National Institute of BUILDING SCIENCES™

2025 Legislative Agenda

The National Institute of Building Sciences (NIBS) is a Congressionally chartered independent non-profit that bridges government and industry expertise to advance the built environment for the public good.

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The National Institute of Building Sciences (NIBS) is an independent 501(c)(3) non-profit, non-governmental organization that supports advances in building science and technology. The U.S. Congress established NIBS in the Housing and Community Development Act of 1974, Public Law 93-383. Congress recognized the need for an organization to serve as an interface between government and the private sector – one that serves as a resource to those who plan, design, procure, construct, use, operate, maintain, renovate, and retire the buildings, spaces, and infrastructure that make up our built environment.

We bring together experts from the building industry, design, architecture, construction, government, and academia. We lead conversations to ensure our buildings and communities remain safe and seek consensus solutions to mutual problems of concern.

Last year, NIBS celebrated its 50th anniversary. As we start the next 50 years, NIBS is energized and renewed in its focus on the public interest and commitment to strengthening our built environment. We look forward to working with the 119th Congress and the incoming Trump Administration to advance solutions to the pressing challenges that put public safety at risk through the NIBS Legislative Agenda below.

Legislative Agenda Focus Areas

Safeguarding Lifeline Infrastructure and Accelerating Functional Recovery

Addressing the Workforce Crisis

Streamlining the Adoption of Emerging Technology

Safeguarding Lifeline Infrastructure and Accelerating Functional Recovery

Natural and man-made disasters, from storm events to wildfires, have become more frequent and devastating. Safeguarding lifeline services and accelerating the functional recovery of impacted lifeline infrastructure is critical. These systems include water, wastewater, electricity, natural gas, liquid fuels, communications, and transportation--highways, roads, rails, airports, ports, and harbors. These systems are often taken for granted in their seamless operation, and investments must be made to ensure that they continue to operate through and after a disaster and that communities remain functional. We must ensure the nation's design standards account for the entire built environment, including lifeline infrastructure.

Policy Recommendations:

- Support the reauthorization and full funding of the National Earthquake Hazards Reduction Program (NEHRP), which was first enacted in 1977 to reduce the risks to life and property from future

earthquakes in the United States by establishing and maintaining an effective earthquake hazards reduction program.

- Support the re-introduction and advancement of the Earthquake Resilience Act, which would direct federal agencies to study the nation's earthquake resiliency to understand better how communities can prepare for future disasters. It would also require the NEHRP to develop standards for designing resilient lifeline infrastructure, which would reduce community recovery time following an event.
- Support the reauthorization and full funding of the National Windstorm Impact Reduction Program (NWIRP), which aims to achieve measurable reductions in the loss of life and property from windstorms through a coordinated Federal effort in cooperation with other levels of government, academia, and the private sector.
- Support the introduction and funding of a program to manage the impact of wildfires and achieve measurable reductions in the loss of life and property from wildfires modeled after NEHRP and NWIRP.
- Support the re-introduction and the advancement of the Building and Upgrading Infrastructure for the Long Term (BUILT) Act, which will promote forward-looking research into climate resiliency by directing the National Institute of Standards and Technology (NIST) to facilitate research on how climate conditions can affect subsurface properties and how technology can be used to assess infrastructure integrity risks as well as to convene workshops across the public and private sector.
- Lead and support the development of modern and resilient standards, codes, and criteria for our lifeline infrastructure, bringing the benefits that have been proven through the development and adoption of model building codes in the past 50 years.

Addressing the Workforce Crisis

Over the last decade, the United States has reached a crisis point in ensuring that a "full pipeline" of skilled workers is available to meet the needs of our built environment that is rapidly and dynamically expanding and transforming, often on a legacy foundation of aging and failing buildings and infrastructure. Our nation does not have enough people to build and maintain our bridges, hospitals, data centers, utilities, and other critical infrastructure, making the workforce shortage more than an industry challenge but a national security issue. This gap in the workforce has reached a crucial level that requires the significant and meaningful participation of women, who make up approximately 51% of our population but only 10.9% of all workers in the construction industry in 2022[1] , to bridge this vast workforce shortage. More women must be recruited, trained, and retained to address this shortage collaboratively across the entirety of the built environment, from material production to the design, construction, installation, commissioning, maintenance, operations, retirement, and renewal.

Policy Recommendations:

- Support the modernization and the reauthorization of the Workforce Innovation and Opportunity Act (WIOA), enacted in 2014 to help job seekers access employment, education, training, and support services to succeed in the labor market and match employers with the skilled workers they need. For example:

1 https://www.americanprogress.org/article/playbook-for-the-advancement-of-women-in-the-economy/expanding-womens-access-to-male-dominated-jobs/

  - Strengthening registered apprenticeships to include wrap-around services like childcare and pay-for-classroom learning portions can help broaden the talent pipeline and increase women's participation and completion since current apprenticeships are overwhelmingly male and white.

- Engage and support related workforce policy and initiatives at the state and regional levels.

Streamlining the Adoption of Emerging Technology

The U.S. construction sector is valued at around $2.3 trillion[2] but faces increased material costs, labor shortages, and operational efficiency challenges. Streamlined adoption of emerging technology can help alleviate these strains and improve output. For example, modular construction involves building components at a manufacturing facility and transporting and assembling them on-site. This can shorten construction schedules and improve building performance. The installation quality of modular building envelopes was also better than that of site-built enclosures on most projects. However, it remains less than 6% of the commercial construction market in the U.S. and Canada. Digital twins serve as another example. They are virtual representations of physical objects, processes, or systems that can be used to predict changes that may affect their physical counterparts. They are increasingly being used in a wide variety of fields. For example, digital twins are typically deployed in facility operations to support asset management and space optimization, including who will use the space, how, when, and what assets will live there.[3] Adopting codes, standards, and regulatory consistency for these new technologies, like modular construction and the use of digital twins, will help protect the public interest.

Policy Recommendations:

- Establish value-driven digitalized asset management for the built environment. In particular, the federal stock of facility assets is managed using outdated methods and spending practices. Simply updating these would increase international competitiveness and national security and save taxpayer dollars.
- Support the adoption of codes and standards and regulatory consistency for modular construction at all levels of government since it is gaining popularity due to its efficiency and cost-effectiveness. A U.S. Department of Energy study found modular projects were completed 30% faster on average than site-built projects, which provided 6-12 months of added revenue for larger projects.
- Support the adoption of standards and regulations for implementing digital twins in the construction industry, which include agreed-upon definitions and address security and privacy risks.
- Support the safe and meaningful integration of small modular nuclear reactors into the US power grid.

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2 https://constructioncoverage.com/data/us-construction-spending

3 https://www.thomasnet.com/insights/innovative-technology-in-construction/

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