

**635 PULL, SPLICE, AND JUNCTION BOXES.**  
**(REV 11-21-13) (FA 2-4-14) (7-14)**

SUBARTICLE 635-3.2 is deleted and the following substituted:

**635-3.2 Pull and Splice Boxes:** Install pull and splice boxes in accordance with the Design Standards, Index No. 17700. Ensure pull and splice boxes are sized for the amount of cable to be placed inside. Ensure that the pull or splice box cover is flush with the concrete apron or sidewalk. Do not install pull or splice boxes in roadways, driveways, parking areas, ditches or public sidewalk curb ramps. Avoid placing pull and splice boxes in low-lying locations with poor drainage. Ensure that pull and splice boxes house fiber optic cable without subjecting the cable to a bend radius less than 14 times the diameter of the cable.

**635-3.2.1 Placement and Spacing:** Place pull and splice boxes as shown in the Plans and at the following locations, unless directed otherwise by the Engineer:

1. At all major fiber optic cable and conduit junctions.
2. Approximately every 2,500 feet for fiber optic cable applications in rural areas with any continuous section of straight conduit if no fiber optic cable splice is required.
3. At a maximum of 1,760 feet for fiber optic cable applications in metropolitan areas.
4. At each end of a tunnel, and on each side of a river or lake crossing.
5. On each side of an aboveground conduit installation, such as an attachment to a bridge or wall.
6. At all turns in the conduit system.
7. Near the base of a service pole or communication cabinet to provide:
  - a. A transition point between the fiber optic conduits extending from the fiber backbone and the conduit feeding the communication cabinet.
  - b. An assist point for the installation of fiber optic drop cable.
  - c. Storage of slack fiber optic drop cable.

**635-3.2.2 Electronic Box Marker:** Equip all pull and splice boxes buried below finish grade with an electronic box marker inside the pull or splice box to mark the location. Ensure that the electronic box marker is a device specifically manufactured to electronically mark and locate underground facilities. Ensure that the electronic box marker includes circuitry and an antenna encased in a waterproof polyethylene shell. Ensure that the outer shell is impervious to minerals, chemicals, and temperature extremes normally found in underground plant environments. Ensure that the electronic box marker does not require any batteries or active components to operate. Ensure that electronic box markers used to mark fiber optic cable and general telecom applications are orange in color and operate at 101.4 kHz. Ensure that the electronic box marker's passive circuits produce an RF field when excited by a marker locator to direct the locator to the marker's position. Ensure that the electronic box marker has a minimum operating range of 5 feet from the marker locator.