
Sec. 4.3.5 Street Standards.

(a) *Relation to Transportation and Land Development Plans.*

- (i) Arrangement, character, extent, width, grade, and location of all roads shall conform to the officially adopted Thoroughfare Plan or Comprehensive Transportation Plan, the adopted County Land Development Plan or elements thereof and any other adopted plan and shall be considered in relation to the following:
 - 1) Existing and proposed transportation patterns.
 - 2) Topographic and other natural features.
 - 3) Public convenience and safety.
 - 4) Appropriate relation to proposed uses of land to be served by such streets and existing or potential land uses in adjoining areas.
- (ii) The subdivider shall dedicate lands and fund necessary road improvements in conformity with adopted transportation or land use plans to the extent that such are adequately related to the traffic expected to be generated by the subdivision.

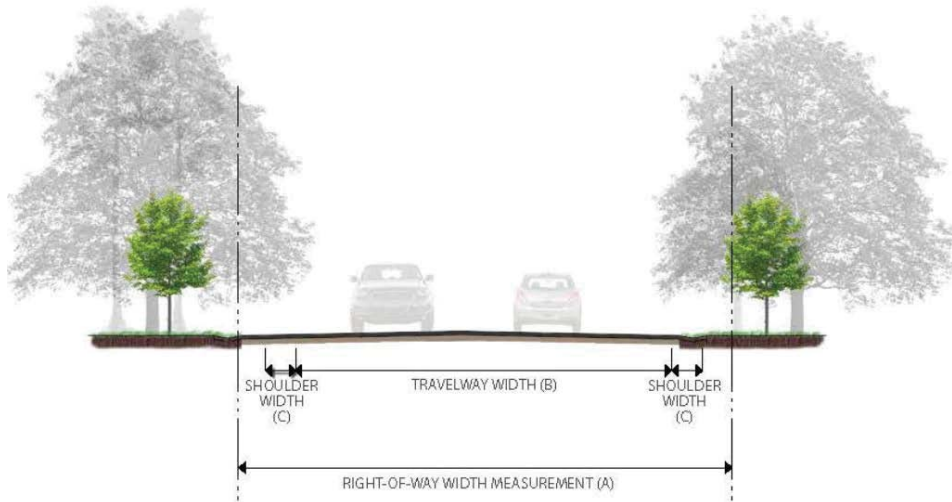
(b) *Public Roads.*

- (i) All subdivision lots shall abut a public or private road for a distance of at least 30 feet. Public subdivision roads shall be designed and built according to the standards in the North Carolina Department of Transportation's Subdivision Roads Minimum Construction Standards. These roads shall be maintained by the developer/owner until the North Carolina Department of Transportation assumes responsibility for maintenance. Roads which are not eligible to be put on the State Transportation system because there are too few residences shall nevertheless be dedicated for public use and shall be built in accordance with State Department of Transportation Standards. Where a road has been offered for public dedication, that offer may not be withdrawn without prior approval from the Director.

(c) *Private Roads.*

- (i) *Design Criteria.*
 - 1) Roads that are not required to be constructed to state standards will be privately maintained, and maintenance responsibilities shall be noted on the final plat. Regardless of the designation of the road, every lot shall have access to a road that is sufficient to provide a means of ingress and egress for emergency vehicles as well as all those likely to need or desire access to the property for its intended use. (Sec. 28-62.1. B)
 - 2) Roads shall be designed by a registered professional engineer or professional land surveyor licensed to work in North Carolina, as provided for by G.S. ch. 89C-3. Prior to approval of a final plat for a subdivision the engineer or land surveyor who designed the roads shall certify that the roads have been constructed in accordance with the approved plans. If a surety bond or other financial guarantee is provided in lieu of constructing roads prior to approval of the final plat, the financial guarantee shall not be considered to be satisfied until the engineer or land surveyor who designed the roads has certified that the roads have been constructed in accordance with the approved plans.
 - 3) Minimum Private roads proposed to serve lots and/or home sites in subdivisions shall comply with the following minimum design standards in Table 4.2.

Figure 4.5: Typical Street Cross-Section



Source: Stewart

TABLE 4.2: Subdivision Road Requirements

ROAD TYPE	MIN. ROW WIDTH (A)	TRAVELWAY WIDTH (B)	SHOULDER WIDTH (C)
SHARED DRIVE (UP TO 8 UNITS SERVED)	30'	10'	2'
MINOR RESIDENTIAL (9-12 UNITS SERVED)	35'	14'	2'
RESIDENTIAL (13-20 UNITS SERVED)	45'	16'	2'
MAJOR RESIDENTIAL (21-50 UNITS SERVED)	45'	18'	3'
COLLECTOR (OVER 50 UNITS SERVED)	45'	20'	3'

Notes:

- The minimum road right-of-way width shall be increased to the extent necessary to keep all grading and land disturbing activity within the road right-of-way.
- Traffic generated by amenities such as golf courses, restaurants, etc. located within the proposed subdivision shall be considered in determining the appropriate standards for the road(s) serving the development and/or providing access to the amenity. This shall be done by identifying the vehicle trips estimated to be generated by the proposed amenity and relating these vehicle trips to those generated by a single-family dwelling. It shall be assumed that a single-family dwelling generates eight vehicle trips per day. Estimated traffic generation shall be as set forth in the NCDOT Traffic Engineering Manual.
- If the shared drive or minor residential road is more than 500 feet long, a turnout must be provided as set forth in Section 4.3.5 (c)(i)5) below.

- [Level 1 Campground are not required to be paved unless grade is in excess of 15%](#)

- 4) Turnouts. The turnouts must be a minimum of 50 feet long and provide for a total travelway width of 18 feet with an additional three feet width cleared of trees, brush, and undergrowth. If the turnout is located on the fill side of the road, it shall have a total travelway width of 20 feet with an additional three feet width cleared of trees, brush, and undergrowth. The location of turnouts on shared drives and minor residential roads shall be approved by the Planning Board. Items to be considered in the review of turnout locations shall include the road grade, slope of the bank (if turnout to be located on fill side of the road), width of the turnout, vertical and horizontal curves, and compaction of the subsoil and base as set forth in Table 4.3.

Road Section Grade	Road Centerline Radius	Turnout Spacing
≤ 12%	> 90 Feet	700 Feet
≤ 12%	90—70 Feet	600 Feet
≤ 12%	69—60 Feet	500 Feet
≤ 12%	59—50 Feet	400 Feet
≤ 12%	< 50 Feet	300 Feet
> 12%	> 90 Feet	350 Feet
> 12%	90—70 Feet	300 Feet
> 12%	69—60 Feet	250 Feet
> 12%	59—50 Feet	200 Feet
> 12%	< 50 Feet	150 Feet

- 5) The maximum length for road types shall be as follows:

Shared Drive	2,650 feet (approximately ½ mile)
Minor Residential	5,300 feet (approximately 1 mile)
Residential	10,600 feet (approximately 2 miles)

¹ If the road length exceeds the maximum for that road type, the road shall be constructed to the standards of the next type regardless of the number of homes/lots served.

- 6) Maximum cut slope: 1 ½ :1; maximum fill slope: 2:1. Steeper slopes may be permitted if certified by a professional engineer and approved by the Subdivision Ordinance Enforcement Officer. A bench with a minimum width of 5 feet shall be provided at the toe of all fill slopes greater than 10 feet in vertical height. All cut and fill slopes greater than 20 feet in vertical height shall have a bench with a minimum width of 5 feet for every 10 feet in vertical height. An illustration

depicting the benching of cut and fill slopes is available on the County Planning Department website <https://www.planning.jacksonnc.org/> and from the Planning Department office.

- 7) Development access roads in subdivisions with more than 100 lots and/or dwelling units proposed and sections of roads within a subdivision providing access to more than 100 lots shall be constructed to NC DOT subdivision roads minimum construction standards.
- 8) All lots in a residential subdivision shall abut an access road meeting one of the classifications identified in the Table 4.2: Subdivision Road Requirements.
- 9) Subdivisions shall abut and be accessed from a public road or have a deeded right-of-way (minimum width of 45 feet) to a public road. If access is provided by a deeded right-of-way, an access road meeting the road construction standards for the number of lots served shall be constructed within the deeded right-of-way.
- 10) Sections of road, including shared drives, with a grade in excess of 15 percent shall be paved, with the pavement extending 100 feet from the section of road with a grade in excess of 15 percent. The length of road sections with a grade greater than 15 percent shall not exceed 300 feet in length, and a leveling area shall be provided at each end of the road segment with a grade exceeding 15 percent. The grade of the leveling area shall not exceed 12 percent and shall be at least 100 feet in length.
- 11) The grade of residential roads and major residential roads may be increased up to a grade of 20 percent upon approval of the Planning Board in order to minimize grading and/or vegetation removal. The section of road with a grade in excess of 15 percent ~~shall be paved~~, shall not exceed 300 feet in length, and a leveling area shall be provided at each end of the road segment with a grade exceeding 15 percent. The grade of the leveling area shall not exceed 12 percent and it shall be at least 100 feet in length.
- 12) The grade of collector roads may be increased up to a grade of 18 percent upon approval of the Planning Board in order to minimize grading and/or vegetation removal. The section of road with a grade in excess of 15 percent ~~shall be paved~~, shall not exceed 300 feet in length, and a leveling area shall be provided at each end of the road segment with a grade exceeding 15 percent. The grade of the leveling area shall not exceed 12 percent and it shall be at least 100 feet in length.
- 13) A two-foot wide shoulder shall be provided on each side of shared driveways, minor residential, and residential roads. A three-foot-wide shoulder shall be provided on each side of major residential and collector roads. The shoulder shall be at approximately the same finish grade as the road bed and shall be compacted to a minimum compaction rating of 95 proctor. Shoulders may be grassed, graveled, or paved.
- 14) The travelway width for all roads except collector and development access roads may be reduced to one lane (minimum width nine feet) in areas with steep slopes to reduce grading and preserve existing vegetation upon approval of the Planning Board. The maximum length of the one lane segment shall be 1,000 feet and a pull out(s) meeting the standards set forth above shall be provided. A road shoulder with a minimum width of two feet shall be maintained on each side of the one lane road segments.
- 15) Leveling areas must be provided for all roads at all intersections. The leveling area shall have a maximum grade of five percent extending 50 feet from the intersection.
- 16) The travelway width shall be increased when the road centerline radius is less than 90 feet. For centerline radii between 90 feet and 70 feet, the travelway width shall be increased 25 percent; for centerline radii between 70 feet and 60 feet, increase the travelway width 35 percent; for centerline radii between 60 feet and 50 feet, increase the travelway width 45 percent; and for centerline radii less than 50 feet, increase the travelway width 50 percent.

- 17) The width of the corridor cleared/graded for road construction shall not exceed 90 feet for 80 percent of the length of the road. For 20 percent of the length of the road, the corridor may be cleared/graded to a maximum width of 135 feet for the road construction. The maximum height of the corridor (combined cut and fill slopes) shall be 60 feet.
- 18) An overhead clearance of 14 feet shall be provided on all roads.
- 19) Alternatives and modifications to these standards that reduce land disturbance and vegetation removal, such as one-way roads and loop roads, and/or that are necessitated by the natural physical features of the property and not otherwise provided for in these standards may be approved by the Planning Board. The request for such alternative or modification shall be submitted by the property owner/developer to the planning department for review and conveyance to the Planning Board.
- 20) Vertical Curves. Formula for determination of length of vertical curve required to provide minimum sight distances shall be as follows:
 - a) $[L = KA]$
 - L = Length of vertical curve in feet
 - K = Rate of vertical curvature in feet per percent of A
 - A = Algebraic difference in grades in percent

Crest	10
Sag	10
Stop	5

- 21) Minimum private roads proposed to serve lots and/or home sites in subdivisions shall comply with the following minimum construction standards:

Road Type	Base Course	Pavement Surface
Shared Drive	4" ABC ¹ or STBC ²	Not required unless grade > 15%
Minor Residential	6" ABC or STBC	AST ³
Residential	6" ABC or STBC	1 ½" SF9.5A ⁴ or S9.5B ⁵
Major Residential	8" ABC or STBC	1 ½" SF9.5A or S9.5B
	Or 6" ABC or STBC	2" SF9.5 or S9.5B
Collector	8" ABC or STBC	2" SF9.5A or S9.5B

¹ ABC Aggregate Base Course

² [All Base Course and Pavement Surface materials shall be in accordance with the latest edition of the NCDOT Standard Specification for Roads and Structures](#)

² [STBC Soil Type Base Course](#)

³ AST Asphalt Surface Treatment, ~~Mix design to be approved by Planning Board~~

⁴ SF9.5A Asphalt Concrete [Surface Course Surface Treatment](#), Type SF9.5A

⁵ S9.5B Asphalt Concrete Surface Course, Type S9.5B

⁶ [This table is intended to provide minimum standards. These minimum standards may or may not be suitable for all conditions. It is recommended that a qualified NC Professional Engineer be consulted for site specific Base Course and Pavement Surface recommendations](#)

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- 22) Approved pervious paving materials are encouraged to be used in lieu of the paving materials listed above. Pervious paving materials shall be approved by the Planning Board.
 - 23) The right-of-way widths and construction standards specified above are for private roads. NCDOT will not assume maintenance of these roads. In order for NCDOT to assume maintenance of roads, they must meet NCDOT standards as set forth in the publication "NCDOT Subdivision Roads Minimum Construction Standards."

Base and subsoil shall be compacted to a minimum rating of 95% [standard proctor density](#).
~~proctor.~~

(d) *Dead-End Roads.*

- (i) Dead end roads shall provide a turnaround at the end of the road to permit general traffic, emergency vehicles, and general service vehicles to turn. If a bulb turnaround is provided, the turnaround shall meet the following standards:
 - 1) Minimum ROW radius: 45 feet.
 - 2) Minimum pavement radius: 30 feet.
 - 3) T-turnarounds and hammerhead turnarounds may be used in lieu of a bulb turnaround on dead end roads. The minimum length of the maneuvering segment shall be 45 feet and the minimum width shall be 18 feet.

(e) *Driveways.*

- (i) Curb cuts, where provided in the subdivision, shall begin not less than three feet from lot lines as projected to meet the line of the pavement edge. Design and construction of portions of driveways within rights-of-way shall be constructed in accordance with the requirements of the NCDOT. The approving authority may permit the establishment of shared driveways on property lines provided that mutual access easements are delineated upon the subdivision plat and all relevant deeds.
- (ii) If extraordinary surface or subsurface conditions, terrain, the general drainage pattern in the area, existing or probable development in the vicinity, or other circumstances exist or occur, the Planning Director, upon making supporting written findings, may establish greater requirements in particular cases.

(f) *Access to Public Lands.*

- (i) Cemeteries and gravesites shall be identified during the application process and protected during development of subdivisions by a 20-foot buffer, and family members shall be assured reasonable access thereto during development and thereafter. Anyone subdividing properties containing roads, trails and other travel ways which have historically provided public access to national forests and other public lands is encouraged to provide for continued public access thereto.

(g) *Traffic Control.*

- (i) All subdivision road intersections including those with existing state-maintained roadways shall be constructed using traffic control standards as designated in the "Manual on Uniform Traffic Control Devices" (MUTCD), "North Carolina Supplement to the Manual on Uniform Traffic Control Devices." All signage shall meet the requirements of the MUTCD.

(h) *Intersections.*

- (i) The most desirable intersections are those with angles of 75 to 90 degrees. Intersections with angles from 60 to 75 degrees are acceptable under extreme conditions as determined by the Planning Director.

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- (ii) Minimum sight distance triangle for stop condition when connecting new local residential roads or residential collector roads to existing state-maintained roads is 70 feet along the existing road right-of-way and 10 feet along the new road right-of-way.
 - (iii) All internal intersections shall have minimum 20 feet radius.
 - (i) *Sidewalks and Ramps.*
 - (i) *General.* Sidewalks may be provided for all Level 1 and Level 2 major subdivisions to access a pedestrian destination point, such as a school, park, etc., and may constitute part of the open space requirements.
 - (ii) *ADA Compliance.* All sidewalks shall meet requirements of the "Americans With Disabilities Act." In accordance with NCGS 136-44.14, all street curbs in the State of North Carolina being constructed or reconstructed for maintenance procedures, traffic operations, repairs, correction of utilities or altered for any reason after September 1, 1973, shall provide wheel chair ramps for the physically handicapped at all intersections where curb and gutter is provided and at other major points of pedestrian flow. Wheel chair ramps and depressed curbs shall be constructed in accordance with details contained in NCDOT's, Division of Highways publication entitled, "Guidelines, Curb Cuts and Ramps for Handicapped Persons."
 - (j) *Street Names and Signage.*
 - (i) In accordance with Chapter 26, Article II of the Jackson County Code of Ordinances, street names, prefixes, suffixes and addresses shall conform to the guidelines and policies set forth by Jackson County. Appropriate street name signs which meet standard County specifications shall be placed at all street intersections. The developer shall bear the expense.
 - (ii) Proposed street names shall be submitted and subject to the approval of the Jackson County, as appropriate. New names shall not duplicate or be similar to existing street names. Existing street names, however, shall be extended where appropriate.

(Ord. No. O2019-01(2), 2-4-2020; Ord. No. O2019-01(5), 11-2-2021; Amend. of 3-1-2022, Att.)

Sec. 4.4 Stormwater drainage standards.

- (a) *General Requirements.*
 - (i) Drainage systems shall be designed utilizing low-impact design to limit disruption of natural water flows by eliminating stormwater runoff, increasing on-site infiltration and eliminating contaminants.
 - (ii) This system design shall be rendered in a drainage plan, which is a written or graphic concept plan of the proposed post-development stormwater management system. The drainage plan shall, at a minimum, include the following: preliminary selection and location of proposed structural stormwater controls; low impact design elements; location of existing and proposed conveyance systems such as grass channels, swales, and storm drains; flow paths; location of flood plain/floodway limits; relationship of site to upstream and downstream properties and drainages; and preliminary location of proposed stream channel modifications, such as bridge or culvert crossings.
 - (iii) The approval of the drainage plan of any subdivision shall require an enforceable restriction on property usage that runs with the land, such as recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans.

- (iv) Where major new drainage ways are required in a subdivision, they shall be coordinated with existing and proposed general drainage systems and designed with due regard for safety, appearance and geological effects.

Figure 4.8: Examples of Stormwater Control Measures



Source: Stewart

- (v) Aboveground drainage ways shall be:
 - 1) Located and constructed to maintain a natural appearance;
 - 2) Limited to safe water depths in easily accessible areas; and
 - 3) Designed to avoid excessive rates of flow, erosion, or overflow into developed areas subject to damage.
- (vi) Watercourses and natural water areas downstream, from any land disturbing activity shall be protected from increased degradation by accelerated erosion caused by increased velocity of runoff from the land disturbing activity in accordance with the County sediment control provision. In circumstances where the impact of new drainage would be likely to damage or destroy significant existing natural water areas, such drainage shall not be discharged through or into such areas.
- (vii) The development area of any lot shall conform with subsection (iii) of this section.
- (b) *Development Standards for Low Density Projects.*
 - (i) Stormwater runoff from the development area shall be transported from the development by vegetated conveyances to the maximum extent practicable.
- (c) *Development Standards for High Density Projects.*
 - (i) The measures shall control and treat the difference in stormwater runoff volume leaving the development area between the pre- and post-development conditions for, at a minimum, the ten-year, 24-hour storm. This standard refers to the surface runoff resulting from a 24-hour rainfall of an intensity expected to be equaled or exceeded, on average, once in ten years. Runoff volume drawdown time shall be a minimum of 24 hours, but not more than 120 hours.
 - (ii) All structural stormwater treatment systems used to meet the requirements of this section shall be designed to have a minimum of 85 percent average annual removal for total suspended solids (TSS).
- (d) *Stormwater Drainage Facilities.*
 - (i) The application shall be accompanied by a description of the proposed method of providing stormwater drainage. The subdivider shall provide a drainage system that diverts stormwater runoff

away from surface waters and incorporates best management practices to minimize water quality impacts. Consistent with Section 5.3.9 (Stormwater Provisions), subdivisions qualifying for the special intensity allocation shall provide non-structural methods of managing stormwater runoff.

(e) *Erosion and Sedimentation Control.*

- (i) The application shall, where required, be accompanied by a written statement that a sedimentation and erosion control plan has been submitted to and approved by the State Division of Land Quality.

(f) *Roads Constructed in Critical Areas and Watershed Buffer Areas.*

- (i) Where possible, roads should be located outside of critical areas and watershed buffer areas. Roads constructed within these areas shall be designed and constructed so to minimize their impact on water quality.

(g) *Erosion Protection; Preservation of Topsoil and Vegetation.*

- (i) In general, during the preparation of the subdivision and installation of improvements, appropriate measures shall be taken to prevent erosion and damaging siltation on the property and on adjoining land or water areas in accord with the Article V, Section 5.3, Erosion and Sedimentation Control.
- (ii) In any grading or filling operations, desirable topsoil shall be conserved and redistributed as such, particularly to cover exposed subsoils.
- (iii) Trees, shrubs and ground cover existing at the beginning of development operations shall be preserved to the maximum extent reasonably feasible where they are of species and in locations likely to add amenity to the completed development.
- (iv) Ground cover. All land within the subdivision right-of-way which is not used for structures, vehicular or pedestrian traffic, or for other approved landscaping shall be provided with grass or other ground cover, appropriately installed, and consistent with the requirements of the County sediment control regulations. Ground cover may include appropriate plant materials preserved in place.
- (v) The Planning Director may require preservation of specified trees or other vegetation in connection with a particular development, except upon findings that such preservation is not feasible in view of the requirements for the installation of public utilities and facilities.
- (vi) The Planning Director may grant a conditional approval of a preliminary subdivision plat, provided that an erosion control plan approval letter is submitted to the Planning Department within 90 days and prior to commencement of site preparation or other land-disturbing activities.

(h) *Adequacy.*

- (i) All storm drainage shall be adequate so that the road may be maintained without excessive cost, and not cause flooding on private property from storm runoff of the design frequency. The minimum design frequency shall be as follows:
 - 1) Storm sewer collector and lateral ditches: ten years.
 - 2) Cross drainage: 25 years.
 - 3) Minimum cross pipe diameter is 18 inches; minimum driveway pipe diameter is 15 inches.
 - 4) All drainage shall be consistent with criteria found in NCDOT Guidelines for Drainage Studies and Hydraulic Design.
 - 5) In areas where ditch grades or quantities of flow make it impracticable to establish and maintain vegetation, an erosive resistant lining such as paving, matting or rip rap shall be required. Subsurface drainage shall be adequate to maintain a stable subgrade.

(i) *Structures (Culverts, Dams, Retaining Walls, and Bridges).*

- (i) Design, construction, and installation of culverts, dams, and retaining walls shall comply with NCDOT standards as set forth in NCDOT Subdivision Roads Minimum Construction Standards, unless other standards are approved by the Planning Board. Bridges shall have a travelway width equal to that required for the road type (including required shoulder width) and shall comply with the requirements of the U.S. Army Corps of Engineers and other permitting agencies. All bridge designs shall be prepared and/or approved by a licensed professional engineer registered in North Carolina. The Planning Director shall review permit documentation for bridges to assure that all required approvals have been obtained prior to construction.

(Ord. No. O2019-01(5), 11-2-2021)

Sec. 4.5 Utility and infrastructure standards.

(a) *General.*

- (i) Subdivision development shall comply with the standards established by the utility company or agency providing the utility service and with the standards of the NCDOT as set forth in NCDOT's Subdivision Roads Minimum Construction Standards (latest edition).

(b) *Above Ground Utilities.*

- (i) Poles and other above-ground utilities which are to remain inside the right-of-way shall be located at or as near as practical to the right-of-way line. As a minimum, above-ground utilities shall be located outside the shoulder/ditch for the road section involved.
- (ii) Where there are curbed sections, above-ground utilities should be located as far as practical behind sidewalks. There is no single minimum dimension for setback of poles, fire hydrants, etc., behind curbs; however, where there are curbed sections and no sidewalks, six feet will be used as a design safety concept guide. Where dimensional or other characteristics of such land are such that they could not be used for other purposes under the zoning applying in the district, the plan shall indicate and restrict use to easement or substation purposes, and requirements generally applicable to access, dimensions or other characteristics of that land shall not apply. Departmental reports in such cases shall include findings as to the effect of the proposed location in adjacent uses, preservation of areas of major ecological importance, and as to whether sites for substations, if involved, are adequate to provide required screening.

(c) *Public Water Supply.*

- (i) Public water supply is required in a subdivision as follows:
- 1) Any subdivision, including estate, family, minor and major, which has public water system lines available shall be required to extend the public water system throughout the subdivision to each lot located therein.
 - 2) All required water line extensions shall include appropriate valves, hydrants, taps and service to the property line of each lot as required by the standards of the provider of the service.
 - 3) For subdivisions located within the jurisdiction of this section, the term "available" shall mean that there is an existing water line of adequate size and water flow and/or pressure, as determined by the water provider, abutting the property and/or right-of-way, provided there are no legal or documented topographic constraints which prevent the subdivider from connecting onto and extending the existing system to the subdivision.

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- 4) Every lot in a Level 1 or Level 2 major subdivision shall be served by a permitted public or community water system or served by individual wells approved by the County division of environmental health.
- (d) *Public Sanitary Sewer.*
- (i) Public sanitary sewer is required as follows:
 - 1) Any subdivision, including estate, family, minor and Level 1 or Level 2 major subdivisions, which has public sewer system lines available shall be required to extend the public sewer system throughout the subdivision to each lot located therein.
 - 2) All required sewer line extensions shall include appropriate manholes, lift stations, pumps, cleanouts, taps and service to the property line of each lot as required by the standards of the provider of the service.
 - 3) For subdivisions located within the jurisdiction of this section, the term "available" shall mean that there is an existing sewer line of adequate size and flow, as determined by the utility provider, abutting the property and/or right-of-way, provided there are no legal or topographic constraints which prevent the subdivider from connection onto and extending the existing system to the subdivision.
 - (ii) Every lot in a Level 1 or Level 2 major subdivision shall be served by a public sewer or, where public sewer is not required, by a permitted community sewer system or an individual on-site septic system approved by the County Public Health Department.
- (e) *Exceptions.*
- (i) Where subdivisions are proposed, and no public or community sewer is available, the applicant should review a soils map of the property and be knowledgeable of the suitability of ground absorption systems for the development.
- (f) *Fire Protection.*
- (i) All lots served by a municipal public water supply system in a subdivision shall also be afforded fire protection by means of hydrants, installed under uniform standards and specifications. Final plats shall indicate that any qualified water ponds shall be made available to emergency personnel for the purpose of pumping water.

(Ord. No. O2019-01(5), 11-2-2021; Amend. of 3-1-2022, Att.)

Sec. 4.6 Easements.

- (a) *Utility Easements.*
- (i) Easements for utilities shall be provided where necessary along front, rear, or side lot lines in the subdivision, but shall not be required to center on such lines. Such easements shall be sufficiently wide to provide for installation of such utilities and access for maintenance and operation.
 - (ii) Where it is proposed to locate major utilities easements (defined for purposes of this section as being 20 feet or more in width) and/or sites for substations, such as pumping stations, relay towers, pressure regulating stations and the like, in a subdivision, procedures shall be as generally provided for minor and family subdivisions.
- (b) *Minor Drainage Easement.*
- (i) For purposes of this section, minor drainage easements are defined as those providing for drainage of surface waters from four or fewer lots, and not involving water bodies of substantial significance in the

ecology of the area, as determined by the Planning Director. Minor drainage easements, where required, shall be permitted to cross lots at other points only where such arrangement is found by the Planning Director to be practically necessary as a result of topography or soils conditions or improved flow and where such arrangement will leave a suitable buildable area, safe from inundation, erosion or subsidence, and safely accessible from approved roads. Where necessary for operation, construction or maintenance, the Planning Director may require, in accord with the terms of the easement, minor drainage easements to be kept free of trees and other obstructions.

(c) *Utilities in Drainage Easements.*

- (i) Utilities in drainage easements shall be permitted only upon specific authorization by the Planning Director and only in locations authorized.

(Ord. No. O2019-01(5), 11-2-2021)

Sec. 4.7 Markers and monuments.

- (a) Monuments, complying with the requirements of G.S. 47-30 and the current edition of the Standards of Practice for Land Surveying in North Carolina, shall be placed in all subdivisions.
- (b) Any permanent monuments or markers displaced or destroyed during the course of development or construction in the subdivision shall be accurately witnessed and replaced upon completion of such development or construction.

(Ord. No. O2019-01(5), 11-2-2021)

Sec. 4.8 Homeowner/property owner associations.

(a) *Establishment.*

- (i) If a property owners' association or similar legal entity is to be responsible for the maintenance and control of roads, open space, recreational facilities, or other common areas and facilities associated with a subdivision, it shall be established so that it has clear legal authority to maintain and exercise control over the common areas and facilities, including the power to compel contributions from subdivision residents to cover their proportionate shares of the costs associated with the maintenance of the common areas and facilities. Such association or similar legal entity shall be established before any dwelling unit or lot in the subdivision is sold or any building in the subdivision is occupied.

(b) *Documentation.*

- (i) Documents providing for the establishment of a property owners' association or similar legal entity in accord with this section shall be submitted to and approved by the County Attorney before any plat for the development is recorded. The review by the County Attorney shall be limited to ensuring that the property owners' association or similar legal entity is established so that it has clear legal authority to maintain and exercise control over the common areas and facilities, including the power to compel contributions from subdivision residents to cover their proportionate shares of the costs associated with the maintenance of the common areas and facilities.

(c) *Maintenance of Private Subdivision Roads.*

- (i) Private subdivision roads shall be maintained privately by a property owners' association. Subdivisions of eight lots or less and family subdivisions shall not be required to establish a property owner's association for the maintenance of private roads in the subdivision. A maintenance agreement that establishes responsibility for maintenance of these roads shall be required for subdivisions of eight lots

or less. The maintenance agreement for private subdivision roads shall include, but not be limited to, the items listed below. In lieu of the legally incorporated property owners' association identified below, subdivisions of eight lots or less may provide an agreement including all lot owners.

- 1) Reserved.
- 2) A legally incorporated property owners' association shall be established for the property owners within the entire subdivision.
- 3) All property owners within the subdivision shall be members of the property owners' association.
- 4) The subdivider shall convey, in a fee simple ownership, all neighborhood private roads within the subdivision to the property owners' association.
- 5) The passage of the responsibility for maintenance of neighborhood private roads from the developer to the property owners' association shall be noted in the deed of each purchaser of property within the subdivision.
- 6) At the time of preparation of the sales agreement, the developer shall include a disclosure statement to the prospective buyer. The disclosure statement shall:
 - a) Provide an explanation of the consequences and responsibilities regarding the maintenance of a private road and shall fully and accurately disclose the party who shall be responsible for the construction and maintenance of the subdivision roads.
 - b) Shall state that the owners of property in this subdivision are responsible for maintaining and repairing the roads as well as paying the costs thereof if the roads are private and will not be dedicated to NCDOT for maintenance.
 - c) Shall state that County and other governmental services may be restricted or not provided for owners of property using private roads for access.
- 7) The buyer of the subject real estate shall receive and sign an acknowledgment of receipt of a separate instrument known as the subdivision streets disclosure statement.
- 8) A copy of the disclosure statement required by this section shall be provided to the Planning Department at the time of the submittal of the final plat.

(Ord. No. O2019-01(5), 11-2-2021)

Sec. 4.9 Completion and maintenance guarantees.

(a) *Completion.*

- (i) All applicants shall be required to complete all the street, sanitary sewer and storm drainage, sidewalks, street signs, monuments, erosion control, street lights, and other required improvements as approved by the Planning Director, prior to approval of the final plat or Certificate of Occupancy for projects not requiring a platting process, except as provided in Subsection (b) below concerning performance guarantees.
- (ii) All required improvements shall be inspected and approved by appropriate public officials or agencies.

(b) *Performance Guarantees.*

- (i) In lieu of completion of all or part of required improvements prior to approval of subdivision final plats or approved phased development, the applicant may post a performance guarantee in the amount as indicated under subsection (d) of this section for the construction, installation and dedication of the uncompleted portion of the required improvements.

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- 1) Type of guarantee. The type of the guarantee shall be as provided herein.
 - a) Surety bond issued by any company authorized to do business in this State.
 - b) Letter of Credit issued by any financial institution licensed to do business in this State. The terms of the letter shall include the absolute right of the County Manager to withdraw funds from the bank forthwith upon the County Manager's certifying to the bank that the terms and conditions of the performance guarantee have been breached. The expiration date of the letter of credit shall be at least six months past the anticipated completion date of the required improvements.
 - c) Other forms of guarantee that provides equivalent security to a surety bond or letter of credit.
 - d) No person shall have or may claim any rights under or to any performance guarantee provided pursuant to this subsection or in the proceeds of any such performance guarantee other than the following:
 - i) The local government to whom such performance guarantee is provided.
 - ii) The developer at whose request or for whose benefit such performance guarantee is given.
 - iii) The person or entity issuing or providing such performance guarantee at the request of or for the benefit of the developer.
 - e) Guarantee Time Limits
 - (ii) Extensions for performance guarantees may be granted by the Planning Director subject to a review of the circumstances surrounding the request for an extension and the record of the applicant. Property owners in the development shall be notified and shall be given an opportunity to comment on the request for an extension of the performance guarantee.
 - (c) *Amount and Terms of Guarantee.*
 - (i) The amount and terms, of the guarantee shall be as provided herein. Following receipt of such recommendations, the Planning Director shall review the information submitted as to the amount and terms of the performance guarantee, including the time of initiation and completion of the work; provisions concerning extensions for cause; and provisions for release of the guarantee upon completion of the work. If the information is complete and the guarantee amount is deemed satisfactory, the Planning Director shall administratively approve the performance guarantee package.
 - (ii) The guarantee shall be 1.25 times the executed construction contract amount or the certified cost estimate, whichever is provided. The amount of the guarantee shall be sufficient to provide adequate funds to the County to ensure, in the case of default, the installation of all required improvements uncompleted at the time of default. In reviewing the amount of the performance guarantee, the Planning Director shall consider the difficulty of restarting a closed project, the size and complexity of the required improvements, the record of the applicant and the site conditions.
 - (iii) The Planning Director may authorize reductions in the amount of the performance guarantee in light of the completion of guaranteed improvements when doing so is fair and equitable and would not be contrary to the public interest.
 - (iv) The performance guarantee shall only be used for completion of the required improvements and not for repairs or maintenance.
 - (d) *Inspections; Reports; Cost Responsibility.*
 - (i) Procedures for inspections and reports and the responsibility shall be as provided herein.

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- 1) The applicant shall have a registered, licensed professional make regular inspections to document progress based on the required construction schedule and provide a final inspection report to confirm work has been completed per ordinance regulations.
 - 2) Within ten days of such inspections, copies of reports of the results thereof shall be provided to the Planning Director.
 - 3) The full cost of making such inspections and preparing such reports shall be paid by the applicant.
- (e) *Action on Inspection Reports.*
- (i) The following actions may be taken on inspection reports:
 - 1) Reports indicating satisfaction of requirements. Where such reports indicate satisfactory completion of work within time limits set and in accord with other terms of the performance guarantee, for agreed-upon stages or for the entire work, the Planning Director shall so indicate by first class mail to the applicant, any surety company involved and the County Manager. The County Manager, upon such notification and any further assurance he may require from the County attorney or governmental bodies exercising operating control, shall then release the performance guarantee in accordance with the terms thereof.
 - 2) Reports indicating failure to satisfy requirements. Where such reports indicate failure to complete work on schedule in full compliance with the terms of the performance guarantee, the Planning Director shall so indicate by first class mail to the applicant, governmental bodies exercising control, any surety company involved, and the County Manager. Such notice shall indicate that, unless action required under the terms of the performance guarantee is completed within 30 days of the date of such notification, the performance guarantee or portions thereof, set forth in its terms, shall be called. Unless such action is completed, as evidenced by inspections and reports from governmental bodies exercising control transmitted through the Planning Director, the County Manager shall call the performance guarantee or affected portions thereof.
 - 3) Reports indicating unsatisfactory progress. Where such reports indicate that work initiated appears unlikely to be completed on schedule, and where the performance guarantee provides for extension of time for cause, the Planning Director shall notify the applicant by first class mail and any surety company involved concerning the potential need for an application for such extension. Where such notice has been given, no application for an extension shall be given after expiration of the original schedule date.
- (f) *Failure to Complete Work Under Performance Guarantee.*
- (i) Where work required under the terms of any performance guarantee given pursuant to this article is not completed by the applicant as specified therein, the County Manager, following the call of the guarantee, shall take such action as is appropriate in the circumstances of the case to procure the completion of the required improvements at the earliest reasonable time, according to the plans and specifications.
- (g) *Maintenance of Land and Improvements.*
- (i) The applicant shall maintain all land and required improvements offered for dedication in a subdivision in satisfactory condition until acceptance of the dedication.
- (h) *Guarantee of Other Governmental Agency or Public Utility.*
- (i) Where all or part of required subdivision improvements are to be completed by another government agency or public utility, the Planning Director may accept the written guarantee of such agency to complete such improvements within a time to be mutually agreed upon, with time for completion limited as provided in Section (d)(1) this section.

(i) *Building Permits and Certificates of Occupancy.*

- (i) Building permits may not be issued for construction of residential structures in a subdivision prior to completion of required improvements unless a performance guarantee has been approved by the Planning Director.
- (ii) Certificates of occupancy may be issued, and buildings occupied only when all of the following improvements are available and as further provided in Section (iii) below:
 - 1) Roads and driveways shall be passable for private, service and emergency vehicles under normal weather conditions.
 - 2) Drainage shall be installed and operative, thus ensuring that, under normal weather conditions, there will be no flooding of the building site or access ways to the site.
 - 3) Erosion protection, acceptable under normal weather conditions, shall be installed.
 - 4) Domestic water supply and sanitary sewerage shall be installed and operative.
- (iii) No such permits or certificates shall be issued unless all remaining required improvements are covered by a performance guarantee and the applicant accepts responsibility pending completion of all required improvements.

(Ord. No. O2019-01(5), 11-2-2021)

Sec. 4.10 Preservation and stormwater control measures for water areas.

- (a) *Intent.* It is the intent of this article both to safeguard existing and potential development in appropriate locations and to preserve and promote a desirable ecological balance. Insofar as is reasonably practicable, subdivisions shall, therefore, be located, designed and improved to:
 - (i) Preserve important natural water areas and related vegetation and wildlife habitats;
 - (ii) Avoid creation of upstream impoundments or downstream runoff harmful to such complexes or to existing or potential development in appropriate locations; and
 - (iii) Maintain desirable groundwater levels.
- (b) *Maintenance of Natural Watercourses.* Standards for maintenance of natural watercourses are as provided herein.
 - (i) Where a proposed subdivision is traversed by or includes in whole or in part a natural watercourse, as defined herein, the following requirements shall apply:
 - 1) Such natural watercourse shall be maintained in its natural state except for those vehicular or utility crossings which are necessary and deemed unavoidable by the approving authority;
 - 2) Bordering lands within 30 feet of the edge of any natural watercourse shall be maintained in a naturally vegetated and unaltered state;
 - 3) Bordering lands likely to be inundated at the period of high water during periods of rainfall of ten-year return frequency shall be maintained in a naturally vegetated and unaltered state;
 - 4) Any area designated as a floodway on the most recently adopted flood insurance rate map for the County shall be maintained in a naturally vegetated and unaltered state;
 - 5) Any area designated as a special flood hazard area inundated by the 100-year flood on the most recently adopted flood insurance rate map for the County shall be designated as open space on

any plat for a Level 1 or Level 2 major subdivision. It shall not be necessary that it be maintained in a naturally vegetated and unaltered state except as required by subsection 4) of this section.

- 6) Any other suitable protective strips deemed necessary by the Planning Director shall be protected.
- (ii) The Planning Director and/or his/her designee, as a condition for plat approval, may make such requirements as are reasonable for the protection of such areas, including the following:
 - 1) The Planning Director may require that streets and/or parkways shall border such areas, setting them apart from residential or other intensive uses; or
 - 2) The Planning Director may require that all or part of such area shall be platted as part of residential or other lots.
- (iii) In making decisions concerning such requirements, the Planning Director shall consider topography, drainage patterns, soil types, character of existing and potential upland uses, ground cover, erosion control requirements, character of the area to be protected, the adequacy of proposed filter areas, and the like.
- (iv) The development area for any lot shall be delineated on subdivision plats. Those areas described in Section(b)(i) above shall not be included in the area of any lot intended for development and shall be set aside for the common use and enjoyment of occupants of the subdivision, and arrangements for maintenance by a property owners' association, management group or other acceptable arrangement shall be made. These areas shall be designated for permanent protection on the subdivision plat and recorded deeds, with appropriate recorded deed restrictions for the use and protection of these areas stipulated, and all management responsibilities set forth in property owners' association bylaws or other appropriate and binding documents for the development.
- (c) *Changes in Location or Extent of Significant Natural Waterways and Water Areas.* The Planning Director may approve plats depicting changes in the location or extent of significant natural waterways and/or water areas only in the following circumstances:
 - (i) When necessary to accommodate unavoidable vehicular or pedestrian crossings;
 - (ii) When such changes will not adversely affect desirable ecological conditions, drainage or water retention or result in undesirable location or amount of upstream impoundment or downstream discharge; and
 - (iii) The subdivider has obtained all necessary state and federal permits.
 - (iv) No-rise certifications shall be required where regulatory floodways are concerned.
- (d) *Minor Incursion for Recreational Purposes.* Minor incursions into areas protected under this section may be permitted for the purpose of providing pedestrian and bicycle access for passive recreational activities. Such incursions shall be permitted only if shown on the preliminary and final plats and approved by the Planning Director.

(Ord. No. O2019-01(5), 11-2-2021; Amend. of 3-1-2022, Att.)

Sec. 4.11 Required certifications.

- (a) Certifications are required per North Carolina General Statutes.

Sec. 4.12 Variances and appeals.

- (a) Variance requests will be processed per section 3.7.20.
- (b) Appeals to the Administrator's decision will be processed per 3.7.2.
(Amend. of 3-1-2022, Att.)

Sec. 4.13 Reserved—Mixed use multifamily subdivision.