



LICENSE NO. 877665 A

1455 OLIVER ROAD #130
FAIRFIELD CA, 94534

INDICATOR / TEST PILE PROCEDURES

The designated indicator / test piles will be installed with the same method and equipment that would be used for the proposed production piles. The pile rig is a Delmag RH 26 capable of producing 210,000 foot lbs. of torque and 50,000 lbs of crowd.

The piles are marked at 1 ft. increments for monitoring purposes. The Geotechnical Engineer typically monitors torque via gauges in the rig and notes the torque readings at whatever intervals he / she deems appropriate during the pile installation. This information is then correlated with the load test results and used to develop the criteria for production pile installation.

Once the piles are installed that are to be load tested, the specified concrete is poured into the piles and vibrated by placing the vibrator tip against the pipe at the top of pile. The piles are then left to set for a minimum of 24 hours to 14 days depending on soil type and pile set up expectations.

The load test apparatus and procedures are per ASTM D1143 / D1143M for compression tests and D3689-07 for tension tests. Typically, we do a modified version of the quick test procedure. We hold the higher loads longer as we get closer to ultimate capacity or failure.

A number of indicator piles that are not tested may be installed across the site depending on the size of the project to further confirm subsurface conditions, pile depths, and consistency of installation. These piles are then removed shortly after installation.

The load testing operation is set up and operated by Substructure Support personal in conjunction with the Geotechnical Engineer who dictates and monitors the procedures and plots the results of the load tests.

Once the test is complete, the test frame and reaction piles are removed. The tested pile remains and can be used as a production pile.