



*Provide a Safe Learning and Working Environment*

# Colorado Springs School District 11

# SAFETY STANDARD

## Electrical Safety

- 1. This Safety Standard was developed by the Safety Office- Risk Related Activities Department.**
- 2. A technical review and content acceptance was performed by:**
  - The Executive Director, Facilities, Operations and Transportation**
  - The Director of Facilities**
  - The Electrical Shop Foreman, Facilities Department**
- 3. This Safety Standard was reviewed and accepted by the Director, Risk Related Activities Department.**

Approved:  Date: 4/22/15

**Glenn Gustafson**  
**Deputy Superintendent/Chief Financial Officer**



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**Electrical Safety**

**Colorado Springs School District 11 is committed to providing a safe learning and working environment. Due to the dangers and life threatening potential that electrical energy presents, various articles within NFPA 70E - Standard for Electrical Safety in the Workplace, were used in the development of this standard.**

**REQUIREMENTS AND SAFE ELECTRICAL WORK PRACTICES**

- 1. A qualified employee is defined as a person who has skills and knowledge related to the construction and operation of electrical equipment and installations, and has received safety training on the hazards involved. Although task dependent, typically the only employees who will meet this requirement are electricians and HVAC technicians in the facilities department.**
- 2. No District 11 employee will perform maintenance or repair work on any energized electrical equipment rated at or above 50 volts, unless designated as a *qualified employee* by the Director of Facilities.**
  - a. Qualified employees will only be allowed to perform this level of work if the employee can demonstrate that (1) deenergizing equipment introduces additional or increased hazards, or (2) is infeasible due to equipment design or operational limitations.**
  - b. In this instance the use of an energized electrical work permit must be utilized and as a minimum contain the written plan elements as described in NFPA 70E. The Director of Facilities and/or designee will be responsible for ensuring compliance with this requirement.**
  - c. High school building mechanics and Information Technology support technicians shall be allowed to perform minor maintenance on portable electrical equipment such as custodial cleaning equipment and replacement of electrical cord ends, but only after they have demonstrated to the Electrical Department Foreman that they are competent to safely perform the work. The Facilities Department Foreman shall provide a list of the trained and competent persons to the Director of Facilities for approval.**

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- 3** An unqualified person is defined as a person who does not have the skills and knowledge related to the construction and operation of electrical equipment. In general, unqualified persons might be exposed to electrical hazards. Training in electrical safety practices is necessary for their safety, and includes an awareness of potential hazards that may be encountered as part of their essential job functions. Most employees will be in this category, to include the following:
- a. Building operations personnel to include Building Managers and Building Technicians are not to perform any electrical systems work other than routine replacement of bulbs, lamps, light fixture lenses, and wall plates.
  - b. Other than simple bulb replacements that do not require use of a ladder or other elevated work methods, and the routine plug- in of tools or equipment into wall receptacles, district employees not specifically identified in sections #1 and #2 above are not to perform any electrical system work.
- 4** Any ballast, electrical outlet, light switch, light fixture or electrical motor replacement work must be requested through the facilities department work order system.
- 5** Only licensed electricians are allowed to install new electrical systems or make modifications to existing electrical systems in District 11 schools and buildings.
- 6** All manufacturers' written instructions regarding the installation, use, and maintenance of parts and equipment must be complied with.
- 7** Existing enclosed and secured electrical distribution panels, breakers, switches and associated equipment must remain in that position unless work is being performed by authorized district employees or district authorized contractors or vendors.
- 8** If required by the Director of Facilities, structural barriers will be used to prevent damage to electrical equipment and components.
- 9** Only employees authorized by the Director of Facilities or school Principal may enter electrical distribution equipment rooms.
- 10** Employees will only use tools that are appropriate and safe for the work being performed.
- 11** Circuits that repeatedly trip must be reported to the facilities department by the building manager or designated employee(s) as identified by the school principal.

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- 12 Only non-conductive ladders will be used when working on or near any electrical equipment.**
- 13 Facilities related equipment with a cord and plug, and extension cords, will be handled and used in a manner to prevent damage to the insulating covering. Any cord or plug found to be damaged must be reported to the building manager, and not be used until repaired or replaced.**

**The building manager or other designated employees are responsible for submitting work order requests to the facilities department or the appropriate department responsible for repair of specialized equipment to include computers, appliances, custodial equipment, radios, and audio-visual equipment.**

- 14 Combustible material will not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.**
- 15 Under no circumstance shall an unqualified employee engage in unsafe work practices and/or create an unsafe condition that presents an exposure for severe injury not only to that employee, but to other employees in the work area.**

**RESPONSIBILITIES**

- 1. The Safety Manager in the Risk Related Activities Department is responsible for:**
  - a. The development, maintenance, and compliance monitoring of this safety standard.**
  - b. The performance of, in collaboration with the Director of Facilities, an annual assessment of the effectiveness of this safety standard, with a primary focus toward employee training components and safety equipment requirements.**
  - c. Assisting (as requested) with accident investigations, development of preventative action recommendations and corrective actions.**
- 2. The Director of the Facilities Department is responsible for:**

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- a. **The identification of designated qualified employees as defined in this standard.**
  - b. **The facilitation of the development and maintenance of a written electrical safety program document addressing the specific requirements and procedures essential to the safe work practices of designated qualified employees.**
  - c. **Coordination with the safety office (risk related activities department) to develop and deliver employee electrical safety training programs that align to stated requirements of position and essential job functions.**
  - d. **Ensuring all new facilities and building electrical equipment and components are compliant with National Electrical Code and/or State of Colorado required standards.**
- 3. School Principals, Assistant Principals, and designated Building Administrators are responsible to ensure compliance with this standard in the schools which supervisory and operational responsibility has been designated.**
- 4. Designated qualified employees are responsible for:**
- a. **Compliance with the contents of the written electrical safety program document and other mandated requirements.**
  - b. **Promptly identifying to the electrical shop foreman substantial electrically unsafe conditions within a district building or grounds.**
  - c. **Communicating and assisting in maintaining a safe learning and working environment by providing input and recommendations regarding safe working practices and procedures.**
- 5. Building Operations Employees (Building Managers, Building Technicians, and Building Mechanics) are responsible for:**
- a. **Assisting school leadership with the compliance requirements of this standard.**
  - b. **Prompt reporting to the facilities department of any electrically unsafe conditions within a building or grounds, which require work by a qualified employee.**

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- c. **Inspecting equipment such as appliances, tools, and extension cords and removing any equipment believed to be in an unsafe condition.**
  - d. **Communicating and assisting in maintaining a safe learning and working environment by providing input and recommendations regarding safe working practices and procedures.**
6. **District 11 employees who are not designated as a qualified employee are responsible for:**
- a. **Immediate reporting of electrical safety hazards or concerns to Building Operations employees or other designated individuals.**
  - b. **Inspecting equipment such as appliances, tools, and extension cords and removing any equipment believed to be in an unsafe condition.**

**EMPLOYEE TRAINING**

The following is considered as minimum employee training requirements:

1. **Qualified person: Training to recognize and avoid electrical hazards that might be present to specific equipment or work method, and being familiar with necessary procedures to include:**
- a. **Use of special precautionary techniques, to include an established lock out/tag out procedure.**
  - b. **Personal protective equipment for arc flash, insulating and shielding materials.**
  - c. **Insulated tools and test equipment, to include the inspection requirements and required repairs or adjustment.**
  - d. **Skills and techniques to distinguish exposed energized parts from other parts of electrical equipment.**
  - e. **Skills and techniques to determine nominal voltage of exposed live parts.**
  - f. **Approach distances.**
  - g. **Decision making process and job planning necessary to perform the task safely.**

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- h. Emergency procedures.**
- 2. Unqualified person: Training in electrical safety practices necessary for their safety, to include an awareness of potential hazards that may be encountered as part of their assigned job function to include:**
  - a. Reporting of all electrical hazards or concerns to the immediate supervisor or Facilities Department.**
  - b. Not attempting to make any electrical system repairs, nor operating equipment where there is a concern of an electrical hazard, to include the use of receptacles which may frequently trip a circuit breaker.**
  - c. Not allowing electrical equipment to make contact with water unless the equipment is specifically designed for that application.**
  - d. Not using cords or plugs that are missing a required ground plug.**