Striking Underground Assets

Background

Excavation activities can pose a threat to underground utilities such as gas pipelines, water mains, electrical cables, and telecommunication lines. Accidental damage to these assets can result in service disruptions, leaks, or even explosions.

Workers involved in excavation may face the risk of personal injury due to equipment malfunctions, cave-ins, or contact with underground utilities. Inadequate safety measures can lead to accidents, including falls, equipment-related injuries, or exposure to hazardous materials.

High Risk Situations - Electricity

- Contact with a live underground power line can result in electric shock, which may cause severe injuries or even be fatal.
- The ground around the damaged area can become energized, posing a risk to anyone in proximity.
- Damage to the insulation of underground cables can lead to short circuits and sparks, potentially causing fires or explosions.
- The release of flammable substances in the vicinity of the damaged line can increase the risk of fires.

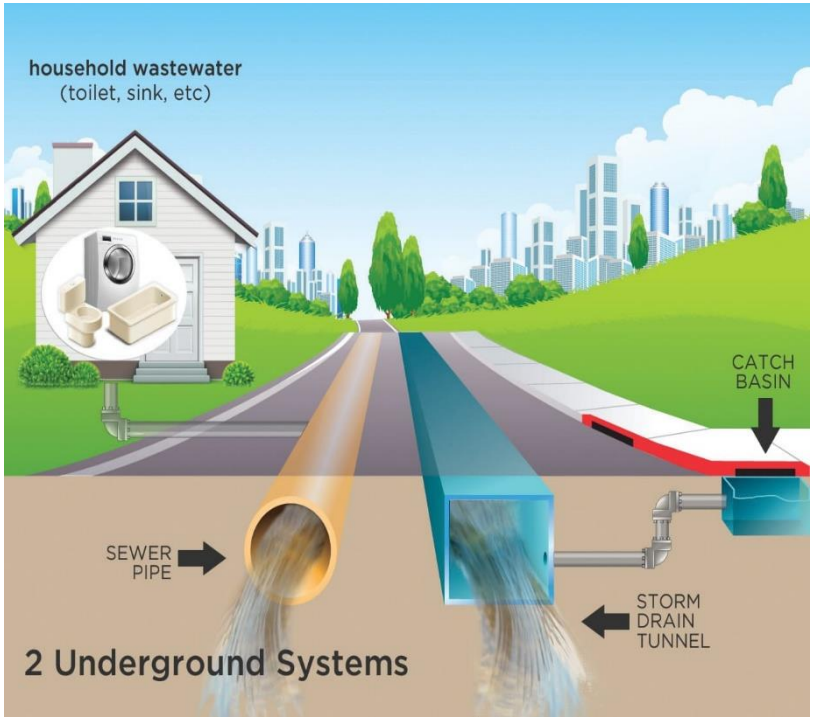
High Risk Situations - Electricity

High Risk Situations - Gas

- Underground gas lines can develop leaks due to corrosion, physical damage, or faulty connections. Gas leaks pose a significant risk as natural gas is flammable and can form explosive mixtures with air.
- If a significant amount of leaked gas comes into contact with an ignition source, it can lead to a fire or explosion. This poses a threat to property, infrastructure, and the safety of individuals in the vicinity.
- In confined spaces or areas with poor ventilation, a leaking gas line can displace oxygen, leading to a reduction in oxygen levels. This can result in asphyxiation for individuals in the affected area.

High Risk Situations - Gas

Other Services - Water & Sewerage



Some Other Services - Communication

Fiber optic cables, telephone lines, and other communication infrastructure are commonly buried to provide reliable connectivity.

The Consequences

Damage to Utilities:

Excavation activities can pose a threat to underground utilities such as gas pipelines, water mains, electrical cables, and telecommunication lines. Accidental damage to these assets can result in service disruptions, leaks, or even explosions.

Service Disruptions:

Accidental damage to underground assets can lead to service disruptions for nearby residents and businesses. This can result in inconvenience, financial losses, and potential legal liabilities for the party responsible for the excavation.

Environmental Impact:

Excavation activities may lead to soil erosion, sedimentation, or the release of hazardous materials into the environment. Contamination of soil or water sources can have long-term ecological consequences.

The Consequences

Cave-Ins:

Excavation sites are susceptible to cave-ins, especially if proper shoring and trenching techniques are not employed. Cave-ins can result in injuries or fatalities for workers within the excavation area.

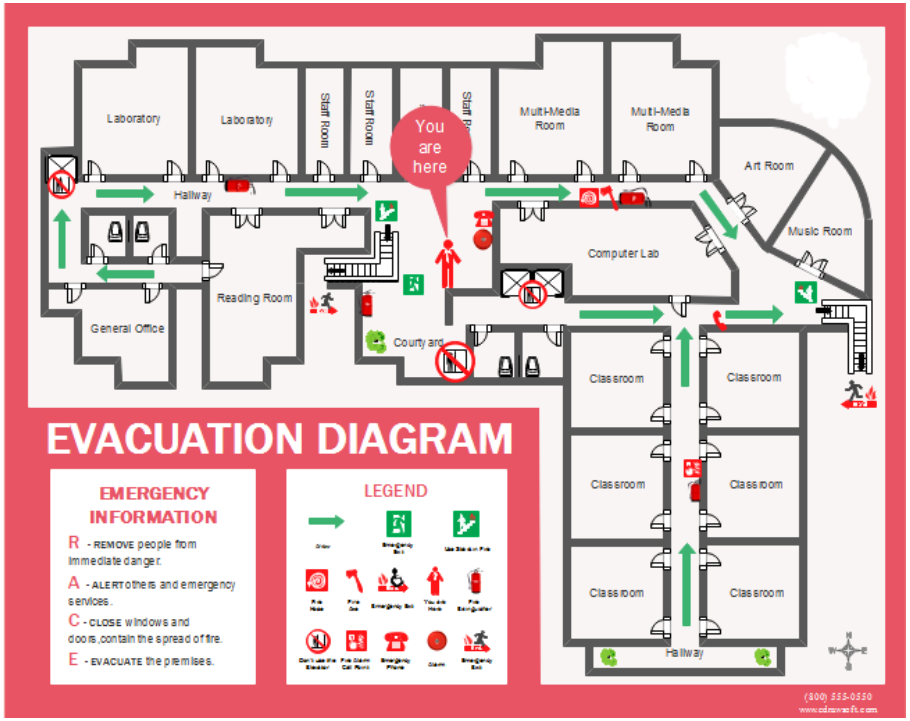
Communication Failures:

Inadequate communication among project stakeholders, including excavators, utility owners, and regulatory agencies, can lead to misunderstandings, delays, and increased risks during excavation.

Regulatory Violations:

Failure to comply with local, state, or national regulations regarding excavation practices and protection of underground assets can result in fines, legal action, and damage to the reputation of the responsible party. **Financial Penalties can be severe.**

When Things Go Wrong – Execute the Site Emergency Response Plan



Evacuation

- ***Ensure you follow these procedures in the event of a fire or evacuation***
  - Be familiar with your work areas and the locations of the Emergency Exits.
  - Know the location of all fire equipment.
  - Know the evacuation procedures and Emergency Assembly Areas.
  - Respond to all evacuation alarms as planned even if you think it is a false alarm or the annual fire drill.
  - Follow the directions of Chief and Emergency Wardens.
  - Report all fires and other serious incidents as per the Evacuation Plan

ISO14001

CERTIFICATION