

FALL PROTECTION PLAN

1. Spoil materials and all excavated and loose material shall always be piled at least 2 feet away from the shaft surface opening or the edge of the excavation.
2. It will be verified that the casing is thick enough to prevent buckling under soil and water pressure.
3. The components involved with drilled shaft entry may include:
 - a. A load with a boatswain chair that lowers and lifts personnel into and out of the drilled shaft
 - b. A life line that attaches to the personnel's safety harness and that is separate from the load line and is secured in a manner that will provide prompt rescue and fall protection in the event of a load line failure
 - c. An optional safety rope that could be used as an alternate method of communication
4. Appropriate clothing and personal protective equipment (such as hard hats and steel-toe safety shoes.) No loose or flowing clothing will be allowed. Hearing protection will be worn by down-hole personnel where the use of mechanical or electrical equipment in the shaft generates high noise levels.
5. If a crane is used for hoisting, an anti-two block device will be used on the load line of the crane. A hook with an automatic safety catch will be used on the hoisting cable.
6. The person entering the shaft will mount the boatswain chair (personnel carrier) adjacent to the shaft after having a lifeline secured to the safety harness. Then the crane's load line with the boatswain chair (personnel carrier) will be placed over the shaft.
7. The person being lowered into the hole will be lowered in a safe, slow and controlled fashion by the boatswain chair that is connected to the load line of a crane. Lowering will be stopped when the individual being lowered signals or when the individual indicates that the bottom of the shaft has been reached.
8. Equipment will be lowered into the shaft prior to personnel whenever possible. Conversely, personnel will be lifted out of a shaft prior to the removal of any equipment.
9. Personnel working in drilled shaft excavations will never disconnect their lifeline from their safety harness while working inside a drilled shaft.
10. Air powered equipment will be pinned or secured so that there is no danger of the release of high pressure air lines while personnel are in the shaft.

11. Machines that produce exhaust will not be operating in the vicinity of the shaft during the inspection.
12. Any welding or heating activities will be prohibited during drilled shaft inspections. Welding will not be conducted in or around shafts where combustible gases have been detected until ventilation or other remedial measures have reduce concentrations of contaminants to below safe levels.
13. After work in the drilled shaft has been completed, personnel will be raised in a slow and controlled fashion.