2025

UNITED STATES PERMANENT MODULAR CONSTRUCTION INDUSTRY REPORT

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THE MODULAR BUILDING INSTITUTE

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UNITED STATES PERMANENT MODULAR CONSTRUCTION INDUSTRY REPORT

ABOUT THE MODULAR BUILDING INSTITUTE

Founded in 1983, the Modular Building Institute (MBI) is the only international nonprofit trade association serving the commercial modular construction industry. For more than 40 years, MBI has promoted the advantages of modular construction while advocating for the removal of barriers that limit growth opportunities. MBI represents more than 600 member companies in 20 countries, serving as an information clearinghouse for end-users and an advocate for the industry on public policy matters.

MISSION

As the Voice of Commercial Modular Construction™ it is MBI's mission to expand the use of offsite and modular construction through innovative construction practices, outreach and education to the construction community and customers, and recognition of high-quality modular designs and facilities.

ABOUT THIS REPORT

In preparing MBI's 2025 annual industry report, a few significant changes were made from prior reports to address growing interest in and greater need for data about the industry.

This report focuses specifically on the U.S. market, rather than the North American outlook. A separate report specific to the Canadian market is also available. Additionally, this report includes more specific regional data based on the four geographic U.S. regions (Northeast, Midwest, South, and West) identified by the U.S. Census Bureau.

MBI has partnered with FMI Consultants for the economic analysis, market-share calculations, and forecasts in this report. The purpose of these changes is to provide more robust data at both the national and regional levels, and to further demonstrate how the modular industry fits into the overall construction industry.

MODULAR ADVOCACY PROGRAM

The Modular Advocacy Program ("MAP") is MBI's multiyear, multimillion-dollar campaign to spur investment in, and promote the greater adoption of, the commercial modular construction industry.

In order to meet the growing needs of its members and the greater modular construction industry, MBI's MAP program will drive industry growth in the following areas:

1. Influencing government legislation, regulations, procurement, programs, and codes.
2. Creating new business opportunities for the industry.
3. Expanding outreach efforts to developers, architects, and code officials.
4. Attracting new employees to the industry, including nontraditional workers.

MBI, leveraging its growing international membership, plans to fund this program through a variety of initiatives.

Funding the Modular Industry's Most Important Initiative

Your company can support MBI's Modular Advocacy Program in three ways:

MBI Seals

MBI Seals are 4-inch square stickers that are meant to be affixed inside each module that MBI member manufacturers produce. Each MBI Seal costs $20. These costs are intended to passed along to your customers, which means a net-zero cost to you.

Manufacturers – Order and affix an MBI Seal inside each module you manufacture.

Architects, Contractors, & Developers – Spec the MBI Seal on your future projects.

Fleet Owners – Ensure all new and existing units have the MBI Seal.

Sponsoring the MAP

Annual sponsorships for the MAP program are available for $1,000. If you're not buying Seals, this is an ideal way to show your support of MBI and contribute to MAP funding.

With your annual sponsorship, your company will receive:

- sponsor recognition and logo inclusion in every MBI printed piece (magazines, annual reports, event brochures),
- a dedicated eblast thanking each sponsor, AND
- a special thanks at the next World of Modular annual conference, including logo inclusion in the opening presentation.

Voluntary Donations

- If Seals and MAP sponsorship don't match your company's current objectives, support the MAP by making a voluntary donation in any amount.
- In combination with the revenues from Seals and sponsorships, these donations will be used to grow and protect the commercial modular construction industry through government affairs advocacy, business development, expanding MBI's membership, and industry workforce development.

MBI Needs You to Support the MAP

Full member support of the Modular Advocacy Program will be critical to MBI's goals in 2024 and beyond. And if your company has not yet joined MBI, now is the perfect time. With more resources than ever, the Modular Building Institute is helping to build the future of modular construction. *Join us!*

ABOUT MODULAR CONSTRUCTION

Modular construction can be considered a hybrid between the construction and manufacturing industries. For the purposes of this report, the term "modular" refers to volumetric, three-dimensional boxes (or modules) fabricated at an offsite location. The modular method involves constructing buildings offsite in a factory-controlled environment, then transporting them to the final site for assembly, incorporating elements of both industries:

Construction: Modular construction involves traditional construction practices such as designing the building, planning the site, and assembling the modules into the final structure. Site preparation, foundation work, and utility connections are also part of the construction process.

Manufacturing: The fabrication of building components, such as walls, floors, and roofs, occurs in a factory setting using assembly-line production methods. This approach allows for standardized processes, quality control, and efficient use of materials and labor.

In essence, modular construction bridges the gap between traditional construction and manufacturing by leveraging the benefits of both industries to streamline the building process.

Unlike federal manufactured-housing products, which are built in accordance with the Housing and Urban Development (HUD) standard, there is no unique "modular building code." As such, modular projects must meet the local codes where the building will be placed, similar to site-built projects. In the United States, this is most often the International Building Code (IBC) or International Residential Code (IRC).

Modular construction can be used for a variety of purposes, including single-family residential, multifamily, commercial, or industrial applications. MBI members commonly build for the multifamily and commercial markets.

The modular construction industry is regulated at the state and local levels by building-code administrators and authorities having jurisdiction.

ABOUT PERMANENT MODULAR CONSTRUCTION

Many industries, including schools, banks, restaurants, hospitals, hotels, medical clinics, and housing developers, regularly use permanent modular construction (PMC).

As measured by the North American Industry Classification System, the most common PMC categories include:

- **236116: New Multi-family Housing Construction**
- **236220: Commercial and Institutional Building Construction**

MBI obtains industry information for this report from multiple sources, including:

- **FMI Consulting:** In spring 2025, the Modular Building Institute and FMI Consulting began a collaborative effort to provide current, detailed, and actionable market insights.
- **MBI member surveys:** Each year, MBI asks all members for data regarding their annual revenues, sources of revenue, markets served, production, capacity, and total employees.
- **MBI's project database:** Through the annual Awards of Distinction contest, MBI gathers specific project data to calculate average square footage of buildings by market type, average days to complete by market type, modular project cost, and total project costs.
- **Publicly available data:** MBI gathers information from news stories, public filings (U.S. and Canada), and corporate websites.
- **Artificial intelligence (AI):** MBI utilized AI (specifically ChatGPT) to assist in rewriting some basic industry information.

Every effort has been made to ensure the accuracy and reliability of this data. In some cases, MBI's best estimates are used, based on the best data available. MBI is confident that this report represents the most comprehensive and accurate information available on the commercial modular construction industry in North America.

MARKETS SERVED

The best market for a modular construction company in the United States can vary depending on several factors, including the company's specialization, target market, and competitive landscape. However, some regions and sectors have shown greater demand and potential for modular construction:

Urban areas with high housing demand: Cities experiencing rapid population growth, such as New York, Los Angeles, and Dallas, often have high demand for affordable housing solutions. Modular construction can offer a faster and more cost-effective way to build housing in these areas.

Affordable housing initiatives: Many states and municipalities have initiatives to address affordable housing shortages. Modular construction can be a preferred method due to its efficiency and cost-effectiveness, making it a good fit for markets with affordable housing needs.

Disaster recovery and resilience projects: Regions prone to natural disasters, such as hurricanes, floods, or wildfires, often require rapid rebuilding efforts. Modular construction can facilitate quick and efficient reconstruction, making it a valuable solution for disaster recovery projects.

Commercial and institutional construction: Beyond residential construction, there is a growing demand for modular buildings in commercial and institutional sectors, including schools, healthcare facilities, offices, and hotels. Markets with a strong presence of these industries can offer opportunities for modular construction companies.

Infrastructure projects: Infrastructure development, such as transportation hubs, educational facilities, and government buildings, can benefit from modular construction's speed and efficiency. Regions with substantial infrastructure investments may present opportunities for modular construction firms.

Sustainability-focused markets: Modular construction's potential for reduced waste and energy efficiency aligns well with markets prioritizing sustainability. Regions with stringent environmental regulations or strong green-building initiatives may favor modular construction methods.

Emerging markets: Some regions within the United States may be relatively untapped or underserved by traditional construction methods, presenting opportunities for modular construction companies to establish a foothold.

Ultimately, the best market for a modular construction company depends on factors such as market demand, regulatory environment, competition, and the company's unique capabilities and offerings. Conducting thorough market research and identifying specific market niches or opportunities can help a modular construction company determine the most suitable markets to target.

KEY ADVANTAGES

Cost Savings and Certainty

Is modular construction cheaper/less expensive?

Generally speaking, yes. There are numerous variables with a modular project, just as there are with a conventional construction project. The availability and cost of onsite labor is a key factor. In larger urban areas where labor is scarce and/or more expensive, shifting construction to an offsite (often rural) location can yield significant cost savings.

Additionally, the overall efficiency of the modular process can lead to cost savings. Fewer labor hours are needed to complete a comparable project, and waste is significantly reduced. The shortened construction schedule can reduce the time needed for a construction loan and dramatically advance the occupancy date, both of which are critical considerations for revenue-generating businesses such as hotels and fast-food restaurants.

McGraw-Hill published a Smart Market Report in 2020 titled "Prefabrication and Modularization: Increasing Productivity in the Construction Industry." In that report, 91 percent of all general contractors surveyed indicated that modular had a favorable impact on project budget performance, with 48 percent indicating that costs decreased by more than 10 percent. More than two-thirds of respondents (68 percent) cited a positive budget impact of better than 5 percent.

Additionally, on government-funded projects where Davis-Bacon and state prevailing wages typically apply, offsite fabrication is generally exempt from these inflationary rates. By definition, work done in a modular factory is "offsite."

In a recent 2023 study from the University of Nebraska's Durham School of Architectural Engineering and Construction, Professor Kevin Groskopf found that construction costs for site-built projects in his study averaged $251 per square foot. The cost for modular projects averaged $243 per square foot, approximately 4 percent less than site-built construction.

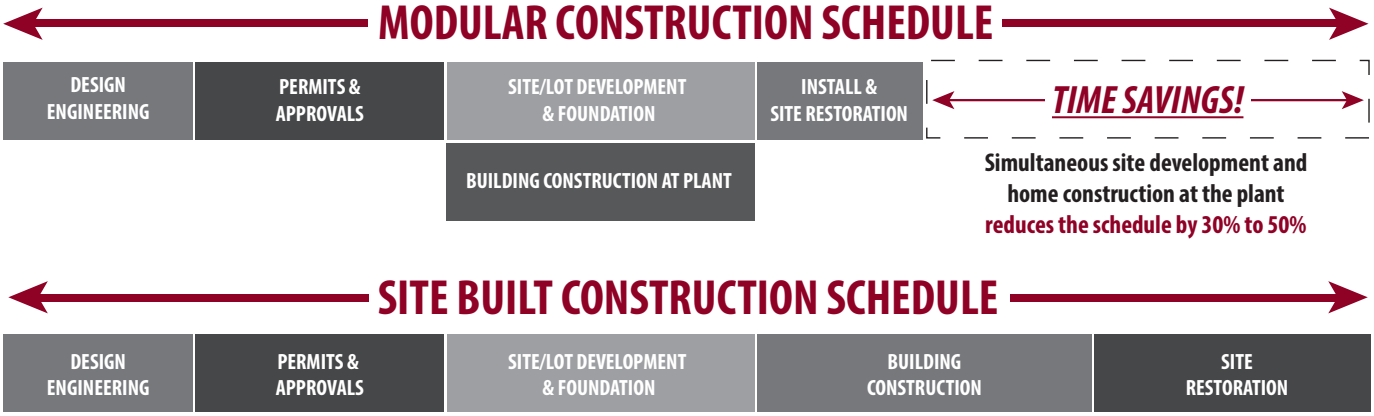
Site-built construction contracts—including firm, fixed-price contracts—usually have change orders and a contingency for unforeseen conditions. By comparison, modular contracts, which typically make up 40 percent or more of a project, are 'locked in' prior to construction, with greatly reduced (or eliminated) change orders and contingency. The modular manufacturer can also consolidate the markups and contingencies of several subcontractors.

Schedule Savings and Certainty

According to the 2019 McKinsey & Company report "Modular construction: From projects to products," overruns of 25-50 percent of projected duration are common with traditional construction. However, recent modular projects have actually established a solid track record of *accelerating* project timelines by 20-50 percent. Construction of modular building components occurs simultaneously with site work, allowing projects to be completed in less time than with traditional construction. Additionally, 60-90 percent of modular construction is completed inside a factory, which mitigates the risk of weather delays. Buildings are occupied sooner, creating a faster return on investment.

Quality Control and Assurance

It is helpful to think of the term "modular" as a *construction process* rather than a *building type.* A modularly constructed building simply means that the materials were delivered to an offsite location (the modular manufacturing facility),



assembled into components or three-dimensional building modules, and then transported to the final site for assembly. A building constructed in this manner must still meet all the same building codes and requirements as if it were built onsite. These codes and requirements are most commonly a version of the International Building Code (IBC) in the U.S. or the National Building Code (NBC) in Canada.

There is no specific or unique modular building code. The industry is regulated primarily at the state/provincial level through administrative agencies that implement and enforce the rules for building in that jurisdiction. The administrative rules of each agency provide for quality control, quality assurance, safety standards, and inspection procedures for industrialized building construction, design, and manufacture. The purpose of these rules is to provide minimum requirements for safeguarding public health, safety, and general welfare, and to address societal and industry challenges for the inspection and regulatory compliance of offsite construction. Once a factory has been approved to build in a jurisdiction, four stages make up a modular building project:

1. Design approval by the end-user and regulating authorities.
2. Fabrication of module components in a controlled factory environment.
3. Transportation of modules to the final building destination.
4. Assembly of modular units to form a finished building and approval by local authorities.

Buildings constructed using the modular process must comply with all applicable building-code requirements, including wind, snow, and seismic conditions where the building will ultimately be located, not the fabrication location.

Because most elements of the building, including electrical and plumbing, are completed and considered closed construction (i.e., concealed behind the drywall when leaving the factory), the inspection protocols must be clear, concise, and coordinated between state and local authorities.

A design package consisting of the aggregate of all plans, designs, specifications, and documentation is submitted by the manufacturer to the design review agency for compliance review, including the compliance control manual and the onsite construction documentation. Where required by the Authority Having Jurisdiction (AHJ), construction documents and other documentation will bear the signature and seal of the registered design professional.

Once the plans are approved, the building components can be fabricated. One key advantage of modular construction is that building modules can be inspected by the staff quality assurance/quality control manager at each station (framing, electrical, plumbing, drywall, etc.), with any mistakes corrected before the modules arrive onsite.

In-plant inspections are conducted by a third-party inspection agency on behalf of a state agency to verify that construction is in compliance with the approved

construction documents. The inspection agency inspects each modular or panelized unit in a phase of construction for compliance. A data plate is attached to the modular component that contains identifying information, providing the local code official with all pertinent information in an easily accessible location.

An agency decal (insignia, label) issued by the AHJ is also permanently attached to the modular component, indicating that it has been constructed to meet or exceed the applicable building code requirements.

These steps are necessary so that the local code official has assurance that the building has been inspected and will meet all local requirements, thus avoiding destructive inspections of the component onsite.

Once the modules are delivered to the final site (often by third-party transportation companies), other site-related requirements are subject to approval at the local level. These requirements may include land use and zoning, local fire zones, site development, building setback, and side and rear yard requirements. Other considerations might include property-line requirements, subdivision regulations, subdivision control, review and regulation of architectural and aesthetic requirements, foundation design, utility, and module connections.

Onsite inspections of components verify that the installation is compliant with the approved manufacturer's installation instructions, and that connections performed onsite are compliant with approved construction documents.

Environmental Impact

The U.S. Environmental Protection Agency considers construction waste and debris to be one of the largest contributors to landfills annually. While construction demolition of existing structures represents about 90 percent of this landfill waste, new construction activity accounts for 57 million tons of landfill waste.

But it does not have to be this way.

According to a March 2022 article by McKinsey & Company, the world will see a once-in-a-lifetime wave of capital spending on physical assets between now and 2027. This surge of investment—amounting to roughly $130 trillion—will flood into projects to decarbonize and renew critical infrastructure. Ninety-three percent of CEOs say that sustainability issues are important for the future success of their business, and 54 percent expect sustainability to be embedded within the core business strategies of most companies within the next decade.

From a sustainable and strategic perspective, modular construction has the potential to dramatically change how we build in four key areas:

- Significant waste reduction
- Lower carbon footprint
- Relocate, renovate, and repurpose
- Greater energy efficiency/tighter building envelope

There have been several studies and reports conducted globally on the impact that modular and prefabrication have on overall waste reduction. According to the groundbreaking "Prefabrication and Modular Construction 2020" report by Dodge Data and Analytics, 86 percent of architect, contractor, and developer respondents said that utilizing modular construction had a medium, high, or very high impact on reducing waste generated by construction activities.

Worker Safety, Productivity, and Diversity

The construction industry typically has about three times the number of annual workplace fatalities as the manufacturing industry. In 2020, the latest year for which construction safety data is available, 1,008 workplace fatalities—about one in five of all workplace deaths—were reported in the construction industry. This is the highest number of reported fatalities of any industry in 2020, and nearly three times the number of deaths (340) reported in manufacturing. (Unless otherwise noted, all data in this section was obtained from the Bureau of Labor Statistics website at BLS.gov.)

Modular construction has demonstrated the ability to provide a safer environment for the construction workforce. Simply by shifting large portions of building construction to an offsite manufacturing setting, the

Bureau of Labor Statistics data suggests that the number of fatalities would drop significantly.

Of those approximately 1,000 annual construction industry fatalities, more than one-third is attributable to fall hazards. The ability of workers to construct multistory buildings in modules while remaining on the ground floor of a factory virtually eliminates hazards associated with falls, potentially saving hundreds of lives annually.

The 2023 Groskopf study found that fewer workers and shortened construction schedules result in less noise, traffic, and other disruptions to the surrounding community. In contrast to a transient workforce under the control of multiple trade contractors, offsite construction relies on a stable, permanent workforce under a central point of control. The repetitive, less specialized nature of prefabrication in a controlled factory setting also allows fabricators to better utilize a diverse workforce.

Modular manufacturing may also provide opportunities for older workers and those with disabilities to extend their careers, given a more comfortable work environment and fewer physical demands. The average age of workers among modular manufacturers surveyed is 35 years, although several workers were 60 or older. Women comprised 15-20 percent of the offsite workforce. Compared to site-built construction, the higher proportions of women and older workers may be attributed to a less physically challenging work environment. As determined by their respective workers' compensation Experience Modification Rates, offsite worker safety (0.91) was found to be better than onsite worker safety (1.00).

The Dodge Smart Market Report "Prefabrication and Modular Construction 2020" addressed the issue of workplace safety. Of the 203 responses received regarding safety, 89 percent of architects, engineers, and contractors indicated that the use of modular construction demonstrated safety benefits.

The results are even more dramatic among large contractors with annual revenues of more than $100 million. Among the 18 contractors in that subset, half said that modular construction had a "very high" impact on safety. A full 100 percent of these 18 respondents said that modular construction had a medium (11 percent), high (39 percent), or very high (50 percent) impact on worker safety.

Simply put, this means that the modular construction industry has greater access to a larger number of potential workers—those who might not be able to meet the physical demands on a job site over a long period of time. It means fewer bad backs and knees. It means less exposure to inclement weather and heights. It means less heavy lifting. It means workers can go home at night, not be physically exhausted, and have a better quality of life. It means a safer workplace environment that leads to greater employee retention and higher productivity.

Here are other factors to consider regarding safety:

Controlled environment: Modular construction often takes place indoors, which can reduce the risks associated with outdoor construction, such as adverse weather conditions.

Quality control/consistency: Factory-controlled construction allows for greater oversight and consistency in materials and construction processes, potentially reducing errors and safety risks associated with onsite construction.

Reduced onsite labor: With modular construction, a significant portion of the construction work is completed offsite. This can potentially reduce the number of workers needed onsite, minimizing the risk of accidents and injuries.

Efficiency: The assembly process for modular construction tends to be faster than for traditional construction methods, which can reduce the overall duration of onsite construction activities, thereby potentially reducing exposure to safety hazards.

RESEARCH PROCESS

In spring 2025, the Modular Building Institute and FMI Consulting began a collaborative effort to provide current, detailed, and actionable market insights. The outcome of that partnership, this report is intended to provide a means to measure and monitor changes across the industry, specifically describing five-year historical (2020-2024) and five-year forecast (2025-2029) data for volumes of modular Construction Put in Place (CPiP).

National and Regional (Northeast, South, Midwest, and West)

Market segments include: commercial, education, healthcare, lodging, multifamily, office (including data centers), and other (including public safety, religious, and transportation).

Market dynamics, trends, and drivers of change are expected to impact the modular landscape in the near and medium terms. Key elements in the development of these insights include:

Primary market research: Interviews were scheduled and conducted with stakeholders involved in both the modular industry and the construction industry at large. In addition, FMI generated quantitative market data via an electronic survey to inform the market-sizing model.

Market modeling/sizing: FMI developed a custom market model with appropriate segmentations based on research, proprietary internal databases, and industry experience. Forecasts were tested and validated against available industry benchmarks.

Secondary research: Experienced research analysts conducted an extensive search of existing industry data and competitive information, including both print and electronic media.

Analysis and documentation: Market observations were developed based on analysis of the research findings, together with the experience of FMI's consultants.

To derive a market forecast, FMI employs a method that utilizes multiple sources to develop and validate the market's size and direction. The following steps represent the methodology used for each element of the custom forecasts in this report.

Modular Construction Forecasts

FMI generated a forecast of demand for modular construction based on CPiP for the segments identified in the project scope (e.g., multifamily). This segmentation reflects the unique aspects of each segment, including patterns, demand dynamics, and major projects.

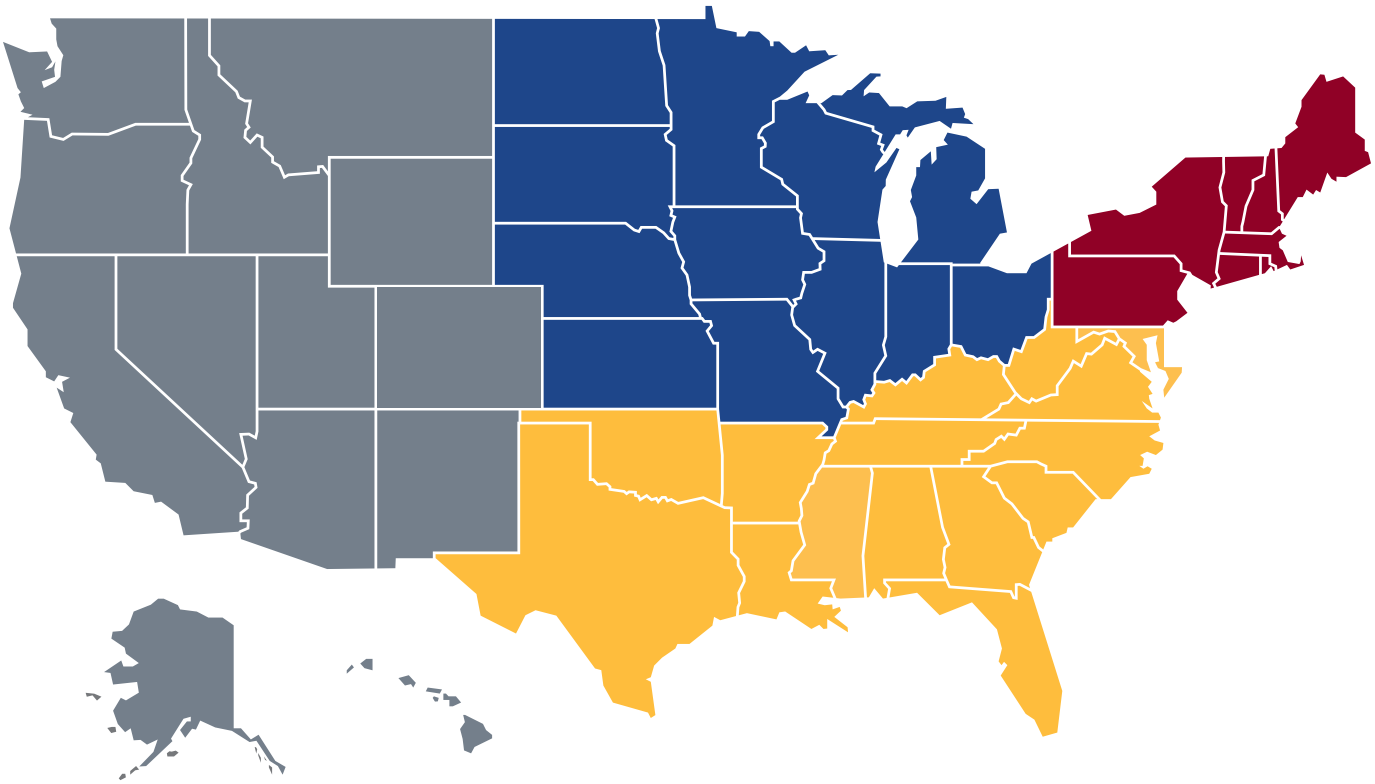
Quantitative Market Model

Utilizing multiple sources, both historical and forward-looking, FMI generated a baseline CPiP forecast. This has its foundation in activity that influences construction opportunities, such as population growth, existing facilities, gross domestic product, shifts in consumer demand, geographic drivers, etc. The data uses a combination of proprietary and public sources and is an input into the forward-looking forecast. The forecast is adjusted based on active and planned projects identified through secondary research.

Note: FMI typically forecasts CPiP. To allow comparison to previous MBI data, CPiP can be scaled down by 0.41 to align to starts in magnitude. Where relevant, "starts" refers to this scaled-down value.

Market-Driven Interviews and Research

Based on interviews, surveys, and research, FMI is able to estimate the market share and growth rates of modular in the various segments. Survey questions discussed in this report cover stakeholder sentiment around the demand for modular, as well as beliefs about how demand will evolve.



U.S. Regions*

- **Northeast:** Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont
- **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia
- **Midwest:** Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin
- **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

** U.S. regions per the U.S. Census Bureau (www.census.gov).*

MBI 2025 U.S. MODULAR CONSTRUCTION MARKET: EXECUTIVE SUMMARY

Overview

The Modular Building Institute (MBI), the international nonprofit trade association dedicated to commercial modular construction, presents the *2025 U.S. Modular Construction Market Report*. This comprehensive analysis, developed in collaboration with FMI Consulting, focuses on the economic performance, trends, and forecasts for permanent modular construction in the United States. The report reflects updated methodologies, enhanced regional analysis, and robust data from both primary and secondary sources.

Market Size and Growth

In 2024, the U.S. modular construction market reached $20.3 billion, accounting for 5.1 percent of total construction activity across key segments. Forecasts indicate a compound annual growth rate (CAGR) of 4.5 percent, with the market expected to reach $25.4 billion by 2029—outpacing the broader construction industry by 1.3 percent.

Key market segments driving growth include:

- **Multifamily residential** ($7.1B in 2024 → $11.3B in 2029; 4.7 percent CAGR)
- **Office/data centers** ($1.4B → $2.0B in 2029; 7.1 percent CAGR)
- **Lodging** ($577M → $1.1B in 2029; 9.2 percent CAGR)

Regional Insights

The U.S. modular market is growing across all regions, with varying demand dynamics:

- **West ($7.5B in 2024):** The leading region, especially in California, driven by high housing demand and strong tech/data center investments (4.9 percent CAGR).
- **Northeast ($4.5B):** Dense urban markets like New York and Boston, regulatory complexity, but high adoption in education and housing sectors (4.7 percent CAGR).
- **South ($4.4B):** The most populous and fastest-growing region, with opportunities in lodging, pad retail, and housing (4.4 percent CAGR).
- **Midwest ($4.0B):** Slower growth but niche opportunities in education, rural healthcare, and manufacturing (3.8 percent CAGR).

Advantages of Modular Construction

Cost and schedule certainty: Modular projects typically achieve 4 percent cost savings and 20-50 percent faster delivery than with traditional construction, helping to mitigate rising labor costs and weather delays.

Quality control: Fabrication in factory settings allows for rigorous quality assurance/quality control processes, third-party inspections, and compliance with local building codes.

Environmental impact: Significant reduction in construction waste, lower carbon footprint, and improved energy efficiency.

Workforce safety and diversity: Safer environments, fewer physical hazards, and more accessible jobs for women, older workers, and persons with disabilities.

Challenges and Market Barriers

Client education: 62 percent of stakeholders identify a lack of familiarity with modular construction as a major barrier.

Perception issues: Persistent misconceptions equating modular with low-quality construction hamper broader acceptance.

Permitting complexities: Navigating inconsistent and outdated building codes reduces the efficiency benefits modular methods can offer.

Strategic Implications

Speed to market **(81 percent)** and cost efficiency **(68 percent)** are top drivers for adoption, particularly when modular designs are standardized. Labor availability **(52 percent)** continues to reinforce offsite construction as a viable solution to skilled-labor shortages. However, increased investment in awareness, policy advocacy, and factory capacity is essential to scaling adoption.

Conclusion

The *2025 United States Permanent Modular Construction Industry Report* underscores the growing relevance and maturity of modular construction. Despite lingering challenges, the sector is primed for sustained growth—especially in high-demand urban regions and industries prioritizing speed, efficiency, and environmental performance. The industry's continued success hinges on deepening stakeholder education, improving regulatory frameworks, and investing in scalable manufacturing capacity.

U.S. MODULAR CONSTRUCTION MARKET OVERVIEW

Market Size and Forecast

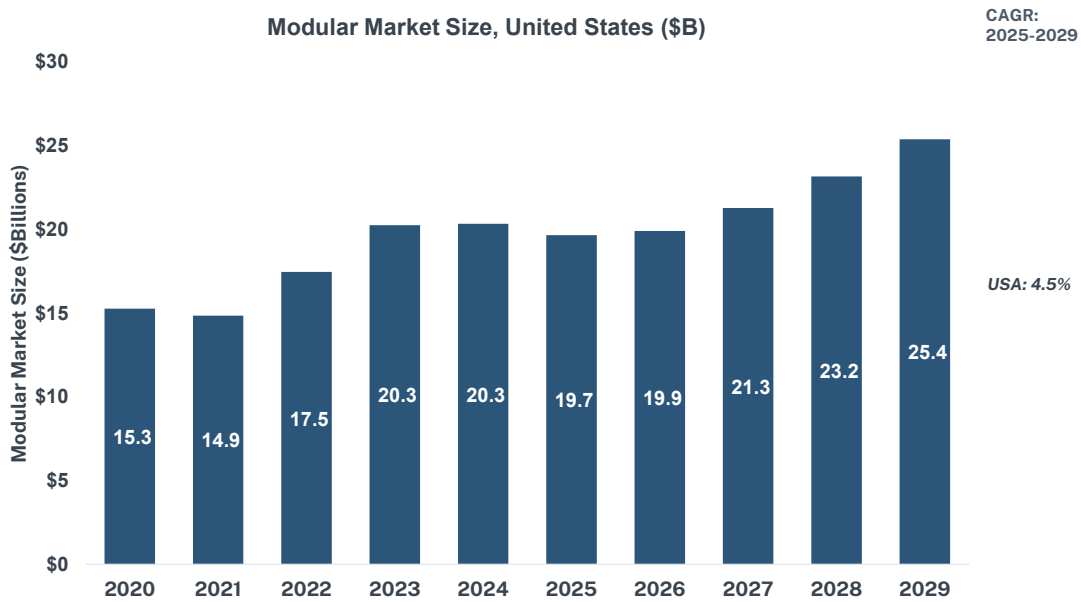
There is strong optimism within the modular construction market, both in performance to date and expectations for the remainder of 2025. Modular stands out as one of the few areas marked for improvement over 2024, signaling its resilience amid broader economic uncertainty. This confidence is further reflected in slightly better-than-expected backlogs reported by many stakeholders.

With a total market value of $20.3 billion in 2024, the modular construction industry represented 5.1 percent of the total construction market in covered segments. Additionally, the industry is expected to increase at a compound annual growth rate (CAGR) of 4.5 percent over the next five years to $25.4 billion, outpacing the overall construction sector by 1.3 percent.

MBI | Modular Industry Study

Modular construction in the U.S. is expected to contract slightly through 2026, influenced by the Multi-family segment, and recover by the end of the decade. It is projected to grow at a CAGR of 4.5% in the forecast period.

Overall Modular Market Size, United States
Source: FMI Survey Data, FMI Analysis



Key Growth Segments

1. Multifamily residential represented the largest modular segment in 2024 at $7.1B, or 8.8 percent of the overall multifamily segment. Strong growth drivers continue to include housing affordability, urban migration, and labor shortages.

This modular segment is expected to grow to $11.3B by 2029 at 4.7 percent CAGR, outpacing the overall construction industry by more than 6 percent. While multifamily is the largest modular segment by spend and for modular's percentage of the overall segment, it is expected to slow through 2026, with recovery sparked by normalizing rent growth and rebounding construction starts. Cost of homeownership and associated services, along with growing populations in major urban centers, will contribute to the expected growth.

Opportunities for modular firms stem from developers who are seeking faster and more cost-effective delivery methods amid labor shortages and rising material costs. Demand in the South, as well as in the Mid-Atlantic and Mountain states, is expected to outperform demand nationwide, due to limited supply and strong demand dynamics.

2. Office (including data centers) reached $1.4B in 2024, and is projected to reach $2.0B by 2029. A modular CAGR of 7.1 percent is forecast through 2029, outpacing traditional office construction.

Substantial growth in the office segment will come from the data center subsegment, which makes up approximately 25 percent of office spend—and is expected to increase. Owners and designers play a critical role in projects in this segment, typically prioritizing speed and reliability. Opportunities also exist for offsite construction in the form of restrooms, kitchens, and other components.

Remote and hybrid work continues to challenge demand for traditional office space, and modular firms in this segment can expect to be constrained by costs. Consistent with "flight to quality" trends following the COVID-19 pandemic, tenants prefer newer, premium spaces with modern amenities. Modular firms may find opportunities in mixed-use buildings that combine office, multifamily, commercial, etc.

"SPEED TO MARKET IS THE DRIVER OF ALMOST EVERYTHING."

3. Lodging represents the smallest modular segment at $577M in 2024 but is also the fastest-growing segment with a 9.2 percent CAGR, expected to reach $1.1B by 2029.

Although it is the smallest market by spend, lodging represents compelling growth prospects, especially in the United States. Although lodging demand is depressed, this is seen as cyclic and is expected to recover by 2027, driven by flexible work trends and the easing of COVID restrictions.

Opportunities for modular firms include extended-stay projects, particularly in locations with high labor demand due to large-scale manufacturing and industrial projects. The 2026 FIFA World cup also presents opportunities in 16 major markets across North America, including Canada and Mexico, with a projected $5 billion economic impact from the event. Modular companies who can leverage speed to market, while convincing owners of modular's quality, will find prospects.

Market Drivers and Challenges

Top Drivers

Speed to market (81 percent): Parallel site/module work allows for compressed schedules. Modular construction enables schedule compression by allowing site work and module fabrication to occur in parallel. This approach offers a competitive advantage for time-sensitive projects such as hotels, which translates to earlier occupancy and revenue generation. This is also an advantage in the education segment, where projects must be completed during academic break periods.

Cost efficiency (68 percent): This is especially true when designs are repeatable. While cost is frequently discussed, its implications are more nuanced, and cost comparisons with traditional construction can vary by project. In this context, cost advantages are a driver when modular designs can leverage economies of scale to shorten schedules and reduce labor costs. Highly customized projects may

struggle to realize these savings, due to their unique design requirements.

Labor availability (52 percent): Modular construction helps mitigate skilled labor shortages and is frequently cited by stakeholders as a solution to ongoing labor shortages and rising labor costs. By shifting work from the field to a factory setting, modular offers a more controlled environment that typically requires less skilled labor and allows job sites to come to workers, rather than workers having to travel to job sites.

> **"YOU'RE TAKING A LARGE PORTION OF A PROJECT AND SHIFTING IT OFFSITE TO A FACTORY SETTING WHERE THE RATES TRADITIONALLY ARE LOWER."**

Main Obstacles

Lack of client education (62 percent): One of the most commonly observed barriers to modular adoption is the construction industry's overall lack of familiarity with modular construction. Many stakeholders in the industry are accustomed to site-built construction, and are simply unaware of the workflows, cadence, and requirements unique to modular delivery.

Negative perception of quality/durability (48 percent): The misconception that modular is of lower quality and inferior durability is perceived to be a major impediment to modular advancement. This perception often stems from the historical association of volumetric modules with low-quality temporary structures like school portables or trailers.

Building codes/permitting complexity (38 percent): Most building codes were written for traditional construction, and modular construction can often fail to realize its advantages of speed and efficiency in these cases. Permitting and inspections are a particular source of frustration, especially as modular buildings are often built in one state and installed in another.

Stakeholder Insights

Key Considerations for Nonusers

Reduced construction timeline was identified as the top factor influencing nonusers to consider modular construction, with 76 percent citing reduced timelines as having a significant or extreme influence on their consideration. In an environment where delays, labor shortages, and permitting bottlenecks can be increasingly common, speed is a potential differentiator. Modular's ability to shorten build times offers a meaningful solution to this growing challenge.

Cost savings was identified as one of the most compelling factors that would influence nonusers to consider modular construction, with 73 percent of survey respondents indicating that the potential to save money would have a significant or extreme impact on their interest in modular. This can be a challenge for modular firms, as new market entrants often struggle to perform modular cheaper than traditional construction. With that in mind, this factor presents educational opportunities for both modular firms and MBI.

Consistency and predictability in modular construction are valued for repeatable builds. Consistency (e.g., repeatable designs in factory settings) is a key factor for nonusers to consider modular construction. Modular excels in projects with standardized elements by delivering uniform quality and precision. Stakeholders value the advantages that come with modular, such as greater predictability, reduced weather impact, and a stable production timeline. However, this applies less to segments in which custom designs and originality are priorities.

REGIONAL AND MARKET OUTLOOK

The West leads the U.S. market regionally, accounting for more than $7.5B in 2024 and projected to grow at 4.9 percent CAGR through 2029. CAGR projections for the other regions include 4.7 percent for the Northeast, 4.4 percent for the South, and 3.8 percent for the Midwest.

Population Trends

The U.S. population grew by nearly 1.0 percent between 2023 and 2024 to more than 340 million, according to 2024 population estimates by the U.S. Census Bureau. This is the fastest annual population growth the nation has seen since 2001—a notable increase from the record-low growth rate of 0.2 percent in 2021. According to the U.S. Census Bureau, growth from 2023-2024 was driven primarily by rising net international migration.

Housing

Privately owned housing completions in December 2024 came in at a seasonally adjusted annual rate of 1,544,000. This is 4.8 percent below the revised November 2024 estimate of 1,621,000 and 0.8 percent below the December 2023 rate of 1,557,000.

Single-family housing completions in December 2024 came in at a rate of 948,000. This is 7.4 percent below the revised November 2024 rate of 1,024,000. The December 2024 rate for units in buildings with five units or more was 570,000—more than at any other time in history, according to the U.S. Census Bureau.

With respect to multifamily construction, approximately 7 percent of multifamily buildings (properties, not units) were built using modular and panelized methods, marking the highest level in the last two decades. This is significantly higher than the 2 percent share in 2022 and 1 percent share from 2018-2021. It is notable that modular construction methods accounted for 5 percent of this share, according to the National Association of Home Builders.

2024 U.S. Population by Region:

Region	Population	% of total	Increase from 2023-2024
South	132,665,693	39.0%	2,000,000
West	80,015,776	23.5%	700,000
Midwest	69,596,584	20.5%	400,000
Northeast	57,832,935	17.0%	400,000

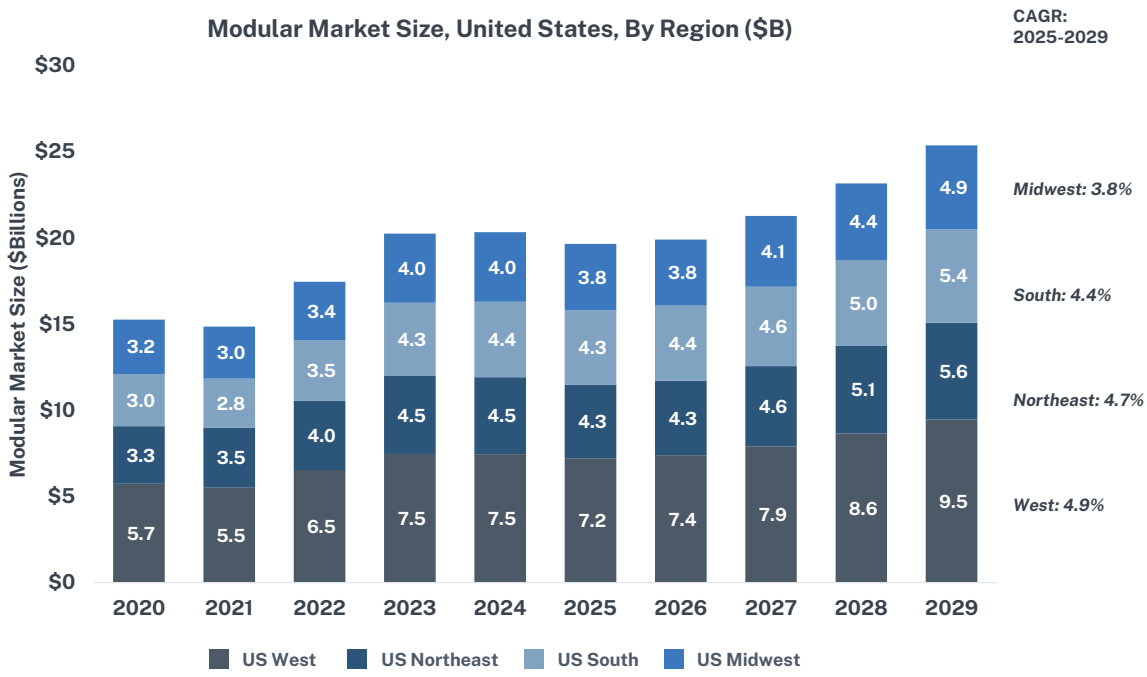
U.S. Regional Comparison of Modular Construction:

Region	2024 Market Size	% of U.S. Modular	Projected 2029	2025-2029
South	$7.5B	37%	$9.5B	4.9%
West	$4.5B	22%	$5.6B	4.7%
Midwest	$4.4B	22%	$5.4B	4.4%
Northeast	$4.0B	20%	$4.9B	3.8%

MBI | Modular Industry Study

In the United States, the West region holds over one third of the modular starts, and it is projected to grow the fastest. The Midwest and South lag behind the West, partly due to a higher prevalence of single-family homes.

Modular Market Size, By Region, United States
Source: FMI Survey Data, FMI Analysis



Regional Profiles

1. West

States included: Alaska, Arizona, Colorado, California, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

- Largest and fastest-growing modular region in the U.S.
- Housing shortages, high urbanization, and tech/data center construction drive demand.
- Multifamily and data center growth are prominent.
- Largest share of total modular starts.

The population in the West grew by almost 688,000 (0.9 percent) to a total of 80,015,776 residents. This growth was consistent with the national trend and continued despite a net domestic migration loss of almost 170,000, which was offset by a gain of 667,794 from net international migration. There was also a gain of 187,986 from natural increase in population. In the West, California (232,570) and Arizona (109,357) had the largest numeric gains between 2023 and 2024, while Utah (1.8 percent) and Nevada (1.7 percent) grew the fastest.

In the West, 225,000 multifamily housing units were completed in 2024, accounting for 52 percent of all new housing starts—the highest percentage of multifamily projects of any region in the country.

California is clearly the leader in this region in terms of overall new construction starts, accounting for approximately $25 billion in activity in key markets for the modular industry. Of that total, multifamily housing was the largest market sector, accounting for 41 percent of activity, or roughly $10 billion, in 2024.

For 2025, multifamily starts are forecasted to increase to $11 billion, or 44 percent of all activity in key modular markets. Other significant markets in 2024 in California include educational facilities at $5 billion, healthcare at $4 billion, and offices at $2 billion.

Other strong markets in this region for construction activity in 2024 include Arizona at $8 billion, Colorado at $4 billion, Washington at $4 billion, and Utah at $3 billion.

2. Northeast

States included: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont.

- Strong base in multifamily housing and education, especially in dense urban markets.
- New York, New Jersey, and Massachusetts are modular hotspots.
- Relatively high regulatory complexity (due in part to permitting and union labor dynamics).
- Modular CAGR of 4.7 percent—second only to the West.
- Likely to benefit from continued housing affordability crises and urban redevelopment efforts.

Approximately 57.8 million people lived in the Northeast between 2023 and 2024. During that time, the number of residents increased by 0.76 percent, a gain of almost 435,000.

About 60,000 multifamily housing units were completed in this region in 2024, accounting for 43 percent of all new housing completions.

3. South

States/districts included: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia.

At nearly 132.7 million residents, the South is the most populous region. With a population gain of nearly 1.8 million—a change of 1.4 percent between 2023 and 2024—the South added more people than all other regions combined, making it both the fastest-growing and largest-gaining region in the country. Within the South, Texas (562,941) and Florida (467,347) had the largest numeric gains, and the District of Columbia grew the fastest (2.2 percent) from 2023 to 2024.

In this region, 245,000 total multifamily housing units were completed in 2024—more than in any other region—accounting for 34 percent of all new housing projects completed in the region.

The South includes fast-growing Sun Belt metros such as Dallas, Atlanta, Charlotte, and Miami.

Modular demand is boosted by population growth, logistics hubs, and manufacturing investments.

Despite favorable demographics, adoption is hampered by limited factory capacity and fragmented awareness of modular benefits.

Lodging and commercial mixed-use (e.g., pad sites and strip retail) offer untapped potential.

4. Midwest

States included: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin.

The population in the Midwest increased by more than 410,000 (0.6 percent) to a total population of 69,596,584 in 2024. The region had a net domestic migration loss of 49,214, far fewer than the net domestic migration loss of 89,787 in the previous year. The Midwest gained 406,737 people through net international migration and experienced a net gain of 52,741 from natural increase.

Within the region, Illinois (67,899) and Ohio (59,270) had the largest population gains, while North Dakota (1.0 percent) and Nebraska (0.9 percent) were the fastest-growing states.

In the Midwest, 40,000 multifamily housing units were completed in 2024, accounting for 23 percent of all new housing completions.

The Midwest has the lowest projected growth rate (3.8 percent), reflective of economic stagnation in some metro areas and a high prevalence of single-family housing.

Some bright spots can be found in education and healthcare (especially in university towns and medical hubs).

Rural hospital construction offers a promising use case for modular in underserved, labor-scarce regions.

Modular adoption in the Midwest lags due to less familiarity and a conservative construction culture.

Strategic Implications by Region

Strategic Focus	West	Northeast	South	Midwest
Top Segments	Multifamily, data centers	Education, multifamily	Lodging, pad retail,	Education, healthcare
Challenges	High demand outpaces capacity	Complex codes/ permitting	Awareness and education gaps	Conservative market
Opportunities	Tech investment, speed to market	Urban redevelopment	Manufacturing-driven lodging needs	Rural health access
2029 Market Rank	#1	#2	#3	#4

Where can I learn more about modular construction?
The MBI website at **www.modular.org** is loaded with case studies, research, articles, and links to companies in your area.

LEADING THE WAY
WITH ICC/MBI OFFSITE CONSTRUCTION STANDARDS

An Interview with the Virginia Department of Housing and Community Development

As the demand for housing and infrastructure continues to outpace demand for traditional construction methods, Virginia has taken proactive steps to modernize its building processes by embracing modular construction. One of the most significant milestones in this effort was the state's early adoption of the ICC/MBI Offsite Construction Standards—a move that has positioned Virginia as a national leader in the offsite construction sector.

A Strategic Move Toward National Consistency

Virginia's decision to adopt the ICC/MBI offsite building standards stemmed from a desire to address two of the most pressing challenges in the building industry: housing affordability and production capacity. Offsite construction—particularly modular methods—offers a scalable solution to both. However, the fragmented regulatory landscape across states has long created roadblocks for manufacturers and builders.

"Virginia, like the rest of the nation, is always looking for ways to address the challenges of producing enough housing to keep up with demand and making housing more affordable," said Brian Hilderbrand, construction regulation administrator at the State Building Codes Office in the Virginia Department of Housing and Community Development.

"Offsite construction plays a critical role in addressing these challenges, but navigating the patchwork of regulatory requirements related to offsite construction across the country has long been identified as a major barrier for the offsite construction industry. Implementation of a national standard for the approval of offsite construction is an important step in addressing this barrier."

By adopting a nationally recognized standard, Virginia helped eliminate this inconsistency. The state played a key role in developing the standards and became one of the first to implement them.

"The standards have improved our program by formalizing many of the policies and practices we had in place and ensuring that the requirements are clear and consistent. Our industry customers regularly express their appreciation for Virginia's offsite program and for our willingness to be a leader in addressing the barriers they face."

Promoting a Modular-Friendly Environment

Another vital initiative has been education.

"So many local officials do not have a clear understanding of modular and the multiple layers of quality-assurance checks required before seals are affixed," said Hilderbrand. "And some still do not understand the difference between manufactured homes and industrialized buildings. Here in Virginia, we provide an eight-hour class on offsite construction, in localities throughout the state, every year. Through these efforts, we have seen a significant increase in awareness, leading to considerably greater acceptance and even appreciation of modular buildings."

Virginia's embrace of modular construction and its adoption of the ICC/MBI standards serve as a compelling example of how states can modernize their building codes, support industry innovation, and meet urgent construction needs. Through strategic planning, regulatory clarity, and public education, the commonwealth is not just responding to today's challenges—it's building for the future.

Athens Medical Campus

BEST OF SHOW
Permanent Modular Construction

Company: MODLOGIQ
Location: Athens, OH, USA
Gross Size of Project: 100,000 Square Feet
Days to Complete: 510

Architectural Excellence

The project's design is proudly rooted in local architecture. The constituent imagery for the design was proudly inherited from the local farming community. The variegated front façade reflects local wooden barn architecture and captures the beautiful randomness of old barn facades. As the façade reaches the ground, the planks flow into a tall grass landscape reflecting local wheat and corn fields. The back of the building is covered in three green panels arranged randomly to further reflect the fields of surrounding farming landscape.

The Athens Health Campus architecture has a local heritage and reflects the sense of place that is Athens, Ohio. The design allows for modification as the medical needs of the center shift. The fourth floor of the facility was initially shell space designed to accommodate up to four operating rooms and 24 patient rooms if needed in the future. Now, the expansion space is being fitted out for more clinical space which is needed in the community.

Technical Innovation & Sustainability

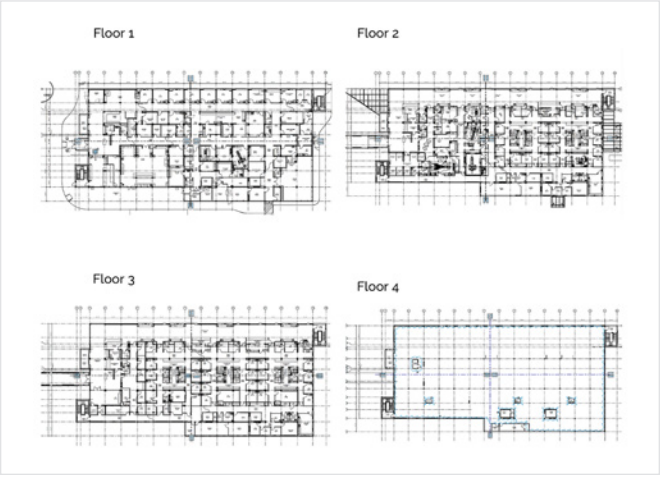
This project included a 2-story, 4-module open-air steel and concrete pedestrian bridge between the hospital and a site-built parking structure, establishing the civil reference points for the entire build. With close collaboration, advanced BIM technology, and MODLOGIQ's "Build Together" process, up to 95% pre-fabrication was achieved, ensuring precision module fitment while minimizing on-site work. This Advanced Modular Manufacturing reduced waste to under 1%, enabling recycling of all reusable materials. This approach prevented 400 tons of greenhouse gas emissions, recycled 230 tons of materials, and significantly cut project costs.

Productivity, safety, and data technologies were key, with tools like Autodesk BIM 360 for real-time collaboration, OnsiteIQ and EarthCam for live project documentation, Kwant AI for workforce efficiency, and TotalStation for precise modular layout with floor-to-floor accuracy.

Cost Effectiveness

The timeline to open was reduced by 15 months compared to traditional methods. The expedited schedule allows this rural community hospital to become operational more quickly, generating much needed revenue sooner and providing essential healthcare services to the community without delay. Off-site fabrication allows quick assembly on-site, reducing labor, project management costs, and the impact of inflation. A faster schedule enables earlier operation, generating revenue and providing healthcare services sooner. This approach also reduces risks from weather and unforeseen delays, offering a more stable budget.

Advanced technologies like OnsiteIQ, Kwant, TotalStation, GPS, and Earthcam enhance efficiency and accuracy. The four-story medical building was designed for disassembly and relocation, adapting to changing healthcare needs and populations, with flexibility for future expansion.




ATHENS
MEDICAL
CAMPUS
EMERGENCY

CASE STUDIES

Eastmoor Heights

Company: Guerdon, LLC
Affiliate: Lowney Architecture
Location: Daly City, CA, USA
Gross Size of Project: 50,600 Square Feet
Days to Complete: 834

Architectural Excellence

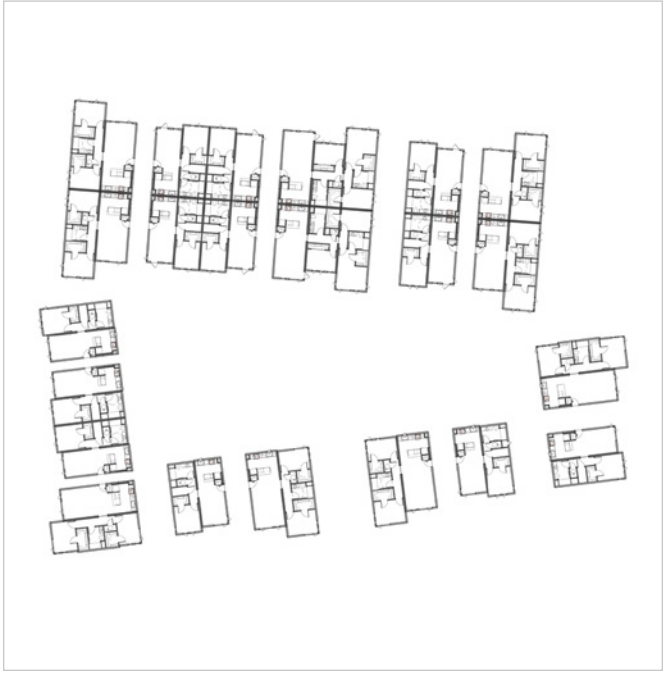
Eastmoor Heights consists of seven buildings that provide affordable housing for district staff and educators, blending seamlessly into the surrounding residential area with simple, durable materials like stucco and siding. The layout fosters a sense of community with a central sheltered courtyard, shared stairways, and amenities such as a play area, community garden, BBQs, and a gathering hub for laundry and shared kitchen use. The 56 units—available in one-, two-, and three-bedroom configurations—are 70% of the local market rate, addressing the housing needs of essential school staff. Designed to encourage interaction among residents, the project also improves the campus layout, shifting playgrounds and creating a safer, dedicated student drop-off zone.

Technical Innovation & Sustainability

Eastmoor Heights integrates pioneering sustainable features, winning the Peninsula Clean Energy Award for Outstanding All-Electric Commercial Project. It's fully electric, using solar PV, efficient heat pump water heaters, and Energy Star appliances. Passive design elements include advanced envelope efficiency and ample daylighting. Solar panels are concealed behind parapets for aesthetics, while a 100% storm water bioretention system channels rainwater back into the soil, preventing runoff into sewers. A third-party inspection minimized travel costs for the district and assured quality, while individual water heaters in each unit optimize energy use, lowering both operational costs and environmental impact.

Cost Effectiveness

By employing modular construction, Eastmoor Heights achieved significant cost savings. This method provided better control over quality and labor while bypassing the need for prevailing wage requirements, which increased during COVID. Additionally, modular production allowed for upfront cost control, reduced on-site workforce and certified payroll expenses, and minimized delivery traffic, ideal for a school environment. The modules were installed in only seven days with 118 crane picks, helping with swift project completion. Further savings came from consolidating permitting through the California Division of State Architecture, simplifying processes and reducing costs, creating a model of efficiency for public school districts.



CASE STUDIES

Fontana Unified School District – Sierra Lakes Elementary

Company: Silver Creek Modular
Location: Fontana, CA, USA
Gross Size of Project: 17,280 Square Feet
Days to Complete: 305

Architectural Excellence

Facing increased enrollment and classroom overcrowding, the Fontana Unified School District partnered with Silver Creek Modular to design and construct a campus expansion. The new 2 story modular classroom building replaced several existing buildings which allowed for the development of a new playground. The building includes 15 standard classrooms, 2 small group rooms, an outdoor classroom, a staff lounge, student and staff restroom facilities, and support spaces.

The stairways and balconies are clad in a decorative metal panel system which acts as the railing. Large overhangs are provided along the front of the building to create outdoor learning environments. The large exterior balconies are directly accessed from each classroom with traditional doors and glazed operable walls. The exterior finish is primarily stucco with fiber cement accents of various colors to identify building entries and to provide projections in the wall plane.

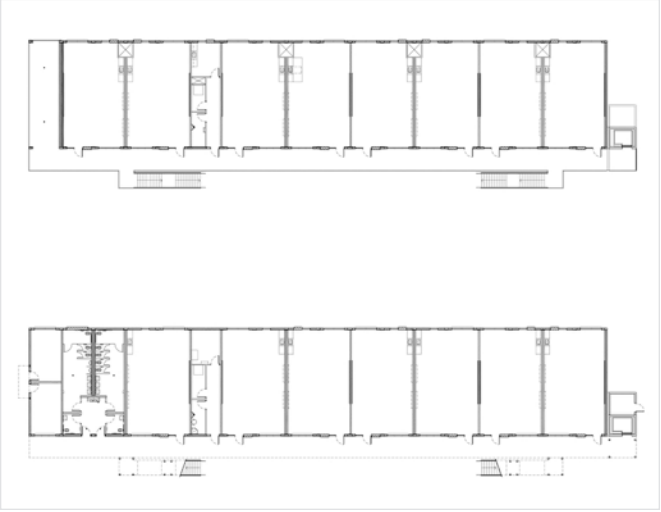
Technical Innovation & Sustainability

To meet the project requirements in the most cost-effective manner possible stacked volumetric modules were utilized to construct the two story building. A light weight concrete floor system was poured the in the factory for all modules. All occupied spaces feature large glazing systems to provide natural daylighting. High efficiency LED lights with dimming controls, occupancy sensing controls and automatic daylighting controls were used in all classrooms. Wall assemblies separating classrooms and adjacent spaces were designed to provide acoustic separation for sound mitigation. Low-VOC materials were used throughout the project to provide a healthy learning environment. High efficiency packaged space conditioning systems with economizers and demand control ventilation systems were used in all occupied spaces. To reduce heating and cooling loads the project used highly insulated assemblies and a cool roof system.

Cost Effectiveness

Based on previous project experiences the client identified early in their planning process that modular construction was the most cost-effective solution for this project. By utilizing off-site construction methods, they were also able to realize significant schedule advantages as compared to traditional construction. During the design process the interior spaces were carefully planned to maximize the work that could be performed in the factory. The duct system was designed to allow for a majority of the system to be installed in the factory.

The interior walls were located to allow for all the casework to be installed in the factory. The restroom facilities were designed and located to be fully contained within a module to allow those spaces to be completed in the factory. A modular elevator tower was utilized to reduce the system cost and allow for earlier occupancy.




USA


WELCOME
TO
R. S. P.

CASE STUDIES

La Mora Senior Apartments

Company: Signature Building Systems
Location: Yonkers, NY, USA
Gross Size of Project: 55,000 Square Feet
Days to Complete: 455

Architectural Excellence

La Mora Senior Apartments is a 55,000 sq. ft., five-story, Passive House-certified modular building with 60 units (57 one-bedroom, 3 two-bedroom). Its design blends energy efficiency and modern aesthetics, featuring superior insulation, high-quality windows, and airtight construction. The project's modular portion comprises 92 prefabricated modules for speed and cost efficiency while ensuring quality. The exterior combines clean lines with sustainable materials, complementing the neighborhood's evolving urban character. Inside, contemporary finishes enhance comfort, with communal spaces like a fitness center, rooftop deck, and landscaped courtyard fostering community. Located near parks, transit, and hospitals, the building integrates seamlessly with its surroundings, prioritizing accessibility and livability. Its thoughtful layout balances affordability, sustainability, and visual appeal, making it a model for senior housing.

Technical Innovation & Sustainability

La Mora Senior Apartments employs innovative modular construction, using 92 modular units to create a high-quality, energy-efficient building. This approach enabled faster assembly, and reduced waste and carbon emissions while adhering to strict PHIUS Certification standards, ensuring 40-60% energy savings compared to conventional designs. High-efficiency insulation, triple-pane windows, and ENERGY STAR appliances enhance energy performance. In the offsite environment, modules were prefabricated with low-flow plumbing, LED lighting, and high-efficiency VRF HVAC systems, minimizing on-site waste and shortening build time. The design integrates sustainable materials, advanced air-tightness, and a central electric hot water system, optimizing resource use. Specific techniques utilized at the modular factory resulted in testing of un-taped airtightness achieving a WUFI Passive: 0.062 cfm50/sf resulting in a Phius Core 2021 certification.

Cost Effectiveness

La Mora Senior Apartments used modular construction to achieve cost-effectiveness, reducing on-site labor and construction time while maintaining high quality. The 92 prefabricated modules were built offsite using sustainable materials like high-performance insulation and low-flow plumbing fixtures, minimizing waste and transportation costs. Partnerships with MHACY, Mulford Corporation, and NYSERDA provided financing and technical guidance, offsetting costs through incentives and funding programs. Energy-efficient features, including LED lighting, ENERGY STAR appliances, and high-efficiency electric VRF HVAC systems, resulted in lower utility bills for residents, and the design ensured longevity and low maintenance with durable materials and a high-efficiency envelope. The project's collaboration with local and state agencies secured cost-sharing opportunities, making it financially viable and sustainable.

CASE STUDIES

Wilmot Modular Corporate Headquarters

Company: Wilmot Modular Structures, Inc.
Affiliates: Sunbelt Modular Inc., ProMod Manufacturing
Location: White Marsh, MD, USA
Gross Size of Project: 13,000 Square Feet
Days to Complete: 372

Architectural Excellence

The project consists of a 13,000 SF 2-story office building (HQ) and 18,000 SF Production Factory. The factory grounds are connected to main offices with landscaping, a paved circular American flag landscaped courtyard, waterfall concrete steps and ADA compliant wrap around ramp. The HQ has a 2-1/2 story blue entrance and exterior black hi-rib siding with teak wood accent walls and matches the factory exterior in color and material. The lobby of HQ is a 2 story atrium with 2nd floor glass railing. Both levels have a 90' curved wall with graphic display. The first floor shows the modular design build process & 2nd floor shows company history. There is a combination of open areas for collaboration and relaxation areas (fitness center, quiet room, library).

Seamlessly integrated into the modular framework are site-built stair towers and a modular elevator to add both functionality and artistic flair, transforming a necessity into a striking architectural element.

Technical Innovation & Sustainability

The decision to utilize modular construction was based on several factors: efficiency, sustainability, safety, and predictability.

The design team created an aesthetically appealing and unique two-story design. The modular design created an offset pattern and a central radiused corridor. The design created an abundance of natural light optimizing the location on site and utilized energy-efficient windows and doors, LED lighting, and efficient HVAC systems.

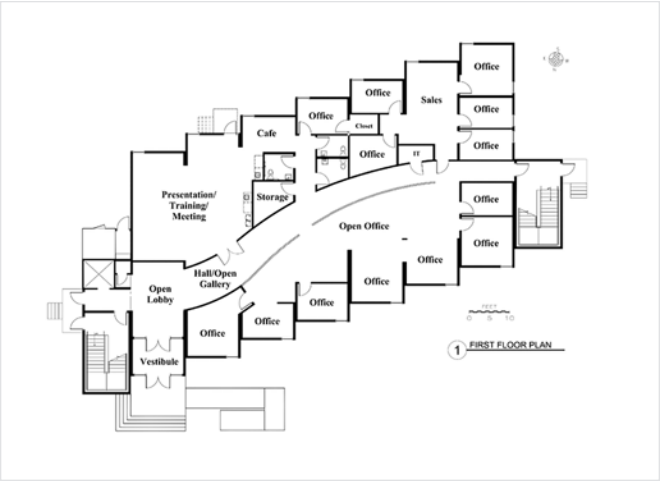
Modular construction, site preparation and building construction occurred simultaneously, drastically shortening project timelines.. Since the bulk of construction happened off-site, there was less environmental disruption at the building site (less noise, fewer emissions, and lower impact on local ecosystems).

The factory environment allowed for precise material use and recycling, reducing waste by up to 50%.

Cost Effectiveness

The modular construction process created the largest cost savings for the project. While the modules were fabricated at the factory, foundation and site development work took place on-site, shortening the length of time labor was needed on site. Modular construction also provided more predictability with less delays, less waste, less unexpected cost, and a shorter timeline which all saved money in the end.

The design of cantilevered modules on the second floor, strategically oriented toward the south to maximize natural light and enhance energy efficiency, significantly lowers operational costs.




WILMOT
AR STRUCTURES


EXIT


RIPKEN BASEBALL
INSTALL
BUILD
DESIGN

DEFINITIONS

MBI adopted the definitions contained in the ICC/ANSI standard 1200 and 1205 for consistency. Sources for other terms not used in the standard include state administrative programs and the National Institute for Building Sciences.

Accessory dwelling unit (ADU). A smaller, independent residential dwelling unit located on the same lot as a stand-alone (i.e., detached) single-family home. (Source: American Planning Association).

Authority Having Jurisdiction (AHJ). Organization, political subdivision, office, or individual charged with the responsibility of administering and enforcing the provisions of the applicable building code. The authority having jurisdiction shall include a state agency or local building department.

Building Envelope. As the physical separator between the interior and exterior environments of a building, the building envelope serves as the outer shell to help maintain the indoor environment (together with the mechanical conditioning systems) and facilitate its climate control. Building envelope design is a specialized area of architectural and engineering practice that draws from all areas of building science and indoor climate control.

Building Site. A lot, the entire tract, subdivision, or parcel of land on which industrialized housing or buildings are sited.

Building System. The design and/or method of assembly of modules or modular components represented in the plans, specifications, and other documentation, which may include structural, electrical, mechanical, plumbing, fire protection, and other systems affecting health and safety.

Certification Label. A decal, insignia, or alteration decal.

Closed Construction. A building, component, assembly, subassembly, or system manufactured in such a manner that all portions cannot be readily inspected at the installation site without disassembly or destruction thereof.

Commercial Structure. An industrialized building classified by the building codes for occupancy and use groups other than residential for one or more families.

Compliance Assurance Program. Procedures that state the guiding principles and define the framework for ensuring that construction documents approved by a design review agency, or that modular buildings inspected by a third-party inspection agency, comply with the applicable building codes.

Compliance (or Quality) Control Program. The manufacturer's system, documentation, and methods of ensuring that industrialized housing, buildings, and modular components, including their manufacture, storage, handling, and transportation, conform with this chapter.

Component. A subassembly, subsystem, or combination of elements for use as a part of a building system or part of a modular component that is not structurally independent, but may be part of structural, plumbing, mechanical, electrical, fire protection, or other systems affecting life safety.

Data Plate. A plate attached by the manufacturer or installer to a modular building or modular component that contains identifying information, allowing code officials or end-users to determine if the structure is suitable for installation in their jurisdiction, location, or project.

Decal. The approved form of certification issued by the authority having jurisdiction, to be permanently attached to the modular building, modular component, or panelized system, indicating that it has been constructed to meet or exceed the applicable building code requirements.

Deconstruction. The process of taking apart a building or structure, or a portion thereof, with the intent of repurposing, reusing, recycling, or salvaging as many of the materials, products, components, assemblies, or modules as possible.

Design Package. The aggregate of all plans, designs, specifications, and documentation required by these sections to be submitted by the manufacturer to the design review agency or required by the design review agency for compliance review, including the compliance control manual and the onsite construction documentation. Unique or site-specific foundation drawings and special onsite construction details prepared for specific projects are not a part of the design package.

Erection/Installation/Set. The process of blocking, leveling, and anchoring a modular building unit on the building site upon delivery.

Industrialized Building. A commercial structure constructed in one or more modules, or constructed using one or more modular components, that is built at a location other than the commercial site and designed to be used as a commercial building when the module or modular component is transported to the commercial site and erected or installed.

Industrialized Housing. A residential structure designed for the occupancy of one or more families that is constructed in one or more modules or constructed using one or more modular components, and is built at a location other that the permanent site and designed to be used as a permanent residential structure when the module or modular component is transported to the permanent site and erected or installed on a permanent foundation system.

Insignia. The approved form of certification issued by the authority having jurisdiction to the manufacturer to be attached to the modular building, modular component, or panelized system, indicating that it has been constructed to meet or exceed the applicable building code requirements.

Manufacturer. The entity responsible for the manufacturing of assemblies, panelized systems, modular buildings, or modular components.

Manufacturing Plant. The location, other than the building site, at which modular buildings, modular components, modules, panels, or tiny houses are assembled or manufactured prior to transport to the final construction site.

Marriage Wall/Crossover Connections. The joint between the modules in a complex, commonly called a mate-line or mod-line.

Modular Component. A subassembly, subsystem, or combination of elements, including panelized systems, building shells or bathroom pods, for use as a part of a modular building that is not structurally independent, but is a part of structural, plumbing, mechanical, electrical, fire protection, or other systems affecting life safety.

Offsite Construction. 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. Such building elements may be prefabricated at a different location and transported to the site or prefabricated on the construction site and then transported to their final location. Offsite construction is characterized by an integrated planning and supply chain optimization strategy. (Source: National Institute of Building Science)

Open Construction. A modular building, modular component, panelized system, or tiny house manufactured in such a manner that all portions can be readily inspected at the building site without disassembly, damage, or destruction thereof.

Permanent Modular Construction (PMC). An innovative, sustainable construction delivery method utilizing offsite, lean manufacturing techniques to prefabricate single- or multistory whole building solutions in deliverable module sections. PMC buildings are manufactured in a safe, controlled setting and can be constructed of wood, steel, or concrete. PMC modules can be integrated into site-built projects or stand alone as a turnkey solution, and can be delivered with mechanical, electrical, and plumbing (MEP); fixtures; and interior finishes in less time, and with less waste and higher quality control than projects utilizing only traditional site construction.

DEFINITIONS

Prefabricated. The manufacture or fabrication of sections of a building at an offsite location that are delivered to and assembled at the building site.

Quality Control. Controls and inspections implemented by the manufacturer, as applicable, to ensure that the material provided and work performed meet the requirements of the approved construction documents and referenced standards-applicable building codes.

Registered Design Professional. An individual who is registered or licensed to practice their design profession, as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed.

Relocatable/Industrialized building. A partially or completely assembled building that complies with applicable codes and state regulations and is constructed in a building manufacturing facility using a modular construction process. Relocatable modular buildings are designed to be reused or repurposed multiple times and transported to different sites.

Site or Building Site. A lot, the entire tract, subdivision, or parcel of land on which industrialized housing or buildings are sited.

Third-Party Inspector. An approved person determined by applicable statutory requirements to be qualified by reason of experience, demonstrated reliability, and independence of judgment to inspect modular buildings, and portions thereof, for compliance with the construction documents, compliance control program, and applicable building codes. A third-party inspector works under the direction of a third-party inspection agency.

Thank You, MAP Heroes!

Thanks to these organizations for contributing to the Modular Advocacy Program!

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2025 PERMANENT MODULAR CONSTRUCTION REPORT

MODULAR BUILDING INSTITUTE

285 Hydraulic Ridge Rd., Suite 6 | Charlottesville, VA 22901 US

888.811.3288 | Fax: 434.296.3361 | info@modular.org | modular.org