

# Excavation Practices

(From CGA's Best Practice Guide 5.0 dated March 2008)

## **5-1: One-Call Facility Locate Request**

The excavator requests the location of underground facilities at each site by notifying the facility owner/operator through the one-call system. Unless otherwise specified in state/provincial law, the excavator calls the one-call center at least two working days and no more than ten working days prior to beginning excavation.

## **5-2: White Lining**

When the excavation site cannot be clearly and adequately identified on the locate ticket, the excavator designates the route and/or area to be excavated using white pre-marking prior to the arrival of the locator.

## **5-3: Locate Reference Number**

The excavator receives and maintains a reference number from the one-call center that verifies the locate was requested.

## **5-4: Pre-Excavation Meeting**

When practical, the excavator requests a meeting with the facility locator at the job site prior to the actual marking of facility locations. Such pre-job meetings are important for major, or unusual, excavations.

## **5-5: Facility Relocations**

The excavator coordinates work which requires temporary or permanent interruption of a facility owner/operators service with the affected facility owner/operator in all cases.

## **5-6: Separate Locate Requests**

Every excavator on the job has a separate one-call reference number before excavating.

## **5-7: One-Call Access (24x7)**

The excavator has access to a one-call center 24 hours per day, 7 days a week.

## **5-8: Positive Response**

The excavator is notified by the underground facility owner/operator of the tolerance zone of the underground facility by marking, flagging, or other acceptable methods at the work site, or is notified that a no conflict situation exists. This takes place after notification from the one-call center to the underground facility owner/operator and within the time specified by state/provincial law.

## **5-9: Facility Owner/Operator Failure to Respond**

If the facility owner/operator fails to respond to the excavator's timely request for a locate (e.g., within the time specified by state/provincial requirements) or if the facility owner/operator notifies the excavator that the underground facility cannot be marked within the time frame and a mutually agreeable date for marking cannot be arrived at, the excavator re-calls the one-call center. However, this does not preclude the excavator from going on with the project. The excavator may proceed with excavation at the end of two working days, unless otherwise specified in state/provincial law, provided the excavator exercises due care in his endeavors.

## **5-10: Locate Verification**

Prior to excavation, excavators verify they are at the correct location and verify locate markings and, to the best of their ability, check for unmarked facilities.

## **5-11: Documentation of Marks**

An excavator uses dated pictures, videos, or sketches with distance from markings to fixed objects recorded, to document the actual placement of markings.

## **5-12: Work Site Review with Company Personnel**

Prior to starting work, the excavator reviews the location of underground facilities with site personnel.

## **5-13: One-Call Reference Number at Site**

The excavator's designated competent person at each job site has the one-call ticket number.

## **5-14: Contact Names and Numbers**

The excavator's designated competent person at each job site has access to the names and phone numbers of all facility owner/operator contacts and the one-call center.

## **5-15: Facility Avoidance**

The excavator uses reasonable care to avoid damaging underground facilities. The excavator plans the excavation so as to avoid damage or minimize interference with the underground facilities in or near the work area.

#### **5-16: Federal and State/Provincial Regulations**

The excavator adheres to all applicable federal and state/province safety regulations, which includes training as it relates to the protection of underground facilities.

#### **5-17: Marking Preservation**

The excavator protects and preserves the staking, marking, or other designations for underground facilities until no longer required for proper and safe excavation. The excavator stops excavating and notifies the one-call center for re-marks if any facility mark is removed or no longer visible.

#### **5-18: Excavation Observer**

The excavator has an observer to assist the equipment operator when operating excavation equipment around known underground facilities.

#### **5-19: Excavation Tolerance Zone**

The excavator observes a tolerance zone which is comprised of the width of the facility plus 18" on either side of the outside edge of the underground facility on a horizontal plane. This practice is not intended to preempt any existing state/provincial requirements that currently specify more than 18".

#### **5-20: Excavation within Tolerance Zone**

When excavation is to take place within the specified tolerance zone, the excavator exercises such reasonable care as may be necessary for the protection of any underground facility in or near the excavation area. Methods to consider, based on certain climate or geographical conditions, include: hand digging when practical (pot holing), soft digging, vacuum excavation methods, pneumatic hand tools, other mechanical methods with the approval of the facility owner/operator, or other technical methods that may be developed. Hand-digging and non-invasive methods are not required for pavement removal.

#### **5-21: Mis-Marked Facilities**

The excavator notifies the facility owner/operator directly or through the one-call system if an underground facility is not found where one has been marked or if an unmarked underground facility is found. Following this notification, the excavator may continue work if the excavation can be performed without damaging the facility, unless specified otherwise in state/provincial law.

#### **5-22: Exposed Facility Protection**

Excavators support and protect exposed underground facilities from damage.

#### **5-23: Locate Request Updates**

The excavator calls the one-call center to refresh the ticket when excavation continues past the life of the ticket (sometimes, but not always, defined by state/provincial law). This recognizes that it is a best practice to define ticket life. If not currently defined in state/provincial law, ticket life would best be 10 working days but not to exceed 20 working days.

#### **5-24: Facility Damage Notification**

An excavator discovering or causing damage to underground facilities notifies the facility owner/operator and the one-call center. All breaks, leaks, nicks, dents, gouges, groves, or other damages to facility lines, conduits, coatings or cathodic protection will be reported.

#### **5-25: Notification of Emergency Personnel**

If the damage results in the escape of any flammable, toxic, or corrosive gas or liquid or endangers life, health, or property, the excavator responsible immediately notifies 911 and the facility owner/operator. The excavator takes reasonable measures to protect themselves and those in immediate danger, general public, property, and the environment until the facility owner/operator or emergency responders have arrived and completed their assessment.

#### **5-26: Emergency Excavation**

In the case of an emergency excavation, maintenance or repairs may be made immediately provided that the excavator notifies the one-call center and facility owner/operator as soon as reasonably possible. This includes situations that involve danger to life, health or property, or that require immediate correction in order to continue the operation of or to assure the continuity of public utility service or public transportation.

#### **5-27: Backfilling**

The excavator protects all facilities from damage when backfilling an excavation. Trash, debris, coiled wire, or other material that could damage existing facilities or interfere with the accuracy of future locates are not to be buried in the excavation.

**5-28: As-Built Documentation**

Contractors installing underground facilities notify the facility owner/operator if the actual placement is different from expected placement.

**5-29: Trenchless Excavation<sup>15</sup>**

All stakeholders adhere to all Best Practices and the general guidelines included in the practice description prior to, during and after any trenchless excavation (as applicable).