



MIKE CAUSEY, INSURANCE COMMISSIONER & STATE FIRE MARSHAL
BRIAN TAYLOR, CHIEF STATE FIRE MARSHAL

MEMORANDUM

DATE: August 20, 2019 (updates July 12, 2012 memo)
TO: Building Inspectors, School Officials, Other Interested Parties
FROM: Michael J. Hamm, P.E.
Chief Building Code Consultant - Manufactured Building Division
RE: Approval Guidelines for Older Classroom Units
(**applies ONLY to buildings designed as single, stand-alone classrooms**)

The following are guidelines established by the Manufactured Building Division for acceptance of older classroom units that frequently are relocated from one school to another within the same district. Many of these units were constructed before the current modular construction program went into effect and therefore may not be labeled with a State of North Carolina Modular Construction Validating Stamp. Many of these older classroom units were approved by local building officials and have been used safely within the school district since they were originally installed. It is the interpretation of the Manufactured Building Division, based on **Section 102** of the *North Carolina Fire Prevention Code, 2018 Edition*, that units which complied with the minimum safety standards of the Code in effect at the time of construction or installation and which have since been properly maintained shall be deemed as complying with the current Code. It is also the interpretation of the Manufactured Building Division that older classrooms which are relocated from the jurisdiction of one inspection department into the jurisdiction of another inspection department within the same school district should be accepted unless an imminent safety hazard is detected by the local building official. Provided the units are properly maintained, acceptance should continue until such time as they are replaced by the local school system.

When approved set-up plans and instructions are not available for these older units, we recommend the following:

1. Piers should be spaced in accordance with the requirements of **Table 3.7** of the *State of North Carolina Regulations for Manufactured Homes, 2004 Edition*.
2. Piers and their footings must be sized and constructed in accordance with the *North Carolina State Building Code, 2018 Edition* or, as an alternate, the **attached memo dated July 15, 2019**. It is acceptable for masonry piers to be dry-stacked and bonded with surface bonding cement in lieu of laying the masonry units in mortar so long as the first course above the footing is set in a bed of mortar. Cap blocks for piers shall be installed in accordance with **Sections 3.7.4.3 and 3.7.4.4 or Sections 3.7.5.3 and 3.7.5.4** of the *State of North Carolina Regulations for Manufactured Homes, 2004 Edition*.
3. Number, spacing, and location of anchoring ties should be in accordance with **Section 3.9** of the *State of North Carolina Regulations for Manufactured Homes, 2004 Edition*.

attachment



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MEMORANDUM

DATE: July 15, 2019 (updates July 12, 2012 memo)

TO: Third Party Inspection Agencies, Building Officials, Modular Manufacturers and Other Interested Parties

FROM: Michael J. Hamm, P.E.
Chief Building Code Consultant
Manufactured Building Division

SUBJECT: Minimum Pier and Footing Sizes for Commercial Modular Units

Questions have arisen concerning the minimum pier and footing sizes for single story, wood frame commercial modular buildings. Taking into account the type and scope of construction that is normally utilized for *single story, wood frame* modular buildings, the policy of the Manufactured Building Division is as follows:

1. The unit must fully conform to the description of *Light-Frame Construction* as given in **Chapter 2, Definitions**, in the *NC Building Code, 2018 Edition*.
2. The unit must not exceed one story in height.
3. As is the case with all NC modular units, the approved plans must include a generic foundation plan which assumes a relatively level site and a presumptive soil bearing capacity of 2,000 psf. *Foundation plans which specify the minimum pier and footing sizes as described in this memo must be sealed by a North Carolina professional engineer.* If a specific site, in the judgment of the local official, differs substantially from these assumptions (i.e., soil bearing capacity less than 2,000 psf, sloping site, etc.), then an independent site investigation and a sealed foundation design *specific to the site* will be required.
4. The minimum size for a plain concrete or masonry footing shall be 16"x 16" x 8" thick. Spacing shall be dictated by the calculated maximum load for the piers.
5. The minimum cross-sectional dimensions for CMU piers for NC commercial modular units shall be 16"x 16". Calculations, sealed by a North Carolina professional engineer, for the maximum capacity of the 16"x 16" CMU piers, including height limitations, shall be included as part of the Manual package for any modular manufacturer using the sizes referenced in this memo.

cc: Barry Gupton, P.E. -- Technical Services Manager
Joseph H. Sadler, Jr., P.E. -- Deputy Director

OFFICE OF STATE FIRE MARSHAL