EQUIPMENT NEAR ENERGIZED LINES

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1. PURPOSE

a. This program is written to comply with local regulatory requirements and provide directives to managers, supervisors, and employees about their responsibilities in the operations and management of **H2 Enterprises, LLC (H2)** mobile equipment near energized lines.

2. SCOPE

a. This program applies to all **H2** employees, temporary employees and contractors. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers **H2** employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

3. UNDERGROUND UTILITIES

a. Before excavating

i. The Project Superintendent (or Designee) shall be responsible for contacting the host- facility operator, utility companies or property owner if in a rural setting, at least 48 hours prior to the start-up of any excavation job to determine, locate, or identify all hidden obstructions like "as-builts", underground pipes or utility service lines such as sewer, telephone, electric, fuel or water. These obstructions are to be protected by suitable means to ensure that machines, equipment or personnel are not allowed to contact them, whether buried underground, or located overhead.

b. During excavation activities

i. When trenching operations are underway and any operator encounters parallel or crossing utilities that have not been specifically addressed, (whether damage has occurred or not), all operations shall immediately stop and the proper utility authorities contacted.

1. Proper supports and precautions shall be provided for existing utility installations.
2. When electric lines are of the direct burial type, a qualified person shall make positive identification of the cable.
3. Mechanical excavating equipment shall maintain a 2-foot clearance from the direct burial cable.
4. When excavation operations approach the location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.

5. While the excavation is open, underground installations shall be protected, supported, or removed as necessary to safeguard employees.

4. OVERHEAD POWER LINES

The purpose of this procedure is to ensure all hazards with respect to moving personnel, equipment, or materials, under or near overhead power lines are identified and controlled to prevent contact with overhead power lines, power poles, or guy wires to ensure a safe work area.

This overhead power lines procedure must be followed whenever personnel or a piece of mobile equipment will be working or moving under or near overhead power lines.

This procedure will be followed during regular business activities as well as throughout an emergency to ensure the employee's health and safety and the environment are not compromised.

a. Plan

   i. Ensure a crossing agreement is in place for construction projects.

   ii. Identify all overhead power lines by reviewing drawings and site visits and determine which lines will create a job site hazard.

   iii. Power lines that are low and may cause a hazard to equipment or personnel must be de-energized and grounded, relocated to a safe height or insulated and guarded by the utility owner and operator.

   iv. Use non-conducting measuring devices to determine the elevation of the power lines.

   v. Identify and mark all overhead power lines that have been determined to be job site hazards.

   vi. Always use high-visibility and non-conductive materials and signage for marking overhead power lines and hazards.

b. Identify and mark all overhead power lines

   i. All power lines that have been identified as job site hazards shall be identified by means of goal posts, flagging and signage. Electrical poles on the ROW which may be too close to the work area must be marked with flagging.

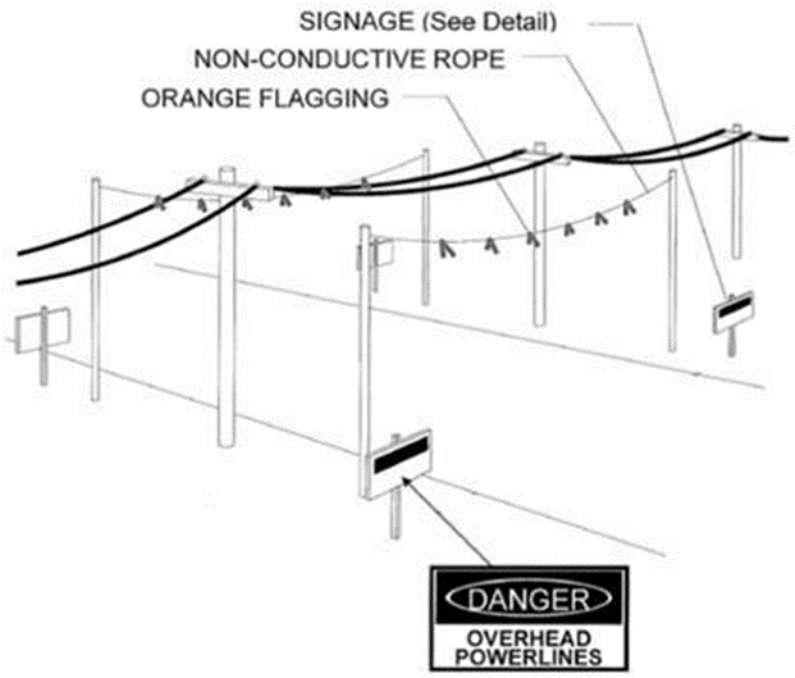
c. Material and signage for marking overhead power lines

   i. Each goal post shall be constructed of appropriate materials. Colored flagging (constructed of a material suitable to withstand damage by rain/wind/sun, etc.) will be suspended between the goal posts, connecting them. The goal posts shall be positioned on the ROW on either side of the power line.

d. All crossings shall have a sign reading:

DANGER OVERHEAD POWERLINE

e. Signs will be of appropriate size and color combination as to be easily seen and read from 50 feet away.



f. Work activity requirements around overhead power lines

i. All activities while working around overhead power lines shall require sufficient personnel to prevent close encounters or contact with the power lines. Power lines with sufficient clearance above ground level that will allow trucks, pick-up trucks, UTV's, busses and similar vehicles to pass well below the colored flagging (that does not exceed minimum separation as required by OSHA) will not require a Spotter.

ii. All other construction equipment movement and operations near overhead power lines will require a Spotter.

iii. The Foreman must conduct a JSA meeting with equipment operator(s) and all other workers who will be in the area of the equipment or load to review the location of the power lines and the steps that will be implemented to prevent encroachment, contact and electrocution.

iv. Designate a Spotter for any work that takes place within the minimum approach distance (in any direction) of overhead power lines. The Spotter shall ensure that anyone approaching the power line is aware of its presence. The Spotter will be equipped with an air horn and shall alert any equipment prior to that equipment's

encroachment of the pre-determined safe operating distance of the power line. The Spotter shall have no other duties or responsibilities during his/her Spotting Duties.

v. If it is determined that any part of the equipment, load line or load could get closer than the minimum approach distance to a power line, then at least one of the following measures must be taken:

1. Ensure the power lines have been de-energized and visibly grounded or insulated guards have been installed by the utility owner/operator.
2. Ensure no part of the equipment, load line or load gets closer than the minimum approach distance to the power line.

g. Maintaining overhead power line safeguards

i. Any time a goal post or sign is knocked down, damaged or removed for work activities, they shall be replaced as soon as is practical, or be guarded by a Spotter until replaced/repaired. If goal posts or signs are moved to accommodate work activities, the party moving them shall replace them when the work is completed, to maintain their warning properties. Foremen shall assume responsibility to insure goal posts are maintained in their work zones.

5. MINIMUM APPROACH DISTANCES

a. Mechanical equipment is operated so the minimum approach distances of 1926.600(a)(6) are maintained, unless operated by a qualified employee. Mechanical equipment shall be operated so that the minimum approach distances are maintained from exposed energized lines and equipment. However, the insulated portion of an aerial lift operated by a qualified employee in the lift is exempt from this requirement. The minimum approach distances are outlined below.

i. For lines rated 50 kV or below, minimum clearance between the lines and any part of the crane or load shall be 10 feet

ii. For lines rated over 50 kV, minimum clearance between the lines and any part of the crane or load shall be 10 feet plus 0.4 inch for each 1 kV over 50 kV, or twice the length of the line insulator, but never less than 10 feet

iii. In transit with no load and boom lowered, the equipment clearance shall be a minimum of 4 feet for voltages less than 50 kV, and 10 feet for voltages over 50 kV, up to and including 345 kV, and 16 feet for voltages up to and including 750 kV

6. PROTECTION FROM HAZARDS

a. Employees will be protected from hazards that might arise from equipment contact with the energized lines. Each employee shall be protected from hazards that might arise from equipment contact with the energized lines. The measures used shall ensure that employees will not be exposed to hazardous differences in potential unless **H2** can demonstrate that the methods in use protect each employee from the hazards that might arise if the equipment contacts the energized line.

b. The critical safety components of mechanical elevating and rotating equipment shall receive a through visual inspection use on each shift.

7. INSULATING MATERIALS

a. The energized line(s) shall be covered with insulating material that will withstand the type of contact that might be made during the operation. The energized lines exposed to contact shall be covered with insulating protective material that will withstand the type of contact that might be made during the operation.

8. OBSTRUCTED VIEWS

a. Vehicles with obstructed views to the rear have a spotter or reverse signal alarm audible above the surrounding noise level. No motor vehicle or earthmoving or compacting equipment having an obstructed view to the rear may be operated on off-highway job sites where any employee is exposed to the hazards created by the moving vehicle, unless:

   i. The vehicle has a reverse signal alarm audible above the surrounding noise level, or

   ii. The vehicle is backed up only when a designated employee signals that it is safe to do so.

9. DESIGNATED SPOTTER

a. A designated employee (spotter) shall observe the approach distances and provide timely warning to the operator if approach distances are compromised. A designated employee other than the equipment operator shall observe the approach distance to exposed lines and equipment and give timely warnings before the minimum approach distance required by paragraph (p)(4)(i) of CFR 1910.269 is reached, unless **H2.** can demonstrate that the operator can accurately determine that the minimum approach distance is being maintained.