High voltage accidents occur when workers don’t plan properly. In construction there are plenty of opportunities to make contact with a high voltage source. Landscapers planting trees and shrubs, antenna installations, roofer installing roofing materials, crane operations, scaffold building, underground utility work, and dump trucks unloading are just a few that can cause problems.

One of the biggest killers in the industry is power lines. Frequently they are strung overhead and attached to power poles providing primary and secondary service to homes, businesses, and construction sites. Always provide for safe clearances when working near electric lines. Keep the lines in your sight or have a worker designated as the spotter. Consider all lines “hot” even though they look safe. NEVER, NEVER touch a rig in motion near electric lines and keep co-workers and bystanders away.

Another area of concern is underground electric lines. More and more of them are being installed around the country. These lines can be severed or damaged and electrical injury is a real danger. To prevent this type of accident, the local utility locator service should be contacted. On average they require 72 hours notice to come out and locate the buried cables. Play it safe, contact them early and follow their locator stakes.

Should contact be made, keep everyone clear of the piece of equipment and any load it may be handling, and beware of fallen wires or cables. The operator should stay on the rig and move it away from the line if possible. Don’t touch anyone who is in contact with the rig or load. Contact the local power company at once. If necessary, contact local emergency personnel.

OSHA has specific regulations covering minimum distances from electric lines. They can be found in Subpart K - Electrical and Subpart N - Cranes. As a rule of thumb, for lines rated 50KV or below, minimum clearance between the lines and any part of the crane or load shall be 10 feet.

OSHA’s Subpart K addresses electrical safety requirements that are necessary for the practical safeguarding of employees involved in construction work and is divided into four major divisions and applicable definitions, as follows:

1. Installation Safety Requirements include such categories as electric equipment, and installations used to provide electric power and light on jobsites.
2. Safety-Related Work Practices cover hazards arising from the use of electricity at jobsites, also covering the hazards arising from the accidental contact, direct or indirect, by employees with all energized lines, above or below ground, passing through or near the jobsite.
3. Safety-Related Maintenance and Environmental Considerations, such as hazardous
locations involving excess dust, ignition sparks, explosions, gases, fumes, vapors, liquids, etc.
(4) Safety Requirements for Special Equipment such as batteries and battery charging procedures.

If you want the facts about electrical hazards, and how to control them (the hazards), read through there Federal standards, and you’ll see that OSHA’s guidelines will help you understand the countless electrical hazards that literally surround you on almost every construction jobsite.

By following the rules, we can prevent high voltage accidents.

SAFETY REMINDER: BE ALERT AND ALWAYS PREPARED FOR HAZARDS!
SAFETY MEETING #39 - HIGH VOLTAGE ACCIDENTS
TRAINING QUIZ

1. High voltage accidents are totally preventable by planning.
   A. True
   B. False

2. High voltage accidents can happen above or below ground.
   A. True
   B. False

3. Electrical power lines are required to be at least ______ feet above a crane or load.
   A. 8
   B. 10
   C. 12
   D. 20

4. You are required to call a utility locator service for clearance to dig at least _____ hours in advance.
   A. 24
   B. 48
   C. 72
   D. 96

5. When using a dump truck you should not ______________.
   A. Raise your dump bed under power lines
   B. Touch a rig in motion near power lines
   C. Unload without a spotter
   D. All of the above

6. You should never build scaffolds near power lines.
   A. True
   B. False

7. If your rig touches a power line you should ____________.
   A. Stay inside the rig
   B. Keep everyone away from the rig
   C. Move the rig away if possible
   D. All of the above

8. You should always consider all power lines “HOT”.
   A. True
   B. False

9. Landscapers don’t have to worry about high voltage.
   A. True
   B. False
10. Power lines are one of the industry’s biggest killers.
   A. True
   B. False

11. OSHA has specific regulations covering minimum distances from electric lines in ________.
   A. Sub-part K and Sub-part L
   B. Sub-part L and Sub-part N
   C. Sub-part K and Sub-part N
   D. Sub-part G and Sub-part L

12. You can move “hot” high voltage wires if you wear rubber gloves.
   A. True
   B. False

13. Ten feet minimum clearance is required for lines rated at _______ or below.
   A. 10KV
   B. 50KV
   C. 60KV
   D. 100KV

14. Underground utility lines can be damaged by backhoes.
   A. True
   B. False

15. Locator stakes always show exactly where the underground cables are buried.
   A. True
   B. False