

# PILE INSTRUMENTATION

## PILE LOAD TEST

### STRESS-STRAIN THEORY

ASTM/D1143 (2020)

Standard Test Methods for Deep Foundations Under Static Axial Compressive Load

In addition to measure pile load versus pile displacement (or deformation) as tested by static compressive (SC), tension (ST) or horizontal (SH), strain gauges can be pre-installed in the pile body to measure its strain behavior during loading performances.

#### Test Procedure

Procedure A: Static Quick Load Test (QLT), maintain < 24hrs.

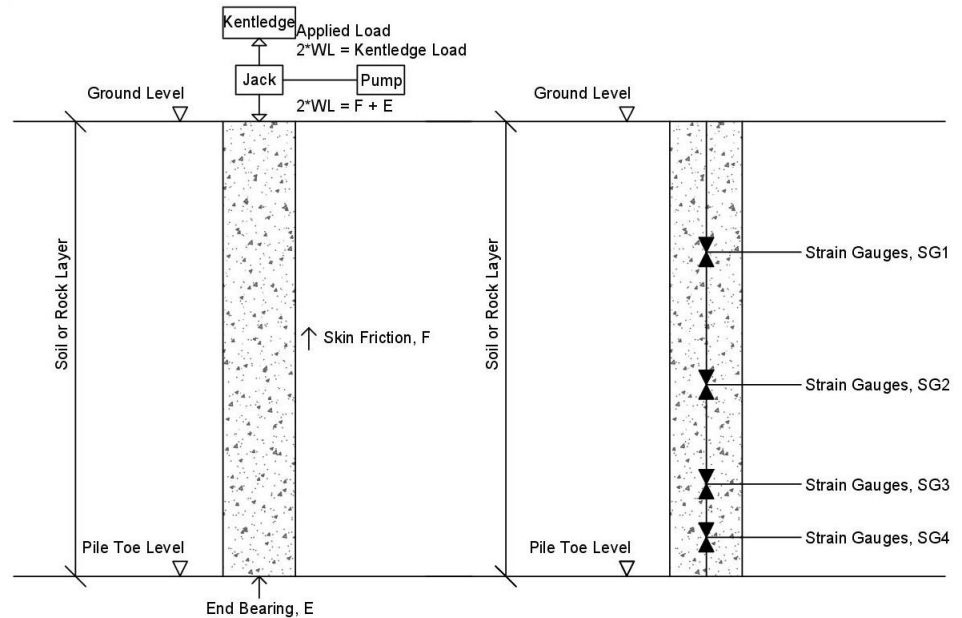
Procedure B: Static Maintain Load Test (MLT), maintain > 24hrs.

Procedure E: Constant Rate of Penetration (CRP), rate 1 mm/min.

Procedure C, D, F, G: Optional Tests.

# Pile Instrumentation Pile Load Test

The instrumentation consists of placement of strain gauges at selected levels of the test pile to determine the load at that location for each load applied to the pile head. From the measured strain, the forces in the pile can be calculated, and thus the load distribution along pile shaft is known.



Static Compressive  
(Top Loaded)

Pile Instrumentation

Installation of Vibrating Wire Strain Gauge (VWSG) at designated locations are depend on the soil and soil profile characteristics. VWSG will be installed along rebar cage prior to concreting.



\*Pictures are from Internet

