ungrounded conductors and controls no other load. Signs and outline lighting systems located within fountains shall have the disconnect located in accordance with 680.13.

Exception No. 1: A disconnecting means shall not be required for an exit directional sign located within a building.

Exception No. 2: A disconnecting means shall not be required for cord-connected signs with an attachment plug.

Informational Note: The location of the disconnect is intended to allow service or maintenance personnel and first responders complete and local control of the disconnecting means.

Δ **(A) Location.** The disconnecting means shall be accessible and located in accordance with 600.6(A)(1), 600.6(A)(2), or 600.6(A)(3). If the disconnecting means is remote from the sign it controls, it shall comply with 600.6(A)(4).

Δ **(1) At Point of Entry to a Sign.** The disconnect shall be located at the point the feeder circuit or branch circuits supplying a sign or outline lighting system enters a sign enclosure, a sign body, or a pole in accordance with 600.5(D)(3). The disconnect shall open all ungrounded conductors where it enters the enclosure of the sign or pole.

Exception No. 1: A disconnect shall not be required for branch circuits or feeder conductors passing through the sign where not accessible and enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location.

Exception No. 2: A disconnect shall not be required at the point of entry to a sign enclosure or sign body for branch circuits or feeder conductors that supply an internal panelboards in a sign enclosure or sign body. The conductors shall be enclosed where not accessible in a Chapter 3 listed raceway or metal-jacketed cable identified for the location. A field-applied permanent hazard label that is visible during servicing shall be applied to the raceway at or near the point of entry into the sign enclosure or sign body. The danger label shall state the following: "Danger. This raceway contains energized conductors." The marking shall include the location of the disconnecting means for the energized conductors. The disconnecting means shall be capable of being locked in the open position.

Δ **(2) Within Sight of the Sign.** The disconnecting means shall be within sight of the sign or outline lighting system that it controls. Where the disconnecting means is out of the line of sight from any section that is able to be energized, the disconnecting means shall be lockable in accordance with 110.25. A permanent field-applied marking identifying the location of the disconnecting means shall be applied to the sign in a location visible during servicing.

Δ **(3) Within Sight of the Controller.** The following shall apply for signs or outline lighting systems operated by electronic or electromechanical controllers located external to the sign or outline lighting system:

(1) The disconnecting means shall be located within sight of the controller or in the same enclosure with the controller.
(2) The disconnecting means shall disconnect the sign or outline lighting system and the controller from all ungrounded supply conductors.
(3) The disconnecting means shall be designed such that no pole can be operated independently and shall be lockable in accordance with 110.25.

Exception: Where the disconnecting means is not located within sight of the controller, a permanent field-applied marking identifying the location of the disconnecting means shall be applied to the controller in a location visible during servicing.

Δ **(4) Remote Location.** The disconnecting means, if located remote from the sign, sign body, or pole, shall be mounted at an accessible location available to first responders and service personnel. The location of the disconnect shall be marked with a label at the sign location and marked as the disconnect for the sign or outline lighting system.

A disconnecting means that is not within sight of the sign that it controls is required to be installed where it can be operated by maintenance personnel and by emergency first responders. In accordance with 600.6(A)(2), a remote disconnecting means must be constructed or equipped to be locked in the open position in accordance with 110.25. Additionally, the sign controlled by the remote disconnecting means must have a permanent and durable label that denotes the location of the disconnecting means. The disconnecting means is required to be marked in accordance with 110.22(A).

(B) Control Switch Rating. Switches, flashers, and similar devices controlling transformers and electronic power supplies shall be rated for controlling inductive loads or have a current rating not less than twice the current rating of the transformer or the electronic power supply.

A switching device that controls the primary circuit of a transformer supplying a luminous gas tube is subject to a highly inductive load that causes severe arcing of its contacts. Therefore, the switch or flasher is required to be rated for the inductive load, or it must have a current rating that is at least twice the current rating of the transformer it controls.

600.7 Grounding and Bonding.

(A) Grounding.

(1) Equipment Grounding Conductor. Metal equipment of signs, outline lighting, and skeleton tubing systems shall be grounded by connection to the equipment grounding conductor of the supply branch circuit(s) or feeder using the types of equipment grounding conductors specified in 250.118.

Exception: Portable cord-connected signs shall not be required to be connected to the equipment grounding conductor where protected by a system of double insulation or its equivalent. Double insulated equipment shall be distinctively marked.