

FAQs on Off-Site Construction



Why is there a growing interest in off-site construction?

The use of off-site construction is expected to increase significantly as the building industry and society struggles to address key challenges including the availability of affordable housing, a lack of skilled workers, material use and sustainability, job site safety and industry productivity.

What is off-site construction? Pre-Fab? Modular?

Off-site construction (also called pre-fab or modular construction) is defined by the [National Institute of Building Sciences Off-Site Construction Council](#) as, “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.” Often, the broad concept of off-site construction is broken into additional characteristics including open versus closed construction, permanent versus relocatable and manufactured housing versus modular housing versus tiny homes.

What is the difference between open construction and closed construction?

Closed construction means that the final product cannot be inspected at the installation site without disassembly, damage or destruction. Open construction still allows for inspection of the product at the installation site. The fact that a closed construction product cannot be readily inspected at installation has caused the regulatory process to move into the factory. Examples of open construction include mechanical racking and certain panels (without embedded MEP for instance). Examples of closed construction include volumetric modules, pods, and some panelized systems.



What is the difference between permanent and relocatable off-site construction?

Relocatable buildings include job site trailers and similar buildings intended to be reused and transported to different sites. They are covered by [Chapter 31, Section 3113 of the International Building Code](#). In contrast, permanent construction is intended to remain at its initial place of assembly.

What is the difference between manufactured housing, modular housing and tiny homes?

Manufactured housing is built on a permanent chassis and is subject to the requirements contained in the [Manufactured Home Construction and Safety Standards](#) developed by the U.S. Department of Housing and Urban Development (HUD). Modular housing is subject to the code requirements of the final jurisdiction – typically based on the [International Residential Code](#). Tiny homes are typically less than 400 sq.ft. and are covered by [Appendix Q of the International Residential Code](#).

Off-site construction components can come from factories hundreds or even thousands of miles away from my jurisdiction. How can I assure that they are safe?

Many states have a modular or industrialized building program that regulates closed construction components manufactured off-site for any project located in the state. The program sets requirements for plan review, inspection and labeling. [ICC/MBI Standard 1205, Standard for Off-Site Construction: Inspection and Regulatory Compliance](#) will include best practices for the regulation of off-site construction.

What about off-site components coming from outside the country?

Because off-site construction components are designed to be transported, in some cases they can economically be constructed in one country and transported to another country. As with all off-site construction, the components still need to comply with requirements in place where they will be installed. So, factories in these countries are still subject to plan review and factory inspection requirements. [NTA](#) currently provides such services for factories in Canada, Mexico, South Korea, Poland and China that are building modules for the U.S. market.

How do I know if an off-site component has been approved under a state modular or industrialized building program?

Most state programs require closed construction components to include a label indicating that they have been designed and fabricated in conformance with the requirements of the state program.

Do state programs cover open construction off-site construction components?

Because they are open, these components can be readily inspected at the job site to assure that they comply with requirements of the local code. However, these components could still be unfamiliar to a code official or contain products or materials that must meet specific requirements. In this case, a product evaluation from a recognized source like the [ICC Evaluation Service](#) can help instill confidence.

What if my state doesn't have a modular or industrialized buildings program?

Without a state program, regulation of off-site construction falls to the local jurisdiction where the project is located. This can certainly present challenges as the factory may be located outside the local jurisdiction but still require inspection prior to final assembly. In most cases, the local AHJ can allow third-party plan review and inspection agencies like [NTA](#) to fulfill this role, limiting the AHJ's expenditure of resources for inspecting these projects.



Who does the plan review and inspection of off-site construction?

While requirements vary from state to state, there are two main processes for the plan review and inspection of off-site closed construction. Either the state conducts all plan review and inspection internally or they allow the use of recognized third-parties like NTA to provide these functions.

What are the differences between the evaluations provided by ICC-ES and approvals by NTA?

ICC-ES typically provides Evaluation Service Reports (ESRs) for open construction products that do not require separate plan review or for closed construction products that are highly replicable or commoditized. NTA provides third party plan review and inspection services for closed construction products that are subject to the HUD Manufactured Home Construction and Safety Standards, state modular or industrialized building programs or would otherwise be difficult to inspect outside of the manufacturing facility.

What codes are off-site products designed and constructed to?

With the exception of manufactured housing which is subject to the Manufactured Home Construction and Safety Standards developed by the U.S. Department of Housing and Urban Development (HUD), all off-site construction must meet the code requirements in place in the jurisdiction it is being assembled. There is not a separate code for off-site construction. [ICC/MBI Standard 1200: Standard for Off-Site Construction: Planning, Design, Fabrication, and Assembly](#) and [ICC/MBI Standard 1205: Standard for Off-Site Construction: Inspection and Regulatory Compliance](#) are being developed to help streamline the use of off-site construction.

Do HUD's Manufactured Home Construction and Safety Standards apply to all aspects of manufactured housing or do local jurisdictions have roles and responsibilities?

The HUD standard covers requirements for the design and fabrication of the unit itself. All other aspects of the project including utility hookups, add-on or accessory buildings and structures, foundations, and site conditions are subject to local codes and 24 CFR 3285 – Model Manufactured Home Installation Standards. These are the responsibility of the local AHJ and should be inspected by the local AHJ or qualified third party.

What resources does the International Code Council have regarding off-site construction?

The Code Council and its Family of Solutions have developed or are developing multiple resources to help building safety professionals and manufacturers realize the benefits of off-site construction. [Guideline 5](#) covers the use of shipping containers as building materials. Two standards are also currently in development: [ICC/MBI Standard 1200: Standard for Off-Site Construction: Planning, Design, Fabrication, and Assembly](#) and [ICC/MBI Standard 1205: Standard for Off-Site Construction: Inspection and Regulatory Compliance](#). NTA is a respected provider of third party [plan review](#) and [inspection](#) services for the off-site construction industry. ICC-ES provides [evaluation services](#) for multiple off-site construction products. IAS provides [accreditation](#) for inspection agencies and manufacturers/fabricators and assemblers. The Learning Center includes a [specialty catalog](#) of courses for code officials interested in off-site construction. Additional courses are in development. For the latest information consult iccsafe.org/offsite.