

WAC 296-32-23518 Wood or other types of poles. (1) Need for testing wood poles. Unless temporary guys or braces are attached, the following poles must be tested in accordance with subsection (2) of this section and determined to be safe before employees are permitted to climb them:

Note: When work is to be performed on a wood pole, it is important to determine the condition of the pole before it is climbed. The weight of the employee, the weight of equipment being installed, and other working stresses (such as the removal or retensioning of conductors) can lead to the failure of a defective pole or one that is not designed to handle the additional stresses. For these reasons, it is essential that an inspection and test of the condition of a wood pole be performed before it is climbed.

(a) Dead-end poles, except properly braced or guyed "Y" or "T" cable junction poles;

(b) Straight line poles which are not storm guyed and where adjacent span lengths exceed one hundred sixty-five feet;

(c) Poles at which there is a downward change in grade and which are not guyed or braced corner poles or cable junction poles;

(d) Poles which support only telephone drop wire; and

(e) Poles which carry less than ten communications line wires. On joint use poles, one power line wire must be considered as two communication wires.

(2) Testing of wood poles.

(a) The employer must develop test methods that can be used in ascertaining whether a wood pole is capable of sustaining the forces that would be imposed by an employee climbing the pole.

(b) The employer must ascertain that the pole can sustain all other forces that will be imposed by the work to be performed.

(c) The following method or an equivalent method must be used for testing wood poles:

(i) Rap the pole sharply with a lineman's hammer, starting near the ground line and continuing upwards circumferentially around the pole to a height of approximately 6 feet. The hammer will produce a clear sound and rebound sharply when striking sound wood. Decay pockets will be indicated by a dull sound and/or a less pronounced hammer rebound. When decay pockets are indicated, the pole must be considered unsafe.

(ii) The pole must be prodded below or as near the ground line as possible using a pole prod or a screwdriver with a single blade at least five inches long, driving it in at a forty-five degree angle towards the center of the pole.

(iii) Apply a horizontal force to the pole and attempt to rock it back and forth in a direction perpendicular to the line. Caution must be exercised to avoid causing power lines to swing together. The force may be applied either by pushing with a pike pole or pulling with a rope. If the pole cracks during the test, it must be considered unsafe.

(d) The pole should be inspected for cracks. Horizontal cracks perpendicular to the grain of the wood may weaken the pole. Vertical ones, although not considered to be a sign of a defective pole, can pose a hazard to the climber, and the employee must keep his or her gaffs away from them while climbing.

(e) The presence of any of these conditions is an indication that the pole may not be safe to climb or to work from. The employee performing the inspection must be qualified to make a determination as to whether or not it is safe to perform the work without taking additional precautions.

(f) Unsafe poles or structures.

(i) Poles or structures determined by a qualified employee to be unsafe by test or observation may not be climbed until made safe by guying, bracing or other means.

(ii) Poles determined to be unsafe to climb must, until they are made safe, be marked in a conspicuous place to alert and warn all employees of the unsafe condition and the owner of the pole must be notified of its condition.

(3) Handling poles near energized power conductors.

(a) Qualified employees permitted to set, remove or handle poles which could inadvertently encroach the minimum approach distance must be trained in:

(i) The proper use of the special precautionary techniques;

(ii) Personal protective equipment;

(iii) Insulating and shielding materials;

(iv) Insulated tools for working near exposed energized parts or overhead electrical lines and equipment;

(v) Skills and techniques necessary to determine the nominal voltage of exposed live lines and parts; and

(vi) The minimum approach distances in Table 6 of this section.

(b) A designated employee other than the equipment operator must observe the approach distance to exposed lines and equipment and give timely warnings before the minimum approach distance required by Table 6 of this section is reached, unless the employer can demonstrate that the operator can accurately determine that the minimum approach distance is being maintained.

(c) Where a hazard of a power contact exists, due to use of long handled tools, proper rubber equipment must be used.

(d) Joint use poles may not be set, moved, or removed where the nominal voltage of open electrical power conductors exceeds 34.5 kV phase to phase or 20 kV phase to ground.

(e) Poles that are to be placed, moved or removed during heavy rains, sleet or wet snow in joint lines carrying more than 8.7 kV phase to phase voltage or 5 kV phase to ground must be guarded or otherwise prevented from any contact with overhead energized power conductors.

(f)(i) In joint lines where the power voltage is greater than 600 volts but less than 34.5 kV phase to phase or 20 kV phase to ground, wet poles being placed, moved or removed must be insulated with either a rubber insulating blanket, a fiberglass box guide, or equivalent protective equipment.

(ii) In joint lines where the power voltage is greater than 8.7 kV phase to phase or 5 kV phase to ground but less than 34.5 kV phase to phase or 20 kV phase to ground, dry poles being placed, moved, or removed must be insulated with either a rubber insulating blanket, a fiberglass box guide, or equivalent protective equipment.

(iii) Where wet or dry poles are being removed, insulation of the pole is not required if the pole is cut off two feet or more below the lowest power wire and also cut off near the ground line.

(g) Insulating gloves must be worn when handling the pole with either hands or tools, when there exists a possibility that the pole may contact a power conductor. Where the voltage to ground of the power conductor exceeds 15 kV to ground, Class II gloves (as defined in ASTM D 120-09a) must be used. For voltages not exceeding 15 kV to ground, insulating gloves must have a breakdown voltage of at least 17 kV.

(h) The guard or insulating material used to protect the pole must meet the appropriate three-minute proof test voltage requirements contained in:

(i) ASTM D 178-01, 2010, Standard Specification for Rubber Insulating Matting;

(ii) ASTM D 1048-12, Standard Specification for Rubber Insulating Blankets;

(iii) ASTM D 1049-98, 2010, Standard Specification for Rubber Insulating Covers; and

(iv) ASTM F 712-06, 2011, Standard Test Methods and Specifications for Electrically Insulating Plastic Guard Equipment.

(i) Reserved.

(j) If, during operation of the mechanical equipment, the equipment could become energized, the operation must also comply with at least one of the following:

(i) The energized lines must be covered with insulating protective material that will withstand the type of contact that might be made during the operation.

(ii) The equipment must be insulated for the voltage involved. The equipment must be positioned so that its uninsulated portions cannot approach the lines or equipment any closer than the minimum approach distances specified in Table 6 of this section.

(iii) Each employee must be protected from hazards that might arise from equipment contact with the energized lines. The measures used must ensure that employees will not be exposed to hazardous differences in potential.

(k) When there is a possibility of contact between the pole or the vehicle-mounted equipment used to handle the pole, and an energized power conductor, the following precautions must be observed:

(i) Employ insulating protective equipment or barricades to guard against any hazardous potential differences.

(ii) When on the vehicle which carries the derrick, avoid all contact with the ground, with persons standing on the ground, and with all grounded objects such as guys, tree limbs, or metal sign posts. To the extent feasible, remain on the vehicle as long as the possibility of contact exists.

(iii) When it is necessary to leave the vehicle, step onto an insulating blanket and break all contact with the vehicle before stepping off the blanket and onto the ground. As a last resort, if a blanket is not available, the employee may jump cleanly from the vehicle then take short steps or shuffle away from the vehicle.

(iv) When it is necessary to enter the vehicle, first step onto an insulating blanket and break all contact with the ground, grounded objects and other persons before touching the truck or derrick.

(4) Working position on poles or structures. Climbing and working is prohibited above the level of the lowest electric power conductor on the pole or structure (exclusive of vertical runs and street light wiring), except:

(a) Where communications facilities are attached above the electric power conductors, and a rigid fixed barrier is installed between the electric power facility and the communications facility; or

(b) Where the electric power conductors are cabled secondary service drops carrying less than 300 volts to ground and are attached forty inches or more below the communications conductors or cables.

(5) Neither the employer nor the employees shall throw or permit anything to be thrown from elevated position(s) or poles to the ground or lower level, nor shall anything be thrown from the ground or lower

level to an elevated position, whether that elevated position is on a pole, tower, aerial manlift or otherwise. Tools and loose materials must not be left on poles, towers, ladders or other elevated structures or positions.

(6) Other elevated locations. Approved harnesses and lanyards or lineman's belts and straps must be worn when working at elevated positions on poles or similar structures, which do not have guarded work areas.

(7) Installing and removing wire and cable. Before installing or removing wire or cable, the pole or structure must be guyed, braced, or otherwise supported, as necessary, to prevent failure of the pole or structure.

(8) Avoiding contact with energized power conductors or equipment. When cranes, digger derricks, or other mechanized equipment are used for setting, moving, or removing poles, all necessary precautions must be taken to avoid contact with energized power conductors or equipment by maintaining the minimum approach distance applicable to the voltage located in Table 6 of this section.

(9) Support structures.

(a) No employee, or any material or equipment, shall be supported or permitted to be supported on any portion of a pole structure, platform, ladder, walkway or other elevated structure or aerial device unless the employer ensures that the support structure is first inspected by a competent person and it is determined to be strong, in good working condition and properly secured in place.

(b) Employees must not throw anything from pole to ground, from pole to pole or from ground to pole.

(10) Power exposures.

(a) The employer must ensure that no employee approaches or takes any conductive object closer to any electrically energized overhead power lines and parts than prescribed in Table 6 of this section unless:

(i) The energized parts are insulated or guarded from the employee and any other conductive object at a different potential; or

(ii) The power conductors and equipment are deenergized and grounded.

(b) While handling communication wires, metal sheaths, or communication equipment, contact must be avoided with street lamp brackets, trolley span wires, power guys, and any other power equipment that may be energized. The safest possible working position must be assumed before starting work.

(c) Communication employees must never work in the pole space on jointly used poles between normal primary and secondary attachments.

Table 6
Minimum Approach Distances to Exposed Energized Overhead Powerlines and Parts

Voltage in Kilovolts Phase-to-Phase or Phase-to-Ground	Distance to Employee Phase-to-Phase or Phase-to-Ground (ft-in)
0 to 0.050	Not Specified
0.051 to 0.300	Avoid Contact
0.301 to 0.750	1-6
0.751 to 15	3-0

15.1 to 36.0	3-6
36.1 to 46.0	4-0
46.1 to 72.5	4-6
Voltage in Kilovolts Phase-to-Phase or Phase-to-Ground	Distance to Employee from Energized Part Without Tools Phase-to-Phase or Phase-to-Ground (ft-in)
72.6 to 121	5-6
121.1 to 145	6-6
145.1 to 169	7-0
169.1 to 242	10-6
242.1 to 362.0	15-6
362.1 to 420.0	18-4
420.1 to 550.0	22-0
550.1 to 800.0	27-9

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 20-20-109, § 296-32-23518, filed 10/6/20, effective 11/6/20. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060, and chapter 49.17 RCW. WSR 17-20-069, § 296-32-23518, filed 10/2/17, effective 1/1/18.]