STANDARD OPERATING PROCEDURE

Excavation and Trenching SOP

Document no.	SOP-CON-003
Revision	1.0
Owner	Excavation Competent Person
Effective date	September 15, 2026
Review cycle	Every 12 months

1. Purpose

To prevent cave-ins, utility strikes and falls by requiring a permit, a protective system and a competent-person inspection before anyone enters an excavation or trench.

2. Scope

Applies to all excavation and trenching work on the construction site, including utility trenches, foundation excavations and pits of any depth requiring worker entry.

Definitions

Competent person	A person trained and authorized to classify soil, select protective systems and inspect excavations, and who can stop work if a hazard is identified.
Protective system	Sloping, benching, shoring or a shield (trench box) used to protect workers from a cave-in.
Spoil pile	Excavated soil or material stacked beside the excavation, which must be set back from the edge.
Utility locate	The process of marking or confirming the position of underground utilities before digging begins.

3. Responsibilities

Excavation Competent Person	Classifies soil, selects the protective system, inspects the excavation daily and can stop entry if conditions are unsafe.
Equipment Operator	Operates excavation machinery, follows the competent person's instructions and watches for utility markers and spotters.
Laborer	Works in or near the excavation following the protective system and access rules, and reports hazards immediately.
Site Supervisor	Confirms the permit is in place, coordinates utility locates and enforces the exclusion zone around the excavation.

RACI matrix

Activity	Excavation Competent Person	Equipment Operator	Laborer	Site Supervisor
Obtain permit and utility locates	C	I	I	R/A
Classify soil and select protective	R/A	I	I	C

Activity	Excavation Competent Person	Equipment Operator	Laborer	Site Supervisor
system				
Inspect excavation before entry each day	R/A	I	I	I
Maintain barricades and signage	C	-	R	A
Stop work if a hazard is found	R/A	R	R	A

R = Responsible, A = Accountable, C = Consulted, I = Informed

4. Materials and PPE

Materials, tools and systems

- Excavation permit form
- Utility locate request and markings
- Protective system: shoring, trench box or sloping equipment
- Ladder or ramp rated for safe access and egress
- Barricades, fencing and warning signage
- Atmospheric gas monitor for deep or confined excavations
- Daily excavation inspection log

Personal protective equipment

- Hard hat
- High-visibility vest
- Safety boots with toe protection
- Safety glasses
- Gloves

5. Procedure

Step	Task	Owner	Done
5.1	**Request the excavation permit** The site supervisor requests an excavation permit before any digging starts, describing the location, depth and duration of the planned work.	Site Supervisor	☐
5.2	**Complete utility locates** Request underground utility locates and confirm all marked utilities are identified and, where required, verified by hand digging or another safe method before machine excavation begins. **Warning:** Never excavate near an unmarked or unconfirmed utility line.	Site Supervisor	☐
5.3	**Classify the soil and choose a protective system** The competent person classifies the soil type and selects sloping, benching, shoring or a shield sized for the depth and conditions, following the manufacturer's tabulated data or a registered engineer's design.	Excavation Competent Person	☐
5.4	**Set up barricades and signage** Install barricades, fencing and warning signs around the full perimeter of the excavation before it is left open or unattended, including at night.	Laborer	☐
5.5	**Position spoil and equipment safely** Place excavated spoil, materials and equipment back from the edge of the excavation by the setback distance required by the protective system design or local regulations.	Equipment Operator	☐

Step	Task	Owner	Done
5.6	**Provide safe access and egress** Install a ladder, ramp or stairway within the excavation so that no worker has to travel an excessive lateral distance to exit, positioned within the protected zone.	Excavation Competent Person	☐
5.7	**Test the atmosphere in deep excavations** For deep or confined excavations, test the atmosphere for oxygen level and hazardous gases with a calibrated monitor before entry and at intervals during the work.	Excavation Competent Person	☐
5.8	**Inspect before entry each day** The competent person inspects the excavation, protective system, access and surrounding ground at the start of each shift and after any rainfall, vibration or other event that could increase hazards. **Checkpoint:** No worker enters the excavation until the competent person has signed off that day's inspection.	Excavation Competent Person	☐
5.9	**Work within the protective system** Workers stay within the sloped, benched or shielded area at all times while in the excavation, and do not work under suspended loads or unsupported sections.	Laborer	☐
5.10	**Stop work if conditions change** Anyone who notices water accumulation, cracking, slumping soil or an unexpected utility must stop work, exit the excavation and notify the competent person immediately. **Checkpoint:** Work stops immediately if any sign of instability is observed.	Laborer	☐
5.11	**Backfill and reinstate** Backfill the excavation in the sequence and compaction specified in the design, removing the protective system in a controlled manner as backfilling progresses.	Equipment Operator	☐
5.12	**Close out the permit** Confirm the excavation is backfilled, barricades removed and the area reinstated, then sign off and file the completed excavation permit and inspection log.	Site Supervisor	☐

6. Quality checks

- No excavation permit is issued without confirmed utility locates on file.
- Every excavation has a documented soil classification and matching protective system.
- Daily inspection log entries exist for every day the excavation remained open.
- Spoil and equipment are kept back from the edge by the required setback distance.

7. Records

- Excavation permit
- Utility locate confirmation
- Daily excavation inspection log
- Soil classification and protective system design

8. KPIs

- Percentage of excavations with a same-day inspection log entry
- Number of stop-work events related to excavation hazards
- Utility strikes per year

9. Common mistakes

- Entering an excavation before the competent person's daily inspection.
- Piling spoil or parking equipment too close to the excavation edge.
- Skipping a protective system for a trench assumed to be shallow enough.
- Not re-inspecting after rain or nearby vibration from equipment.

10. Revision history

Revision	Date	Description	Reviewed by
1.0	September 15, 2026	Initial release	Ilia Pirozhenko

Approval

Prepared by	Approved by	Date

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