



Job Name: _____ Job Site Location: _____

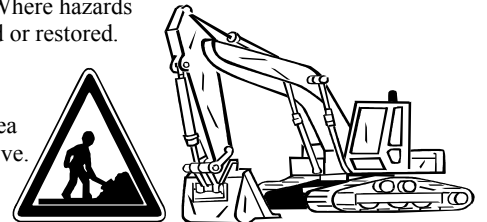
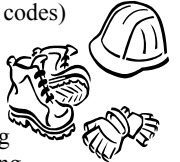
Date: _____ Start Time: _____ Finish Time: _____ Foreman/Supervisor: _____

Topic 152: Trenching Operations

Introduction: Each year in the United States, 80 to 100 workers die in trench cave-ins, and thousands of injuries occur in excavating operations. By far, the largest part of these accidents could have been avoided by following proper trenching techniques. All company personnel involved with trenching operations should become familiar with the regulations and guidelines for safe excavation procedures and processes.

Specific Requirements for Safe Excavation Operations:

- **All surface material** or structures located in such a manner as to create hazards to personnel shall be removed or supported.
- **All underground utilities** in the work area must be located prior to digging.
- **Utility companies** must be notified of your intention to excavate within established, or customary, response times. (Check local codes)
- **When excavations approach** the estimated location of underground utilities, the exact location must be determined and marked by safe and acceptable means. (Usually this is done by a reputable utilities locating and marking service such as "Blue Stake".)
- **While the excavation is open**, utilities must be protected, supported, or removed as necessary to safeguard employees.
- **Structural ramps** which are provided as a means of entry or exit of employees must be designed by a competent person. If using two or more members (planks), they must be connected, of a uniform thickness, and have cleats on the top side to prevent slipping.
- **Structural ramps** used for access of equipment or vehicles must be designed by a person qualified in structural design.
- **A stairway, ladder, or ramp** must be provided for personnel to exit a trench 4 feet or more in depth and located within 25 feet of any employee.
- **Employees exposed** to traffic flow must wear warning vests of reflective or high visibility material.
- **No employee is permitted** underneath loads handled by lifting or digging equipment, and must stand clear of any loading operations.
- **When equipment or vehicles** are being operated adjacent to, or approaching an excavation, a warning system such as barricades, hand or mechanical signals, or stop logs must be used.
- **Employees entering** bell bottom pier holes, or any similar deep and confined footing excavation, must wear a harness with a securely attached safety line which is separate from other lines, and must be attended at all times the employee is in the excavation.
- **Employees shall not** work in excavations where water is either accumulated or accumulating unless adequate precautions are taken.
- **Where the stability** of structures adjacent to excavations is endangered, support systems must be provided to insure stability.
- **Never operate equipment** near a trench while personnel are working in the trench.
- **Protection must be provided** to guard employees from loose rock, soil, tools, or equipment that could fall or roll into the excavation.
- **Daily inspection** of excavations, adjacent areas, and protective systems must be made by a competent person for evidence of any hazardous situations. These inspections must be made prior to work, and as needed throughout the shift. Where hazards are found, employees who are exposed shall be removed until necessary safeguards are provided or restored.
- **Where hazardous atmospheres** (gases or less than 19.5% oxygen) exist, or are suspected, if the excavation is over 4 feet deep it must be tested before employees enter.
- **Any excavation** over 4 feet deep must be properly shored, shielded, sloped, or stepped in any area where work is occurring within the excavation or areas where employees may be required to move.
- **Piles should** be located at least 2 feet away from the excavation.



Conclusion: In addition to these requirements, all workers in excavations should wear required **Personal Protective Equipment** such as hard hats, proper foot gear, gloves, eye and face protection, and any required breathing protection. All personnel should be adequately trained in job performance and safety requirements (depending on the type of work performed, "Confined Space" training may be required). Workers should be spaced in the trenches to provide safe clearance, and should never work at a higher level (or up-slope) of another worker. All personnel involved in excavation operations should be familiar with signs of danger on the job site, proper accident reporting, and emergency response. Always watch out for the other guy, and if the situation, circumstances, or any safety conditions in the excavation seem questionable, immediately give warning and evacuate the trench! Report the situation to proper supervision before re-entry of the excavation.

Work Site Review

Work-Site Hazards and Safety Suggestions: _____

Personnel Safety Violations: _____

Employee Signatures: _____
(My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

Foreman/Supervisor's Signature: _____
These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.