

worker beware®

Working Safely Around Utility Lines



Respect the Power of Electricity

- **When you arrive at a job site, always identify power lines and high-voltage equipment, and point them out to coworkers.**
- **Assume *all* overhead power lines are energized**, including service drops running between poles and buildings.
- **Check the site daily** because conditions change.
- **Review your emergency plan** before work begins so that everyone knows what to do in case of power line contact.



For Tools & Equipment Other than Cranes & Derricks Used in Construction: Observe the 10-Foot Rule

- OSHA requires that you keep yourself and your equipment (other than cranes or derricks used in construction) **AT LEAST 10 feet away** from overhead power lines carrying 50 kV or less.
- Higher-voltage lines require greater clearances. Contact OSHA for clearance information.
- If your job requires you to work closer than 10 feet from power lines, call PECO at 1-800-454-4100 well in advance to make safety arrangements.
- Electric safety distances given here are minimums.
- Always use the maximum possible clearance, and clearly mark boundaries to keep workers and equipment the required distance away.

Cranes & Derricks in Construction

- **Cranes and derricks used in construction must remain 20 feet away from lines up to 350 kV** and 50 feet away from lines greater than 350 kV but at or less than 1,000 kV until the operator has taken specific safety measures.
- **As voltage increases, clearance distances also increase.** Consult the OSHA regulations at [osha.gov](https://www.osha.gov) for specific clearance requirements and encroachment precautions.
 - Once you have established the required clearance, clearly mark a boundary with tape, signs or barricades.
- **Whenever cranes or derricks are used in construction on your job site,** contact PECO well in advance at 1-800-454-4100 so that any necessary facility protection arrangements can be made.

Use a Dedicated Spotter



- **Always use a dedicated, qualified spotter on the ground** to safely judge distances between hoisting equipment and power lines.
- **Crane and derrick operators:** You must maintain continuous contact with a dedicated spotter to comply with line clearance requirements.
- **The spotter's only responsibility should be power line safety.** Don't divide the spotter's attention with other tasks.

If Heavy Equipment Contacts a Power Line

- Both the equipment and the line should be considered energized.
- If you can do so safely, move the equipment away from the line.
- It may be safer to stay on the equipment unless there is imminent danger, such as the equipment is on fire.
- Warn others to stay away.
- Call **911** and PECO at 1-800-841-4141.
- If fire or other danger forces you off:
 - Jump clear, keeping both feet together, without touching the equipment and the ground at the same time.
 - Then shuffle away with small steps, keeping both feet close together and on the ground at all times.



Notify 811 Before You Dig

- **Dial 811 or place an online locate request at pa1call.org at least three business days (excluding weekends and state holidays) before you dig or move earth in any way.** They will arrange to have the underground utility lines marked so that you can dig safely.
- **Before you call, pre-mark your proposed dig area with white paint** so that locators can easily identify and mark affected utilities.
- **If you don't notify 811, you risk hitting a natural gas or an electric line,** which has serious consequences, including severe personal injury or death.



**Know what's below.
Call before you dig.**

Wait the Required Time

- In Pennsylvania, wait at least three full business days, excluding the date of your request, weekends and state holidays.
- Before you dig, wait the required time, and confirm with the 811 automated response system that all utility operators have responded.



Conduct a Visual Site Survey

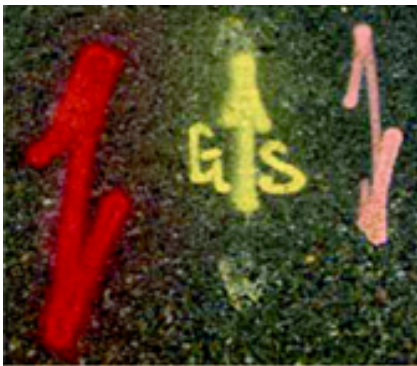










- **Do not rely exclusively on the locate marks.** Look for visual indicators of underground facilities that have not been marked, such as meters, valves and pad-mounted transformers.
- **Check with property owners about any private underground lines** that would not have been marked by the locator.
- **Also check for signs of something buried after the locate was completed,** such as a fresh trench.
 - If you find a newly installed or unmarked facility, call 811.

Dig Safely

- **Respect the locator marks.** Maintain utility indicator marks and follow them when digging.
- **Dig with care.** Have a spotter present to observe the excavation whenever heavy equipment is used.
- **Know the underground utility color code:**

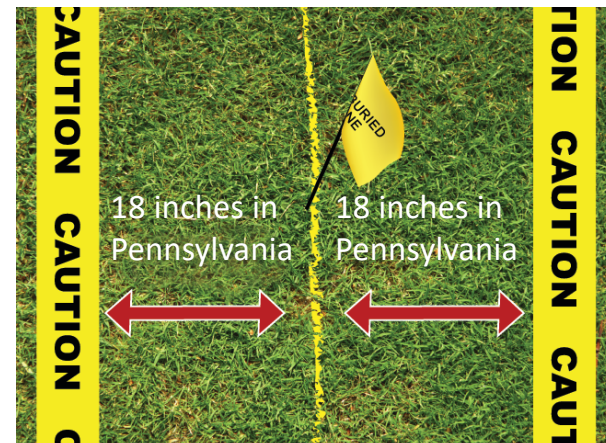
AMERICAN PUBLIC WORKS ASSOCIATION COLOR CODE FOR LOCATOR MARKS



-  Electric power lines
-  Gas, oil, steam
-  Communications lines, cables or conduit
-  Potable water
-  Reclaimed water, irrigation and slurry lines
-  Sewers and drain lines
-  Temporary survey markings
-  Your proposed excavation

Respect the Tolerance Zone

- **Adhere to state laws for digging within the “tolerance zone.”** This safety area spans the width of a marked utility line plus a state-mandated distance from each indicated outside edge of the line: 18 inches in Pennsylvania.
- **Hand dig or use other non-intrusive methods prudently in this zone.**
- **Once visual identification has been achieved,** do not use mechanized digging equipment within 18 inches of the outermost surface of buried utility lines. Use a spotter to observe the excavation and help prevent damage when heavy equipment is used near utility lines.
- **The tolerance zone is a *minimum* safety clearance.** Protect yourself by using the maximum possible distance.



Know When to Stop Digging



- **If you do not understand the locate marks, do NOT dig.**
- **If you cannot visually verify the location of marked utility lines, STOP digging.**
- **If you find unmarked, mismarked or seemingly abandoned facilities, STOP digging.**
- **If you see signs of something buried after the locate was complete, such as a fresh trench, STOP digging.**
- **If the marks fade or are destroyed, STOP digging and contact 811 to request a new ticket.**

Natural Gas Basics

- **Natural gas travels through pressurized underground pipelines of varying diameters.** The size of a gas line is NOT a reliable indicator of the internal pressure.
- **PECO adds a distinctive, sulfur-like odor to natural gas to assist in the detection of leaks.** However, in certain conditions, you may not be able to smell this odorant.
- **Leaking natural gas can be ignited by a tiny flame or spark—even from a lit cigarette or a phone.**



Watch Out Around Pipeline Markers

- **High-visibility pipeline markers indicate the need for extra care** around our high-pressure natural gas transmission pipelines.
- **These markers are general indicators only.** For security purposes, they do not show the exact location, path, number or depth of gas pipelines.
- **The markers should never be used as a substitute for calling 811.**
- **Call the number on the marker if you notice any type of suspicious activity** or construction occurring nearby without gas utility personnel present.



Recognizing a Natural Gas Pipeline Leak

- If digging, grading or excavation of any kind is happening on your job site, **be alert for the signs of a gas pipeline leak:**
 - **A distinctive, sulfur-like odor**
 - **A hissing or roaring sound**
 - **Dirt spraying or blowing into the air**
 - **Continuous bubbling in water**
 - **Dead or dying vegetation (in an otherwise moist area) over or near a pipeline**
 - **Exposed pipelines after fire, flood or other disaster**
 - **A damaged connection to a gas appliance**



Responding to a Natural Gas Pipeline Leak

- **If you suspect a gas leak or if you contact a gas pipeline:**
 - **Leave your equipment behind.** Warn others and leave the area immediately.
 - **Do NOT use matches or lighters, start an engine or operate a radio, phone or any electrical device.** Even a tiny spark could ignite leaking gas.
 - **Do NOT attempt to stop the flow of natural gas or fix the pipeline.** Leave the excavation open.
 - **From a safe location, immediately report the incident to 911 and PECO at 1-800-841-4141.** The law requires you to call 911 if natural gas is escaping.
 - **Stay far away from the area** until utility workers say it is safe to return.
 - **Report the incident to your supervisor.**



Utility Safety Review

- Identify all power lines and electrical equipment upon arrival at a job site. Recheck the site daily.
- Keep yourself and all tools and equipment (other than cranes and derricks used in construction) **AT LEAST 10 feet away** from *all* overhead power lines carrying 50 kV or less.
- Cranes and derricks used in construction may require clearances at or greater than 20 feet and encroachment precautions.
- Always use a dedicated spotter.
- If a power line contact occurs, follow proper safety procedures, and immediately call **911** and PECO at 1-800-841-4141.
- Notify the underground utility locator service by calling **811** or placing an online request before you dig.
- Know the warning signs of a natural gas leak.
- If you contact a natural gas pipeline, leave the area, avoid spark hazards and call **911** and PECO at 1-800-841-4141.

Underground Utility Locator Contact Information

- To reach the underground utility locator service, call **811** or visit **pa1call.org**.



**Know what's below.
Call before you dig.**

Contact Information

- In case of emergency, call PECO at **1-800-841-4141**.
- To schedule work, call PECO at **1-800-454-4100**.
- For additional information, visit our website at **peco.e-smartworkers.com**.

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Thank You

