



PERSONAL PROTECTIVE EQUIPMENT PLAN

29 CFR 1910.132-133 & 135-138

Maine Department of Transportation
Bureau of Project Development

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1.0 PURPOSE

The Occupational Health and Safety Administration (OSHA) standards covering personal protective equipment in the workplace are 29 CFR 1910.132-133 and 135-138. The regulations require a facility to implement a Personal Protective Equipment Program to ensure the safety of employees. Personal protective equipment (PPE) is used at Bureau of Project Development (BPD) facilities to protect employees from hazards to the eyes, face, hands, skin, head, and feet when engineering and administrative controls are not feasible. PPE is also used to provide protection against heat or cold and hazardous chemicals.

2.0 SCOPE AND APPLICATION

This program describes the procedures for ensuring the proper identification and use of PPE for the Maine Department of Transportation's (MaineDOT) BPD facilities. The personal protective equipment program shall include the following:

- Designation of a person who is responsible for administrating the program.
- Hazard Assessment.
- Employee notification of proper equipment requirements and usage.
- Employee training.
- Enforcement of the program.
- Periodic review of equipment use and needs.

The following sections describe these aspects of the program.

Responsibility

The Director of Project Development is responsible for administering the BPD's PPE program. The Director's (or the Director's designee(s)) duties include:

- Implementing the program.
- Ensuring that personal protective equipment is available.
- Reviewing the program on an annual basis.
- Ensuring that employee training is conducted.

BPD supervisors are responsible for ensuring employees properly wear assigned personal protective equipment in required areas.

Furthermore, it is the responsibility of BPD employees to wear the appropriate protective equipment where required and to keep it clean and well maintained.

PPE policy within work areas of active construction projects: BPD employees are often within work areas controlled by outside contractors who are performing work for the MaineDOT. In this situation, if the prime contractor has safety policies regarding PPE that are more stringent than those of the MaineDOT BPD, then the BPD employees entering these work areas shall comply with the prime contractor's policies.

The BPD materials testing laboratories, staffed by Materials and Testing Exploration (MTEx) employees, have specific PPE requirements that differ somewhat from those included in this policy. For PPE requirements in these facilities, refer to the MTEx Safety and Environmental Management Manual.

3.0 HAZARD ASSESSMENT

The general requirements for personal protective equipment are in 29 CFR 1910.132. This standard requires the completion of a hazard assessment. The assessment identifies the hazards that are present or likely to be present on specific jobs that require the use of personal protective equipment (PPE).

Because BPD employees typically do not actually perform the work associated with construction or maintenance activities taking place at BPD facilities, but rather typically perform inspection or testing tasks at these facilities, written hazard assessments are not required. However, BPD supervisors and employees must be knowledgeable in identifying the potential hazards associated with the work being inspected or tested, must be knowledgeable in the use of the appropriate PPE to mitigate these hazards and must be provided with the appropriate PPE to mitigate these hazards. Accordingly, the BPD will select and distribute the appropriate PPE and conduct training to:

- Inform the affected employees of the PPE required for each hazard and its limitations.
- Properly fit selected PPE to each employee.
- Inform the affected employees in the proper use, care, cleaning and maintenance of the provided PPE.

Refer to Appendix A for Standard Hazard Assessment & Protective Equipment Selection information.

Exceptions to, or variances from, this PPE Plan may be allowed for specific activities. Exceptions/variations shall only be granted through written hazard assessments, approved by BPD management. Refer to Appendix B for Hazard Assessment & Protective Equipment form.

Eye Protection

OSHA requires the use of eye protection (29 CFR 1910.133). Employees exposed to flying materials must use eye protection, such as safety glasses with side protection. Permanently attached side shields are preferred, however, slide on side shields are acceptable if they meet the requirements of the American National Standards Institute (ANSI) specification Z87.1.

BPD employees must use safety glasses with side shields when directly exposed to the following hazards:

- Flying particles
- Compressed air
- Impact

All eye protection must:

- Provide adequate protection for the hazards in the work area.
- Fit properly and comfortably.
- Be kept in a clean condition.
- Be kept in good repair.

Meet the American National Standard practice for occupational and educational eye protection.



If employees wear glasses with corrective lenses and require eye protection, they will be provided with one of the following, at the employee's discretion:

- Eye protection that has corrective lenses built in (the Department will pay a portion of these, in accordance with the Department's eye care reimbursement policy; the employee is responsible for the balance), or
Eye protection that can be worn over corrective glasses without interfering with the position of the glasses or the protection.

All eye protection purchased after July 5, 1994, must comply with ANSI Z87.1-1989, the American National Standard practice for occupational and educational eye and face protection. Any eye protection purchased before July 5, 1994 must comply with ANSI Z87.1-1968, the USA Standard for Occupational and Educational Eye and Face Protection.

Head Protection

Head protection provides protection from impact and penetration hazards caused by falling objects. Head protection is also available to provide protection from electric shock and burns.

Head protection (hard hats) utilized must meet the requirements of ANSI Z89.1, the American National Standard for Personnel Assurance Protection-Protective Headwear for Industrial Workers requirements.

Hard hats shall be worn by BPD employees at all times when working within the limits of active BPD work zones, at other ancillary work areas (such as lay down yards, hot mix asphalt or concrete plants, fabrication facilities, gravel pits, waste areas, etc.) or at other MaineDOT facilities controlled by other bureaus, as required, unless otherwise stated herein. Only Department issued hard hats shall be worn.

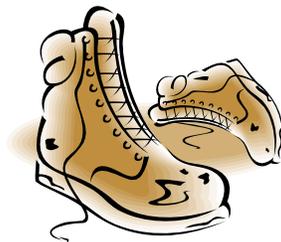


Exceptions to wearing hard hats. Employees may wear MaineDOT furnished high visibility caps in lieu of hard hats in the following circumstances:

- While involved in pre-construction or post-construction activities where equipment and/or machinery are not in use.
- When outside of an active construction work zone where overhead dangers are not present.

Foot Protection

Protective footwear is worn when working in areas where there is a danger of foot injuries due to falling or rolling objects or objects piercing the sole, and where there may be electrical hazards. Safety footwear used by personnel at BPD facilities must meet the requirements and specifications in ASTM F 2412, ASTM F 2413 and OSHA 29 CFR 1910.136.



Protective footwear will: Be constructed of material that will provide comfort and support appropriate for the work to be performed and protection from potential foot injury from the work environment; meet current applicable ANSI standards for toe protection; be built high enough to cover the ankle bone. Some operations performed by BPD employees do not require the use of protective footwear that provides ankle protection, such as paving inspection operations; however, BPD management shall determine if and when protective footwear without ankle protection may be worn, on a case-by-case situation.

Protective footwear shall be worn by BPD employees at all times when working within the limits of active BPD construction projects, at other ancillary work areas (such as lay down yards, hot mix asphalt or concrete plants, fabrication facilities, gravel pits, waste areas, etc.) or at other MaineDOT facilities controlled by other bureaus, as required, unless otherwise stated herein.

Exceptions to wearing protective footwear: Steel-toed footwear is not required to be worn when employees are involved in pre-construction or post-construction activities where equipment and/or machinery are not in use.

Hand Protection

Employees whose hands are exposed to hazards must be provided hand protection as required by 29 CFR 1910.138. Employees must use hand protection when conditions may cause:

- Exposure to hazardous substances which can damage or be absorbed through the skin.
- Cuts/scrapes/abrasions
- Punctures.
- Injury from extreme temperatures (hot or cold).

Protective Clothing

Protective clothing used by personnel at BPD facilities includes the following:

- Enhanced visibility clothing/accessories
- Hazardous material or Chemical protective clothing, such as Tyvek® (or equivalent) suits

Enhanced visibility clothing shall be worn by employees whenever they are exposed to vehicular traffic. Enhanced visibility elements must appear on the outer most layer of clothing to be effective and must conform to Class III for all activities, during daytime and nighttime hours. Only Department issued enhanced visibility clothing shall be worn.

Employees potentially exposed to hazardous materials, extreme heat, or cold shall use protective clothing appropriate to the hazard. Selection of protective clothing requires a clear understanding of the potential hazards and the limitations of the protective clothing. For chemicals, the Material Safety Data Sheet (MSDS) or other toxicology references to identify compatible materials are typically consulted.

Rain gear is worn as needed. Enhanced visibility is incorporated into the rain gear as required.

Leg protection (long pants), extending to the top of footwear, and shirts, with sleeves, must be worn to protect against cuts, scrapes, abrasions, poison ivy, sunburn, insect bites, hazardous materials, etc. Long pants and sleeved shirts shall be worn by BPD employees at all times when working in the field or at other MaineDOT facilities controlled by other bureaus, as required.

Respiratory Protection

Typical activities where BPD employees would be required to use respiratory protection include enclosed areas where existing steel coatings are being removed or where new steel coatings are being applied. The MaineDOT is drafting a separate plan detailing the requirements and responsibilities associated with the use of Respiratory Protection. Employees must receive respiratory protection training prior to being assigned to activities when there is concern or risk of air contamination exposure. Employees and supervisors should familiarize themselves with MaineDOT's Respiratory Protection Policy and respiratory protection training opportunities which can be found at <http://mdotweb.state.me.us/safety/osm/>.

Hearing Protection

In general, hearing protection is required whenever employees are exposed to continuous noise levels of 85 decibels, or above. Typical activities where BPD employees are required to use hearing protection include, but are not limited to, operations where there is exposure to milling, pile driving, concrete demolition, removal of existing steel coatings or any activity that could result in debris getting lodged in an employee's ear canals. The MaineDOT is drafting a separate plan detailing the requirements and responsibilities associated with Hearing Conservation

Employees must receive hearing protection training prior to being assigned to activities when there is concern or risk of exposure to noise levels as described above. Employees and supervisors should familiarize themselves with MaineDOT's Hearing Conservation Policy and hearing conservation training opportunities which can be found at <http://mdotweb.state.me.us/safety/osm/>.

Fall Protection

In general, fall protection is required whenever an employee is required to be six feet, or more, above the ground. The MaineDOT is drafting a separate plan detailing requirements and responsibilities associated with the use of fall protection harnesses. Employees must receive fall protection training prior to being assigned to activities when there is concern or risk of falling as described above. Employees and supervisors should familiarize themselves with MaineDOT's Fall Protection Policy and fall protection training opportunities which can be found at <http://mdotweb.state.me.us/safety/osm/>.

Personal Floatation Devices

In general, PFD's shall be required whenever an employee is working over, or adjacent to, water bodies, where appropriate protective railings or barriers are absent. The MaineDOT is drafting requirements and responsibilities associated with the use of Personal Floatation Devices (PFD's) and other PPE when working in or around open water.

Care for PPE

Some of the PPE, such as earplugs, coveralls, and gloves, may be disposable. For non-disposable equipment, the BPD ensures that this material is carefully maintained so that it continues to give full protection.

Recognize Limitations of PPE

PPE provides important protection, but it has limitations. PPE can be hot, bulky, and heavy. It can make it harder to move freely while doing a job. It can increase fatigue and cut down on the ability to see, hear, and feel. All of these limitations can create stress. The BPD has taken these factors into consideration when selecting PPE.

Defective PPE

Damaged, defective, or worn out PPE cannot provide the necessary protection. PPE must be inspected before each use to see if it has been degraded or weakened by contact with a chemical, excessive wear or abuse. Employees are instructed to look for holes, defects, rips, or seam openings in the PPE that could let a chemical penetrate.

4.0 RECORD KEEPING

Maintain Records

Documentation of training relative to PPE is conducted. This documentation includes:

- A statement that each employee has received and understands the PPE training
- The content of the training
- The names and signatures of the employee
- The date(s) of training
- The name of the person who provided the training

5.0 PROGRAM COMPLIANCE

Training Employees

Training for BPD employees shall include the following information:

- Where and when to wear PPE
- What PPE to wear
- How to properly don, doff, adjust, and wear PPE
- How to properly care for and maintain PPE
- What the limitations of PPE are
- How to identify when PPE is no longer usable

All employees required to wear PPE must demonstrate that they understand how to properly wear, use, clean, and maintain their PPE.

Employees require retraining when:

- They improperly wear, use, clean, or maintain PPE, or otherwise show that they lack these skills.
- Whenever there are new work practices or equipment, or requirements for PPE have changed.
- Whenever a worker is assigned to a task that requires different PPE or places additional limitations on the PPE that the worker is already trained to use.

Enforce the Program

Consistent enforcement of the PPE program is important. The message conveyed to employees at BPD facilities is that the use of PPE is required for select job functions.

Review the Program Annually

The program administrator (or their designee(s)) conducts an annual review of the Personal Protective Equipment program. The review addresses the following:

Monitoring

- PPE usage results.
- Areas with altered or changed equipment or processes.
- Hazard assessments as needed.

Implement Controls

- Providing the appropriate PPE.
- Training in the correct use of PPE.
- Enforcing the use of PPE.

6.0 DEFINITIONS

Active Construction Work Zone: Any area in which construction activities are actually taking place.

Administrative Controls: Controls such as job rotation, different work assignments, or time away from the hazard.

Engineering Controls: Methods of controlling employee exposures by modifying the source or reducing the quantity of contaminants released into the work environment.

Hazard Assessment: A process used to identify hazards present or likely to be present, to determine the proper PPE usage.

Personal Protective Equipment (PPE): Equipment worn by the worker to protect against hazards. Examples include gloves, respirators, and hearing protection.

APPENDIX A

Standard Hazard Assessment & Equipment Selection

Standard Hazard Assessment & Protective Equipment Selection

Type of hazard	Source/Activity	Hazard Effect	Protective Equipment
Eye and Face Protection			
Flying material, Compressed air, Dust	Maintenance activities Chipping, grinding , cutting, drilling, or demolition activities, Moving equipment , material or objects Traffic movement, Compressor or air tools Sweeping or windblown particles Equipment maintenance and repair	Impact to eye, Materials caught in eye Damage to eye	 Safety glasses with side shields, ANSI Z87.1
Flying material	Grinding wheel Hand held grinders Abrasive blasting Flying glass	Impact or damage to eye or face	 Goggle, face shield
Chemicals	Exposure to acid or chemicals liquids, vapors or powder chemicals that can burn, corrode or dissolve Mixing liquid chemicals, concrete additives or herbicides Radiation exposure	Chemical burn or reaction Damage to eye	 Goggle
Cutting Flying material Falling trees and brush	Operating Chain saw Operating Chipper	Impact, cuts or damage to eye or face	 Wire mesh face shield

Flash, sparks, or glare Flying material	Welding operations and attendants		 <p>Welding Helmet, shield and goggles that meet OSHA 1910.252(b)</p>
Flash, sparks, or glare Flying material	Burning or cutting, operations		 <p>Safety glasses or goggles that meet 1910.252(b)(2)</p>
Head Protection			
Impact Falling Object Flying Objects	Inspection activity within limits of active work zone Construction or maintenance activity Moving equipment or vehicles Working around equipment, tools, or materials that may fall from a height	Impact Penetration	 <p>Hard Hat, ANZI Z89.1</p>
Foot Protection			
Rolling or falling objects Piercing the sole Slips, trips or falls Uneven surface Electrical contact	Pre or post construction activity Inspection activity Maintenance and construction activities Equipment maintenance and repair Overhead wires	Impact Penetration Twisting ankle	 <p>Steel toed shoes high enough to cover ankle bone with nonslip soles, ASTM F 2412, ASTM F 2413 and ANSI Z41</p>

<p>Cutting Falling trees and brush</p>	<p>Operating chain saw</p>	<p>Cut Impact Penetration Twisting ankle</p>	 <p>6" steel toed leather boot or ANSI approved chainsaw boot or booties</p>
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Protective Clothing			
Day time visibility Traffic	Maintenance and construction activities Moving vehicle traffic or Equipment	Struck by Crushing	 <p>Outer layer of Class III vest, shirt or jacket</p>
Day time visibility Traffic	Pre or post construction activities Inspection activity outside limits of active work zone Picking Litter	Struck by Crushing	 <p>MaineDOT Soft Cap</p>
Night time visibility Traffic	Pre or Post construction activities Inspection activities Maintenance and construction activities Moving vehicle traffic or Equipment	Struck by Crushing	 <p>Outer layer of Class III vest, shirt or jacket</p>
Night time visibility Traffic	Flagging Maintenance and construction activities Moving vehicles, traffic, or equipment	Struck by, Crushing	 <p>Class III pants or gaiters</p>
Insects, plants, sun, sharp objects, chemicals, moving objects, hazardous material	Pre or Post construction activities Inspecting activities Maintenance, and construction activities Equipment maintenance and repair	Insect bites Poisonous plants Chemical Burns Sun Burns Cuts, scrapes and abrasions	 <p>Leg protection (long pants) Sun screen Insect repellent</p>

Cutting Flying material Falling trees and brush	Chain saw operations	Cuts or loss of limb or body parts	 Chain saw chaps,
Extreme heat, hot liquid or sparks	Burning, cutting or welding	Burns	 Welding jacket or
Hand Protection			
Twisting, turning, pulling, pushing, or vibrating equipment or tools Pinch points Sharp objects Splinters Hot or cold	Maintenance and construction activities Equipment Maintenance and repair	Blisters, cuts, scrapes, punctures, and abrasions Insect bites	 Leather or insulated gloves
Hazardous substances which can damage or absorb through the skin	Laboratory testing Handling hazardous materials	Chemical burns	 Nitrile or latex gloves
Extreme heat Hot Liquids	Burning, cutting or welding with torches	Burns, blisters, cuts, scrapes, puncture	 Welding Gloves
Exposure to BBP	Picking trash, cleaning rest rooms, removing dead animals	BBP disease	 Gloves-PVC Green 53004999143 Large 53004999142 XL Rubber Gloves

Respiratory Protection			
Inhaling harmful airborne materials	Exposure to Silica dust, paint dust, vapors from equipment removing or applying steel coatings		 <p>Appropriate respiratory protection (refer to the Respiratory Protection Plan)</p>
Hearing Protection			
Exposed to noise hazards exceeding Permissible Exposure Level (PEL) of 85 decibels (DBA) over an 8-hour time weighted average for general industry or 90 DBA for construction or more.	<p>Pile driving operations, concrete demolition operations, operating a jack hammering, chainsaw</p> <p>Anywhere normal conversation (standing 2-3 feet apart) cannot be conducted without shouting</p>	Hearing loss	 <p>Appropriate hearing protection (refer to the Hearing Protection Plan)</p>
Fall Protection			
Falls	Working 6' above surfaces		 <p>Lanyard and body harness</p>
Drowning	Working over water danger of drowning		 <p>Life vest, life ring and line, boat</p>
Electrical shock	Only qualified electricians are allowed to work on electrical installations		

APPENDIX B

Hazard Assessment & Equipment Selection Form

MaineDOT BPD Employee Hazard Assessment & Equipment Selection Form

GENERAL INFORMATION

Employee's Printed Name

Job Title

Location and WIN

Specific Work Activity

EQUIPMENT SELECTION

(All That Apply – Any Required PPE to be Supplied by Employer)

Eye and Face Protection

Safety Glasses

Helmet / Shield

Goggles

Welding Goggles

Face Shield

Welding

Other(s):

Head Protection

Hard Hat

Bump Cap

Other(s):

Foot Protection

Work Shoes

Rain

Other(s):

Min. 6" High w/Laces

Chemical Protective (Type):

Supportive Midsole

Protective Toe

Hand Protection

Abrasion/Cut Resistant Gloves

Water Resistant Gloves

Chemical Protective Gloves (Type):

Other(s): Leather or Rubber Coated

Protective Clothing

Enhanced Visibility Striping or Colors

Back Support Belt

Chemical Protective Clothing (Type:)

Other(s):

Respiratory Protection

Disposable Dust Respirator

Halfmask Respirator

Fullmask Respirator

Other(s):

Hearing Protection

Ear Plugs

Ear Muffs

Canal Caps

Other(s):

Comments by Manager regarding Exceptions to/Variations from PPE Plan:

I certify that I have received or will use the personal protective equipment indicated on this form and that I have been trained to know:

1. how to properly put on, take off, adjust and wear this equipment.
2. the limitations of this equipment, and
3. the when it is necessary to wear this protective equipment.
4. what protective equipment is necessary for each of my assigned duties.
5. proper care, maintenance, useful life and disposal of this equipment.

Employee's Signature

Date

I certify that I have assessed the employee's work tasks, assigned this employee to use the indicated personal protective equipment and have determined that he/she is qualified to use and maintain it.

Manager's Signature

Date

