



ICC/MBI Standards 1200 & 1205-2021 for Off-site Construction: A New Tool for State and Local Jurisdictions

Off-site construction practices have become increasingly common as a strategy for addressing the challenges of sustainability, affordability, and quality within the building industry. In order to provide more clarity and encourage increased uptake of this construction process, two standards were released in a collaborative effort between the International Code Council (ICC) and the Modular Building Institute (MBI) in September 2021.



The [ICC/MBI 1205-2021 Standard for Off-site Construction](#) and the [ICC/MBI 1200-2021 Standard for Off-Site Construction: Planning, Design, Fabrication](#) standardize off-site construction practices and offer consistent standards for the inspection and design practices of off-site construction. The 1200 provides standard requirements for planning, designing, fabrication, transportation, and assembly of off-site construction. The 1205 standard provides requirements for inspection, approval, and compliance practices of off-site construction. Taken together, the standards provide a comprehensive approach to unlocking the potential of off-site construction and assuring buildings constructed using these methods meet code requirements for safety, sustainability, and resilience.

Adoption of the 1200 and 1205 Standards offers jurisdictions comprehensive standards to off-site construction practices and further provide uniformity in the application of off-site construction for residential and commercial buildings. Jurisdictions already employing off-site construction can benefit from clarifying language by the adoption or integration of the standards into existing building codes. States and jurisdictions where off-site construction is not currently employed benefit from the adoption or integration of the following standards which provide guidance on off-site construction practices and further allow jurisdictions to employ off-site construction practices.

This brief discusses the new model language of the 1200 and 1205 Standards, which covers the roles of code officials and third-party inspectors, and clarifies how the new standards apply in the context of existing state and local enforcement programs. The 1205 Standard further offers guidance to jurisdictions without statewide off-site construction programs by enabling the use of third-party inspectors and remote virtual inspections (RVI).

A Closer Look

The lack of national standards for off-site construction results in obstacles to uptake of the construction method. Even basic definitions lack consistency. Requirements for approval, permitting, and inspection of off-site construction vary across states, and a number of states had no state-wide regulations for off-site construction.



As a result of the lack of a national model standard, ICC/MBI developed the two standards mentioned above – the 1200-2021 Standard and the 1205-2021 Standard. The first addresses planning, design, fabrication, and assembly, and the second addresses regulatory compliance and inspection. [The 2010-202x Standard](#), which is still under development, will address energy efficiency and water conservation by addressing mechanical, electrical, and plumbing systems.

A Case Study

Salt Lake City, Utah is the first jurisdiction to adopt the 1200 and 1205 Standards and has since been commended for addressing housing and infrastructure needs and barriers. Prior to the adoption of the 1205 Standard, off-site construction processes were hindered due to existing codes that prevented code officials from traveling outside of the city to complete inspections. The adoption of the 1205 Standard addresses this barrier by specifying the use of third-party inspection agents that allow for efficient off-site inspection processes and, in turn, reduce the time-consuming back and forth between code officials and manufacturing plants. The biggest promise of the new ICC/MBI 1205-2021 Standard is nationally consistent language for regulations. In particular, the standard will assist states that currently leave off-site construction oversight to local authorities in establishing requirements that will improve conditions for AHJs, code officials, fabricators, and builders.

State and Local Level Regulation

Authorities having jurisdiction (AHJ), which may operate at the state or local level, are recognized as the entities responsible for administration and enforcement of applicable building codes. Some states mandate codes that local jurisdiction must then enforce, and other states establish a minimum code level that local jurisdictions must meet or exceed. Alternatively, some local jurisdictions adopt their own codes and are not regulated by the state.

In approximately three quarters of states, off-site construction is regulated at the state level. In these states, a state agency is responsible for off-site elements of a project and the local AHJ is responsible for any on-site plan reviews and inspection. The local AHJ does not oversee the inspections processes at the off-site plant, but rather is responsible for verifying that off-site components that come to the job site have gone through the state process, arrived undamaged, and are being assembled correctly on-site. The state agency maintains a list of approved factories and third-party inspection agencies to oversee factory quality control programs and off-site plan review and inspections. Additionally, off-site manufacturers may be fabricating products for use in multiple jurisdictions, each with their own requirements; the 1205 Standard allows for standardization of the inspection process by providing clarifying information regarding the inspectional requirements and processes of fabricated products for jurisdictions and manufacturers.

Off-site construction plants are often located outside of the jurisdiction where a project is being sited. However, the project must comply with the building codes in place at the final job site. Since factories often construct projects for multiple states, variations in inspection and other requirements can cause confusion and inefficiency in the process. Standard 1205 aims to provide consistency by specifying that inspections must occur before parts are sealed up, meaning that they also require off-site inspections. Furthermore, the adoption of the



1200 and 1205 Standards offers states and local jurisdictions consistent approaches to the design and inspection of off-site construction methods.

Third Party Inspection and Remote Virtual Inspections

Third-party inspection agencies are independent (not involved in design, fabrication, construction) qualified companies that provide impartial inspection services. Third-party inspectors can conduct inspections outside of a potentially limited geographic jurisdiction while still being subject to the oversight of AHJs. Third-party inspectors can also be useful in cases where code official staff levels are low and travel times are long. Third-parties also are able to develop specialized expertise that may not be necessary at an individual jurisdiction level.

Remote virtual inspections are inspections conducted remotely through use of video cameras and still photographs. Contractors/fabricators and code officials/third-party inspectors communicate in real time through video networking software. Drone technology may also be used for difficult- or dangerous-to-access areas, though privacy and search laws may be an issue.

Given separate sites for fabrication and construction, using both RVI and third-party inspectors allows necessary building inspections to occur in an increasingly efficient manner. Standards for the deployment, quality assurance, and performance evaluation of third-party inspectors are clarified in the ICC/MBI 1205 Standard. Requirements and specifications such as labeling requirements are also provided. Should AHJs decide to utilize RVI, there are also standards for plan approvals and inspection procedures.

Conclusion

Off-site construction can be used to address the increasing costs of housing, the current lack of skilled labor, and ongoing environmental concerns. Innovative deployment of RVI and third-party inspections address barriers of off-site inspection practices and can help facilitate more off-site construction projects.

Off-site construction provides an effective solution to the challenges of delivering affordable, code compliant residential and commercial buildings to communities. As a result, the standards and requirements in the ICC/MBI Standards 1200 and 1205 offer consistent definitions and requirements to assist jurisdictions in addressing their need for regulatory compliance and inspection practices.