

prevent the exposure of employees to the hazards created by damage to dangerous underground facilities, efforts shall be made to determine the location of such facilities and work conducted in a manner designed to avoid damage.

(2) Trenching and excavation operations shall comply with §§ 1926.651 and 1926.652.

(3) When underground facilities are exposed (electric, gas, water, telephone, etc.) they shall be protected as necessary to avoid damage.

(4) Where multiple cables exist in an excavation, cables other than the one being worked on shall be protected as necessary.

(5) When multiple cables exist in an excavation, the cable to be worked on shall be identified by electrical means unless its identity is obvious by reason of distinctive appearance.

(6) Before cutting into a cable or opening a splice, the cable shall be identified and verified to be the proper cable.

(7) When working on buried cable or on cable in manholes, metallic sheath continuity shall be maintained by bonding across the opening or by equivalent means.

**§ 1926.957 Construction in energized substations.**

(a) *Work near energized equipment facilities.* (1) When construction work is performed in an energized substation, authorization shall be obtained from the designated, authorized person before work is started.

(2) When work is to be done in an energized substation, the following shall be determined:

- (i) What facilities are energized, and
- (ii) What protective equipment and precautions are necessary for the safety of personnel.

(3) Extraordinary caution shall be exercised in the handling of busbars, tower steel, materials, and equipment in the vicinity of energized facilities. The requirements set forth in § 1926.950(c), shall be complied with.

(b) *Deenergized equipment or lines.* When it is necessary to deenergize equipment or lines for protection of employees, the requirements of § 1926.950(d) shall be complied with.

(c) *Barricades and barriers.* (1) Barricades or barriers shall be installed to prevent accidental contact with energized lines or equipment.

(2) Where appropriate, signs indicating the hazard shall be posted near the barricade or barrier. These signs shall comply with § 1926.200.

(d) *Control panels.* (1) Work on or adjacent to energized control panels shall be performed by designated employees.

(2) Precaution shall be taken to prevent accidental operation of relays or other protective devices due to jarring, vibration, or improper wiring.

(e) *Mechanized equipment.* (1) Use of vehicles, gin poles, cranes, and other equipment in restricted or hazardous areas shall at all times be controlled by designated employees.

(2) All mobile cranes and derricks shall be effectively grounded when being moved or operated in close proximity to energized lines or equipment, or the equipment shall be considered energized.

(3) Fenders shall not be required for lowboys used for transporting large electrical equipment, transformers, or breakers.

(f) *Storage.* The storage requirements of § 1926.953(c) shall be complied with.

(g) *Substation fences.* (1) When a substation fence must be expanded or removed for construction purposes, a temporary fence affording similar protection when the site is unattended, shall be provided. Adequate interconnection with ground shall be maintained between temporary fence and permanent fence.

(2) All gates to all unattended substations shall be locked, except when work is in progress.

(h) *Footing excavation.* (1) Excavation for auger, pad and piling type footings for structures and towers shall require the same precautions as for metal tower construction (see § 1926.955(b)(1)).

(2) No employee shall be permitted to enter an unsupported auger-type excavation in unstable material for any purpose. Necessary clean-out in such cases shall be accomplished without entry.