

Underground utility safety guidelines for excavation



Every year thousands of hits to buried utility lines occur, resulting in serious personal injuries, operational downtime and substantial legal and financial costs. All parties involved in the underground utility business, including one-call centers, utility owners and excavators, share responsibility for minimizing utility strikes. Businesses conducting underground utility work or performing any type of excavation can minimize damage to buried utilities by implementing basic damage prevention procedures.

SAFETY GUIDELINES

- Taking steps during the initial planning stages of an excavation project can save time, money and lives. Pre-construction meetings to discuss project scope and collect key information, including underground utilities, will aid in preventing future incidents. A number of state laws require the designer to notify facility owners upon completion of final designs. Establishing communications and a working relationship with utility owners is extremely beneficial to ensuring accurate locates and mitigating any future damage.
- The excavation area should be pre-marked with white paint stakes or flags. Pre-marking is a technique of communicating where you intend to dig and is a highly recommended practice. Pre-marking, commonly referred to as white-lining, is done using white markings and is performed prior to contacting the one-call. When feasible, initiate the practice of meeting with the locators. Review and clarify excavation plans and locations. This process will help ensure locates are consistent with your plans.
- All existing utilities will be located, marked, and visually verified prior to starting any operation.
- Utility locate services should be contacted a minimum of 48 hours prior to any excavation.
- Traffic signal wires and illumination for intersections are not covered by locate services. It is the superintendent's responsibility to contact the proper authority to locate the traffic signal wires.
- Before excavation operations begin, potholing for the utilities will take place. Potholing is performed to verify the location and depth of the utility lines.

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- The superintendent of the operation will maintain a minimum clearance of 36 inches between a marked and unexposed underground lines and the cutting edge or point of any power operated excavating or earth moving equipment. If excavation is required within 36 inches horizontally of any marking, the excavation will be performed with extreme care utilizing hand tools or vacuum excavation techniques only.
- Do not assume that the utility will continue on the same line and grade. Spotting of lines should continue at various intervals along the excavation route to verify the utility line depths.
- Initiate procedures to document at each job site through all stages of production. Documentation should include an accurate diagram of the worksite, which includes identifying streets, buildings and any other structures, utility locates and permanent locate markers. The diagram should be to scale. Photographs of the site should be taken prior to commencement of work, at the time locates are made, beginning of excavation, uncovering any utility line, work progress, backfilling, and final restoration. Additionally, photos of the actual locate personnel and vehicle tags may be beneficial. Ensure all photos are time stamped. Records should be maintained for an appropriate period of time as designated by your legal counsel.
- In the event of a utility strike, you should have immediate action procedures for your field staff to follow. Review those procedures with your staff on a periodic basis throughout the year. Contact your insurance agent or carrier's claims department as soon as possible. It is important to remember the person dealing with the claim will probably never be on the site, or by the time they are, the conditions will have changed. Conducting a thorough damage investigation provides valuable information for insurance adjusters and, if necessary, legal counsel. A good investigation and documentation preserves job site conditions and details. Photos should be taken at the time of the strike to document the location of the line.

SUMMARY

Anytime excavation is done there is a possibility that an underground utility line will be contacted and damaged. There are steps that can be taken to reduce the potential for these types of losses and mitigate the extent of the loss when this occurs. The above guidelines are provided to assist you in your safety and loss prevention program related to your excavation operations. Should you have any questions or require assistance in implementing a loss prevention program policy for excavation, please contact your United Fire Group (UFG) risk control representative.

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