MEMORANDUM

Date: October 21, 2015 (replaces September 16, 2015 Tiny Homes in North Carolina memo)

To: Code Officials, Manufacturers, Consumers, and other Interested Parties

From: C. Patrick Walker, PE
Technical Services Manager
Manufactured Building Division
Office of State Fire Marshal/NC Department of Insurance

Re: Guidelines for Tiny Homes in North Carolina

There has been a nationwide movement recently regarding the usage of “Tiny Homes” as a viable single-family dwelling. Tiny Homes are acceptable as permanent single-family dwellings in North Carolina provided they meet the following minimum requirements.

**NOTE: This is not intended to be an all-inclusive list of requirements.** All code references are to the *North Carolina State Residential Code, 2012 edition* unless otherwise noted.

**Tiny Homes in North Carolina**

**Administrative Requirements**

1. Must be permitted by the local building official having jurisdiction over the building site – *Section 106.1 - NC Administrative Code and Policies, 2012 Edition*
2. Must be of open construction so unit can be fully inspected by the local building official – *Section 107.1 - NC Administrative Code and Policies, 2012 Edition*
3. May be constructed of closed construction at an off-site location if the off-site construction is inspected and certified under the NC Modular Construction Program. *NC General Statute 143.139.1*
4. Must meet local zoning and set-back requirements as applicable
5. Must meet community protective covenant requirements as applicable

**Construction Requirements**

1. Unit and its foundation must comply with the *North Carolina State Residential Code, 2012 Edition – Section 101.3.2.11 NC Administrative Code.*
2. Habitable Space is defined as a space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered *habitable spaces.* - *Section R202*
3. Must have at least one habitable room with not less than 120 square feet of gross floor area - *Section R304.1*

4. Other habitable rooms must have not less than 70 square feet of floor area - *Section R304.2* - Exceptions: Kitchens

5. Habitable rooms must not be less than 7 feet in any horizontal dimension - *Section R304.3*

6. Ceilings Height Effect on Room Area – Portions of a sloped ceiling measuring less than 5 ft. or a furred ceiling measuring less than 7 ft. from the finished floor the finished ceiling shall not be considered as contributing to the minimum required habitable area for that room.

7. Ceiling heights must be a minimum 7 foot in habitable spaces, hallways, bathrooms, and toilet rooms – *Section R305*

8. Every dwelling unit must have toilet facilities – water closet, lavatory, and a bathtub or shower – *Section R306.1*

9. Must have a kitchen area with a sink – *Section R306.2*

10. All plumbing fixtures must be connected to a sanitary sewer or to an approved private sewage disposal system – *Section R306.3* (Storage tanks are not acceptable)

11. Must be provided with a heating facility – *Section R303.8*

12. Must meet the means of egress requirements - *Section R311*

13. Must meet the energy conservation requirements – *Section N1101.1*

14. **IF the unit is constructed through the NC Modular Construction Program**, the unit must also meet the following minimum construction and design standards for modular homes - *NC General Statute GS § 143-139.1*,

   1. Roof pitch. - For homes with a single predominant roofline, the pitch of the roof shall be no less than five feet rise for every 12 feet of run.

   2. Eave projection. - The eave projections of the roof shall be no less than 10 inches, which may not include a gutter around the perimeter of the home, unless the roof pitch is 8/12 or greater.

   3. Exterior wall. - The minimum height of the exterior wall shall be at least seven feet six inches for the first story.

   4. Siding and roofing materials. - The materials and texture for the exterior materials shall be compatible in composition, appearance, and durability to the exterior materials commonly used in standard residential construction.

   5. Foundations. - The home shall be designed to require foundation supports around the perimeter. The supports may be in the form of piers, pier and curtain wall, piling foundations, a perimeter wall, or other approved perimeter supports. (1971, c. 1099; 1989, c. 653, s. 2; 2003-400, s. 17.)

15. **IF the unit is constructed through the HUD Manufactured Housing Construction Program** the unit must also contain a minimum of 320 sq. ft. of floor area when erected. *24 CFR 3280.2 - Definition of Manufactured Home*
NCDOI NOTE: This memo addresses structures intended for use as a permanent single-family dwelling. Units that are manufactured and certified by the Recreational Vehicular Industry Association (RVIA) are considered recreational vehicles and should be treated as such.

NCDOI NOTE: See the NCDOI Recreational Park Trailer Memo for Requirements for Recreational Park Trailers (Park Models, Park Model RV’s)
Creating the structure for a tiny home.

Start out by getting the trailer set up on a level area. If the area is not level then make the proper adjustments to level the trailer. I usually go with 1 jack stand per corner. You can purchase jack stands at any automotive shop, Lowes, Home Depot and Northern Tool. You can also have leveling jacks welded to the corners of the trailer.

A trailer is **NEVER** perfectly straight

- Find the highest point of the trailer and make sure all of your measurements are based off of that point. (a transit can be very helpful for this)

- Pull strings from end to end to find an equal point from which you can level.

- Once the trailer is level and secure you can start with your floor system.

- After the decking has been applied make sure you know what your tallest stud height will be.

- Pull a string across the top of the trailer edge. This way you can take measurements for each stud by adding or subtracting the amount of space under your string.

- Subtract 4 1/2" for your bottom and top plates, this gives you an actual stud height.

- Add your bottom plate to the top of the decking and use 1/2" x 5" galvanized carriage bolt every 24"-36". Now you are tied to the trailer with your plate!

- Lay out your plate where your studs will go and window openings etc.

- Pull your string again to double check your stud heights.

- After you cut studs, jacks, cripples and build headers you can start assembling the wall.
Once you have your wall framed and braced off

- Double check with your level and your desired height. (Your top plate should be perfectly straight and not have any kind of bow in it like the trailer might.)

- After all the walls are built, you can attach your hardware to the studs with a Stud Plate Tie. (This goes from your plate to your stud on the bottom and using a taller stud plate tie for the top... you can hit both top plates.)

**Attaching the plywood**

**Glue, Screw and Nail !!!**

- Run your plywood horizontal... Most plywood structure is horizontal unless it is otherwise noted.

- Use a flexible glue. (I have had great luck with sub Floor adhesive. It will allow any movement and not crack away.)

- Screw every 12’ or so. Use 10d ring shank nails every other 12”. (Screws will keep it tight while nails have more tinsel strength.)

- Make sure to cover all window holes and attach nails and screws to the pressure treated plate.

- Leave the last row of plywood off to attach to the rafters.

- Cut out all window holes after wall is finished.

**The Roof**

**Whatever roof design you may choose is up to you**

- While dealing with a ridge beam there has to be some kind of lateral support underneath. Lofts are really good for this along with storage areas toward the front of the structure. Otherwise you will be using a structural ridge beam and it will lower your central head space drastically. Shed roofs do require some lateral support in the same way for portable models.

- Cut your rafter to be flush with the outside edge of your walls top plate. This will allow you to tie your plywood to the rafter. By doing so you will be tying the trailer to your roof system.

- Use rafter ties (hurricane clips) on the inside of the structure to add support and connection to the framed wall system.
After attaching the rafter to the ridge beam use an 18” x 1 1/2” metal strap to connect the rafters to the ridge in order to add strength to the whole unit.

Insulation

Polyurethane is a closed-cell foam insulation material that contains a low-conductivity gas in its cells. As a result of the high thermal resistance of the gas, spray polyurethane insulation typically has an R-value around R-5 to R-6 per inch.

Advantages of open and closed-cell spray insulation in residential applications

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<td>Able to deflect water and reject bulk water</td>
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<td>Able to accommodate seasonal movement</td>
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Green Building

History of Green Building

History of Green Building – Historical Buildings

Green building is defined by the Office of the Federal Environmental Executive as “the practice of: 1) increasing the efficiency with which buildings and their sites use energy, water, and materials, and 2) reducing building impacts of human health and the environment, through better siting, design, construction, operation, maintenance, and removal throughout the complete life cycle.” While the green building movement has gained momentum in the last decade, the origin can be traced back to the late nineteenth century.

According to David Gissen, curator of architecture and design and the National Building Museum in Washington DC, structures such as London’s Crystal Palace and Milan’s Galleria Vittorio Emanuele II used methods that decreased the impact of the structure on the environment. Systems such as roof ventilators and underground air-cooling chambers were used to regulate indoor air temperature. In the early twentieth century, several skyscrapers such as the Flatiron Building and the New York Times Building in New York utilized deep-set windows and the Carson Pirie Scott department store in Chicago had retractable awnings. Both of these techniques were effective in controlling interior temperature while lessening the buildings’ impact on the environment.

From the 1930’s through the 1960’s, the forward thinking cooling methods mentioned above gave way to some new building technologies that would change inner-city building construction dramatically. The invention of air conditioning, reflective glass, and structural steel popularized the enclosed glass and steel buildings that litter the American city today. These buildings were able to be heated and cooled with massive HVAC systems that consumed huge amounts of cheap and readily available fossil fuels. The massive consumption of energy required to inhabit these buildings made their viability tenable and entirely dependent upon energy availability and cost.

History of Green Building – The Infancy

Around the time that the “glass box” style high rise had become the icon of the American city (circa 1970), a forward thinking group of architects, environmentalists, and ecologists were inspired by the growing environmental movement and the higher fuel costs that were prevalent during the 1970s. The genesis of these two scenarios ultimately resulted in the modern build green movement.

The first Earth Day, celebrated in April 1970, gave some credence to this new building concept, but the OPEC oil embargo of 1973 gave the burgeoning environmental movement, and subsequently the green build effort, the kick start it needed. With gas lines stretching for blocks, some Americans began to question the conventional wisdom that we should be so independently reliant upon fossil fuels for our energy.

As a result of the oil embargo, amongst other energy concerns, the American

Institute of Architects (AIA) formed a Committee on Energy that was broken into two camps. "One group looked toward passive, such as reflective roofing materials and environmentally beneficial siting of buildings, to achieve energy savings, while the other concentrated more on technological solutions, such as the use of triple-glazed windows."

As energy concerns subsided, momentum for green building and the environment, in general, slowed down, but a dedicated core-group of architects continued to push their green building concept forward. A couple of notable buildings constructed during the seventies which utilized concepts of green design are: The Willis Faber and Dumas Headquarters in England, which utilized a grass roof, day-lighted atrium, and mirrored windows; the Gregory Bateson Building in California, which used energy-sensitive photovoltaic (solar cells), under-floor rock-store cooling systems, and area climate-control devices.

Through the late seventies, throughout the eighties, and into the early nineties, much research was commissioned on energy efficient processes. This research resulted in more effective solar panels, pre-fabricated efficient wall systems, water-reclamations systems, modular construction units, and direct usage of light through windows in order to decrease day-time energy consumption.

History of Green Building – The Greening of the White House

When Bill Clinton was elected President in 1992, the green build/sustainability communities began to toss around the idea of “Greening the White House” as a way to put their ideas on the radar of everyday American society. Twenty-three years after the initial Earth Day, Bill Clinton announced a plan to make the White House the “model for efficiency and waste reduction.”

The “Greening of the White House” program was designed to improve “energy efficiency and environmental performance of the White House complex by identifying opportunities to reduce waste, lower energy use, and make an appropriate use of renewable resources, all while improving the indoor air quality and building comfort.” In March 1996, it was reported that through the first two years of the “Greening” project, more than $150,000 per year in energy and water costs, landscaping expenses, and expenditures associated with solid waste were saved. Since 1996, $300,000 has been saved annually due to additional projects. In all, 845 metric tons per year of carbon emissions were eliminated during Clinton’s presidency.

Some of the methods utilized to “green” the White House are as follows:
1. Building Envelope – decreasing energy lost through the roof, windows, walls, etc.
2. Lighting – utilizing energy-saving light bulbs and maximizing use of natural light.
3. Plug Loads – Energy-saving office equipment was installed. Refrigerators and coolers were replaced with more energy-efficient models.
4. Waste – a comprehensive recycling program was initiated.
5. Vehicles – leased many vehicles that utilized cleaner burning fuels.

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9 Photovoltaic Fundamentals, www.fsec.ucf.edu/pvt/pvbasics
History of Green Building – Where are we Now?

With the overwhelming success of the “Greening of the White House” other governmental institutions have since been given a green makeover. The Pentagon, the Presidio, and the U.S. Department of Energy, among others have gone green. 

The concepts of building green and, on a larger scale, sustainability are ideas that we hear all of the time. These two concepts, however, are rarely properly understood. “Sustainability is a systemic concept, relating to the continuity of economic, social, institutional and environmental aspects of human society, as well as the non-human environment. It is intended to be a means of configuring civilization and human activity so that society, its members and its economies are able to meet their needs and express their greatest potential in the present, while preserving biodiversity and natural ecosystems, and planning and acting for the ability to maintain these ideals for a very long time. Sustainability affects every level of organization, from the local neighborhood to the entire planet”. In short, the concept of sustainability refers to thinking holistically about how everything you do affects everything around you. It is an attempt to minimize each person’s impact on the world.

Today, green building is one of the fastest growing building and design concepts. Every month new magazines are popping up that report on this growing trend. Architects, designers, and homeowners are becoming infatuated with the cost saving possibilities, energy saving emphasis, modern look, and the symbiotic relationship with nature that green buildings possess.

The United States Green Build Council (USGBC) is the foremost leader and educator within the world of green building today. They are the sanctioning body for LEED, the program with which points are awarded to various design applications within a building ultimately resulting in LEED certification for the building.

USGBC (The United States Green Build Council) & LEED (Leadership in Energy and Environmental Design)

USGBC

The USGBC was created to promote the design and construction of buildings that are environmentally responsible, profitable, and healthy places to live and work. They are focused on integrating building industry sectors and leading a market transformation towards greener construction. The organization consists of various trade associations, architects, designers, and individuals all interested in the greening of the construction business.

Between 1990 and 1995, the USGBC worked feverishly with the American Society of Testing and Materials in order to create a rating system for sustainability. ASTM’s rigorous consensus-based process moved much too slowly for the USGBC and in 1995 it was determined that they would create their own rating system to exist under the USGBC banner. A committee was formed to study other green building programs currently in existence and after three years LEED 1.0 unveiled. By 2003, LEED was refined down to its current form that is the talk of the construction and design communities.

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17 http://en.wikipedia.org/wiki/Sustainability
18 “An Introduction to the USGBC and LEED Green Building Rating System”, www.usgbc.org
LEED

In short, LEED is a system for designing, constructing, and certifying green buildings. Buildings are classified as Certified, Silver, Gold, or Platinum depending upon the number of points they acquire within 6 building components:

1. Sustainable Sites
2. Water Efficiency
3. Energy and Atmosphere
4. Materials and Resources
5. Indoor Environmental Quality
6. Innovation and Design Process

Within each of these categories, there are specific number of credits available via many subcategories. LEED ratings are rapidly becoming boasting points for property owners with property values of LEED certified buildings skyrocketing.

LEED has been assisted in its success by the early adoption of many government agencies. Today, however, it is mostly a market driven engine with the number of LEED registered projects growing each year.

Characteristics of LEED Building

Site Design and Planning

- Site a building within close proximity of commuter rail or bus lines, to reduce pollution and any land-development impacts associated with increased automobile usage.
- Establish building specifications that maintain the current level of storm-water runoff, or decrease the amount of imperviousness already existing onsite.
- Develop a site with a minimum density of 60,000 square feet per acre. Channeling development to urban areas with existing infrastructure protects green spaces and preserves natural habitats and resources.

Material and Product Selection

- Use building materials and products that contain post-consumer recycled content.
- Support the regional economy by using materials and products manufactured regionally.
- Encourage environmentally responsible forestry through the use of wood or wood-based material that meets Forest Stewardship Council’s Principles and Criteria for wood building components.
- Utilize rapidly renewable materials, such as bamboo flooring, wool carpets, strawboard, cotton ball insulation (made from denim scrap), genuine linoleum flooring, or poplar oriented-strand board (OSB). Using rapid renewables helps reduce the use and depletion of finite raw materials.

Construction and Demolition Waste Management

- Develop and implement a waste management plan that diverts a substantial amount of construction, demolition, and land-clearing debris from landfills to recycling or salvage facilities.
- Reuse a percentage of salvage or refurbished materials from construction, demolition, or land clearing as new building material. For more information on the benefits of salvaging materials from existing sites, go to www.deconstruction.com.

Energy and Atmosphere

- Generate building electricity on site, from renewable resources like geothermal, solar, or biogas sources.
- Eliminate the use of CFCs (chlorofluorocarbons) in new heating, ventilation, air-conditioning, and refrigeration (HVAC & R) systems.
Eliminating the use of CFCs reduces ozone depletion.

- Contract with a green power provider to purchase building electricity generated from renewable resources, such as solar, wind, geothermal, biomass, or low-impact hydro sources.
- Optimize energy performance.

**Water Management**

- Install water-efficient or low-flow equipment and appliances in kitchens and bathrooms to reduce water consumption.
- Use water-efficient irrigation, captured rain, or site-recycled water for onsite landscaping.
- Utilize innovative wastewater technologies, such as treating waste water on site or significantly decreasing the amount of potable water used for sewage conveyance.

**Indoor Environment**

- Design the HVAC system and building envelope to provide for the most optimal delivery and mixing of fresh air. Effective air exchange supports the safety, comfort, and well-being of building occupants.
- Reduce the number of indoor air contaminants by selecting paints and coatings, adhesives, carpets, and composite woods that emit low VOCs (volatile organic compounds) or none at all. Examples of low VOC emitting products are carpets made of wool, carpets made of recycled plastic bottles, and low VOC paint.
- Establish segregated areas for chemical-using operations (such as copy/printing rooms and housekeeping); these areas should have separate outside exhaust and no air recirculation.
- Maximize day lighting and view opportunities. Day lighting and increased view opportunities can save energy costs and enhance worker productivity.²¹

**Stone in Green Building**

**What is Stone’s Current Perception**

With the growing influence of green building, it is imperative that the natural stone industry does everything it can to position its product as being green friendly. Despite what many of us in the industry may think (natural stone is about as green as something can get), that perception is at odds with the prevailing thought among the architecture and design communities. Much of these misconceptions arise from the inaccurate idea that mining natural stone is somehow on par with strip mining, an environmentally devastating practice.

One facet of LEED certification where natural stone stands out is in product origin. A major tenant within the green community is that of supporting local products and business. LEED points are available for products whose origin or manufacturing is within 500 miles of the building site. Regionally manufactured and extracted materials reduce environmental impact by lowering emittance of greenhouse gases during transportation while supporting local economies. Fortunately for the stone industry, there is a quarry site within 500 miles of nearly everywhere in the United States and Canada.

**Future Areas of Emphasis**

There are some areas where natural stone should be an obvious choice for green builders, but in which further research is needed to prove the hypothesis:

- The enduring life cycle of natural stone makes it a great green build option. Because stone has proven that over the

centuries it holds up to weathering and time better than any other building material; one would think that less energy would be consumed by the initial fabrication and installation than in manufacturing and replacing another product.

- The ease of care and maintenance involved with maintaining natural stone applications should be very attractive to those in the green community. Harsh chemicals are not needed to either clean or finish stone.
- The recyclability of natural stone is unequaled. Nearly 100% of stone from old projects and scrap stone are recyclable.

These components of natural stone use need to be studied and reported on adequately before the natural stone industry can go to the USGBC and request LEED certification points.

**Quarrying**

In the past 15-20 years, the business of quarrying has been vastly cleaned up from an environmental perspective. Quarries today are required to comply with a strict code of practice and are monitored by OSHA, the Bureau of Mines of the US Department of the Interior, EPA, the Department of Resources and Economic Development, and the Mine Safety and Health Administration among others. This message needs to be spread throughout the entire construction industry. Quarrying is not what it was 20 years ago and certainly not what it was 50 or 100 years ago.

Quarry reclamation projects have added to the ability of quarries to limit their long term impact on the environment. Today, many old quarries are being turned into golf courses, lakes, recreations areas, and state parks. A list of quarry reclamation projects appears at the end of this chapter as examples of how old quarry sites can be successfully utilized for the public good.

As technology moves forward, the greening of quarrying will continue and this will, in turn, continue to further enhances natural stone’s position among the green community.

**The Committee on Sustainability**

In order to properly position natural stone, to research elements of building with natural stone that would qualify for LEED points, and to market the use of natural stone as a green product, the Natural Stone Council has commissioned a Committee on Sustainability. The NSC’s Committee on Sustainability will take the lead for the industry in ensuring that stone becomes a viable green building option. A couple of early initiatives for the committee are establishing a set of green best practices for quarrying and fabrication. The committee is also pursuing the commissioning of studies to research Life Cycle Assessment, Life Cycle Cost, Water Use Reduction, Construction Waste Management, and Material Reuse for the Natural Stone Industry. While the initiatives being undertaken by the Committee on Sustainability are aggressive, they are greatly needed in order to ensure that stone becomes a viable option for green building.

**Quarry Reclamation Site List**

Quarry Park and Nature Preserve  
County of Stearns, MN  
[http://www.co.stearns.mn.us/1450.htm](http://www.co.stearns.mn.us/1450.htm)

Halibut Point State Park  
Gloucester, MA  
[http://www.mass.gov/dcr/parks/northeast/halb.htm](http://www.mass.gov/dcr/parks/northeast/halb.htm)

The Quarry Golf Club  
San Antonio, TX  

Oak Quarry Golf Club  
Riverside, CA  

Crystal Springs Quarry Golf Club  
Maryland Heights, MO  
Old Quarry Nature Center
Danbury, CT
http://www.danbury.org/oldquarry/

Quarry Lakes Regional Recreational Area
Fremont, CA
http://www.ebparks.org/parks/quarry.htm

Quarry Oaks Golf Club
Ashland, NE
http://www.quarryoaks.com/

Bomoseen State Park
Fair Haven, VT
http://www.vtstateparks.com/htm/bomoseen.cfm

Natural Bridge State Park
North Adams, MA
http://www.mass.gov/dcr/parks/western/nbdg.htm

Elephant Rocks State Park
Belleview, MO
http://www.mostateparks.com/elephantrock.htm

Canoe Creek State Park
Hollidaysburg, PA
http://www.dcnr.state.pa.us/STATEPARKS/PARKS/canocreek.aspx#history

Banning State Park
Sandstone, MN
http://www.dnr.state.mn.us/state_parks/banning/index.html

Sleeping Giant State Park
Hamden, CT
http://www.sgpa.org/

Knightdale Environmental Education Park
Knightdale, NC
http://www.hsmm.com/UPLOADS/BD/News/20050427_013046/Art_Knightdale_Ltnd%20Wtr_10%2004%20(0nal).pdf

Emerald Lake State Park
East Dorset, VT
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When reviewing a request for the issuance of an oversize/overweight permit, the North Carolina Department of Transportation’s top priority is the safety of the motoring public and the protection of our state highway system.

The NCDOT Oversize/Overweight Permit Handbook is provided to answer questions relating to movement of qualified vehicles and/or commodities that exceed the specified limits in North Carolina law.

This booklet is for general information. Specific publications are available upon request. Please refer to page 25.

**Width**
102 inches (8 feet 6 inches) – on all roads in North Carolina

**Height**
13 feet 6 inches

**Weight**
Gross weight is determined by the extreme axle measurement (federal bridge law)
Single axle – 20,000 pounds
Tandem axle – 38,000 pounds

**Length**
Single vehicle – 40 feet
Vehicle combination – 60 feet

**Exception:** (Truck tractor/48-foot semi-trailer combination with no overall length limitation is allowed on all roads and truck tractor/53-foot semi-trailer combination, with no overall length limitation is allowed on all North Carolina primary (NC, US and Interstate) routes unless restricted.

***Publication M-13***

**Overhang**
Rear overhang in excess of 4 feet is required to display a 18-inch-square red flag for daytime travel and clearance lights during nighttime travel. Loads shall not extend more than 14 feet beyond the rear of the bed or body of the vehicle. Maximum overhang is limited to 14 feet.

***Publication L-14***
Permits

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To qualify for a permit:

1. **Overweight**
   One item/commodity qualifies for overweight; multiple items do not qualify for an overweight permit.

2. **Overwidth**
   One item/commodity or multiple items loaded in line qualifies for overwidth; multiple items cannot be loaded side by side creating width exceeding 8 feet 6 inches.

3. **Overlength**
   One item/commodity of continuous length qualifies for overlength; multiple items cannot be loaded in line creating overlength in excess of limits specified by North Carolina law dependent upon route of travel.

4. **Overheight**
   One item/commodity qualifies for overheight; stacked items/commodities cannot exceed the legal height of 13 feet 6 inches.

*It is the responsibility of the permittee to reduce all overdimension and/or overweight loads to the least dimension and weight prior to application for a N.C. permit.*

Application

Telephone

A total of four permit requests may be accepted during one telephone request. Multiple permits for one multi-sectional mobile home is considered one permit request.

**Toll Free Calls**
1-888-574-6683 (single trip permit)
1-888-221-8166 (administrative personnel/annual permit/superload permit)

**Local Calls**
(919) 733-7154 (single trip permit)
(919) 733-4740 (administrative personnel/annual permit/superload permit)
Fax

**Toll Free Fax:** 1-888-222-8347

**Single Trip:** (919) 733-7828; (919) 733-7921

**Annual:** (919) 715-5616

Address (walk-in and mail)

(annual and single trip permit)

Oversize/Overweight Permit Unit

1425 Rock Quarry Road, Suite 109

Raleigh, NC 27610

**Directions:** I-40, Exit 300

Internet

The Internet Permit Application System provides an easy way to apply for single trip permits.

To use this system, you must register with our office. A user identification and password is required for access to the system. Internet Explorer 4.0 or Netscape 4.5 or above is required.

For a registration packet including more information, call the NCDOT Central Permit Office at (919) 733-4740 or 1-888-221-8166.

Method of Payment

**Cash or Company Check**

PERSONAL CHECKS CANNOT BE ACCEPTED

**Credit Card**

American Express, MasterCard, Discover or VISA are accepted.

**Direct Fax Escrow Account**

(single trip permits only)

An application and escrow deposit are required to establish the account allowing a participant to receive permits directly from the Central Permit Office. A monthly activity statement will be mailed.

***Publication DF-4***

Permit Service Agencies

(single trip permits only)

Contact the Central Permit Office for a current listing of permit service agencies doing business with our office.

***Publication PSA-10***
Fee $100 per vehicle (non-divisible general commodities)
$200 per vehicle (mobile homes)

Valid One year from effective date

Width 12 feet maximum*
(14 feet farm equipment)

Length 105 feet hauling one item commodity
or truck tractor/48-feet semi-trailer combination hauling multiple commodities in line (not route specific)
53 feet semi-trailer combination hauling multiple commodities in line (route specific - primary routes only)
60 feet with truck/trailer combination hauling multiple commodities in line
105-feet toter/mobile home combination

Height 13 feet 6 inches (legal)

Overweight (One item) Minimum 51-foot wheelbase, vehicle combinations can qualify for movement up to 90,000 pounds. (Travel not authorized on posted roads or posted bridges.)
Over 90,000 pounds, route specific (exact origin, detailed route and destination).

Identified by Power unit license and serial number

Issued to Registered owner of power unit

* Mobile homes not exceeding unit width of 14 feet with a total roof overhang of 12 inches may apply for an annual permit if moving within a 25-mile radius from a specific dealer sales lot (permit coissued) to customer’s homesite, another dealer or out of state. (PF-27)

* Mobile homes not exceeding unit width of 14 feet with a total roof overhang of 12 inches or 16 feet with maximum of a 3 inch gutter edge may apply for an annual permit if moving from a specific manufacturing facility to a specific dealer sales lot identified by dealer name and license number (maximum 30 routes). (PF-27 & PF-27A)
Gross Weights

5, 6 or 7 axles 90,000 lbs.  
(minimum 51-foot wheelbase)  
(annual permit – not to cross posted roads or posted bridges)

5 axles 94,500 lbs. *  
(*112,000 pounds with minimum 51-foot wheelbase)  
(annual permit - up to 10 specific routes) (PF-2A)

6 axles 108,000 lbs. *  
(*120,000 pounds with minimum 51-foot wheelbase)  
(annual permit - one specific route) (PF-2A)

7 axles 122,000 lbs. *  
(*132,000 pounds with minimum 51-foot wheelbase)  
(annual permit - one specific route) (PF-2A)

Annual Permit inquiries: 1-888-221-8166

Fee $12 - $48 (state fee)
Valid 10 calendar days for one single trip
Width 15 feet maximum (mobile home may be permitted up to 16 feet)
Length No overall length limitations, with the following exception:  
105 feet maximum for mobile homes/total combination
Height Maximum determined by vertical clearance along authorized route of travel
Overweight One item route specific (exact origin, detailed route and destination)
Identified by Power unit license and serial number
Issued to Registered owner of power unit

• The following weights do not apply to self-propelled vehicles or off-road equipment.

• Maximum permit weight allowed is determined by the number of load supporting axles; allowable bridge structure weights.

Axle weights:

Steer axle 20,000 lbs.
Single axle 25,000 lbs.
Tandem axles 50,000 lbs.
Tridem axles 60,000 lbs.
4 or more axle grouping 68,000 lbs.
Gross Weights

5 axles  94,500 lbs.*
(*112,000 pounds with minimum 51-foot wheelbase)
(single trip permit - one specific route)

6 axles  108,000 lbs.*
(*120,000 pounds with minimum 51-foot wheelbase)
(single trip permit - one specific route)

7 axles  122,000 lbs.*
(*132,000 pounds with minimum 51-foot wheelbase)
(single trip permit - one specific route)

Route of Travel - Must include exact origin, detailed route and exact destination. County/state road numbers and routes are required. County alpha and numeric listings are available on the Permit Unit website at: www.ncdot.gov/~osowpermits.

- May include a return trip to the original point of origin, if requested at original time of issue. The return trip must be completed within the validation date of the permit.
- Interstate Commerce Commission number, or ICC#, is required for interstate (across state lines) travel.

***Publication GP-1***

Superload Permit

- $100 non-refundable application fee
- State fee ($12 – $48) will be charged in addition to $3 per 1,000 pounds over 132,000 pounds gross weight.
- Gross weight exceeds 132,000 pounds.
- Gross weight on steer axle exceeds 20,000 pounds.
- Width exceeds 15 feet (shipper’s letter required).
- Requires a written superload application (PF-20) to include vehicle combination schematics (axle spacing and distribution of weight) and documentation for variances.
- Request must be made at least 10 working days prior to the anticipated date of movement to allow for internal and bridge engineering reviews.

Superload inquiries: 1-888-221-8166

***Publication SL-6***
The permit is required to be issued in the name of the registered owner of the insured power unit. The permittee is responsible for total compliance with permit rules and regulations.

Violations of weight, escort, dimension and other restrictions or conditions stated on the permit may result in your permit being considered invalid by the Central Permit Office and/or enforcement personnel. A violation or repeated violations may result in denial, suspension or revocation of North Carolina permit privileges.

Must comply with legal requirements for proper license, insurance coverage and operating authority for each vehicle to be permitted.

The object(s)/item(s) transported are to be loaded or reduced to the smallest dimensions and/or weight prior to applications for an over-dimension and/or overweight permit.

Proof the permit document for accuracy prior to travel on North Carolina highways. If the document is incorrect, permittee is to immediately contact the NCDOT Central Permit Office prior to movement on North Carolina highways.

Properly sign the permit to verify you have read and fully understand the requirements.

Responsible for damages and cost involved to persons or property as a result of the permitted movement.

Total compliance with North Carolina law and permit policies and restrictions specified on permit document.

Maintain a speed consistent with safety of the traveling public and avoid creating traffic congestion.

Permittee shall temporarily move to the side of the highway to allow trailing traffic to pass.

Disclaimer

The issuance of a permit by the NCDOT does not imply nor guarantee the clearance for the permitted load(s). All vertical clearances should be checked by the permittee before moving beneath the structure and/or utility lines.
Permits may be issued not to exceed a maximum width of 15 feet.

A non-divisible general commodity would include but is not limited to:

- Construction equipment
- Machinery (farm and business)
- Sealed ship containers
- Self-propelled equipment
- Tanks
- Transformers
- Trusses/beams

**General Requirements:**

- Escorts are required as specified in the Equipment Safety Requirements section of the handbook.
- Overheight permit applications (in excess of 14 feet) are required to be faxed or submitted via the internet to the Central Permit Office for review and processing.

***Publication GP-1***

**Houses**

- House mover license applications and supporting documentation are renewed and issued by the Central Permit Office. The annual fee is $100.
- House move permit applications are accepted, reviewed and issued by NCDOT division/district offices statewide.
- NCDOT offices statewide have the authority to approve, deny or permit with various restrictions after reviewing the route of travel and dimension(s) of structure to be moved.
A $20 non-refundable fee is required for house move permit applications. Application is required to be made at least two working days prior to the anticipated date of movement.

**Mobile/Manufactured Homes**

**Single Trip Permit** is required for:

- 12-foot-wide units (width at bottom of unit) with overhang exceeding 3 inch gutter edge.

- 14-foot-wide units with roof overhang not to exceed a total of 12 inches that are not operating by authority of an annual permit.

- 16-foot-wide units that are not operating by authority of an annual permit. Issuance of permits for movement of 16-foot-wide unit(s) in specific geographical areas within the state will require a route survey to be completed.

- Units exceeding the legal height of 13 feet 6 inches.

- For all other mobile home movement not covered by authority outlined on an annual permit.

**Additional information required:**

- Serial number of mobile home (last five digits).

- ICC registration number is required when crossing state line(s).

**Annual (Blanket) Permits** may be issued for:

- Movement of 12-foot-wide units that do not exceed the legal height of 13 feet 6 inches.

- 14-foot-wide units with roof overhang not to exceed a total measurement of 12 inches or 16’ wide units with maximum 3” gutter edge moving from point of specified manufacturer to a specific retail sales center (manufacturer name and dealership name and dealer number are required), may include up to a maximum of 30 specific routes of travel.

- 14-foot-wide units with roof overhang not to exceed a total measurement of 12 inches moving within a 25-mile radius from a specific dealer sales lot (permit coissued) to customer’s homesite, another dealer or out of state.

***Publication MH-2***
North Carolina licensed manufacturers and mobile home dealers are required to maintain records of all permitted movement and submit a monthly report to the Central Permit Office by the 10th of the next month for mobile home transactions covered by an annual permit on forms PF-25 (dealer) and PF-26 (manufacturer).

Failure to comply with the requirements to maintain and submit the required monthly reports and/or repeated violations may be grounds for denying, suspending or revoking manufacturer’s or dealer’s license issued by the Division of Motor Vehicles, or refusal to renew a permit, suspend or deny North Carolina oversize permit privileges.

Title 19A NCAC 03D.0219 Business Records

(b) All motor vehicles dealers, manufacturers, factory branches, distributor branches and wholesalers shall keep for a period of four years the following additional records for each vehicle and mobile/modular home manufactured, received, sold, traded or junked:

(7) The North Carolina oversize single trip or annual permit number authorizing movement of the mobile/modular unit, serial number or vehicle identification number of the mobile/ modular unit, the date of move, transporter, and name and address of purchaser.
Sealed Ship Container

A sealed ship container is defined as containerized freight being transported to or from a designated seaport and has or will be transported by marine shipment for International trade with the original unbroken seal or a replacement seal affixed by an authorized government agency.

A sealed ship container must meet all of the following requirements to qualify for a permit:

- All dimensions of width, height and length do not exceed limits specified in North Carolina law;
- Traveling to or from a designated seaport (either in state or out of state) and has been or will be transported intact by marine shipment;
- Power unit is licensed for 80,000 pounds;
- Is a vehicle/vehicle combination of at least five axles; and
- Has proper documentation (shippers’ bill of lading and/or trucking bill of lading) of sealed commodity being transported available for enforcement inspection.

Allowable weights are specified in the Annual Permit and Single Trip Permit sections of the handbook (See pages 6 and 7).

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Self-Propelled Equipment

The original permit request – annual or single trip permit – for cranes or off-road equipment must include schematics of the unit including axle spacings, axle weights, gross weight, width, overall length and length of front and/or rear overhang.

The maximum permitted gross weight varies depending on extreme wheelbase and axle grouping measurement.
PERMITS ARE NOT TRANSFERABLE. If a permitted vehicle is wrecked, sold, traded or junked, a new permit must be issued and the required fee(s) paid.

Oversize/overweight permits (annual and single trip) are issued with the requirements and restrictions customized on each permit document for the load being transported.

No movement is allowed on Sunday or between sunset and sunrise on any day unless otherwise stated on the permit.

Commodity being hauled must be loaded so that the vehicle/vehicle combination presents the least dimension and exposure to the motoring public.

The towing unit must be properly licensed for maximum allowable weight determined by extreme axle measurement (G.S. 20-118) prior to application for an overweight permit.

Permittee must be apportionately registered prior to travel into or through North Carolina as required by law. For more information, contact the DMV International Registration Plan Unit at (919) 861-3720.

Results of Permit Violations
Violations of weight, escorts, dimensions, route of travel or any other restrictions or conditions stated on the permit may result in the permit being considered invalid by the Central Permit Office and/or enforcement personnel. A violation or repeated violations may result in denial, suspension or revocation of North Carolina permit privileges.
Penalties for Permit Violations

G.S. 20-140

(f) A person is guilty of the Class 2 misdemeanor of reckless driving if the person drives a commercial motor vehicle carrying a load that is subject to the permit requirements of G.S.-20-119 upon a highway or any public vehicular area either:

1. Carelessly and heedlessly in willful or wanton disregard of the rights or safety of others; or
2. Without due caution and circumspection and at a speed or in a manner so as to endanger or be likely to endanger any person or property.

G.S. 20-119

(d) For each violation of any of the terms or conditions of a special permit issued or where a permit is required but not obtained under this section the Department of Crime Control and Public Safety shall assess a civil penalty for each violation against the registered owner of the vehicle as follows:

1. A fine of one thousand five hundred dollars ($1,500) for operating without the proper number of certified escorts as determined by the actual loaded weight or size of the vehicle combination.
2a. A fine of five hundred dollars ($500.00) for any of the following: operating without the issuance of a permit, moving a load off the route specified in the permit, falsifying information to obtain a permit, or failing to comply with dimension restrictions of a permit.
2. A fine of two hundred fifty dollars ($250.00) for moving loads beyond the distance allowances of an annual permit covering the movement of house trailers from the retailer's premises or for operating in violation of time of travel restrictions.
3. A fine of one hundred dollars ($100.00) for any other violation of the permit conditions or requirements imposed by applicable regulations.

The Department of Transportation may refuse to issue additional permits or suspend existing permits if there are repeated violations of subdivision (1) (1a), or (2) of this subsection.

(d1) In addition to the penalties assessed under subsection (d) of this section, the Department of Crime Control and Public Safety shall assess a civil penalty, not to exceed ten thousand dollars ($10,000), in accordance with G.S. 20-118(e)(1) and (e)(3) against the registered owner of the vehicle for any of the following:

1. Operating without the issuance of a required permit.
2. Operating off permitted route of travel.
3. Failing to comply with travel restrictions of the permit.
4. Operating without the proper vehicle registration or license for the class of vehicle being operated.

A violation of this subsection constitutes operating a vehicle without a special permit.
Amber Flashing Lights

**Type**
Rotating sealed beam or strobe.

**Size**
Minimum 5-inch diameter base with minimum 4-inch lens.

**Placement:**
Escort vehicles are required to display lights as specified above in good working condition on top of the vehicle. Escorts for 16-foot-wide mobile/modular homes should refer to Publication MH-2 for requirements.

Mobile homes are required to display lights in good working condition 72 inches from the road surface on all four corners of the mobile home with the option of mounting the required front lights on the mirror bar no less than the extreme width of the power unit.

Self-propelled vehicles are required to display lights of the size specified above – minimum 800-watt candle power on any front and/or rear overhang if vehicle is approved for continuous travel (24 hours/seven days a week/365 days a year).
**Banners**

**Size**
- **Vehicle combination:** the banner length totaling 7 feet wide by 18 inches high. Banner may be displayed in two sections to allow for visibility of registration plates/decals.
- **Escort vehicle:** the banner length to extend the entire width of the escort vehicle.

**Lettering**
- Black letters 10 inches high with 1.5-inch brush strokes bearing the legend “Oversize Load” or “Wide Load.”

The banner displayed on front and rear of a mobile/modular home combination and on top of a 16-foot-wide mobile/modular home escort must bear the legend “WIDE ____ FT. LOAD” or “OVERSIZE ____ FT. LOAD” to properly identify the nominal width of the unit in transport.

**Color**
- Yellow

**Placement:**
- **Vehicle combination:** Banner is to be displayed on the front and rear bumpers of any vehicle combination permitted for more than 10 feet wide. (May be two separate banners totaling a length of 7 feet to provide for display of registration plates/decals).
- **Escort vehicle:** Banners are to be displayed on the escort vehicle as determined by the required escort placement (front and/or rear) or on top of the vehicle for 16-foot-wide mobile/modular home escorts.

**Brake Lights**
- Red brake lights in good working order must be temporarily displayed on any rear overhang for self-propelled equipment approved for continuous travel (24 hours/ seven days a week/365 days a year).

**Escorts**

**Requirements:** All escort vehicle operators are required to obtain an approved escort certification prior to performing the duties of an oversize/overweight load escort vehicle operator in North Carolina.

- Front escort for permitted loads more than 12 feet wide on two-lane/two-way traffic highways and a rear escort on multi-lane highways or as determined and stated on the permit document by issuing agent.
- Rear escort required for permitted loads exceeding 110 feet in length.
- Escort vehicle requirements for 16-foot-wide mobile/modular homes are different from those for other escort vehicles. Refer to Publication MH-2.
• No driver or passenger other than a certified escort vehicle operator is allowed to travel in the escort vehicle.

• Front and rear escort required for overall length 150 feet or greater.

• Front escort required for weight greater than 149,999 pounds.

• Front and rear escort for permitted loads exceeding 14 feet in width on two-lane/two-way roads.

• Front pole car escort equipped with height pole indicator for permitted loads exceeding 14 feet 5 inches in height.

• Additional escorts may be required for any vehicle or vehicle combination with individual consideration of weight, width, length, height, weather, geographical location or route of travel as determined by issuing agent.

Vehicle Size (weight)
A truck of not less than a one-quarter-ton rated load capacity but not more than 17,000 pounds GVWR (gross vehicle weight rating) or a passenger vehicle of not less than 2,000 pounds gross weight.

Enforcement
Non-compliance of the requirement for escort(s) or incorrect placement of escort(s) as stated on the permit will result in the assessment of a civil penalty.

Identification
Placards or identification signs measuring at least 8 inches by 12 inches providing name and telephone number of the registered owner of the vehicle (company or individual) must be displayed on the right and left side of the vehicle.

***Publication E-9***

Flags

Color: Red or Orange

Size: 18 inches square

Placement: At widest point of overwidth or as specified on the permit.

Headlamps
Towing unit and escort vehicle(s) must burn headlamps during highway movement of permitted loads.

Height Pole Indicator
Required for front escort vehicle for overheight moves in excess of 14 feet 5 inches.
Mirrors

Rearview mirrors on towing units attached or extended for movement of overwidth loads must be removed or retracted to conform with legal widths when unit is not towing or hauling permitted load.

Radio

Two-way radio communication is required between power unit of vehicle combination and escort vehicle.

Emergency Conditions

• Permittee must be in compliance with North Carolina motor carrier regulations relating to vehicle emergencies.

• The governor may issue an executive order for vehicle exceptions to North Carolina law and motor carrier regulations for relief of emergency conditions for declared natural disasters. If such an event occurs, contact the Central Permit Office for additional information. 1-888-221-8166.

Convoy

Multiple permitted vehicles cannot travel in a convoy. Vehicles must travel at least two miles apart.

Detour of Authorized Route

Regardless of the route shown on the permit, an alternative route will be followed if:

• directed by a peace officer
• directed by an official traffic control device to follow a specific route to weighing device
• escorted by an enforcement officer to a permanent weigh scale

Holiday Travel

Permitted vehicles with a gross weight exceeding 112,000 pounds and/or overdimensions of width, length or height cannot travel on the following holidays from noon on the weekday before the holiday until noon on the weekday after the holiday: New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

Properly permitted vehicles can travel on all other holidays observed by the NCDOT Oversize/Overweight Permit Office.

***Publication H-7***
Time of Travel

General Commodities/Self Propelled Equipment
Monday through Saturday – sunrise to sunset – no Sunday travel unless otherwise stated on the permit.

12-foot to 14-foot Mobile/Manufactured Home
Monday through Saturday – sunrise to sunset – no Sunday travel unless otherwise stated on the permit.

16-foot Mobile/Manufactured Home
Monday through Saturday – 9 a.m. to 2:30 p.m.

Oversize loads with width greater than 12 feet, travel prohibited within a 10-mile radius of the city limits of Charlotte, Raleigh, Durham and Chapel Hill between 7 to 9 a.m. and 4 to 6 p.m.

Continuous travel –
(24 hours/seven days) is authorized if:

- the permitted gross weight does not exceed 112,000 pounds, and
- no overdimension of width, length or height is part of the permitted movement.

Inclement Weather
No move shall be made when weather conditions render visibility less than 500 feet for a person or vehicle. Moves shall not be made when highway is covered with snow or ice or at any time travel conditions are considered unsafe by the Division of Highways, State Highway Patrol or other Law Enforcement Officers having jurisdiction. Movement of a mobile/modular unit exceeding a width of 10 feet is prohibited when wind velocities exceed 25 miles per hour in gusts.
Administrative Code: Permit policy approved by the N.C. Board of Transportation.

Annual (Blanket) Permit: A permit valid one year from date of validation for any qualifying vehicle over legal weight, width or length.

Axle Group: Any two or more consecutive axles on a vehicle/vehicle combination.

Building: Barns, houses, utility sheds.

Central Permit Office: A unit of NCDOT’s Division of Highways located in Raleigh that is responsible for issuing overdimension/overweight permits.

Commercial Motor Vehicle: A motor vehicle designed or used to transport passengers or property; that has a combined GVWR of at least 26,001 pounds and includes as a part of the combination a towed unit that has a GVWR of at least 10,001 pounds.

Construction Equipment: Designed for off-highway use. Examples: scraper, backhoe, excavator, etc.

Continuous Travel: Authorized to travel 24 hours a day/seven days a week/365 days a year.

Controlled-Access Highway: Highways on which access connections are provided only with selected roads; at-grade crossing and private driveway connections are prohibited.

Dealer: Any person engaged in the business of buying, selling, distributing or exchanging motor vehicles, trailers or semi-trailers in the state, having an established place of business in this state.

Direct Facsimile: Transmittal of document(s) directly to specified location.

District Office: Operates under the authority of a Division of Highways Division Office, geographically assigned.

Division Office: One of 14 offices located throughout the state of North Carolina responsible for Division of Highways activities for that specific area.

Divisible Load: A load that can be divided to meet legal requirements and does not qualify for issuance of a permit.

Duration of permits: Specified time a permit is valid.

Enforcement: Enforcement of over dimension/overweight permits is the responsibility of the N.C. State Highway Patrol.

Extreme Wheelbase Measurement: Measurement from the center of the first axle to the center of the rear most axle.

GVWR (gross vehicle weight rating): The value specified by the manufacturer as the maximum loaded weight a vehicle is capable of safely hauling.

General Statutes: North Carolina law.

Government Agency: Includes United States government and state of North Carolina agencies, institutions, subdivisions and municipalities.

Gross vehicle weight (GVW): The total gross weight of the loaded truck/trailer combination.


House move: Movement of a “building” exceeding 15 feet in width (Refer to G.S. 20-356).

House Trailer: Any trailer or semi-trailer designed and equipped to provide living or sleeping facilities and drawn by a motor vehicle.

Interstate Movement: Transportation from state to state.

Intrastate Movement: Transportation within North Carolina only.
License Weight: Registered gross weight of vehicle/vehicle combination.

Low-Limited Road: Any highway on the state highway system, posted by the Department of Transportation for limited axle weights.

Manufacturer: Any person, resident or non-resident of this state, who manufactures trucks, truck chassis, trailers, mobile/modular homes and property licensed to do business as such.

Mobile/Modular Home: Any trailer or semi-trailer designed and equipped to provide only living or sleeping facilities and drawn by a motor vehicle.

Mobile Office: Any trailer or semi-trailer designed and equipped to provide temporary office space and drawn by a motor vehicle.

Motor Vehicle: Every vehicle that is self-propelled and every vehicle designed to run upon the highways that is pulled by a self-propelled vehicle.

Non-divisible Load: Commodity to be transported that cannot be broken down or divided to meet legal requirements specified in North Carolina law may qualify for an overdimension/overweight permit.

Off-Highway Construction Equipment: Self-propelled or towing vehicle(s) exempt from registration (G.S. 20-51). Equipment constructed for non-highway use and which is operated on the highway only for the purpose of getting to or from a non-highway job and not for the transportation of persons or property or for hire.

Overdimension: Vehicle and/or load that exceeds legal limits of height, width, length or weight.

Overheight: Vehicle/vehicle combination, empty or transporting a non-divisible load over 13 feet 6 inches in height.

Overweight: A vehicle or vehicle gross combination, axle and/or load that exceeds legal limit weights and gross weights specified in North Carolina law.

Owner: A person holding the legal title to a vehicle, or in the event a vehicle is the subject of a chattel mortgage or an agreement for the conditional sale or lease thereof or other like agreement, with the right of purchase upon performance of the conditions stated in the agreement, and with the immediate right of possession vested in the mortgagor, conditional vendee or lessee shall be deemed the owner for the purpose of this manual.

Permit: Legal document authorizing travel on the highways of North Carolina in excess of statutory limits.

Permittee: Registered owner/lessee of towing unit.

Policy: Rules and regulations set by the Secretary of Transportation or his designee for issuance of overdimension/overweight permits.

Posted Bridge: A bridge on the state highway system signed by the Department of Transportation for limited gross weights.

Posted Road: Any highway on the state highway system, signed by the Department of Transportation for limited axle weights (same as Low-Limited Road).

Reasonable Access: Three-mile access off the National Truck Network Interstate/Surface Transportation Assistance Act (STAA) vehicle routes to include specific federal-aid primary highways (designated by the U.S. secretary of transportation) for food, fuel, repair, rest or terminals for STAA vehicles.

Registration: To record or register a motor vehicle as required by statute.

Restriction: A limitation, a limiting condition or rule.
Revocation: Termination of a permittee's privilege to operate an overdimension and/or overweight vehicle/vehicle combination for a period of time stated in an order of revocation or suspension. The terms “revocation” or “suspension” or a combination of both terms shall be used synonymously.

Road Tractor: Vehicles designed and used for drawing other vehicles upon the highway and not constructed to carry any part of the load, either independently or as a part of the weight of the vehicle so drawn.

Sealed Ship Container: A sealed ship container is defined as containerized freight being transported to or from a designated seaport and has or will be transported by marine shipment for International trade with the original unbroken seal or a replacement seal affixed by an authorized government agency.

Self-Propelled Vehicle: A vehicle operating under its own power, not towed.

Single Axle Weight: The gross weight transmitted by all wheels whose centers may be included between two parallel transverse vertical planes 40 inches apart, extending across the full width of the vehicle.

Single-Trip Permit: A permit issued over the statutory limit allowing one movement from origin to destination and return (if requested at time of issuance) if such movement can be made within a 10-day validation period.

Special Mobile Equipment: Self-propelled, non-property hauling vehicle, trailer or semi-trailer, which has permanently attached equipment. Operated on the highway only for the purpose of getting to and from a non-highway job properly classified and licensed as special mobile equipment by the N.C. Division of Motor Vehicles.

Superload: Qualified vehicle/vehicle combination and/or load exceeding routine permit policy. A superload request may require an engineering review.

Suspension: Temporary revocation of a permittee's privilege to operate an overdimension and/or overweight vehicle/vehicle combination for a period of time stated in an order of revocation or suspension. The terms “revocation” or “suspension” or a combination of both terms shall be used synonymously.

Tandem Axle Weight: The gross weight transmitted to the road by two or more consecutive axles whose centers may be included between parallel vertical planes spaced more than 40 inches and not more than 96 inches apart, extending across the full width of the vehicle.

Truck Tractor: Vehicles designed and used for drawing other vehicles upon the highway and not constructed to carry any part of the load.

Validation of Permit: The length of time the permittee is allowed to complete the permitted movement.

Wrecker: Vehicles with permanently attached cranes used to move other vehicles, provided that said wreckers shall be equipped with adequate brakes for units being towed.
Publications are available upon request or can be downloaded from our Web page. The documents provide detailed information pertaining to topics that may be of individual interest for movement of oversize/overweight commodities and/or vehicles on North Carolina highways.

Web site:  www.ncdot.gov/~osowpermits
Telephone:  1-888-221-8166
Fax:  1-888-222-8347

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MEMORANDUM

DATE: October 21, 2015 (replaces September 3, 2014 Recreational Park Trailer (Park Models)/Permanent Dwellings Memo)

TO: Building Inspectors / Third Party Inspection Agencies / other Interested Parties

FROM: C. Patrick Walker, P.E.
Technical Services Manager
Manufactured Building Division

RE: Recreational Park Trailers (Park Models)/Permanent Dwellings

The purpose of this memorandum is to clarify the position of the NC Department of Insurance on the requirements for the labeling and setting up of “Recreational Park Trailers” (formerly “Park Model” recreational vehicles) as permanent dwelling units. All references herein to the North Carolina Electrical Code are to the 2011 Edition (National Electrical Code (NEC) w/NC Revisions).

RECREATIONAL VEHICLE: (defined by HUD in 24 CFR 3282.8 (g) Manufactured Home Procedural and Enforcement Regulations

As defined by HUD in 24 CFR 3282.8 (g) Manufactured Home Procedural and Enforcement Regulations
A recreational vehicle is a vehicle which is:
(1) Built on a single chassis;
(2) 400 Square feet or less when measured at the largest horizontal projections;
(3) Self-propelled or permanently tovable by a light duty truck; and
(4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

As defined in Article 551, NEC
A vehicular-type unit primarily designed as temporary living quarters for recreational, camping, or travel use, which either has its own motive power or is mounted on or drawn by another vehicle. The basic entities are travel trailer, camping trailer, truck camper, and motor home.

As defined in ANSI A119.5, Park Model Recreational Vehicle Standard, 2015 Edition
A vehicular type unit primarily designed as temporary living quarters for recreational, camping, travel or seasonal use, that either has its own motive power, or is mounted on, or towed by another vehicle. The basic entities are: camping trailer, fifth wheel trailer, motor home, travel trailer and truck camper.

PARK MODEL RECREATIONAL VEHICLE - also known as Recreational Park Trailer and Park Model

As defined in ANSI A119.5, Park Model Recreational Vehicle Standard, 2015 Edition
A single living unit that is primarily designed and completed on a single chassis, mounted on wheels, to provide temporary living quarters for recreational, camping, or seasonal use, is certified by the manufacturer as complying with all applicable requirements of ANSI A119.5 and:
(a) Has a gross trailer area not exceeding 400 square feet (37.15 square meters) in the setup mode or
(b) If having a gross trailer area not exceeding 320 square feet (29.72 square meters) in the setup mode, has a width greater than 8.5 ft. (2.59 meters) in the transport mode.

As defined by Article 552.2, NEC
A unit that is built on a single chassis mounted on wheels and has a gross trailer area not exceeding 37 m² (400 ft²) in the setup mode.

General Requirements per Article 552.4, NEC
A park trailer as specified in 552.2 is intended for seasonal use. It is not intended as a permanent dwelling unit or for commercial uses such as banks, clinics, offices, or similar.
GROSS TRAILER AREA – (as defined in ANSI A119.5, 2015 Edition)
The total plan area measured to the maximum horizontal projections of exterior walls in the setup mode.

NCDOI Note: Loft areas that are habitable room(s) (5 ft. or greater ceiling height) shall be included in the gross trailer areas. Accessible loft spaces with ceiling height less than 5 ft. are not included in the gross trailer area. Per HUD, roof overhangs are not included in the calculation of the gross trailer area. Any units to be labeled under the HUD manufactured housing program must contain a minimum of 320 sq. ft. in gross trailer area.

NORTH CAROLINA CODE REQUIREMENTS:

Recreational Park Trailer - Electrical Supply System
The electrical supply system to Recreational Park Trailers is required to be installed and inspected in accordance with Article 552 of the North Carolina Electrical Code (NEC). The power supply is installed in accordance with Section 552-43 of the 2011 NEC. Section 552-43(A) states:

(A) Feeder. The power supply to the park trailer shall be a feeder assembly consisting of not more than one listed 30-ampere or 50-ampere park trailer power-supply cord with an integrally molded or securely attached cap, or a permanently installed feeder.

NCDOI Note: All permanently installed feeders must be permitted and inspected by the local building official having jurisdiction.

Recreational Park Trailer - Temporary Installation
Since these units are defined to be temporary structures, it is not permissible to set them up as permanent dwelling units. Therefore it is our interpretation that they cannot have any permanent plumbing or mechanical connections. However, for safety reasons we will allow these units to be temporarily blocked up and anchored against overturning forces, but to remain classified as a temporary structure, the wheels and axles must remain on the unit at all times. We recommend that all recreational vehicles used for temporary recreational dwellings be set-up in accordance with the manufacturer’s recommendations. Accessory structures may not be supported by these units.

Recreational Park Trailers – Permanent Installation
A Recreational Park Trailers constructed in accordance with ANSI A119.5, Recreational Park Trailer Standard and only labeled as a Recreational Park Trailer under the Recreational Park Trailer construction program of the Recreational Vehicle Industry Association (RVIA), cannot be accepted as a permanent dwelling structure in North Carolina. However, sometimes manufacturers will duel label their Recreational Park Trailers by constructing them through the RVIA program and also through the NC Modular Construction Program or the HUD Manufactured Housing program, dual labeling the unit for each respective program. Labeled Recreational Park Trailers that are also constructed and dual labeled in accordance with the NC Modular Construction Program may be permanently installed as a single family modular dwelling in accordance with the NC Residential Code provided the installation meets the current NC Code’s foundation/anchoring requirements and meets the local zoning ordinances. This is acceptable because the unit is dual labeled with a North Carolina Modular Construction Validating Stamp as a modular dwelling unit. Labeled Recreational Park Trailers that are also constructed and dual labeled in accordance with the Federal Manufactured Housing Construction and Safety Standards as a single family (HUD) manufactured home may be permanently installed as a single family manufactured home dwelling in accordance with the State of North Carolina Regulations for Manufactured Homes provided the installation meets the foundation/anchoring requirements of these regulations and the local zoning ordinances. This is acceptable because the unit is dual labeled with a HUD manufactured housing label.

Recreational Park Trailers - Unlabeled/Site Constructed
Some manufacturers are not members of the Recreational Vehicle Industry Association (RVIA) and are not authorized/able to certify and label their Recreational Park Trailers as being constructed in accordance with the ANSI A119.5, Recreational Park Trailer Standard under the RVIA Recreational Park Trailer construction program. Unlabeled and/or site-constructed Recreational Park Trailers cannot be accepted as a permanent dwelling structure in North Carolina. Unlabeled and/or site-constructed Recreational Park Trailers must meet the electrical construction and inspection requirements as indicated above and must be no larger than 400 sq.ft. gross trailer area as defined in ANSI A119.5, Recreational Park Trailer Standard – 2015 Edition. All unlabeled and/or site constructed recreational park trailers greater than 400 sq.ft. gross trailer area will be considered to be a non-complying single family dwelling in violation of the NC Residential Code.
LABELS

Labels – Acceptable Examples of Recreational Park Trailer (Park Model) Labels for Temporary Use

RVIA Park Model Label (oldest units)  RPTIA Park Model Label (older units)  RVIA Recreational Park Trailer Label (new units)

Labels – Required for Permanent Installations

NC Modular Construction Validating Stamp  HUD Manufactured Housing Label

NCDOI Note: See the NCDOI Tiny Homes Memo for Requirements for Tiny Homes
Important Information Regarding “Tiny Homes” and the RV Industry

The Recreation Vehicle Industry Association (RVIA) is often contacted by companies and individuals that are considering or are already actively engaged in building a product known as “Tiny Homes.” In fact, many folks seem to be thinking about getting into the tiny home business nowadays. However, the building of tiny homes has several critical questions that should be understood and considered beforehand. Not the least of which, these questions include: “What is the intended purpose of the product?” “Who are the customers and how will they be using the product?” and “How will this product be regulated?” We hope that the following information will help you to begin answering these questions.

What is RVIA and Who Does it Represent?

RVIA is the national trade association that represents the manufacturers of recreation vehicles (“RVs”), which include motorhomes, travel trailers, fifth wheel trailers and truck campers, along with park model RVs (also known as PMRVs). RVIA also represents component part suppliers and other businesses that provide materials and services to the RV/PMRV industry.

RVs are defined as: vehicular-type units that are primarily designed as temporary living quarters for recreational, camping, or seasonal use; have their own motive power or are mounted on or towed by another vehicle; are regulated by the United States Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) as a vehicle or vehicle equipment; do not require a special highway use permit for operation on the highways; can be easily transported and set up on a daily basis by an individual; and are certified by their manufacturer as complying with the NFPA 1192 Standard on Recreation Vehicles.

PMRVs are defined as: trailer type units that are primarily designed as temporary living quarters for recreational, camping, or seasonal use; are built on a single chassis mounted on wheels; have a gross trailer area not exceeding 400 square feet in the setup mode (or if less than 320 square feet in the setup mode would require a special highway movement permit); and are certified by their manufacturer as complying with ANSI A119.5 Park Model RV Standard.

The most important fact to take away from these basic definitions is that RVs and PMRVs are purpose-built as temporary accommodations for camping and seasonal use. They are not houses; they are not manufactured housing; and they are neither designed for nor intended to serve as permanent habitations.

Can Tiny Homes Be RVs?

Tiny homes may qualify as RVs, but to do so they must be built as vehicles in compliance with NHTSA regulations (see the Federal Motor Vehicle Safety Standards – also referred to as the FMVSS – which can be found at Title 49 of the Code of Federal Regulations). They must also comply with the NFPA 1192 RV Standard. Note that these products cannot require a special
movement permit to be transported on the highways. RVIA maintains an inspection program for its member RV manufacturers. Every eight weeks or so, staff inspectors make unannounced factory visits to ensure that manufacturers are fulfilling their obligation to comply with the provisions of the NFPA 1192 standard.

Can Tiny Homes Be PMRVs?

Tiny homes may qualify as PMRVs, but to do so they must not exceed 400 square feet in the setup mode or, if less than 320 square feet in the setup mode, must require a special movement permit to be transported on the highway. They must also comply with the ANSI A119.5 PMRV Standard. RVIA maintains an inspection program for its member PMRV manufacturers. Every eight weeks or so, staff inspectors make unannounced factory visits to ensure that manufacturers are fulfilling their obligation to comply with the provisions of the ANSI A119.5 standard.

What If Tiny Homes Are Intended For Permanent Residence?

If a manufacturer of tiny homes intends for its units to serve as a permanent residence -- and markets its tiny home products to consumers for that purpose -- then these units cannot be considered RVs or PMRVs. Instead, such tiny homes are required by law to comply with local building codes, state modular housing codes, and/or the United States Department of Housing and Urban Development (HUD) regulations for manufactured housing. RVIA does not represent manufactured housing products.