

# Electrical Safety

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**Purpose:** To ensure the safety of Wayne County employees while working with or near electricity.

**Scope:** For authorized and unauthorized employees working on or near electrical equipment and wiring

**Definitions:** Authorized employees – those who have the training in avoiding the electrical hazards of working on or near exposed energized parts.

Unauthorized employees – those with little or no training in electrical safety and maintenance.

## I. Training for Authorized Personnel

- A. Authorized employees will be identified as those who perform work on electrical equipment.
- B. A list of authorized personnel will be retained by the Safety/Loss Control Manager.
- C. Training for authorized employees shall include:
  - 1. The requirements of the Lockout-Tagout standard
  - 2. Type and magnitude of energy in the workplace
  - 3. The method to follow when the electrical source cannot be shut off and locked out.
  - 4. Personal protective equipment to be worn when working on or near energized electrical components.
  - 5. The method to release stored electrical energy, including the method to ground and short circuit high capacitance equipment.
  - 6. Practices to guard the employee from inadvertent exposure.

7. Precautions to be followed when severe weather is occurring.
8. The method used to inspect extension cords and other electrical equipment.
9. The safe method to work around wet equipment or ground.
10. The requirements concerning the use of temporary wiring.

**D. General Requirements (authorized)**

1. Access and working space of 36" must be provided at electrical boxes.
2. The area must not be used as storage space.
3. Rooms or guarded locations containing exposed live parts must be marked and secured.
4. Knockouts in cabinets / boxes should be removed only if conductors are run through them.

**II. Training for Unauthorized Employees**

- A. The identification of electrical sources and location or where work is being performed, including signs used in the workplace to warn employees of the presence of energized equipment.
- B. The methods to reduce the hazard of electrical shock while working on or near electrical equipment.

**C. General Guidelines (unauthorized)**

1. Be aware of all markings, tags, and signs.
2. Avoid using metal ladders around electrical wires
3. Report any exposed wiring to your supervisor
4. Avoid standing in water while working with electrical equipment.
5. Consult with your supervisor before using extension cords.

6. Do not put hands in electrical boxes or cabinets.
7. Conduct safe practices to guard the employee from inadvertent exposure.
8. Precautions to be followed when severe weather is occurring.

### **III. Employee Protection**

#### **A. Flexible Cords, Extension Cords, and Cables**

1. Cords shall not be used if wiring can be installed instead.
2. General use for extension cords and cables
  - a. connection of portable lamps or appliances
  - b. connection of stationary equipment that is frequently interchanged
  - c. data processing equipment
3. General areas where cords and cables shall **not** be used
  - a. as a substitute for fixed wiring
  - b. where cords run through holes in walls, ceilings, or floors
  - c. where cords run through doorways, windows, or similar openings
  - d. where they are attached to building surfaces
  - e. where they may be concealed behind walls, ceilings, floors, or carpeting

#### **B. Splices**

1. Flexible cords shall only be used in a continuous length without splices
2. Electrical strips shall be run continuous to an outlet. An electrical strip shall not be connected to another electrical strip.

**C. All exposed electrical equipment over 50 volts within 7' of the floor, platform, or other area accessible to employees shall be guarded or protected by a suitable enclosure, cabinet, or screen.**

**D. All rooms or enclosures having electrical equipment over 600 volts shall be locked from access to unauthorized employees and labeled.**

- E. All light bulbs under 7' from the working surface shall be protected from damage by a suitable lamp holder or guard.
- F. All locations where material is handled in such lengths to make contact with a bulb possible shall be protected by lamp guards regardless of the lamp elevation above the working surface.
- G. Employees shall not be permitted to congregate in, nor store materials in, any transformer vault or room.
- H. Water shall not be used to wash floors or equipment within 10' of high voltage equipment or any unprotected electrical equipment of any voltage.
- I. Water spigots, wash basins, tubs, or sinks shall not be placed within 3' of any electrical box or cabinet.
- J. Employees shall not be permitted to place any material in front of electrical cabinets for a distance of 3'.
- K. The use of metal ladders shall be prohibited when advertent or accidental contact with exposed energized electrical lines or parts is possible.
- L. Electric lines shall not be placed within 3' of any stairs, window, fire escape, or similar structure where employees can be exposed to contact.
- M. Adapters for increasing the number of outlets at wall plugs shall not be used unless they contain a suitable built-in breaker.
- N. Ground plugs shall not be removed from any portable electrical equipment.