

# Excavation Support by Grouting

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The system is based on two converging features resulting from use of compaction grouting:

The ability to compact loose soils.

The ability to form compaction piles.

The process can be carried out in all types of compressible soil. It has functioned well where soil and rock mix. It can not be used below the water table.

Advantages include:

Preventing disruption at the site of construction.

Supporting vertical footing and construction loads.

Supporting horizontal soil loads in an open cut.

Compacting the soil to prevent sloughing during construction.

One sided forms are possible for new foundation.

Design and engineering assessment includes:

Loads to be supported: Adjoining structures, static and dynamic.

Construction loads.

Embedment of the pile at the bottom.

Securing the pile at the top.

Soil parameters including the ability to form a pile.

Illustrative projects include:

Excavated trenches for new metal presses in silty sand (Caloric/Raytheon).

A new foundry soaking pit in silty clay (IMCO Aluminum).

An acid tank at a fibers plant in mixed media (Lenzing Fibers).

A buried tank replaced at a large building (BellSouth).

Excavation at the water table in sand, cobbles and mush (Russell Towers).