

Our Mission

The NAHB Research Center's mission is to promote innovation in housing technology to improve the quality, durability, affordability, and environmental performance of homes and home building products. The NAHB Research Center Laboratory was founded in 1964 to integrate theory and practice in home building. Today, the laboratory provides research and development testing, product certification, home builder and trade contractor quality system certification, and other vital services to the housing industry.

Our Facilities

The NAHB Research Center provides specialized material and structural systems testing, research, and certification programs for public and private clients. Building materials tests range from stain resistance, to countertop surfaces, to compressive strength of full-size walls up to loads of 400,000 pounds. Materials tested include wood, steel, concrete, plastics, composites, and others. Other capabilities include thermal conductivity tests on insulation materials; certification testing on plastic plumbing fixtures; wind, water, and structural tests on windows, doors, and walls; wall shear resistance tests; roof truss tests; and floor, joist, and roof system tests for both manufactured and site-built housing.

Keeping pace with the ever-changing and expanding needs of the home building industry, the Research Center initiated a major laboratory expansion in 2005. Check the progress of this exciting development at www.nahbrc.org.

Our lab is equipped with:

- 200,000 lb and 10,000 lb Universal Test Machines
- Thermal Shock Machines
- 400,000 lb Wall Compression Machine
- 125,000 lb Shear Wall Tester
- Heat Flow Meters
- Xenon Arc Weatherometer
- Wind-Driven Rain and Wind-Blown Debris Testers
- Environmental Chambers
- CSL and Post-Flexure Machine

Our Staff

Our engineers and technicians are experts at materials and system design and testing. We look for solutions that optimize performance, reduce construction costs, and reduce potential product failures.

Contact Us

Interested in having your product tested or certified? Call (800) 638-8556, email certification@nahbrc.org, or visit www.nahbrc.org.



400 Prince George's Blvd.
Upper Marlboro, MD 20774



NAHB Research Center Laboratory & Certification Services



Dedicated to improving home building since 1964.

LABORATORY

Services for Manufacturers and Industry

Appropriate performance standards and related test procedures are integral to the product development process. To gain acceptance in the market and with building code officials, criteria must be established to document a product's performance. The Research Center can assist with development of criteria with the model code groups or through the standards-writing process. The NAHB Research Center also conducts ANSI-recognized standards-writing processes.



Building Envelope Durability

The Research Center is a leader in assessing the durability of building products. We investigate the entire spectrum of influences on durability from disasters (such as earthquakes and hurricanes), to recurring problems, to maintenance issues.



Prescriptive Method Development

The NAHB Research Center is a leader in developing prescriptive construction methods for new building technologies and gaining recognition of methods by the model codes. Our prescriptive construction guidelines have established industry standards for widespread use of new products or classes of products.

Code Conformity and Quality Assurance

The NAHB Research Center provides independent third-party product testing and quality assurance verification services to product manufacturers. A full-service project would include coordinating the product approval application to assess the product's conformity to the codes, as well as physical testing and ongoing verification of the quality assurance system at the manufacturing plant.



Products and Systems Testing

We work with builders and manufacturers to test the performance of products and subsystems used in homes today. We not only perform controlled laboratory tests, but also test products in the field. An abbreviated list of our testing capabilities is provided below.



Assembly/Component Tests

- Axial load, bending load, diaphragm tests, shear wall
- Water absorption, thermal conductance, weathering
- Water penetration and air leakage by uniform static air pressure differential (e.g., for doors and windows)
- Thermal R-value and other parameters for glass and mineral fiber, cellulose and foam board insulation
- All tests required by model codes for plastic plumbing fixtures
- Fasteners and connections
- 1.6 GPF Toilets

Standard Material Physical Property Tests for Wood, Steel, Concrete, and Plastic

- Tensile and compressive strength
- Creep, torsion, ductility
- Impact resistance
- Slip resistance of surfaces
- Modules of elasticity; modules of rupture

For a complete list of the standard tests conducted at the Research Center, please go to www.nahbrc.org.

Our Credentials

The NAHB Research Center is recognized as a test laboratory, quality assurance agency, and certified product listing agency by many building and plumbing code agencies, and by national, state, and local code enforcement authorities. These include: NIST - National Voluntary Laboratory Accreditation Program (NVLAP), International Accreditation Service (IAS), International Code Council (ICC), U.S. Department of Housing and Urban Development Product Standards and Certification, International Association of Plumbing and Mechanical Officials (IAPMO), City of Los Angeles, California - Testing Laboratory License, and Recreation Vehicle Industry Association.

Product Certification



The Research Center certifies products to nationally recognized standards. Our label assures builders, code officials, and consumers that the product meets or exceeds the appropriate industry standards. Certified manufacturers undergo periodic inspection of their quality system and records. Products are randomly selected from the manufacturer's production for testing. These samples are extensively tested at the Research Center to insure compliance with the standards.

Current product certification includes:

- Accessible products
- Light-gauge steel framing
- Plastic plumbing fixtures
- OSB
- Solid surface materials
- Thermal insulation

Manufacturers with certified products are listed on our website at www.nahbrc.org.

Builder and Trade Contractor Certification



The NAHB Research Center has established quality assurance system requirements for builders and trades, which certify companies that have implemented an effective quality system. Quality procedures help these building

professionals tightly control the construction process, require inspection of specific checkpoints, and specify actions to prevent recurring problems. Certification requires auditing of a company's quality system and records as well as jobsite processes.

Listings of NHQ Certified Builders and Trade Contractors are available online at www.nahbrc.org.