

4781-6-03

**Reference publications and definitions for installation of new and used manufactured homes.****(A) Referenced Publications**

- (1) In addition to any referenced publication in any rule in Chapter 4781-6 of the Administrative Code, the specifications, standards, and codes of the following organizations are incorporated by reference as though set forth in full in any rule in Chapter 4781-6 of the Administrative Code.
- (2) Any standard incorporated by reference shall have the same force and effect as the installation standards set forth in Chapter 4781-6 of the Administrative Code, except that wherever reference standards are in conflict with any rule of Chapter 4781-6 of the Administrative Code, the requirements of the rules in Chapter 4781-6 of the Administrative Code prevail to the extent of the conflict.
- (3) Where the enforcement of an installation standard would violate the conditions of the listing of equipment or appliance, the conditions of the listing and manufacturer's installation instructions shall apply.
- (4) The abbreviations and addresses of organizations issuing the referenced standards appear in this paragraph. Reference standards that are not available from their producer organizations may be obtained from the "Office of Manufactured Housing Programs, Room 9164, U.S. Department of Housing and Urban Development, 451 Seventh Street, SW Washington, DC 20410."
  - (a) "Air Conditioning Contractors of America (ACCA), 2800 Shirlington Road, Suite 300, Arlington, VA 22206. ACCA Manual J, Residential Load Calculation, eighth edition."
  - (b) "The Engineered Wood Association, (APA) 7011 South Nineteenth Street, Tacoma, Washington 98411, (253) 565-6600, facsimile (253) 565-7265. PS-1-95, Construction and Industrial Plywood (with typical APA trademarks), 1995 edition."
  - (c) "American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. ASHRAE Handbook of Fundamentals, 1997 inch-pound edition."
  - (d) "American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. ASTM C 90, Standard Specification for Load Bearing Concrete Masonry Units, 2002. ASTM D 1586, Test Method for Penetration Test and Split-Barrel Sampling of Soils, 1999. ASTM D 2487, Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System), 2000. ASTM D 2488, Practice for Description and Identification of Soils

(Visual-Manual Procedure), 2000. ASTM D 3953, Standard Specification for Strapping, Flat Steel and Seals, 1997."

(e) "American Wood-Preservers' Association (AWPA), P.O. Box 388, Selma AL 36702. AWPA M4-02, "Standard for the Care of Pressure Treated Wood Products, 2002. AWPA U1-04, Use Category System; User Specification for Treated Wood, 2004."

(f) "Federal Emergency Management Administration (FEMA), 500 C Street, SW, Washington D.C. 20472. FEMA 85 / September 1985, Manufactured Home Installation in Flood Hazard Areas, 1985."

(g) "Manufactured Homes Construction and Safety Standards, revised April 1, 1995 (MHCSS). Department of Housing and Urban Development (HUD), Manufactured Housing Standards Division, Office of Manufactured Housing and Regulatory Functions, Room 9152, 451 Seventh Street, S.W., Washington, DC 20410."

(h) "National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-7471. NFPA 31, Standard for the Installation of Oil Burning Equipment, 2001. NFPA No. 70, National Electrical Code, 2000. NFPA 501A, Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities, 2009 edition."

(i) "Structural Engineering Institute/American Society of Civil Engineers (SEI/ASCE), 1801 Alexander Bell Dr., Reston, VA 20191. SEI/ASCE 32-01, Design and Construction of Frost Protected Shallow Foundations, 2001."

(j) "Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, Illinois 60062. UL 181, Factory Made Air Ducts and Connectors, 1996 with 1998 revisions. UL 181A, Standard for Safety Closure Systems for use with Rigid Air Ducts and Air Connectors, 1994, with 1998 revisions. UL 181B, Standard for Safety Closure Systems for use with Flexible Air Ducts and Air Connectors, 1995, with 1998 revisions."

#### (B) Definitions

In addition to the definitions contained in the model manufactured home installation standards, the following definitions apply to the installation standards for the installation of new, used, or relocated manufactured homes. Where terms are not included, common usage of the term applies. The definitions are as follows:

(1) "Accessible" means able to approach, access a fixture, connection, appliance, or equipment. Access shall be permitted to require the removal of an access panel, door or similar obstruction.

- (2) "Accessibility" means the removal of architectural barriers for the purpose of providing access to persons with disabilities.
- (3) "Accessory building or structure" means any structure that supports its own load and is established for use of the occupant of the manufactured home specifically including, but not limited to, storage sheds, garages, basements, awnings, carports, decks, steps and ramps.
- (4) "Air conditioner" means all equipment intended or installed for the purpose of processing the treatment of air so as to control simultaneously its temperature, humidity, cleanliness, and distribution to meet the requirements of the conditioned space. This includes "comfort cooling equipment."
- (5) "Alteration" means any change, addition, repair conversion, replacement, modification or removal of any equipment or installation which may affect the operation, construction, installation or occupancy of a manufactured home.
- (6) "Anchor assembly" means any device or other means designed to transfer home anchoring loads to the ground.
- (7) "Anchoring equipment" means ties, straps, cables, turnbuckles, chains, and other approved components, including tensioning devices that are used to secure a manufactured home to the ground or foundation.
- (8) "Anchoring system" means a combination of anchoring equipment and anchor assemblies that will, when properly designed and installed, resist the uplift, overturning, and lateral forces on the manufactured home, and on its support and foundation system.
- (9) "Approved," when used in connection with any material, appliance or installation or on- site construction, means complying with the requirements of the Ohio manufactured homes commission. For new manufactured home factory construction, approved means complying with the requirements of the MHCSS.
- (10) "Arid region" means an area subject to fifteen inches or less of annual rainfall.
- (11) "Attached garage" means a garage which is designed to be structurally independent of a manufactured home but may be attached to a manufactured home in accordance with rule 4781-6-02 of the Administrative Code.
- (12) "Authority having jurisdiction" means the commission certified agencies given authority to review plans, issue permits, and perform inspections in accordance with Chapter 4781 of the Administrative Code. The Ohio manufactured homes commission has statewide authority pursuant to Chapter

4781. of the Revised Code with regard to the installation of manufactured homes. Some counties and municipalities may have authority with regard to local zoning ordinances or other regulations outside the coverage of rules 4781-6-01 and 4781-6-02 of the Administrative Code.

- (13) "Base flood" means a flood having a one percent chance of being equaled or exceeded in any given year.
- (14) "Base flood elevation" (BFE) means the elevation of the base flood, including wave height, relative to the datum specified on an authority having jurisdiction's flood hazard map.
- (15) "Bonding" means the permanent joining of metallic parts to form an electrically conductive path that will ensure electrical continuity and the capacity to conduct safely any current likely to be imposed.
- (16) "Building drain" means that part of the lowest piping of a drainage system which receives the discharge from soil, water-borne waste, and other drainage pipes inside the walls of the manufactured home and conveys it to the building sewer.
- (17) "Building sewer" means that part of the horizontal piping of a drainage system which extends from the end of the building drain and which receives the discharge of the building drain and conveys it to a public sewer, private sewer, individual sewage disposal system or other point of disposal.
- (18) "Building supply" means the pipe carrying potable water from the water meter or other source of water supply to a building or other point of use or distribution on the lot. Building supply shall also mean the water service.
- (19) "Carport" means a stationary structure consisting of a roof with its supports and not more than one wall, or storage cabinet substituting for a wall, and used for sheltering motor vehicles.
- (20) "Chassis" means the entire transportation system comprising the following subsystems: drawbar and coupling mechanism, frame, running gear assembly, and lights.
- (21) "Clearance" means the minimum allowable distance between two adjacent surfaces or points.
- (22) "Comfort cooling certificate" means a certificate permanently affixed to an interior surface of the home specifying the factory design and preparations for air conditioning the manufactured home.
- (23) "Commission" means the Ohio Manufactured Homes Commission.

- (24) "Concealed" means rendered inaccessible by the structure or finish of the manufactured home or accessory building.
- (25) "Construction" means the arrangements and methods of building including, but not limited to, fire and life safety, electrical, plumbing and mechanical equipment and systems within a manufactured home which are typically performed and inspected at the manufacturer's factory.
- (26) "Crossovers" means utility interconnections in multi-section homes that are located where the sections are joined. Crossover connections include heating and cooling ducts, electrical circuits, and water pipes, drain plumbing, and gas lines.
- (27) "Deck" means a self-supporting, outside walking area greater than thirty-six square feet in area, having a floor that is elevated more than eight inches above grade. The deck shall be constructed in accordance with the residential code of Ohio; except for decks which are an integral part of the home and built at the factory as part of the manufactured home the MHCSS shall apply.
- (28) "Design Approval Primary Inspection Agency" (DAPIA) is a state or private organization that has been accepted by the HUD secretary in accordance with the requirements of part 3282, subpart H, which evaluates and approves or disapproves manufactured home designs and quality control procedures.
- (29) "Designed foundation system" means a foundation system designed by an Ohio licensed or registered Ohio architect or professional engineer or a foundation system designed by the manufactured home's DAPIA regardless of the state of registration or licensing of the DAPIA.
- (30) "Diagonal tie" means a tie intended primarily to resist horizontal or shear forces, but which may secondarily resist vertical, uplift, and overturning forces.
- (31) "Drain" means a pipe that carries waste, water, or water-borne waste in a drainage system.
- (32) "Drain connector" means the removable extension, consisting of all pipes, fittings and appurtenances from the drain outlet to the drain inlet serving the manufactured home.
- (33) "Drain outlet" means the lowest end of the drain to which a sewer connection is made.
- (34) "Drainage system" means all piping within or attached to the home that conveys sewage or other liquid waste to the drain outlet, not including the drain connector.

- (35) "Engineered foundation system" means a certified and approved engineered system of prefabricated foundation supports installed to manufacturer's installation instructions.
- (36) "Egress" means a path or opening for going out of a building, dwelling, home, or manufactured home.
- (37) "Factory built porch" means an exterior porch, deck, or landing, including roof, built by the manufactured home manufacturer and shipped with the manufactured home.
- (38) "Feeder assembly" means the overhead or under-chassis feeder conductors, including the grounding conductor, together with the necessary fittings and equipment, or a power supply cord approved for manufactured home use, that are designed for the purpose of delivering energy from the source of electrical supply to the distribution panel board within the manufactured home.
- (39) "Fill" means a deposit of materials intended to raise an existing grade and includes, but is not limited to, the following types:
- (a) "Engineered fill" means fill over twelve inches in depth placed in layers of soil, crushed stone or masonry waste material, free of expansive soils and organic materials, compacted and tested according to accepted engineering practices to insure that it meets the required load bearing capacity and specified compaction standards as determined by laboratory tests of soil samples from the fill material.
  - (b) "Non-engineered approved fill" means fill of twelve inches or less in depth consisting of soil, crushed stone or masonry waste material, free of expansive soils and organic materials, compacted with two passes of a vibrating compacting machine.
  - (c) "Uncompacted fill" means fill which may include soil, crushed stone, masonry waste material, expansive soils, and organic materials, or is of unknown content, and does not meet the definitions of engineered or non-engineered, approved fill.
  - (d) Fill does not include the six inches of gravel required on some manufactured home stands.
- (40) "Flood hazard area" means the greater of either: the special flood hazard area shown on the flood insurance rate map; or the area subject to flooding during the design flood and shown on an authority having jurisdiction's flood hazard map, or otherwise legally designated.
- (41) "Flood hazard map" means a map delineating the flood hazard area and

adopted by an authority having jurisdiction.

- (42) "Footing" means that portion of the support system that transmits loads directly to the soil.
- (43) "Frame" means the fabricated, rigid substructure which provides permanent support to the affixed manufactured home structure above the frame, both during transport and on-site; and also provides a platform for securement of the running gear assembly, the draw bar and the coupling mechanism.
- (44) "Foundation" means the basis or base which a wall or structural support stands, is founded, or supports footings on solid ground.
- (45) "Frost Depth" means the maximum approved depth to which frost penetrates the earth in a specific climatic region which is determined by the local authority having jurisdiction.
- (46) "Gas supply connector" means a listed flexible connector designed to connect the manufactured home to the gas supply source.
- (47) "Grade" has the following meanings:
- (a) "Grade" as it relates to plumbing means the fall (slope) of a pipe in reference to a horizontal plane expressed in inches per foot length.
  - (b) "Grade" as it relates to the earth means the finished soil level adjoining the home at all exterior walls.
- (48) "Grounded" means connected to earth or to some conducting body that serves in place of the earth.
- (49) "Ground anchor" means a specific anchoring assembly device designed to transfer manufactured home anchoring loads to the ground.
- (50) "Ground level installation" means a manufactured home with a below-grade foundation system and a perimeter retaining wall or foundation which is back filled against it.
- (51) "HUD Act" means the National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. 5401-5426.
- (52) "Inspection Primary Inspection Agency" (IPIA) means a state or private organization that has been accepted by the secretary of HUD to evaluate the ability of manufactured home manufacturers to follow approved quality control procedures and provide ongoing surveillance of the manufacturing process.

- (53) "Inspector" means a commission certified inspector. An commission certified inspector has the right to inspect the installation of a manufactured home and any elements that deal with installation of a manufactured home that are under the jurisdiction of the commission. An inspector also has the right to conduct plans reviews. Any new construction, other than the foundations of the home and the means of egress such as stairs, landings, handrails, ramps, platforms and guard rails, electrical and plumbing connections, are not under his jurisdiction for inspection such as basements, garages, sheds, carports, and room additions are not the inspector's jurisdiction unless specifically indicated in the manufacturer's installation manual for that specific home installation.
- (54) "Installation" shall have the same meaning as set forth in divisions (B)(1) to (B)(4) of section 4781.01 of the Revised Code. And, in relation to construction, is performed at a location away from the manufacturer's factory. The leveling of the home on a foundation system defines the commencement of the installation and/or set-up.
- (55) "Installation permit" means the legal right to install a manufactured home that is obtained by paying for all fees prescribed by law prior to commencement of any work required to install a manufactured home. This permit is a legal paper document issued by the authority having jurisdiction upon receiving payment in full.
- (56) "Installation standards or standards" means the installation standards established in Chapter 4781, of the Revised Code and the rules promulgated thereunder for the installation of new and used manufactured or mobile homes, when the manufacturer's installation instructions are not obtainable, at the place of occupancy, to ensure proper siting, the joining of all sections of the home, and the installation of stabilization, support, or anchoring systems.
- (57) "Installer" means any individual licensed by the commission to create footings, install, set-up connect, hook-up, block, tie-down, secure, level, support, install steps, install skirting, or makes electrical, plumbing, or mechanical connections to manufactured homes, or who provides consultation or supervision for any of these activities.
- (58) "Labeled" means a label, symbol, or other identifying mark of a nationally recognized testing laboratory, inspection agency, or other organization concerned with product evaluation that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling is indicated compliance with nationally recognized standards or tests to determine suitable usage in a specified manner.
- (59) "Landing" means a self-supporting outside walking area equal or less than



thirty-six square feet in an area and having a floor that is elevated more than eight inches above grade. No landing shall be less than the dimension of the door that swings over the landing. Every landing shall have a minimum dimension of twenty-four inches in the direction of travel.

- (60) "Listed" means included in a list published by a nationally recognized testing laboratory, inspection agency, or other organization concerned with product evaluation that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner.
- (61) "Lot" means any space area or tract of land or portion of a manufactured home park which is designated or used for occupancy by one manufactured home.
- (62) "Lowest floor" means the floor of the lowest enclosed area of a manufactured home. An unfinished or flood resistant enclosure, used solely for vehicle parking, home access or limited storage, shall not be considered the lowest floor, provided the enclosed area is not constructed so as to render the home in violation of the flood-related provisions of this rule.
- (63) "Manufactured home" has the same meaning as in division (C) of section 3781.06 of the Revised Code.
- (64) "Manufactured Home Construction and Safety Standards" (MHCSS) means the manufactured home construction and safety standards established in part 3285 of the HUD Act pursuant to section 604 of the HUD Act, 42 U.S.C. 5403.
- (65) "Manufactured home gas supply connector" means a listed connector designed for connecting the manufactured home to the gas supply source.
- (66) "Manufactured home site" means a designated parcel of land designed for the installation of one manufactured home for the exclusive use of the occupants of the home.
- (67) "Manufacturer's installation instructions" means DAPIA-approved instructions provided by the home manufacturer that accompany each new manufactured home and detail the home manufacturer requirements for support and anchoring systems, and other work completed at the installation site.
- (68) "Means of egress" means a continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building, structure, dwelling, home, or manufactured home to a public way or open place of safety.
- (69) "Mobile home" means a manufactured home constructed prior to 1976. For the

purposes of these installation standards, an installation requirement for a manufactured home is also a requirement for a mobile home.

(70) "Noncompliance" means that the manufactured home does not comply with MHCSS, the manufactured home's installation manual, these rules or the residential building code.

(71) "Permit" see "Installation permit".

(72) "Person" has the same meaning as in section 1.59 of the Revised Code and also includes this state, any political subdivision of this state, and any other state or local body of this state.

(73) "Pier" means that portion of the support system between the footing and the manufactured home, exclusive of shims.

(74) "Plenum" means an air compartment that is part of an air-distribution system to which one or more ducts or outlets are connected.

(75) "Porch" means a self-supporting, outside, covered, walking area having a floor that is elevated more than eight inches above grade.

(76) "Ramada" means any freestanding roof or shade structure, installed or erected above a manufactured home or any portion thereof, which may also extend over a patio or parking space and is used principally for protection from snow, sun or rain.

(77) "Readily accessible" means direct access without the necessity of removing any panel, door, or similar obstruction.

(78) "Recessed porch" means an open floor area supported by the main frame, is located outside the exterior walls of the manufactured home and may be enclosed by a roof, three or less walls, screening or glass.

(79) "Regulator" means either "pressure regulator" means a device placed in a gas line for reducing controlling and maintaining the pressure that portion of the piping system downstream of the device or "service regulator" means a pressure regulator installed by the serving gas supplier to reduce and limit the service line gas pressure to the delivery pressure.

(80) "Repair" means the reconstruction or renewal of any part of an existing manufactured home or piece of equipment for the purpose of its maintenance.

(81) "Replacement in kind" means replacing equipment or accessories with approved like equipment or accessories, such as switches, thermostats, fittings, elements or motors but does not include the replacement of major portions of the structural, plumbing, electrical, or mechanical system.

- (82) "Running gear assembly" means the subsystem consisting of suspension springs, axles, bearings, wheels, hubs, tires, and brakes with their related hardware.
- (83) "Secretary" means the secretary of housing and urban development (HUD) or an official of HUD delegated the authority of the secretary with respect to the HUD Act.
- (84) "Service equipment" means the equipment containing the disconnecting means over current protective devices and receptacles or other means for connecting a manufactured home feeder assembly.
- (85) "Setbacks" - see paragraph (A)(2) of rule 4781-6-02.1 of the Administrative Code.
- (86) "Set up" - see "Installation." The leveling of the home on a foundation system defines the commencement of the installation and/or set-up.
- (87) "Shim" shall mean a thin tapered piece of approved material, including hardwood, corrosion resistant metal, or abs plastic, used to fill gaps and to level a manufactured home. A shim shall be a minimum nominal four inches by six inches by one inch thick. Shims shall be used in pairs in opposing directions not to exceed one inch in height. Pressure treated shims shall not be used in direct contact with I-beams or other metals.
- (88) "Site" means a designated parcel of land designed to accommodate a manufactured home, its accessory structures or buildings and accessory equipment for the exclusive use of the occupants.
- (89) "Skirting" means a weather-resistant material used at the perimeter of the manufactured home to enclose the space under the living area of the home, from the bottom of the manufactured home to grade.
- (90) "Stabilizing devices" means all components of the anchoring and support systems, such as piers, footings, ties, anchoring equipment, anchoring assemblies, or any other equipment, materials and methods of construction, that support and secure the manufactured home to the ground.
- (91) "Stand" means that area of the manufactured home site which has been reserved for the placement of a manufactured home. In manufactured home parks, pursuant to paragraph (M) of rule 3701-27-01 of the Administrative Code, a manufactured home stand is called a manufactured home lot.
- (92) "State" means the state of Ohio.
- (93) "Support system" means pilings, columns, footings, piers, foundation walls,

- shims, and any combination thereof that, when properly installed, support the manufactured home.
- (94) "Tie" or "tie down" means straps, cable, or securing devices used to connect the manufactured home to anchoring assemblies.
- (95) "Ultimate load" means the absolute maximum magnitude of load that a component or system can sustain, limited only by failure.
- (96) "Utilities" means the water, sewer, gas, or electrical services provided on a lot for a manufactured home.
- (97) "Utility connection" means the installation and connection of the manufactured home to utilities that include, but are not limited to electricity, water, sewer, gas, or fuel oil.
- (98) "Vertical tie" means a tie intended to resist uplifting and overturning forces.
- (99) "Water distribution system" means potable water piping within, or permanently attached to the manufactured home.
- (100) "Wind zone" means the areas designated on the "Basic Wind Zone Map" as further defined in section 3285.405 of the 2003 edition of the model manufactured home installation standards that delineate the wind design load requirements as determined by the fastest mile wind speed (miles per hour) within each area. In wind zone 1, the horizontal design wind load shall not be less than fifteen psf and net uplift load shall not be less than nine psf.
- (101) "Working load" means the maximum recommended load that may be exerted on a component or system determined by dividing the ultimate load of a component or system by an appropriate factor of safety.

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Certification

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