



NICHOLSON

# STONE COLUMNS



## COMMON USES:

- To improve soils prior to construction of foundations and slabs for commercial, industrial and residential buildings.
- To reduce settlement in areas of landfill.
- To reduce the risk of liquefaction under roadways, airport runways, embankments, bridges and tunnels.
- As an alternative support system to deep foundations (piling).

Nicholson Construction Company is a recognized leader in the use of highly efficient and cost-effective ground improvement techniques, including vibrated stone columns, which are continuous vertical columns of dense interlocking aggregate. The increasing demand for new infrastructure developments has recently led to an escalating trend to develop sites with inadequate ground conditions that were previously considered uneconomical to develop.

Stone columns are constructed with a vibrating probe suspended from a crawler crane. As the vibroprobe is lowered, it penetrates weak soils until reaching the required depth. Stone columns are used to improve clays, silts, mixed granular and cohesive soils, and artificial soils such as fill. Soil that has been displaced laterally by the vibroprobe is replaced with stone to form a stone column. Nicholson installs stone columns using either top- or bottom-feed systems, either with or without jetted water. The top-feed method is used when a stable hole can be formed by the vibratory probe. With the dry method (top or bottom-feed), the vibroprobe is inserted into the ground and penetrates to the target depth under its own weight and compressed air jetting.