

Ordinance No. 2015-10-01

**An Ordinance
Amending the Camden County
Code of Ordinances**

Camden County, North Carolina

BE IT ORDAINED BY THE CAMDEN COUNTY BOARD OF COMMISSIONERS as follows:

Article I: Purpose

The purpose of this Ordinance is to amend Chapter 151 of the Camden County Code of Ordinances of Camden County, North Carolina, which was originally adopted by the County Commissioners on December 15, 1997, and subsequently amended and as otherwise incorporated into the Camden County Code.

Article II. Construction

For purposes of this Ordinance, underlined words (underline) shall be considered as additions to existing Ordinance language and strikethrough words (~~strikethrough~~) shall be considered deletions to existing language. New language of proposed ordinance shall be shown in italics (*italics*) and underlined.

Article III. Amend Chapter 151 as amended of the Camden County Code which shall read as follows:

CHAPTER 151: UNIFIED DEVELOPMENT

§ 151.069 DESIGN STANDARDS.

See §§ 151.380 through 151.387 of this chapter for further criteria for any development within a special flood hazard area.

(A) Except as otherwise provided herein, the following design standards shall apply to all ~~site built, modular and mobile~~ single-family and multi-family homes erected, constructed, installed, placed or otherwise located in the county, but shall not apply to commercial structures. *No certificate of occupancy may be issued until the Administrator determines that the applicable appearance criteria have been met.*

(B) ~~The following design standards shall apply to all modular and site built homes erected, constructed, installed, placed or otherwise located in the county, but shall not apply to commercial structures:~~

~~(1) The minimum vertical rise for a roof shall be 6 feet for each 12 feet of horizontal run.~~

~~———— (2) Not less than 50% of the entire roof area of the house shall have a minimum vertical rise of 6 feet for each 12 feet of horizontal run.~~

~~———— (3) The calculation of the minimum roof area required to meet the 50% threshold shall not include the roof area covering a dormer window.~~

~~———— (4) The minimum vertical rise for a roof shall be 4 feet for each 12 feet of horizontal run over any style of dormer windows.~~

~~———— (5) The minimum vertical rise for a roof shall be 3 feet for each 12 feet of horizontal run over non heated space such as porches.~~

~~(C) The following appearance standards shall apply to all modular homes erected, constructed, installed, placed or otherwise located in R-3 and GUD districts:~~

~~———— (1) No modular home may be constructed or installed that does not have at least a porch at the front entrance of the structure. Such porch shall have a minimum area of 54 square feet, and the calculation of such area shall not include any steps.~~

~~———— (2) The sides of all porches and steps shall be constructed with wood, masonry or concrete, but no metal.~~

~~———— (3) All porches shall have a roof attached to the modular home and shall extend over the entire porch.~~

~~———— (4) The curtain wall or foundation shall have a visible exterior of one of the following: true brick or natural stone.~~

~~(D) The following appearance standards shall apply to all Class A, Class B and Class C mobile homes. No certificate of occupancy may be issued until the Administrator determines that the applicable appearance criteria have been met:~~

(1) Class A mobile homes may be installed in R-1 and R-2 zoning districts with at least the following appearance standards:

(a) The curtain wall or foundation shall have a visible exterior of one of the following: true brick or natural stone.

(b) 1. The mobile home is to be installed not less than the same distance from the right-of-way as any principle structure on an adjacent property on the same side of the roadway.

2. In those instances where an adjoining property has a principal structure

located inside the required front setback area, and such principal structure is located within 150 feet of the proposed site for installation of the Class A mobile home, then the proposed Class A mobile home may be installed at a setback equal to the structure on the adjacent property or 25 feet from the right-of-way, whichever is greater.

(c) There shall be a front porch to the mobile home having dimensions of not less than five feet wide and five feet deep. The rear or side porch shall have dimensions of not less than three feet wide and three feet deep. The front and sides of all porches and steps shall be constructed with wood, stone, masonry, concrete, or similar looking composite material.

(2) Class B and Class C mobile homes may be installed in the R-1 zoning district and within approved mobile home parks subject to the following appearance standards:

(a) The curtain wall shall be of all weather material covering all exposed underpinning.

(b) 1. The mobile home is to be installed not less than the same distance from the right-of-way as any principal structure on an adjacent property on the same side of the roadway.

2. In those instances where an adjoining property has a principal structure located inside the required front setback area, and such principal structure is located within 150 feet of the proposed site for installation of the Class B or C mobile home, then proposed Class B or C mobile home may be installed at a setback equal to the structure on the adjacent property or 25 feet from the right-of-way, whichever is greater.

(c) There shall be a porch at each entrance to the structure having dimensions of not less than three feet wide and three feet deep. The front and sides of all porches and steps shall be constructed with wood, stone, masonry, concrete, or similar looking composite material.

(3) Mobile homes that are installed as a change out to an existing mobile home must meet these appearance standards.

§ 151.232 DESIGN STANDARDS AND CRITERIA.

All major subdivisions shall be designed to meet the following requirements:

(F) *Drainage.*

(1) Each subdivision shall provide adequate storm drainage for all areas in the subdivision as described in Article 151.400 and the Camden County Stormwater Drainage Design Manual. ~~A combination of storage and controlled release of stormwater run-off is required. The release rate of stormwater from all developments shall not exceed the ten-year stormwater run-off from the area in its natural state (post development vs. pre-development). All free flowing storm drainage systems shall be designed to accommodate the run-off generated by a ten-year design storm or State Department of Transportation (NCDOT) standards if more~~

~~restrictive and the system will be maintained by NCDOT if the system is located within the NCDOT right of way. Plans must show, at minimum, the following information:~~

- ~~_____ (a) All culvert inverts, including driveway culverts;~~
 - ~~_____ (b) Direction of flow;~~
 - ~~_____ (c) Elevation data of drainways, ditches, swales and the like to outlet;~~
 - ~~_____ (d) Drainage calculations for drainway design within boundaries of proposed subdivision and off site, if appropriate; and~~
 - ~~_____ (e) Total pre development and post development run off in CFS (cubic foot per second) volume leaving development area.~~
- ~~_____ (2) Plans must address maintenance of the drainage system and who will be the responsible party to ensure proper maintenance is performed on the drainage system. The plan will be reviewed and inspected by county planning and technical review staff.~~

(J) Lots.

(6) Lot Grading - Minimum desirable slope shall be not less than 1%, minimum acceptable slope shall be not less than 0.5%. Construction plans shall provide sufficient grades, ridge lines and directional arrows to define the proposed drainage pattern of the entire lot. A minimum of seven proposed lot grades shall be provided; four at the corners; two at the side yard midpoints; and one grade located at the center of the lot (rear of typical structure location). Intermediate grades will be defined by linear interpolation of lot grades provided. Note Type A, B, or AB lot drainage for each lot. Overland flow onto adjacent offsite property is generally unacceptable. Commercial/Industrial subdivision plans shall provide lot grading to facilitate drainage until final development of individual parcels. Single Family Detached Lot Grading Policy:

(a) Construction plans for all new subdivisions will show proposed lot grades to the nearest 0.1'.

(b) An engineer's or land surveyor's certification shall be submitted to the County prior to final plat approval certifying that lot grades are within 0.4' of proposed grades and a minimum positive slope of 0.25% exists in the direction indicated in the approved plan. Certification may be waived in cases where approved drainage plans showing existing grades meet the criteria.

(c) Lots shall be graded to within 0.1' of the final grade prior to being certified for a Certificate of Elevation. A minimum grade of 0.5% must be provided on the lot. A certification is required from a Land Surveyor confirming this lot grading. See the County's "Certificate of Elevation Grade Adjacent to Structure and Finished Floor of Structure for Compliance with Final Plat."

(d) The as constructed elevations of culverts shall be deemed acceptable if the as constructed invert elevation is within 0.12' of the proposed grade, provided, however, that

elevations resulting in a flat or adverse slope will be deemed unacceptable even if within the 0.12' tolerance.

§ 151.233 REQUIRED MAJOR SUBDIVISION SUBMISSION DOCUMENTS AND INFORMATION.

	<i>Sketch Plat</i>	<i>Preliminary Plat</i>	<i>Final Plat</i>
Project; Plat Information:			
Drainage calculations in order to comply with state <u>and county</u> stormwater/ <u>drainage</u> regulations		X	

FLOODPLAIN MANAGEMENT

§ 151.384 GENERAL STANDARDS.

(15) Excavation and filling in the floodplain areas, areas noted as AE in the FIRM maps, may be allowed at the approval of the Countyt. Cut and fill for new development in the floodplain will only be acceptable if the net volume available within the floodplain remains the same (<https://msc.fema.gov/portal/advanceSearch>). The volumes will be judged from one foot contour to the next. No credit will be provided for excavation below the normal water elevation of the creek or below the ground water table, whichever is higher. The engineer will provide the areas and volumes at one foot contour intervals for the existing conditions and demonstrate through volume calculations that the proposed condition equals or provides more storage volume for the development. The calculation and demonstration shall begin at the normal elevation, or invert elevation, and proceed by even one foot increments to the FIRM reported base flood elevation for the immediate area. The cut and fill within the floodplain area must take place within the general confines of the development or within 500' of the river station shown on the FEMA maps

(16) A parcel which lies within the AE Flood zone and is within a portion of a creek or river which has riverine hydraulic characteristics, may fill one time only up to five percent (5%) of the flood zone area within the parcel's boundary. This is a onetime only occurrence and supersedes Item 2 of this Division. This exception is provided to allow a reasonable engineering design of a property and a connection or roadway from one area to another. This exception should not be construed to include floodways and non-encroachment zones. Filling over five percent (5%) will require a balance of cut and fill as dictated by Item 2 of this Division.

DRAINAGE, EROSION CONTROL AND STORMWATER MANAGEMENT

§ 151.400 DRAINAGE. WHEREAS, the issue of storm water management is of substantial concern to the Camden County Commissioners and the people of Camden County; and whereas after thorough reflection and study, the Camden County Commissioners find the following facts:

- Given the topography of Camden County its citizens are challenged with storm water runoff management which can be a danger to health and property.

- Such topographical slopes as exists in Camden County which can be as modest as zero percent to two percent over vast areas including those portions of real property which are improved with residential and commercial structures.

- Such topography severely limits, if not completely prohibits, storm water runoff and natural drainage that might be found in other areas of the state.

- Further, such topography can expose the County and its citizens to standing water and flooding.

- The elevation of surface waters at drainage outfalls and the hydraulic grade lines within and outside of a residential or commercial development site are critical to designing storm water systems to accommodate the often substantial quantities of runoff that could result from hurricanes, tropical storms, nor'easters and sustained periods of intense rain all of which the County is subject to receive on a frequent basis.

- Rain water tends to be held on undeveloped or agricultural land, often standing in agricultural fields to a depth of several inches for lengthy periods of time which in turn attenuates the flow of water from agricultural fields thereby reducing agricultural runoff to a greatly lesser amount than what would be typically expected in other areas of the state.

- Development of the land, both residential and commercial will change the impervious/pervious nature and compaction character of the soil and further restrict natural attenuation.

Now, therefore, based upon the foregoing Findings of Fact, and in the exercise of its Police Powers granted by the North Carolina General Assembly, the Camden County Board of Commissioners for the Health, Safety, and Welfare of the public, now legislates the following standards for planning and construction of stormwater systems for both residential and non-residential developments within this County.

(A) *Stormwater drainage.* Each residential/non-residential subdivision or commercial site plan shall provide adequate storm drainage certified by a North Carolina registered engineer or a North Carolina Licensed Surveyor, (with proven experience in stormwater drainage) for all areas in the subdivision.

(B) Use of the Camden County Stormwater Drainage Manual is mandated by this ordinance. The methods outlined in the manual are not the only methods acceptable for use.

Any deviations from these methods, however, must still meet or exceed the intended results and be reviewed and approved by the County.

(C) A combination of storage and controlled release of stormwater run-off is required. The release rate of stormwater from all developments shall not exceed the ten-year stormwater run-off from the area in its natural state (post-development vs. pre-development). All free-flowing storm drainage systems shall be designed to accommodate the run-off generated by a ten-year design storm or North Carolina Department of Transportation (NCDOT) standards if more restrictive. Master drainage stormwater studies for developments shall include and make a part of the analysis any previous subdivision of the property which occurred within the five years of the proposed major development.

(1) Conveyance systems draining over 300 acres shall be designed for the 25 year Storm.

(2) Stormwater systems that meet the following criteria will be considered sufficient to accommodate the 10 year storm:

(a) Acceptable hydraulic grade lines for 10-year storm designs in open drainage systems shall be no higher than 0.25 feet (3") below the edge of pavement.

(b) Acceptable hydraulic grade lines for 10-year storm designs in closed drainage systems shall be no higher than 0.5 feet (6") below the flow line of the gutter pan

(c) Additionally, the maximum static elevation of the 100-year flood shall not inundate the lowest centerline point of any proposed road by more than 0.75' (9 inches).

(D) The following information must be provided as prescribed in the Camden County Stormwater Drainage Manual:

(1) Elevation survey of entire tract with topo lines at one-foot intervals;

(2) All culvert inverts (including driveway culverts);

(3) Direction of flows;

(4) Downstream analysis (cross-sections) of drainage way to outlet (creek, stream, river and the like) and upstream analysis as stated in Camden's Storm Water Drainage Design Manual:

(5) Stormwater storage analysis (storing the differential between the outlet ditch capacity at bank full and the 100-year storm event throughout the proposed development area) and show minimum lot elevations;

(6) Drainage calculations for drainway design within boundaries of proposed subdivision and off-site, if appropriate;

(7) Show total pre-development and post-development run-off in CFS (cubic feet per second) volume leaving development area;

(8) Drainage studies shall demonstrate that the retention systems recover the percentage as stated in the County's Storm Water Drainage Design Manual of their maximum 10 year storage within 72 hours from the beginning (hour 0) of a Type III storm.

(9) Along all existing drainage ways within proposed development areas, swales (minimum 6:1 side slopes) are preferred over traditional ditches. Swales shall have a 10 foot easement that extends 5 feet on each side of the centerline. Maintenance easements the width of the swale shall be centered over the swale;

(10) There shall be a 30-foot drainage/maintenance easement on all lead ditches that carry water from upstream through the development to the outfall;

(11) If swales are not utilized, then all ditches and canals will require minimum of 30 feet of open space from the top of bank on one side or the other (maintenance area); and

(12) Developer will be responsible for upgrading drainage system to outlet subject to obtaining permission from all property owners adjacent to the watercourse outlet (See Division 7, paragraph 12 of the Drainage Manual).

(E) Plans must address maintenance of the drainage system and who will be the responsible party to ensure proper maintenance is performed on the drainage system. The plan will be reviewed and inspected by County Technical Staff members.

§ 151.401 DEVELOPMENTS MUST DRAIN PROPERLY.

(A) All developments shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the development site. Surface water shall not be regarded as unduly retained if:

(1) The retention results from a technique, practice or device deliberately installed as part of an approved sedimentation or storm water runoff control plan; or

(2) The retention is not substantially different in location or degree than that experienced by the development site in its pre-development stage unless the retention presents a danger to health or safety.

(B) No surface water may be channeled or directed into a sanitary sewer.


(C) Whenever practicable, the drainage system of a development shall coordinate with and connect to the drainage systems or drainage ways on surrounding properties or streets.

(D) Use of drainage swales rather than curb and gutter and storm sewers in subdivisions is provided for in §§ 151.170 through 151.184. Private roads and access ways within unsubdivided developments shall utilize curb and gutter and storm drains to provide adequate drainage if the grade of the roads or access ways is too steep to provide drainage in another manner or if other sufficient reasons exist to require the construction.

(E) Construction specifications for drainage swales, curbs and gutters and storm drains are contained in the County's Stormwater Drainage Manual.

Adopted by the Board of Commissioners for the County of Camden this 16th day of November, 2015.

County of Camden


P. Michael McLain, Chairman
Board of Commissioners

ATTEST:



Angela L. Wooten
Clerk to the Board

