display the SLOW face and the yellow or white lights, if used, within the SLOW face shall flash or the Warning Beacon or the Type B warning lights shall flash.
- 16 If STOP/SLOW AFADs are used to control traffic in a one-lane, two-way TTC zone, safeguards shall be incorporated to prevent the flagger(s) from simultaneously displaying the SLOW face at each end of the TTC zone. Additionally, the flagger(s) shall not display the AFAD's SLOW face until all oncoming vehicles have cleared the one-lane portion of the TTC zone.

Section 6E.06 Red/Yellow Lens Automated Flagger Assistance Devices Standard:

01 A Red/Yellow Lens Automated Flagger Assistance Device (AFAD) (see Section 6E.04) shall alternately display a steadily illuminated CIRCULAR RED lens and a flashing CIRCULAR YELLOW lens to control traffic without the need for a flagger in the immediate vicinity of the AFAD or on the roadway (see Figure 6E-2).

02 Red/Yellow Lens AFADs shall have at least one set of CIRCULAR RED and CIRCULAR YELLOW lenses that are 12 inches in diameter. Unless otherwise provided in this Section, the lenses and their arrangement, CIRCULAR RED on top and CIRCULAR YELLOW below, shall comply with the applicable provisions for traffic signal indications in Part 4. If the set of lenses is post-mounted, the bottom of the housing (including brackets) shall be at least 7 feet above the pavement. If the set of lenses is located over any portion of the highway that can be used by motor vehicles, the bottom of the housing (including brackets) shall be at least 15 feet above the pavement.

Option:

03 Additional sets of CIRCULAR RED and CIRCULAR YELLOW lenses, located over the roadway or on the left-hand side of the approach and operated in unison with the primary set, may be used to improve visibility and/ or conspicuity of the AFAD.

Standard:

04 A Red/Yellow Lens AFAD shall include a gate arm that descends to a down position across the approach lane of traffic when the steady CIRCULAR RED lens is illuminated and then ascends to an upright position when the flashing CIRCULAR YELLOW lens is illuminated. The gate arm shall be fully retroreflectorized on both sides, and shall have vertical alternating red and white stripes at 16-inch intervals measured horizontally as shown in Figure 8C-1. When the arm is in the down position blocking the approach lane:

- A. The minimum vertical aspect of the arm and sheeting shall be 2 inches; and
- B. The end of the arm shall reach at least to the center of the lane being controlled.
- 05 A Stop Here On Red (R10-6 or R10-6a) sign (see Section 2B.53) shall be installed on the right-hand side of the approach at the point at which drivers are expected to stop when the steady CIRCULAR RED lens is illuminated (see Figure 6E-2).
- 06 To inform road users to stop, the AFAD shall display a steadily illuminated CIRCULAR RED lens and the gate arm shall be in the down position. To inform road users to proceed, the AFAD shall display a flashing CIRCULAR YELLOW lens and the gate arm shall be in the upright position.

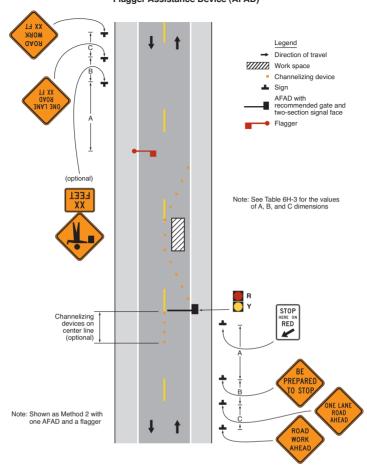


Figure 6E-2. Example of the Use of a Red/Yellow Lens Automated Flagger Assistance Device (AFAD)

07 If Red/Yellow Lens AFADs are used to control traffic in a one-lane, two-way TTC zone, safeguards shall be incorporated to prevent the flagger(s) from actuating a simultaneous display of a flashing CIRCULAR YELLOW lens at each end of the TTC zone. Additionally, the flagger shall not actuate the AFAD's display of the flashing CIRCULAR YELLOW lens until all oncoming vehicles have cleared the one-lane portion of the TTC zone.

08 A change interval shall be provided as the transition between the display of the flashing CIRCULAR YELLOW indication and the display of the steady CIRCULAR RED indication. During the change interval, the CIRCULAR YELLOW lens shall be steadily illuminated. The gate arm shall remain in the upright position during the display of the steadily illuminated CIRCULAR YELLOW change interval.

09 A change interval shall not be provided between the display of the steady CIRCULAR RED indication and the display of the flashing CIRCULAR YELLOW indication.

Guidance:

10 The steadily illuminated CIRCULAR YELLOW change interval should have a duration of at least 5 seconds, unless a different duration, within the range of durations recommended by Section 4D.26, is justified by engineering judgment.

Section 6E.07 Flagger Procedures

Support:

01 The use of paddles and flags by flaggers is illustrated in Figure 6E-3.

Standard:

02 Flaggers shall use a STOP/SLOW paddle, a flag, or an Automated Flagger Assistance Device (AFAD) to control road users approaching a TTC zone. The use of hand movements alone without a paddle, flag, or AFAD to control road users shall be prohibited except for law enforcement personnel or emergency responders at incident scenes as described in Section 6I.01.

03 The following methods of signaling with paddles shall be used:

- A. To stop road users, the flagger shall face road users and aim the STOP paddle face toward road users in a stationary position with the arm extended horizontally away from the body. The free arm shall be held with the palm of the hand above shoulder level toward approaching traffic.
- B. To direct stopped road users to proceed, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body. The flagger shall motion with the free hand for road users to proceed.
- C. To alert or slow traffic, the flagger shall face road users with the SLOW paddle face aimed toward road users in a stationary position with the arm extended horizontally away from the body.

Option:

04 To further alert or slow traffic, the flagger holding the SLOW paddle face toward road users may motion up and down with the free hand, palm down.

Standard:

05 The following methods of signaling with a flag shall be used:

A. To stop road users, the flagger shall face road users and extend the flag staff horizontally across the road users' lane in a stationary position so that the full area of the flag is visibly hanging below the staff. The free arm shall be held with the palm of the hand above shoulder level toward approaching traffic.

Figure 6E-3. Use of Hand-Signaling Devices by Flaggers **EMERGENCY SITUATIONS ONLY** PREFERRED METHOD STOP/SLOW Paddle Red Flag 18 inches MIN R1-1 STOF 36 inches 24 inches 24 inches TO STOP TRAFFIC W20-8 TO LET TRAFFIC PROCEED W20-8 TO ALERT AND SLOW TRAFFIC

- B. To direct stopped road users to proceed, the flagger shall face road users with the flag and arm lowered from the view of the road users, and shall motion with the free hand for road users to proceed. Flags shall not be used to signal road users to proceed.
- C. To alert or slow traffic, the flagger shall face road users and slowly wave the flag in a sweeping motion of the extended arm from shoulder level to straight down without raising the arm above a horizontal position. The flagger shall keep the free hand down.

Guidance:

06 The flagger should stand either on the shoulder adjacent to the road user being controlled or in the closed lane prior to stopping road users. A flagger should only stand in the lane being used by moving road users after road users have stopped. The flagger should be clearly visible to the first approaching road user at all times. The flagger also should be visible to other road users. The flagger should be

stationed sufficiently in advance of the workers to warn them (for example, with audible warning devices such as horns or whistles) of approaching danger by out-of-control vehicles. The flagger should stand alone, away from other workers, work vehicles, or equipment.

Option:

07 At spot lane closures where adequate sight distance is available for the reasonably safe handling of traffic, the use of one flagger may be sufficient.

Guidance:

08 When a single flagger is used, the flagger should be stationed on the shoulder opposite the spot lane closure or work space, or in a position where good visibility and traffic control can be maintained at all times.

Section 6E.08 Flagger Stations

Standard:

01 Flagger stations shall be located such that approaching road users will have sufficient distance to stop at an intended stopping point.

Option:

02 The distances shown in Table 6E-1, which provides information regarding the stopping sight distance as a function of speed, may be used for the location of a flagger station. These distances may be increased for downgrades and other conditions that affect stopping distance.

Guidance:

03 Flagger stations should be located such that an errant vehicle has additional space to stop without entering the work space. The flagger should identify an escape route that can be used to avoid being struck by an errant vehicle.

Standard:

04 Except in emergency situations, flagger stations shall be preceded by an advance warning sign or signs. Except in emergency situations, flagger stations shall be illuminated at night.

Table 6E-1. Stopping Sight Distance as a Function of Speed

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

^{*} Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed

Figure 6H-10. Lane Closure on a Two-Lane Road Using Flaggers (TA-10)

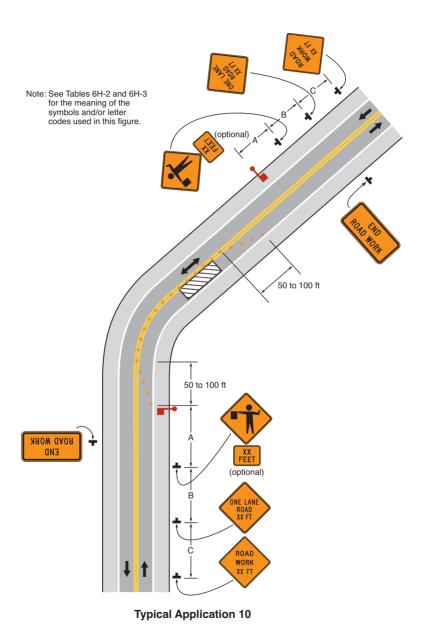


Figure 6H-13. Temporary Road Closure (TA-13)

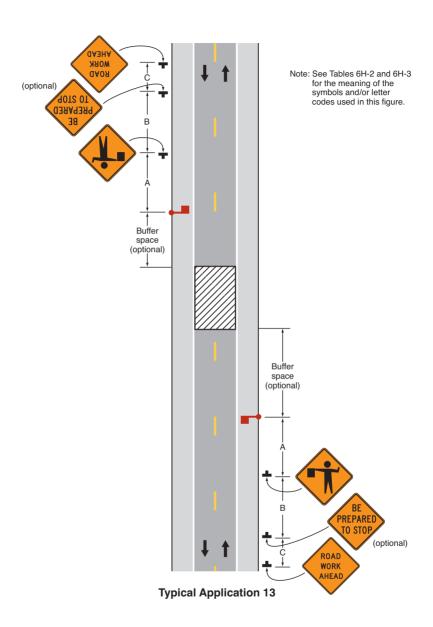
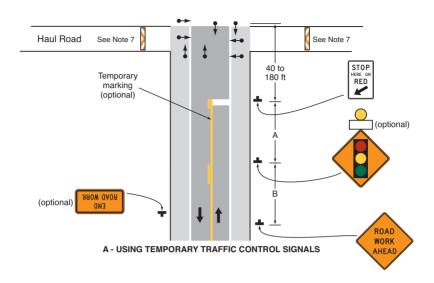
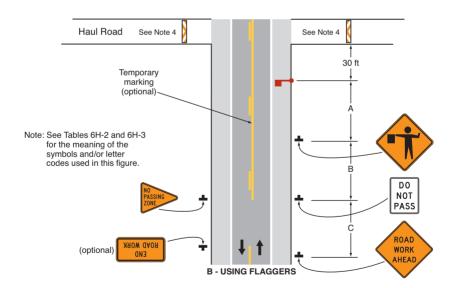


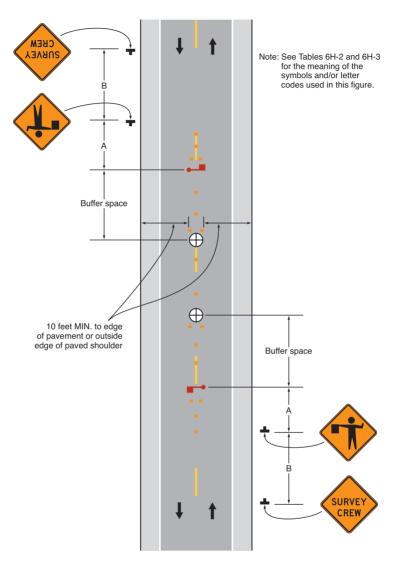
Figure 6H-14. Haul Road Crossing (TA-14)





Typical Application 14

Figure 6H-16. Surveying Along the Center Line of a Road with Low Traffic Volumes (TA-16)



Typical Application 16

Figure 6H-27. Closure at the Side of an Intersection (TA-27)

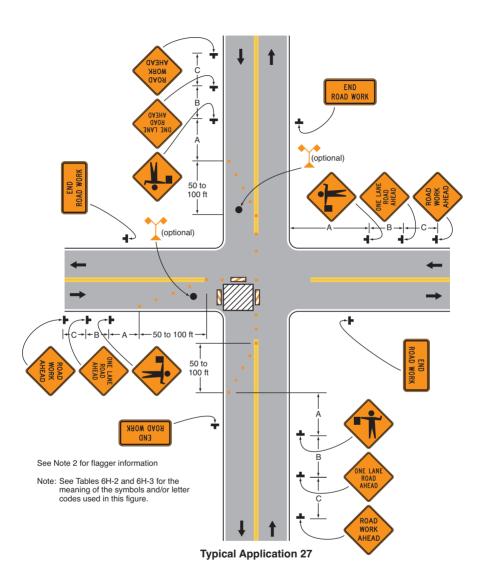
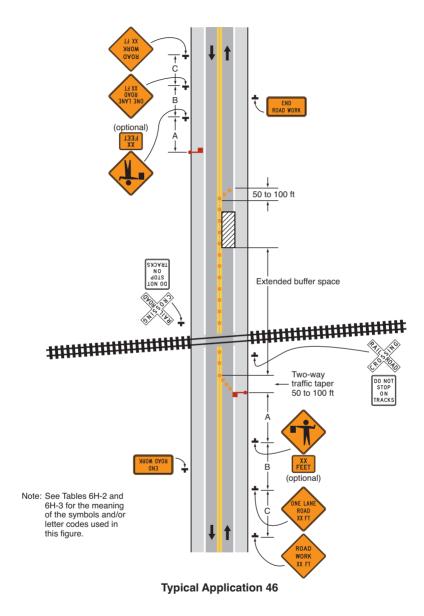


Figure 6H-46. Work in the Vicinity of a Grade Crossing (TA-46)



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Table A2-1. Conversion of Inches to Millimeters

Inches	Millimeters			
0.25	6			
0.4	10			
0.5	13			
0.75	19			
1	25			
1.25	31			
2	50			
2.25	56			
2.5	62			
3	75			
3.5	87			
4	100			
4.5	113			
5	125			
6	150			
8	200			
9	225			
10	250			
10.4	260			
10.6	265			

Inches	Millimeters			
12	300			
15	375			
16	400			
18	450			
21	525			
24	600			
27	675			
28	700			
30	750			
32	800			
36	900			
42	1050			
48	1200			
54	1350			
60	1500			
72	1800			
84	2100			
120	3000			

Note: 1 inch = 25.4 millimeters; 1 millimeter = 0.039 inches

Conversion of Feet to Meters

1 foot = 0.3048 meters; 1 meter = 3.28 feet

Conversion of Miles to Kilometers

1 mile = 1.609 kilometers; 1 kilometer = 0.621 miles

Conversion of Miles per Hour to Kilometers/Hour

1 mile per hour = 1.609 kilometers/hour; 1 kilometer/hour = 0.621 miles per hour

Before leaving for the job site, check the following:

STOP/SLOW Paddle
□ Clean?
☐ At least 18" x 18"?
☐ Rigid handle at least 5 feet high?
☐ Retroreflective if used at night?
Flag
☐ Good grade RED material?
☐ At least 18" x 18"?
☐ Staff at least 3 feet long?
☐ Retroreflective if used at night?
□ Weighted?
☐ Used for emergencies only?
High-Visibility Safety Apparel
□ ANSI Class 2 apparel for daytime work?
☐ ANSI Class 3 apparel for nighttime work?
□ Proper colors?
□ Clean?
☐ Hardhat?
☐ Does it protect you from the elements?
Communication devices
☐ Two-way radio?
☐ Flag for token method?
☐ Flag for token method?☐ Extra batteries?
□ Extra batteries? Other
□ Extra batteries? Other □ Air horn?
□ Extra batteries? Other □ Air horn? □ Whistle?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks? □ Pencil and paper?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks? □ Pencil and paper? □ Comfortable shoes?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks? □ Pencil and paper? □ Comfortable shoes? □ Sun protection?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks? □ Pencil and paper? □ Comfortable shoes? □ Sun protection? □ Gloves?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks? □ Pencil and paper? □ Comfortable shoes? □ Sun protection? □ Gloves? □ Bug spray?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks? □ Pencil and paper? □ Comfortable shoes? □ Sun protection? □ Gloves? □ Bug spray? □ First-aid kit?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks? □ Pencil and paper? □ Comfortable shoes? □ Sun protection? □ Gloves? □ Bug spray? □ First-aid kit? □ Flagger Handbook?
□ Extra batteries? Other □ Air horn? □ Whistle? □ Water? □ Snacks? □ Pencil and paper? □ Comfortable shoes? □ Sun protection? □ Gloves? □ Bug spray? □ First-aid kit?

At the job site, before starting the flagger operation, if applicable:
☐ Are you wearing your at least ANSI 107 Class 2 high-visibility safety apparel and hardhat?
☐ Is your air horn easily accessible?
☐ Have you told your fellow workers how you plan to warn them?
☐ Is there at least a FLAGGER AHEAD sign ahead of you?
\Box If in rural area, is the sign at least 500 feet ahead of you?
☐ Can you effectively communicate with the other flagger(s)?
□ Is your radio working properly?
☐ Are you clearly visible to oncoming traffic?
☐ Are you on the shoulder and away from moving traffic?
☐ Are you giving the proper signals to oncoming drivers?
□ STOP?
□ RELEASE?
□ SLOW?
☐ Have you expressed any concerns to your supervisor?
☐ Have you identified your escape route?
\square Are there a transition (taper) and a buffer space
between you and the work space?
□ Proper devices (such as cones).
□ Taper should be no longer than 100 feet long.
☐ Buffer should be between 200 and 500 feet
(check with the supervisor).
□ Do not leave your post.

In case of a violation:

- Protect yourself FIRST!
- Alert other workers (air horn).
- Maintain your post.
- Note information about the violator, if possible.
- Notify your supervisor.

ATSSA Flagger Handbook Order Form

Quantity ATSSA Members & Non-Members **Public Agencies** 1 \$5.95 \$7.95 50-99 \$4.95 \$6.95 When ordering bulk quantities, please call ATSSA's Roadway Safety Training Institute for a quote at (877)642-4637. Prices do not include shipping. Additional shipping charges will apply for shipments outside the Continental United States and Alaska. Orders will be sent UPS Ground unless otherwise requested. Order Form Company/Agency: _____ Billing Address: State: Zip: Shipping Address: _____ State: _____ Zip: ____ Phone: (_____) _____ Fax: (_____) ____ Please send copies @ \$ each = \$ (see chart on following page) Shipping: \$_____ Tax (if applicable): \$_____ Total: \$ **Payment Method** → Visa ☐ M/C ☐ Amer Exp Card # ______ Exp. Date: _____ Name of Cardholder Authorized Signature ☐ Check ☐ PO#**

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**Minimum invoice \$50.00 to public agencies only. A valid purchase order must accompany your

order if you wish to be invoiced.

UPS Shipping Charges

Order Total	Ground Select	3 Day Air	2nd Day Air	Next Day
1.00 - 9.99	\$6.00	\$9.50	\$12.00	\$28.00
10.00 - 24.99	\$7.50	\$12.00	\$15.50	\$33.00
25.00 - 49.99	\$8.50	\$15.00	\$19.00	\$39.00
50.00 - 74.99	\$10.50	\$17.00	\$23.00	\$44.50
75.00 - 99.99	\$11.50	\$21.00	\$29.00	\$53.00
100.00 - 199.00	\$15.50	\$27.00	\$37.00	\$65.00
200.00 - 299.00	\$17.50	\$34.00	\$50.00	\$78.00
300.00 - 399.00	\$21.50	\$42.00	\$62.00	\$90.00
400.00 - 499.00	\$26.00	\$50.00	\$74.00	\$104.00
500.00 - 599.00	\$29.50	\$58.50	\$85.50	\$120.00
600.00 - 699.00	\$33.50	\$67.50	\$96.50	\$133.00
900.00 – 999.00	\$42.50	\$92.00	\$131.00	\$188.00

No C.O.D. shipments permitted.

- A \$20 surcharge will be added for same day rush orders.
- A \$10 surcharge will be added for using your own shipping account.

Sales Tax:

We are required by law to collect the appropriate tax on product orders shipped to these locales: Virginia 5%, Washington state 6.5%, Canada 7% and the applicable state and district tax in California.

Shipping Policy

Orders will be shipped by Ground unless otherwise requested. All UPS Ground, Next Day Air, 2nd Day Air, & 3 Day prices are throughout the contiguous 48 states. Additional shipping will be charged for all shipments outside contiguous 48 states. Please mail or fax your order to ATSSA on your agency's letterhead (if faxed, do not mail). Prices subject to change without notice.

Return Order Form to:

American Traffic Safety Services Association

Roadway Safety Training Institute 15 Riverside Parkway, Suite 100 Fredericksburg, VA 22406 Phone: (877) 642-4637

Fax: (540) 368-1722

^{*} Also available in Spanish Language.

Important Phone Numbers

Police:
Fire:
Medical:
Supervisor:
Office:
Shop:



American Traffic Safety Services Association

Roadway Safety Training Institute 15 Riverside Parkway, Suite 100 Fredericksburg, VA 22406

Phone: (877) 642-4637 Fax: (540) 368-1722

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