

### **13 NCAC 15 .0424      ELECTRICAL SAFETY REQUIREMENTS**

(a) General Requirements. All electrical wiring, equipment and apparatus used for amusement devices or for lighting shall comply with the National Electrical Code, NFPA 70 and shall be properly and legally installed, operated and maintained.

- (1) Branch Circuits. The circuit for each ride shall be protected by fuses or a circuit breaker at the junction box or at the generator.
- (2) Disconnecting Means. Each ride shall be provided with a main line disconnect switch or breaker. The disconnect switch or breaker shall be located at the ride. Each branch circuit on a ride shall be further provided with a disconnecting means.
- (3) Conductors. Conductors supplying current to rides shall be of moisture resistant construction and insulated for the maximum voltage supplied to the ride.
- (4) Grounding. Grounding of rides shall be by means of one or more grounding electrodes driven at the generator or other service. The grounding conductor to each junction box shall be of sufficient size to carry the maximum voltage generated by the system. Grounding conductors to each ride shall not be less than No. 8 awg. wire size.

(b) Protection of Employees. No employee shall be suffered or permitted to work in such proximity to any part of an electric power circuit that he may contact the same in the course of his work unless he is protected against shock by de-energizing the circuit, grounding it or guarding it, by effective insulation. If protection is supplied by de-energizing the circuit, the switch controlling the circuit shall be locked out to prevent inadvertent closing.

(c) High Voltage Lines. The outlets of electric power lines carrying more than 120 volts shall be clearly marked to show their voltage.

(d) Transformers. All electrical transformer sub-stations shall be properly enclosed and proper warning signs posted.

(e) Outdoor Apparatus and Wiring. Electrical apparatus and wiring located outdoors shall be of such quality and so constructed or protected that exposure to weather will not interfere with its normal operation.

(f) Elevated Lines. Elevated power lines crossing access or other roads within the grounds of a carnival, fair or amusement park shall be so suspended as to provide minimum vertical clearance of 12 feet from the road surface and minimum horizontal clearance of three feet on each side of the normal passage space of vehicles.

(g) Grounding. Temporary electric installations shall be properly grounded.

(h) Exposed Conductors. Bare wires and other uninsulated current-carrying parts shall be guarded against inadvertent contact by means of proper location or by fence or other barrier.

(i) Overcurrent Protection. Conductors shall be provided with overcurrent protective devices according to load. No such device shall be installed in neutral or grounding conductors.

(j) Generator Grounding. Where electrical power is supplied for an amusement device or a temporary structure by a privately operated generating system, the generator and all equipment shall be properly grounded if the system incorporates a ground.

(k) Receptacles and Caps. All receptacles and attachment caps shall be of the ground type.

(l) Abrasion Protection. Wiring laid on surfaces traversed by vehicular or pedestrian traffic shall be adequately protected against wear and abrasion.

*History Note:      Authority G.S. 95-111.4;  
                            Eff. August 1, 1987;  
                            Amended Eff. May 1, 1992;  
                            Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. January 5, 2016.*