National Institute of
BUILDING SCIENCES™
50TH ANNIVERSARY

1974-2024

50th Anniversary Report

50 Years of Service to the Built Environment

Fifty years ago, the National Institute of Building Sciences was established by the U.S. Congress in the Housing and Community Development Act, Public Law 93-383. At that time, Congress recognized the need for an organization to serve as an interface between government and the private sector – a resource to those who plan, design, procure, construct, use, operate, maintain, renovate, and retire physical facilities.

Our enabling legislation calls for NIBS to convene industry leaders to examine and build alignment on issues challenging our future. Specifically, our mission is to serve the public interest by advancing building science and technology to improve the built environment.

Throughout 2024, we are celebrating five decades of service to the nation. This includes, but is not limited to the built environment professionals and stakeholders we continue to serve, the projects we've touched and continue to develop, the relationships we have managed, and the reports, standards, provisions, and systems we have created with the help and expertise of our esteemed Board of Directors, members, volunteers, and councils.

There are thousands of individuals and agencies who have supported and helped us along the way.

Our work is led by talented staff and the subject matter experts and members who comprise eight volunteer bodies – the Building Enclosure Technology and Environment Council, Digital Technology Council, Building Seismic Safety Council, Consultative Council, Facility Management and Operations Council, Off-Site Construction Council, Multi-Hazard Mitigation Council, and Whole Building Design Guide Workgroup.

These experts and stakeholders engage with private organizations, institutions, agencies and federal, state, and local government entities to focus on the development of methods that encourage representation from all sectors of the economy, ensuring national interests are represented and protected.

NIBS' strategic plan is four-fold: climate adaptation, mitigation, and resiliency; transformational building sciences and technologies; industry development and diversification; and visibility and recognition.

Our work is never done, and we look forward to seeing what the next 50 years hold.

Stephen T. Ayers, FAIA, NAC, CCM, LEED-AP
Interim CEO, NIBS

Thomas H. Phoenix, Sr., PE, FASHRAE, LEED-AP
Chair, NIBS Board of Directors

The State of the Nation

The year is 1967.

The United States is facing a housing crisis. President Lyndon Johnson has launched a 'War on Poverty,' forming the National Commission on Urban Problems. Later known as The Douglas Commission, its goal was to research housing and building development in the United States, including model codes, standards, zoning, and taxes.

After two years of investigation, the commission's report caused concerns, revealing a national labyrinth of housing and building codes and standards lacking uniformity and modernization.

The commission reported " ... alarms sounded over the past years about the building code situation have been justified. They showed that, while the national model codes were reasonably up to date, the lack of uniformity and modernization at the local level was serious. This situation calls for a drastic overhaul, both technically and among various levels of government."

The commission found the need for a national resource to provide solutions.

1967

President Lyndon Johnson launches a 'War on Poverty,' forming the National Commission on Urban Problems.
The goal: research housing and building development in the U.S., including model codes, standards, zoning, and taxes. The need for a national resource is identified.

1970

August 22, 1974

NIBS is created by the United States Congress in the Housing and Community Development Act, Public Law 93-383. Among our charges: to serve the public interest as a national source to make findings and advise the public and private sectors regarding the use of building science and technology and support federal agencies having responsibility for buildings or construction through technical research funded by request authorizations and appropriations for grants.

1974-1977

NIBS organizes its framework, creating programs addressing four areas – rehabilitation guidelines, residential energy efficiency standards, building code development and updating, and mobile home construction and safety standards.

1970s

NIBS begins support of the Naval Facilities Engineering Systems Command (NAVFAC) and U.S. Department of Defense to update federal facility criteria. The contract: provide multi-discipline architect-engineer services in support of DoD criteria management throughout the NAVFAC area of responsibility and worldwide.

July 9, 1976

President Gerald Ford swears in the first 18-member NIBS Board of Directors.

1977

Congress passes the Earthquake Hazards Reduction Act to protect the lives of building occupants, during an earthquake and mitigate the impact of such disasters on the national economy. The law establishes the National Earthquake Hazards Reduction Program (NEHRP).

1978

NIBS forms the Insulation Task Force and publishes its first report: The Insulation Situation.

According to the mandate, Congress found the "lack of an authoritative national source to make findings and to advise both the public and private sectors of the economy with respect to the use of building science and technology in achieving nationally acceptable standards and other technical provisions for use in Federal, State and local housing and building regulations is an obstacle to its efforts by and imposes severe burdens upon all those who procure, design, construct, use, operate, maintain, and retire physical facilities, and frequently results in the failure to take full advantage of new and useful developments in technology which could improve our living environment."

This paved the way for the formation of the National Institute of Building Sciences (NIBS).

A National Call to Action

Congress declared that an authoritative nongovernmental instrument was needed to address these problems and issues.

On August 22, 1974, the National Institute of Building Sciences was created by Congress with the signing of the Housing and Community Development Act, Public Law 93-383.

1978

Charlene Frazier Sizemore is the first woman to serve on the NIBS Board of Directors. She was appointed by President Jimmy Carter and reappointed by President Gerald Ford and served a total of 11 years.

1979

NIBS analyzes mobile home standards for the U.S. Department of Housing and Urban Development.

1979

The Consultative Council begins operating, ensuring a direct line of communication between all representatives of the built environment and NIBS.

1979

The Building Seismic Safety Council is formed. Under a contract with the Federal Emergency Management Agency, BSSC develops and maintains the NEHRP Recommended Seismic Provisions for New Buildings and Other Structures.

1980

NIBS publishes rehabilitation guidelines for the U.S. Department of Housing and Urban Development.

1980

NIBS forms the Committee for Home Energy Conservation (CHEC), developing the Home Energy Saving Checklist for the U.S. Department of Energy. President Jimmy Carter awards the CHEC program with the National Energy Efficiency Award.

1981

NIBS advises President Ronald Reagan's transition team on housing and building regulatory matters.

1982

The Building Thermal Envelope Coordinating Council (future Building Enclosure Technology and Environment Council) is created.

1980

Two councils are called out in NIBS' enabling legislation: the Consultative Council and Advanced Building Technology Council.

NIBS immediately began work. Organizing the framework took three years, and NIBS created programs that addressed four specific areas – rehabilitation guidelines, residential energy efficiency standards, building code development and updating, and mobile home construction and safety standards.

President Gerald Ford appointed NIBS' first 18-member board of directors, which was sworn in July 9, 1976. The directors elected Gene C. Brewer to be the first NIBS president in November 1977.

During this time, NIBS also began working with a variety of federal agencies.

In the 1970s, NIBS began support of the Naval Facilities Engineering Systems Command (NAVFAC) and U.S. Department of Defense to update federal facility criteria. The contract was to provide multi-discipline architect-engineer services in support of DoD criteria management throughout the NAVFAC area of responsibility and worldwide.

1982

HUD contracts with NIBS to create a national agenda for housing research.

1982

Advancing federal design and construction criteria, NIBS develops the Model Project Management Procedures Manual for Rehabilitation, Construction and Maintenance of Government Buildings.

1982

NIBS forms the Toxicity Task Force, addressing the controversial issue of smoke toxicity resulting from building fires. As a result of a 1986-1989 study, Toxicity Effects in Building Fires, NIBS produces a test apparatus and method to assess the toxic potency of a range of building materials and furnishings.

1982

The U.S. Department of Veterans Affairs contracts with NIBS to review building start-up and operations procedures.

1982

FEMA funds NIBS' project on civil defense shelter and fire safety building design criteria.

1983

A formal working relationship is formed with the National Bureau of Standards (later known as the National Institute of Standards and Technology). The Building Product Approval Project Committee is formed.

1984

NIBS' rehabilitation guidelines for HUD are adopted as the model by three code organizations.

1984

NIBS creates the Asbestos Task Force to combat asbestos attributing to declining indoor air quality issues.

Seismic Design to Protect Building Occupants

In the spirit of its founding, NIBS convened public and private interests to create councils to address specialty issues and challenges associated with the building process.

During this time, in 1977, Congress passed the Earthquake Hazards Reduction Act to protect the lives of building occupants during an earthquake and to mitigate the impact of such disasters on the national economy. The law established the National Earthquake Hazards Reduction Program (NEHRP).

Just two years later, in 1979, NIBS created the Building Seismic Safety Council. Under a contract with the Federal Emergency Management Agency (FEMA), BSSC began developing and maintaining the NEHRP Recommended Seismic Provisions for New Buildings and Other Structures (NEHRP Provisions).

The NEHRP Provisions are used as the primary technical resource for developing national seismic design standards within American Society of Civil Engineers/Structural Engineering Institute 7 Standard Minimum Design Loads and Associated

1984

Actor Gregory Peck teams with NIBS and the Alliance to Save Energy on a national TV campaign to Keep America Energy Conscious.

1985

The Wood Protection Council is formed.

1985

The U.S. Army Corps of Engineers and Naval Facilities Engineering Systems Command (NAVFAC) approaches NIBS to solve a criteria management problem that had evolved since the 1950s. Background: The DoD puts billions of dollars of construction in place annually and its paper-based criteria management and dissemination system had become a serious problem. Documents were un-indexed, sometimes unreadable, and often out of date or missing. This "system" became a paper mess that was affecting the schedules, quality, and costs of these agencies' projects.

1986

The Construction Criteria Base (CCB) is launched. It is the building industry's first CD-ROM library of criteria, guidance, specifications, regulations, codes, and more. NIBS later developed programming to sell Industry Organization standards on the CCB and later converted over from ASCII-text documents to Adobe Acrobat PDF, as adopted by the Government Printing Office.

The Indoor Air Quality Project Committee is formed.

1984

The Building Seismic Safety Council publishes the first editions of the NEHRP Recommended Provisions for the Development of Seismic Regulations for New Buildings.

1985

NIBS publishes the Model Guide Specifications for Asbestos Abatement.

1986

The Wood Protection Council publishes the report, Indoor Sampling Guidelines for Termiticides.

1986

Criteria for Buildings and Other Structures (ASCE 7), which represents the consensus standard of the entire civil engineering community.

Today, BSSC is one of the most widely recognized authorities on the subject of seismic design.

With support from FEMA, BSSC currently is developing the 2026 NEHRP Provisions and defining functional recovery design criteria during this NEHRP Provisions cycle.

This assignment has received strong endorsement by the BSSC's Functional Recovery Planning Committee and from a large group of volunteer experts within the Functional Recovery Task Committee, working under the guidance of the 2026 NEHRP Provisions Update Committee (PUC).

Formalizing a Council on Building Enclosure Technology

Another early NIBS program brought together 50 subject matter experts, representing public and private interests to address insulation materials used in construction.

The group was formalized in 1982 as the Building Thermal Envelope Coordinating Council. Over the

1987

NIBS creates the Lead-Based Paint Task Force.

1988

The Rehabilitation Task Force publishes the report, Meeting America's Housing Needs Through Rehabilitation of Existing Housing and Vacant Buildings.

1988

NIBS submits the report, Feasible Alternatives for a Federal Voluntary Preemptive Modular Housing Regulatory System, to Congress.

1989

NIBS' modular housing report generates resolutions by code and housing organizations.

1989

NIBS studies life safety standards for health care facilities.

The Land Use Task Force is formed.

1987

NIBS publishes the Factory-Built Housing Forums.

1988

NIBS publishes the report, Lead-Based Paint Testing, Abatement, Cleanup and Disposal Guidelines, for HUD.

1989

NIBS conducts review of federal court design criteria.

1989

years, this council has addressed building issues from bugs, mold, and rot to President Bill Clinton's Climate Action Plan.

Today, the council is known as the Building Enclosure Technology and Environmental Council (BETEC).

Among its charges is the production of the Building Enclosure Science and Technology (BEST) conference series, which was started in 2008.

The BEST Conference brings together a cross-section of public and private building leaders, including design professionals, contractors, manufacturers, and educators.

2024 brought the BEST6 Conference to the Sheraton Austin Hotel at the Capitol in Austin, Texas, where built environment professionals were immersed in educational programming around the "Next Generation of Building Technology." The conference focused on the impact of climate change on building enclosures, new techniques in building design and construction, durability, and sustainability.

The Building Enclosure Council (BEC) network was created in 2004, as a joint venture between NIBS

NIBS publishes the report, Foreign Influences in the U.S. Building Industry.

1989

1989

NIBS completes the General Services Administration/Public Building Service (PBS) Codes Study.

1990

1990

NIBS publishes the report, Land-Use Regulations Handbook.

The first five editions of the U.S. Courts Design Guide are completed.

1991

1991

NIBS signs an agreement to share information and technology with the U.S. Consumer Product Safety Commission.

FEMA selects the BSSC to develop guidelines for seismic rehabilitation of existing buildings.

1991

1991

A Building Thermal Envelope Coordinating Council symposium addresses issues on Bugs, Mold & Rot.

NIBS begins development of the Hazards U.S. (HAZUS)/ Earthquake Loss Estimation Model for FEMA. It is the most comprehensive tool of its kind and still in use today.

1992

and the American Institute of Architects.

BECs are comprised of affiliated architects, engineers, contractors, manufacturers and others who provide a forum for the construction industry to address building enclosures. Today, BECs host some 4,000 members in 34 local chapters.

A Direct Line to the Executive and Legislative Branches

The founding 500 members of the National Institute of Building Sciences recognized the potential enormity of NIBS' mission and need for a smaller, more responsive deliberative body to review recommendations and potential projects before presenting them to the board of directors and, eventually, to the President of the United States.

Enter the Consultative Council.

An assembly of high-level building community representatives, the Consultative Council makes recommendations directly to the executive and legislative branches of government to improve our nation's buildings and infrastructure.

1992

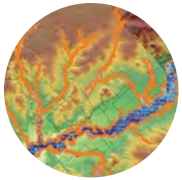
The Construction Metrication Council is formed. NIBS publishes the federally approved Guide to Metrication in Construction.

NIBS publishes the Asbestos Operations & Maintenance Work Practices Manual.

1992

1993

NIBS completes the HAZUS Earthquake Model state-of-the-art study.



The Metric Guide for Federal Construction is published.

1993

1994

The Lead Laws database is published on CD.

1994

The Facility Information Council is created.

NIBS holds its first seminar on federal construction (FEDCon).

1994

1994-1997

The Building Seismic Safety Council, FEMA, and United States Geological Survey develop the first national applicable seismic maps under NEHRP.

The Building Thermal Envelope Coordinating Council focuses on President Bill Clinton's Climate Change Action Plan.

1994

This is carried out annually through the annual Moving Forward Report, which in years past has covered major topics, including workforce (i.e. maintaining a skilled 21st century workforce and driving workforce diversity, equity, and inclusion in the built environment); healthy buildings and how buildings can protect and promote public health; advancing an understanding of resilience in adapting to climate change and promoting disaster mitigation; and charting a path toward decarbonization of U.S. buildings.

This year, the 2024 Moving Report tackles two critical subjects: housing affordability and clean water and sanitation.

Critical Built Environment Informational Resources

Over the last several decades, NIBS has built a reputation of trust and authority.

In 1978, NIBS formed the Insulation Task Force and published the report, The Insulation Situation. Two years later, in 1980, NIBS formed the Committee for Home Energy Conservation (CHEC), developing

1995

The manual, Moisture Control in Buildings, is published.

1995

NIBS helps GSA address building security issues.

1995

The Building Thermal Envelope Coordinating Council changes its name to the Building Environment & Thermal Envelope Council.

1995

HAZUS Earthquake Model pilot studies begin in Portland, Oregon and Boston, Massachusetts.

1995

NIBS publishes the Lead-Based Paint O&M Work Practices Manual and Guide Specifications for Reducing Lead-Based Paint Hazards.

1996

NIBS' lead-based paint work becomes the basis for a model code change.

1996

NIBS creates the Facility Maintenance & Operations Committee, which eventually would become the Facility Management and Operations Council.

1996

The BSSC conducts analysis of 36 federal buildings for seismic rehabilitation.

the Home Energy Saving Checklist for the U.S. Department of Energy. The CHEC program was recognized by President Jimmy Carter with the National Energy Efficiency Award.

NIBS became an important resource for building-related science at Congressional hearings. And, in 1981, after an exhaustive three-stage review and analysis of federal regulations impacting the housing and building industry, NIBS presented 19 recommendations for change to Vice President George H. W. Bush in 1981.

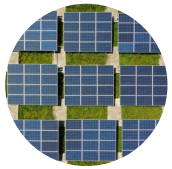
Over the years, NIBS has taken on several public health issues, including smoke toxicity resulting from building fires, asbestos attributing to declining indoor air quality, indoor guidelines for termiticides, lead-based paint testing and abatement, and land use.

By the mid-1980s, the organization was tapped to assist the U.S. Army Corps of Engineers and Naval Facilities Engineering Systems Command (NAVFAC) with solving a criteria management problem that had evolved since the 1950s.

The issue: The U.S. Department of Defense (DoD) annually had put billions of dollars of construction in place and its paper-based criteria management

1996

NIBS conducts a Green Buildings Panel for GSA.



1997

The first four versions of the HAZUS Earthquake Model are released.

1997

The United States National CAD Standard effort begins, based on an MOU between NIBS, Construction Specifications Institute, American Institute of Architects, Sheet Metal and Air Conditioning Contractors' National Association, United States Army Corps of Engineers, U.S. Coast Guard, and General Services Administration.

1998

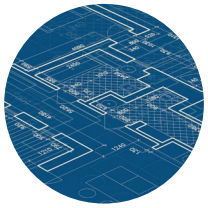
NIBS welcomes the National Clearinghouse for Educational Facilities to its programs.

The NIBS Board of Directors establishes the Multi-Hazard Mitigation Council. The MMC has informed thousands of mitigation decisions that led to effective public policy on many levels.

1997

The CCB migrates all criteria to Adobe PDF and launches an online library. The WBDG concept website launches with Design Objectives & Building Types.

1997



The Facility Information Council releases the United States National CAD Standard® V1.

1998

The Construction Criteria Base database goes on the world wide web.

1998

and dissemination system had become a serious problem. Documents were un-indexed, sometimes unreadable, and often out of date or missing. This “system” became a paper mess affecting the schedules, quality, and costs of the agencies’ projects.

NIBS came to the table with the launch of the Construction Criteria Base (CCB) in 1986. It was the building industry’s first CD-ROM library of criteria, guidance, specifications, regulations, codes, and more. Later, NIBS developed programming to sell Industry Organization standards on the CCB and converted over from ASCII-text documents to Adobe Acrobat PDF, as adopted by the Government Printing Office.

In 1997, NAVFAC developed the concept of an online portal focusing on Whole Building Design - a synergy of an 'integrated team process' and an 'integrated design approach' to achieve a true high-performance building: One that is cost-effective, safe, secure, accessible, flexible, aesthetic, productive, and sustainable over its entire life cycle. Thus, the Whole Building Design Guide - WBDG was born, and later in

1998

ProjNet™ is developed by the U.S. Army Corps of Engineers Construction Engineering Research Laboratory (ERDC-CERL) as a suite of integrated web-based design review, bid, and build applications. NIBS assists with the identification and resolution of design issues for this worldwide customer base of federal users and non-federal (commercial, state, and academic institutions).

2000

NIBS publishes the report, Proceedings on Building Sustainability.

2001

NIBS assumes management of the Whole Building Design Guide – a massive resource to thousands of building professionals on design recommendations, operations and maintenance project management, federal facility criteria, and continuing education. NIBS adds Resources Pages and expanded Federal Mandates to reference the CCB.

2002

The Multi-Hazard Mitigation Council examines ways to reduce America’s vulnerability to chemical, biological, and radiological attacks.

2000

The U.S. Navy requires use of the United States National CAD Standard.

2000

The Multi-Hazard Mitigation Council is commissioned by FEMA to conduct a Congressionally-mandated independent study of mitigation. The Natural Hazard Mitigation Saves study found that for every dollar spent on mitigation, society saves $4.

2000-2005

The United States National CAD Standard® V2 is released. Several U.S. agencies start mandating use of the standard and commercial AEC firms adopt the NCS as their in-house standard.

2002

The CCB is integrated with the WBDG. The website relaunches with a new design and sections, including News & Events and Project Management.

2003

2001, NAVFAC turned over development and management to NIBS as more agencies began supporting the online portal.

The WBDG grew from over a dozen pages in its first launch to now more than 200 subject matter expert written pages, and in 2003, the CCB was merged into the WBDG to create the largest and only online portal providing built environment practitioners access to relevant building-related guidance, up-to-date federal criteria, and new technology information.

In 2007, the WBDG launched its custom-built learning management system to support workforce development across all disciplines. The catalog consisted of six courses accredited by AIA with enrollment in the dozens, and now the WBDG LMS hosts over 125 on-demand and live-online courses with enrollment in the thousands.

The success of the WBDG has largely been due to the support of its agency members making up the WBDG Workgroup. Members of the WBDG workgroup include the U.S. Department of Defense, U.S. Department of Veterans Affairs, U.S. Department of Energy, General Services

2004

GSA contracts with NIBS to support IFC building information models (BIM).

2004

The national Building Enclosure Councils are created through an MOU between NIBS and the American Institute of Architects. More than 3,000 affiliated architects, engineers, contractors, manufacturers, and others with an interest in building enclosures participate in 32 BEC chapters nationwide.

2005

The International Alliance for Interoperability (IAI), the predecessor of buildingSMART International, moves to NIBS.

2005

The United States National CAD Standard® V3 is released.

2005

NIBS studies the 9/11 collapse of the World Trade Center and offers provisions for local building codes.

2005

ProductGuide™, the first online database of UFGS-compliant building products, is launched.

2005

NIBS collaborates with Open Geospatial Consortium on open information technology systems.

2005

The WBDG releases a new website, adding Space Types, Case Studies, Industry Organizations and interactive features like the LEED®-DoD Antiterrorism Standards Matrix.

2005

The Building Environment & Thermal Envelope Council becomes the Building Enclosure Technology and Environment Council.

BETEC/BEC

Administration, U.S. Department of State, U.S. Department of Homeland Security, National Aeronautics and Space Administration, U.S. Department of Agriculture, U.S. Department of the Interior, and the National Institutes of Health.

The WBDG continues to grow and this year will unveil its new design with even more rich resources and features.

Expanding Our Reach and Services

In the 1990s, the National Institute of Building Sciences entered a period of expansion of services.

NIBS was contracted to study and provide advice and counsel on topics that were groundbreaking at the time and now are recognized as having been at the vanguard of a safer and more secure quality of life in the built environment.

These projects included international influences on the U.S. building industry, criteria for the design of U.S. courts, accessibility of people with disabilities, radon in buildings, survey of model codes, and conversion of federal construction to metric measurements.

A lifecycle approach to operations and

2005

NIBS begins conducting post-occupancy evaluations for GSA.

2005-2007

BSSC, FEMA, and USGS update the national applicable seismic maps under NEHRP.

2006

NIBS forms the High Performance Building Council and the National Mechanical Insulation Committee.

2006

Under DoD direction, NIBS develops the WBDG Criteria Management System (CMS) as a simpler, more effective UFC program criteria management service. Features and processes represent input from the Tri-Service branches and are integrated to assist with managing, while also unifying the life cycle of its specifications and criteria.

2007

The WBDG releases a new website adding O&M, Design Disciplines, BIM & Continuing Education LMS with courses created from WBDG material.

The first Natural Hazard Mitigation Saves report is released. A series of reports eventually would be released between 2017-2021. This was funded by FEMA, HUD, EDA, ICC, IBHS, NFPA, and AIA.

2005

NIBS and the U.S. Army Corps of Engineers Construction Engineering Research Lab releases the Construction to Operations Building information exchange (COBie) V1.

2006

The MMC publishes the report, Best Practices for Reducing the Potential for Progressive Collapse in Buildings.

2006

NIBS forms the buildingSMART alliance® by consolidating the work on the Facilities Information Council and the International Alliance for Interoperability North America chapter.

2007

maintenance of buildings led to the creation of the Facility Maintenance & Operations Committee in 1996. This committee eventually would become today's Facility Management and Operations Council (FMOC).

FMOC provides industry-wide, public and private support for the creation of higher quality facilities through improved maintenance and operation and real property management.

There are many opportunities for NIBS members to participate in FMOC, which has several projects underway for 2024.

These projects open opportunities for collaboration, knowledge sharing, publications, and outreach for individuals and firms.

Joining the Climate Action Front

Long before NIBS became an ally with the U.S. Department of Energy's Better Climate Challenge in 2023, climate and its effects on the built environment has been on NIBS' radar since nearly the organization's inception.

In the 1990s, NIBS developed the Multihazard Loss Estimation Program Hazards U.S. (known as HAZUS),

2007

NIBS buildingSMART alliance® releases the United States National Building Information Modeling Standard™ V1 – Part 1.

2007

NIBS begins administering ProjNet™.

2008

NIBS releases the United States National CAD Standard® V4.

2008

BETEC co-sponsors the new Building Enclosure Science and Technology (BEST) conference series.

2008

The High Performance Building Council publishes the report, Assessment to the U.S. Congress and the U.S. Department of Energy on High Performance Buildings.

2009

NIBS helps the VA perform seismic assessment of 50 hospital buildings.

2009

The first buildingSMART alliance® COBie Challenge is held, putting facility maintenance software to the test.

2009

NIBS hosts the Security, Energy, Environmental Sustainability Summit for the U.S. Department of Homeland Security.

2009

NCEF releases U.S. K-12 School Construction Data 1999-2008.

under a cooperative agreement with FEMA.

This project grew out of an Earthquake Loss Estimation Study that began in 1992. Today, the national applicable HAZUS software tool is used by communities across the country to estimate the effects of natural disasters, including earthquakes, riverine and coastal floods, and hurricane winds.

Separate from HAZUS, NIBS formed the Multi-Hazard Mitigation Council in 1997. To date, MMC has informed thousands of mitigation decisions that have led to effective public policy on many levels.

Over the last 24 years, MMC has taken on the massive study of natural hazard mitigation and the cost benefits associated with strategic mitigation. The initial study entitled Natural Hazard Mitigation Saves began in 2000, and it was commissioned by FEMA as part of a Congressionally-mandated independent study of mitigation.

The Mitigation Saves study found that for every dollar spent on mitigation, society saves $4. In 2019, the Mitigation Saves study produced its most comprehensive report yet – 658 pages of benefit-cost analysis of natural hazard mitigation, from adopting up-to-date building codes and

2010

2010

NIBS assists the U.S. Department of Veterans Affairs with creating the VA BIM Guidelines V1. V2 comes out in 2016.

2010-2018

NIBS operates the Integrated Resilient Design Program in partnership with the U.S. Department of Homeland Security Science and Technology Directorate. The IRDP developed a series of publications and tools to assist facility owners with addressing security in context with other important performance criteria. Highlights include development of the Owners Performance Requirements (OPR) and Integrated Rapid Visual Screening (IRVS) Tool for use on a variety of facility types.

2011

NCEF releases new instructional videos on school safety and a report highlighting federal spending in school facilities.

The WBDG releases a new website to streamline management, adding the Building Envelope Design Guide, Federal High Performance and Sustainable Buildings & Applied Research.

2010

NIBS begins performing scientific resolution panels for FEMA. The purpose is to review and resolve conflicting scientific and technical data submitted by a community challenging FEMA's proposed flood hazard data.

2011

NIBS forms the Council on Finance, Insurance and Real Estate (CFIRE), National Council of Governments on Building Codes and Standards (NCGBCS), and Low Vision Design Committee (LVDC).

2011

exceeding codes to addressing the retrofit of existing buildings and utility and transportation infrastructure. The report was funded by HUD.

Earlier editions of the Mitigation Saves report were funded by FEMA, the U.S. Economic Development Administration, International Code Council, Insurance Institute for Business & Home Safety, American Institute of Architects, and National Fire Protection Association.

Exploring Mitigation Investment to Help Americans Prepare for Disasters

As disasters grow more frequent and destructive, preparing the nation's infrastructure and communities for extreme weather has become critical to protect lives and reduce economic losses.

The MMC's Committee on Finance, Insurance, and Real Estate (CFIRE) published the report – A Roadmap to Resilience Incentivization – calling for public and private incentives to owners of buildings and other infrastructure to facilitate the upgrade of existing infrastructure and better design of new infrastructure.

In 2023, CFIRE and Fannie Mae released the Resilience Incentivization Roadmap 2.0 on

2011

NIBS releases the United States National CAD Standard® V5.

2012

NIBS releases the National BIM Standard-United States® V2.

2012

NIBS and AIA collaborate on a new research portal, the Building Research Information Knowledgebase (BRIK).

2012

NIBS establishes the Science, Technology, Engineering and Mathematics (STEM) program with the Total Learning Research Institute and NASA.

2013

The first Building Innovation conference takes place.

2013

The NIBS Whole Building Design Guide-WBDG is authorized as the primary Learning Management System for the U.S. Department of Energy Federal Energy Management Program.

2013

NIBS releases the NBIMS-US 2021 Vision Paper.

2013

The Off-Site Construction Council is created to serve as a research, education, and outreach hub for relevant and current information on off-site design and construction for commercial, institutional, and multifamily facilities.

2013

The Whole Building Design Guide breaks the 7 million mark in documents downloaded monthly.

mitigation investment to help people in America prepare for and respond to natural disasters. The report specifically explores the investment opportunities by lenders, insurers, developers, owners, and government.

Climate Change: Protecting the Nation's Lifelines

For the past two decades, development of codes and standards to advance design and construction practices of lifeline infrastructure has been overlooked, making communities across the nation susceptible to devastating consequences from natural disasters.

Community resilience necessitates a unified vision for the future and a platform of diverse perspectives offering opportunities for comprehensive, synergistic, and sustainable solutions.

Urgency is required, given the historic infrastructure investments made possible by the 2022 Inflation Reduction Act. If a collaborative approach is not defined, data-informed design

2014

NIBS releases the United States National CAD Standard® V6.

2014

NIBS and the U.S. Department of Education's National Center for Education Statistics release the report, Condition of America's Public School Facilities.

2014

NIBS collaborates with the U.S. Department of Energy on zero-energy buildings.

2014

The U.S. House of Representatives approves the Thermal Insulation Efficiency Improvement Act based on a Consultative Council recommendation.

NIBS partners with the Defense Health Agency and U.S. Department of Veterans Affairs to modernize the Space and Equipment Planning System (SEPS) and connect it with BIM.

2014

NIBS and the U.S. Army Engineering and Development Center, Construction Engineering Laboratory signs a Cooperative Research and Development Agreement, pursuant to the Federal Technology Transfer Act of 1986. The objective: Improve ProjNet™ and streamline its underlying business processes through research and improvement of interoperable building information modeling standards and to transfer the ProjNet™ technologies to other agencies, the private sector, and general public.

2014

NIBS hosts first workshops on Cybersecurity of Building Control Systems.

2014

NIBS partners with the Defense Health Agency and U.S. Department of Veterans Affairs to modernize the Space and Equipment Planning System (SEPS) and connect it with BIM.

2014

requirements will not be set forth for lifeline infrastructure, and the promised investments under the act will fail to fulfill their true potential benefit to the American public.

Enter the NIBS Lifeline Infrastructure Hub, a platform that fosters collaboration among lifeline infrastructure industry experts, stakeholders, and policymakers. NIBS leadership has been working with the BSSC and MMC to establish this national resilience lifeline since 2022.

The nation is experiencing an urgent need to better understand and improve aging and unreliable lifeline systems. These systems include water, wastewater, electricity, natural gas, liquid fuels, communications, and multi-modal transportation—highways and roads, rail, airports, and ports and harbors.

Objectives for the Lifelines initiative include NIBS serving as a convener to establish private and public partnerships, building a fundamental understanding of current lifeline infrastructure vulnerabilities and potential cascading failures due to their dependencies, and prioritizing investments and policies for resilience improvement and modernization of lifeline infrastructure.

2015

NIBS begins advisory support on bridge model standardization to the American Association of State Highway and Transportation Officials (AASHTO) BIM for Bridges Pooled Fund project.

2015

NIBS buildingSMART alliance® releases National BIM Standard-United States® V3.

2015

The 2015 NEHRP Recommended Seismic Provisions are released.

2016

The NIBS team begins providing support to the U.S. Department of State Bureau of Overseas Buildings Operations (OBO) Design, Construction and Operations to prepare BIM requirements, standards and processes and to review their application on OBO projects.

2016

NIBS participates in the Earthquake Resilience Summit at the White House, supporting an executive order to establish a Federal Earthquake Risk Management Standard.

NIBS develops U.S. Bridge Lifecycle Process Map and IFC-based Design to Construction Exchange Specification for the Federal Highway Administration to provide an open standard for bridge modeling in the U.S.

2015

NIBS and the U.S. Department of Energy release Better Buildings Workforce Guidelines.

2015

BSSC, FEMA, and USGS join efforts for the third time to update the national applicable seismic maps under NEHRP.

2015 - 2017

NIBS and the U.S. Department of Homeland Security Science and Technology Division, Office of the SAFETY Act release Best Practices Guide to Anti-Terrorism Security (BPATS) for Commercial Facilities. The BPATS guide is accompanied by a web-based tool and training in its use.

2016

A Leader in Building Technology

It used to be that the construction industry was among the least digitized industries, ranking just above agriculture.

While that is changing in recent years, there's still room for improvement, and NIBS continues to help pave the way toward digital transformation.

When NIBS was created, it was to serve as the "authoritative national source of knowledge and advice on matters of building science and technology and as a leadership forum for the purpose of bringing together the building community."

Goals included promoting a more rational building regulatory environment, developing and using new technology and processes, promoting quality in the built environment, disseminating nationally recognized technical information, facilitating building science investigations and research, and seeking solutions to building community problems and needs.

In 1994, NIBS formed the CADD Council, which eventually would become today's Digital Technology Council (DTC). The work of the DTC over the years has contributed significantly to U.S. building technology standards and digitalization.

2016

NIBS works with the U.S. Department of Energy and Green Sports Alliance to identify opportunities to influence energy and water use in stadiums and arenas. The report, Taking the Field: Advancing Energy and Water Efficiency in Sports Venues, is released in 2017.

2017

NIBS publishes the National BIM Guide for Owners.

2017 & 2018

Natural Hazard Mitigation Saves interim reports are published.

2017-present

The WBDG Catalog contains more than 150 registered on-demand courses, live webinars, and workshops with 33,000 enrollments between 2017-2023. Course sponsors include the U.S. Department of Defense and U.S. Department of Energy – Federal Energy Management Program.

2019

Women Executives in Building inaugural summit.

2019

The Natural Hazard Mitigation Saves report is expanded, representing the most exhaustive benefit-cost analysis of natural hazard mitigation.

2020

2020

BSSC/FEMA publish the 10th edition of the NEHRP Provisions.

2020

NIBS hosts the COVID-19 Town Hall Series, which was highly valuable to the industry and widely attended. NIBS also takes the Building Innovation conference online.

2020

The buildingSMART alliance® becomes the Building Information Management Council.

BIM Council

Standardizing Data Collection and Transmission

NIBS assumed oversight of the International Alliance for Interoperability (IAI), which eventually would become buildingSMART International (bSI). IAI was founded to standardize data collection and exchange within the international building industry, known today as the Industry Foundation Classes.

The seamless flow of data remains a critically important service to members of the building industry.

Today, NIBS continues to work closely with bSI on the advancement of IFC to meet industry needs.

In 1997, the United States National CAD Standard® (NCS) effort began. NCS is a consensus standard incorporating industry publications. It's comprised of interrelated standards, guidelines, and tools for uniformly organizing and presenting facility drawing information.

It was based on an MOU between NIBS, the Construction Specifications Institute, American Institute of Architects, Sheet Metal and Air Conditioning Contractors' National Association, U.S. Army Corps of Engineers, U.S. Coast Guard, and General Services Administration.

2020

The Facility Maintenance & Operations Committee becomes the Facility Management & Operations Council.

2021

Anne Ellis becomes the first woman to serve as Chair of the NIBS Board of Directors.

2022

The U.S. National BIM Program implementation and launch plan becomes available. Program goals: Next generation standards, support owner adoption, improve project delivery, build communities, and create a legal framework.

2023

NIBS creates the Digital Twin Integration Subcommittee. NIBS and ASHRAE jointly publish the ASHRAE NIBS Standard 224 BIM for Owners.

2023

The U.S. Department of Housing and Urban Development, NIBS, and MOD X publish the Offsite Construction for Housing: Research Roadmap.

2020

CFIRE publishes A Roadmap to Resilience Incentivization.

2021

The MMC conducts a national survey to solicit feedback on the development of a national mitigation resource portal. This eventually will become known as TurboGrants.

2023

Building Innovation: The Podcast is launched.

2023

CFIRE publishes the Resilience Incentivization Roadmap 2.0. This industry report is funded by Fannie Mae.

A year later, the Facility Information Council CAD Standard Project Committee released the United States National CAD Standard Version 1.

By 2000, the U.S. Navy required use of the NCS.

NCS is the only comprehensive standard for facility planning, design, construction and operation drawings. Today, it consists of the American Institute of Architect's CAD Layer Guidelines, Construction Specifications Institute's Uniform Drawing System (Modules 1-8), and NIBS' BIM Implementation & Plotting Guidelines.

ProjNet™: Identifying and Resolving Design Issues

Another major project that NIBS assisted with began in 1998, with the U.S. Army Corps of Engineers Engineer Research and Development Center Construction Engineering Research Laboratory (ERDC-CERL). USACE developed ProjNet™ as a suite of integrated web-based design

2023

NIBS forms the Lifeline Infrastructure Hub, a public-private partnership to assist the nation with community resilience and recovery after disasters.

2024

United States National CAD Standard® V7 is approved by the NCS Project Committee and slated for release in 2024.

2024

The NIBS BIM Council becomes the Digital Technology Council.

2023

NIBS launches the National BIM Standard-United States® V4. This includes Project BIM requirements, BIM execution planning, BIM use definition and COBie Version 3.0.

2023

NIBS and industry partners host a Congressional briefing to make an appeal for reauthorization of NEHRP and the National Windstorm Impact Reduction Program.

2024

The WBDG is a federal facility criteria library and collection of more than 5,000 federal criteria, manuals, specifications, standards, and more. It receives 2 million annual visitors, 6.4 million page views, and 1.4 million document views.

August 22, 2024

NIBS celebrates 50 years of service to the U.S. built environment.

review, bid, and build applications.

NIBS assists with the identification and resolution of design issues for this worldwide customer base of federal users and non-federal (commercial, state, and academic institutions). By 2007, NIBS began administering ProjNet™.

At about the same time, NIBS formed the buildingSMART alliance® by consolidating the work of the Facility Information Council and the International Alliance for Interoperability (IAI) North America chapter. The buildingSMART alliance® was renamed the Building Information Management Council in 2020.

Throughout the 2000s, NIBS collaborated with national and international partners to release a number of versions of the United States National Building Information Modeling Standard® and United States National CAD Standard®, with NBIMS-US Version 4 and NCS Version 7 being released in 2024.

NIBS worked with a number of partners – domestically and internationally – to coordinate and collaborate on future development of the standards.

NIBS published the National BIM Guide for Owners in 2017 and worked with ASHRAE to release it as a joint ANSI/ASHRAE/NIBS Standard in 2024.

Following successful programs in other countries around the world, in 2022, NIBS released the implementation and launch plan for the U.S. National BIM Program (NBP). The NBP began to operate and bring together the U.S. public and private sector building and infrastructure asset

industry to expand digitalization of the sector.

NBP's goals include advancing next generation standards, support owner adoption, improving project delivery, building communities, and createing a legal framework.

Today, building information management and modeling are just two of the keys to unlocking digitalization.

To better serve the ever-evolving architecture, engineering, construction, and operations (AECO) industry, NIBS renamed the BIM Council to the Digital Technology Council in 2024.

The Digital Technology Council's expanded focus builds on the work and foundation of building information management and modeling, while also addressing the rapid expansion of artificial intelligence, cybersecurity, ditigal twins, and other new digital technologies in the built environment.

Digging Into Modular and Off-site Construction

NIBS began studying off-site construction in the 1980s. By 1989, a modular housing report by NIBS generated resolutions by code and housing organizations.

Off-site construction is the planning, design, fabrication, and assembly of building elements at a location other than their final installed location to support the rapid and efficient construction of a permanent structure. Off-site construction is characterized by an integrated planning and supply chain optimization strategy.

In 2013, the Off-Site Construction Council was created to serve as a research, education, and outreach hub for relevant and current information on off-site design and construction for commercial, institutional, and multifamily facilities.

NIBS continues research in this very important area. In 2020, NIBS began three projects with the U.S. Department of Housing and Urban Development: The Off-site Construction for Housing: Research Roadmap, HUD Offsite Summit, and the study of HUD's Current and Future Role in Industrialized Construction. NIBS worked with research consultant MOD X to develop the research roadmap, which was published in January 2023.

In February 2024, HUD awarded nearly $4 million across 11 agencies to study innovative ways to boost housing supply, including office-to-residential conversions, filling critical knowledge gaps and leveraging off-site construction.

NIBS received $499,878 to partner with six HUD regions to design pilot programs that will identify regional barriers to the adoption of off-site construction and develop strategic plans for off-site construction growth.

What's Next for the National Institute of Building Sciences

NIBS has its eyes on the future.

Our strategic plan covers four specific goals:

- Climate adaptation, mitigation, and resiliency. Building alliances with public and private sector organizations to develop and deploy innovative solutions is critical to this mission. NIBS also must drive interdisciplinary and interorganizational collaboration resulting in the development of policies, codes, and standards and share knowledge to advance resilient and sustainable communities.
- Transformational building sciences and technologies. NIBS promotes convergent research and transformational technologies. Strategies to this goal involve nurturing and promoting creativity and innovation to advance technology. NIBS also aims to remove barriers to accelerate technology acceptance and adoption and advance innovative technology awareness and implementation.
- Industry development and diversification. NIBS encourages collaboration across the public and private sectors to increase diversity, equity, and inclusion within the workforce and communities. Strategies to this goal include expanding the industry's understanding of how building science, built environment, and social equity are related and championing diverse, equitable, and inclusive communities.
- Visibility and recognition. NIBS is a trusted authority and resource in the built environment. The organization aims to amplify its congressionally-authorized purpose as the nationally recognized authoritative voice. Strategies include increasing NIBS' brand visibility and stakeholder engagement among government and the private sector as well as attracting new stakeholders and business partners.

Our dedicated Board of Directors, council officers and members, volunteers, partners, and members keep NIBS on the cutting edge of the nation's vast built environment. Thank you to all who have joined us along the way and to the partnerships ahead. This is NIBS.

Our Partners – Thank You For Making Us Gold

84 Lumber
AABC Commissioning Group (ACG)
AECCafe
AECOM
AIA Austin Building Enclosures Council
Airthings
Airwavz Solutions, Inc.
American Institute of Architects
American Institute of Steel Construction
American Iron and Steel Institute
American Society of Heating, Refrigerating and Air-Conditioning Engineers
American Wood Council
APA – The Engineered Wood Association
Architect of the Capitol
Architectural Record
Armstrong
Associated Builders & Contractors, Inc.
Association for Facility Engineering
Autodesk
AWG Contracting – Moses West Foundation
Barge Design Solutions, Inc.
Bentley Systems
BOMA International
BSI Group
Build Strong Coalition
Building Enclosure Magazine
Charles Pankow Foundation
Coda
Compass Datacenters
Component Assembly Systems
Concrete Masonry Association of California and Nevada
Connex
Construction Links Network
Construction Specifications Institute
Daikin U.S.
Degenkolb
Dell Technologies
Delta Controls Inc.
Delta Electronics
Design-Build Institute of America
DPR Construction
EMA
EPDM Roofing Association
ESG Property Consultants
ESRI
Fannie Mae
Federal Emergency Management Agency
Federal Highway Administration
FM Global
General Motors Company
General Services Administration
Gilbane Building Company
Green Building Initiative
Greenroofs.com
Heat and Frost Insulators LMCT
Insurance Information Institute
Insurance Institute for Business & Home Safety
International Association of Plumbing and Mechanical Officials
International Code Council
International Institute of Building Enclosure Consultants
Kingdom of Saudi Arabia
LeapThought
MADCAD.com
McCarthy Building Companies
McDonough Bolyard Peck, Inc.
MOD X Advisory LLC
Modular Building Institute
National Association of Home Builders
National Building Museum
National Council of Structural Engineers Associations
National Fire Protection Association
National Institute of Standards & Technology
National Institutes of Health
National Oceanic and Atmospheric Administration
National Ready Mixed Concrete Association
Naval Facilities Engineering Systems Command
NBBJ
New Horizons Foundation
Ohio Facilities Construction Commission
Onuma, Inc.
Precast/Prestressed Concrete Institute
Procore Technologies
Professional Roof Consultants, Inc.
Prosoco
Protogetic
RDH Building Science
RICS
Salas O'Brien
Simpson Gumpertz & Heger
Smart Building Technology Magazine
STG Design
Structural Engineers Association of California
Tenmat
Terracon
The Marshall Group
The National Terrazzo & Mosaic Association
The Pew Charitable Trusts
Tremco Construction Products Group
U.S. Army Corps of Engineers
U.S. Department of Energy
U.S. Department of Housing and Urban Development
U.S. Department of State Bureau of Overseas Buildings Operations
U.S. Department of Veterans Affairs
U.S. Green Building Council
U.S. Navy
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