PennState Physical Plant

Program Highlights

TRENCHING AND EXCAVATION

SEPTEMBER 2019

INTRODUCTION

The purpose of this program is to prevent injuries and accidents from occurring during excavation work that Office of Physical Plant (OPP) performs. This policy will set forth the official practices required for excavations made by the OPP employees on property owned by Penn State University.

TRAINING

A competent person, as defined above, shall be at the excavation site while excavation activities are being performed. To be classified as a competent person, an individual must have attended an approved excavation safety course and received a certificate and/or card indicating successful completion of the course.

INSPECTIONS

The competent person shall conduct inspections:

- Daily and before the start of each shift.
- As dictated by the work being done in the trench. After every rain storm.
- After other events occur that could increase hazards or change conditions, such as snowstorm, windstorm, thaw, earthquake, dramatic change in weather, etc.

Supervisors shall ensure these inspections are being done.

KEY ELEMENTS

- A PA one call shall be completed prior to any ground disturbance.
- When the excavation operation approaches the estimated location of underground utility installations, the exact location of the installation shall be determined by safe and acceptable means (such as hand digging).
- For excavations 5 feet or greater in depth, a trench inspection form shall be completed daily or more often in hazards exist
- All soils at university park shall be classified as Class C soil.
- Trenches 4 feet or more in depth shall be provided with a fixed means of egress.
    - Spacing between ladders or other means of egress must be such that a worker will not have to travel more than 25 feet laterally to the nearest means of egress.
    - Ladders must be secured and extend a minimum of 36 inches above the landing. Metal ladders should not be used when electric utilities are present in the trench.
- Temporary spoil shall be placed no closer than 2 feet from the surface edge of the excavation, measured from the nearest base of the spoil to the edge of the cut

Committed to Safety Excellence

- Tools, materials and equipment shall also be placed at least 2 feet from an excavation
- Employees exposed to vehicular traffic shall be provided with and required to wear vests or other suitable garments marked with or made of reflective or high-visibility materials.
- Only personnel who have been trained in Work Zone and Traffic Control procedures shall be permitted to control traffic by use of flags, barricades and other traffic control devices.
- Employees are not permitted to work under loads being lifted or moved by heavy equipment.
- Employees are required to stand away from equipment that is being loaded or unloaded to avoid being struck by falling materials or spillage.
- Equipment operators or truck drivers may remain in their equipment during loading and unloading if the equipment is properly equipped with a cab shield or adequate canopy.
- Barricades must be installed where necessary.
- Hand or mechanical signals must be used as required.
- Trenches left open overnight shall be fenced and barricaded.
- Employees shall not be permitted to work in hazardous and/or toxic atmospheres. Such atmospheres include those with less than 19.5% oxygen, greater than 23.5% oxygen a combustible gas concentration greater than 10% of the lower flammable limit, or concentrations of hazardous substance that exceed those specified in the Threshold Limit Values for airborne contaminants established by the ACGIH or the OSHA Permissible Exposure Limits.
- When the excavation is open, underground utility installations shall be protected, supported, or removed as necessary to safeguard employees.

REFERENCE

Excavation Safety Program