



National Institute of
BUILDING SCIENCES™

January 8, 2024

Quarterly Connection

A NIBS Member Newsletter

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National Institute of
BUILDING SCIENCES™
50TH ANNIVERSARY

Feature Story

NIBS Celebrates 50 Years in 2024

On August 22, 1974, the National Institute of Building Sciences was created by Congress 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 facilities.

We're proud of the work that we've accomplished.

But this has never been a solo enterprise – NIBS is guided by the incredible expertise and leadership of our Board of Directors and the council leaders, volunteers, stakeholders, partners, and members who keep us on the cutting edge of tools, strategies, and conversations in the built environment.

Depending on whom you ask, NIBS has had its hands in everything from federal facilities to the development and maintenance of seismic provisions (which serve as the nation's primary resource for the professional design standard ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures) to the comprehensive and ongoing study of natural hazard mitigation, functional recovery, and community resilience. NIBS also has worked hard to support and advance technology and building industry standards, including the National BIM Standard – United States and United States National CAD Standard, to name just a couple.

2024 brings more than our 50th anniversary. We have a lot in the pipeline, including the return of the Building Enclosure Science and Technology Conference (BEST6) March 18-20. The BEST6 theme is “The Next Generation of Building Technology,” and the conference will be held in Austin, Texas.

Our annual Building Innovation conference takes place May 22-24, at the Capital Hilton in Washington, DC. Building Innovation

brings together a unique group of individuals – government agencies, contractors, architects, scientists, and more – to meet, network, and learn about tools, technologies, groundbreaking research, and case studies that affect the built environment.

And, NIBS is proud to serve as the 2024 administering organization of the U.S. Celebration of World Standards Day, the planning committee of which is co-chaired by the American National Standards Institute and National Institute of Standards and Technology. The celebration takes place in October.

Honestly, we're just getting started. When Congress created NIBS, the charge started off simple: To bring together experts from throughout the building industry, design, architecture, construction, and government and lead conversations to ensure our buildings and communities remain safe.

They say NIBS is Washington's best kept secret. We like to think so.



Housing Affordability Hearing

Housing Affordability: An Issue Multiple Decades in the Making

In November, NIBS held a [three-part public hearing](#), bringing together veteran building industry experts to discuss the state of housing affordability.

There's ample motivation to fix the problem, but it's taken decades for us to get here. And the road forward isn't easy to navigate.

"This is no longer an issue of the poor," said Chris Herbert, PhD, Managing Director with the Joint Center for Housing Studies of Harvard University. "Affordability has gotten worse for working families. This has changed the conversation around rental affordability, and people are spending excessive amounts for rental housing."

Those in the labor force – fully employed individuals are the most affected by the cost of housing. What's more – middle- and lower-income households are severely impacted by the cost of rental housing.

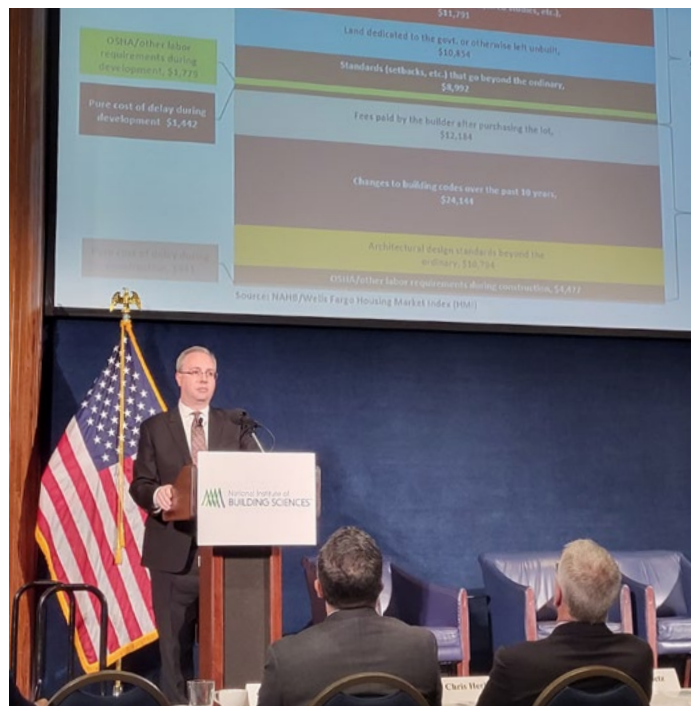
The ones most likely to stretch? First-time homebuyers.

The Housing Shortage

Depending on whom you ask, the estimated shortage of housing in the United States is anywhere from 1.5 million residences to 5 million residences, said Robert Dietz, PhD, Chief Economist and Senior Vice President for Economics and Housing with the National Association of Home Builders.

There are numerous issues affecting housing affordability.

These include – but are not limited to – underbuilding, lending and getting access to developer and construction loans, high interest rates on mortgages, building materials costs (aggregate costs of materials are up 35 percent), regulatory costs, zoning impacts on housing construction, and the shortage of skilled labor in the construction workforce.



“We need more than 2 million workers on a gross basis,” Dietz said. “This is a tremendous job ... if there are no workers to build these homes, they’re not going to get built. We desperately need to diversify our labor force.”

Dietz said stability has been seen in a few places: the remodeling sector, townhouse market, and modular/panelized construction.

The NIBS 2024 Moving Forward Report

Affordable housing generally is defined as housing where the occupant pays no more than 30 percent of their gross income for housing costs, including utilities. According to Pew Research

Center, a rising share of Americans say the availability of affordable housing is a major problem in their local community. In October 2021, about half of Americans (49 percent) said this was a major problem where they live, up 10 percentage points from early 2018. In the same 2021 survey, 70 percent of Americans said young adults today have a harder time buying a home than their parents’ generation did.

The topic of housing affordability will be covered in the 2024 Moving Forward Report by the NIBS Consultative Council. The report will be released this spring.



BUILDING INNOVATION

BI2023 Conference

Tracks: Resilience, Technology, Building Performance & Sustainability, Workforce



3
Keynotes



46
Speakers



21
Sessions



26
Sponsors



3
Days

BI Webinar Series



4
2023 webinars

BI: The Podcast



4
Episodes

COVERAGE

News Coverage



188
News stories
featuring
NIBS in 2023



1.52 Billion
Total combined
readership of 2023
news stories



1,653
Total estimated social
shares of NIBS stories

Social Media Coverage



64,500
Total 2023 X (Twitter)
impressions



+30%
LinkedIn followership
growth from January 2023



+18%
Facebook followership
growth from January 2023

TOP STORIES

1

New Built Environment Workforce Report: 63% Say It's Important to Increase Diversity
<https://finance.yahoo.com/news/built-environment-workforce-report-63-160700880.html>

3

Climate change is driving insurance rates up, forcing developers to add weather-proofing
<https://www.cnbc.com/2023/10/31/climate-change-forcing-real-estate-developers-to-add-weather-proofing.html>

5

A Call for a National Community Resilience Extension Partnership to Bridge Resilience Research to Communities
<https://www.nature.com/articles/s42949-023-00102-3>

2

Emerging BIM Standards Promise to Bolster AEC Efficiency
<https://finance.yahoo.com/news/emerging-bim-standards-promise-bolster-123900930.html>

4

Climate Action 30: Top global leaders addressing the climate crisis in 2023
<https://www.businessinsider.com/climate-action-30-global-leaders-climate-solutions-2023-11>

6

A novel approach to climate-proof infrastructure
<https://www.ft.com/content/0870f081-7b0e-4e14-aec6-600cb4f3efa9>



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NATIONAL INSTITUTE OF BUILDING SCIENCES

Building Innovation Webinar Series

NIBS Launches Building Innovation Webinar Series

Every year, hundreds of built environment professionals descend upon Washington, DC, to attend the Building Innovation conference.

As part of our mission to continue conference education, NIBS last fall launched a [new webinar series](#) to reach even more professionals on technology, trends, tools, best practices, and workforce solutions.

It's our way of extending Building Innovation beyond the in-person meeting.

In recent months, our subject matter experts discussed the Intersection of Resilience, Low-Embodied Carbon, and Life-Cycle Cost Analysis (LCCA) in Materials Selection; Accelerating Digital Transformation with the U.S. National BIM Program; Cyber-Physical Impact Modeling; and Developments in Sustainable Precast Concrete.

On January 16, Paul Doherty, President & CEO of The Digit Group, will lead a webinar on [Unlocking the Metaverse: The Cyber-Physical Relationship](#).



**Unlocking the Metaverse:
The Cyber-Physical
Relationship**

January 16, 2024 | 1:00 pm - 2:00 pm EST
Virtual Event

[Register Now](#)

 National Institute of
BUILDING SCIENCES™

nibs.org/events

Columns

NIBS Names 2023-2025 Board and Council Officers

NIBS recently announced new officers for the Board of Directors and our seven councils. The officers are new for the Building Enclosure Technology and Environment Council, Facility Management & Operations Council, and Off-Site Construction Council.

As of October 1, 2023, officers include:

NIBS Board of Directors

- Chair – Thomas H. Phoenix, Sr., PE, FASHRAE, LEED-AP, Mechanical Contractors, LLC
- Vice Chair – Charlie (Chuck) D. Curlin, Jr., PE, CEM, CPD, Principal, Shultz Engineering Group
- Treasurer – Sandra Benson, Vice President, Industry Transformation, Procore Technologies
- Secretary – Evelyn Fujimoto, Associate AIA, LEED AP, NCIDQ, RID, NAC, EMF Collaborative

Building Enclosure Technology and Environment Council

- Chair – Dudley McFarquhar, PhD, PE, VP & Partner, Stone Building Solutions and President, McFarquhar Group Inc.
- Vice Chair – Keith Simon, Principal, Building Enclosures Practice Lead, Terracon
- Secretary – Brian Stroik, Consultant, American Contractors Insurance Group

Building Information Management Council

The following positions were recently elected and began their terms January 2, 2024.

- Chair – Rachel Riopel, AIA, Digital Practice Leader, HDR Inc.
- Vice Chair – Alex Belkofer, CM-BIM, VDC Director, McCarthy Building Companies, Inc.
- Secretary – Zahra Ghorbani, BIM Manager, Office of Physical Plant, Department of Architectural Engineering, Penn State University



Team NIBS – NIBS Board Member Judy Dinelle, Vice President of Corporate and Foundation Relations Sarah Swango, and Director of Governance and Special Programs Jennifer Hitzke – attended the Women in Residential + Commercial Construction (WIR+CC) Conference in Nashville in October.



NIBS staff and the Committee on Finance, Insurance and Real Estate (CFIRE) were grateful to take part in the resilience incentivization discussion during a recent Climate Risk Forum with Fannie Mae and Freddie Mac.

Building Seismic Safety Council

- Chair – Kent Yu, PhD, SE, Principal, SEFT Consulting Group
- Vice Chair – Joann Browning, PhD, PE, Dean, College of Engineering, University of Texas at San Antonio
- Secretary – Dr. Iris Tien, Williams Family Associate Professor, Georgia Tech

Consultative Council

- Chair – Brian Pallasch, Executive Vice President & CEO, IIBEC
- Vice Chair – Thomas W. Smith III, ENV SP, CAE, F.ASCE, Executive Director, American Society of Civil Engineers

Facility Management & Operations Council

- Chair – Keith Bryan, Director, Federal Advisory – Sustainability, Environmental, & Climate, KPMG

Multi-Hazard Mitigation Council

- Chair – Dr. Anne Cope, Chief Engineer, IBHS
- Vice Chair – Russ Strickland, Secretary, Maryland Department of Emergency Management

Off-Site Construction Council

- Chair – Ryan M. Colker, J.D., CAE, Vice President of Innovation, International Code Council
- Vice Chair – Marc Bielas, Founder & CEO, Quilt Group



NIBS HQ recently hosted the U.S. Army Corps of Engineers and Industry BIM Consortia Workshop. The group works to develop mutually beneficial BIM requirements, pushing for innovation yet ensuring USACE requirements are fair, practical, and achievable for contractors and in-house design teams.

Our Year on the NIBS Blog: Top Posts from 2023

We're reflecting on the news and information that crossed the NIBS blog last year. Here are our top posts from each month in 2023, according to readership.

January: [Disaster Resilience is a Trillion-Dollar Challenge. Here's What FEMA Can Do To Help](#)

February: [HUD Unveils New Report to Overcome Barriers to Offsite Construction](#)

March: [Assessing Natural Hazard Mitigation Needs for the Nation](#)

April: [BIM Executives Discuss CAD, BIM Standards Release and Program Development Plans](#)

May: [NIBS Scholarship Winner Hopes to Bring Broader STEM Education to Saint Lucia](#)

June: [Ballot Comment Period Now Open for the NBIMS-US Project Committee](#)

July: [Resilience Initiatives Advance](#)

August: [100 Years of Inspiration from Japan's 1923 Earthquake](#)

September: [NIBS Announces BEST6 Call for Abstracts](#)

October: [NIBS Joins U.S. Celebration of World Standards Day](#)

November: [Housing Affordability: A Problem Multiple Decades in the Making](#)

December: [Thank You and Happy Holidays from NIBS!](#)

Webinar: Team Discusses Resilience Incentivization Roadmap 2.0

In September, NIBS and Fannie Mae unveiled the [Resilience Incentivization Roadmap 2.0](#) – a continuation of a 2020 study that called for public and private incentives that allow owners

of buildings and other infrastructure to facilitate the upgrade of existing infrastructure and better design of new infrastructure.

Led by the NIBS Multi-Hazard Mitigation Council's Committee on Finance, Insurance, and Real Estate (CFIRE), Roadmap 2.0 maintains the same goal: To have stronger and safer buildings and resilient communities by catalyzing collaboration across the building science, finance, insurance, and real estate industries and increase mitigation investment and develop coordinated resilience guidelines and tools for community implementation.

On October 18, 2023, the National Institute of Building Sciences hosted a webinar to discuss the Resilience Incentivization Roadmap 2.0. The panel included Dr. Keith Porter, Chief Engineer, Institute for Catastrophic Loss Reduction; Sean Kevelighan, President & CEO, Insurance Information Institute; Jeff Dunsavage, Senior Research Analyst, Insurance Information Institute; Dr. Sean Beckett, Principal, Elliott Bay Analytics; and Dr. Jiqui (JQ) Yuan, Vice President, Engineering, NIBS. Mira Papinova, NIBS Project Manager, served as moderator.

Closing the Resilience Investment Gap

Natural hazards are growing in severity and getting more expensive. To date, disasters annually cost the nation an average of \$120 billion annually; this cost doubles every 12 years, growing 10 times faster than the population.

According to Porter, this essentially is like wiping out four weeks of construction value each year.

"That four weeks will get longer and longer," Porter said. "It is unsustainable."

Porter said the mission of the Resilience Incentivization Roadmap 2.0 is to "help close the resilience investment gap partly by leveraging private investment funds."

He then pointed to several key findings in the Resilience Incentivization Roadmap 2.0:

- Mitigation saves, but it does so unequally, often with the owner or developer bearing the cost while others enjoy the benefits.

- Co-beneficiaries rarely collaborate to help pay for resilience, so they lose the opportunity to share billions of dollars of potential savings and increased market value.
- Public-private coordination is essential for society to realize most of the benefits that better buildings could deliver.

Read the [full session paper from the webinar](#).



NIBS was proud to be a gold sponsor of ASHRAE's 2023 Decarbonization Conference for the Built Environment in October. Our representatives included NIBS Vice President of Technical Solutions Stephanie Stubbs and Project Manager Mira Papinova. As climate adaptation, mitigation, and resiliency are among NIBS' strategic priorities, we believe it's important to reduce our carbon footprint.



October was a very busy month for the NIBS team! We were proud to participate in the 2023 International Code Council annual meeting in St. Louis.

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NIBS in the News

Yahoo Finance

Emerging BIM Standards Promise to Bolster AEC Efficiency

AEC firms would be wise to adopt standardized approaches to building information modeling (BIM) now that it is becoming an expected—or even government-mandated—part of their projects, advised BIM specialists from HFA Architecture + Engineering. [Read More>>](#)

Scientific American

FEMA Offers Every State \$2 Million to Adopt Safer Building Codes

Two houses are side by side. One is a crumpled mess of splintered wood and ripped insulation. The other stands perfectly intact.

This image is one that increasingly pops up on news sites and social media after hurricanes, floods and climate-fueled disasters. An accompanying caption often emphasizes that the intact home was built with a hurricane-resistant roof and flood-resistant materials. [Read More>>](#)

Construction Dive

2024's Top Construction Events

In 2024, the construction industry's major conferences, meetings and other events will fully reclaim their in-person roots and expand their offerings to contractors, AEC professionals and key stakeholders. Take a look below to see what the road ahead looks like for next year's biggest industry events. [Read More>>](#)

CNBC

Climate Change is Driving Insurance Rates Up, Forcing Developers to Add Weather-Proofing

Along East Boston's waterfront sits The Eddy, a two-building property with over 250 luxury apartments. Its harbor-side location provides unobstructed views of the Boston skyline. It also leaves the building particularly vulnerable to sea surges and flooding. [Read More>>](#)

Business Insider

Climate Action 30: Top Global Leaders Addressing the Climate Crisis in 2023

NIBS Vice President of Engineering Jiqui Yuan was featured among the Climate Action 30 list! [Read More>>](#)

UN Women

Women Leaders Who Broke the Glass Ceiling in Under-Represented Industries

"Fulfilling all you can be." This was a common message of women leaders who spoke at '1st Seoul Gender Equality Dialogue: Breaking Gender Barriers for a Better Future of Key Industries,' organized by the UN Women Centre of Excellence for Gender Equality (the Centre) in the Republic of Korea on November 2. With some 300 people attending, the event presented inspiring stories from trailblazing women in the fields of infrastructure, technology and finance, who have broken glass ceilings and now serve as role models for upcoming women and girls. [Read More>>](#)

Architect Magazine

The Evolution of Architecture in 2023

While architects seek to leave a positive imprint on the world, the world also constantly impacts the role and remit of architects. This year has seen the profession reflect on its place and power in society while ramping up its advocacy efforts on behalf of itself, its clients, and the planet. [Read More>>](#)

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Observances & Events

2024 - NIBS Celebrates 50th Anniversary

January 10 – National Cut Your Energy Costs Day

January 15 – MLK Day

January 16 – [Unlocking the Metaverse: The Cyber-Physical Relationship](#)

January 25 – [The Intersection of AI and Building Sciences: A New Era of Intelligent Infrastructure](#)

February 11 – International Day of Women and Girls in Science

February 18-24 – National Engineers Week

February 19 – Presidents Day

March 4 – World Engineering Day

March 8 – International Women's Day

March 11 – World Plumbing Day

March 18-20 – [Building Enclosure Science & Technology Conference \(BEST6\)](#)

March 22 – World Water Day



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MARCH 8-11
2024
PHOENIX

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NIBS to Host Housing Affordability Hearing

[Read More>>](#)

NIBS Joins U.S. Celebration of World Standards Day

[Read More>>](#)

Community Resilience Is Now at the Center of Modern Model Building Code Development

[Read More>>](#)

NIBS Named Among 2023 Top-Rated Nonprofits

[Read More>>](#)

Thank You and Happy Holidays from NIBS!

[Read More>>](#)

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- Rural Builder Magazine
- Frame Building News
- Metal Roofing Magazine
- Rollforming Magazine
- Garage, Shed & Carport Builder
- Roofing Elements
- Metal Builder

TRADE SHOWS:

- Garage, Shed & Carport Builder Show – Jan. 24-25, 2024
- Post-Frame Builder Show – Jun. 19-20, 2024
- Construction Rollforming Show – Sept. 18-19, 2024



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