

Assistant Communications Cable Worker Task List (2017)

Installation, Repair, and Maintenance of Overhead and Underground Communications Cable

1. Secures a crossarm to a power pole using tools such as screwdrivers and power drills to tighten bolts and screws and then installs hardware for cable attachment such as three bolt clamps with a J-hook using a hammer, power drill, or impact wrench in order to hold communication cables in place.
2. Installs or attaches a messenger cable to a utility pole, crossarm or other hardware using a hoist to tension the line and then installs a down guy to a down guy anchor into the ground in order to backup or support the cable messenger.
3. Sets-up plastic conduit risers by stacking one on top of the other and nailing them to the power pole in order to transition underground cable to overhead cable.
4. Feeds a rod through a duct, either by hand or with a rodding machine, and then pulls the rod back out after the string or rope has been attached to the rod in order to pull cable through conduit to facilitate the repair or installation of underground cable.
5. Attaches a regulator valve to a nitrogen bottle and a hose to the Schrader valve on the cable in order to maintain proper cable pressurization.
6. Trims trees using a hand or power saw in order to remove tree debris affecting or having the potential to affect communication lines such as causing signal disruption and/or to clear the surrounding area for the installation or repair of overhead cables.
7. Inspects underground or confined spaces for water prior to entering the area and uses a centrifugal pump to remove excess water, if necessary, in order to perform work with minimal interference and to protect exposed wire or cable from water.

Testing Procedures and Equipment

8. Tests copper and fiber-optic cables at the completion of installation or when performing maintenance or repairs using test equipment such as a tone generator, optical time domain reflector (OTDR), fluke meter, voltmeter, ultrasonic leak detector, or inductance amplifier and then reads and interprets the data and graphs displayed on such devices or listens for distinguishing sounds depending on the type of equipment used in order to verify continuity, locate a leak, determine loss, distance, and splice points of individual fibers, or identify

disruptions, shorts, grounds or faults in the cable to report such information to the supervisor and/or take necessary corrective action to repair the cable.

9. Installs a Schrader valve into copper cable using a knife to puncture the outer sheath of the cable, a file to sand or roughen the area, and scotch coat (C-cement), rubber or electrical tape to make the cable air tight in order to create a test point on the cable.
10. Attaches a hose to the Schrader valve on the copper cable or splice case to apply gas pressure and take gas pressure readings at intervals along the communication cable using a pressure gauge in order to ensure the splice case or cable is gas tight, locate potential areas of pressure leaks, document the gas pressure reading findings on graph paper, report findings to supervisor, and take corrective actions, if necessary, such as repairing cables.

Grounding

11. Hammers a ground rod into the ground next to a telephone or utility pole using tools such as a double jack sledge hammer, jackhammer, hydraulic driver, or manual ground rod driver and then attaches a ground wire to the ground and runs the ground wire to the messenger using clamps or Kearneys in order to discharge electrical currents.
12. Hammers galvanized or copper coated staples around wooden molding placed over ground wire in order to isolate and secure wire on wooden poles and protect the public from exposure.

Terminating and Splicing Cables

13. Installs, mounts, and fastens highband blocks, Hubble cabinets, connecting blocks, terminal blocks, fanning strips, D-rings, cable clamps, and other communications components using tools such as cordless drills, screwdrivers, or nut drivers in order to prepare for terminating or splicing copper cable and assist in setting-up a cable termination point.
14. Opens and exposes wire pairs, installs an air dam to seal the cable by manually mixing polyurethane resin or sealing compound together, and then punches down wire pairs on terminal blocks or wraps the end of the individual wire pairs to terminal lugs and tightens lug nuts in numerical order in order to terminate copper cables.
15. Opens single or multi-mode fiber cable and prepares for termination or splicing using tools such as communications scissors, wire strippers, ringers, cleavers, miller tool strippers, and alcohol for cleaning and then terminates or splices fiber cable using mechanical connectors or by fusion splicing a pre-manufactured termination connector in order to establish a termination point.

16. Splices copper cable by placing the ends of colored wires through a pic-a-bond tool with a pic-a-bond connector or other splicing device to cut off excess wire and create a crimp and then covers spliced area with a splice case and supports the cable, in a graduated sequence, using bands and spacers from the splice case to where the cable and the messenger meet in order to relieve stress from the cable.

Safety

17. Climbs telephone or utility poles using safety equipment such as a lineman's belt and gaffs in order to perform overhead communications work such as the installation, maintenance, or repair of communication cables.
18. Secures the area surrounding a job site by setting up traffic and pedestrian control devices such as cones, sign trucks, and flag stands in accordance with Cal-OSHA and Department of Transportation rules and regulations in order to ensure safety of oneself and others when working in the field to install or repair overhead and underground communication cables.
19. Adheres to department and Cal-OSHA safety rules and regulations when installing, repairing, and removing overhead and underground cables by wearing appropriate personal protective equipment such as hard hats, flame resistant clothing, safety belts, safety glasses, and gloves in order to ensure safety of oneself.
20. Observes work area for possible hazards such as exposed or live wires and takes necessary corrective measures such as reporting such information to the supervisor in order to ensure safety of oneself and others.
21. Assesses any safety issues and concerns including accidents and takes appropriate action based on department and Cal-OSHA safety rules and regulations such as calling 911, the electric trouble board, and the Voice Operations Center (VOC), keeping an injured individual immobilized, removing an individual from an energized circuit using a non-conductive object, or waiting until the power is turned off before taking any further action in the event of a work-related accident such as a crewmember falling from a ladder or telephone phone or being electrocuted while installing, repairing, and/or removing overhead and underground communication cables in order assist the injured individual while also ensuring safety of oneself.
22. Ventilates underground or confined spaces such as substructures or vaults prior to and while working in the area using an air blower in order to ensure oxygen levels are in accordance with the range prescribed by Cal-OSHA for safety of oneself and others.

23. Tests the oxygen and explosive gas levels in confined spaces such as substructures or vaults prior to and while working in the area using a gas-tech or other test instrument to determine if it is safe to enter and be in the workspace, or if it is necessary to evacuate depending on if the levels are within the range prescribed by Cal-OSHA rules and regulations.

Equipment Operation

24. Lifts and lowers crewmember and their tools by maneuvering the hand controls of a bucket truck to raise and lower the upper boom or stinger and position the bucket at different heights and distances in order to facilitate the installation and repair of overhead communication cables.
25. Drives a stake bed or liftgate truck to and from a job site in order to transport tools, equipment, and materials such as nitrogen bottles, tool boxes, portable machinery, jack stands, air machines, cable, and other cable equipment necessary to repair and install overhead and underground communication cables.

Communication

26. Communicates with journeymen, supervisors, station operators, Load Dispatchers, and staff located at the Voice Operations Center (VOC), in-person or using a walkie-talkie, Lineman's Test Set, or telephone, in order to request authorization to work in a specific location, report entry or departure from a secured location, report when a crewmember is injured, and/or to receive instructions or provide information regarding daily assignments such as the equipment or methods to be used for different tasks or the nature of a communications-related problem and where it is located.

Other Related Job Tasks

27. Lifts tools and equipment including jackhammers and water filled splice cases weighing up to 100 lbs. using proper material handling equipment, such as forklifts, pallet jacks and cranes or manual lifting techniques, such as bending at the knees in order to move or transport the equipment from one area or job site to another to facilitate the repair and installation of communication cables.