

Click a Chapter Section
to jump to that page.



Chapter 4. Overlay District Specific Standards

4.1. Quarry Overlay District.....	1
4.2. Special Highway Overlay District.....	2
4.3. Manufactured Home Overlay District.....	3

4.1. Quarry Overlay District

- A. **Location.** The QOD shall be located on parcels that otherwise allow residential development and are adjacent to the primary quarry parcel up to a maximum of one-thousand (1,000) feet from the primary quarry parcel boundary as determined by the Town Council.
- B. **Uses Permitted.** The district restricts any form of residential development to a minimum lot size of one (1) acre and a maximum density of one (1) dwelling unit per acre. All other uses in the underlying Base, Planned Development, or Conditional District are not restricted and permitted according to the Use Matrix (Section 3.1 (C)). Land utilized as open space shall be restricted to passive open space only.
- C. **Full Disclosure Statement.** For all residential and/or non-residential structures constructed within the QOD, the owner shall disclose in writing to all prospective purchasers that they are located within an area that may be impacted by mining/quarry operations and blasting. Such notification will be accomplished by inclusion of the preceding disclosure in all sales contracts, brochures, and promotional documents, including any illustrative site plans on display within any sales related office(s), as well as in homeowners association documents, and displayed on all subdivision and site plans, and within all deeds of conveyance.

4.3. Manufactured Home Overlay District

A. Manufactured Housing.

1. In the RR and RT Districts, the minimum lot size for manufactured homes shall be one (1) acre.
2. All setback requirements shall match those of the underlying zoning district.
3. Unless located in a mobile home park (Section 4.3 (C)), the minimum width (the width being the narrower of the two (2) overall dimensions) of the main body of the manufactured home shall be at least twenty-two (22) feet for a distance extending along the length (the length being the longer of the two (2) overall dimensions) of at least forty (40) feet. In general terms, this only permits double-wide or multi-section manufactured housing.
4. Unless located in a mobile home park (Section 4.3 (C)) or exempt under NCGS §160D-210, a continuous, permanent brick, or stone foundation, constructed in accordance with standards of the North Carolina Residential Building Code, shall be installed under the perimeter of the manufactured home. The foundation shall be un-pierced except for required ventilation and access.
5. Unless located in a mobile home park (Section 4.3 (C)), windows shall be set to the inside wall face.
6. Unless located in a mobile home park (Section 4.3 (C)), a covered front porch or covered front stoop shall be provided at the entrance and should project from the primary façade a minimum of four (4) feet and be no less than four (4) feet in width.
7. The manufactured home shall front on a street such that the principal entrance is aligned to the street.
8. All towing apparatus, wheels, axles, and transporting lights shall be removed.
9. Manufactured homes may be used for residential purposes and home occupation uses only.
10. A manufactured home must bear a seal certifying that it was built to the standards adopted on July 1, 1976 that meets or exceeds the construction standards promulgated by the US Department of Housing and Urban Development that were in effect at the time of construction.
11. In the RR District, the minimum lot width for manufactured homes shall be one hundred (100) feet.

Click a Chapter Section
to jump to that page.



Chapter 5. Use Specific Standards

5.1. Purpose, Intent, and Applicability of Use Specific Standards.....	1
5.2. Residential Use Standards	2
5.3. Lodging Use Standards.....	4
5.4. Office / Service Use Standards.....	6
5.5. Retail / Restaurant Use Standards.....	8
5.6. Entertainment / Recreation Use Standards.....	10
5.7. Manufacturing / Wholesale / Storage Use Standards.....	12
5.8. Civic / Institutional Use Standards.....	14
5.9. Infrastructure Use Standards.....	15
5.10. Accessory Use Standards.....	19

5.1. Purpose, Intent, and Applicability of Use Specific Standards

- A. **Purpose.** The conditions set forth in this Chapter ensure compatibility among building and use types so that different uses may be located in proximity to one another without adverse effects to either. Special regulation of these establishments is necessary to ensure that these adverse effects will not contribute to a downgrading or blighting of surrounding residential districts or neighborhoods unless otherwise determined by this Section.
- B. **Intent.** The intent of this Chapter is to allow for the construction, continuation, and/or expansion of certain uses provided that they meet certain mitigating conditions specific to their design and/or operation. Each use shall be permitted upon compliance with all conditions listed for the use in this Chapter. Certain uses are classified in Section 3.1(C) as Special Uses and require a Special Use (SU) Permit and Town Council approval in accordance with Section 12.2 (F)(4). Certain uses are classified in Section 3.1(C) as requiring Conditional District (CD) rezoning and Town Council approval in accordance with Section 12.2 (G)(3)(f).
- C. **Applicability.** This Chapter specifies those requirements that must be met by uses in the Use Matrix Section 3.1 (C) where Use-Specific Standards are referenced in the Additional Regulations column.

- D. **Live-Work Units.** Live-Work units are unique in that they provide both residential and non-residential space which must each be constructed to different building code standards including, but not limited to, matters of ingress and egress, accessibility by the disabled, and fire-rated separation. In addition, the following standards shall be met:
1. **Access.** Vehicular access to Live-Work Unit shall be from a rear land or alley only.
 2. The maximum total area of a Live-Work unit shall be three-thousand (3,000) square feet.
 3. The maximum height of a Live-Work unit shall be three (3) stories.
 4. The work area shall occupy less than fifty (50) percent of the total unit.
 5. The same tenant must occupy the work area and living area.
 6. There shall be a maximum of five (5) non-resident workers/employees allowed in the Live-Work unit at any single time.
- E. **Manufactured Housing.**
1. In the RT and RR districts, the minimum lot size for manufactured homes shall be one (1) acre.
 2. In the RR district, the minimum lot width for manufactured homes shall be one hundred (100) feet.
 3. The front, side, and rear yard setback requirements shall match those of the underlying zoning district.
 4. Individual homes shall be placed upon separately platted lots.
 5. The manufactured home shall have the tow assembly and wheels removed and be mounted on and anchored to a permanent, continuous masonry (brick) foundation, unless exempt under NCGS §160D-910.
 6. Unless located in a mobile home park (Section 4.3 (C)), the minimum width (the width being the narrower of the two [2] overall dimensions) of the main body of the manufactured home shall be at least twenty-two (22) feet for a distance extending along the length (the length being the longer of the two [2] overall dimensions) of at least forty (40) feet. In general terms, this only permits double-wide or multi-section manufactured housing.

H. Equipment Rental.

1. Equipment rental uses shall be located in the Mixed-Use Building Type as detailed in Section 6.8.

I. Outdoor Animal Boarding / Equestrian Facilities.

1. All open exercise, boarding, training, and similar areas shall be enclosed by a perimeter fence or wall no less than four (4) feet in height and screened from any pre-existing adjacent residential dwelling (other than the owner's) by a Type-A buffer yard (Section 7.4 (I)(2)).
2. No outdoor kennel and/or run shall be located within a five-hundred (500) foot radius of the footprint of any adjacent residential dwelling (other than the owner's).
3. All accessory structures other than outdoor kennels and/or runs related to the care of animals shall not be located within a two-hundred (200) foot radius of the footprint of any pre-existing adjacent residential dwelling (other than the owner's).

J. Personal Services.

1. Hours of operation shall be permitted only from 6:00 am until 11:00 pm.

K. Tattoo Shop.

1. Hours of operation shall be permitted only from 6:00 am until 11:00 pm.
2. A tattoo shop's exterior customer entrance(s) shall not be situated within a one-thousand (1,000) foot radius of another tattoo shop's exterior customer entrance(s).

L. Vehicle Services –Maintenance / Repair / Body Work.

1. Vehicle services - maintenance, repair, and/or body work uses shall be located in the Mixed-Use Building Type ~~within the TC District~~ as detailed in Section 6.8.
2. All vehicles, materials, or equipment shall be stored within an enclosed building, or within an outdoor storage area enclosed by an opaque fence or wall that meets the requirements of Section 7.64 and shall be restricted to the rear yard. ~~Outdoor storage is not permitted within the TC District.~~
3. Any operation which results in the creation of noxious vibrations, odors, dust, glare, or sound is prohibited.
4. No vehicle may be kept or used for parts for other vehicles.
5. No vehicle may be stored in an unrepaired state for more than thirty (30) calendar days.

5.5. Retail / Restaurant Use Standards.

A. Auto Parts Sales.

1. Auto parts sales uses shall be located in the Mixed-Use Building Type as detailed in Section 6.8.

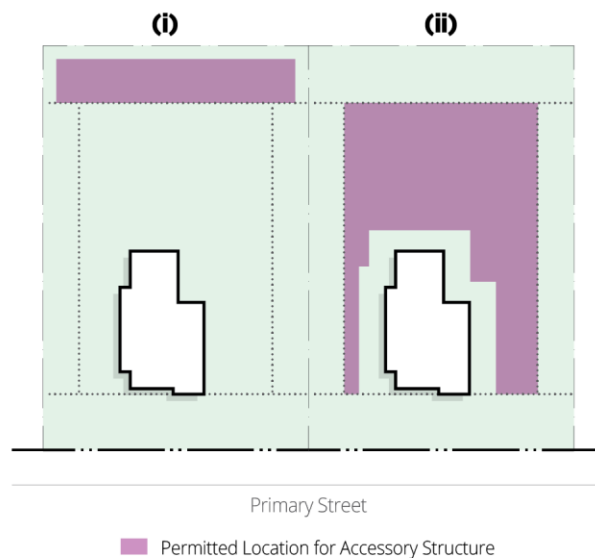
5.10. Accessory Use Standards.

A. Accessory Building / Structure.

1. **Principal Building Required.** The construction of an accessory building or structure is not permitted unless a principal building is located on the lot. Accessory buildings or structures and principal buildings may be constructed concurrently.
2. **General Requirements.**
 - a. **Maximum Allowance.**
 - i. **Districts Permitting Residential Uses:** Accessory buildings or structures on a single lot in a district permitting a residential use (Section 3.1(D)) shall not:
 - a) Collectively:
 - (i) exceed more than three (3) accessory buildings,
 - (ii) cover more than twenty (20) percent of the total combined area of the lot's rear and side yards; nor
 - b) Individually:
 - (i) exceed one thousand (1,000) square feet in area,
 - (ii) exceed the height of the principal building (Section 3.5).
 - ii. **Districts Not Permitting Residential Uses:** Accessory buildings or structures on a single lot in a district not permitting a residential use (Section 3.1 (D)) shall not:
 - a) collectively cover more than thirty (30) percent of the total combined area of the lot's rear and side yards; nor
 - b) individually exceed the height of the principal building (Section 3.1 (D)).
 - iii. **Exceptions.** The following are not subject to the maximum allowance restrictions stated herein:
 - a) Property located in the OSP (Open Space Preservation), RR-1 (Rural Residential), or RT (Rural Transition) districts along with certain farmland meeting the exemption requirements of Section 1.5 (B).
 - b) CBU Shelters.

- b. **Location.** Unless otherwise specified, accessory buildings or structures are restricted to the side or rear yards and shall be located ~~either:~~
- i. A minimum of five (5) feet from side and rear property lines
 - ~~i. Completely within the required rear yard and a minimum of five (5) feet from side and rear property lines;~~
 - ~~ii. Completely within the buildable area of the lot, or~~
 - ~~iii. ii.~~ As permitted in Section 3.6 Permitted Bulk and Dimensional Standards Exceptions and Encroachments.

Figure 5.2: Accessory Building/Structure Allowed Location



- c. **Separation.** To ensure proper maintenance of building exteriors, accessory buildings shall be located, if otherwise permitted, a minimum of five (5) feet from any principal building or other accessory building.
3. **Specific Requirements for Certain Animal Shelters.**
- a. **Dog House.** All dog houses shall be located in the rear yard.
 - b. **Chicken Coop.** The keeping of chickens (hens only) is permitted as an accessory use in conjunction with single-family dwellings in the GR3, GR8, UR12, RMX, NMX, and TC Districts subject to the regulations stated herein.
 - c. **Permit Required.** An application for a Livestock, Chicken and Other Domestic Fowl Permit must be filed and approved by the Administrator prior to the keeping of chickens in any area authorized by this subsection. Said permit application shall require the submission of a plot plan showing coop (hen house and pen) location, dimensions and distances from property lines.
 - d. **Number and Type of Chickens.** Up to five (5) female domesticated chickens (no roosters, peafowl, guineafowl or other domestic fowl are permitted) are allowed per lot.

Click a Chapter Section
to jump to that page.

Chapter 9. Environmental Protection Standards

9.1. Purpose and Intent	1
9.2. Neuse River Basin Riparian Buffers (NRBs)	1
9.3. Sediment and Erosion Control	2
9.4. Stormwater Management	3
9.5. Flood Damage Prevention.	27

9.1. Purpose and Intent

The purpose of this Section is to protect, maintain, and enhance public health, safety, environment, and general welfare by establishing minimum requirements and procedures to control adverse effects of sediment and erosion control, grading, post-construction stormwater runoff, illicit discharges, and flood damage. Proper management of stormwater runoff will minimize damage to public and private property and infrastructure; safeguard the public health, safety, and general welfare; and protect water and aquatic life.

9.2. Neuse River Basin Riparian Buffers (NRBs)

- A. Both the corporate limits and the Extra Territorial Jurisdiction (ETJ) of the Town of Knightdale fall completely within the Neuse River basin and are therefore subject to the riparian buffer rules as governed by North Carolina Administrative Code (NCAC), Title 15A, Chapter 2, Sub-Chapter B as amended.
- B. NRBs are a form of open space, and as such, may only be retained in private ownership if the necessary conservation easements are recorded with the Wake County Register of Deeds in a form approved by the Town. Otherwise, NRBs shall be separately deeded to a homeowner's association, a non-profit land trust or conservancy, Wake County, or the Town of Knightdale (upon approval by the Town Council).
- C. NRBs cannot be located on any single-family residential building lot (detached or attached) within a major subdivision as defined in Section 12.2 (F)(6). In general terms, NRBs in major subdivisions must be platted as separate lots where the responsibility of maintaining (in a natural state) said riparian buffers in perpetuity is typically designated to a homeowner's association or non-profit land conservation agency. Lots that have received Construction Drawing approval (Section 12.3 (G)) prior to March 1, 2010 shall be exempt from this requirement.

as to discuss and assess constraints, opportunities, and potential approaches to stormwater management designs before formal site design engineering is commenced. Local watershed plans, the Comprehensive Plan, and other relevant resource protection plans should be consulted in the discussion of the concept plan.

- b. **Concept Plan Contents.** To accomplish this goal, the following information should be included in the concept plan, which should be submitted in advance of the meeting:
 - i. **Existing Conditions/Proposed Site Plans.** Existing conditions and proposed site layout sketch plans, which illustrate at a minimum:
 - a) Existing and proposed topography;
 - b) Perennial and intermittent streams;
 - c) Mapping of predominant soils from soil surveys (if available);
 - d) Stream and other buffers and features used in designing buffers and meeting any applicable buffer requirements;
 - e) Boundaries of existing predominant vegetation;
 - f) Proposed limits of clearing and grading; and
 - g) Location of existing and proposed roads, buildings, parking areas, and other impervious surfaces.
 - ii. **Natural Resources Inventory.** A written or graphic inventory of natural resources at the site and surrounding area as it exists prior to the commencement of the project. This description should include a discussion of soil conditions, forest cover, geologic features, topography, wetlands, and native vegetative areas on the site, as well as the location and boundaries of other natural feature protection and conservation areas such as lakes, ponds, floodplains, stream buffers, and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.). Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for development and stormwater management.
 - iii. **Stormwater Management System Concept Plan.** A written or graphic concept plan of the proposed post-development stormwater management system including: preliminary selection and location of proposed engineered 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 floodplain/floodway limits; relationship of site to upstream and downstream properties and drainages; and preliminary location of any proposed stream channel modifications, such as bridge or culvert crossings.

2. Stormwater Management Permit Application.

- a. The stormwater management permit application shall detail how post-development stormwater runoff will be controlled and managed and how the proposed project will meet the requirements of this article, including Section 9.4 (G), Standards. All such plans shall be prepared by a qualified licensed North Carolina Professional Engineer or registered surveyor, soil scientist, or landscape architect. The engineer, surveyor, soil scientist, or landscape architect shall perform services only in their area of competence and shall verify that the design of all stormwater management facilities and practices meets the submittal requirements for complete applications, that the designs and plans are sufficient to comply with applicable standards and policies found in the Design Manual, and that the designs and plans ensure compliance with this article.
- b. The submittal shall include all of the information required in the submittal checklist established by the Stormwater Administrator. Incomplete submittals shall be treated pursuant to Section 9.4

(B)(2)(e), Submittal of Complete Application.

3. **Sedimentation & Erosion Control Plan Approval and Grading Permit.** Within the corporate limits of the Town of Knightdale, the Stormwater Administrator is responsible for the administration and enforcement of the town's erosion control program, including approval, issuance of permits related to, and enforcement of erosion and sedimentation control plans. Prior to land disturbing activities, a Sedimentation & Erosion Control Plan Approval and a grading permit shall be obtained directly from the town. Sedimentation & Erosion Control Plans shall be prepared in accordance with Section 9.4(A)(7) of this ordinance. ~~This section shall not be effective until local delegation is received.~~
4. **Preconstruction Activities.**
 - a. Prior to site work, submittals shall be presented to the town outlining all materials used for public infrastructure i.e., precast structures, conveyance piping etc.
 - b. Once the submittals have been approved by the Stormwater Administrator, a pre-construction meeting shall be scheduled on site to review the stormwater management and erosion control plan.
5. **As-Built Plans and Final Approval.**
 - a. Upon completion of a project, and before a Certificate of Compliance/Occupancy shall be granted, the applicant shall certify that the completed project is in accordance with the approved stormwater management plans and designs and shall submit actual "as built" plans for all stormwater management facilities or practices after final construction is completed.
 - b. The plans shall show the final design specifications for all stormwater management facilities and practices and the field location, size, depth, and planted vegetation of all measures, controls, and devices, as installed. This shall also include any geotechnical surveys completed by an authorized representative, ~~and~~ CCTV footage recorded and Geographic Information System (GIS) files from all stormwater conveyances. The designer of the stormwater management measures and plans shall certify, under seal, that the as-built stormwater measures, controls, and devices are in compliance with the approved stormwater management plans and designs and with the requirements of this article. A final inspection and approval by the Stormwater Administrator shall occur before the release of any performance securities.
6. **Other Permits.** No Certificate of Compliance/Occupancy shall be issued by the Town Inspections Department without final as-built plans and a final inspection and approval by the Stormwater Administrator, except where multiple units are served by the stormwater practice or facilities, in which case the Inspections Department may elect to withhold a percentage of permits or Certificates of Compliance/Occupancy until as-built plans are submitted and final inspection and approval has occurred.

Click a Chapter Section
to jump to that page.

Chapter 10. Infrastructure Improvement Standards

10.1.	Purpose and Intent	1
10.2.	Required Improvements for all Development Plans.....	2
10.3.	Payments in Lieu of Construction	2
10.4.	General Infrastructure Design Guidelines	3
10.5.	General Roadway Design Criteria.....	16
10.6.	Acceptance of Public Infrastructure.....	20


10.1. Purpose and Intent

It is hereby declared to be the policy of the Town that the subdivision and development of land shall be guided and regulated in such a manner as to meet the following requirements for orderly and harmonious growth:

- A. Land to be subdivided shall be of such character that it can be used safely without danger to health, or peril from fire, flood, erosion, excessive noise, air and/or water pollution, or another menace, and in accordance with a Town approved phasing plan (Section 12.3 (E)(10));
- B. Proper provisions shall be made for drainage, water supply, sewerage, and other appropriate utility services;
- C. The proposed streets shall provide a safe, convenient and functional system for vehicular circulation and shall be properly related to the land use plan of the area;
- D. Streets shall be of such width, grade, and location as to accommodate prospective traffic, as determined by existing and probable future land uses;
- E. Streets shall be detailed to compliment neighborhoods and commercial centers and shall be pedestrian in scale;
- F. Buildings, lots, blocks, and streets shall be so arranged as to afford adequate light, view, and air, and to facilitate fire protection in accordance with the Fire Code; and
- G. Land shall be subdivided and developed with due regard to topography so that the natural beauty of the land and vegetation shall be protected and enhanced.

2. **Category Two – Avenues and Main Streets.** Category Two roadways connect neighborhoods to commercial centers. Avenues and Main Streets are “transitional” roadways: in addition to providing access, they carry large and more diverse amounts of traffic. Avenues and Main Streets host deliveries and efficient emergency responses. They anchor neighborhood commerce, serve pedestrians and bicyclists, and improve transit operations. Category Two streets must operate at low to moderate speeds, since many people live, work, shop, and play within these street environments. Parking is found on many, but not all avenues and main streets.
 - a. **Main Street.** Main streets are “transitional” roadways that provide access to neighborhoods, as well as, places for neighborhood commercial and mixed-use buildings.
 - i. **ROW Width.** The minimum right-of-way width of main streets shall be sixty-four (64) feet.
 - ii. **Drive Lane Width.** The minimum drive lane width of a main street shall be ten (10) feet.
 - iii. **Curb and Gutter.** A curb with a minimum height of six (6) inches and a gutter with a minimum width of twenty-four (24) inches shall be required along both sides of main streets.
 - iv. **Sidewalk.** A sidewalk with a minimum width of five (5) feet shall be required on both sides of main streets.
 - v. **Parkway.** A parkway with a minimum width of six (6) feet shall be located between the back of curb and the sidewalk along both sides of main streets.
 - vi. **Utility Location.** Utilities shall be located in the parkway.
 - vii. **Street Trees.** Street trees shall be planted in the parkway. A minimum of one (1) canopy tree shall be planted every forty (40) feet. Where overhead utility line conflicts are present, a minimum of one (1) understory tree shall be planted every twenty (20) feet. The spacing of street trees shall take into consideration local conditions and clear vision triangles.
 - viii. **On-Street Parking.** On-street parking shall be required on main streets without medians. On-street parking shall be parallel. On-street parking spaces shall have a minimum width of eight (8) feet and a minimum length of twenty-three (23) feet. On-street parking spaces shall be delineated with striping with a minimum width of four (4) inches.
 - ix. **Medians.** Medians with a width of eight (8) feet shall be required on main streets without on-street parking. Medians shall be improved with a mountable curb with a minimum height of nine (9) inches and a gutter with a minimum width of nine (9) inches. Medians shall taper to a minimum of four (4) feet at intersections. Medians shall be planted with a minimum of two (2) shrubs every twenty (20) feet. If medians are utilized in drive aisles, the aisles must be widened to ~~##~~ 18 feet to accommodate fire trucks and other emergency vehicles.
 - x. **Bicycle Facilities.** Shared bike and vehicle lanes shall be required along both sides of main streets with on-street parking. Bike lanes, with a minimum width of four (4) feet, shall be required along both sides of main streets without on-street parking. Shared bike and vehicle lanes and bike lanes shall be delineated in accordance with NACTO standards.

Click a Chapter Section
to jump to that page.



Chapter 11. Subdivision Standards

11.1.	General Provisions.....	1
11.2.	Recreational Open Space.....	2
11.3.	Circulation and Connectivity	8

11.1. General Provisions

- A. **Maximum Development Density.** The maximum development density per gross acreage of a subdivision shall be as established per zoning district as detailed in Table 11.1(A) below.

Table 11.1(A) Maximum Development Density	
District	Maximum Development Density Per Gross Acreage
RT	.5 unit/acre
RR1	1 unit/acre
GR3	3 units/acre
GR8	8 units/acre
UR12	12 units/acre
RMX	18 units/acre
NMX	no maximum
TC	no maximum
HB	not applicable
BO	not applicable
MI	not applicable

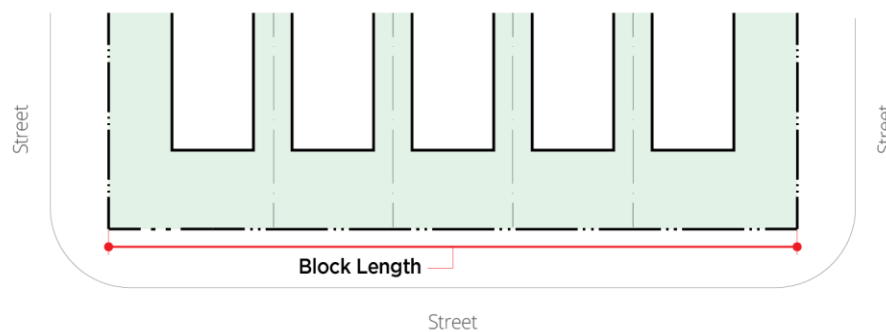
- B. **Required Distribution of Uses.** The minimum and maximum required distribution of uses shall be as detailed in Table 11.1(B) below and shall be calculated as the net development area which excludes street rights-of-way and dedicated open space as detailed in Section 11.2.

Table 11.1(B) Required Distribution of Uses		
Use Type	Minimum Distribution	Maximum Distribution
Dwelling-Duplex/Townhouse	10%	40%
Dwelling-Multifamily	5%	40%
Dwelling-Single Family	15%	60%
Mixed Use*	10%	100%
Lodging/Office/Service/Retail/Restaurant/Entertainment/Recreation*	5%	20%
Civic/Institutional*	As determined by the Town Council	
*Minimum and maximum distribution requirements shall apply only to nonresidential subdivisions or subdivisions with both residential and non residential uses.		

4. **Block Length.** Maximum block lengths inside proposed developments shall be in accordance with lengths shown in the following table. Short block lengths are intended to create a better pedestrian-scaled environment. The Land Use Administrator may allow a deviation from this requirement if it is determined that this requirement is impractical due to topographic conditions, environmental constraints, property shape, or property accessibility.

Table 11.3(E)(1): Maximum Block Length												
	OSP	RT	RR1	GR3	GR8	UR12	RMX	NMX	TC	HB	BP	MI
<i>Standards (Maximum)</i>												
Block length (ft)	n/a	1,500 ft	1,500 ft	1,000 ft	1,000 ft	800 ft	800 ft	660 ft	660 ft	n/a	n/a	n/a

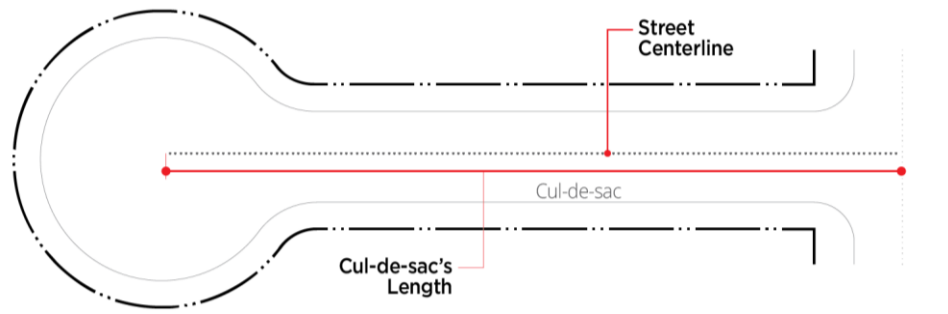
Figure 11.3: Block Length Standards



5. **Cul-de-sacs.** Permanent cul-de-sac streets and dead-end streets are discouraged in the design of street network systems, and they should only be used when topography, the presence of natural features, and/or vehicular safety factors make a vehicular connection impractical. Where cul-de-sacs or dead-end streets are unavoidable, developments shall incorporate provisions for future vehicular connections to adjacent, undeveloped properties, and to existing adjacent developments where existing connections are poor. No system of multiple branching cul-de-sacs from a single junction with a connected street network is permitted unless the Land Use Administrator deems it allowable due to environmental constraints. Any permanent dead-end streets or cul-de-sac shall comply with the length limits (as measured along the street centerline) shown in the following table and shall be provided with a turnaround at the closed end of the street as set forth in the Town's Standard Specifications and Details Manual [and the Fire Code, unless otherwise approved by the Fire Code Official.](#)

Table 11.3(E)(2): Cul-de-Sac Length												
Standards	All Buildings											
	OSP	RT	RR1	GR3	GR8	UR12	RMX	NMX	TC	HB	BP	MI
<i>Standards (Maximum)</i>												
Cul-de-Sec Length (ft)	n/a	500 ft	500 ft	300 ft	300 ft	200 ft	200 ft	n/a	n/a	n/a	n/a	n/a

Figure 11.4: Cul-de-Sac Standards



6. Second and Additional Points of Access Required for Residential Developments. Residential development shall be required to provide points of access as detailed in the following sections. The number of further open and functioning vehicular access points shall be controlled and determined by the development's Town-approved TIA (Section 12.3 (j)). If a TIA should establish a higher standard for the number of open and functioning vehicular access points from the existing public street system, the requirement of the TIA shall prevail. The requirements herein shall not preclude a development from also meeting the following connectivity index required in Section 11.3(E)(7). For purposes of this section, a median-divided vehicular access point counts as a single vehicular access point. This section does not preclude developments from connecting to existing street stubs and/or street stub right-of-ways abutting their property. When two points of open and functioning vehicular access are required, the placement shall be in accordance with the Fire Code.


a. One- and Two-Family Dwelling Developments. At a minimum, a second point of open and functioning vehicular access from the existing public street system (not a stub-out) is required for developments of one- or two-family dwellings that ~~exceed~~ contain one-hundred (100) residential units or more, and a third shall be required for developments that exceed five-hundred (500) residential units. These second and third points shall be open and functioning prior to the issuance of the 100th 401st and 501st Certificate of Occupancy respectively for the development. ~~The number of further open and functioning vehicular access points shall be controlled and determined by the development's Town-approved TIA (Section 12.3 (j)). If a TIA should establish a higher standard for the number of open and functioning vehicular access points from the existing public street system, the requirement of the TIA shall prevail. The requirements herein shall not preclude a development from also meeting the following connectivity index required in Section 11.3(E)(7). For purposes of this section, a median-divided vehicular access point counts as a single vehicular access point. This section does not preclude developments from connecting to existing street stubs and/or street stub right-of-ways abutting their property.~~

a.b. Multi-family Residential Developments. At a minimum, a second point of open and functioning vehicular access from the existing public street system (not a stub-out) is required for multi-family residential developments that exceed 100 dwelling units. However, if all buildings are equipped with an approved automatic sprinkler system, multi-family projects with up to 200 dwelling units may have a single open and functioning vehicular access. Regardless of automatic sprinkler systems, all multi-family developments with more than 200 dwelling units shall have two separate open and functioning vehicular access roads.

6.7. Connectivity Index. A Connectivity Index shall be used to determine the adequacy of street layout design. This is calculated as the ratio of the number of street **links** (*road sections between intersections*) in the project's street layout divided by the number of street **nodes** (*intersections and cul-de-sac heads*). For comparison purposes, a perfect grid has a Connectivity Index of 2.00 or higher, while a conventional cul-de-sac subdivision is often 1.00 or less. The accompanying illustration exhibits a connectivity index of 1.32 (links are shown as circles and nodes are shown as stars). Street links on existing adjacent streets that are not part of the proposed subdivision are not included in the connectivity index calculation. The illustration has eleven (11) links and nine (9) nodes for an index of $11 / 9 = 1.22$. Any development shall be required to achieve a Connectivity Index as shown in the following table.

Table 11.3(E)(3): Connectivity Index												
Standards	All Buildings											
	OSP	RT	RR	GR3	GR8	UR12	RMX	NMX	TC	HB	BP	MI
<i>Connectivity Index (Min.)</i>												
Index Score	n/a	1.30	1.30	1.40	1.40	1.40	1.40	1.50	1.60	n/a	n/a	n/a

Click a Chapter Section
to jump to that page.



Chapter 15. Definitions

15.1.	Intent.....	2
15.2.	Interpretation.....	2
15.3.	“A” Definitions	3
15.4.	“B” Definitions	4
15.5.	“C” Definitions	6
15.6.	“D” Definitions.....	8
15.7.	“E” Definitions	10
15.8.	“F” Definitions.....	11
15.9.	“G” Definitions.....	14
15.10.	“H” Definitions	15
15.11.	“I” Definitions	16
15.12.	“L” Definitions	16
15.13.	“M” Definitions	18
15.14.	“N” Definitions	20
15.15.	“O” Definitions	21
15.16.	“P” Definitions	23 ²²
15.17.	“Q” Definitions	25 ²⁴
15.18.	“R” Definitions	25 ²⁴
15.19.	“S” Definitions.....	26 ²⁵
15.20.	“T” Definitions	32 ³¹
15.21.	“U” Definitions.....	33 ³¹
15.22.	“V” Definitions.....	34 ³³
15.23.	“W” Definitions.....	34 ³³
15.24.	“X” Definitions.....	35 ³⁴
15.25.	“Y” Definitions.....	36 ³⁵
15.26.	“Z” Definitions.....	36 ³⁵

- L. **Animated Sign.** See “Sign, Animated”
- M. **Arm.** A mounting device which projects from a wall and attaches to a sign
- N. **Arterial.** Those streets which generally serve through traffic and are designated on the current edition of the officially adopted Arterial Plan (Appendix A: Street Network Plan).
- O. **Arterial Plan.** A plan, adopted by the Town Council, for the development of existing and proposed major streets that will adequately serve the future travel needs of an area in an efficient and cost-effective manner.
- P. **Automated Teller Machines (ATM).** Computerized, self-service machines used by banking customers for financial institutions, including deposits, withdrawals, and fund transfers, without face-to-face contact with financial institution personnel. These machines may be located at or within banks, or in other locations.
- Q. **Auto Parts Sales 3.1C(4)a.** Establishments selling new, used, or rebuilt automotive parts and accessories. Examples include parts and supply stores, automotive stereo stores, speed shops, truck cap stores, and tires and tube shops. (LBCS F2115)
- R. **Awning Sign.** See “Sign, Awning”.

15.4. “B” Definitions

- A. **BUG (Backlight, Uplight, and Glare) Rating.** A luminaire classification system that classifies backlight (B), uplight (U), and glare (G) ratings to evaluate luminaire optical performance related to light trespass, sky glow, and high angle brightness control.
- B. **Ballast.** A device used with an electric-discharge lamp to obtain the necessary circuit conditions (voltage, current, and waveform) for starting and operating.
- C. **Banks, Credit Unions, Financial Services 3.1C(3)c.** Establishments that engage in financial transactions that create, liquidate, or change ownership of financial services. Banks, credit unions, and savings institutions may perform central banking functions, accept deposits, and lend funds from these deposits. In addition to banks and credit unions, financial services institutions may include. credit agencies, trust companies, holding companies, lending and thrift institutions, securities/commodity contract brokers and dealers, security and commodity exchanges, vehicle finance (equity) leasing agencies, and investment companies. (LBCS F2200 and F2210)
- D. **Banner.** See Sign, Banner.
- E. **Bar/Tavern/~~Nightclub~~ 3.1C(4)b.** A business where alcoholic beverages are sold for on-site consumption, which are not part of a larger restaurant. Includes bars, taverns, pubs, and similar establishments where any food service is subordinate to the sale of alcoholic beverages. May also ~~include live entertainment (music, dancing, comedy, etc.); beer brewing as part of a microbrewery and other beverage testing facilities as well as~~ not more than three (3) non-server based, non-internet connected sweepstakes center games. (LBCS F2540)
- F. **Base Flood.** The flood having a one percent (1%) chance of being equaled or exceeded in any given year.

- J. **Medical Services – Outpatient/Urgent Care Center 3.1C(3)o.** Ambulatory or outpatient care establishments offer health care services directly to patients without providing inpatient services. Such facilities also include outpatient family planning services; laboratories that provide analytic or diagnostic services, and other services, such as medical imaging, and forensics; and blood and organ banks. (LBCS F6510, F6512, F6513 and F6514)
- K. **Meeting Facilities 3.1C(5)g.** Meeting/conference facilities that include room(s) or space(s) used for assembly purposes by 50 or more persons including fraternal halls (VFW lodges, etc) and banquet facilities. (LBCS S3800)
- L. **Metal Products Fabrication, Machine or Welding Shop 3.1C(6)h.** An establishment engaged in the production and/or assembly of metal parts, including the production of metal cabinets and enclosures, cans and shipping containers, doors and gates, duct work forgings and stampings, hardware and tools, plumbing fixtures and products, tanks, towers, and similar products. Examples of these include:
1. Blacksmith and welding shops
 2. Plating, stripping, and coating shops
 3. Sheet metal shops
 4. Machine shops and boiler shops (LBCS F3340 and F3350)
- ~~M.~~ **Microbrewery 3.1C(4)b.** A facility that produces less than 25,000 barrels of beer per year and sells the majority of the beer it produces for off-site resale and consumption. The development may include other uses such as a standard restaurant or bar as otherwise permitted in the zoning district.
- ~~M.N.~~ **Mini-Warehouses 3.1C(6)i.** A building containing separate enclosed storage spaces of varying sizes leased or rented on an individual basis. (LBCS F2710 and F2720)
- ~~N.O.~~ **Monument Sign.** See “Sign, Monument”.
- ~~O.P.~~ **Movie Theater.** See “Theater, Movie”.
- ~~P.Q.~~ **Multi-use Path.** A pathway, often found in conjunction with a greenway, usually intended for the use of bicycles, pedestrians, and other non-motorized means of conveyance. Usually a 10- to 12-foot wide (for two-way travel) paved surface or a surface graded with a material suitable for the types of users.
- ~~Q.R.~~ **Mural.** A painting on a building wall with any commercial copy limited to no more than 10 percent (10%) of the façade area.

15.14. “N” Definitions

- A. **Nadir.** The point directly below the luminaire.
- B. **Neighborhood Manufacturing.** See “Manufacturing, Neighborhood”.
- C. **Neighborhood Retail/Restaurant 3.1C(4)e.** A “General Retail” or “Restaurant” use that is of a size of 2,000 square feet or less. (LBCS F2100, F2510, F2520 and F2530)
- D. **Neighborhood Sign.** See “Sign, Neighborhood/Campus Entrance”.

- E. **Neuse River Buffer (NRB).** An area of natural or planted vegetation through which stormwater runoff flows in a diffuse manner so that the runoff does not become channelized and which provides for infiltration of the runoff and filtering of pollutants. The buffer is measured landward from the normal pool elevation of impounded structures and from the bank of each side of streams or rivers.
- F. **New Construction.** Structures for which the "start of construction" commenced on or after the effective date of the initial floodplain management regulations and includes any subsequent improvements to such structures.
- ~~F.~~G. **Nightclub 3.1.C(4)h.** A business that operates primarily in the evening hours that principally provides entertainment such as live music, and/or dancing, comedy, etc.
- ~~G.~~H. **Nonconforming.** A lot, structure (including buildings, wireless telecommunication towers, manufactured homes), sign, plan, street frontage, landscaping, screening, lighting, or use of land or structure, which does not meet the regulations and requirements of this Ordinance (either by adoption of this Ordinance or a subsequent amendment) but was lawful at the date on which it was established or became lawful at some later date.
- ~~H.~~I. **Non-Cutoff Fixture.** See "Fixture, Non-Cutoff".
- I.~~J.~~ **Non-Encroachment Area.** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot as designated in the FIS report.
- ~~J.~~K. **Non-Residential Use.** See "Use, Non-Residential".

15.15. "O" Definitions

- A. **Official Maps or Plans.** Any map or plan officially adopted by the Town Council as a guide for the development of the Town, its ETJ or its Urban Service Area as so designated by Wake County.
- B. **Off-Premise Directional Sign.** See "Sign, Off-Premise Directional".
- C. **Off-Premise Sign.** See "Sign, Off-Premise".
- D. **On-Premise Sign.** See "Sign, On-Premise".
- E. **Ornamental Tree.** See "Tree, Understory".
- F. **Outdoor Display Area.** The portion of a commercial establishment identified for the outdoor display and sale of items such as heavy equipment, recreational vehicles, automobiles, manufactured homes, and building materials.
- G. **Outdoor Animal Boarding/Equestrian Facilities 3.1C(3)o.** A use or outdoor structure such as a kennel or run intended and used for the breeding or accommodation of small domestic animals for sale or for the training or overnight boarding of animals for persons other than the owner of the lot, but not including a veterinary clinic in which the overnight boarding of animals is necessary for or accessory to the testing and medical treatment of the physical disorders of animals. This use also includes equestrian-related leisure activities including riding, mounting, horsemanship, and equestrian games, such as polo, hurdles, dressage training and show jumping; as well as the facilities for maintaining stables, feeding, caring, and housing horses. (LBCS F2700 and LBCS A7120)

(government issued coins and bills in hand) in amounts of 10 dollars (\$10.00) or more may be received. This definition does not apply to any game or process prohibited by NCGS §§ 14-304 through 14-309 or to any game regulated by the North Carolina Education Lottery Commission.

15.20. “T” Definitions

~~A.~~ **Tasting Room 3.1C(4)m.** A principal use which serves and sells products solely produced by an off-site brewery, winery, or distillery under the same ownership.

~~A.B.~~ **Tattoo.** An indelible mark, figure or decorative design introduced by insertions of dyes or pigments into or under the subcutaneous portion of the skin or by the production of scars upon the body of a live human being.

~~B.C.~~ **Tattoo Shop.** An establishment which is engaged to any extent in providing tattoos to customers beyond that permitted as permanent makeup within the definition of Personal Services.

~~C.D.~~ **Temporary Sign.** See “Sign, Temporary”.

~~D.E.~~ **Theater, Live Performance 3.1C(5)j.** Includes concert halls and other structures with fixed seats arranged on a sloped or stepped floor; may seat 300 to 3,000 people. (LBCS S3110)

~~E.F.~~ **Theater, Movie 3.1C(5)k.** A specialized theater for showing movies or motion pictures on a projection screen. This category also includes cineplexes and megaplexes, complex structures with multiple movie theaters, each theater capable of an independent performance. (LBCS S3120)

~~F.G.~~ **Town.** The Town of Knightdale, North Carolina.

~~G.H.~~ **Town Council.** Town Council of the Town of Knightdale, North Carolina.

~~H.I.~~ **Townhouse.** A building type consisting of units attached to one another in which each unit is located on an individually owned parcel, generally within a development containing drives, walks and open space in common areas.

~~I.J.~~ **Tract.** A lot, or contiguous group of lots in single ownership or under single control, and usually considered a unit for purposes of development.

~~J.K.~~ **Transit, Road and Ground Passenger Services 3.1C(8)b.** Services including but not limited to taxi cabs, limousines, charter buses, interurban buses, towing companies and mass transit. Also includes but is not limited to dispatch centers, stations and maintenance facilities. (LBCS F4130 and S3900)

~~K.L.~~ **Tree, Specimen.** Any healthy, existing tree over 12 inches DBH found in a field or open grown condition, or along the edge of a forest stand or tree stand and displaying the root zone, canopy, and structure characteristic of the particular species, excluding Sweet Gum, Catalpa, Wild Cherry, Wild Elm, Princess, Hackberry and Tree-of-Heaven.

~~L.M.~~ **Tree, Street.** A tree planted along the street, within a public right-of-way or public easement, and usually in a planting strip or tree well.

~~M.N.~~ **Tree, Understory.** A deciduous or evergreen tree or shrub planted primarily for its ornamental value or for screening purposes. Also known as an ornamental tree.