

Bureau of Maintenance and Operations

FLAGGING HANDBOOK



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WHY USE A FLAGGER

In work zones, flaggers are provided to stop traffic as necessitated by the work; or to maintain continuous traffic flow through the work zone at safe speeds. In all cases, the flagger must be clearly visible to approaching traffic. The flagger's station shall be located such that approaching traffic will have sufficient distance to stop at an intended stopping point. Refer to the correct PATA drawing in Publication 213, for the work being performed.

FLAGGER TRAINING

As per Publication 408, Section 901.3 (y):

- Flaggers shall have successfully completed a flagger-training course within the last 3 years which complies with the Department's minimum flagger training guidelines. Assure that flaggers carry a valid wallet-sized training card containing the name of the flagger, training source, date of successful completion of training, and signature; or provide a roster of trained flaggers to the Representative before the start of flagging operations that contains the names of flaggers, training source, and date of successful completion of training.

INTRODUCTION

You have been chosen for the job of flagger because your supervisor feels you are physically able, mentally alert, and possess the proper communication skill set (courteous, but with a firm manner) which is required to properly control traffic through work zones. Flaggers are responsible for human safety and make the greatest number of public contacts of all work personnel. As a flagger, your duties are to protect your work crew, and to provide guidance and direction to the traveling public.

In work zones, flaggers are provided to stop traffic as necessitated by the operations; or to maintain continuous traffic flow through the project at safe speeds. In both cases, the flagger must be clearly visible to approaching traffic for a distance sufficient to allow the drivers to properly react to their instructions.

This handbook has been developed to assist you in understanding your duties, and should be studied and kept available for your reference. You are a vital link in the safety of our work zone operations. Remember that lasting impressions are made, and public opinion is quickly formed during the brief contact the motorist has with maintenance, construction, and engineering forces.

GENERAL

This handbook has been developed from the guidelines contained in the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), Title 67-PA Code and the Department's Publication 213. It is designed to provide general information on the

fundamentals of flagging used for short-term operations. This handbook shall not relieve its users of the responsibilities outlined in Publication 213. When flagging is required for a long-term operation, or a more detailed traffic control plan is needed, refer to Publication 213 or the MUTCD.

ATTIRE

PennDOT flaggers shall wear a hardhat and an ANSI Class 2 high-visibility fluorescent yellow-green with orange stripes and gray reflective trim (multi-colored) safety vest. During nighttime operations, ANSI Class 3 garments shall be worn by all employees.

All other flaggers shall wear a Class 2 high-visibility fluorescent orange or yellow-green safety vest.

During inclement weather, ANSI Class 2 high-visibility fluorescent rain gear may be used. A neat appearance helps promote a professional atmosphere and helps you be a more respected and effective flagger. When positioning yourself, remember to maintain the color contrast between the work zone and your garments.

POSITIONING

Flaggers must be standing and alert when facing approaching traffic. Always stand in a highly visible location and when possible do not stand in shaded areas. Flaggers must be located in such a position that they can be seen by traffic so drivers can react safely to their instructions. For a two flagger stationary operation, the flaggers should be stationed a minimum of 200 feet in advance of the work area, and for mobile operations 100 feet in

advance of the work area. Flaggers should normally stand on the shoulder or in the barricaded lane. Flaggers should stand alone and **never** allow a group of workers to congregate around their station, or stand next to work vehicles or other obstructions which could restrict paths of escape in case of an errant vehicle. Flaggers should always take precautions to be visible, particularly when working at night.

All flagger stations must be preceded by the appropriate work zone signs (which can be found in Publication 213). In addition, flaggers should be visible to approaching motorists for a minimum distance:

IF THE SPEED LIMIT IS:	BE VISIBLE TO MOTORISTS AT:
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

EQUIPMENT

There are two basic pieces of equipment used by flaggers to control traffic. These are a Stop/Slow Paddle (*W21-10*) and a red flag. The Stop/Slow paddle shall display an 18" minimum size Stop Sign on one face and a diamond shaped Slow Sign on the opposite face. It shall be attached to a shaft a minimum of 72 inches in length, and be retro-reflectorized. The red flag

shall be 24"x24" in size, made of **red material, not orange**, and be attached to a staff approximately 3 feet in length. The flag shall be fully deployed when used, and not rolled up.

FLAGGING PROCEDURES

USE OF A STOP/SLOW PADDLE

A Stop/Slow paddle shall be used to control one-lane, two-way traffic except when flagging in the center of an intersection, or in an emergency situation when a Red Flag is not readily available.

To Stop Traffic

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.

To Allow Traffic 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.

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.

NOTE: These Figures are MUTCD Compliant
Figure 1
Hand Signaling Procedures
When Using A Stop/Slow Paddle

18 inches

MIN.



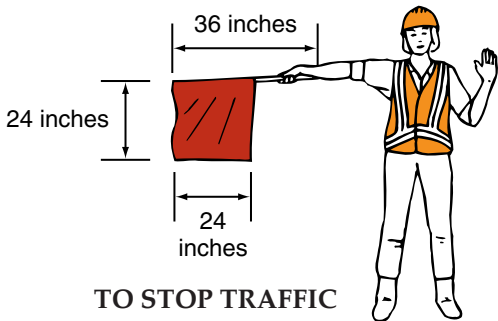
TO STOP TRAFFIC

TRAFFIC PROCEED



TO ALERT
AND SLOW TRAFFIC

NOTE: These Figures are MUTCD Compliant
Figure 2
Hand Signaling Procedures
When Using A Red Flag



TRAFFIC PROCEED



**TO ALERT AND
SLOW TRAFFIC**

USE OF A RED FLAG

A red flag shall only be used to control traffic in an intersection where the flagger is positioned within the intersection or in an emergency situation.

To Stop Traffic

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.

To Allow Traffic 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 waved as a signal for road users to proceed.

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.

NIGHTTIME FLAGGING

During hours of darkness, illumination of flagger stations is required, except during emergencies. When a flagger station is not illuminated during hours of darkness, a flashlight with a red wand or one or more flares shall be used to supplement the retro-reflectorized Stop/Slow Paddle, or a red flag in an emergency situation.

To Stop Traffic

The flagger should wave the light back and forth across the path of the approaching vehicle. **Never** shine the light directly into the eyes of the driver.

To Allow Traffic To Proceed

The flagger should lower the light and either tell the vehicle operator to proceed or use the daytime hand motion.

COMMUNICATIONS

Flaggers must be in communication with each other at all times. This can be accomplished by using predetermined hand signals between flaggers (when they are visible to each other), approved handheld radio communication, a flag carrying car, an official car or a pilot car.

INFORMING MOTORISTS

Whenever practical, flaggers should advise motorists of the reason for the delay and the approximate time that traffic will be halted. (Do not abandon your post at the head of the traffic

line to advise other drivers.) Both flaggers and equipment operators should understand that every reasonable effort must be made to prevent excessive delays and to allow the traveling public adequate right-of-way.

Do not lean on the vehicles and talk to the occupants.

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.

FLAGGER CONDUCT

1. Be courteous and professional.
2. When talking to motorists, be friendly and polite but do not become preoccupied with small talk. Your job demands full and complete concentration.
3. All signs indicating a flagger is on duty must be removed or covered when you or your replacement are not actually flagging.
4. Be clearly visible to approaching traffic at all times.
 - Position yourself to provide the greatest color contrast between you and your surroundings.
 - Do not stand in the shade whenever possible.
 - **Never** flag from beside or inside a vehicle.
 - Do not lean, sit or lie on any vehicle.
 - Do not permit a group of workers to congregate around you.

5. Be ready to respond to all emergencies or errant vehicles.
 - Establish a warning signal with the work crew.
 - Plan an escape route.
6. Be familiar with the nature of the work being performed.
 - Cover, fold, remove, or turn if beyond the clear zone, the “FLAGGER AHEAD” and/or “BE PREPARED TO STOP” sign when a flagger is no longer in position.
7. Remember - SAFETY FIRST.
 - Do not watch the work in progress or try to do any work other than flagging.
 - Do not step into or turn your back on traffic.
 - Do not leave your position until you are relieved by another flagger.

SITUATIONAL AWARENESS

Flaggers must know how to handle emergency vehicles, traffic control violations, accidents in work zones, and hostile individuals.

Emergency Vehicles

- When informed in advance of an approaching emergency vehicle, the flagger should clear a path for the emergency vehicle by stopping traffic in all directions.
- When no advance notice is given, first stop the emergency vehicle, then stop all traffic in all directions.

- When the type of work, such as blasting or excavation makes the roadway impassable, advance arrangements should be made with the local police agency that has jurisdiction over the roadway.

Traffic Control Violations

- Warn construction workers, either visually or with an audible warning device, when a driver has run the flagger station.
- Stop all vehicles entering the work zone, but do not put yourself in an unsafe situation.
- Be prepared for these possibilities.
- Plan your escape route in case of an emergency.

Traffic Accidents

- Notify your supervisor and call for help.
- If accidents happen in the line of waiting traffic, stay at your station and continue to control traffic until you receive instructions from your supervisor or a police officer.
- If an accident happens within the work zone beyond your flagging station, hold approaching traffic and follow the guidance of your supervisor or a police officer.
- Flaggers must communicate with each other before releasing or stopping traffic.

Dealing with Hostile Individuals

- Be courteous and professional.
- Do not argue with motorists or pedestrians.

- If a motorist fails to follow your instructions and threatens the safety of the work zone, note the vehicle license number, description of vehicle, and driver.
- Report the information to your supervisor for the purpose of filing a police report.

INFORMATION FOR SUPERVISORS AND FOREMEN

Successful execution of traffic control is dependent upon proper supervision. One of the first and most important steps in supervision is providing all necessary instructions to the foreman, crew chief and flagger(s) 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. 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.

It is the duty of the supervisors and foremen to see that all guidelines are followed. Any supervisor, foreman, or crew member should not hesitate to identify and correct any carelessness that may lead to an accident. Particular attention should be given to proper training and awareness of each individual responsible for the 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.

It is impractical in this booklet to cover the vast number of situations that will arise during the course of work which may require special traffic control. We must, therefore, depend upon supervisory personnel to plan each particular action and supervise the placement of signs, traffic control devices, and flaggers. The safety of the work crew and the motoring public is as important as the work you are performing. Take pride in your position as a supervisor or foreman and be proud of your flaggers and the job they are doing. Be effective in your decisions and continue to give the traveling public the safest and most efficient system of highways possible.

In an effort to obtain standardized traffic control, the following guidelines should be followed:

1. The selection of persons to be used as flaggers and the assignment of persons already employed in this capacity are clearly the responsibility of the supervisor or foreman. Flaggers should possess the following minimum qualifications:
 - Adequate training in safe temporary traffic control practices.
 - Good physical condition (including sight, mobility and hearing).
 - Courteous, but firm manner.
 - Neat appearance.
 - Sense of responsibility for safety of the motoring public and the work crew.

- Mental alertness and the ability to react in an emergency.
2. The supervisor or foreman shall decide which situations require flaggers. A flagger should be made available when required, even if there is insufficient manpower to perform all of the work activities.
 3. Flaggers should be instructed in the importance of the work they are to perform before being allowed to assume full responsibility for directing traffic.
 4. Traffic control should be handled in a uniform manner.
 5. Flaggers should be relieved periodically during the course of work to provide ample rest breaks. This can be accomplished by “training” all of the crew members in the proper procedures of flagging and rotating them throughout the day. This is very important in maintaining proficient flagging operations. The foreman shall have a roster of the entire staff who have their approved flagging training.
 6. Supervisors or foremen must determine that all required traffic control devices, flaggers, and equipment are in place, and that measures to safeguard the public and employees have been taken before work is started.
 7. Consideration should be given to the positioning of the flagger for every work project. It is important that flaggers stand where the approaching drivers can see them in plenty of time to interpret and react

to the signals to stop, proceed or slow down. If possible, flaggers should be able to see the workers.

8. When the traffic control devices and flaggers are in place, the supervisor or foreman should drive through the work zone at the anticipated speed of the motorists in order to determine the effectiveness of the overall traffic control system.
9. Should a flagger report that a close call or near accident has occurred after the traffic control has been set up, the supervisor or foreman will take this as an indication that something may be wrong and investigate the situation. If adjustments are made, the supervisor or foreman should not leave the job until behavior of the traffic has been studied to be certain that the problem has been corrected.
10. "FLAGGER AHEAD" and/or "BE PREPARED TO STOP" signs shall be removed, covered, folded, or turned if beyond the clear zone, during lunch time, at quitting time, and any other time when work is interrupted and the equipment is clear of the traveled way for more than 15 minutes. The confidence of the traveling public in these warning devices must be maintained.
11. Advance warning signs and Stop/Slow paddles shall be replaced when the faces become dull or worn.
12. All traffic control signs shall be in accordance with Publications 213 and 236.

PUBLICATION 213

GENERAL NOTES

- * For Pennsylvania Typical Application (PATA) drawing layouts, refer to Publication 213. Refer to the MUTCD when necessary.
- 1. All distances may be adjusted slightly to fit field conditions.
- 4. The three categories for work duration of temporary traffic control are:
 - a. Short-Term Stationary Operation - Work that occupies a location up to 24 hours.
 - b. Long-Term Stationary Operation - Work that occupies a location more than 24 hours.
 - c. Mobile Operation - Work that moves intermittently or continuously at an average speed of less than 1 mph (88 ft/min).
- 8. All warning sign colors shall have an orange background and black border and legends unless otherwise specified.
- 9. All workers, including flaggers, shall wear high-visibility fluorescent orange or yellow-green apparel with retroreflective material that meets the latest ANSI/ISEA publication entitled American National Standard for High-Visibility Safety Apparel and Headwear.

Worker –

A person on foot whose duties place him or her within the right-of-way of a street or highway.

10. All flaggers at minimum shall have training as per the most current version of Publication 408, Section 901.3(y) Flagger Training.
13. Orange flags or flashing yellow warning lights may be used in conjunction with signs.
14. Traffic Cones shall only be used during short term operations.
17. Neither work activity nor storage of equipment, vehicles, or material should occur within a buffer space.
26. Except in an emergency situation, each flagger station shall be illuminated at night with an overhead lighting source having 30,000 to 40,000 lumens minimum of light output for an area of not less than 7,500 square feet. The lighting source shall have a minimum color temperature of 3,000 degrees and a maximum of 4,000 degrees. Position the light so the flaggers can be seen and not cause excessive glare to motorists traveling through the work zone.
27. A red flag shall only be used in an emergency situation when a Stop/Slow Paddle is not available or at intersections where a single flagger is used within the intersection. Additional flaggers shall be used to help control traffic movements at all times. When flagging at a signalized intersection, the signal should be placed in flash mode. If necessary, provide additional

flaggers to properly control all movements of the intersection. In locations where multiple signalized intersections are located in close proximity, multiple intersections may be placed in flash mode to control the traffic flow through the work zone. Additional flaggers shall be used to control the traffic movements through each intersection.

28. See the MUTCD, Chapter 6 for additional guidelines and requirements.

NOTES

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NOTES

A FLAGGER SHOULD HAVE PRIDE

ProfessionalAnd have a neat, clean appearance; be properly attired; be alert and properly positioned.

ResponsiveAnd able to adjust to changing conditions.

InformedAnd properly briefed by the supervisor, and know the limits of the work area and the type of traffic that will be encountered.

DecisiveAnd give signals that are clear, that motorists and the crew will understand and comply with.

EffectiveAnd able to efficiently control the flow of traffic.

P rofessional	P
R esponsive	R
I nformed	I
D ecisive	D
E ffective	E

Flaggers who display *PRIDE* in their work, will be more effective at controlling the flow of traffic through the work zone.