

MOVING FORWARD REPORT

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Introduction

The National Institute of Building Sciences (NIBS) serves as the unbiased forum for solving common issues and identifying opportunities within the building community. The NIBS Consultative Council assembles high-level building community leaders to make collective recommendations directly to policymakers to improve our nation's buildings and infrastructure. Members of the council include organizations representing consumers, architects, engineers, government officials, contractors, researchers, and housing officials.

The goals of the council are three-fold:

- **Convening Thought Leaders:** bringing together industry leaders and experts from across the built environment to improve our nation's infrastructure and buildings.
- **Identifying Challenges:** assembling experts who identify key issues they believe will be facing the industry in the year ahead.
- **Finding Solutions:** developing and publishing a yearly report that offers solutions to key challenges the built environment faces.

Each year, the Consultative Council publishes the Moving Forward Report to investigate key challenges facing the building industry and to make recommendations to help overcome those challenges. The 2021 Moving Forward Report examines the critical area of “driving workforce diversity, equity, and inclusion in the built environment.”

Driving Diversity, Equity, and Inclusion in the Built Environment

NIBS and the Consultative Council believe that diversity, equity, and inclusion (DEI) are essential characteristics of the built environment, and that pursuing DEI initiatives across the industry can yield key advantages. From developing and nurturing a diverse, robust, and sustainable workforce, to enhancing occupant satisfaction in buildings and continuing to expand industry innovation, there are numerous benefits to amplifying DEI throughout the varied businesses and professions that compose the building sector.

Consider the case of the building sector workforce. As discussed in multiple Moving Forward Reports over the last decade, the U.S. is reaching a crisis point in terms of ensuring that a “full pipeline” of workers (and skilled workers, in particular) is available to meet the needs of a rapidly advancing building industry. The National Association of Home Builders Home Builders Institute Fall 2021 Labor Market Report estimates that over the course of 2022-2024, the construction industry will require an additional 2.2 million net hires to fill the shortage of workers.¹ A business-as-usual approach will not meet this need. The construction industry and policymakers must explore all untapped sources of potential workers to help fill this gap. Critical to this effort is improving access, targeted recruitment efforts, and training for women and underrepresented groups, including ensuring fair and equitable opportunities for career advancement within the industry. As described in more detail below, findings from the NIBS 2021 Built Environment Social Equity Survey reinforce these needs.

¹ http://hbi.org/wp-content/uploads/HBI_Fall_Construction_Labor_Market_Report.pdf

A focus on diversity and inclusion can also benefit the industry by increasing occupants' satisfaction with the built environments in which they work, live, and play, and by improving the communities where buildings are located. Buildings that are designed by a workforce drawing from a diverse set of cultural, geographic, and/or religious backgrounds can cater to a broader range of customer requests, preferences, and community needs. Structures that are built to satisfy and accommodate diverse audiences can be made accessible and more comfortable for all occupants, regardless of shape, size, disability, skin tone, or gender, among the many other dimensions of diversity. Industry research has identified and affirmed the relationship between occupant comfort and productivity.² In other words, all of society ultimately benefits if everyone can thrive in buildings that are universally designed, built, and operated for all peoples.

Inclusive Community Engagement

NIBS encourages greater diversity among those voices that guide decisions about the built environment. Promoting equitable and inclusive access to decision-making bodies and public forums can help ensure that building projects and relevant policies consider the needs and experiences of those communities where buildings are located. One organization that has been active in this area is the NAACP, through its Centering Equity in the Sustainable Building Sector (CESBS) Initiative.³ As part of CESBS, the NAACP developed resources and partnered with groups from across the industry to drive deeper community involvement in processes and proceedings that influence building sector policy and project development.



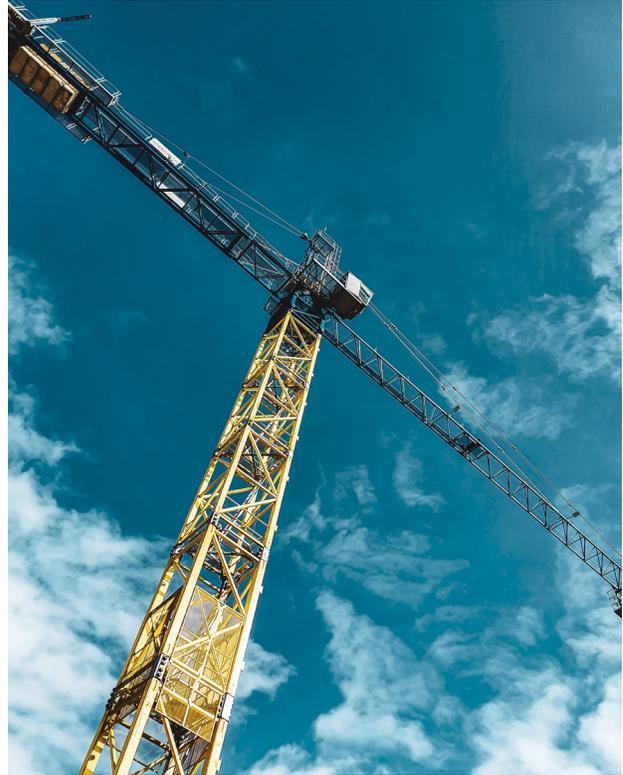
Importantly, greater diversity fuels continued innovation within the industry. By its very nature, diversity brings perspectives to the table that encourage new and different ways of thinking about projects, addressing obstacles, and proposing solutions that might otherwise be missed.⁴ Continued innovation is essential as the industry evolves to drive greater accomplishments in the built environment and adapt to the consequences of a changing climate—designing, constructing, and operating buildings that are better, safer, smarter, and more efficient.

NIBS 2021 Built Environment Social Equity Survey

In December 2020, the NIBS Consultative Council held a social equity roundtable with over two dozen organizations representing various facets of the built environment. A common concern among attendees was the need for reliable data and research from the many sectors of the built environment. In response, NIBS agreed to partner with Avenue M Group, an independent market research and consulting firm, to conduct a comprehensive study aimed at collecting critical demographic data on the workforce of the built environment, as well as this workforce's perceptions of diversity, inclusion, and discrimination in the workplace, for the purpose of informing future initiatives on social equity.

The following organizations agreed to participate as a partnering organization and to survey their contacts in the built environment:

- American Institute of Architects (AIA)
- American Society of Civil Engineers (ASCE)
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- Building Owners and Managers Association International (BOMA International)
- Construction Management Association of America (CMAA)
- Construction Specifications Institute (CSI)
- Design-Build Institute of America (DBIA)
- Energy & Environmental Building Alliance (EEBA)
- Green Building Initiative (GBI)
- Institute of Real Estate Management (IREM®)
- International Code Council (ICC)
- International Institute of Building Enclosure Consultants (IIBEC)
- New Buildings Institute (NBI)
- Regional Hispanic Contractors Association (RHCA)
- RMC Research & Education Foundation
- U.S. Green Building Council (USGBC)



² Kaushik, A., Arif, M., Tumula, P., & Ebohon, O. J. (2020). Effect of thermal comfort on occupant productivity in office buildings: Response surface analysis. *Building and Environment*, 180, 107021.

³ <https://naacp.org/resources/guidelines-equitable-community-involvement-building-development-projects-and-policies>

⁴ Global Diversity and Inclusion: Fostering Innovation Through a Diverse Workforce, *ForbesINSIGHTS*, July 2011. Retrieved from https://www.forbes.com/forbesinsights/innovation_diversity/.

The Progress:

- While nearly 75% of all respondents identified as white, considerably more racial diversity was present among younger professionals than their more experienced colleagues, particularly among those aged 34 or younger.
- Although nearly 66% of all respondents identified as male, results show that an increasing share of professionals entering the industry over the past two decades have been women. Furthermore, the racial diversity of this female workforce exceeds that of their similarly-aged male peers.

The Perception:

- Almost 40% of respondents indicated the building industry is somewhat diverse, with another 33% indicating it is diverse or extremely diverse; however, about 33% indicated it is not diverse at all or only a little diverse.
- Around 66% of respondents indicated it is important or extremely important to increase diversity in the industry, but almost 20% indicated that increasing diversity is not important at all or only a little important.
- Compared to older and longer-tenured respondents, younger professionals were more likely to indicate that the industry is not diverse and to believe it is important to increase diversity.
- Women were more likely than men to indicate that the built industry is not diverse or only a little diverse, and that it is extremely important to increase diversity. Respondents identifying as one or more racial/ethnic minorities were also more likely to indicate the industry is not diverse, and to label increasing diversity and improving inclusion as important or extremely important.

The Challenge:

- Only 40% of respondents indicated they had experienced no discrimination or prejudice in the built environment, whereas almost 30% of respondents indicated they had experienced discrimination/prejudice based on age, more than 25% based on gender, and 16% based on race and/or ethnicity.
- Among only those respondents who identified with certain demographic groups, incidences of discrimination or prejudice were significantly higher. Roughly 66% of women respondents, more than 50% of nonbinary and gender nonconforming respondents, almost 75% of Black or African American respondents, and around 50% of East, Southeast, and South Asian respondents indicated they had experienced discrimination or prejudice based on gender, race/ethnicity, socioeconomic class, and/or country of origin.
- Some form of discrimination or prejudice was reported by these groups across the areas of hiring, compensation, work assignments, promotions, and others.

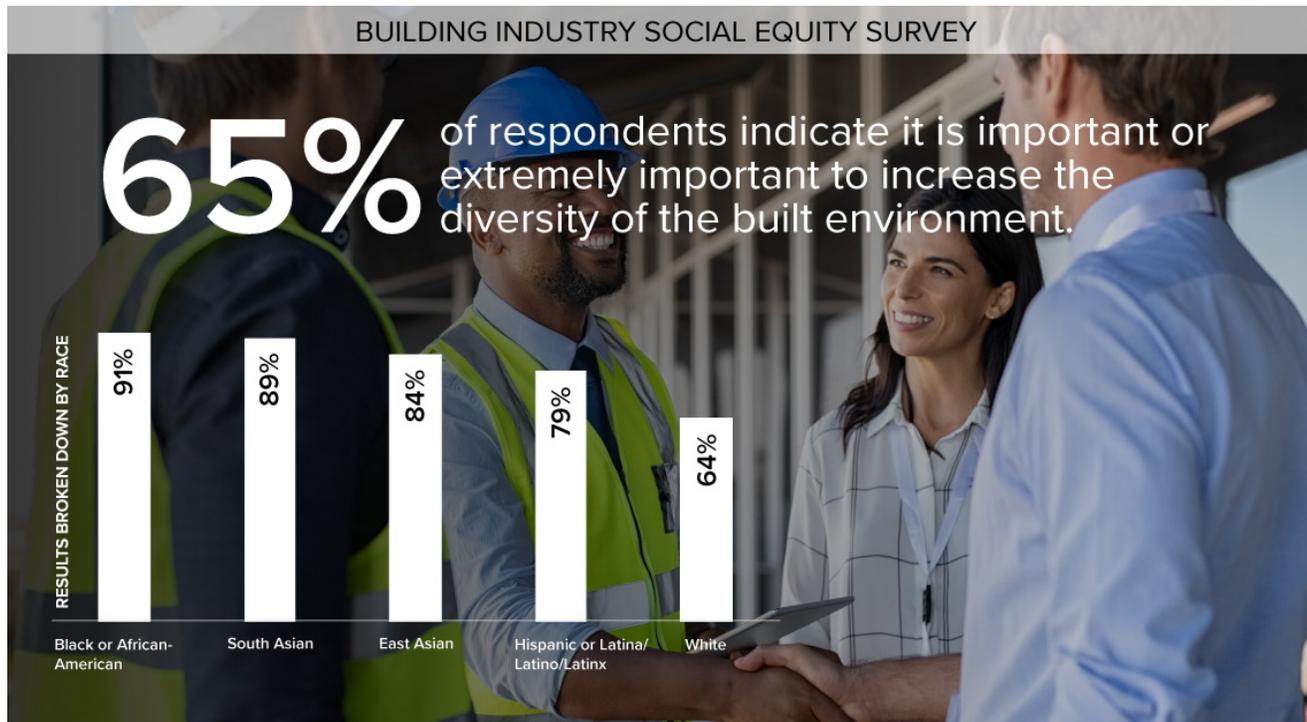
Progress around the industry's diversity and inclusion challenges is on the horizon, as more than 40% of respondents indicated their company had a program or initiative dedicated to DEI, and nearly 20% indicated their company had instituted policies related to DEI, even if a formal program/initiative was not present. The importance of such efforts cannot be overstated. A significant share of the industry workforce—almost three-fifths of survey respondents—have 20 or more years accrued in the industry. Efforts to open the industry to greater participation by more diverse professionals will become more critical to the industry's future as this large and more experienced segment of the workforce approaches retirement age.

As an industry, the building sector is both blessed and challenged by the wide range of professions, career paths, and specialized skills that are required to design, construct, regulate, and maintain buildings. To function, the industry requires sufficient volume and diversity of new professionals to fill all vacancies with the skills and

certifications needed to “keep the lights on.” NIBS’ survey findings highlight that expanding the workforce pipeline overall—including by developing novel and expanded pathways for a larger and more diverse range of new and seasoned professionals to enter relevant trades and careers—will become only more important as time goes on.

NIBS and Consultative Council Activities

In 2021, NIBS and the Consultative Council focused many activities on promoting workforce DEI. These activities included a comprehensive survey (see previous), two Executive Roundtables focused on social equity, a pledge from council members to promote DEI within their organizations, and a networking and educational series focused



on women executives in buildings. NIBS also developed a DEI web page to highlight the important work NIBS, the Consultative Council, and partners are doing to promote DEI in the built environment. Link here: <https://www.nibs.org/about/diversity-inclusion>.

Social Equity Executive Roundtables

In December 2020 and July 2021, NIBS held two Executive Roundtables entitled “Improving the Workforce of the Built Environment through Social Equity.” Thirty-five C-suite executives from the building industry discussed the worker shortage, promoting sustainability, a review of internal and external best practices regarding culture, diversity, recruitment and retention, and strategic partnerships. Participants also discussed the results of the NIBS 2021 Built Environment Social Equity Survey, and the efforts they have made at their own organizations to promote DEI. A link to a summary of the Roundtable can be found here: <https://www.nibs.org/about/diversity-inclusion>.

⁵ Link: <https://www.nibs.org/blog/built-environment-ceos-sign-diversity-commitment>

Built Environment CEO Commitment

Following the two Social Equity Executive Roundtables, NIBS and the Consultative Council requested a commitment from CEOs and their organizations to support greater diversity and inclusion in the built environment. The primary goals that CEOs agreed to include building diverse staff and volunteer leadership teams, sharing best practices, and promoting this work with association membership.

Organizations who have signed the pledge include:⁵

- American Institute of Architects
- American Society of Civil Engineers
- American Society of Heating, Refrigerating and Air-Conditioning Engineers
- Arc Skoru Inc.
- ASTM International
- Building Owners and Managers Association International (BOMA) International
- ConnexFM
- Construction Specifications Institute
- Design-Build Institute of America
- Energy & Environmental Building Alliance
- Green Building Initiative
- Green Business Certification Inc.
- Institute of Real Estate Management
- Insurance Institute for Business & Home Safety
- International Institute of Building Enclosure Consultants
- Modular Building Institute
- NAREIM
- New Buildings Institute
- Royal Institute of Chartered Surveyors (RICS)
- U.S. Green Building Council

Women Executives in Building

In 2021, NIBS continued its Women Executives in Building virtual meetings. Sponsored by 84 Lumber, NIBS held a series of web events designed for C-suite women executives to network and share ideas, challenges, and propose solutions to current issues. A list of the events (expected to continue in 2022) is listed below.

February 25, 2021: Building Your Personal Brand

May 25, 2021: Elevator Pitch Workshop

August 31, 2021: Being the Only

December 7, 2021: Honoring Your Authentic Self

A link to the virtual series can be found here: <https://www.nibs.org/events/women-executives-building/>



Other Activities: NIBS Council Leadership

In 2020 and 2021, in order to promote DEI amongst its own leadership (including volunteer leadership), NIBS put into effect new bylaws designed to encourage more diverse and inclusive leadership among its councils. These efforts included adding the following statement on DEI to the council leadership selection process:

Statement on Diversity in Nominations Process

NIBS and all of its Decision-Making Bodies shall strive to ensure that our membership reflects a diversity of experience and perspectives, including but not limited to diversity with respect to race, ethnicity, gender identity, age, geography, and areas of expertise. Having leadership with diverse perspectives is critically important. Each individual will bring their own personal and professional contacts and life experiences to their service. With a diversity of experience, expertise, and perspectives, our organization is in a stronger position to: plan for the future, manage risk, make prudent decisions, and take full advantage of opportunities. With NIBS choosing to focus on diversity, equity, and inclusion—our ability to respond to internal and external influences that are changing the built environment exponentially increases.



Recommendations

- The Administration, U.S. Department of Labor, and U.S. Department of Education should extend their efforts to advance apprenticeships and workforce development to include careers within the buildings and construction workforce, with additional programs focused on promoting women, veterans, and historically excluded and underrepresented groups in the trades. While the recently passed Infrastructure Investment and Jobs Act provided additional funding for these programs in the transportation sector, consideration should be given to developing similar programs for other infrastructure areas, including the building space.
- With the support and engagement of the U.S. Departments of Labor and Education, the building industry

should establish a national campaign highlighting the exciting and well-paying careers in the industry. The effort should include development of resources for students, parents, and guidance counselors on career pathways and educational opportunities.

- Working with the government and representatives of community organizations, the industry should develop best practices for community engagement. Community engagement in project development and policy setting is essential to assuring resident needs and expectations are considered. Meaningful engagement also provides visibility to community members on the roles and responsibilities of different disciplines.
- The Consultative Council encourages leaders in the building community to commit to supporting greater diversity and inclusion in their organizations, as well as in the built environment, following the example of those CEOs who participated in NIBS' Social Equity Executive Roundtables.

Consultative Council Members

- American Institute of Architects
- American Institute of Steel Construction
- American Planning Association
- American Society of Civil Engineers
- American Society of Heating, Refrigerating and Air-Conditioning Engineers
- Associated Builders and Contractors
- Associated General Contractors of America
- ASTM International
- AS Viable Solutions
- Building Owners and Managers Association International
- Connex FM
- Construction and Demolition Recycling Association
- Construction Management Association of America
- Construction Specifications Institute
- Continental Automated Buildings Association
- Design-Build Institute of America
- Energy & Environmental Building Alliance
- Green Building Initiative
- International Institute of Building Enclosure Consultants
- Insurance Institute for Building and Home Safety
- International Association of Plumbing and Mechanical Officials
- International Code Council
- Modular Building Institute
- National Ready Mixed Concrete Association
- New Buildings Institute
- Royal Institution of Chartered Surveyors
- U.S Green Building Council





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