



Weekly Safety Meeting

Construction - Electrical Safety

Electricity is an essential source of energy for most work-related operations. However, fewer sources have a greater potential to cause harm than electricity. Working safely with electricity is possible if you are trained in, understand, and follow certain basic ground rules.

By its nature, electricity will take the path of least resistance to the ground. If your body happens to be in that path, even a small amount of electric current can have fatal effects. The risk of shock or electrocution is greatest around metal objects and in damp conditions. Therefore, make sure all electric equipment, switch enclosures, and conduit systems are properly grounded and that all external or damp operations are wired for wet conditions. When working in damp areas, wear the correct personal protective equipment—such as rubber gloves and boots. Use rubber mats, insulated tools, and rubber sheets to protect you from exposed metal.

It doesn't take a lot of electricity to kill you. The amount of current needed to light an ordinary 60-watt light bulb is five times what can kill a person. Thus, all electrical equipment on construction sites is potentially deadly.

Ensure That:

- All extension cords are three-wire cords;
- The ground pin is on a male plug;
- End appliances (plug and receptacle) are gripped to insulation;
- All wires are continuous and unbroken;
- All cords are protected from damage likely to occur when passing through a door or window;
- Metal boxes with knockouts are not used on extension cords;
- Plugs are dead-front (molded or screwed in place);
- Romex (non-metallic sheathed cable) is not used as flexible cord;
- Cords are not stapled or hung from nails;
- Brushing is passing through holes in covers or outlet boxes;
- Cords do not support temporary lights;
- Bulb guards are used on temporary lights;
- Electrical power tools with non-dead man switches have a magnetic restart (when injury to the operator might result if motors were to restart following power failures);
- Provisions are made to prevent machines from automatically restarting upon restoration of power;
- Outlets do not have reversed polarity; and

- Power tools are double insulated or have a ground pin.

Keep your electrical system in good operating condition. Damage and injuries can occur when equipment is defective. So, inspect your electrical equipment, outlets, plugs, and cords before each use.

Make sure outlets and cords are of adequate size and length to prevent electrical overload. If cords must cross a traffic area, protect them with planks or other means.

Guard all of the exposed sources of electricity of more than 50 volts so no one can come in contact (receptacles, light-bulb sockets, bare wires, load center, switches).

Guard by:

- Using approved enclosures;
- Locating them in a room, vault, or similar enclosure accessible only to qualified persons;
- Arranging suitable permanent, substantial partitions or screens so only qualified persons have access to the space within reach of live parts;
- Locating them on a suitable balcony or platform that is elevated or arranged to exclude unqualified persons; or
- Elevating them 8 feet or more above the working surface.

There are “clues” that electrical hazards exist. For example, if a GFCI keeps tripping while you are using a power tool, there is a problem. Don’t keep resetting the GFCI and continue to work. You must evaluate the “clue” and decide what action should be taken to control the hazard.

IF YOU DON'T PRACTICE ELECTRICAL SAFETY...THERE CAN BE ELECTRIFYING RESULTS!!

