



Proposed New Industrialized Unit Rules

Summary of Changes - March 2024 (eNotification)

In addition to the fact that the rules regulating the authorization of industrialized units has moved from Section 113 of the Ohio Building Code to a set of Ohio Administrative Code (OAC) rules, 4101:10-1-01 to 4101:10-9-01, the proposed new rules are intended to clarify requirements, codify policy, coordinate enforcement authority and align expectations for manufacturers, owners, code enforcement authorities and the board of building standards. The requirements identified in this list, in sequential order, highlight some of the more significant changes which include but are not limited to:

- **4101:10-1-01(B)(1) Exempt structures.** Identifies more types of structures that are exempt from compliance including floating structures with a hull identification number, vehicles with a vehicle identification number, and mobile computing units that comply with Ohio Revised Code 3781.06(C)(3).
- **4101:10-1-01(B)(3)(c) Work without approval.** Clarifies that closed construction, delivered to a site of intended use without an authorization or approval from the board of building standards, is not an industrialized unit.
- **4101:10-2-01(B)(10) Equipment units.** Creates a new category of industrialized unit.
- **4101:10-3-01(A)(5) Manufacturing plant evaluation.** Clarifies the minimum content to evaluate, frequency of evaluations and records to be maintained and shared regarding the manufacturer's facility and quality assurance program.
- **4101:10-03-01(A)(8) Suspension of participation.** Consequence for violating the rules. *
- **4101:10-03-01(B)(2) Conditions of authorization.** BBS may set conditions on the authorization. *
- **4101:10-3-01(B)(5) Expiration of authorization.** Codifies an overlap of one (1) year between the effective date of a new referenced building code and the last day an industrialized unit can be constructed using the authorization issued under the previous building code.
- **4101:10-3-01(C) Inspections required.** Clarifies the third-party inspection process and expands it to include a manufacturer's option to self-perform day to day inspections under the audit of the third-party inspection entity. This section also allows for remote inspections.
- **4101:10-3-01(D) Insignias required.** Clarifies how to get, when they are placed, and their significance. *
- **4101:10-4-01(C)(1)(a)(ii) Scope of work.** Codifies the communication of what portion of the industrialized unit design and assembly is under the board of building standards authority and authorization and what portion is under the authority having jurisdiction at the site of intended use.
- **4101:10-7-01(A)(2) Replacement modules.** Creates an alternative path to allow the manufacturer the opportunity to assist the owner of a building to repair the portion of their building that was constructed using an industrialized unit.

- **4101:10-7-01(B) Reauthorization.** Creates an alternative path, for manufacturers of leased or other short-term placement of industrialized units, to rejuvenate, remodel or change the occupancy of their units at the manufacturing plant and have them reauthorized as an industrialized unit instead of regulating them as a moved existing structure.
- **4101:10-8-01 Fees.** Codifies the fee structure, who is responsible for the fees and clarifies the only exception.
- **4101:10-9-01 Certifications.** Codifies the requirements to become certified to perform inspections of industrialized units at the manufacturing plant.

4101:10-1-01 Title and scope.

(A) **Title.** Rules 4101:10-1-01 to 10-10-01 of the Administrative Code are designated as the “Ohio Industrialized Unit Rules” for which the designation “IU Rules” may be substituted. Where applicable, the technical provisions found in rules 4101:1-2 to 4101:1-35 of the Administrative Code (the “Ohio Building Code” - Chapters 2-35), rules 4101:2-2 to 4101:2-15 of the Administrative Code (the “Ohio Mechanical Code” - Chapters 2-15), rules 4101:3-2 to 4101:3-15 of the Administrative Code (the “Ohio Plumbing Code” - Chapters 2-15) and rules 4101:8-2 to 4101:8-44 (the “Residential Code of Ohio” - Chapters 2-44) are used by this code and are hereby incorporated by reference.

(1) **Rules of construction.** The following rules of construction are to be applied to rules 4101:1-2 to 4101:1-35 of the Administrative Code, rules 4101:2-2 to 4101:2-15 of the Administrative Code, rules 4101:3-2 to 4101:3-15 of the Administrative Code and rules 4101:8-2 to 4101:8-44 of the Administrative Code:

(a) All references to the “International Building Code,” “International Mechanical Code,” “International Plumbing Code,” and “International Residential Code” mean the “Ohio Building Code,” “Ohio Mechanical Code,” “Ohio Plumbing Code,” and “Residential Code of Ohio,” respectively, unless otherwise noted.

- (i) References to “this code” in rules 4101:1-1 to 4101:1-35 of the Administrative Code mean the “Ohio Building Code.”
References to “building code” in divisions 4101:1, 4101:2, 4101:3 and 4101:8 of the Administrative Code mean “Ohio Building Code.”
- (ii) References to “this code” in rules 4101:2-1 to 4101:2-15 of the Administrative Code mean the “Ohio Mechanical Code.”
References to “mechanical code” in divisions 4101:1, 4101:2, 4101:3 and 4101:8 of the Administrative Code mean “Ohio Mechanical Code.”
- (iii) References to “this code” in rules 4101:3-1 to 4101:3-15 of the Administrative Code mean the “Ohio Plumbing Code.”
References to “plumbing code” in divisions 4101:1, 4101:2, 4101:3 and 4101:8 of the Administrative Code mean “Ohio Plumbing Code.”

- (iv) References to “this code” in rules 4101:8-1 to 4101:8-44 of the Administrative Code mean the “Residential Code of Ohio.” References to “residential building code” in divisions 4101:1, 4101:2, 4101:3 and 4101:8 of the Administrative Code mean “Residential Code of Ohio.”
 - (b) The phrase "applicable energy conservation code referenced in Chapter 13" is substituted for "International Energy Conservation Code" in divisions 4101:1, 4101:2 and 4101:3 of the Administrative Code.
 - (c) Except as otherwise noted and in rule 4101:1-34-01 of the Administrative Code, “Chapter 34” is substituted for “International Existing Building Code.”
 - (d) The terms “approval” or “approvals” are substituted for “permit” or “permits,” respectively, when referring to documentation indicating compliance with this code.
 - (e) The phrase “manufacturer’s representative” is substituted for “owner’s authorized agent.”
 - (f) Except as otherwise noted, “board of building standards” is substituted for “fire code official.”
 - (g) The phrase “board of building standards” is substituted for “code official.”
 - (h) The provisions of this code are mandatory whether or not the term “shall” is used.
- (B) **Scope.** The provisions of the “IU Rules” shall apply where an application for authorization is submitted for the construction of *industrialized units*. As provided in division (B) of section 3791.04 of the Revised Code, no plans or specifications shall be authorized or inspection given unless the *industrialized unit* represented by those plans or specifications would, if constructed or equipped according to those plans or specifications, comply with Chapters 3781. and 3791. of the Revised Code and the applicable rules adopted by the board of building standards.
- (1) **Exceptions:**
- (a) A manufactured home as defined by division (C)(4) of section 3781.06 of the Revised Code or a mobile home as defined by division (O) of section 4501.01 of the Revised Code.
 - (b) Amusement rides and portable electric generators and wiring supplying carnival and amusement rides regulated by the Ohio

department of agriculture pursuant to Chapter 993. of the Revised Code.

- (c) Floating structures that have been issued a “Hull Identification Number” (HIN) and a vessel registration from the Ohio department of natural resources division of parks and watercraft.
- (d) Portable mobile vehicles which have been issued a “Vehicle Identification Number” (VIN) by the United States department of transportation. The vehicles have wheels and license plates and are intended for transportation on the public streets and highways. Examples of the exempt vehicles include, but are not limited to, recreational vehicles, book mobiles, blood mobiles, mobile medical imaging units, mobile concession trailers, network television transmission and production trailers used at sporting events, mobile restroom facilities, mobile pet grooming units, etc.
- (e) Primitive transient lodging structures as defined in rule 4101:1-2-01 of the Administrative Code with only provisions for sleeping, with no building services equipment, piping, or electrical wiring system and not greater than 400 sq. ft. in area.
- (f) Intermodal shipping or freight containers, moving containers, storage containers, if used exclusively as a storage container and are unaltered or alterations that do not constitute closed construction.
- (g) Mobile computing units as defined in section 3781.06 of the Revised Code.
- (h) One-story, detached, accessory structures to dwellings where the accessory structure is without building services and used as tool and storage sheds, playhouses, playground structures or similar uses, provided the floor area does not exceed two hundred square feet (18.58 m²).
- (i) An *industrialized unit*, installed at the site of intended use, as a portion of an existing building having a certificate of occupancy. Per paragraph (D)(4) of rule 4101:10-3-01 of the Administrative Code, the identification of the structural entity as an *industrialized unit* ends and structure becomes an integral part of an existing building regulated as an existing building or structure.
- (j) A valid *industrialized unit* that has been constructed but not installed at the site of intended use and the board of building standards’ authorization has been invalid for a period exceeding two years, the

identification of the structure as an *industrialized unit* ends and the structure is regulated as an existing structure.

- (k) Materials, devices, products, appliances, equipment or methods of construction for which the board has recognized the conformity assessment body and the accreditation agency pursuant to section 114 of rule 4101:1-1-01 of the Administrative Code and in accordance with one of the following:
 - (i) Materials, devices and products used in accordance with their listing recognized by the board of building standards per section 114.3.1.
 - (ii) Alternative materials, products, equipment and methods of construction in accordance with their evaluation service report recognized by the board of building standards per section 114.3.2.
- (l) Individual composite *panels* with integrated structural components constructed in accordance with section 1704 of the “Ohio Building Code.” This exception is not applicable to composite panels that include building services components or systems as concealed elements in the *panel*.
- (m) Individual insulated spandrel panels using foam plastic insulation conforming to the provisions of section 2603 of the “Ohio Building Code” or section 316 of the “Residential Code of Ohio” as applicable between facing sheets where all materials used are visible at the finished edge of the spandrel panel.
- (2) **Intent.** The “IU Rules” apply to *industrialized units* used in the construction of *residential buildings* and *non-residential buildings*. To the extent of the construction documents submitted to the board, the *industrialized units* are to be in conformance with the applicable building code based on the occupancy type, intended use, and design criteria.
- (3) **Jurisdictional authority.** Buildings that include the installation of an *industrialized unit* are regulated under the rules of the board. The board of building standards has the authority to enforce the “IU Rules” with the *industrialized unit* manufacturer, applicant for authorization and within the manufacturing plant.
 - (a) **Manufacturer submission for authorization.** Before a manufacturer constructs an *industrialized unit*, the manufacturer is to receive an *authorization* from the board of building standards in

accordance with paragraph (B) of rule 4101:10-3-01 and rule 4101:10-4-01 of the Administrative Code. Before a manufacturer transports an *industrialized unit*, the unit is to have an *insignia* applied in accordance with paragraph (D) of rule 4101:10-3-01 of the Administrative Code.

(b) Building owner submission for approval. Where the building owner or owner's representative proposes to include the installation of an *industrialized unit* in the construction, addition, alteration, repair or the change of occupancy or use of a building, the owner is to identify the intent to use an *industrialized unit* on the construction documents submitted for approval to the department with the authority to enforce the rules of the board in the jurisdiction in accordance with rule 4101:1-1-01 of the Administrative Code for non-residential buildings or rule 4101:8-1-01 of the Administrative Code for residential buildings.

(c) Work without approval. A unit, manufactured off-site, of closed construction, and arrives at the site of intended use without an *insignia* issued by the board of building standards is work constructed without approval and will be regulated at the site of intended use by the individual with the authority to enforce the rules of the board in the jurisdiction in accordance with rule 4101:1-1-01 of the Administrative Code for non-residential buildings or rule 4101:8-1-01 of the Administrative Code for residential buildings.

(4) Materials, systems and methods of construction. Materials, products, assemblies or methods of construction used in the construction of an *industrialized unit* are to be approved by the board of building standards. The provisions of section 114 of rule 4101:1-1-01 of the Administrative Code describes the approval process intended in accordance with division (C) of section 3781.10 of the Revised Code and are hereby incorporated by reference.

(5) Industrialized units may exceed requirements. An owner or a manufacturer may exceed the requirements of this code in compliance with paragraph (C)(5) of rule 4101:10-4-01 of the Administrative Code.

(C) Role of the Board. Pursuant to 3781.10 of the Revised Code, the board of building standards shall adopt rules and issue authorizations for *industrialized units* that are in compliance with the requirements of these rules and the Revised Code. The board of building standards may designate

a representative to administer the program, oversee plans examinations, issue authorizations and adjudication orders, render interpretations of the rules of the board as they relate to industrialized units and conduct other administrative duties necessary to enforce these rules.

4101:10-2-01 Definitions.

- (A) **Definitions.** Unless otherwise expressly stated, the following words and terms are to, for the purposes of this code, have the meanings shown in this section.
- (1) **Interchangeability.** Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.
 - (2) **Defined in other codes.** Where terms are not defined in this code and are defined in the “International Energy Conservation Code,” “International Fuel Gas Code,” fire code, building code, mechanical code, ~~or~~ plumbing code, or the “Residential Code of Ohio” such terms are to have the meanings ascribed to them as in those codes.
 - (3) **Terms not defined.** Where terms are not defined through the methods authorized by this section, such terms are to have ordinarily accepted meanings such as the context implies.
- (B) **Defined terms.**
- (1) **Approval.** The action by the building official of the department with jurisdiction in accordance with rule 4101:1-1-01 or 4101:8-1-01 of the Administrative Code.
 - (2) **Approved.** Determined by the authority having jurisdiction to be in compliance with the rules of the board.
 - (3) **Authorization.** The board of building standards’ action which provides a manufacturer the license to build industrialized units based on the construction documents for the industrialized unit submitted to and *approved* by the board of building standards.
 - (4) **Building.** Any structure utilized or intended for supporting or sheltering any occupancy, function, or activity. This includes, but is not limited to, structures built or used for the shelter, occupancy, enclosure or support of persons, animals, or chattels. For the purposes of the “IU Rules,” the term “building” is to be construed as followed by the words “or portion thereof.”
 - (5) **Building, existing.** A building regulated by the Ohio building code or the residential code of Ohio, as applicable, that has been erected and for which a certificate of occupancy has been issued or can be issued in accordance with section 111.4 of rule 4101:1-1-01 or 4101:8-1-01, as applicable.

- (6) **Building, non-residential.** Any building that is not a residential building, industrialized unit, manufactured home or mobile home.
- (7) **Building, residential.** A one-family, two-family, or three-family dwelling house, and any accessory structure incidental to that dwelling house. "Residential building" does not include a manufactured home as defined by division (C)(4) of section 3781.06 of the Revised Code, or a mobile home as defined by division (O) of section 4501.01 of the Revised Code.
- (8) **Closed construction.** An assembly of materials or products manufactured in such a manner that its structural, plumbing, electrical, environmental control, or fire protection elements or components are concealed and are not readily accessible for inspection at the site of its erection, without disassembly, damage, or destruction. Closed construction includes assemblies where only one of the components is not accessible for inspection.
- (9) **Compliance assurance program.** Procedures that state the guiding principles and define the framework for ensuring that construction documents with authorization by the board of building standards, or that industrialized units inspected by a third-party inspection entity, comply with the applicable rules of the board.
- (10) **Equipment unit.** A type of industrialized unit that is an enclosed, single unit assembly for the purposes of separating, from other portions of the building, the plumbing, mechanical, electrical or fire protection systems or operations in support of building services where access into the unit is limited and controlled to authorized personnel only and where the assembly as a whole is not otherwise listed in accordance with a referenced standard.
- (11) **Industrialized unit.** A prefabricated component, building unit or assembly comprised of closed construction, manufactured at a location remote from the site of intended use, with an insignia issued by the board of building standards and transported to a building site for its installation and subsequent use as part of a building structure, building services system (equipment, piping, wiring, etc.), or both. *Industrialized units may be modular units, panelized units or equipment units and can be installed on the site of intended use as an independent unit, as part of a group of units, or incorporated with standard construction methods to form a completed structural entity.*

- (12) **Insignia.** An official label provided by the board of building standards with a unique number that distinguishes each *modular unit* or *panelized unit* of an authorized *industrialized unit* from all other units manufactured.
- (13) **Inter-connection.** Point of attachment between an *industrialized unit* and any building components or systems, designed by others, and constructed at the site of intended use.
- (14) **Intra-connection.** Point of attachment between two or more modular units or panelized units required to complete the *industrialized unit* as authorized where the connection is completed at the site of intended use.
- (15) **Manufacturing plant.** The location at which the *modular units*, *panelized units* or *equipment units* are assembled or manufactured prior to transport to the site of intended use.
- (16) **Mate line.** The plane at which *intra-connections* or *inter-connections* are made.
- (17) **Modular unit.** A type of industrialized unit that is a building unit or assembly that is designed and authorized as a volumetric section having occupiable space or spaces of an industrialized unit. A modular unit can be transported to the site of intended use as a whole unit or broken down.
- (18) **Module.** A three-dimensional, volumetric section of a modular unit that is transported as a single section, independent of other sections, to a site of intended use for installation in a building.
- (19) **Panel.** A distinct, sectional element in a panelized unit.
- (20) **Panelized unit.** A type of industrialized unit that is a component used as a surface or edge defining component (e.g. floor, wall or roof) and the component itself does not have space that can be occupied.
- (21) **Registered Design Professional.** Any architect holding a certificate issued under section 4703.10 of the Revised Code, any landscape architect holding a certificate issued under section 4703.36 of the Revised Code, or any engineer holding a certificate issued under section 4733.14 of the Revised Code.
- (22) **Third-party inspection entity.** An individual under contract with the manufacturer or a company under contract with the manufacturer or a building department designated by the board of building standards and under contract with the manufacturer where the individual or personnel of the organization holds a valid certification recognized by

the board of building standards that confirms the authority to inspect the scope of work included in the industrialized unit. Certifications recognized by the board of building standards include certifications identified in rule 4101:10-9-01 of the Administrative Code.

(C) Variations of defined terms. Such terms as heart modules or cores, modules, modulars, service cores, prefabs, sectional or sectionalized, panels or panelized construction, and specific terms including "prefabricated-subassembly, -building, -unit, -unit service equipment" may reference an *industrialized unit*. The units may be self-sufficient or interdependent as a unit or group of units to form a complete *industrialized unit*; and when used together or incorporated with standard construction methods, form a completed building.

4101:10-3-01 Manufacturer's participation.

- (A) **Manufacturer's participation in the industrialized unit program.** Every manufacturer participating in Ohio's *industrialized unit* program are to comply with paragraphs (A)(1) through (A)(4) of this rule prior to making application for *authorization* of an *industrialized unit*.
- (1) **Registration information.** The manufacturer is to register with the board of building standards. For the purpose of registration, the manufacturer is to provide the following information at a minimum:
- (a) Manufacturer's name, and
 - (b) Address of the manufacturing plant where the unit is constructed, and
 - (c) Contact name, phone number and email, and
 - (d) Identification of the *third-party inspection entity* recognized by the board of building standards that will perform in-plant inspections in accordance with paragraphs (A)(5) to (A)(7) and (C) to (C)(3) of this rule, and
 - (e) A statement of acknowledgement from the third-party inspection entity indicating that they have a contractual relationship with the manufacturer to perform the inspections. The statement shall include the name(s) and board certification(s) of the individual(s) who will be assigned to perform the inspections.
- (2) **Manufacturing plants in Ohio.** A manufacturer with a manufacturing plant in Ohio may request the board of building standards to designate a *third-party inspection entity* of the state for the purpose of performing required third-party inspections. The board may designate either the certified personnel of the local building department certified to enforce the rules of the board for the jurisdiction in which the manufacturing plant is located or the superintendent of the division of industrial compliance. The manufacturer is responsible for payment of any fees charged by a local certified building department or the division of industrial compliance in connection with review and inspection of an *industrial unit* pursuant to rule 4101:10-8-01 of the Administrative Code.
- (3) **Changes is registration information.** Whenever changes occur to company name, ownership, subsidiary status, address or change in the manufacturer's management personnel who are responsible for making

policy concerning quality control, the manufacturer is to notify the board immediately and in writing. The manufacturing plant(s) affected by the change will be subject to a plant evaluation inspection.

- (4) **Accessing industrialized unit program functions.** The board of building standards utilizes an electronic portal to conduct the official business of the *industrialized unit* program. No paper submissions or payments will be accepted. After registration is complete, the board will provide the manufacturer with access to the board of building standards' industrialized unit portal. The manufacturer and the board of building standards will use the portal for interactions including but not limited to:
- (a) Making application for board of building standards' industrialized unit authorization including submission of construction documents and any substantive revisions or amendments.
 - (b) Access to correction letter containing items of non-compliance and adjudication orders issued.
 - (c) Response to correction letter including resubmission of revised construction documents or intent to appeal.
 - (d) Access to authorized construction documents for download.
 - (e) Payment of fees.
 - (f) Request for insignia(s).
 - (g) Upload of shipping log(s).
 - (h) Other forms of communication are available and may be used for general information sharing.
- (5) **Manufacturing plant evaluation.** Before a manufacturer can begin construction of industrialized units authorized by the board of building standards, an initial manufacturing plant evaluation inspection is to be conducted by the *third-party inspection entity* identified in the manufacturer's registration with the board. An evaluation is to occur for each plant in which an *industrialized unit* with authorization from the board of building standards is being assembled and the evaluation is to assess the following:
- (a) Compliance with chapter 5 of the "1205 Standard for Off-site construction: Inspection and Regulatory Compliance, 2021 edition" as published by the International Code Council/Modular Building Institute. The manufacturer has a compliance assurance program in place to address quality

control and where required participation in quality assurance to maintain acceptable control of materials and processes used in the manufacture of *industrialized units* to ensure conformance with the approved construction documents.

- (b) The manufacturer's facility has necessary, adequate and appropriate spaces for production, storage, packaging, shipping, employees, etc. that are equipped (machinery, movers, platforms, cranes, tools, etc.) and supported with building services (utilities) of a reasonable manner for the manufacture of the authorized industrialized unit.
 - (c) The plant evaluation inspection is to include all subassembly plants supplying the manufacturer, as the board may deem necessary.
 - (d) The necessary facilities and personnel to perform in plant testing as required by the applicable code provision or as may be required by the board of building standards as evidence of compliance. Test methods are to be as specified in the applicable building code or by other recognized test standards. In the absence of recognized and accepted test methods, the testing procedures used are to be approved by the board of building standards. Tests are to be performed by a conformity assessment body recognized by the board in accordance with paragraph (B)(4) of rule 4101:10-1-01 and section 114 of rule 4101:1-1-01 of the Administrative Code. Reports of all required in plant testing is to be retained by the manufacturer. Reports of those tests required by the board of building standards are to be submitted to and will be retained by the board for the period required for retention of public records.
 - (e) Record and maintain a list of the *industrialized unit* authorizations for which the plant evaluation is applicable.
 - (f) The *third-party inspection entity* is to provide a summary of the initial plant evaluation to the board of building standards indicating the manufacturer's compliance with paragraphs (B)(5) to (B)(5)(e) of this rule of the Administrative Code.
- (6) **Frequency of evaluation.** In addition to the initial manufacturing plant evaluation, a manufacturer is to notify the *third-party inspection entity* that a review of the manufacturing plant evaluation is needed anytime one or more of the following occurs:

- (a) The manufacturer has received a new *authorization*. The review of plant evaluation applies only to the manufacturing plant at which the unit is to be assembled.
 - (b) The *industrialized unit* is assembled at a different plant location. The review of plant evaluation applies only to the manufacturing plant at which the unit is to be assembled.
 - (c) The manufacturing plant has not produced an *industrialized unit* authorized by the board of building standards in the preceding five (5) years.
 - (d) The manufacturer has made substantive change in their compliance with chapter 5 of the “1205 Standard for Off-site construction: Inspection and Regulatory Compliance, 2021 edition” as published by the International Code Council/Modular Building Institute.
 - (e) The manufacturer has made an alteration or addition to the manufacturing plant such that the previous plant evaluation is incomplete, irrelevant or otherwise inaccurate.
 - (f) A current manufacturing plant evaluation is the combination of the initial manufacturing plant evaluation and any amendments, revisions or replacement resulting from compliance with paragraphs (D)(6)(a) to (D)(6)(e) of this rule.
- (7) **Evaluation records.** The manufacturer is to maintain a current manufacturing plant evaluation for each *industrialized unit* authorization.
- (a) Where multiple industrialized unit authorizations are assembled at the same manufacturing plant and the manufacturing plant evaluation is sufficient for all industrialized units, the manufacturer need maintain only one current manufacturing plant evaluation.
 - (b) The current plant evaluation is to include a list of all the authorizations for which the plant evaluation is applicable.
 - (c) The *third-party inspection entity* is to retain a historical record of the manufacturing plant evaluation for the immediately preceding five (5) years.
 - (d) Manufacturing plant evaluations are to be made available to the board of building standards upon request.
- (8) **Suspension of participation.** Where a manufacturer demonstrates a pattern of violating the rules of the board, the board of building

standards may suspend the manufacturer's participation in the program which includes but is not limited to refusing to accept applications for authorization, processing requests for insignias and revoking existing authorizations in accordance with paragraph (B)(4) of this rule. Notice of a suspension of participation will be provided in writing to the manufacturer and will include the extent of the suspension and the conditions under which participation may be restored.

(B) Authorization required. Any manufacturer who intends to manufacture, produce or assemble an *industrialized unit* must first make application for *authorization* to the board of building standards. The application for *authorization*, including revisions and renewals for existing *authorizations*, are to be submitted to the board of building standards together with required construction documents in accordance with this paragraph and the fee required in rule 4101:10-8-01 of the Administrative Code. Only the person holding an *authorization* may apply to the board for a revision or renewal of the approval.

(1) Board's authorization. The board, upon determination of compliance in accordance with paragraph (D)(2) of rule 4101:10-4-01 of the Administrative Code, shall issue an *authorization* to the applicant.

(a) Industrialized units authorized by the board may be used anywhere in Ohio subject to the conditions for their use and application as indicated in the approval.

(b) The manufacturer may assemble, produce or manufacture duplications, including any variations identified in the approved construction documents, of the industrialized unit with a valid authorization.

(c) The authorization does not include approval for use associated with the following activities, locations or equipment unless specifically noted in the design criteria:

(i) Used to accommodate the manufacture, sales or storage of fireworks, or

(ii) Placement in a flood hazard area, or

(iii) Used in a facility that requires approval from the Ohio Department of Rehabilitation and Correction, or

(iv) Requires approval from the elevator section, division of industrial compliance, or

- (v) Requires approval from the boiler section, division of industrial compliance.
- (2) **Conditions of authorization.** In addition to any design criteria established by the manufacturer for an industrialized unit, the board of building standards may also establish other conditions or limitations of the board of building standards' *authorization* to coordinate with the site of intended use. Such conditions or limitations may include, but are not limited to:
 - (a) Panel, module or equipment unit;
 - (b) Enclosed or unenclosed;
 - (c) Conditioned or unconditioned;
 - (d) Accessible or non-accessible; or
 - (e) Any other unique stipulations as needed.
- (3) **Revisions to authorization.** Prior to or during fabrication but before transport, any changes to board approved construction documents affecting the conditions illustrated or described in the *authorization* are required to be submitted for review and determination of compliance with the rules of the board as either an amendment of the existing *authorization* or as an application for a new *authorization*.
- (4) **Revocation of authorization.** Upon failure of the holder of an *authorization* to comply with the conditions of the *authorization* and the "IU Rules," the board, on its own motion, may order a hearing in accordance with section 119.03 of the Revised Code to revoke an existing *authorization*.
- (5) **Expiration of authorization.** An *authorization* is valid for up to one year after the effective date of rules of board adopting a subsequent model-code based edition of the applicable building code.
 - (a) **Exception:** An industrialized unit where manufacture started under a valid *authorization* issued by the board and was not transported to a building site of intended use but stored at a manufacturer's or dealer's facility, can be installed in Ohio as an industrialized unit for a maximum of two years after the effect on the date of the subsequent model-code based edition of the applicable building code. After this two-year time period, the unit's *insignia* has expired and is to be regulated as a moved or relocated existing structure in accordance with the applicable building code provisions.

- (b) **Renewal of expired authorization.** The holder of an expired authorization may renew the authorization by making application for a new authorization and submitting construction documents which include a cover letter requesting a renewal of the expired authorization, with revisions as needed and clearly identified, that are in compliance with the rules of the board that are in effect on the date of the application for industrialized unit authorization.
- (6) **Applicable rules to be enforced.** Except as otherwise provided by these rules, the board of building standards exercises authorization authority to accept, review and approve construction documents and audit inspections, related to the manufacture of industrialized units, using the rules of the board that are in effect on the date of the application for an industrialized unit authorization.
- (7) **Alteration of an authorized industrialized unit after transport.** The alteration of an industrialized unit at the site of intended use is permitted provided the building owner makes application to the building department with jurisdiction and receives approval for the alterations from the certified building official or other individual with the authority to enforce the rules of the board in the jurisdiction.
- (C) **Inspection required.** After issuance of an authorization by the Board and construction commences, the manufacturer shall have the unit(s) inspected by a third-party inspection entity to confirm that construction of the units is consistent with the approved construction documents in accordance with this section.
- (1) **Initial inspections.** The manufacturer is required to notify the third-party inspection entity identified in the manufacturer's registration with the board that the initial industrialized unit constructed in accordance with an authorization is ready for required inspections listed in rule 4101:10-4-01 and are to provide ready access to all the module(s) or panel(s) of the industrialized unit for inspection. Where the inspection of the first three industrialized units has demonstrated that the manufacturer's quality control program is capable of assuring that the industrialized units produced are built in accordance with the construction documents approved by the board, the manufacturer may proceed in accordance with paragraph (2) of this section for inspections of subsequent industrialized units of similar use, size and method of

construction as determined by the board for which an authorization has been issued by the board of building standards. When in the course of inspections of the initial industrialized unit, the third-party inspection entity identifies items of non-conformance with the approved construction documents, the items are to be corrected and the next unit(s) are to be inspected in accordance with this section until no further items of non-conformance have been identified in subsequent units. Records of initial inspections, including items of non-conformance and corrective action, are to be maintained by the third-party inspection entity and provided to the board upon request.

- (2) Subsequent reduced inspections.** Where the initial inspections of industrialized units have demonstrated that the manufacturer's compliance assurance program is capable of assuring that the industrialized units produced are built in accordance with the construction documents approved by the board and no further items of non-conformance have been identified by the inspector in accordance with paragraph (1) of this section, then the manufacturer may choose to self-perform required inspections of each module or panel of subsequent industrialized units. Such inspections are to be performed by an employee of the manufacturer who is certified by the board of building standards in accordance with rule 4101:10-9-01 of the Administrative Code to inspect the scope of construction under the authorization. Records of such inspections, including items of non-conformance and corrective action, are to be maintained by the manufacturer and provided to the board upon request. For manufacturers that produce five or more units of any authorized industrialized units, the third-party inspection entity is to visit the manufacturing plant, at random times at least four times per year, and conduct inspections of units intended for Ohio, audit the manufacturer's plant evaluation and compliance assurance program and review the record of inspections.

- (a) Exception:** Where the manufacturer does not self-perform required inspections, the third-party inspection entity is to perform at least one on-site inspection of "open" construction of each subsequent industrialized unit. The inspection is to include but is not limited to the rough framing and the rough building services inspections. Inspection of individual modules or panels of the same industrialized unit inspected at different phases of completion is acceptable provided at least one module or panel

allows for rough framing inspection and one allows for rough building services inspection. Records of inspections completed under this exception, including items of non-conformance and corrective action, are to be maintained by the third-party inspection entity and provided to the board upon request.

- (3) **Increased inspections.** Notwithstanding the above, upon notification by a third-party inspection entity to the board and the manufacturer that the compliance assurance program of a manufacturer does not sufficiently ensure compliance with the approved construction documents, or on the Board's own motion, increased inspection frequency may be ordered by the Board so that each assembly or component will be inspected by the third-party inspection entity. These inspections are to continue until an inspection demonstrates that the manufacturer's control of the materials and processes used is sufficient to ensure that the units are constructed in accordance with the approved construction documents. Records of such inspections, including items of non-conformance and corrective action, are to be maintained by the third-party inspection entity and provided to the Board upon request.
- (4) **Remote inspections.** All inspections are to be in-plant except that a third-party inspection entity may provide remote virtual inspection when the third-party inspection entity has an established program for conducting remote inspections where directed by the inspector, recorded and conducted in real time.
- (D) **Insignia required.** Each modular unit or panelized unit or equipment unit of an authorized industrialized unit must have an insignia applied.
 - (1) **Insignia acquisition.** An insignia is to be obtained from the board for each industrialized unit module or panel to be used within the state of Ohio.
 - (2) **Insignia placement.** The insignia is to be affixed to each unit, in the location identified in the authorized construction documents, after a determination is made by the third-party inspection entity that the unit is constructed in accordance with the construction documents authorized by the board.
 - (a) For industrialized units inspected per paragraph (C)(1) of this rule, the insignia cannot be applied until after the final inspection is completed by the 3rd party and is satisfactory.
 - (b) For industrialized units inspected per paragraph (C)(2) of this rule, the manufacturer is extended the authority to apply the insignia to the self-inspected units provided the 3rd party audit of

- inspections and process is kept in good standing and increased inspections are not required.
- (c) For industrialized units inspected per paragraph (C)(3) of this rule, the Board has the authority and discretion to direct who is to apply insignias, under what conditions, for how long and the conditions under which the manufacturer can earn the right to apply insignias.
- (3) **Insignia signifies.** An insignia, applied to the unit, constitutes final approval of the unit as compliant with the requirements of the applicable building code.
- (4) **Insignia expiration.** An insignia expires at either of the following events:
- (a) After the building owner receives a certificate of occupancy for the building in which the industrialized unit with this specific insignia is installed.
- (b) After two years from the effective date of the subsequent model-based building code.
- (5) **Assemblies without insignia.** Modules, panels or equipment units constructed without an *authorization* or arriving at the site of intended use without an *insignia* from the board of building standards are not *industrialized units*.
- (E) **Adjudication orders required.** When the board of building standards denies any authorization or takes action in response to findings of non-compliance with the rules of the board, such action is to be initiated by issuing an adjudication order, prior to seeking any remedy, civil or criminal.
- (1) **Response to orders.** The person receiving an order shall exercise their right to appeal within thirty (30) days of the issuance of the order, comply with the order, or otherwise be released from the order by the board of building standards.
- (2) **Time limitation of application.** If construction documents have been reviewed for compliance with the rules of the board, an adjudication order has been issued to the manufacturer, and the manufacturer has neither exercised the right to appeal pursuant to paragraph (F) of this rule nor resubmitted corrected documents, the application for authorization is invalid six months from the date of the issuance of the adjudication order. Any fees accrued for plan review are the responsibility of the manufacturer and are due upon receipt of notice of expired application.

- (F) **Appeals** Adjudication hearings shall be in accordance with sections 119.09 to 119.13 of the Revised Code. Requests for hearing is to be within thirty (30) days of the issuance date of an adjudication order. Unless otherwise provided in the order, the Ohio board of building appeals conducts adjudication hearings on orders issued pursuant to these rules.

4101:10-4-01 Authorizations.

- (A) **Application for authorization.** The manufacturer or manufacturer's representative is to submit application for authorization and any submittals necessary in accordance with paragraphs (C) to (C)(7) of this rule to demonstrate compliance with the appropriate provisions of the applicable building codes as described in paragraphs (B) to (B)(3) of this rule. The application for *authorization* is an online, fillable form provided by the board of building standards at the electronic portal.
- (B) **Compliance standard.** Construction documents are to demonstrate that the design and construction of the units are in compliance with the rules of the board including but not limited to the applicable referenced building codes based on the intended use and occupancy type in which the industrialized unit is intended to be incorporated.
- (1) **Industrialized unit for non-residential buildings.** Industrialized units intended for installation in non-residential buildings shall comply with the applicable provisions of the "Ohio Building Code", "Ohio Mechanical Code", "Ohio Plumbing Code" and other codes and standards referenced in those codes as listed in rule 4101:1-35-01, rule 4101:2-15-01 or rule 4101:15-01 of the Administrative Code.
- (2) **Industrialized unit for residential buildings.** Industrialized units intended to be used exclusively for one-, two-, or three- family dwellings shall comply with the applicable provisions of the "Residential Code of Ohio for One-, Two-, and Three- Family Dwellings" and other codes and standards referenced in that code as listed in rule 4101:8-44-01 of the Administrative Code.
- (3) **Products, materials and methods of construction used.** Any material, product, assembly or method of construction used in the construction of an industrialized unit shall be approved by the board of building standards. The provisions of paragraph (B)(4) of rule 4101:10-1-01 of the Administrative Code describe the product, material and method of construction approval process intended by the board of building standards in accordance with division (C) of section 3781.10 of the Revised Code.
- (C) **Submittals.** With the application for authorization and fee, construction documents are to be submitted to the board of building standards through the

board's electronic portal under a registered manufacturer. The construction documents include design drawings and may include, but are not limited to, evaluation service reports, manufacturer's installation instructions, and test reports. The construction documents are to comply with this paragraph and rule 4101:10-5-01 of the Administrative Code:

(1) Information on construction documents. Construction documents are to be provided as electronic media documents. Construction documents are to illustrate or describe all essential elements of the structure or assembly and details of intra- and inter-connections. Construction documents are to be dimensioned, coordinated and of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the *industrialized unit* will conform to the provisions of this code. Construction documents, adequate for the scope of the project, is to include information necessary to determine compliance with the applicable referenced building code including but not limited to the building, mechanical, plumbing, fire, electrical, energy, fuel gas codes and where applicable the residential building code.

(a) General information, design criteria and orientation.

(i) **Design criteria.** Identify the conditions at the site of intended use that are necessary for the installation of the industrialized unit, the applicable codes, referenced standards, climatic and geographic conditions, all occupancy classification(s), type(s) of construction, the overall area of the industrialized unit, the maximum design occupant load, the structural design loads, the seismic design category and site class that control the design. Include specific conditions or design criteria that will prohibit the installation without additional alteration of the industrialized unit at the site of intended use and approval by the local building official including the following as applicable:

(a) **Unit type and integration.** Identify the type of unit proposed and the intended manner of integration at the site of intended use. Integration is one of the following:

(i) **Detached industrialized unit.** Where intended to be a stand-alone industrialized unit, identify the industrialized unit as detached and the minimum fire separation distance required.

(ii) **Attached industrialized unit.** Where intended to be an attached industrialized unit, identify the industrialized

unit as attached and identify the specific conditions required of the building construction to which the industrialized unit can be attached.

- (b) **Floodplain unit.** Declare the unit as not designed for installation in a flood hazard zone; or, where the unit is intended for installation in a flood hazard zone, identify the flood hazard area for which the unit is designed.
- (c) **Seasonal use unit.** Where the structure is identified and designed for seasonal use (May-September), compliance with thermal envelope requirements of the energy conservation provisions are not required.
- (d) **Hazardous materials.** Where the industrialized unit is intended to store, process or otherwise contain hazardous materials, identify the hazardous material, classification type and quantity stored, processed or otherwise used.
- (ii) **Scope of work.** Each portion of the design represented in the construction documents are to be identified in one of three categories of work:
 - (a) **Category 1 Factory assembled.** Work completed at the manufacturing facility under the board's industrialized unit authorization and inspected by the *third-party inspection entity*. Unless otherwise stated as category 2 or category 3 work, the design represented in the submitted construction documents is category 1.
 - (b) **Category 2 Site assembled.** Work completed at the site of intended use regarding modules or panels assembled at the manufacturing plant under the board's industrialized unit authorization. This work is to be inspected by the building department with the authority to enforce the rules of the board in the jurisdiction in accordance with the industrialized unit authorization and section 108 of rule 4101:1-1-01 or section 108 of rule 4101:8-1-01 of the Administrative Code as applicable.
 - (c) **Category 3 Building owner provided.** Work completed at the site of intended use necessary to accept the installation of the industrialized unit. This work is under the approval and inspection of the building department with the authority to enforce the rules of the board in the jurisdiction. The

manufacturer is not required to include any technical detail for category 3 scope of work.

- (iii) **Index.** A table of contents identifying the drawings, specifications and other product information included in the construction documents with a method to locate the information within the set of construction documents.
- (iv) **Orientation.** Provide appropriate code appellations of all spaces, identification of the type and location of illustrations, and a legend of notations/symbology used to orient the relationship between illustrations and reference related information that further illustrates or describes the industrialized unit's compliance with the "IU Rules."
- (b) **Structural integrity and load path.** Provide a complete description of the structural system, materials, components and details that complete the load path, of the industrialized unit including the resultant loads that have to be resisted by on-site construction.
- (c) **Fire-safety.** As required under the applicable referenced code, provide fire safety information within the construction documents to address the following:
 - (i) **Means of egress.** All modular units are to comply with the means of egress provisions in rule 4101:1-10-01 of the Administrative Code for non-residential buildings and rule 4101:8-3-01 of the Administrative Code for residential buildings. Equipment units need not comply with the means of egress provisions; however, the documents are to indicate the occupancy limit, have posted signage on exterior near point(s) of access and describe the method of access control.
 - (ii) **Fire and smoke protection systems and features.** All modular units are to comply with the fire and smoke protection provisions in chapter 4101:1 for non-residential buildings and chapter 4101:8 for residential buildings. Include identification, description, performance, listing or other compliance indicators for fire protection systems or features as required or provided as part of the industrialized unit including but not limited to:
 - (a) Minimum fire separation distance from other buildings or structures.
 - (b) Fire area delineation as well as the type(s), performance and details of the separation assemblies.

- (c) Fire-resistance ratings of all structural elements, data substantiating all required fire-resistance ratings including details showing how penetrations will be made for electrical, mechanical, plumbing, and communication conduits, pipes, and systems, and the materials and methods for maintaining the required structural integrity, fire-resistance rating, and firestopping.
 - (d) Flame spread and smoke developed classifications for interior finish materials.
 - (e) Draftstops and fireblocking.
 - (f) Opening protectives.
 - (g) Fire detection, alarms, and notification systems.
 - (h) Automatic fire sprinkler systems
- (iii) **Life safety features.** Where the industrialized unit consists of more than two modules in any direction, life safety features are to be specified. The documentation should identify the egress path, fire separation assemblies, smoke barriers, fire and smoke dampers, and all fire protection system devices and signage.
- (d) **Unit accessibility.** The industrialized unit construction documents are to demonstrate compliance with the accessibility requirements of rule 4101:1-11-01 of the Administrative Code.
 - (i) **Exception.** If accessibility provisions are not a requirement of the project, a statement is to be provided that declares the unit is for use where accessibility is not required.
- (e) **Sanitary materials, components and systems.** Where an industrialized unit includes potable water, drain, waste and vent system, storm drainage system or other portion of a plumbing system, identify the spaces, finishes, fixtures equipment, appliances and utilities required for sanitary safety including potable water distribution and drain, waste and vent piping.
- (f) **Environment conditioning and ventilation.** Where an industrialized unit includes heating, cooling or ventilation systems, identify the spaces, equipment, appliances, ductwork, fuel, source of power and controls required for environmental conditioning or human comfort.
- (g) **Miscellaneous systems regulated under the building code.** Where other systems regulated under the rules of the board such as boilers, elevators, fuel gas or medical gas is provided, identify the portion of the system provided in the manufacturing plant assembly and indicate

that the owner of the building is responsible for completing any on-site inspections with applicable state and/or local regulatory agencies.

- (h) **Energy Conservation.** Unless otherwise exempt, demonstrate energy conservation through prescriptive compliance or an energy compliance alternative recognized in the applicable referenced building code. Where energy conservation compliance is demonstrated through a method other than the prescriptive method, provide supporting documentation that illustrates the conditions at the site of intended use that can result in compliant energy conservation.
- (i) **Connections.** Construction documents are to describe all essential elements of the industrialized unit and details of intra-connections and inter-connections including but not limited to:

 - (i) Structural members to each other and to site built construction;
 - (ii) Site utilities where a direct connection is provided;
 - (iii) Building service equipment and piping;
 - (iv) Electrical wiring systems;
 - (v) Plumbing and other sanitary systems;
 - (vi) Mechanical heating, cooling and ventilation systems; and
 - (vii) any other equipment whether installed at the site or in the manufacturing facility.
- (2) **Amended construction documents.** If substantive changes to the *industrialized unit* are contemplated after first document submission, or during assembly, those changes must be submitted to the board of building standards for review and *authorization* prior to those changes being executed.
- (3) **Alternative materials and methods of construction and equipment.** For approval of a device, material or assembly that does not conform to the prescriptive requirements in the applicable referenced building code, the construction documents may demonstrate compliance as an alternative material or method of construction in accordance with section 114.3.2 of rule 4101:1-1-01 of the Administrative Code.
- (4) **Alternative engineered design.** The design, documentation, inspection, testing and approval of an alternative engineered system shall comply with paragraphs (B)(4)(a) to (B)(4)(c) of this rule.

 - (a) **Design criteria.** An alternative engineered design is to conform to the intent of the provisions of this code and is to provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Materials, equipment or components are to be designed and

installed in accordance with the manufacturer's installation instructions.

- (b) **Submittal.** The registered design professional is to indicate on the application that the system is an alternative engineered design. The approval and permanent approval records are to indicate that an alternative engineered design was part of the approved installation. Where special conditions exist, the board of building standards is authorized to require additional construction documents to be prepared by a registered design professional.
- (c) **Technical data.** The registered design professional is to submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that the performance meets the intent of this code.

 - (i) **Exception:** Approval of alternative materials, products, assemblies and methods of construction in accordance with section 114.3.2 of rule 4101:1-1-01 of the Administrative Code.
- (5) **Non-required work.** Any component, building element, equipment, system or portion thereof not required by the applicable building code is to be permitted to be installed as a partial or complete system provided that it is constructed or installed in accordance with applicable building code to the extent of the installation.
- (6) **Evidence of responsibility.** Where required construction documents, are submitted for review as required under paragraph (C) of this rule, the design documents are to bear the identification of the person primarily responsible for their preparation.

 - (a) **Seal requirements.** Construction documents are to bear the seal of a registered design professional pursuant to section 3791.04 of the Revised Code.

 - (i) **Exceptions:** The seal of a registered design professional is not required on construction documents for:

 - (a) Buildings or structures classified as one-, two-, or three-family dwellings and accessory structures;
 - (b) Energy conservation design for buildings or structures classified as one-, two-, or three-family dwellings;
 - (c) Fire protection system designs submitted under the signature of an individual certified in accordance with section 107.4.4 of rule 4101:1-1-01;

- (d) Industrialized units subject to sections 3781.06 to 3781.18 and 3791.04 of the Revised Code where the board of building standards determines that the proposed work does not involve the technical design analysis of work affecting public health or general safety in the following areas: means of egress, structural, mechanical, electrical, plumbing, or fire protection.
 - (b) **Sealed construction documents.** Construction documents which have been prepared by an Ohio registered design professional who prepared the same as conforming to the requirements of the rules of the board pertaining to design loads, stresses, strength, and stability, or other requirements involving technical analysis, need be examined only to the extent necessary to determine conformity of such construction documents with other requirements of the rules of the board.
 - (c) **Technical design analysis.** For the purpose of paragraph (C)(6) of this rule, technical design analysis is defined as the development of integrated solutions using analytical methods in accordance with established scientific and engineering principles.
- (D) **Authorization process.** When construction documents have been submitted to the board of building standards for review and *authorization* as an *industrialized unit*, the board shall cause the construction documents to be examined for compliance with the rules of the board to the extent of the scope of the *industrialized unit*. The examiner is to first determine whether the construction documents being reviewed are adequate as required in paragraph (A) of this rule. If so, the examiner is to review the construction documents to determine compliance with the rules of the board.
- (1) **Limits of examination.**
 - (a) The board of building standards' review of the construction documents submitted is based on the scope of work shown or described.
 - (b) The design criteria identified in the construction documents are to be relevant to locations in Ohio and establish controls over the site of intended use where the industrialized unit may be installed. Design criteria may exceed conditions in Ohio per section (B)(5) of rule 4101:10-3-01.

(c) Authorization is not required for the following work; however, this work is to comply with all applicable provisions of the rules of the board:

(i) Building:

- (a) One-story, detached, structures used as Group S-2 storage or Group U structure and similar uses provided no building services are installed and the floor area does not exceed one hundred twenty square feet (11.15 m²).
- (b) Water tanks supported directly upon grade if the capacity does not exceed five thousand gallons (18,927 L) and the ratio of height to diameter or width does not exceed two to one.
- (c) Finishes, cabinetry, decorative elements not regulated by the rules of the board.
- (d) Above-ground storage tanks as defined in rule 4101:1-2-01 of the Administrative Code and the associated tank foundations.

(ii) Electrical:

- (a) Electrical equipment used for radio and television transmissions except equipment and wiring for power supply, and the installations of towers and antennas.
- (b) The installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.
- (c) Electrical wiring, devices, appliances, apparatus or equipment operating at less than twenty-five volts and not capable of supplying more than fifty watts of energy, unless specifically addressed in this code.
- (d) Process equipment and the associated wiring on the load side of the power disconnect to the equipment.

(iii) Gas:

- (a) Appliances and equipment used for heating, cooling or ventilation, exclusively or in combination, and where the appliance or equipment is portable in nature.
- (b) Process equipment, including the associated tanks, foundations, and process piping.
- (c) For combination building services and process piping systems, the process piping located on the process equipment side of the control valve which separates the

process from the building services piping is exempt from approval.

(iv) Mechanical:

(a) Appliances and equipment used exclusively or in combination for heating, cooling or ventilation and where the appliance or equipment is portable in nature.

(b) Process equipment including the associated tanks, foundations, and process piping. For combination building services/process or power piping systems, the power or process piping located downstream of the control valve which separates the process from the building services piping is exempt from approval.

(v) Plumbing:

(a) Process equipment including the associated tanks, foundations, and process piping.

(b) For combination building services and process piping systems, the process piping located on the process equipment side of the control valve which separates the process from the building services piping is exempt from approval.

(2) **Plan review, compliance with rules of the board.** If the construction documents are determined to comply with the rules of the board, the examiner is to communicate the findings and recommend the conditions and type of authorization to the board's designee.

(a) **Board's authorization.** The board's designee is to evaluate the examiner's recommendations; and when the construction documents have been determined to conform to the applicable provisions of the rules of the board, the board's designee is to provide any additional limitation and stamp such plans with the board's industrialized unit seal as the authorization in accordance with section (B) of rule 4101:10-3-01 of the Administrative Code.

(b) **Locked authorization.** The board is to lock the authorized construction documents and save the documents under the registered manufacturer's account in the board's industrialized unit database. The authorized construction documents are available for download through the registered manufacturer's electronic portal.

(c) **Posting.** The authorized construction documents are to be available at manufacturer's facility during the manufacturing process of the

industrialized unit. The manufacturer is to provide access to and use of the authorized construction documents by the *third-party inspection entity* for the required inspections during manufacture.

(3) Plan review, items of noncompliance.

(a) Corrections letter. The plans examiner for the board of building standards is to communicate items of non-compliance as a corrections letter via the electronic portal until such time as an authorization can be issued. From the items on the correction letter, an adjudication order can be either requested by the manufacturer or deemed necessary by the board.

(b) Adjudications orders. When issued, every adjudication order is to contain the following information:

- (i) Clearly identify the rules of the board violated;
- (ii) Specifically indicate which detail, installation, site preparation, material, appliance, device, addition, alteration to structures, construction documents, assemblages or procedures are necessary to change to comply with the order;
- (iii) Include notice of the procedure for appeal and right to a hearing if requested within thirty days of the mailing of the order. The order is to also indicate that, at the hearing, the manufacturer may be represented by counsel, present arguments or contentions orally or in writing, and present evidence and examine witnesses appearing for or against the manufacturer;
- (iv) Specify a reasonable period of time in which to bring the item(s) on the order into compliance;
- (v) The order is to be sent to the manufacturer and manufacturer's representatives.

(4) Time limitation of plan review. The board of building standards will review submittals and issue an authorization, a correction letter or an adjudication order in accordance with these rules within thirty (30) days of the date of application.

(5) Order of plan review. Construction documents submitted for authorization is to be examined for compliance with the rules of the board in the order received, except unless otherwise consented to by the manufacturers affected by deferred examination, or pursuant to an alternative schedule implemented by the board's designee providing for order of plan review based on project size or other rational basis. No alternative schedule may give preferential treatment to any one individual, organization or industry.

- (6) **Inadequate construction documents.** If construction documents are determined to be incomplete or inadequate for examination, the examiner is to report the findings to the applicant pursuant to paragraph (D)(3) of this rule. The examiner is to examine the construction documents to the extent possible and identify what information from this rule and rule 4101:10-5-01 of the Administrative Code is missing and needed to complete the required examination.
 - (7) **Resubmitted documents.** If construction documents are resubmitted in response to an adjudication order or correction letter, the review for compliance is limited to determining that the item(s) of non-compliance, and any work affected, has been corrected.
 - (8) **Authorized construction document sets.** Construction documents are kept on the board's industrialized unit database and are available for download through the electronic portal by the manufacturer or with the manufacturer's permission. The board is to maintain the construction documents in accordance with its records retention schedule.
 - (9) **Abandoned applications.** Applications will be considered abandoned if the manufacturer fails to respond to a correction letter or other written communication from the board requesting information within six (6) months from the date of the letter or communication. Abandoned applications are no longer valid and any fees accrued for plan review are the responsibility of the manufacturer and are due upon receipt of notice of the abandoned application.
- (E) **Required inspections.** Unless otherwise permitted under paragraph (C)(2) of rule 4101:10-3-01 of the Administrative Code, the *authorization* is to include a list of required inspections as determined by the Board from the following list:
- (1) **Plant evaluation.** In-plant evaluation in accordance with paragraphs (A)(5) to (A)(6)(e) of rule 4101:10-3-01 of the Administrative Code that affirms the current plant evaluation is sufficient for manufacture of the authorized industrialized unit and the *compliance assurance program* is available during the manufacturing process.
 - (2) **Rough framing.** Floor, floor/ceiling, wall, roof/ceiling, diaphragms, over framing, and other structural system components as included in the industrialized unit authorization.

- (3) **Rough building services.** HVAC, plumbing, electrical, fuel gas, fire protection, medical gas, and other building service systems components as included in the industrialized unit authorization.
- (4) **Weather resistance.** Roof covering, siding, water resistive barrier, flashing, ice barrier, vapor retarder, exterior windows and doors, thermal envelop and other materials used to protect the structure from water, moisture, vapor intrusion and energy conservation as included in the industrialized unit authorization.
 - (a) **Exception.** Industrialized units that are intended for installation inside another structure which provides the required weather resistance.
 - (b) **Thermal envelope.** The thermal envelop includes but is not limited to insulation, air barrier, air leakage, duct leakage, leakage testing, and other materials as included in the industrialized unit authorization.
 - (c) **Leakage in multi-module industrialized units.** For industrialized units that are assemblies of multiple modules at the site of intended use, the air leakage testing and duct leakage testing, where required, is to be completed at the site of intended use.
- (5) **Insignia of a subassembly.** Where an industrialized unit is assembled utilizing industrialized unit subassemblies, the inspection agency is to verify that the subassembly is a valid industrialized unit.
- (6) **Testing and reports.** Verification that required testing has been completed, records are maintained including testing results and correction of unsatisfactory results. Testing is complete when required testing demonstrates the construction is satisfactory as tested.
- (7) **Final.** A final inspection is of materials, components and construction that is readily visible after construction of the industrialized unit is complete including, but not limited to, finish materials, doors, glazing, cabinetry, millwork, hardware, fixtures, appliances, equipment, luminaires, devices, alarms, sensors, cover plates, etc. as included in industrialized unit.
- (8) **On-site inspections.** A list of inspections conducted at the site of intended use by the department with the authority to enforce the rules of the board in the jurisdiction including but not limited to intra-connections of modules or panels for structural system, building services, thermal envelope and finishes as well as inter-connections to site built construction and/or utilities as applicable.

4101:10-5-01 Construction documents.

- (A) **Organization of construction documents.** Construction documents are to provide required information as prescribed in paragraph (C) of rule 4101:10-4-01 of the Administrative Code and this rule. Information required to determine compliance will be searched first in the document illustrations, schedules, specifications and reports as described in paragraphs (B) to (L) of this rule. To assist in efficient plan review, the construction documents are to be prepared, to the greatest extent possible, in conformity with paragraphs (B) to (L) of this rule, as applicable, based on the requested authorization:
- (B) **Design scope and criteria**
- (1) **Cover sheet.** Provide identification of manufacturer, facility of manufacture, unique model identification, evidence of responsibility for the design and, either on the cover sheet or the next sheet, the following information:
- (a) **Design criteria.** Identify the conditions at the site of intended use that are necessary for the installation of the industrialized unit. Including but not limited to:
- (i) Type of industrialized unit and manner of integration.
 - (ii) Site conditions and restriction(s).
 - (iii) Specialty or limited use(s).
 - (iv) Hazardous materials and the quantity of each used or stored.
- (b) **Scope of work.** Each portion of the design represented in the construction documents is to be identified in one of three categories of work:
- (i) Category 1 Factory assembled.
 - (ii) Category 2 Site assembled.
 - (iii) Category 3 Building owner provided.
- (c) **Index.** List of all documents included in the submittal and a method of location.
- (2) **Overview of installation.** Provide the information necessary to connect the industrialized unit to on-site construction including load path continuation, utility type, size and quantity, egress continuation, alarm and communication system as required and any additional unique requirements necessary to support, supply or connect the industrialized unit.

- (3) **Exception.** Specific site address or building owner information related to the intended initial installation is not required.

(C) **Horizontal sections.**

- (1) **Floor plans.** Provide configuration layout drawings of all horizontal floor and floor-ceiling systems with all walls and partitions shown including but not limited to full height, partial height, structural and non-structural walls, major openings, and references to other details, sections, elevations, accessibility and *matelines*. Floor plans are to show all relevant information such as door swings, stairs and ramps, windows, shafts, all portions of the means of egress, plumbing fixtures, built-in fixtures, special equipment, vertical transportation, etc., and be sufficiently dimensioned to describe all relevant space sizes. Spaces are to be identified by appropriate code appellations. The number of occupants to be accommodated in each industrialized unit and in all rooms and spaces of the industrialized unit are to be designated on construction documents;
- (2) **Roof plan.** Where exposed to weather, provide a roof plan showing roof outline, overall dimensions, slope of roof, drainage, reference to other details, roof covering materials, penetrations through roof, and roof-mounted equipment;

(D) **Vertical Sections.**

- (1) **Exterior elevations.** For modules with vertical surfaces exposed to weather, provide exterior elevations showing and identifying major elements, material indications, windows, doors, louvers and all other openings, grade lines, floor lines, the bottom of module, top of foundation, top of wall/module/roof bearing, top of roof, mate lines for intra- and inter-connections, references to other details and vertical dimensions to these elements.
- (2) **Module sections.** Vertical dimensions, elevations of the top of structural components and finish floor lines, materials, footings and foundations, reference to other details, ceiling lines, and major mechanical services.
- (3) **Wall Sections.** Face of wall dimensions to other components, vertical dimensions from foundations to parapet relating all elements to top of structural elements, all connection methods, wall, ceiling, floor, foundation, and roof materials and construction details.
- (4) **Interior elevations.** Vertical dimensions to critical elements, references to other details, openings in walls, wall finishes, built-in items, accessibility, and locations of switches, thermostats, and other wall-

mounted equipment.

- (E) **Exterior envelope.** Where exposed to weather, the exterior envelope described in sufficient detail to determine compliance with this code and the referenced standards. Details are to be provided which describe flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves, or parapets, means of drainage, water-resistive membrane details around openings, location and type of vapor retarders, window and door “U”-values, and insulation location and “R”-values. The supporting documentation is to fully describe the exterior wall system, which was tested, where applicable, as well as the test procedure used.
- (F) **Schedules.** Information or tables that describe the room finishes, doors, windows, and door hardware and controls. Wall and floor materials are to be described by cross hatching (with explanatory key), by notation, or by other clearly understandable method.
- (G) **Structure.** Provide complete description of the structural system including size and location of all structural elements and the values of live, wind, snow, rain and seismic loads used in the design of the industrialized unit and other data as required to fully describe the structural system. The resultant loads at the points of inter-connection with on-site construction are to be provided.
- (H) **Building services systems.** Provide complete description of the building services (plumbing, mechanical, fuel gas and electrical) systems, fire protection systems and medical gas systems that are part of the industrialized unit that may include but is not limited to:
- (1) **Plumbing.**
- (a) Materials and general routing and sizes of all piping, joints and fittings;
 - (b) Location and type of plumbing fixtures and equipment;
 - (c) Plumbing schematics and isometrics;
 - (d) Insulation “R”-values;
- (2) **Mechanical.**
- (a) Materials and general routing and sizes of all ductwork, vents, and louvers;
 - (b) Location and type of heating, ventilation, air conditioning, and other mechanical equipment;
 - (c) Insulation “R”-values;
 - (d) Materials and general routing and sizes of all fuel gas piping and valves;

- (3) Electrical wiring.
 - (a) Location and type of all lighting and controls;
 - (b) Location and type of all power equipment and devices;
 - (c) Type and size of all electrical conductors and overcurrent protection.
- (4) Fire protection systems.
 - (a) Areas of protection.
 - (b) Fire alarm system.
 - (c) Fire suppression system occupancy hazard classification and required water supply data.
- (I) **Energy conservation.** Where energy conservation compliance is demonstrated through a method other than the prescriptive method, provide supporting documentation like energy analysis compliance software reports.
- (J) **Hazardous materials.** Where use, storage or production of hazardous materials is intended, provide information regarding the operations; the types, quantities, and arrangement of flammable, combustible, or hazardous materials proposed to be produced, used, dispensed, or stored in the facility; material safety data sheets for hazardous materials produced, used, or stored in the facility; the commodity and arrangement of high piled or rack storage, control areas, etc.
- (K) **Material, component or system reports.** Where alternative materials, components, systems or methods of construction are proposed, provide the evaluation reports or other recognized technical analysis information to support compliance with the applicable building code requirements.
- (L) **Panelized units.** Where the *industrialized unit* is a *panelized unit*, all of the above information is required, as applicable, based on the scope of the requested *authorization* except floor plans and roofs plans. The elevations and sections required in paragraphs (D)(1) to (D)(4) of this rule are to be provided for the panel in lieu of the volume bounded by the panel. For *panelized units*, any volumes, spaces or rooms created by their use including but not limited to the means of egress, accessibility, lighting, power, hvac systems, etc. are to be approved by the building official having authority to enforce the applicable building code for the jurisdiction where the *industrialized unit* is installed.

4101:10-6-01 Transport.

- (A) **Transport to site of intended use.** Industrialized units may be shipped in structurally complete units ready for installation in the building structure or in knock-down and packaged form for assembly at the site.
- (B) **Shipping Reports required.** After an *insignia* has been affixed, the manufacturer is to record the use of the *insignia* in shipping records which are to keep, at a minimum, record of:
- (1) The shipping *insignia* number;
 - (2) Ohio board of building standards' industrialized unit group assigned project file number appearing on the board-authorized construction documents;
 - (3) The date the *insignia* was affixed to the individual unit;
 - (4) Name and address of the construction inspector and inspection agency.
 - (5) Manufacturer's unit serial number;
 - (6) Manufacturer's model number;
 - (7) Dealer name and address (applicable where a dealer is used) and;
 - (8) Site installation destination address and owner's/purchaser's name.
- (C) **Submit record to the board.** Shipping records are to be submitted to the board of building standards through the electronic portal no later than thirty days following departure from the factory.
- (D) **Document submission to building departments.** The manufacturer is to provide the construction documents, authorized by the board, to the owner or owner's representative for purposes of design, code compliance or approval prior to placing the *industrialized unit* on site.
- (E) **Protect from damages.** Manufacturer is to protect the *industrialized unit* from damage during transport and installation. Causes of damage including but are not limited to movement (loading, unloading, transporting), weather, installation and activities of construction prior to installation into the building at the site of intended use.
- (F) **Manufacturer responsibility.** The manufacturer maintains responsibility over all work completed in the factory until the unit is approved for first occupancy and is responsible to rectify any damages or deviations from the authorized construction documents. Damages or deviations can be identified

either in the field or at the place of manufacture. The manufacturer is to submit to the board such periodic reports, notifications and information as required by board procedures or may be requested by the board.

4101:10-7-01 Relocation and reauthorization.

- (A) **Existing buildings with industrialized unit.** Where a previously authorized *industrialized unit* is removed from the initial installation with the intent to relocate or replace the unit, one of the following conditions applies:
- (1) **Relocated building.** Where the unit is removed for the purpose of direct relocation, with or without repairs, alterations or a change of occupancy at the site of intended reuse, the owner is to comply with the requirements for a moved existing structure and make application to the building department with the authority to enforce the rules of the board in the jurisdiction where the unit is to be relocated for approval of the scope of work in compliance with the applicable building code.
 - (2) **Replacement modules.** Where the unit is removed for the purpose of replacement with a new unit, both (A)(2)(a) and (A)(2)(b) of this rule apply:
 - (a) **The owner is to make application and get approval from the building department with the authority to enforce the rules of the board in the jurisdiction for either:**
 - (i) a repair in accordance with the existing approval, in the same configuration, and not less safe, or
 - (ii) a replacement, with or without alteration, in accordance with the requirements for new construction and not less safe.
 - (b) **The manufacturer is to make application to the board of building standards for authorization of either:**
 - (i) An industrialized unit used as an alteration to an existing building and is constructed in accordance with the current building codes, or
 - (ii) An industrialized unit, used as a repair to an existing building and is constructed in accordance with a specifically identified, previously authorized industrialized unit.
- (B) **Reauthorization.** Where the unit is removed for the purpose of relocation and includes proposed repair, alteration or a change of occupancy to the previously authorized unit, the unit can be reauthorized by the board and receive a new *insignia* provided the repair, alteration or change of occupancy is:
- (1) **completed by an industrialized unit manufacturer registered with the board, and**

- (2) the manufacturer makes application to the board and submits construction documents describing the proposed modifications, with fee, for authorization, and
- (3) performed in an off-site location, and
- (4) performed in accordance with construction documents authorized by the board of building standards.

4101:10-8-01 Fees.

- (A) **Fees.** All costs associated with *industrialized unit* request for authorization applications, processing, construction document review, inspections and insignias shall be in accordance with this rule.
- (1) **Exception.** Ohio career technical schools and Ohio community colleges that manufacture an *industrialized unit* as part of a certified curriculum using third-party inspectors designated by the board of building standards are permitted to have fees waived.
- (B) **Applications.** Each initial application or revision submittal to the board is to be accompanied by a nonrefundable fee of one hundred thirty-five dollars, designated by the board to include:
- (1) application processing fee;
- (2) one-hour minimum plan review fee; and
- (3) other costs, when incurred, such as mailing and check processing.
- (C) **Evaluation of construction documents.** All costs of application processing, evaluation of construction documents and other required documentation submitted to the board is to be paid by the manufacturer. Where the review for authorization exceeds one hour, the manufacturer is charged an additional plan review fee at the rate of one hundred dollars per hour (\$100/hr) in half hour increments for the total time required to complete the review for authorization.
- (D) **Plant evaluation and inspection costs.** All costs of plant evaluations and inspections is to be paid by the manufacturer of the *industrialized unit* including travel, food, lodging, and administrative costs.
- (E) **Insignias.** The fee for an insignia is as follows:
- (1) An insignia applicable to a *modular unit* or *equipment unit* for use in the state of Ohio is fifty dollars per *module* or *equipment unit* (any preassembled combination of walls to floor, ceilings, roof, and other such components) transported as a whole unit or broken down.
- (2) An insignia applicable to a *panelized unit* for use in the state of Ohio is one dollar for each twenty square feet of surface area of preassembled individual components (wall, floor, ceiling or roof sections, and other such components) intended to be shipped to the site and attached to other components at the site of intended use.

- (F) **Tests.** Tests required by the board to be performed to determine compliance pursuant to paragraph (A)(5)(d) of rule 4101:10-3-1 of the Administrative Code, is to be conducted at no expense to the board. Costs associated with any required testing or research necessary to provide evidence of compliance is to be the responsibility of the manufacturer.

4101:10-9-01 Certifications, inspector.

- (A) **Third-party inspector certification.** Individuals performing the required inspections of an *industrialized unit* at the *manufacturing plant* are to be certified as one of the following:
- (1) An individual with valid certification issued by the board of building standards under rule 4101:7-3-01 of the Administrative Code for inspection of building, plumbing, mechanical and electrical systems.
 - (2) An individual with valid certification for inspection of building, plumbing, mechanical and electrical systems from the International Code Council recognized by the board of building standards.
- (B) **Duties.** Individuals certified to perform inspections have the authority to conduct required inspections of the construction of the *industrialized unit* at the *manufacturing plant* to verify that the construction is in accordance with the authorized construction documents as follows:
- (1) A person with a level 4 combination inspector certification issued by the board of building standards or an equivalent combination inspector certification from the “*International Code Council*” is permitted to inspect all building and building service systems of any *industrialized unit*.
 - (2) Persons with level 3 inspector certifications issued by the board of building standards for an inspector specialization (e.g. building inspector, mechanical inspector, plumbing inspector, or electrical safety inspector) or equivalent inspector certification from the “*International Code Council*” are permitted to inspect the scope of work of an *industrialized unit* to the extent of their level 3 inspector certifications.
 - (3) Persons with a level 2 residential inspection certification for residential buildings or equivalent residential inspector certification from the “*International Code Council*” are not permitted to inspect the building or building service systems of *industrialized units* intended for residential buildings.
- (C) **Conflict of interest.** Except as provided in paragraph (C)(2) of rule 4101:10-3-01 of the Administrative Code, no certified person who contracts for inspection services with a manufacturer of an *industrialized unit* shall perform inspection services which would require that person to exercise authority or make an evaluation of any work furnished by said inspector or by a private contractor that employs said inspector on a full-time, part-time, or incidental basis. Further, such certified person shall not engage in conduct that is prohibited or considered a conflict of interest pursuant to Chapter 102. of the Revised Code.