

# **TOWN OF DUXBURY SAFETY HANDBOOK**



## **DPW EMPLOYEES**

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## GENERAL RULES FOR EMPLOYEE SAFETY

It is not possible to prescribe detailed standards of application for all situations that may arise. Therefore, minimum standards are presented for the most common situations with the understanding that additional protection must be provided where special complexities and hazards prevail. Although each situation must be dealt with individually, conformity with the provisions established is required. The following general rules apply to all departments:

- Horseplay, fighting, pranks, wrestling, etc. is prohibited.
- Smoking is prohibited around any flammable material.
- Heavy objects, tools, or materials should not be lifted alone. Use proper devices or request help. Lift properly.
- Asbestos pipe will not be cut with any tool that will create dust.
- Work areas will be kept clean and orderly for maximum safety.
- Intoxication, reporting for work or trying to work under the influence of alcohol or drugs, consumption or possession of alcohol or drugs during working hours is prohibited.

### ENFORCEMENT OF SAFETY RULES

The following enforcement of the safety rules will be used.

- First Offense - Verbal Warning. Written record to be issued by the department head no later than the next working day the employee is at work.
- Second Offense - Written Warning. To be issued no later than the next working day the employee is at work. If employee must return home or back to shop to obtain safety clothing or equipment, the net loss of pay for the time they are not at work is to be determined by the supervisor.
- Third Offense - One day suspension.
- Fourth Offense - Three day suspension.
- Fifth Offense - Subject to termination of employment.

### SAFETY EQUIPMENT AND CLOTHING

- Seat Belts shall be worn when operating or riding in town vehicles.
- Safety Shoes or a good work boot shall be worn at all times.
- Safety glasses or full face shields shall be worn when using grinders, torches, pipe cutters, cleaning tools, jackhammers, stump chippers or any tool or device which may produce chips or flying particles. Safety glasses shall be equipped with wide shields.
- Hearing protection shall be worn in designated areas or around designated equipment.
- Safety helmets shall be worn in all trenches over five feet deep, around all overhead equipment, or where work is being performed overhead. If there is a possibility of a head injury, wear a hard hat.
- Shorts and sneakers are prohibited.
- Work gloves shall be used as required.

## DEPARTMENT OF PUBLIC WORKS

### TRAFFIC CONTROL

- **Signs.** Damaged, defaced or muddy signs should be cleaned, repaired, or replaced.
- **Barricades.** Don't weigh temporary barricades with stones, chunks of concrete or other ballast material that may present a hazard if struck by a moving vehicle. Barricades should be marked with reflectorized orange and white stripes.
- **Cones and Posts.** Lane delineators are usually placed near moving traffic. Therefore, they must not be made of rigid material that could endanger a worker or pedestrian when struck by a moving vehicle. Delineators are always used together with other warning devices such as signs and high level warnings. Remember that a sufficient number of delineators must be used to clearly define a pathway for motorists approaching the work site.
- **Positioning of Cones, etc.** A good rule of thumb for traffic control in most traffic situations: for every one foot of land blockage, the length of the control devices in feet is equal to the speed that traffic is moving in miles per hour. Therefore, if you plan to close 10 feet of land and traffic is moving at 30 mph, multiply 10 feet, times 30 to find that you must run the devices 300 feet along the roadway. If you wouldn't be blocking too many driveways or parking stalls, or if you wouldn't be going through an intersection, it's best to run the devices even longer.
- **Flashers.** Flashing lights are used as night warning signals. Steady burning lights are used to delineate traffic lanes. Raised pavement markers and temporary tape are also used to delineate lanes.
- **High Level Warning Devices.** Flags and signs mounted on lightweight frames, either free standing on the pavement or set on trucks, are especially useful for short-term maintenance operations in congested, low speed situations. Their height facilitates advance warning to motorists.

## PLACEMENT OF WARNING DEVICES

- On city streets, warning signs must be at least seven feet above and four feet from the edge of the right side curb. On rural roads, warning signs should be at least one foot above and six feet from the edge of the right side of the roadway. On divided roadways, post signs in the median as well as the right side.
- Where buildings, parked vehicles, hills, or curves block motorist's view of the work area, take care to give the motorist early warning. Early warning is also a good idea in congested areas where the work in progress is likely to back up traffic. Early warnings help motorists avoid sudden lane changes and panic stops.
- Cover warning signs until work begins and remove them from view when they are no longer needed. Remember that the lesson learned from the story about the boy who cried "wolf" applies to traffic warnings, too.

## ROAD MAINTENANCE OPERATIONS

### General Conditions

- Make adjustments in driving techniques to accommodate the changing handling characteristics of machines such as sewer cleaning trucks, and street sweepers that substantially increase or decrease their loads and change their centers of gravity depending on the quantity of load.
- Use ear plugs or ear muffs in environments that are noisy, such as where jack hammers or vacuums are being used, or where many pieces of equipment are running.
- Wear the proper type of air mask or respirator in dusty environments, or, when available, use air conditioning. This will help prevent damage to the lungs.
- Wear the proper clothing for the job when using chemicals such as sewer grouting material, plant sprays, or insecticides. Some chemicals may require the use of respirators, rubber gloves, or special clothing. Be sure to read the label and follow the instructions.
- Make the operator aware of the dangers inherent in spraying any kind of material that vaporizes or is a fine dust. These materials include, but are not limited to, gasoline, heavy solvents, and methane gas.

## Painting Operations

- Always use the properly designed respirator to avoid breathing the paint and its solvents.
- Many paint pigments and solvents are classified as hazardous materials. Read the label and avoid contact with the material. Be observant of dusts when sanding or grinding off lead-based paints.
- Keep out of the direct spray area when spraying paint. Paint being sprayed at only 30 PSI can imbed itself into the skin.
- Do not blow dust from clothes with high pressure air. Air at 30 PSI can imbed dust and clothing in the skin.
- Never field-rig a high pressure hose coupling. Always use a factory-made and tested coupling.
- Do not use more pressure in the hose and coupling than that for which they are rated.
- Keep paint closed and in a ventilated area. When not in use, keep paint in a designated and approved paint storage cabinet.

### Pneumatic Tools

- Wear hearing protection while operating air tools that operate above 85 decibels.
- Give frequent breaks to air hammer operators to reduce the cumulative effects of vibration and noise on the worker.
- Wear safety shoes with metatarsal protection while operating air hammers. Do not guide the air hammer tool with the feet to start a drill hole.
- Wear eye protection during the drilling operation.
- Be sure a deadman switch is standard equipment on the hammer in case the hammer is dropped.
- Employ wet drilling over dry drilling whenever possible to reduce the amount of flying debris and dust.
- Vent the air compressor tank prior to removal of the hoses or disconnect the hammer after completing an operation.
- Use retainer clips on the air hammer to prevent premature tool ejection.

- Do not allow the heads of cutting tools to mushroom. Grind the head to its original shape upon deformation. This will prevent splinters from chipping off the tool when being struck.
- Warm the cutting tool before use in very cold weather. This will prevent spilling during use.
- Before using any tool, check the bolts for adequate tightness and the chuck bushing for excessive wear.
- Watch where the chips are being thrown when cleaning pot holes with air pressure. They can travel up to 25 mph.

### TRENCHING

- Keep all tools, material, and spoil at least two feet from the edge of the trench.
- Do not drive equipment up to the edge of the trench.
- Inspect the trench for signs of failure after a rain and first thing in the morning.
- Do not jump across a trench. Go around or use a temporary bridge.
- Locate emergency exits from the trench no more than 25 feet apart. Ladders extending at least 3 feet past the top of the trench and tied securely are adequate.
- Take care when working adjacent to sidewalks, buildings, utility poles, trees, or similar structures. In some cases, underpinning may be necessary.
- Install shoring from the top down. Remove shoring from the bottom up. This will reduce the chances of ditch collapse during the installation/removal operation.
- Install jacks or bracing perpendicular to the trench sides to prevent them from kicking out under pressure.
- Do not support construction equipment on the shoring unless it was specifically designed for that function.
- Backfill the trench immediately after the shoring is removed. The trench has a greater possibility of cave-in due to the construction activity at that time.
- Keep workers out from under the excavating and backfilling equipment.
- Use life lines in excavations over 15 feet deep due to the danger of asphyxiants or poisonous gases collecting in the trench bottom.
- **BE ATTENTIVE TO YOUR SURROUNDINGS: DON'T DIG YOUR OWN GRAVE!**

### SNOW REMOVAL OPERATIONS

- Pre-check assigned routes for these hazards:
  - Low hanging cables
  - Deep side ditches
  - Steep shoulders
  - Raised manholes
  - Offset curb and pavement joints
  - Yield and merge intersections
  - Blind and left-turn intersections
  - Mailboxes
  - Signposts
  - Fire Hydrants
  - Guardrails
  - Fences
  - Special maneuvering areas, cul-de-sacs, steep grades,
  - dead ends
  - Congested areas
  - Narrow roadways
- Avoid situations that require backing. If it is necessary, in such areas as cul-de-sacs, dead ends, steep hills, exercise extreme caution.
- Keep the plow blades and sanders in working condition. Frostbite can be contracted rapidly as work is performed on the equipment outside.
- Be cautious of frostbite. Severe pain followed by a feeling of warmth are signs. Don't be fooled by the apparent return of warmth. Return to the shop and seek medical aid from a qualified individual.
- Watch for pedestrians when plowing. Do not exceed 25-30 mph. At speeds greater than this, a grown person could be knocked down by the force of the thrown snow.
- Check the cab of the truck for exhaust seepage. Carbon monoxide is colorless, odorless, and tasteless. If the driver feels drowsy, check the cab.
- Stay with the truck if it is immobilized. It's easier to locate a truck than a body covered with snow.

## VEHICLES AND EQUIPMENT

- Circle check shall be completed before entering vehicle including air tank inspection.
- Check behind and under the vehicle or machine before moving it.
- Only qualified operators shall operate equipment. All equipment operated on roads must be operated by a person with a valid drivers license. Any other operator must be accompanied by a licensed operator.
- Vehicle shall not be overloaded. Loose materials must be covered.
- No one is permitted to ride on the back (cargo area) of dump trucks or pick-ups.
- Passenger in truck shall get out and assist driver when truck is being backed up.
- Seat belts shall be worn at all times.
- Machines and vehicles shall be entered and exited slowly and with caution.

## SHOP WORK RULES

- Bays are to be kept clean and free of parts, water, broken glass, etc.
- Gasoline absolutely must not be used for cleaning parts, hands, or clothing.
- No smoking in service area, around pumps or tanks.
- Charge batteries only in well-vented areas, making sure to open battery caps to release hydrogen gas buildup.
- Fire extinguishers must be kept charged and in good condition. They must be readily accessible at all times. Do not use them for hangers or shelves.
- Do not use air hoses to clean clothes, as the air may blow dirt particles into eyes and air pressure can be injurious.
- All electrical equipment must be kept charged and in good condition. They must be readily accessible at all times. Do not use them for hangers or shelves.
- Floors must be kept free of spilled oil, antifreeze, grease, water, etc. If spills cannot be cleaned up immediately, then they must be covered with an oil absorbent material, such as speed-dry.
- The parking areas should be kept clean, and any potholes or cracks reported and repaired.

- NEVER work under a lift that does not have the safety pin/leg in position. Few people survive a vehicle dropping on them.
- Make sure that the vehicle is on the lift properly before raising it.
- Protective equipment (goggles, masks, etc.) must be worn where provided.
- All flammables (paints, thinners, etc.) must be stored in the flammable liquid storage area when not actually being used.
- The door(s) to the flammable liquid storage room cabinet is to be kept closed at all times.
- Spray painting may be done in specified areas only.
- Any injury, no matter how slight, must be reported to your supervisor.

## TREE DEPARTMENT

- Hard hats shall be worn by tree crews on any job where work is going on overhead.
- Moveable equipment on rear of trucks such as mowers should be tied down or otherwise secured.
- Masks, respirators, rubber gloves and face masks shall be worn. When mixing spray materials with water or oil, rubber gloves and masks shall be worn.
- Ear protectors shall be used when operating brush chippers and chain saws.
- Chaps shall be used when using chain saw
- Proper clothing, such as long pants and work shoes or boots are to be worn. Sneakers and shorts are prohibited.
- Rotary mower's safety devices shall not be removed from mower. Employee shall operate rotary mower so that discharge from mower shall not be directed towards any person or vehicle. Employees getting off mowers to remove items from area to be mowed shall face machine at all times.
- All safety equipment shall be installed on chipper
- Safety belts shall be used in bucket truck
- Tree trimmers without EHAP training shall not come within 10' of energized power lines
- Prior to climbing any tree, a visual inspection for decay and defects of such tree shall take place (pre-climbing inspection)
- All other National Arborists Association (NAA) 2133 safety standards shall be used.

## CEMETERY DIVISION

- After graves are dug and before they are set up for service, they shall be covered with plywood which shall be supported with planking.
- When setting up a grave, plywood, solid planking, and headers shall be placed around opening and under lowering devices.
- All openings for markers shall be covered until marker is set.
- When placing grave markers, at least two men should lift and place markers. No single employee shall remove stones or other material from cars or any vehicle delivering to cemetery.
- Any employee working with mixing or applying insecticide, pesticide, and herbicide, shall be licensed. All safety requirements shall be followed. The cemetery shall furnish protective clothing and equipment.
- Each employee shall be instructed on proper and safe operation of each machine that they shall use. The town shall furnish safety equipment such as hearing protection, safety lens and face shields, hard hats, rain gear, etc.
- Rotary mower's safety devices shall not be removed from mower. Employee shall operate rotary mower so that discharge from mower shall not be directed towards any person or vehicle. Employees getting off mowers to remove items from area to be moved shall face machine at all times.
- Hearing protection shall be used when operating chain saws and other noise producing equipment.

## BACK HOE AND LOADER

- Always get on and off machine slowly and with caution.
- Have machine at idle speed or shut off machine when getting off. When getting up on back hoe seat, have machine at idle speed and be careful not to hit levers (with rain gear on, you can get pant legs hung up on levers).
- Always park machine in low range, low gear, lower all units and remove key when leaving machine.
- When men are in front of loader bucket hooking up filling bucket, have machine in reverse or neutral. Men shall wear hard hats.
- Lower front bucket at a slow, steady speed every time, so the men will become aware of any loss of control.
- Have foreman assign only men that are needed around machine. They should be in view of the operator at all times.

- When traveling over the road, put flashers on and chain-up backhoe unit. When turning, do not cut off cars with backhoe bucket.
- Always be in loader seat with brake set before putting up stabilizers.
- Never carry a load with loader when bucket is more than two feet from ground.
- Walk up to an operator in front of him where he can see you. Never walk from behind or from the side.
- Only licensed operators shall run equipment, no passengers shall be carried.
- Never put your back to any machine that is working.

## WATER AND SEWER DEPARTMENT

- Hard hats shall be worn on construction sites at all times whenever an overhead exposure exists.
- Safety vests shall be worn when working in busy streets and when directing traffic.
- Gloves shall be worn when working on sharp edges or at the discretion of the foremen in charge.
- Safety cones and barricades are to be used around work areas. Men working signs, or cones are to be set 200 feet in each direction from the work area.
- Good housekeeping and safe work habits shall be in constant use. Good housekeeping means keeping your truck, job site, and yard neat, clean, and organized. Safe work habits include keeping your tools and equipment clean, well maintained and properly stored when not in use.
- Proper procedures before entering manholes:
  1. Check atmosphere with appropriate testing device.
  2. Use proper ventilation-open manhole in front and one in back of the manhole being worked in.
  3. Safety Harness to be worn upon entering.
  4. At least one employee must be above the manhole at all times.
- Ladders shall be used when working in a manhole or trenches. They shall consist of 12 inch runners and shall extend 3 feet above the ground level. Ladders must be positioned no more than 25 feet apart.

- Excavations and trenching shall comply with the Massachusetts Department of Labor and Industry's Regulations on sheathing and shoring.
- Jet rodding machines shall not be used without the rod guard.
- Jet rodder hose guard shall be used at all times, going in and coming out.
- When taking rodding machine out, safety chains must be in working order.
- When changing nozzle on jet rodder the machine shall be shut off.
- All sewer chemicals shall be locked up. Distribution of such chemicals shall be done by sewer division personnel only.
- Safety harnesses must be used with a guideline when going into a manhole 6 feet or deeper.
- All employees who are furnished safety equipment and/or clothing shall be required to wear such safety equipment at all times while doing the work for which the equipment is furnished. The safety gloves, aprons, helmets, hardhats, goggles, face shields, dust masks, vest, ear protection, etc., provided are designed for the protection of all employees and must be used in designated areas. Safety shoes are highly recommended but will not be required until such time as they are provided.
- All personnel working in the sewage system shall be provided with vaccines, inoculations and tests, as provided by Massachusetts law. Required inoculations shall be kept current according to the most recent Department of Public Health requirements.
- When cutting asbestos, tiles or cement pipe, a face mask and appropriate breathing protection must be worn.
- When working at night, flashers or flares shall be used to warn public of the work area. Trenches and work areas shall be well lighted.
- Hard toe boots or sturdy work boots shall be worn while working in water or mud. Rain gear shall be worn during inclement weather.
- Safety goggles shall be worn while using air driven tools or power saws.
- Clothing must be suitable to the job. Shirts or t-shirts, and long pants shall be worn at all times. Suitable work shoes shall be worn - safety shoes are recommended. Sneakers, moccasins, sandals, and shorts or cut off pants shall not be worn.
- While working in watershed areas, no hand power cutting tools such as chain saws and brush cutters shall be used without a means of transportation in the immediate area.
- When machine cutting asbestos, tile or cement pipe a face mask and breathing protection must be worn.

- Excavations and trenches shall comply with the Massachusetts Department of Labor and Industry Safety Rules.
- Self-contained breathing equipment shall be provided for personnel working around chlorination equipment.
- A safety drill on the operation of self-contained breathing equipment shall be conducted for such personnel once a month.

#### WASTEWATER TREATMENT PLANT

- All employees who are furnished safety equipment and/or clothing by the Plant shall be required to wear such safety equipment at all times while doing the work for which the equipment is furnished. The safety gloves, aprons, helmets, hardhats, goggles, face shields, dust masks, vest, ear protection, etc., provided by the Plant are designed for the protection of all employees and must be used in designated areas. Designated areas must have signs visible to all employees.
- Damaged or worn out safety equipment furnished by the Plant and in use will be replaced, provided the worn or damaged equipment is turned in when the new equipment is issued and provided there is no evidence of abuse. If the equipment shows evidence of abuse, the employee shall be responsible for replacing the equipment.
- Safety drill on the operation of self contained breathing equipment shall be conducted for all personnel once a month.
- All valves and hand rails shall be kept free of grease.
- Chlorine tanks shall not be changed unless two men are present.
- All chlorine connections shall be checked with ammonia after a tank has been filled.
- If a leak is detected in the chlorine room do not enter without calling the Fire/Police Department first. Under no circumstances enter the area alone or without self contained breathing equipment and protective clothing.
- No Smoking signs must be observed.
- When working in wastewater, footwear must be cleaned off before entering any building.
- There shall be no eating in the Laboratory.
- Proper barricades or cones must be used when manhole covers or grates are removed.



- Proper procedures before entering manholes, digesters, wetwells, etc.
  1. Check atmosphere
  2. Use proper ventilation - open manhole in front and one in back of the manhole being worked in.
  3. Safety Harness to be worn upon entering.
  4. Two employees above manhole, wetwell, etc.
- Housekeeping and safe work habits shall be in constant use. All spills shall be cleaned up immediately.
- When working on a pump or any other equipment, all switches shall be tagged and power locked out. Tags and locks shall only be removed by the person who originally tagged them.
- All employees who are furnished safety equipment and/or clothing will be required to wear such safety equipment at all times while doing the work for which the equipment is furnished. The safety gloves, aprons, helmets, hardhats, goggles, face shields, dust masks, vest, ear protection, etc., provided are designed for the protection of all employees and must be used in designated areas. Safety shoes are highly recommended but will not be required until such time as they are provided.
- Safety harness and line must be worn when cleaning clarifiers (inside) or any other situation that calls for this precaution.
- Safety chains must be replaced at all walkways, tanks, etc.
- Equipment safety guards and covers must be kept in place.
- Electrical cabinet doors are to be kept closed.
- Two persons (one above and one below) are to be present upon entering clarifiers and pumping stations.