

Deep Foundation Non-Destructive Testing

Verify your project's deep foundation to gain peace of mind

Our deep foundation testing services provide critical insights into the integrity, performance, and reliability of deep foundation systems. Our non-destructive testing (NDT) methods help identify potential issues during installation - before they become costly problems post-construction.

Why Deep Foundation Testing Matters

- Detects flaws and anomalies early
- Confirms design assumptions and load capacity
- Informs construction techniques and decisions
- Enhances confidence in structural performance

Applicable Foundation Types

- Drilled shafts and piers
- Auger cast piles
- Driven piles (H-piles, pipe piles, concrete piles)
- Micropiles
- Helical piers
- Rammed aggregate piers



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Latest Methods, Experienced Inspectors



Terracon's deep foundation testing expertise includes a wide variety of methods, many of which are quick, inexpensive, and even monitored remotely. We know which tests to perform when – and have the resources to execute them and interpret the results.

Method	Standard	Purpose
Thermal Integrity Profiling (TIP)	ASTM D7949	Detects anomalies and evaluates shaft integrity using temperature differentials
Dynamic Pile Analysis (PDA)	ASTM D4945	Assesses pile capacity and driving stresses in real time
Crosshole Sonic Logging (CSL)	ASTM D6760	Evaluates concrete quality and detects voids using ultrasonic pulses
Crosshole Tomography (CT)	–	Provides 3D imaging of anomalies for detailed structural evaluation
Pulse Echo Test / Low Strain Impact Integrity Testing (PIT)	ASTM D5882	Detects pile length and integrity using sonic echoes
Lateral and Static Load Tests	ASTM D3966 / D1143	Confirms load-bearing capacity under simulated conditions

3 Cost and Schedule Benefits of NDT

1. Early detection = cost avoidance

NDT methods allow for the identification of flaws, anomalies, and integrity issues during installation. This proactive approach reduces the risk of structural failures and minimizes costly rework and delays.

2. Fast and efficient testing

Most NDT methods are designed to be quick and minimally disruptive:

- TIP provides results within 24 hours of concrete pour, enabling rapid quality assurance.
- PIT and CSL are portable, fast, and require minimal setup.
- PDA offers real-time feedback during pile driving, allowing immediate adjustments.

3. Remote monitoring capabilities

Technologies like PDA and TIP support remote monitoring, which eliminates the need for on-site personnel, speeds up data collection and analysis, and enables real-time decision-making.