

SAFETY SMART. KNOW THE LAW.

ATTENTION:

This document is a brief overview only. Please take the time to read completely through the full text of each related regulation. To assist contractors with compliance with OSHA's Crane and Derrick final rule, OSHA has developed a webpage containing fact sheets, frequently asked questions, a presentation covering the final rule and other important information.

This information can be found online at:
[osha.gov/cranes-derricks](https://www.osha.gov/cranes-derricks)

Other OSHA regulations can be found online at:
[osha.gov](https://www.osha.gov)

FOOTNOTES

¹ Code of Federal Regulations, Title 29, Part 1910.180, 1910.333, 1926.416, 1926.417 and 1926.550

² Occupational Safety and Health Administration Small Entity Compliance Guide for Final Rule for Cranes and Derricks in Construction

³ DEENERGIZE AND GROUND: The employer must rely on the power line's owner or operator to take these steps. You must assume that all power lines are energized unless the utility owner/operator confirms that the power line has been and continues to be de-energized and the line is visibly grounded at the work site



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ONCOR.
SAFETY SMART



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Oncor wants you to be aware of the dangers of making contact with power lines. Electricity, powerful enough to kill, will flow through any metal or other conductive object and an electric arc flash can occur if a conductive object gets too close or touches electric lines.

For this reason special care must be taken when working near power lines. No one should ever let any object touch an electric line except trained personnel using tools and equipment especially made for this purpose, which have been properly maintained, tested and inspected.

If it is possible during the course of work for someone to move to, or place any objects, within **TEN feet*** of any high voltage overhead electric line you must first notify the operator of that electric line (at least 48 hours in advance of beginning any planned work closer to the line than those distances) and arrange with the operator for permission to complete the work. For lines to be turned off, moved, or other arrangements, contact Oncor.

*** WARNING – this distance should be increased for voltages above 50KV (see #4 of Excerpts from OSHA regulations).**

Texas Health and Safety Code, Chapter 752:

If a violation of these requirements results in physical or electrical contact with a high voltage overhead electric line, persons who committed that violation are liable to the owner or operator of the line for all damages to the facilities and for all liability that the owner or operator incurs as a result of the contact.

The federal Occupational Safety and Health Administration (OSHA), and the National Electric Safety Code (NESC) also regulate or impose minimum clearance restrictions, relating to work on or around high voltage overhead electric lines as well as special requirements for Cranes and Derricks. Local codes and ordinances may also apply.

**FEDERAL LAW:
EXCERPTS FROM OSHA REGULATIONS ¹**

- 1. Employers must establish safety-related work practices to protect employees against the danger of contacting power lines.
- 2. Before any work is begun, the employer must determine whether the work may bring any worker, tool, or machines near a power line. If so, the employer must post warning signs, advise employees of the location of the lines, the hazards involved, and protective measures to take.
- 3. Every power line must be treated as energized unless and until the utility indicates that it is not energized.
- 4. For power lines of 50,000 volts and below, a worker or any part of a conductive material, tool, piece of equipment or machine must not come within ten (10) feet of an energized line. For power lines above 50,000 volts, this minimum clearance requirement increases four (4) inches for every 10,000 volts.
- 5. The only exception to these requirements is when the parties responsible for the work have effectively guarded against the danger of contacting the lines. Those parties responsible for the work must notify the electric utility at least 48 hours BEFORE the work begins to arrange for measures to guard against contact with the lines. The work may not begin until those parties and the utility have negotiated and taken proper safety precautions, such as de-energizing the lines.
- 6. Responsible parties that violate these requirements could subject to criminal penalties. In addition, if a violation results in contact with a power line, they are also liable to the utility for all damages and liability it incurs due to the contact.

**EXCERPTS FROM OSHA'S CRANE AND
DERRICK REGULATION ²**

The first step – could the crane get closer than 20 feet to a power line? Keeping a safe distance from power lines is the key to preventing power line accidents. Therefore, the first step you must take when planning to operate a crane on a site where a power line is present is to identify the crane's work zone and use that work zone to determine how close it could come to the power line.

If you determine that no part of the crane, load, or load line could get closer than 20 feet to a power line, no further precautions are required. If the initial plan for the crane's use changes during the project, you must reevaluate whether the equipment could get closer than 20 feet to the power line.

[Note: If the line's voltage is over 350,000 volts, a 50-foot, rather than 20-foot, minimum clearance must be maintained. This Guide assumes that the voltage is less than 350,000 volts and uses the 20-foot clearance distance.]

Alternative to 20-foot clearance (Table A):

If you know the line's voltage, you may use the minimum clearance distance in Table A in lieu of 20 feet.

TABLE A (ABBREVIATED) Minimum Clearance Distances to 350kV	
VOLTAGE (Nominal, Alternating Current)	MINIMUM CLEARANCE DISTANCE (Feet)
50 kV and below	10 feet
Over 50kV to 200kV	15 feet
Over 200kV to 350kV	20 feet

One way to determine the line's voltage is to ask the line's owner or operator. The utility must respond to such a voltage inquiry within two working days.

If you use Table A to determine the minimum clearance distance, you must determine whether any part of the crane, load, or load line could get closer than the Table A distance to a power line if the equipment is operated up to its maximum working radius in the work zone.

If you determine that part of the crane, load, or load line could come closer to the power line than the required minimum clearance distance (either 20 feet or the Table A clearance), you must either **de-energize and ground the line** or take specified steps to **maintain the required minimum clearance distance.**³