

Safety Corner

What is underground utility safety?

Without a careful study of the location of underground utility lines, one could accidentally strike high power cable, water main, sewage duct, communication lines, or pipelines carrying dangerous or explosive gases, during an excavating. These accidental encounters with underground utilities can cause property damage, injuries and even death, as well as disruption to business activities. Correctly identifying the presence of underground utilities has become increasingly important as more and more excavation works are being carried out in underground space that is increasingly crowded with utility services.

Although information on the location of underground utility is usually available from the relevant utility companies, challenges exist in obtaining information that is accurate. Information may not be available for older installations, or relevant drawings may not accurately show as-built arrangements. Furthermore, excavation often requires a quick turnaround to meet project progress and minimize impact to business activities and nearby traffic. Workers are often tempted to commence digging before the location of underground facilities can be satisfactorily verified.

There are quite a number of laws and regulations related to the protection of underground utilities, such as HK law Cap 51B G as Safety (Regulation), Cap 406H Electricity Supply Lines (Protection) Regulation, the Telecommunication Ordinance, and the Water Ordinance. Responsible proprietors would also include relevant safety requirements in contracts requiring excavation.

To avoid accident, save costs, protect lives, and enhance project progress, the construction industry has proposed a "4R" approach to accurately locate underground utilities: Right Person, Right Equipment, Right Preparation, and Right Price. The responsible party must appoint skillful personnel with appropriate training and qualifications, use proper equipment, allow reasonable time and allocate adequate resources to ensure underground utilities are properly located. Qualified personnel with recognized training and certification from professional bodies, the development of standards and codes of practice, the standardization of report format and contract requirements can also contribute to the assurance of underground utility safety.

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