

Sample Excavation Checklist

(To Be Completed by a Competent Person)

COMPETENT PERSON (print):		SIGNATURE:																																				
SITE LOCATION/CROSS STREETS:																																						
DATE:	TIME:	WEATHER:																																				
EXCAVATION DEPTH:		EXCAVATION WIDTH:																																				
<p>SOIL CLASSIFICATION: <input type="checkbox"/> B <input type="checkbox"/> C <i>If no manual/visual test performed, slope/shore for Type "C"</i></p> <table border="0"><tr><td><u>Visual Analysis</u></td><td></td><td><u>Manual Analysis</u></td></tr><tr><td>Estimate Range of Particle</td><td>Observe Soil as Excavated</td><td>Thumb Penetration Test</td></tr><tr><td><input type="checkbox"/> Fine grained = Cohesive</td><td><input type="checkbox"/> Clumps = Cohesive</td><td><input type="checkbox"/> Barely able to penetrate w/thumb pressure</td></tr><tr><td><input type="checkbox"/> Coarse grained = Granular</td><td><input type="checkbox"/> Breaks up easily = Granular</td><td><input type="checkbox"/> Penetrate to back of thumb nail</td></tr><tr><td>Observe Open Excavation</td><td>Water Condition</td><td><input type="checkbox"/> Easily penetrate and mold w/light pressure</td></tr><tr><td><input type="checkbox"/> Layered soils</td><td>Is there water in the excavation?</td><td>Pocket Penetrometer</td></tr><tr><td><input type="checkbox"/> Layers sloped toward excavation</td><td><input type="checkbox"/> Yes</td><td><input type="checkbox"/> 1.5 tsf or greater</td></tr><tr><td><input type="checkbox"/> Fissures/cracks - excavation sides</td><td><input type="checkbox"/> No</td><td><input type="checkbox"/> Greater than 0.5 but less than 1.5 tsf</td></tr><tr><td><input type="checkbox"/> Fissures/cracks - top of excavation</td><td>Water Condition</td><td><input type="checkbox"/> 0.5 tsf or less</td></tr><tr><td>Previously Disturbed</td><td>Equipment/vehicles?</td><td></td></tr><tr><td>Existing utilities/underground structures adjacent to or in excavation?</td><td><input type="checkbox"/> Yes</td><td></td></tr><tr><td><input type="checkbox"/> Yes <input type="checkbox"/> No</td><td><input type="checkbox"/> No</td><td></td></tr></table>			<u>Visual Analysis</u>		<u>Manual Analysis</u>	Estimate Range of Particle	Observe Soil as Excavated	Thumb Penetration Test	<input type="checkbox"/> Fine grained = Cohesive	<input type="checkbox"/> Clumps = Cohesive	<input type="checkbox"/> Barely able to penetrate w/thumb pressure	<input type="checkbox"/> Coarse grained = Granular	<input type="checkbox"/> Breaks up easily = Granular	<input type="checkbox"/> Penetrate to back of thumb nail	Observe Open Excavation	Water Condition	<input type="checkbox"/> Easily penetrate and mold w/light pressure	<input type="checkbox"/> Layered soils	Is there water in the excavation?	Pocket Penetrometer	<input type="checkbox"/> Layers sloped toward excavation	<input type="checkbox"/> Yes	<input type="checkbox"/> 1.5 tsf or greater	<input type="checkbox"/> Fissures/cracks - excavation sides	<input type="checkbox"/> No	<input type="checkbox"/> Greater than 0.5 but less than 1.5 tsf	<input type="checkbox"/> Fissures/cracks - top of excavation	Water Condition	<input type="checkbox"/> 0.5 tsf or less	Previously Disturbed	Equipment/vehicles?		Existing utilities/underground structures adjacent to or in excavation?	<input type="checkbox"/> Yes		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> No	
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TYPE OF PROTECTIVE SYSTEM USED:																																						
<input type="checkbox"/> Sloping <input type="checkbox"/> Benching <input type="checkbox"/> Trench Shield/Box <input type="checkbox"/> Shoring <input type="checkbox"/> Other _____																																						

A Competent Person shall inspect excavations, adjacent areas, and protective systems daily prior to the start of work, as needed throughout the shift, and after every rainstorm or other hazard increasing occurrence. A Competent Person has the authority to remove workers from an excavation immediately.

1. GENERAL INSPECTION OF THE JOB SITE	YES	NO	N/A
A. Surface encumbrances (trees, sidewalks, foundations, etc.) removed or supported			
B. Employees protected from loose rock or soil that could pose a hazard by falling or rolling into the excavation			
C. Hard hats are worn by all employees			
D. Spoils, materials, and equipment set at least 2 feet from the edge of the excavation			
E. Barriers provided at all remotely located excavations, wells, pits, shafts, etc.			
F. Walkways and bridges over excavations 4 feet or more in depth are equipped with standard guardrails and toe-boards			
G. Class II high-visibility reflective warning vest or clothing worn by all employees exposed to public vehicular traffic and other operating equipment			
H. Employees are required to stand away from vehicles being loaded or unloaded			

1. GENERAL INSPECTION OF THE JOB SITE (continued)	YES	NO	N/A
I. Warning systems established and utilized when mobile equipment is operating near the edge of the excavation			
J. Employees are prohibited from going under suspended loads			
K. Employees are prohibited from working on the faces of sloped or benched excavations above other employees			
2. UTILITIES	YES	NO	N/A
A. Utility companies contracted and/or approximate location of utilities marked			
B. Overhead lines located/noted/reviewed and precautions taken to ensure contact does not occur			
C. Underground installations protected, supported, or removed when excavation is open			
3. MEANS OF ACCESS AND EGRESS	YES	NO	N/A
A. Lateral travel to means of egress no greater than 25 ft (excavations 4 ft or more in depth)			
B. Employees protected from cave-in when entering or exiting the excavation			
C. Ladders used in excavations secured and extended 3 ft above the edge of the trench			
D. Structural ramps used by employees designed by a Competent Person			
E. Ramps constructed of materials of uniform thickness, cleated together on the bottom, equipped with non-slip surface			
F. Structural ramps used for equipment designed by a registered professional engineer			
4. WET CONDITIONS	YES	NO	N/A
A. Precautions taken to protect employees from the accumulation of water			
B. Water removal equipment monitored by a Competent Person			
C. Surface water or runoff controlled or diverted away from the excavation			
D. Inspections made after every rainstorm or other hazard-increasing occurrence			
5. HAZARDOUS ATMOSPHERE	YES	NO	N/A
A. Atmospheric testing required? If YES, refer to Confined Space Entry policy. (Testing required where there is a reasonable possibility of an oxygen deficiency, combustible or other contaminant exposing employees to a hazard)			
B. Adequate precautions taken to protect employees from exposures to an atmosphere containing less than 19.5% oxygen and/or to other hazardous atmospheres			
C. Ventilation provided to prevent employees' exposure to an atmosphere containing flammable gas in excess of 10% of the lower explosive limit of the gas			
D. Testing conducted often to ensure that the atmosphere remains safe			
E. Emergency equipment, such as breathing apparatus, safety harness and lifeline, readily available where hazardous atmospheres could or do exist			
F. Employees trained to use personal protective and other rescue equipment			
G. Full body harness and lifeline used and individually attended when entering bell bottom or other deep and confined footing excavations			
6. PROTECTIVE AND SUPPORT SYSTEMS	YES	NO	N/A
A. Protective systems installed without exposing employees to the hazard of cave-ins, collapses, or threats of being struck by materials or equipment			
B. Support systems provided to ensure stability of adjacent structures, buildings, roadways, sidewalks, walls, etc.			
If sloping and/or benching are the <u>only</u> protective systems selected, check here <input type="checkbox"/> and skip C through J.			

6. PROTECTIVE AND SUPPORT SYSTEMS (continued)	YES	NO	N/A
C. Materials and/or equipment for selected support systems based on soil analysis, trench depth, expected loads, and trench parameters			
D. Materials and equipment used for protective systems inspected			
E. Materials and equipment not in good condition have been removed from service			
F. Damaged materials/equipment inspected by a registered professional engineer after repairs and before being placed back into service			
G. Members of support system securely fastened to prevent failure			
H. Members of protective systems extend at least 18 inches above the surrounding area			
I. Material excavated to a level no greater than 2 feet below the bottom of the protective support system, and only if the system is designed to support the calculated loads			
J. Employee(s) prohibited from remaining in a trench box when moved vertically			

Excavations that are sloped and/or benched shall be at an angle not steeper than “maximum allowable slope” for the classified soil type:

Benching cannot be done in Type C soil.

Soil Type	Maximum Allowable Slopes (H:V) For Excavations Less Than 20 Feet Deep
TYPE B	1:1 (45 Degrees)
TYPE C	1.5:1 (35 Degrees)

A registered professional engineer should design excavations that are greater than 20 feet deep.

NOTES: _____

