Codes, Specifications and Guidelines pertinent to Dynamic Load Testing and Wave Equation Analysis

USA:

Describes a proper dynamic load test in a similar way that ASTM 1143 describes a proper static load test. This standard is often approved for use in many countries.
Follow the link from www.pile.com/specifications to the ASTM bookstore (or go to www.astm.org and search D4945)

For information contact ASCE at 1-800-548-2723 or 703-295-6300 or email: pubsful@asce.org


Volume I covers design. Volume II, covering installation and inspection, reflects FHWA recommendations and devotes over 120 pages to wave equation analysis and dynamic pile testing. This publication is used for workshops presented through FHWA to State Departments of Transportation. Numerous State departments of transportation have adopted these provisions in their State codes.
Copies are available from Pile Driving Contractors Association, www.piledrivers.org

A consensus standard developed by several State highway engineers that reflects the acceptance of dynamic testing. Numerous states have their own codes specifying wave equation and dynamic pile testing. (DFI has compiled all State specifications into a two volume reference).

Contains provisions for dynamic testing and wave equation analysis. Allows increased resistance factors (equivalent to reduced safety factors) when both wave equation and dynamic measurements are performed in conjunction with static tests.

Presents current practice and recognizes the dynamic testing and analysis. Available from DFI at www.dfi.org
8) Pile Driving Contractor's Association (PDCA) "Installation Specification for Driven Piles." PDCA Specification 103-07 (August 2007)
Reflects the use and acceptance (including economic incentive and lowered safety factors) of wave equation and dynamic pile testing. This Installation Specification was developed from the similar AASHTO specification (AASHTO adopted most of these PDCA provisions into their Specification)
Available from www.piledrivers.org

Combines three regional national building codes (SBC, BOCA, and UBC) into a single nationwide code for the United States. References ASTM D4945 in the Foundations Sections (1810).
Available from bookstores or online.

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AUSTRALIA


BRAZIL


CANADA

Makes extensive reference to dynamic foundation testing and wave equation.


CHINA


DENMARK

25) Eurocode 7: Geoteknik – Del 1: Generelle regler (Geotechnical design – Part 1: General rules)


27) Eurocode 7: Geoteknik – Del 2: Jordbundsundersøgelse og –prøvning (Eurocode 7 – Geotechnical design – Part 2: Ground investigation and testing)

EGYPT


HONG KONG

Mandated by Hong Kong Housing Authority, Architectural Services Department and other Government Agencies

MEXICO


POLAND

30) EC7 PN-EN 1997-1

SAUDI ARABIA

31) ASTM D4945 is mandated by the Royal Commission YANBU

SLOVENIA

33) follows Eurocode 7 with additions and deletions (but piling section is unchanged)

SOUTH KOREA


SWEDEN


UNITED KINGDOM

38) United Kingdom Institution of Civil Engineers “Specification of Piling” Chapter 11, section 11.2 “dynamic pile testing”

39) Company specific procedures approved by UKAS