

### C. TEMPORARY WIRING

1. Install temporary conductors and electrical equipment in accordance with the NEC article "Temporary Installations" and City standard sheets.
2. Provide a ground fault circuit interrupter (GFCI) for power outlets for portable electrical equipment, power tools, ice machines, ice storage bins and refrigerators located outdoors at grade. GFCI may be any one of the following: molded cord and plug set, receptacle, or circuit breaker type.
3. Use listed wire nuts with factory applied sealant for temporary wiring where approved.
4. Enclose conductor splices within a listed enclosure or ground box, or ensure the splices are more than 10 ft. above grade vertically and more than 5 ft. horizontally from any metal structure. Where installing temporary conductors in areas subject to vehicle traffic or mobile construction equipment, ensure the vertical clearance to ground is at least 18 ft. when measured at the lowest point. Ground messenger wires that support power conductors in conformance with the NEC.
5. Protect and when necessary repair any existing electrical conduits uncovered during the construction process in a timely manner and in conformance with the NEC.

### IV. GROUND RODS & GROUNDING ELECTRODES

#### A. MATERIAL INFORMATION

1. Provide and install a 5/8" X 8' grounding rod, at electrical services and as called for in the plans. Larger diameter or longer length rods may be called for in some specific locations, see the individual plans sheets. Concrete encased grounding electrodes may be called for in specific locations including the electrical service, see individual plan sheets.

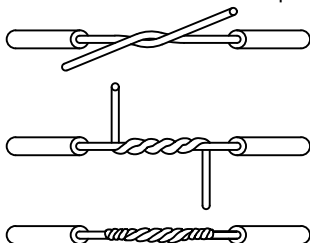
#### B. CONSTRUCTION METHODS

1. Furnish auxiliary ground rods and/or grounding plates for lightning protection and install in soil, concrete, or both, as called for in the plans. For ground rods installed in concrete, ensure the connection of the conductor to the ground rod is readily accessible for inspection or repairs. For ground rods installed in soil, ensure that the upper end is between 2 to 4 in. below finished grade.
2. Do not place ground rods in the same drilled hole as a timber pole.
3. Install ground rods so the imprinted part number is at the upper end of the rod.
4. Remove all non-conductive coatings such as concrete splatter from the rod at the clamp location.
5. Route all conductors as short and straight as possible for connection to lightning protection ground rods. When a bend is required, ensure a minimum radius bend of four inches for these conductors.
6. Unless otherwise called for in the plans, protect grounding electrode conductors with non-metallic conduit. When protecting grounding electrode conductors with metal conduit, provide and install a grounding type bushing and properly sized bonding jumper on each end of the metal conduit.
7. Written authorization is required before installing a ground rod in a horizontal trench for rocky soil or a solid rock bottom.

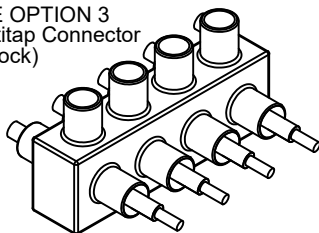
### V. TRAFFIC SIGNAL ELECTRICAL SERVICES NOTES

1. Provide new materials. Ensure installation and materials comply with the applicable provisions of the National Electrical Code (NEC) and National Electrical Manufacturers Association (NEMA) standards. Ensure material is Underwriters Laboratories (UL) listed. Provide and install electrical service conduits, conductors, disconnects, contactors, circuit breaker panels, and branch circuit breakers as shown on the Electrical Service Data chart in the plans. Faulty fabrication or poor workmanship in material, equipment, or Installation is justification for rejection. Where manufacturers Provide warranties and guarantees as a customary trade practice, furnish these to the Engineer.
2. Provide all work, materials, services, and any incidentals needed to install a complete electrical service as specified in the plans.

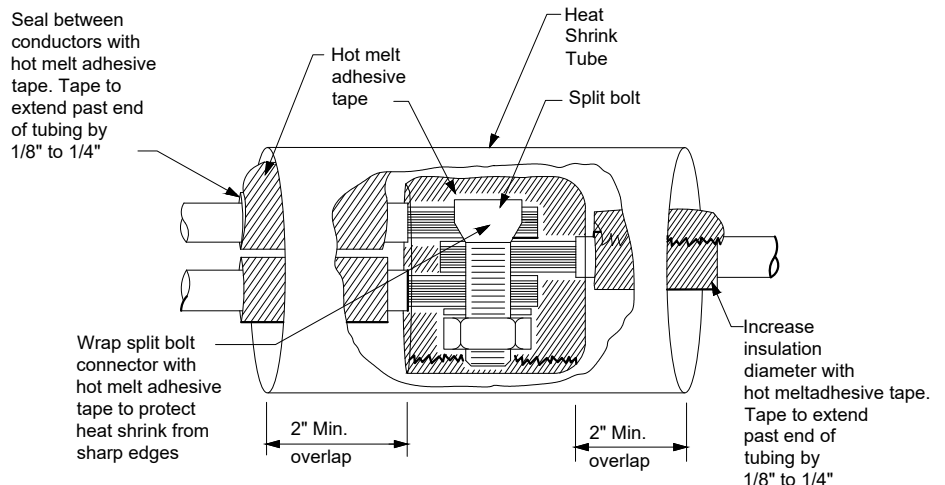
SPLICE OPTION 1 - Butt Splice



SPLICE OPTION 3  
Insulated Multitap Connector  
(Block)



SPLICE OPTION 2 - Split Bolt Type



CITY OF AUSTIN  
DEPARTMENT OF PUBLIC WORKS

### TRAFFIC SIGNAL ELECTRICAL NOTES AND DETAILS

THE ARCHITECT/ENGINEER ASSUMES  
RESPONSIBILITY FOR APPROPRIATE  
USE OF THIS STANDARD.

STANDARD NO.  
**838-1**  
4 OF 8

ADOPTED