

WORKER SAFETY APPAREL NEEDS

Any time road construction or maintenance is conducted in your municipality, your workers are exposed to traffic and the risk of injury or death from crashes with motorists. Workers on foot are also exposed to their own equipment and the possibility of backover crashes.

Unfortunately, one worker is killed in a work area or construction site every three days in the United States. Making sure your workers are highly visible near moving vehicles or equipment is one of the most important steps you can take to protect them.

To support this safety concept, PennDOT and the Federal Highway Administration require workers to wear high-visibility safety apparel when doing any work on or near a roadway.

This requirement is intended to decrease the likelihood of fatalities or injuries to workers on foot who are exposed to either traffic or construction vehicles and equipment..



What are the requirements?

The *Manual on Uniform Traffic Control Devices (MUTCD)*, Title 67, Chapter 212 Subchapter E, and PennDOT Publication 213, *Temporary Traffic Control Guidelines*, identify the worker safety apparel requirements both nationally and within Pennsylvania. Section 6D.03 of the MUTCD, Worker Safety Considerations, defines the requirements as such:

Standard: All workers, including emergency responders, within the right-of-way who are exposed either to traffic (vehicles using the highway for purposes of travel) or to work vehicles and construction equipment within the TTC zone 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 Safety Apparel and Headwear” (see Section 1A.11), or equivalent revisions, and labeled as meeting the ANSI 107–2004 standard performance for Class 2 or 3 risk exposure, except as provided in Paragraph 5. A person designated by the employer to be responsible for worker safety shall make the selection of the appropriate class of garment.

Furthermore, Pennsylvania’s adoption of this visibility regulation includes a requirement that workers wear helmets, as per Note A-7 of Publication 213.



A-7. Workers engaged in or entering into any field operation are required to wear hard hats meeting ANSI Type 1 requirements and high-visibility vests, t-shirts, or sweatshirts which meet the ANSI Class 2 or 3 safety garment requirements. A raincoat or jacket which meets ANSI Class 2 or 3 safety garment requirements may be worn during inclement weather. Furthermore:

- All visitors and others present on a work site in an official capacity must comply with the requirements.
- PennDOT employees shall refer to Publication 445, Safety Policy Handbook, and any applicable PennDOT memoranda regarding Personal Protective Equipment (PPE) and work attire.
- Emergency, incident responders, and law enforcement personnel within TTC zones should wear high-visibility public safety vests that meet the performance requirements of the ANSI/ISEA 207-2011 (Refer to MUTCD, Section 1A.11).

How does this apply?

The requirement to wear high-visibility safety apparel applies to all workers who are exposed to traffic or construction equipment while working

PennDOT Pub 213, Worker definition:

A person on foot whose duties place him or her within the highway right-of-way, such as construction and maintenance forces, survey crews, utility crews, first responders, and law enforcement personnel.

within the work area on or near a highway. Workers include public works crews and any other municipal personnel who are performing duties within the road right-of-way, including first responders and police.

Workers must comply with this requirement anytime they are on or near a highway for any type of work activities, such as roadway maintenance, construction, surveying, and inspections. Highway refers to any road open to public travel, including borough, township, and city roads.

Apparel standards and terms

The MUTCD refers to the ANSI/ISEA 107-2004 standards or equivalent revisions. The ANSI standard has been revised several times since the 2009 MUTCD and includes updates in 2010, 2015, and 2020. Per the MUTCD, safety apparel that meets the 2004 standard or more recent updates are permitted.



The standards include four classes and several types of safety apparel. Each type and class have specific requirements for the amount of background and retroreflective material, as well as other features. These design standards are intended to provide minimum levels of visibility and help identify the wearer as a person.

The four classes are:

- Type O/Class 1 is for off-road

use and does not meet the requirements for work zones on or near a highway.

- Type R Class 2 and Class 3 are for typical roadway work zones and are the most common for road crews.
- Type P Class 2 and Class 3 are for fire, police, and EMS personnel.
- Class E includes supplemental garments, including leggings and gaiters. A Class 2 torso garment plus a Class E garment can achieve Class 3.

Purchasing and maintaining apparel

Be sure to purchase safety apparel that meets ANSI standards. Check the label, which should include information about the class, standards, and care instructions.

The standards allow for three different colors for the background material: fluorescent yellow-green, fluorescent orange-red, and fluorescent red. When choosing, consider the work environment and select a color that will provide the most contrast for the work crew. Some safety apparel has a combination of colors to increase visibility for different work scenarios.



Safety apparel comes in a variety of styles, materials, shapes, and designs, including vests, shirts, sweatshirts, jackets, and raingear. Whatever the style, make sure it meets at least ANSI Class 2 requirements, per the label. Note that plain T-shirts and sweatshirts (without the retroreflective material) do not meet the requirements.

Lastly, be sure to maintain the safety apparel. Apparel that is worn, stained, or damaged is unacceptable per PennDOT Publication 213 (see figure below). Follow the manufacturer's directions for care and maintenance of the safety apparel and periodically replace worn or damaged apparel.

Wear it properly

Safety apparel should be worn properly. Vests and jackets should be closed so that 360-degree retroreflectivity and visibility are achieved. Wear the appropriate size and do not modify the garment or obscure it with other clothing and items. Be careful using smaller sizes of garments as they may be below the minimum material amounts and may not meet Class 2.

Safety apparel worn on the torso can be supplemented with other apparel for the legs, including chaps, pants, and gaiters. An example would be wearing a Class 2 vest during the day and adding Class E garments during nighttime operations to create a Class 3 garment.

Although not mandated for municipalities, PennDOT requires its flaggers to wear a Class 3 garment and Class E chaps. It also requires its employees and contractors to wear Class 3 apparel for nighttime work.

Ultimately, the municipality is responsible for worker safety, and an appropriate person, whether it is the roadmaster, public works manager, foreman, or municipal official, should decide what is the proper safety apparel for each work environment.



For more information

Contact LTAP for additional information or to schedule a Work Zone Traffic Control or Equipment and Worker Safety class in your municipality.

Personal Protective Equipment (Safety Vests)



ACCEPTABLE

New or like-new high-visibility safety apparel meeting Class 2 or 3 performance requirements found in the ANSI/ISEA 107-2004 or current publication. Safety apparel is not faded or soiled, has excellent color contrast and retroreflectivity.



MARGINAL

Safety apparel has slightly faded colors or is slightly soiled. Retroreflective material is in good condition.



UNACCEPTABLE

Safety apparel is significantly soiled and/or material is badly faded with poor color contrast. Retroreflective material is deteriorated or damaged and has little to no reflective qualities.