



## LAYFIELD INSTALLS VERTICAL WICK DRAINS



- *Layfield Vertical Wick Drains can reduce long term settlement*
- *Layfield Vertical Wick Drains can reduce preload times*
- *Layfield Vertical Wick Drains can speed up your construction schedule*
- *Layfield Vertical Wick Drains can allow you to build in "swampy" areas*



### VERTICAL WICK DRAINS WORK

Water saturated compressible soils undergo long term settlement as the weight of a structure places extra pressure on the soil mass. Many construction projects must deal with critical structures supported by these types of soils. One solution to the issue of long term settlement is the use of short term preloads. Preloads may be required from as little as one month to as much as 4 years. Vertical wick drains can greatly reduce the preload time by providing a drainage matrix to the soil mass. The shorter the distance to a drainage path, the faster the soil mass will drain. Vertical wick drains can be as short as 20 feet to as deep as 150 feet and are usually installed in a triangular pattern with 5 foot spacing.



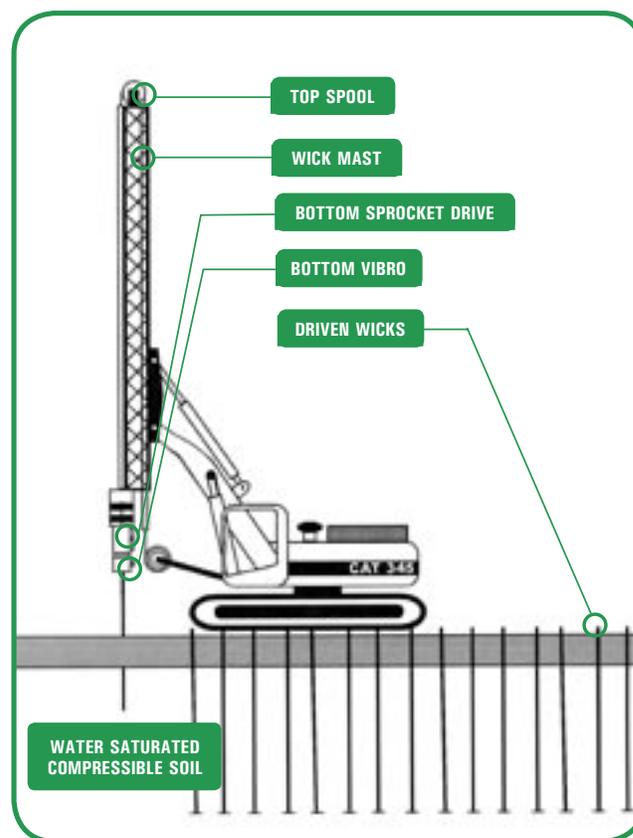
Vertical wick drain (which comes in rolls roughly 300 m long) is installed utilizing specialized wick drain installation equipment. The equipment is typically mounted on an excavator or crane (depending on the depth of installation) and pushes a hollow mandrel into the ground which carries the wick drain inside to protect it. The wick drain is wrapped around an anchor at the bottom of the mandrel which holds it in place at the desired depth while the mandrel is retracted. The locations and depth of wick drain installation is determined by the design engineer. Once the vertical wick drain has been installed, a gravel drainage layer and preload will be placed on top of the specified area. The pressure of the preload will force water to enter through the geotextile covering into the corrugated core of the wick drain and move upwards into the gravel drainage layer.

This process will significantly increase the speed of settlement thereby reducing the required pre-load time.

## WICK DRAIN INSTALLATION

The sequence of installation will be as directed by the Project Engineer and/or specifications in conjunction with all "as-built" drawings and logs. All drains will go to maximum allowable/ "anchorable" depths or until refusal as defined in the specs and logs. Installation is also contingent on obstructions both above and below ground.

## Consolidate soft compressible soils using vertical wick drains



*For more information on vertical wick drains and to find out if they are right for your next construction project please contact Layfield*



ISO 9001:2000



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