Utility Safety Question and Answer

Posted: 07/06/2004

Question:
Are all trucks and equipment near overhead utility wires required to have spotters?

Answer:
All excavation, lifting and similar equipment shall operate under the control of a spotter whenever working within 5 meters (16ft) of an overhead utility wire.

Conclusions:
All excavation, lifting and similar equipment shall operate under the control of a spotter whenever working within 5 meters (16ft) of an overhead utility wire.

Dump truck dump bodies may be raised only under the control of a spotter, unless the vehicle is in an area clearly marked to be free of overhead utility wires.

All equipment and dump trucks are to have warning decals requiring 3.05 m (10 ft) minimum clearance from high voltages.

Dangerous proximity is defined as within 3.05 m (10 ft) for voltages up to 50 kilovolts, and an additional 0.1 m (1 ft) for every 10 kilovolts over 50 kilovolts.

References:
Standard Specification §107-05(O) - "Equipment Safety Procedures" - page 1-89 (lines 28-30) All excavating, lifting and similar equipment shall comply with electrical safety requirements, and shall operate under the control of a spotter whenever working within 5 m (16 ft) of an overhead line.

Standard Specification §107-05(O) - "Equipment Safety Procedures" - page 1-89 (lines 24 and 25) Dump trucks boxes may be raised only under the control of a spotter, unless the vehicle is in an area clearly marked to be free of overhead wires and safe for dumping.

Standard Specification §107-05(J) - "Electrical Safety" - page 1-86 (lines 12-15) the Contractor shall: Ensure employees are not placed in dangerous proximity to high voltage. Dangerous proximity is defined as within 3.05 m (10 ft) for voltages up to 50 kilovolts, and an additional 0.1 m (1 ft) for every 10 kilovolts over 50 kilovolts.

Standard Specification §107-05(J) - "Electrical Safety" - page 1-86 (line 18) - the Contractor shall: Post warning decals on any equipment regarding 3.05 m (10 ft) minimum clearance.

Standard Specification §107-05(J) - "Electrical Safety" - page 1-86 (lines 19 and 20) - the Contractor shall: Ensure that when any equipment operator is unable to assess clearances, a spotter observes for clearance and directs the operator.
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Question:
What overhead utility safety issues are to be included in a project safety and health plan?

Answer:
An overhead utility plan shall include:

- Notify Utility to identify overhead utility voltages and required clearances prior to work.
- Process to inform workers of overhead utility hazards and precautions to prevent contact.
- Ensuring workers are not placed in dangerous proximity (within 3.05 meters (10')) to high voltage.
- Contacting the Utility to identify energized facilities and determine the need to protect the facility against accidental contact.
- Conspicuously marking and maintaining marks of the location of overhead utilities.
- Post Warning decals on equipment/trucks regarding 3.05 meter (10') minimum clearance.
- Ensuring a spotter observes clearance and directs equipment/truck operator where an operator is unable to assess clearances.

References:
Standard Specification §107-05(J) - "Electrical Safety" - page 1-86. Pursuant to the High Voltage Proximity Act, for all electrical systems carrying 600 volts or more, the Contractor shall:

- Notify the Utility at least 5 working days before any work begins which requires the Utility to identify voltages and clearances, or de-energize, insulate or relocate lines.
- Ensure employees are not placed in dangerous proximity to high voltage. Dangerous proximity is defined as within 3.05 m (10ft) for voltages up to 50 kilovolts, and an additional 0.1m for every 10 kilovolts over 50 kilovolts. Dangerous proximity applies to the individual and any conductive object.
- Inform employees of the hazards and corresponding precautions when working near high voltage.
- Post warning decals on equipment regarding 3.05 m (10ft) minimum clearance.
- Ensure that when any equipment operator is unable to assess clearances, a "spotter" observes for clearance and directs the operator.
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**Question:**
What precautions must be undertaken for overhead utility safety prior to the start of work?

**Answer:**
Prior to the start of work the contractor shall identify existing facilities and reference prominent physical features where contact with energized electrical systems is possible, as well as conspicuously mark all overhead wires and remind workers of safeguards and precautions prior to beginning any nearby work. **Examples:**

Utility Identification:
(note: Utility Identification should describe the general area of overhead utility conflicts, but may describe an isolated overhead utility conflict)
General area having number overhead utilities conflicts including electric, telephone, cable TV:

- Main Street entire length between 1st Avenue and 10 Avenue Isolated Overhead Electrical Wires
- I-495, 100 feet west of Main Street

**Precautions:**
- Use of flowboy trucks
- All overhead utilities will be marked with paint 10 feet in advance of the approaching utility and 10 after passing the approaching utility.
- All trucks with raising dump bodies with be posted with warning decals.
- Spotters will be with all trucks with raised truck beds at all times.
- All trucks with raising dump bodies will have dump bodies lowered as the front of the truck approaches 10 feet in advance of approaching utility and remain down until the back of the truck is 10 feet beyond the overhead utility.

**References:**
Standard Specification §107-05(J) - "Electrical Safety" - page 1-86 Prior to the start of work where contact with energized electrical systems is possible, the Contractor shall identify existing facilities and reference their location to prominent physical features...Energized electrical lines or equipment shall be conspicuously marked and workers shall be reminded of their locations and the safeguards and precautions to be taken prior to beginning any nearby work that may cause the workers to approach electrical lines. New employees shall be informed of electrical hazards and proper precautions and procedures.