

Review Draft, June 2016

Pittsboro, North Carolina Unified Development Ordinance



Module 2

Article 4: Environmental and Open Space Standards
Article 5: Development Standards



This page intentionally left blank.

Article 4: Environmental and Open Space Standards

Commentary

Article 4: Environmental and Open Space Standards groups together those development standards that most closely relate to preservation and protection of the environment and ecosystems. Standards from Pittsboro's Stormwater Management, Flood Damage Prevention and Riparian Buffer Protection Ordinances are included in this article, and revised as appropriate for consistency with terms, standards, procedures and review authorities used in this Ordinance.

- **Section 4.1, General Provisions**, describes the purpose of the article.
- **Section 4.2, Tree Preservation**, establishes tree preservation and protection standards. Standards focus on maintaining tree canopy and preserving special individual trees.
- **Section 4.3, Open Space and Recreation Areas**, establishes a comprehensive set of open space and public recreation area standards.
- **Section 4.4, Riparian Buffers**, establishes consolidated riparian buffer standards and administrative provisions, including provisions from Pittsboro's Riparian Buffer Protection Ordinance.
- **Section 4.5, Floodplain Management**, establishes floodplain management standards and administrative provisions, including provisions from Pittsboro's Flood Damage Prevention Ordinance.
- **Section 4.6, Perimeter Buffers**, establishes a flexible set of perimeter buffer standards.
- **Section 4.7, Stormwater Management**, establishes stormwater management standards and administrative provisions, including provisions from Pittsboro's Stormwater Management Ordinance.
- **Section 4.8, Green Development Incentives**, establishes a point and menu-based system of incentives for developments that incorporate green development practices.

This comment box and the footnotes included in this draft are provided for reference purposes and will not be included in the adopted zoning ordinance.

This page intentionally left blank.

Article 4: Environmental & Open Space Standards - Table of Contents

ARTICLE 4:	ENVIRONMENTAL AND OPEN SPACE STANDARDS.....	4-1
Section 4.1.	General Provisions	4-1
4.1.1.	General Intent.....	4-1
Section 4.2.	Tree Preservation.....	4-1
4.2.1.	Purpose.....	4-1
4.2.2.	Applicability.....	4-1
4.2.3.	Tree Survey.....	4-3
4.2.4.	Tree Canopy Retention.....	4-3
4.2.5.	Tree Protection Plan and Tree Protection Areas.....	4-7
4.2.6.	Tree Protection During Development Activity	4-7
4.2.7.	Replacement Trees	4-9
4.2.8.	Credit Toward Other Standards.....	4-11
Section 4.3.	Open Space and Recreation Areas	4-13
4.3.1.	Common Open Space	4-13
4.3.2.	Public Recreation Area.....	4-19
4.3.3.	Alternative Options for Meeting Common Open Space and Public Recreation Area Requirements.....	4-20
Section 4.4.	Riparian Buffers.....	4-23
4.4.1.	Purpose.....	4-23
4.4.2.	General	4-23
4.4.3.	Records	4-25
4.4.4.	Riparian Buffers and Zones	4-25
4.4.5.	Identification of Riparian Buffers	4-26
4.4.6.	Diffuse Flow Requirements.....	4-27
4.4.7.	Riparian Buffer Development Review	4-27
4.4.8.	Variances from Riparian Buffer Regulations	4-31
4.4.9.	Uses and Activities Permitted in Riparian Buffers.....	4-31
4.4.10.	Mitigation	4-37
Section 4.5.	Floodplain Management	4-44
4.5.1.	Purpose.....	4-44
4.5.2.	Required Certificates	4-44
4.5.3.	Determinations for Existing Buildings and Structures.....	4-46
4.5.4.	General Standards for All Special Flood Hazard Areas.....	4-46
4.5.5.	Standards for Special Flood Hazard Areas with Base Flood Elevation Data	4-47
4.5.6.	Standards for Floodplains Without Established Base Flood Elevations	4-52
4.5.7.	Standards for Floodways and Non-Encroachment Areas.....	4-52
Section 4.6.	Perimeter Buffers	4-54
4.6.1.	Purpose.....	4-54
4.6.2.	Applicability.....	4-54

Article 4: Environmental & Open Space Standards - Table of Contents

4.6.3.	Required Buffer Type	4-55
4.6.4.	Buffer Type Standards	4-57
4.6.5.	Location of Buffers	4-62
4.6.6.	Development within Required Buffers	4-63
4.6.7.	Alternative Configuration	4-63
4.6.8.	Credit Toward Other Required Landscaping	4-63
Section 4.7.	Stormwater Management.....	4-64
4.7.1.	General Provisions.....	4-64
4.7.2.	Administration and Procedures	4-67
4.7.3.	Standards	4-73
4.7.4.	Maintenance	4-76
4.7.5.	Enforcement and Violations.....	4-80
4.7.6.	Illicit Discharges and Connections.....	4-83
Section 4.8.	Green Development Incentives.....	4-86
4.8.1.	Purpose.....	4-86
4.8.2.	Applicability.....	4-86
4.8.3.	Incentive Eligibility Points.....	4-86
4.8.4.	Menu of Green Building Features	4-87
4.8.5.	Verification.....	4-90

Article 4: ENVIRONMENTAL AND OPEN SPACE STANDARDS

Section 4.1. General Provisions

4.1.1. General Intent

This Article includes standards and guidelines for developing property or establishing new uses of property within Pittsboro, to ensure the protection of the health, welfare, safety, and quality of life for local residents, visitors, and business owners. These provisions address the physical relationship between development and adjacent properties, public streets, neighborhoods, and the natural environment, in order to implement the Land Use Plan vision for a more attractive, efficient, and livable community.

Section 4.2. Tree Preservation¹⁵¹

4.2.1. Purpose

The purpose of this section is to establish minimum standards to ensure that development and land-disturbing activities do not result in the unnecessary removal or damage of tree canopy and mature trees that contribute to the character and quality of life in Pittsboro by:

- A. Preserving and enhancing the visual and aesthetic qualities of the Town;
- B. Reducing glare, dust, heat, and noise;
- C. Maintaining and enhancing property values;
- D. Increasing slope stability and controlling erosion and sedimentation;
- E. Reducing stormwater runoff into waterways and preserving and enhancing water quality;
- F. Preserving and enhancing air quality;
- G. Conserving wildlife habitat; and
- H. Conserving energy by moderating temperatures and reducing heating and cooling demands.

4.2.2. Applicability

A. General

The standards in this section shall apply to the following permit applications (see Section 8.3, Application-Specific Review Procedures), unless exempted in accordance with Section 4.2.2.B, Exemptions, below:

1. Planned Development District;

¹⁵¹ This section establishes new tree preservation and protection standards. Consistent with the Pittsboro Code Assessment and the model tree protection ordinance reviewed by the Town's Conservation Ordinance Review Committee, this section:

- Requires retention/provision of minimum tree canopy;
- Requires retention of specimen trees;
- Requires replacement trees or In-lieu payments;
- Includes standards for protecting required trees during development; and
- Allows retained trees to be credited toward applicable perimeter buffer; open space and public recreation area; landscaping; and screening requirements.

2. Mixed-Use Planned Development District;
3. Special Use Permits;
4. Major and Minor Subdivisions; and
5. Major and Minor Site Plans.

B. Exemptions

The following activities are exempt from the standards of this section:

1. The removal or replacement of trees associated with the development of a single-family detached, duplex, or manufactured home dwelling, or a subdivision that creates lots for such dwellings;
2. The removal or replacement of trees associated with an existing single-family detached, duplex, or manufactured home dwelling;
3. The removal of dead or naturally-fallen trees;
4. The removal of trees that pose an imminent threat of falling onto an existing structure, are so close to an existing structure as to endanger the stability of the structure, or otherwise create on-going safety problems for existing development;
5. The removal of diseased trees posing a threat to adjacent trees;
6. The removal of invasive species of trees, provided the removal results in the complete removal of the trees (including roots);
7. The selective and limited removal of trees or vegetation necessary to obtain clear visibility within intersection sight distance triangles;
8. The removal of trees that the Town Engineer determines to be a hazard to traffic or to interfere with the provision of utility lines or public services;
9. The removal of trees as necessary for rescue in an emergency or for clean-up following a natural disaster;
10. The removal or replacement of trees outside of an approved tree protection area, when associated with an expansion of the building footprint or parking area of an existing nonresidential development by ten percent or less from that originally approved for the development; and
11. Tree removal associated with normal forestry activity that is conducted on land taxed on the basis of its present-use value as forestland pursuant to N.C.G.S. Chapter 105, Article 12, or in accordance with a forest management plan prepared or approved by a forester registered in accordance with N.C.G.S. Chapter 89B—subject to the limitations on subsequent development in Section 4.2.2.C, Limitations on Development Proposals Subsequent to Exempt Forestry Activity, Limitations on Development Proposals Subsequent to Exempt Forestry Activity.

C. Limitations on Development Proposals Subsequent to Exempt Forestry Activity

Clear-cutting of a site to circumvent the requirements of this section is prohibited. Using the forestry exemption in Section 4.2.2.B.11, Exemptions, to remove all or substantially all of the trees that would have been protected by this Section is a violation of this Ordinance.

4.2.3. Tree Survey

A. Purpose

The purpose of the tree survey is to clearly demonstrate the location and area of existing tree canopy coverage for stands of trees on a development site as well as the location and size of individual specimen trees (see *Section 10.5, Terms and Uses Defined*) on the site.

B. Required

A tree survey shall be prepared and submitted as part of any application for development subject to this section.

C. Contents

The inventory shall include:

1. The latest available aerial photograph of the development site;
2. A plan depicting:
 - a. The location, area, predominant species, general health, estimated tree number, and average Diameter at Breast Height (or DBH, see *Section 10.5, Terms and Uses Defined*) of stands of trees;
 - b. The location, species, general health, and DBH (diameter at breast height) of all individual specimen trees on the site;
 - c. Known dead or diseased trees, where practical; and
 - d. The percentage of the development site area (excluding proposed street rights-of-way, existing utility easements, and natural water surface areas) that is covered by existing tree canopy.

4.2.4. Tree Canopy Retention

A. Minimum Percentage

Except as exempted by 4.2.2.B, Exemptions, or otherwise allowed and mitigated in accordance with Section 4.2.7, Replacement Trees or Damage, existing tree canopy cover on a development site shall be retained and protected in accordance with Table 4.2.4.A, Existing Tree Canopy Retention Standards, based on the proposed type of development and the percentage of the site covered by existing tree canopy and the priorities established in Section 4.2.4.B Priority Retention Areas and Specimen Trees.

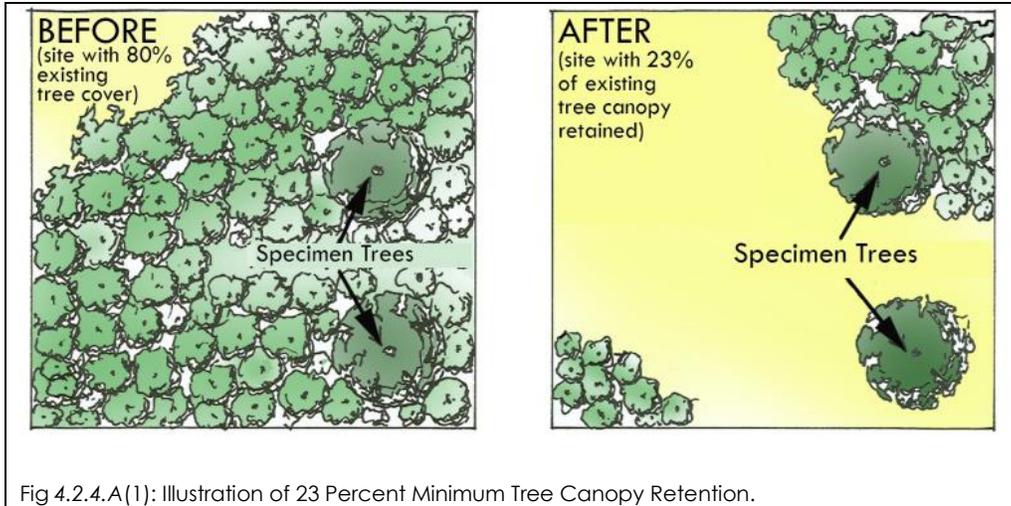


Fig 4.2.4.A(1): Illustration of 23 Percent Minimum Tree Canopy Retention.

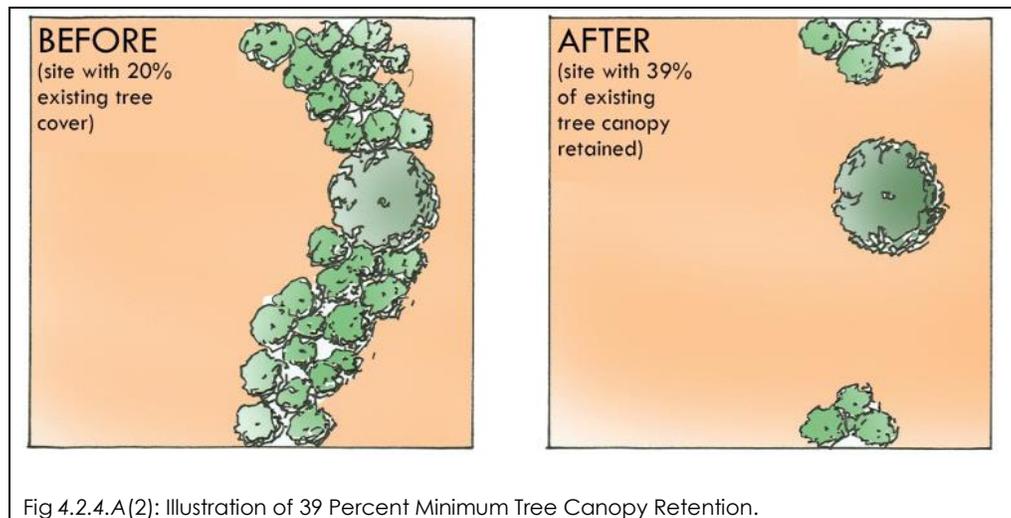


Fig 4.2.4.A(2): Illustration of 39 Percent Minimum Tree Canopy Retention.

Priority Retention Areas. (See example application in Table 4.2.4.A: Existing Tree Canopy Retention Standards.)

Table 4.2.4.A: Existing Tree Canopy Retention Standards		
Existing Tree Canopy Cover [1]	Minimum Percentage of Existing Tree Canopy Cover to be Retained	
	Single-Family Attached and Multifamily Development	Nonresidential and Mixed-Use Development
92% up to 100%	19%	7%
84% up to 92%	21%	8%
76% up to 84% [2]	23%	9%
68% up to 76%	25%	10%
60% up to 68%	27%	11%
52% up to 60%	29%	12%
44% up to 52%	31%	13%
38% up to 44%	33%	14%
30% up to 38%	35%	15%
22% up to 30%	37%	16%
14% up to 22% [3]	39%	17%
6% up to 14%	41%	18%
0% up to 6%	n/a	n/a

% = percent
NOTES:
[1] Existing tree canopy cover is the percentage of a development site (excluding proposed street rights-of-way, existing utility easements, and natural water surface areas) that is covered by existing tree canopy before development or land disturbing activity.
[2] As shown in Fig 4.2.4.A(1): Illustration of 23 percent Minimum Tree Canopy Retention, the tree survey establishes that 80% of a 100,000-square-foot multifamily development site is covered by existing tree canopy. Because 80% falls within the 76% up to 84% range, the minimum required tree canopy retention for the site is 23% of the existing canopy tree cover. This equates to 18.4% of the total development site (80% x 23%), yielding a tree protection area of approximately 18,400 square feet.
[3] As shown in Fig 4.2.4.A(2): Illustration of 39 percent Minimum Tree Canopy Retention, the tree survey (same size multifamily development site as item [2] above) established that only 20% of the site is covered by existing tree canopy. Because 20% falls within the 14% up to 22% range, the minimum required tree canopy retention is 39% of the existing tree cover. This equates to 7.8% of the total development site (20% x 39%), yielding a tree protection area of 7,800 square feet.

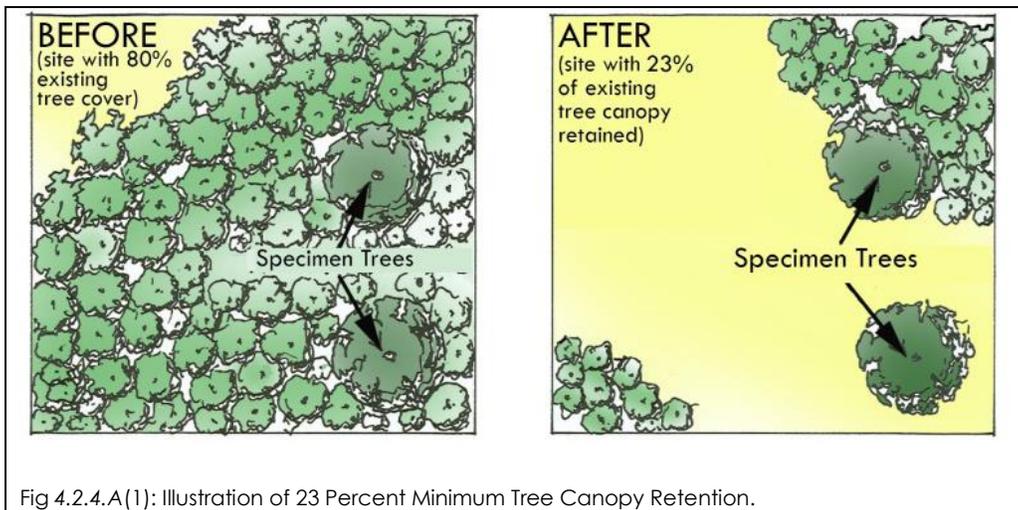
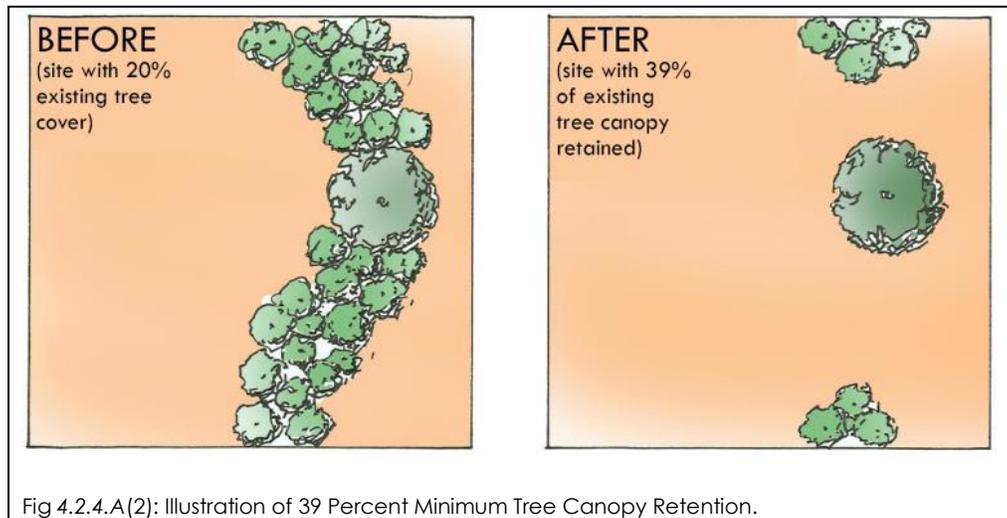


Fig 4.2.4.A(1): Illustration of 23 Percent Minimum Tree Canopy Retention.



B. Priority Retention Areas and Specimen Trees

When meeting the tree canopy retention standards outlined in Section 4.2.4.A, Minimum Percentage of Existing Tree Canopy Cover to be Retained, priority areas and specimen trees (see Section 10.5, Terms and Uses Defined) for retention of existing tree canopy cover shall include the following, listed in priority order. The existing tree canopy cover retained may include a combination of the areas listed below, but shall, to the maximum extent practicable, include all the highest priority areas (as described in subsection 1 below), then all of the next highest priority areas (as described in subsection 2 below), and so forth until the minimum percentage is met. Specimen trees may be relocated if they cannot be incorporated into the design of the development.

1. Existing tree canopy area containing stands of specimen trees and their associated root zones.
2. Existing specimen trees and their associated root zones.
3. Existing tree canopy area located in riparian buffers, wetlands, or wetland protection areas.
4. Existing tree canopy area containing stands of mature deciduous and evergreen trees.
5. Existing tree canopy area with natural grades of 15 percent or more.
6. Existing tree canopy area containing trees and other vegetation needed for required perimeter and streetyard buffers and landscaping.
7. Existing tree canopy that is a part of wildlife habitat and other sensitive natural areas.
8. Trees within 25 feet of parking areas or within 12 feet of a public right-of-way if the property is not in compliance with Section 5.6, Landscaping, unless the property owner demonstrates either of the following:¹⁵²
 - a. The tree is dead or dying; or
 - b. The tree is a threat to people or property.

¹⁵² This is carried forward from section 18.4, Area Deficient in Landscaping, in the current ordinance.

4.2.5. Tree Protection Plan and Tree Protection Areas

- A. All applications subject to this section shall include a tree protection plan prepared by an ISA-certified (see Section 10.5, Terms and Uses Defined) arborist, registered landscape architect, or registered forester that designates boundaries of one or more tree protection areas and shows grading and other major development activities proposed adjacent to the tree protection area(s).
- B. The tree protection area(s) shall include land within the drip lines for all individual trees and stands of trees proposed to be retained and protected in accordance with Section 4.2.4, *Tree Canopy Retention* as well as for any replacement trees proposed to be provided in accordance with Section 4.2.7.C, *Replacement Trees*. The tree protection plan shall also depict the location and details of protective fencing, marking, and signage to be provided in accordance with Section 4.2.6.B, *Protective Fencing and Signage, Protective Fencing and Signage*.
- C. Tree protection areas shall be located within required common open space or public recreation areas, where they are maintained so as to protect the included trees in accordance with Section 4.3.1.G, *Ownership, Management, and Maintenance of Common Open Space*. For Major and Minor Subdivisions (see Section 8.3.4, *Subdivision*), tree protection areas shall not be located within individual lots, and the recorded subdivision plat shall include a note prohibiting disturbance of the tree protection area during development of the subdivision except as authorized by this section.

4.2.6. Tree Protection During Development Activity

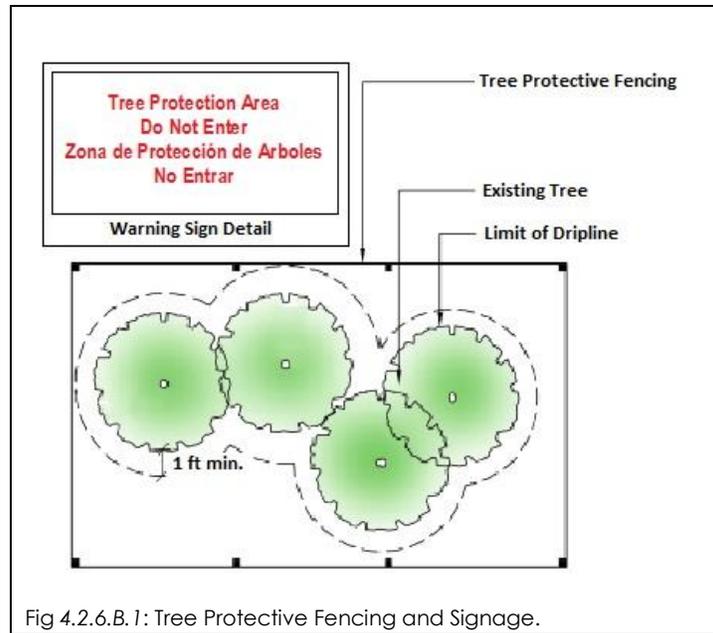
A. Responsibility

During any development activity (including demolition activity), the property owner or developer shall be responsible for protecting existing or replacement trees within a tree protection area.

B. Protective Fencing and Signage

1. Protective Fencing

Continuous fencing consisting of a bright orange plastic mesh at least four feet high shall be provided along the boundaries of tree protection areas, no closer than one linear foot outside of the drip lines of trees within the area. The Planning Director shall consider existing site conditions and the species and size of the trees to be protected in determining the exact location of tree protective fencing, and may require the fencing to be extended to include the critical root zones of trees (see Fig 4.2.6.B.1: *Tree Protection Fencing and Signage*).



2. Warning Sign

Warning signs shall be installed along any required tree protective fencing at points no more than 150 feet apart. The signs shall be clearly visible from all sides of the outside of the fenced-in area. The size of each sign must be a minimum of two feet by two feet. The sign message shall, in both English and Spanish, identify the fenced or marked area as a tree protection area and direct construction workers not to encroach into the area (e.g., "Tree Protection Area: Do Not Enter").

3. Duration of Protective Fencing or Signage

Required protective fencing and signage shall be erected before any grading or other development activity begins and shall be maintained until issuance of a Certificate of Compliance/Occupancy following completion of all development in the immediate area of the fencing or signage.

C. Tree Protection Area Limitations and Requirements

Except where authorized by the tree protection plan, encroachments into a tree protection area may occur only when no other alternative exists, and shall comply with landscaping best management practices and the following limitations and requirements:

1. Construction Activity, Equipment, or Materials Storage

No development activity—including grade changes, the operation or parking of heavy equipment, or the washing down of concrete or cement handling equipment, or the storage of fuel, chemicals, materials, supplies, or construction waste and debris—shall be allowed within the tree protection area.

2. Clearing of Vegetation

Any clearing of vegetation within the tree protection area shall be only by hand.

3. Use of Retaining Walls and Drywells

Retaining walls and drywells may be used to protect trees to be preserved from severe grade changes if venting adequate to allow air and water to reach tree roots is provided through any fill.

4. Structures and Hard Surfaces

No structures or hard surfaces can be located within a tree protection area.

5. Fences and Walls

Installation of fences and walls shall take into consideration the root systems of existing trees. Post-holes and trenches close to trees shall be dug by hand and adjusted as necessary to avoid damage to major roots. Continuous footers for masonry walls shall end at the point where major large roots are encountered and these roots bridged.

4.2.7. Replacement Trees

A. Removal Pursuant to Waiver of Requirements

1. General

On determining that features of a development site make it infeasible to meet the minimum existing tree canopy retention standard in Section 4.2.4, Tree Canopy Retention, the Planning Director may waive or partially waive such standard and allow removal of trees in accordance with this section.

2. Criteria for Waiver

Before the Planning Director may waive or partially waive the minimum existing tree canopy retention standard, the applicant shall clearly demonstrate that compliance with the standard would necessarily preclude reasonable development of the site in accordance with the provisions of this Ordinance and of other Town, State, and federal regulations. Factors that may be considered include, but are not limited to, the following:

- a. The extent to which the size and features of the development site (e.g., floodplains, riparian buffers along water bodies and watercourses, steep slopes, and existing utility lines and easements) pose constraints on the developability of areas not covered by existing tree canopy;
- b. The feasibility of relocating, resizing, or reconfiguring building footprints, parking areas, driveway entrances, hydrology, utility lines, or other development features to accommodate compliance with the canopy tree retention standard as well as other applicable regulations;
- c. The opportunity and feasibility of using any of the following procedures to provide the flexibility needed to accommodate compliance with the canopy tree retention standard as well as other applicable regulations:
 - (1) Administrative Adjustment procedure (see Section 8.3.5.A, Administrative Adjustment);
 - (2) Alternative Options for Meeting Common Open Space and Public Recreation Area Requirements (see Section 4.3.3, Alternative Options for Meeting Common Open Space and Public Recreation Area Requirements); and

- (3) Alternative Landscaping Plan (Section 5.6.4.1, Alternative Landscaping Plan); and
- d. The extent to which the requested waiver gives highest priority to preserving specimen trees.

3. Replacement Trees Required

- a. Each existing non-specimen tree with a DBH of ten inches or more that is removed pursuant to a waiver or partial waiver of the minimum existing tree canopy retention standard shall be replaced with one or more trees with a minimum caliper of two inches each and a cumulative caliper equal to or greater than one and on-half times the DBH of the removed tree.
- b. Each existing specimen tree that is removed pursuant to a waiver or partial waiver of the minimum existing tree canopy retention standard shall be replaced with one or more specimen trees with a minimum caliper of five inches each and a cumulative caliper equal to or greater than two times the DBH of the removed tree.
- c. Required replacement tree(s) shall be planted and maintained in accordance with the planting standards in Section 5.6.4, General Landscaping Standards, and shall comply with the standards in Section 4.2.7, Replacement Trees.

B. Tree Damage During Development

- 1. If a specimen tree or other existing tree to be preserved under the tree protection plan is damaged during development of the development site, an ISA-certified arborist or registered forester retained by the Town, at the expense of the applicant, shall assess the damage and provide a written report to the Planning Director that documents the following:
 - a. Severity of the tree damage;
 - b. Determination on whether corrective measures can be taken to save the tree or whether the tree has been damaged beyond repair; and
 - c. Any corrective measures recommended to ensure the tree's survival (e.g., pruning damage to tree canopy, root pruning, fertilization, soil enhancements for damage to tree roots, and application of irrigation to compensate for root loss).
- 2. If the ISA-certified arborist or registered forester determines that the tree can survive with corrective measures, the applicant shall promptly have recommended corrective actions undertaken by an ISA-certified arborist.
- 3. If the ISA-certified arborist or registered forester determines that a tree has been damaged beyond repair, the tree shall be replaced with one or more trees that shall comply with the standards in Section 4.2.7, Replacement Trees, and the following standards:
 - a. Each non-specimen tree damaged beyond repair shall be replaced with one or more trees with a minimum caliper of two inches each and a cumulative caliper equal to or greater than one and on-half times the DBH of the removed tree.
 - b. Each specimen tree damaged beyond repair shall be replaced with one or more specimen trees with a minimum caliper of five inches each and a cumulative caliper equal to or greater than two times the DBH of the removed tree.

C. Replacement Trees

1. Location of Replacement Trees

Replacement trees shall be planted within the tree protection area or, where the tree protection area does not contain sufficient area, within any other part of the development site. The Planning Director may allow replacement trees to be planted as street trees in accordance with the standards in Section 5.6.5, Street Landscaping.

2. Native Species Required

Replacement trees shall be species native to the Pittsboro area (see Appendix 1, Recommended Plant List).

3. Tree Type

- a. Removed shade trees shall be replaced with shade trees and removed understory trees shall be replaced with understory trees.
- b. Where more than 12 replacement trees are provided, they shall comprise at least four different species, including at least three deciduous species.

4. Guaranteed Establishment Period

The applicant shall guarantee the survival and health of all replacement trees during an establishment period of at least three years. If the replacement trees do not survive the establishment period, the applicant shall purchase and install new replacement trees and guarantee their survival and health for a new three-year establishment period.

D. Payment In Lieu of Providing Required Replacement Trees

1. In lieu of providing all or a portion of the replacement trees required by this section, the developer may, with the approval of the applicable decision-making body, make a payment to the Town that approximates the cost of purchasing and installing the required caliper inches of replacement trees.
2. The Town Board of Commissioners or Planning Director, as appropriate, may approve the use of the in-lieu payment option only upon determining that it is impractical to provide the replacement trees for which in-lieu payment is proposed on the development site.
3. The amount of the in-lieu payment shall be determined from per caliper inch replacement tree fee in the Town's fee schedule.
4. The developer shall make the in-lieu payment before recordation of any subdivision plat for the development or issuance of any Building Permit for the development (if no subdivision approval is required)—provided, however, that the payment may be phased in accordance with an approved phasing plan for the development.
5. The Town shall deposit any in-lieu payment into a special Town fund that shall be used only for purchasing, installing, replacing, and/or maintaining trees in public parks, greenways, or other land owned or leased by the Town.

4.2.8. Credit Toward Other Standards

Tree protection areas, and trees and other vegetation within such areas, may be credited toward compliance with the following, to the extent they comply with applicable standards:

Article 4: Environmental and Open Space Standards

Section 4.2. Tree Preservation

4.2.8. Credit Toward Other Standards

- A. Open space areas (see Section 4.3.1.D, Required Open Space Area);
- B. Public recreation areas (see Section 4.3.2.C, Required Public Recreation Area);
- C. Perimeter and streetyard buffers (see Section 4.6.3, Required Buffer Type);
- D. Screening requirements (see Section 5.7, Screening); and
- E. Landscaping requirements (see Section 5.6, Landscaping).

Section 4.3. Open Space and Recreation Areas¹⁵³

4.3.1. Common Open Space

A. Purpose

The purpose of this section is to ensure that developments other than residential subdivisions include or contribute to the provision of common open space for the use and enjoyment of the development's occupants and users. Open space serves numerous purposes, including preservation and protection of natural areas and features, providing opportunities for passive and active recreation, enhancing management of stormwater runoff to protect water quality and reduce flooding, and mitigating the heat island effect of developed areas.

B. Applicability

1. General

The standards in this section shall apply to the following permit applications (see Section 8.3, Application-Specific Review Procedures), unless exempted in accordance with Section 4.3.1.B.2, Exemptions, below:

- a. Planned Development Rezoning);
- b. Special Use Permit;
- c. Major and Minor Subdivision; and
- d. Major and Minor Site Plan.

2. Exemptions

The following development is exempt from the standards of this section:

- a. Development directly associated with a permitted agricultural use;
- b. Residential subdivisions (which are subject to public recreation area standards in Section 4.3.2, *Public Recreation Area*); and

¹⁵³ Currently, provisions for open space and recreation areas exist in both Subdivision Regulations and the Zoning Ordinance as follows:

- Current Subdivision Regulations require all residential subdivisions to dedicate to the public and convey to the Town a portion of the subdivision site (1/33 acre—or 1,320 square feet—per lot) and to develop it with facilities serving community active recreation needs. The requirement is accompanied by standards for the size, configuration, location, topography, and recreational functionality of the required recreation area. It also allows subdividers to make a payment in lieu of dedication (or the Town to require them in certain circumstances).
- The current Zoning Ordinance requires private common recreational area in manufactured home parks (400 square feet per space), in planned unit developments and multifamily residential developments (56 square feet per dwelling unit), and in Mixed-Use Planned Development Districts (5% of district area establishes a comprehensive set of open space standards).

Consistent with the Pittsboro Code Assessment, this section consolidates and expands open space and public recreation area standards. Standards in this section:

- Require common open space for all major developments;
- Tailor open space standards to use classifications and districts;
- Incorporate public recreation area requirements;
- Include context-sensitive priorities and standards for open space areas;
- Add standards for ownership and maintenance responsibilities; and
- Allow options to on-site provision of required open space and recreation area.

- c. Development of a single-family detached, duplex, or manufactured home dwelling on an existing lot.

c. Credit Toward Other Standards¹⁵⁴

Open space areas and associated vegetation within such areas may be credited toward compliance with the following, to the extent they comply with applicable standards:

1. Tree preservation (see Section 4.2, Tree Preservation);
2. Perimeter and streetyard buffers (see Section 4.6.3, Required Buffer Type);
3. Screening requirements (see Section 5.7, Screening); and
4. Landscaping requirements (see Section 5.6, Landscaping).

d. Required Open Space Area

1. Required Total Common Open Space Area

A development shall provide the minimum area of common open space identified in Table 4.3.1.D.1, Required Total Common Open Space Area, based on the development's base zoning district and use classification.

Table 4.3.1.D.1: Required Total Common Open Space Area		
Use Classification	Minimum Total Common Open Space Area (as percentage of development site area)	
	Downtown District	All Other Districts
Residential Uses	10%	20%
Mixed-Uses	5%	15%
Institutional Uses	5%	10%
Commercial Uses	5%	10%
Industrial Uses	5%	5%
% = percent		

2. Allowable Common Open Space Areas

The features and areas identified in Table 4.3.1.D.2, Allowable Common Open Space Areas shall be credited toward compliance with the open space set-aside standards of this section. They are listed generally in the order of priority.

¹⁵⁴ This provision is added to allow for compliance with related standards, as appropriate.

Table 4.3.1.D.2: Allowable Common Open Space Areas

Area Counted as Common Open Space	Description	Design and Maintenance Requirements
Natural Resource and Hazard Areas		
	<p>Natural water features (including lakes, ponds, rivers, streams, rivers, wetlands, drainageways), riparian buffers, flood hazard areas, existing tree canopy and specimen trees, steep slopes, and important wildlife habitat areas, including such areas used for required public recreation area</p>	<ul style="list-style-type: none"> • Preservation of any existing natural resource and hazard areas shall have highest priority for locating open space. • Maintenance is limited to the minimum removal and avoidance of hazards, nuisances, or unhealthy conditions. • See tree protection standards (Section 4.2, Tree Preservation).
Active Recreational Areas		
	<p>Land occupied by areas and facilities used for active recreational purposes, such as pools, playgrounds, tennis courts, jogging trails, ball fields, and clubhouses, including required public recreation area</p>	<ul style="list-style-type: none"> • Land shall be compact and contiguous unless used to link or continue an existing or planned open space resource. • Areas shall have at least one direct access to a building or to a street, bikeway, or walkway accessible to the public or the development's occupants and users.
Stormwater Management Devices		
	<p>Up to 75 percent of land area occupied by stormwater management devices (including retention and detention ponds and other bioretention devices), when such features are treated as an open space site amenity</p>	<ul style="list-style-type: none"> • To qualify, stormwater management devices shall support passive recreation uses by providing access and pedestrian elements such as paths and benches.
Formal Plantings and Gardens		
	<p>Formally planned and regularly maintained open areas that provide passive recreation opportunities, including arranged plantings, gardens, gazebos, and similar structures, as well as roof gardens</p>	<ul style="list-style-type: none"> • Formal plantings and gardens shall have at least one direct access to a building, or to street, bikeway, or walkway accessible to the public or the development's occupants and users. • Such features shall be oriented to surrounding development.

Table 4.3.1.D.2: Allowable Common Open Space Areas

Area Counted as Common Open Space	Description	Design and Maintenance Requirements
Squares, Forecourts, Plazas, and Outdoor Dining Areas		
	<p>Squares, forecourts, plazas, and outdoor dining areas that provide gathering places or active and passive recreational opportunities</p>	<ul style="list-style-type: none"> • Squares, forecourts, plazas, and outdoor dining areas shall be at least 200 square feet, but no more than one acre, in area. • Such features shall have at least one direct access to a principal building, or to a street, bikeway, or walkway accessible to the public or the development's occupants and users. • Surrounding principal buildings shall be oriented toward the square, forecourt, plaza, or outdoor dining area where possible.
Public Access Easements		
	<p>Public access easements that are available for passive recreational activities such as walking, running, and biking</p>	<ul style="list-style-type: none"> • Such public access easements shall include at least one direct and signed access from a street, bikeway, or walkway accessible to the public or the development's occupants and users.
Required Buffer and Landscape Areas		
	<p>All areas occupied by required perimeter and streetyard buffers, and landscaping, except landscaped area within parking lots</p>	<ul style="list-style-type: none"> • See perimeter buffer standards (Section 4.6, Perimeter Buffers, Perimeter Buffers) and landscaping standards (Section 5.6, Landscaping).

3. Areas Not Allowable as Required Common Open Space

The following areas shall not be allowed as required common open space:

- a. Private yards not subject to an open space or conservation easement;
- b. Street rights-of-way or private access easements, including sidewalks located within those rights-of-way or easements;
- c. Open parking areas and driveways;
- d. Land covered by structures, unless designated for active recreational uses;
- e. Designated outdoor storage areas; and
- f. Stormwater ponds not located and designed as a site amenity (e.g., with low fencing, vegetative landscaping, gentle slopes, fountain or other visible water circulation device, and pedestrian access or seating).

E. Design Standards for Common Open Space

Areas used as a required common open space shall meet the following design standards:

1. To the maximum extent practicable, required common open space shall be located and configured to include, protect, or enhance as many of the allowable types of common open space shown in Table 4.3.1.D.2, *Allowable Common Open Space Areas* as possible, with a priority generally reflecting the order in which the types are listed in the table.
2. Required common open space areas shall be compact and contiguous unless a different configuration is needed to continue an existing trail or accommodate preservation of natural features.
3. Required common open space shall be located to be readily accessible and useable by occupants and users of the development. Where possible, a portion of the open space should provide focal points for the development through prominent placement or easy visual access from streets.
4. If the development site is adjacent to existing or planned parks, greenways, or other public open space, required common open space shall, to the maximum extent practicable, be located to adjoin, extend, and enlarge the park, greenway, or other public open space.
5. If the development contains, or adjoins an existing or planned transit station, required common open space shall, to the maximum extent practicable, adjoin the transit station site or be integrated with the transit station or other open space adjoining the transit station in accordance with any Town-adopted plans for the transit station area. Such required common open space shall be furnished with at least three of the following types of community amenities:
 - a. Benches or seating areas;
 - b. Raised landscape planters;
 - c. Shade structures;
 - d. Public art (e.g., sculptures, murals, water elements, carvings, frescos, mosaics, mobiles);
 - e. A courtyard;
 - f. Decorative shelters for transit riders (as approved by the Town); or
 - g. Similar community amenities approved by the Town.

F. Development Within Required Common Open Space Areas

1. Development within required common open space areas shall be limited to that appropriate to the purposes of the type(s) of common open space (see Table 4.3.1.D.2, *Allowable Common Open Space Areas*).
2. Where appropriate to the type of common open space, such development may include, but is not limited to:
 - a. Walking, jogging, and biking paths or trails;
 - b. Benches or other seating areas;
 - c. Tables, shelters, grills, and other picnicking facilities;
 - d. Docks and other facilities for fishing;

- e. Environmental education guides and exhibits;
- f. Gazebos and other decorative structures;
- g. Fountains or other water features;
- h. Tot lots and play structures for children;
- i. Gardens or seasonal planting areas; and
- j. Swimming pools, athletic fields and courts, and associated clubhouses.

G. Ownership, Management, and Maintenance of Common Open Space

1. Required common open space area shall be managed and maintained as permanent open space through one or more of the following options:
 - a. Open space may be held in common ownership by the owner(s) of the development, who will be responsible for managing and maintaining the land for its intended open space purposes.
 - b. Open space areas may be conveyed to a property owners' or homeowners' association that holds the land in common ownership and will be responsible for managing and maintaining the land for its intended open space purposes.
 - c. Open space areas may be conveyed to a third-party beneficiary such as an environmental or civic organization that is organized for, capable of, and willing to accept responsibility for managing and maintaining the land for its intended open space purposes.
 - d. Open space areas may be dedicated to the public and conveyed to the Town or other public agency that is organized for, capable of, and willing to accept responsibility for managing and maintaining the land for its intended open space purposes.
2. Easements may be established on those parts of individually-owned lots including open space areas that require the areas to be managed consistent with their intended open space purposes and prohibit any inconsistent future development. Any options involving private ownership of required common open space area shall include association by-laws, deed restrictions, covenants, or other legal instruments that ensure continued use of the land for its intended open space purposes and provide for the continued and effective management, operation, and maintenance of the land and facilities. Such instruments shall be approved by the Town as sufficient to comply with this standard before or conjunction with approval of a Major or Minor Subdivision (see Section 8.3.4, Subdivision).
3. Responsibility for managing and maintaining common open space areas lies with the owner of the land comprising the areas. Failure to maintain common open space areas in accordance with the approved development shall be a violation of this Ordinance. Identification of who bears responsibility for managing and maintaining common open space areas shall be shown on any recorded subdivision (see Section 8.3.4, Subdivision) plat for the development.

4.3.2. Public Recreation Area

A. Purpose

The purpose of this section is to ensure that new residential subdivisions include or contribute to the provision of public recreation area sufficient to meet the passive and active recreation needs of residents of the subdivision, as well of the surrounding neighborhood.

B. Applicability

The standards in this section shall apply to all new residential Major or Minor Subdivision (see Section 8.3.4, Subdivision).

C. Required Public Recreation Area

1. Any subdivision proposing to create lots designed and intended to serve as building sites for single-family detached, duplex, manufactured home, single-family attached, multifamily, live/work, congregate living facility, and continuing care retirement facility shall dedicate a portion of the subdivision site as public recreation area.
2. The amount of land required to be dedicated shall equal 1/35 of an acre times the number of dwelling units proposed to be accommodated by subdivision lots as follows:
 - a. For subdivisions creating lots for single-family detached, manufactured home, or single-family attached dwellings, this will equal the number of such lots;
 - b. For subdivisions creating lots for duplex dwellings, this will equal twice the number of lots; and
 - c. For subdivisions creating lots for multifamily dwellings, this will equal the number of dwelling units proposed on the lots.

D. Credit Toward Other Standards¹⁵⁵

Public recreation areas and associated vegetation within such areas may be credited toward compliance with the following, to the extent they comply with applicable standards:

1. Tree preservation (see Section 4.2, Tree Preservation);
2. Perimeter and streetyard buffers (see Section 4.6.3, Required Buffer Type);
3. Screening requirements (see Section 5.7, Screening); and
4. Landscaping requirements (see Section 5.6, Landscaping).

E. Design Standards for Required Public Recreation Area

Areas used as a required public recreation area shall meet the following design standards.

1. Required public recreation area shall be compact and contiguous, forming a single area, unless multiple public recreation areas or a different configuration is needed to continue an existing trail or accommodate preservation of natural features.
2. The size and shape of required public recreation area shall be sufficient to accommodate active recreation activities appropriate to the recreational needs of subdivision residents (e.g., public recreation area should be sufficiently large and rectangular to accommodate soccer or softball fields, tennis courts, swimming pools, etc.).

¹⁵⁵ This provision is added to allow for compliance with related standards, as appropriate.

Article 4: Environmental and Open Space Standards

Section 4.3. Open Space and Recreation Areas

4.3.3. Alternative Options for Meeting Common Open Space and Public Recreation Area Requirements

3. Required public recreation area shall be located to be readily accessible and useable by occupants and users of the development.
4. Required public recreation area shall have at least 50 feet of frontage on a public street or a public access easement at least 30 feet wide.
5. No land dedicated as active public recreation area shall be located on slopes exceeding five percent.
6. If the development site is adjacent to existing or planned parks, greenways, or other public open space, required public recreation area shall, to the maximum extent practicable, be located to adjoin, extend, and enlarge the park, greenway, or other public open space.

F. Dedicated Recreation Area to be Shown on Recorded Plat

Dedicated recreation area shall be shown on the recorded final plat for Major and Minor Subdivisions (see 8.3.4, Subdivision) as appropriate.

G. Conveyance of Dedicated Recreation Area

Required public recreation area shall be dedicated to the public and conveyed to the Town or other public agency that is organized for, capable of, and willing to accept responsibility for managing and maintaining the land for its intended open space purposes. The Town may sell or otherwise convey any public recreation area conveyed to the Town if the Town Board of Commissioners determines that development of the land for park and recreation purposes is no longer feasible or consistent with Town-adopted parks and recreation plans. Any proceeds from such transactions shall be deposited into the Town fund referenced in subsection 4.3.3.B.5 below.

4.3.3. Alternative Options for Meeting Common Open Space and Public Recreation Area Requirements

A. Off-Site Provision

1. In lieu of providing required common open space area or public recreation area on a development site in accordance with Section 4.3.1, Common Open Space, or Section 4.3.2, Public Recreation Area, the developer may, with the approval of the Town Board of Commissioners in accordance with the criteria in subsection 4 below, provide all or some of required common open space or public recreation area on land outside the development site. No development application proposing off-site provision of required common open space or public recreation area shall be approved unless and until the Town Board of Commissioners approves such proposal (even where the application would normally be decided by Town staff or another board).
2. Where off-site provision of required common open space or public recreation area is proposed, the application shall include a map showing the location, boundaries, and topography of the site, as well as any additional information necessary to ascertain the site's suitability as common open space or public recreation area, as appropriate.
3. Any approved off-site common open space shall be shown as reserved or dedicated open space on a plat of the property containing the common open space, and any approved off-site public recreation area shall be shown as dedicated recreation area on a plat of the property containing the public recreation area. The plat shall be recorded with the Register of Deeds for the county in which the dedicated land is located.

4. The decision of the Town Board of Commissioners on whether to approve off-site provision of required common open space or public recreation area shall be based on the following criteria:
 - a. Whether the proposed off-site common open space or public recreation area would meet the design standards for required common open space (see Section 4.3.1.E, Design Standards for Common Open Space) or public recreation area (see Section 4.3.2.E, Design Standards for Required Public Recreation Area), as appropriate;
 - b. Whether the proposed off-site common open space or public recreation area is located sufficiently close to the development site to meet the open space or recreation needs, as appropriate, of the occupants and users of the development; and
 - c. Whether the proposed off-site common open space or public recreation area would contribute more to meeting the open space or recreation needs, as appropriate, of the occupants and users of the development than on-site provision of the common open space or public recreation area or the Town's use of in-lieu payments to acquire and develop parks, greenways, and other open space areas in the vicinity of the development.

B. Payment in Lieu of Providing Required Common Open Space or Public Recreation Area

1. In lieu of providing all or a portion of the required common open space area or public recreation area on a development site in accordance with Section 4.3.1, Common Open Space, or Section 4.3.2, Public Recreation Area, the developer may make a payment to the Town with the approval of the appropriate decision-making body (see Section 8.3, Application-Specific Review Procedures).
2. The amount of such in-lieu payment shall be the product of the number of acres of required common open space area or public recreation area, as appropriate, that is proposed and approved for the in-lieu payment option multiplied by the pre-development fair market value per acre of land making up the development site. The development application shall include an appraisal or other documentation acceptable to the Town as showing the development site's predevelopment fair market value.
3. If the Town disagrees with the pre-development fair market value submitted by the applicant, such value shall be determined by a special appraisal committee made up of one professional appraiser appointed by the applicant, one professional appraiser appointed by the Town Manager, and one professional appraiser appointed by the initial two committee members. The committee shall view the site, hear the contentions of both the applicant and the Town, reach a conclusion by majority vote, and submit a written certification of its conclusion to the applicant and Town Manager within 30 days after the final member of the committee is appointed. The costs of the committee shall be borne by the applicant.
4. The developer shall make the in-lieu payment before recordation of any subdivision plat for the development or issuance of any Building Permit for the development—provided, however, that the payments may be phased in accordance with an approved phasing plan for the development.
5. The Town shall deposit any in-lieu payment into a special Town fund that shall be used only for the acquisition or development of parks, greenways, and other open space

Article 4: Environmental and Open Space Standards

Section 4.3. Open Space and Recreation Areas

4.3.3. Alternative Options for Meeting Common Open Space and Public Recreation Area Requirements

areas that will serve occupants and users of the development. Such areas may also serve other developments in the immediate area.

6. The decision on whether to approve a payment in lieu of providing required common open space or public recreation area shall be based on the following criteria:
 - a. Whether the on-site provision, or any proposed off-site provision, of required common open space or recreation could be used to establish, expand, or extend an existing or planned public park, greenway, or other open space area identified in parks and recreation plans or other plans adopted by the Town;
 - b. The extent to which the size, shape, topography, geology, soils, and public accessibility of the development site makes it impractical to provide required common open space or public recreation area that complies with Section 4.3.1.E, *Design Standards for Common Open Space*, or Section 4.3.2.E, *Design Standards for Required Public Recreation Area*, as appropriate; and
 - c. Whether the Town's use of an in-lieu payment to help acquire and develop parks, greenways, and other open space areas would better meet the open space and recreational needs of occupants and users of the development than on-site provision, or any proposed off-site provision, of the required common open space or public recreation area, as appropriate.

Section 4.4. Riparian Buffers¹⁵⁶

4.4.1. Purpose

The purpose of the standards in this section is to protect water quality in the Cape Fear River Basin and Jordan Lake watershed, including water supplies throughout the Cape Fear River Basin and Jordan Lake watershed. Specifically, it is intended to protect and preserve existing riparian buffers in accordance with State riparian buffer rules. Vegetative buffers adjacent to surface waters provide multiple environmental protection and resource management benefits. Forested buffers enhance and protect the natural ecology of stream systems, as well as water quality through bank stabilization, shading, and nutrient removal. They also help minimize flood damage in flood prone areas. Well-vegetated riparian buffers help remove nitrogen and prevent sediment and sediment-bound pollutants such as phosphorus from reaching the waters. The riparian buffer standards in this article are intended to achieve these important benefits.

4.4.2. General

A. Authority

This article is enacted and administered pursuant to the Town's general authority to regulate development (see Section 1.1.2, Authority) and the local delegation or assignment of authority for the protection and maintenance of riparian buffers granted by the North Carolina Environmental Management Commission in accordance with 15A N.C.A.C. 2B .0311 (Cape Fear River Basin) and 15A N.C.A.C. 02B .0267 (Jordan Water Supply Nutrient Strategy: Protection of Existing Riparian Buffers).

B. Applicability

1. General

- a. Except as otherwise provided in Section 4.4.2.B.2, Exemptions, this article applies to any development, as well as any other activity listed in Table 4.4.9, Uses and Activities Permitted in Riparian Buffers, that occurs within riparian buffers directly

¹⁵⁶ The Town of Pittsboro currently has two different sets of riparian buffer standards, located in the Zoning Ordinance and in a stand-alone riparian buffer protection ordinance as follows:

- In the Zoning Ordinance, riparian buffer provisions only apply to water supply watersheds, which cover most of Pittsboro planning jurisdiction. Riparian buffer standards require new "high-density development" (development exceeding two units per acre for single-family development or 24 percent built-upon area for all other development) to provide a 100-foot-wide riparian buffer along all perennial waters.
- The riparian buffer protection ordinance applies jurisdiction-wide, and requires a two-zone riparian buffer along all surface waters. The two zones consist of a 30-foot-wide zone of undisturbed vegetation nearest the water's edge and an outer 20-foot-wide zone of vegetation that can be grass or disturbed for limited uses.

The two sets of riparian buffer standards both address the same objective of maintaining water quality. In this section, standards established in the riparian buffer protection ordinance have been carried forward, which address development outside of water supply areas. Standards for water supply areas in the Zoning Ordinance are addressed in Section 2.6.4, Watershed Critical Area Overlay (WCAO) District, Section 2.6.5, Watershed Protected Area Overlay (WPAO) District, and Section 2.6.6 Natural Resource Conservation Overlay (NRCO) District. These districts both include a 100-foot minimum vegetative buffer requirement, as well as other development standards that comply with the state's water supply watershed regulations and provide enhanced protection of water quality, wildlife habitat, and environmentally sensitive areas. As noted in Section 8.3.3.B, Riparian Buffer Development and Section 8.3.5.D, Variance (Riparian Buffer), administrative procedures are integrated into Article 8: Development Review Procedures, for consistency with the Ordinance structure, and this section to ensure compliance with the state's Jordan Lake watershed regulations.

adjacent to surface waters in the Cape Fear River Basin and the Jordan Lake watershed (as identified in accordance with 4.4.4, *Riparian Buffers*), as well as to any development or listed activity that occurs outside of such buffers and has hydrologic impacts in violation of the diffuse flow requirements set out in Section 4.4.6, Diffuse Flow Requirements. No new clearing, grading, or development shall take place, nor shall any new building permits be issued, in violation of the standards in this article.

- b. No development or activity subject to this article may occur within a required riparian buffer unless reviewed and approved in accordance with 4.4.7, *Riparian Buffer Development Review*.
- c. Parties subject to this article shall abide by all State rules and laws regarding waters of the state—including, but not limited to, Rules 15A N.C.A.C. 2B .0230 and .0231, Rules 15A N.C.A.C. 2H .0500, 15A N.C.A.C. 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.

2. Exemptions

a. Existing and Ongoing Uses

- (1) This article shall not apply to uses that are existing and on-going. Existing uses may include agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines, and on-site sanitary sewage systems—any of which involve either specific, periodic management of vegetation or displacement of vegetation by structures or regular activity. An existing, on-going use is one meeting the following criteria:

(A) Cape Fear River Basin

A use in the Cape Fear River Basin is existing if it existed before February 1, 1976 (the effective date of the adopted classifications assigned to the waters within the Cape Fear River Basin Rules 15A N.C.A.C. 2B .0311.(a)).

(B) Jordan Lake Watershed

A use in the Jordan Lake watershed is existing only if one of the following occurred before April 26, 2011 (the date the Town Board of Commissioners adopted the Riparian Buffer Protection Ordinance):

- (i) If subject to requirements for a 401 Certification/404 Permit, such certification and permit were issued for the use;
- (ii) If subject to a State permit or certification (e.g., for landfills, National Pollution Discharge Elimination System (NPDES) wastewater discharges, land application of residuals, and road construction activities), all such State permits and certifications were obtained for the use and construction of the permitted activity began or was under contract to begin;
- (iii) If reviewed through the Clean Water Act Section 404/National Environmental Policy Act Merger 101 Process, an agreement with the North Carolina Department of Environment and Natural Resources on avoidance and minimization was reached; or

- (iv) If not subject to review through the Clean Water Act Section 404/National Environmental Policy Act Merger 101 Process, a Finding of No Significant Impact pursuant to the National Environmental Policy Act was issued for the use and the use was approved, in writing, by the Town.
- (2) A change in an existing, on-going use to another use is not exempt, though a mere change in ownership through purchase or inheritance does not constitute such a change in use.
- (3) Only that portion of the riparian buffer occupied by the footprint of the existing and on-going use is exempt from this article.

C. Interpretation of Riparian Buffer Regulations

When interpreting the meaning or application of the riparian buffer regulations in this article, the Town Engineer shall consider the clarification memos and other information developed and maintained by the North Carolina Division of Water Resources.

4.4.3. Records

The Town shall maintain on-site records for a minimum of five years, and shall furnish a copy of these records to the North Carolina Division of Water Resources within 30 days of receipt of a written request for them. Such records shall include the following:

- A. A copy of all variance requests;
- B. Findings of fact on all variance requests;
- C. Results of all variance proceedings;
- D. A record of complaints and action taken as a result of complaints;
- E. Records for stream origin calls and stream ratings; and
- F. Copies of all requests for authorization, records approving authorization, and Authorization Certificates.

4.4.4. Riparian Buffers and Zones

A. Riparian Buffer

Riparian buffers subject to this section include all land (including wetlands) within 50 feet of, and directly adjacent to, all sides of surface waters in the Cape Fear River Basin and the Jordan Lake watershed (wetlands within a riparian buffer are also regulated pursuant to Rules 15A N.C.A.C. 2B .0230, and .0231, Rules 15A N.C.A.C. 2H .0500, 15A N.C.A.C. 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act).

B. Riparian Buffer Zones

Riparian buffers shall consist of two zones that have a combined width of 50 feet as described in subsections 1 and 2 below.

1. Zone One

Zone One consists of a vegetated area that is undisturbed except for uses and activities allowed in accordance with 4.4.9, Uses and Activities Permitted in Riparian Buffers.

- a. For intermittent and perennial streams, Zone One begins at the top of the bank and extends landward on both sides of the stream a distance of 30 feet, measured horizontally on a line perpendicular to a vertical line marking the top of the bank.
- b. For ponds, lakes, and reservoirs located within natural drainageway, Zone One begins at the normal water level and extends landward on all sides of the water body a distance of 30 feet, measured horizontally on a line perpendicular to a vertical line marking the outer edge of the normal water level.

2. Zone Two

Zone Two consists of a stable, vegetated area that is undisturbed except for uses and activities allowed in accordance with 4.4.9, Uses and Activities Permitted in Riparian Buffers. Zone Two begins at the outer edge of Zone One and extends landward a distance of 20 feet, measured horizontally on a line perpendicular to a vertical line marking the outer edge of Zone One.

4.4.5. Identification of Riparian Buffers

A. Surface Waters with Riparian Buffers

1. General

Except as provided in subsection 2 below, riparian buffers subject to this section shall be required along all surface waters in the Cape Fear River Basin and the Jordan Lake watershed identified on designated maps (see Section 4.4.5.B, Maps Used to Identify Surface Waters with Riparian Buffers) or by on-site determinations (see Section 4.4.5.C, On-site Determination of Surface Waters with Riparian Buffers).

2. Exception

Riparian buffers shall not be required along mapped surface waters where an on-site determination in accordance with Section 4.4.5.C, On-site Determination of Surface Waters with Riparian Buffers, shows that mapped surface water is:

- a. A man-made pond or lake that is not part of a natural drainage way classified in accordance with 15A N.C.A.C. 2B .0100, including ponds and lakes created for animal watering, irrigation, or other agricultural use as defined in N.C.G.S. 106-581.1 (A pond or lake is part of a natural drainage way when it is fed by an intermittent or perennial stream or when it has a direct discharge point to an intermittent or perennial stream.);
- b. An ephemeral stream;
- c. Lacks on-the-ground evidence of a corresponding intermittent or perennial stream, lake, reservoir, or pond; or
- d. A ditch or other man-made water conveyance other than a modified natural stream.

B. Maps Used to Identify Surface Waters with Riparian Buffers

The following maps may be used for purposes of identifying surface waters with riparian buffers subject to this section:

1. The most recently published version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture;

2. The most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS); and
3. A map approved by the Geographic Information Coordinating Council and the North Carolina Environmental Management Commission (Commission) following a 30-day public notice and opportunity for comment.

c. On-Site Determination of Surface Waters with Riparian Buffers

1. A landowner or other affected party (including the North Carolina Division of Water Resources) who believes the maps used to identify riparian buffers (see Section 4.4.5.B, Maps Used to Identify Surface Waters with Riparian Buffers) inaccurately depict the surface waters subject to these riparian buffer regulations may request the Town for an on-site determination of the presence, location, and extent (including the origin point) of such surface waters, or whether the mapped surface waters are excepted from riparian buffer regulations in accordance with Section 4.4.5.A.2, Exception.
 - a. The determination shall be conducted by the Town Engineer who has successfully completed the Surface Water Identification Training Certification course, or other equivalent training curriculum approved by the North Carolina Division of Water Resources. The Town may accept the results of site assessments made by other parties who have successfully completed such training.
 - b. If determining the origin of a stream, the determination shall use the latest version of the North Carolina Division of Water Resources' Identification Methods for the Origins of Intermittent and Perennial Streams.
2. Any disputes over on-site determinations shall be referred in writing to the Director of the North Carolina Division of Water Resources and is subject to review as provided in Articles 3 and 4 of N.C.G.S 150B.

4.4.6. Diffuse Flow Requirements

Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow prior to its entry into the buffer and reestablishing vegetation as follows:

- A. Concentrated runoff from new ditches or man-made conveyances shall be converted to diffuse flow at non-erosive velocities before the runoff enters Zone Two of the riparian buffer;
- B. Periodic corrective action to restore diffuse flow shall be taken as necessary and shall be designed to impede the formation of erosion gullies; and
- C. No new stormwater conveyances are allowed through the buffers except for those specified in Table 4.4.9, *Uses and Activities Permitted in Riparian Buffers*, addressing stormwater management ponds, drainage ditches, roadside ditches, and stormwater conveyances.

4.4.7. Riparian Buffer Development Review

A. Applicability

1. Except as exempted in Section 4.4.2.B.2, *Exemptions*, Riparian Buffer Development Review is required before any development, or any other activity listed in Table 4.4.9, *Uses and Activities Permitted in Riparian Buffers*, may be conducted within a riparian buffer.

2. An application for Riparian Buffer Development Review may be submitted and reviewed concurrently with applications for the following permit types (see Section 8.3, Application-Specific Review Procedures):
 - a. Major and Minor Site Plan;
 - b. Floodplain Development Permit,
 - c. Stormwater Management Permit; or
 - d. Administrative Adjustment.

B. Riparian Buffer Development Review Procedure

The following subsections identify those steps in the standard review procedure (see Section 8.2, Standard Review Procedures) applicable to the review of a Riparian Buffer Development Review application and note any specific variations of, or additions to, those review steps.

1. Pre-Application Conference

The applicant shall hold a pre-application conference with Town staff in accordance with Section 8.2.2, Pre-application Conference.

2. Application Submittal and Acceptance

The application shall be submitted and accepted, and may be withdrawn, in accordance with Section 8.2.4, Application Submittal and Acceptance, except that if the application proposes development or activity that is allowable only with mitigation, the application shall include a mitigation strategy.

3. Staff Review and Action

The Town Engineer shall review the application, allow revisions of the application, and decide the application in accordance with Section 8.2.5, Staff Review and Action, subject to the following provisions:

- a. The decision shall be one of the following:
 - (1) Determine that the proposed development or activity is permitted without an Authorization Certificate ("Exempt");
 - (2) Approve the proposed development or activity as allowable, as submitted;
 - (3) Approve the proposed development or activity as allowable, subject to conditions;
 - (4) Approve the proposed development or activity as allowable with mitigation, as submitted;
 - (5) Approve the proposed development or activity as allowable with mitigation, subject to conditions; or
 - (6) Deny the application.
- b. If the Town Engineer fails to decide the application within 60 days after its acceptance, the application shall be deemed approved as submitted unless the applicant:
 - (1) Agrees in writing to a longer time period; or
 - (2) Refuses access to its records or premises for gathering information necessary to a decision on the application.

4. Post-Decision Actions and Limitations

The post-decision actions and limitations in Section 8.2.10, Post-Decision Actions and Limitations, shall apply to the application except as follows:

a. Issuance of Authorization Certificate

On approving the proposed development or activity as allowable or allowable with mitigation, the Town Engineer shall issue the applicant an Authorization Certificate. If the development or activity is approved with mitigation, the Authorization Certificate shall identify the approved mitigation option, including the area of mitigation and the location of donated property or restored riparian buffer and/or amount of mitigation fee, as appropriate.

b. Appeal

The decision on an application for Riparian Buffer Development Review may be appealed to the Director of the North Carolina Division of Water Resources for review and decision in accordance with the North Carolina Administrative Hearings Act.

c. Effect of Approval

Approval of the proposed development or activity as "Exempt" or issuance of an Authorization Certificate allows approval of any concurrently-reviewed applications within the riparian buffer, including any mitigation included in the application approval. It also authorizes submittal of an application for Building Permit or other development permits or approval needed to undertake the authorized land disturbing activities.

d. Expiration of Approval

Approval of the proposed development or activity as "Exempt" or issuance of an Authorization Certificate shall expire if an application for a Building Permit (or Certificate of Compliance/Occupancy, if a Building Permit is not required) for the approved development is not submitted within one year after the date of approval or issuance.

c. Riparian Buffer Development Review Standards

1. Exempt

The Town Engineer shall determine that the development or activity proposed in a riparian buffer is permitted without an Authorization Certificate ("Exempt") only on reaching each of the following conclusions:

- a. The proposed development or activity falls within a use listed as "Exempt" in Table 4.4.9, *Uses and Activities Permitted in Riparian Buffers*; and
- b. The proposed development or activity complies with the diffuse flow requirements in Section 4.4.6, *Diffuse Flow Requirements*; and
- c. The proposed development or activity will be designed, constructed, and maintained to minimize soil disturbance and provide the maximum water quality protection practicable.

2. Allowable

The Town Engineer shall determine that the development or activity proposed in a riparian buffer is allowable with an Authorization Certificate only on reaching each of the following conclusions:

- a. The proposed development or activity falls within a use listed as “Allowable” in Table 4.4.9: *Uses and Activities Permitted in Riparian Buffers*.
- b. The proposed development or activity complies with the diffuse flow requirements in Section 4.4.6, Diffuse Flow Requirements.
- c. There are no practical alternatives to the proposed development or activity within the riparian buffer—that is, that:
 - (1) The basic purpose of the proposed development or activity cannot be practically accomplished in a manner that would better minimize disturbance of the riparian buffer, preserve aquatic life and habitat, and protect water quality;
 - (2) The proposed development or activity cannot practically be reduced in size or density, reconfigured, or redesigned to better minimize disturbance of the riparian buffer; and
 - (3) Best management practices will be used as necessary to minimize disturbance of the riparian buffer, preserve aquatic life and habitat, and protect water quality.

3. Allowable with Mitigation

The Town Engineer shall determine that the development or activity proposed in a riparian buffer is allowable with an Authorization Certificate and mitigation only on reaching each of the following conclusions:

- a. The proposed development or activity falls within a use listed as “Allowable with Mitigation” in Table 4.4.9: *Uses and Activities Permitted in Riparian Buffers*.
- b. The proposed development or activity complies with the diffuse flow requirements in Section 4.4.6, Diffuse Flow Requirements.
- c. There are no practical alternatives to the proposed development or activity within the riparian buffer—that is, that:
 - (1) The basic purpose of the proposed development or activity cannot be practically accomplished in a manner that would better minimize disturbance of the riparian buffer, preserve aquatic life and habitat, and protect water quality;
 - (2) The proposed development or activity cannot practically be reduced in size or density, reconfigured, or redesigned to better minimize disturbance of the riparian buffer; and
 - (3) Best management practices will be used as necessary to minimize disturbance of the riparian buffer, preserve aquatic life and habitat, and protect water quality.
- d. The proposed mitigation strategy complies with the mitigation standards in 4.4.10, Mitigation.

4.4.8. Variances from Riparian Buffer Regulations

See Section 8.3.5.D, Variance (Riparian Buffer).

4.4.9. Uses and Activities Permitted in Riparian Buffers

- A.** Table 4.4.9: Uses and Activities Permitted in Riparian Buffers, establishes uses and activities permitted within a riparian buffer and areas adjacent to the buffer in which certain uses may cause adverse impacts to the riparian area. Uses are categorized as “Exempt,” “Allowable,” or “Allowable with Mitigation.”
- B.** Unless a Riparian Buffer Variance is granted pursuant to 4.4.8, *Variances from Riparian Buffer Regulations*, all uses or activities not listed in the table shall be considered prohibited and may not occur within the riparian buffer, or areas outside the buffer as noted Table 4.4.9: Uses and Activities Permitted in Riparian Buffers.
- C.** All land uses must also comply with Article 3: Use Standards. In the event that there is a conflict between allowed uses established in Article 3: Use Standards, and Table 4.4.9: Table 4.4.9: Uses and Activities Permitted in Riparian Buffers, the more restrictive standard shall control.

Table 4.4.9: Uses and Activities Permitted in Riparian Buffers			
Use or Activity	Exempt [1]	Allowable [2]	Allowable with Mitigation [3]
Access trails (pedestrian access trails leading to the surface water, docks, fishing piers, boat ramps, and other water dependent activities):			
Pedestrian access trails that are restricted to the minimum width practicable and do not exceed 4 feet in width of buffer disturbance, and provided that installation and use does not result in removal of trees and no impervious surface is added to the riparian buffer	X		
Pedestrian access trails that exceed 4 feet in width of buffer disturbance, the installation or use results in removal of trees or impervious surface is added to the riparian buffer		X	
Airport facilities that impact no more than 150 linear feet or 1/3 acre of riparian buffer		X	
Airport facilities that impact more than 150 linear feet or 1/3 acre of riparian buffer			X
Activities necessary to comply with FAA requirements (e.g. radar uses or landing strips), where: <ul style="list-style-type: none"> • No heavy equipment is used in Zone One; • Vegetation in undisturbed portions of the buffer is not compromised; • Felled trees are removed by chain; • No permanent felling of trees occurs in protected buffers or streams; • Stumps are removed only by grinding; • At the completion of the project the disturbed area is stabilized with native vegetation; and • Zones One and Two meet the requirements of Section 4.4.4, <i>Riparian Buffers and Zones</i>, and Section 4.4.6, <i>Diffuse Flow Requirements</i>. 		X	

Table 4.4.9: Uses and Activities Permitted in Riparian Buffers

Use or Activity	Exempt [1]	Allowable [2]	Allowable with Mitigation [3]
Archaeological activities	X		
Bridges		X	
Dam maintenance activities that do not cause additional buffer disturbance beyond the footprint of the existing dam or those covered under the U.S. Army Corps of Engineers Nationwide Permit No. 3	X		
Dam maintenance activities that do cause additional buffer disturbance beyond the footprint of the existing dam or those not covered under the U.S. Army Corps of Engineers Nationwide Permit No.3		X	
Drainage ditches, roadside ditches, and stormwater conveyances through riparian buffers:			
New stormwater flows to existing drainage ditches, roadside ditches, and stormwater conveyances provided flows do not alter or result in the need to alter the conveyance and are managed to minimize the sediment, nutrients and other pollution that convey to water bodies	X		
Realignment of existing roadside drainage ditches retaining the design dimensions, provided that no additional travel lanes are added and the minimum required roadway typical section is used based on traffic and safety considerations		X	
New or altered drainage ditches, roadside ditches and stormwater outfalls provided that a stormwater management facility is installed to control nutrients and attenuate flow before the conveyance discharges through the riparian buffer		X	
New drainage ditches, roadside ditches and stormwater conveyances applicable to linear projects that do not provide a stormwater management facility due to topography constraints provided that other practicable Best Management Practices (BMPs) are employed			X
Drainage of a pond in a natural drainage way provided that a new riparian buffer that meets the requirements of this article is established adjacent to the new channel	X		
Driveway crossings of streams and other surface waters subject to this article:			
Driveway crossings on single-family residential lots that disturb no more than 25 linear feet or 2,500 square feet of riparian buffer	X		
Driveway crossings on single-family residential lots that disturb more than 25 linear feet or 2,500 square feet of riparian buffer		X	
Driveway crossings in a subdivision that cumulatively disturb no more than 150 linear feet or 1/3 acre of riparian buffer		X	
Driveway crossing in a subdivision that cumulatively disturb more than 150 linear feet or 1/3 of an acre of riparian buffer			X

Table 4.4.9: Uses and Activities Permitted in Riparian Buffers

Use or Activity	Exempt [1]	Allowable [2]	Allowable with Mitigation [3]
Driveway impacts other than crossing of a stream or other surface waters subject to this article			X
Fences where disturbance is minimized and installation does not result in removal of trees as defined in this Ordinance	X		
Fences where disturbance is minimized and installation results in removal of trees as defined in this Ordinance		X	
Fertilizer application: one-time application to establish vegetation	X		
Grading and revegetation in Zone Two where diffuse flow and the health of existing vegetation in Zone One is not compromised and disturbed areas are stabilized until they are revegetated		X	
Greenway/hiking trails designed, constructed, and maintained to maximize nutrient removal and erosion protection, minimize adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practical		X	
Historic preservation	X		
Maintenance access on modified natural streams via a grassed travel way on one side of the water body where less impacting alternatives are not practical, the width and specifications of the travel way are only that needed for equipment access and operation, and the travel way is located to maximize stream shading		X	
Mining activities covered by the Mining Act where new riparian buffers that meet the requirements of Section 4.4.4, Riparian Buffers and Zones, and Section 4.4.6, Diffuse Flow Requirements, are established adjacent to the relocated channels		X	
Mining activities not covered by the Mining Act OR where new riparian buffers that meet the requirements of Section 4.4.4, Riparian Buffers and Zones, and Section 4.4.6, Diffuse Flow Requirements, are not established adjacent to the relocated channels			X
Wastewater or mining dewatering wells with approved NPDES permit		X	
Playground equipment on lots with single-family detached or manufactured home dwellings where installation and use does not result in removal of vegetation	X		
Playground equipment installed on lands other than single-family lots or that requires removal of vegetation		X	
Protection of existing structures, facilities, and stream banks when this requires additional disturbance of the riparian buffer or the stream channel		X	
Railroad impacts other than crossings of streams and other surface waters subject to this article			X
Railroad crossings of streams and other surface waters subject to this article:			
Railroad crossings that impact no more than 40 linear feet of riparian buffer	X		

Table 4.4.9: Uses and Activities Permitted in Riparian Buffers			
Use or Activity	Exempt [1]	Allowable [2]	Allowable with Mitigation [3]
Railroad crossings that impact more than 40 linear feet but no more than 150 linear feet or 1/3 acre of riparian buffer		X	
Railroad crossings that impact more than 150 linear feet or 1/3 acre of riparian buffer			X
Removal of previous fill or debris where diffuse flow is maintained and vegetation is restored		X	
Road impacts other than crossings of streams and other surface waters subject to this article			X
Road crossings of streams and other surface waters subject to this article:			
Road crossings that impact no more than 40 linear feet of riparian buffer	X		
Road crossings that impact more than 40 linear feet but no more than 150 linear feet or 1/3 acre of riparian buffer		X	
Road crossings that impact more than 150 linear feet or 1/3 acre of riparian buffer			X
Road relocation:			
Relocation of existing private access roads associated with public road projects that are necessary for public safety and impact no more than 2,500 square feet of riparian buffer		X	
Relocation of existing private access roads associated with public road projects that are necessary for public safety and impact more than 2,500 square feet of riparian buffer			X
Scientific studies and stream gauging	X		
Stream bank or shoreline stabilization		X	
Temporary roads provided that the disturbed area is restored to pre-construction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation—provided that: tree planting may occur during the dormant season; a one-time application of fertilizer may be used to establish vegetation; and the restored buffer shall comply with the restoration criteria in Section 4.4.10.E, Riparian Buffer Restoration or Enhancement, by the end of five years		X	
Temporary sediment and erosion control devices for work within a stream channel that is authorized under Sections 401 and 404 of the Federal Water Pollution Control Act, where the disturbed area is restored to pre-construction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation—provided that: tree planting may occur during the dormant season; a one-time application of fertilizer may be used to establish vegetation; and the restored buffer shall comply with the restoration criteria in Section 4.4.10.E, Riparian Buffer Restoration or Enhancement, by the end of five years		X	

Table 4.4.9: Uses and Activities Permitted in Riparian Buffers

Use or Activity	Exempt [1]	Allowable [2]	Allowable with Mitigation [3]
Temporary sediment and erosion control devices for work within a stream channel that is not authorized under Sections 401 and 404 of the Federal Water Pollution Control Act, where the disturbed area is restored to pre-construction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation—provided that: tree planting may occur during the dormant season; a one-time application of fertilizer may be used to establish vegetation; and the restored buffer shall comply with the restoration criteria in Section 4.4.10.E, Riparian Buffer Restoration or Enhancement, by the end of five years		X	
Utility line crossings of streams and other surface waters subject to this article:			
Above-ground electric line crossings that are perpendicular to the stream and disturb no more than 150 linear feet of riparian buffer [4][5][6]		X	
Above-ground electric line crossings that are perpendicular to the stream and disturb more than 150 linear feet of riparian buffer [4][5][6]		X	
Above-ground electric line crossings that are not perpendicular to the stream and impact Zone Two [4][6]			X
Above-ground electric line crossings that are not perpendicular to the stream and impact Zone One [4][5][6]			X
Underground electric line crossings that are perpendicular to the stream and disturb no more than 40 linear feet of riparian buffer [4][6][7]		X	
Underground electric line crossings that are perpendicular to the stream and disturb more than 40 linear feet of riparian buffer [4][6][7]		X	
Underground electric line crossings that are not perpendicular to the stream and impact Zone Two [4][6]			X
Underground electric line crossings that are not perpendicular to the stream and impact Zone One [4][6][7]			X
Non-electric utility line crossings that are perpendicular to the stream and disturb no more than 40 linear feet of riparian buffer and have a maintenance corridor no more than 10 feet wide [4][6]		X	
Non-electric utility line crossings that are perpendicular to the stream and disturb no more than 40 linear feet of riparian buffer and have a maintenance corridor more than 10 feet wide [4][6]		X	
Non-electric utility line crossings that are perpendicular to the stream and disturb more than 40 linear feet but no more than 150 linear feet of riparian buffer and have a maintenance corridor no more than 10 feet wide [4][6]		X	
Non-electric utility line crossings that are perpendicular to the stream and disturb more than 40 linear feet but no more than 150 linear feet of riparian buffer and have a maintenance corridor more than 10 feet wide [4][6]			X

Table 4.4.9: Uses and Activities Permitted in Riparian Buffers

Use or Activity	Exempt [1]	Allowable [2]	Allowable with Mitigation [3]
Non-electric utility line crossings that are perpendicular to the stream and disturb more than 150 linear feet of riparian buffer			X
Non-electric utility line crossings that are not perpendicular to the stream and impact Zone Two [4][6][7]			X
Non-electric utility line crossings that are not perpendicular to the stream and impact Zone One [4][6][7]			X
Vegetation management:			
Emergency fire control measures where topography is restored	X		
Mowing maintenance in Zone Two	X		
Planting vegetation to enhance the riparian buffer	X		
Pruning forest vegetation where the health and function of the forest vegetation is not compromised	X		
Removal of individual trees that are in danger of causing damage to dwellings, other structures, or human life, or are imminently endangering stability of the stream bank	X		
Removal of individual trees that are dead, diseased, or damaged	X		
Removal of poison ivy	X		
Removal of invasive exotic vegetation as defined in <i>Exotic Plant Guidelines</i>	X		
Water dependent structures as defined in 15A N.C.A.C. 02B .0202, where installation and use result in disturbance to riparian buffers		X	
Water supply reservoirs:			
New reservoirs where a riparian buffer that meets the requirements of Section 4.4.4, Riparian Buffers and Zones, and Section 4.4.6, Diffuse Flow Requirements, is established adjacent to the reservoir		X	
New reservoirs where a riparian buffer that meets the requirements of Section 4.4.4, Riparian Buffers and Zones, and Section 4.4.6, Diffuse Flow Requirements, is not established adjacent to the reservoir			X
Wetland, stream, and buffer restoration that results in impacts to the riparian buffers:			
Restoration that requires North Carolina Division of Water Resources approval for the use of a 401 Water Quality Certification		X	
Restoration that does not require North Carolina Division of Water Resources approval for the use of a 401 Water Quality Certification		X	
Wildlife passage structures		X	
NOTES:			
[1] Uses and activities designated as "Exempt" must be designed, constructed, and maintained to minimize soil disturbance and provide the maximum water quality protection practicable, including construction, monitoring, and			

Table 4.4.9: Uses and Activities Permitted in Riparian Buffers

Use or Activity	Exempt [1]	Allowable [2]	Allowable with Mitigation [3]
<p>maintenance activities.</p> <p>[2] Uses and activities designated as "Allowable" are allowed only if no practical alternatives are available and upon approval and issuance of an Authorization Certificate in accordance with 4.4.7, Riparian Buffer Development Review.</p> <p>[3] Uses and activities designated as "Allowable with Mitigation" are allowed only if no practical alternatives are available and on approval and issuance of an Authorization Certificate with a mitigation strategy in accordance with 4.4.7, Riparian Buffer Development Review, and 4.4.10, Mitigation.</p> <p>[4] Perpendicular crossings are those that intersect the surface water at an angle between 75 and 105 degrees.</p> <p>[5] Overhead electric lines crossing Zone One shall comply with all of the following best management practices, unless the Board of Adjustment finds no practical alternative exists to such compliance:</p> <ul style="list-style-type: none"> • A minimum zone of 10 feet wide immediately adjacent to the water body shall be managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed. • Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed. • Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain where trees are cut. • Riprap shall not be used unless it is necessary to stabilize a tower. • No fertilizer shall be used other than a one-time application to re-establish vegetation. • Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state. • Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer. • In wetlands, mats shall be utilized to minimize soil disturbance. <p>[6] Poles or other above-ground utility line infrastructure shall be installed within 10 feet of a water body unless the Board of Adjustment finds no practical alternative exists to such location.</p> <p>[7] Underground utility lines crossing Zone One shall comply with all of the following best management practices, unless the Board of Adjustment finds no practical alternative exists to such compliance:</p> <ul style="list-style-type: none"> • Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed. • Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain, except in the trench where trees are cut. • Underground cables shall be installed by vibratory plow or trenching. • The trench shall be backfilled with the excavated soil material immediately following cable installation. • No fertilizer shall be used other than a one-time application to re-establish vegetation. • Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state. • Measures shall be taken on completion of construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer. 			

4.4.10. Mitigation

A. Applicability

This subsection applies where a Riparian Buffer Development Review application proposes a use or activity listed as "Allowable with Mitigation" in Table 4.4.9: *Uses and Activities Permitted in Riparian Buffers*, or where mitigation is proposed or required as a condition of approval for a Riparian Buffer Variance application. Any application for Riparian Buffer Development Review or a Riparian Buffer Variance that proposes mitigation shall include a written mitigation proposal that calculates the required area of mitigation in accordance with Section 4.4.10.C, Area of Mitigation, and describes the area and location of each type of proposed mitigation.

B. Options for Meeting the Mitigation Requirement

The mitigation requirement may be met through one of the following options:

1. On-site or off-site riparian buffer restoration, enhancement, or preservation in accordance with Section 4.4.10.E, *Riparian Buffer* ;
2. Payment of a compensatory mitigation fee to a mitigation bank if buffer credits are available from the bank pursuant to 15A N.C.A.C. 02B .0295(g), or to the Riparian Buffer Restoration Fund pursuant to 15A N.C.A.C. 02B .0295(h) if the applicant is a government entity or buffer credits are not available from a mitigation bank within the same 8-digit Hydrologic Unit Code as the buffer impact; or
3. Donation of real property or an interest in real property pursuant to Section 4.4.10.H, *Donation of Property*.

C. Area of Mitigation

For any option used, the required area of mitigation shall be calculated in accordance with the formulas in Table 4.4.10.C, Calculation of Required Area of Mitigation.

Table 4.4.10.C: Calculation of Required Area of Mitigation				
Impacted Area or Zone	Area of Impact		Zonal Multiplier	Required Area of Mitigation
Wetlands subject to and compliant with mitigation under 15A NCAC 2H .0506	Areas within the riparian buffer included within wetlands subject to and compliant with mitigation under 15A N.C.A.C. 2H .0506 [1]	X	See 15A N.C.A.C. 2H .0506(h)(7)	= A
Zone One	Area of the footprint of the use or activity causing the impact to Zone One [2] + Area within the boundary of any clearing and grading activities within Zone One needed to accommodate the use or activity [2] + Area of any on-going maintenance corridors within Zone One that are associated with the use or activity [2]	X	3.0	= B
Zone Two	Area of the footprint of the use or activity causing the impact to Zone One [2] + Area within the boundary of any clearing and grading activities within Zone One needed to accommodate the use or activity [2] + Area of any on-going maintenance corridors within Zone One that are associated with the use or activity [2]	X	1.5	= C
Total Required Mitigation Area				= A + B + C
NOTES:				
[1] The required area of mitigation is calculated for each area of wetland present for which 15A N.C.A.C. 2H .0506 provides a separate multiplier (See North Carolina Division of Water Resources).				
[2] Wetland areas subject to and compliant with mitigation under 15A N.C.A.C. 2H .0506 are excluded.				

D. Location of Mitigation

For any option used to mitigate impacts to riparian buffers in the Jordan Lake watershed, the mitigation effort shall be located within the same subwatershed of the Jordan Lake watershed, and the same or closer distance from Jordan Lake as the proposed impact, and as close to the location of the impact as feasible. Alternatively, the applicant may propose

mitigation anywhere within the same subwatershed of the Jordan Lake watershed if the mitigation proposal accounts for differences in delivery of nutrients to the affected arm of Jordan Lake resulting from differences between the locations of the buffer impact and mitigation. Additional location requirements for the property donation option are enumerated in Section 4.4.10.H, Donation of Property.

E. Riparian Buffer Restoration or Enhancement

Restoration and enhancement are intended to establish a forested riparian buffer in accordance with the standards of this subsection. Persons who choose to meet their mitigation requirement through riparian buffer restoration or enhancement shall comply with the following standards.

1. Restoration or Restoration

Restoration shall be distinguished from enhancement based on existing riparian buffer conditions. Where the density of existing woody vegetation is less than 100 trees per acre, a riparian buffer may be restored. Where the density of existing woody vegetation is greater than or equal to 100 trees per acre, but less than 200 trees per acre, a riparian buffer may be enhanced.

2. Area of Restoration

Any restoration area shall be equal to the required area of mitigation determined pursuant to Section 4.4.10.C, Area of Mitigation.

3. Area of Enhancement

Any enhancement area shall be three times larger than the required area of mitigation determined pursuant to Section 4.4.10.C, Area of Mitigation.

4. Location

The location of the restoration or enhancement shall comply with the requirements in Section 4.4.10.D, Location of Mitigation.

5. Restoration or Enhancement Plan

The applicant or mitigation provider shall submit a restoration or enhancement plan for written approval by the Town Engineer. The plan shall demonstrate compliance with this section and shall contain the following additional elements.

- a.** A map of the proposed restoration or enhancement site.
- b.** A vegetation plan, which shall include a minimum of five native hardwood tree species, where no one species is greater than 25 percent of planted stems, planted at a density sufficient to provide 320 trees per acre at maturity. The Town Engineer may approve alternative vegetation plan on consideration of factors including site wetness and plant availability.
- c.** A grading plan.
- d.** A schedule for implementation, including a fertilization and herbicide plan that will include protective measures to ensure that fertilizer and herbicide is not deposited downstream from the site and will be applied per manufacturers guidelines.
- e.** A monitoring plan, including monitoring of vegetative success, stream stability, and other anticipated benefits to the adjacent water as listed in the Authorization Certification.

6. Minimum Width

The restoration or enhancement site shall have a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water.

7. Diffuse Flow

The mitigation site shall provide diffuse stormwater flow across the entire buffer width. Any existing impervious cover or stormwater conveyances such as ditches or pipes shall be eliminated and the stormwater flow converted to diffuse flow.

8. Pesticides

Any pesticides used shall be certified by EPA for use in or near aquatic sites, and applied in accordance with the manufacturer's instructions

9. Conservation Easement Required

The mitigation area shall be placed under a perpetual conservation easement, or similar legal mechanism that includes a non-wasting endowment sufficient to ensure perpetual long-term monitoring and maintenance, that will provide for protection of the property's nutrient and sediment removal functions.

10. Performance Guarantee

A performance guarantee shall be provided for the mitigation site to account for all land purchase, construction, monitoring, and maintenance costs.

11. Post-Approval Documentation

Within one year after approval of a restoration or enhancement plan, the applicant or mitigation provider shall present documentation to the Town Engineer that the riparian buffer has been restored or enhanced. The Town Engineer may, by written agreement, extend this time period where a longer construction period is necessary. If documentation is not presented within this timeframe, then the person shall be in violation of both this Ordinance and the State's riparian buffer regulations.

12. Annual Reports

The applicant shall submit written annual reports to the Town Engineer for a period of five years after the restoration or enhancement. The reports shall show that the trees planted have survived, or that trees that do not survive has been replaced, and that diffuse flow through the riparian buffer has been maintained, or that diffuse flow has been restored.

F. Purchase of Buffer Mitigation Credits from a Private or Public Mitigation Bank

Persons who choose to satisfy some or all of their mitigation determination by purchasing mitigation credits from a private or public mitigation bank shall meet the following requirements.

1. The mitigation bank from which credits are purchased shall comply with banking requirements of the U.S. Army Corps of Engineers and the applicable trading criteria in 15A N.C.A.C. 02B .0273, and have available riparian buffer credits.
2. The mitigation bank from which credits are purchased shall be appropriately located as described in Section 4.4.10.C, *Area of Mitigation*, and Section 4.4.10.D, *Location of Mitigation*.

3. After receiving a mitigation acceptance letter from the mitigation provider, proof of payment for the credits shall be provided to the Town Engineer prior to any activity that results in the removal or degradation of the protected riparian buffer.

G. Payment to the Riparian Buffer Restoration Fund

Persons who choose to satisfy some or all of their mitigation determination by paying a compensatory mitigation fee to the Riparian Buffer Restoration Fund shall meet the requirements of 15A N.C.A.C. 02B .0269 (Riparian Buffer Mitigation Fees to the NC Ecosystem Enhancement Program).

H. Donation of Property

Persons who choose to satisfy their mitigation determination by donating real property or an interest in real property shall meet the following requirements.

1. The donation of real property interests may be used to either partially or fully satisfy the payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A N.C.A.C. 02B .0269. The value of the property interest shall be determined by an appraisal performed in accordance with subsection 4.d below. The donation shall satisfy the mitigation determination if the appraised value of the donated property interest is equal to or greater than the required fee. If the appraised value of the donated property interest is less than the required fee calculated pursuant to 15A N.C.A.C. 02B .0269, the applicant shall pay the remaining balance due.
2. The donation of a conservation easement, or similar legal mechanism that includes a non-wasting endowment sufficient to ensure perpetual long-term monitoring and maintenance, shall be accepted to satisfy compensatory mitigation requirements only if the conservation easement or similar legal mechanism is granted in perpetuity.
3. Donation of real property interests to satisfy the mitigation determination shall be accepted only if such property meets all of the following requirements:
 - a. In addition to complying with the location requirements of Section 4.4.10.D, *Location of Mitigation*, the property shall be located within an area that is identified as a priority for restoration in, or is otherwise consistent with the goals of, the Basinwide Wetlands and Riparian Restoration Plan for the Cape Fear River Basin;
 - b. The property shall contain riparian buffers not currently protected by the State's riparian buffer protection program that are in need of restoration or enhancement rather than preservation.
 - c. The restorable riparian buffer on the property shall have a minimum length of 1,000 linear feet [a collective minimum length of 1,000 linear feet per 2,500 linear feet along a surface water] and a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water.
 - d. The size of the restorable riparian buffer on the property to be donated shall equal or exceed the area of mitigation responsibility determined pursuant to Section 4.4.10.C, *Area of Mitigation*;
 - e. The property shall not require excessive measures for successful restoration, such as removal of structures or infrastructure.
 - f. Restoration of the property shall be capable of fully offsetting the adverse impacts of the requested use.

- g.** The property shall be suitable to be successfully restored, based on existing hydrology, soils, and vegetation.
 - h.** The estimated cost of restoring and maintaining the property shall not exceed the value of the property minus site identification and transaction costs, unless the applicant supplies financial assurance acceptable to the Town for restoration and maintenance of the buffer.
 - i.** The property shall not contain any building, structure, object, site, or district that is listed in the National Register of Historic Places established pursuant to Public Law 89-665, 16 U.S.C. 470 as amended;
 - j.** The property shall not contain any hazardous substance or solid waste such that water quality could be adversely impacted, unless the hazardous substance or solid waste can be properly remediated before the interest is transferred.
 - k.** The property shall not contain structures or materials that present health or safety problems to the general public. If wells, septic, water, or sewer connections exist, they shall be filled, remediated, or closed at the owner's expense in accordance with state and local health and safety regulations before the interest is transferred.
 - l.** The property and adjacent properties shall not have prior, current, or known future land use that would inhibit the function of the restoration effort.
 - m.** The property shall not have any encumbrances or conditions that are inconsistent with the requirements of this article or purposes of the riparian buffer regulations.
 - n.** Fee simple title to the property or a conservation easement in the property shall be donated to the North Carolina Ecosystem Enhancement Program or a similar organization approved by the North Carolina Division of Water Resources to conduct the restoration or enhancement.
 - o.** On completion of the riparian buffer restoration or enhancement, the property or the easement shall be donated to a local land trust or to a local government or other state organization that is willing to accept the property or easement. The donation shall be accompanied by a non-wasting endowment sufficient to ensure perpetual long-term monitoring and maintenance, except that a local government donating a conservation easement may enter into a binding intergovernmental agreement with the North Carolina Division of Water Resources to manage and protect the property consistent with the terms of the conservation easement.
- 4.** At the expense of the applicant or donor, the following information shall be submitted to the Town with any proposal for donations or dedications of interest in real property:
- a.** Documentation that the property meets the requirements laid out in subsection 3 above;
 - b.** U.S. Geological Survey 1:24,000 (7.5 minute) scale topographic map, county tax map, U.S.D.A. Natural Resource Conservation Service County Soil Survey Map, and county road map showing the location of the property to be donated along with information on existing site conditions, vegetation types, presence of existing structures and easements;
 - c.** A current property survey performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office, as identified by the State Board of Examiners for Engineers and Land Surveyors in "Standards of Practice for Land Surveying in North Carolina";

- d. A current appraisal of the value of the property performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office, as identified by the Appraisal Board in the "Uniform Standards of Professional North Carolina Appraisal Practice; and
- e. A title certificate.

Section 4.5. Floodplain Management¹⁵⁷

4.5.1. Purpose

The purpose of this section is to set forth methods and provisions for minimizing the risks of flooding and flood damage on lots subject to flooding according to the Flood Insurance Rate Map (or FIRM, See Section 10.5, Terms and Uses Defined). The standards in this section are intended to:

- A. Restrict or prohibit development that is dangerous to health, safety, and property due to water or erosion hazards, or that result in damaging increases in erosion or in flood heights or velocities;
- B. Require development vulnerable to floods, including facilities serving such development, to be protected against flood damage at the time of initial construction;
- C. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
- D. Control filling, grading, dredging, and other development that may increase flood damage; and
- E. Prevent or regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards in other areas.

4.5.2. Required Certificates

A. Elevation Certificates

1. An Elevation Certificate (FEMA Form 81-31) is required before the actual start of any new construction. It shall be the duty of the applicant for a Floodplain Development Permit (see Section 8.3.3.C, Floodplain Development Permit) to submit to the Planning Director a certification of the elevation of the reference level, in relation to mean sea level. The Planning Director shall review the certificate data submitted. The permit holder shall correct deficiencies detected by such review before the application for a Floodplain Development Permit may be approved. Failure to submit the certification or make required corrections of it shall be cause to deny a Floodplain Development Permit.
2. An Elevation Certificate (FEMA Form 81-31) is required after the reference level is established. Within seven calendar days after establishment of the reference level elevation, it shall be the duty of the holder of a Floodplain Development Permit to submit to the Planning Director a certification of the elevation of the reference level, in relation to mean sea level. Any work done within the seven-day calendar period and before submittal of the certification shall be at the permit holder's risk. The Planning Director shall review the certificate data submitted. The permit holder shall correct deficiencies detected by such review immediately, and before proceeding further on

¹⁵⁷ This section carries forward provisions from the current flood damage prevention ordinance. Procedural requirements are relocated as follows:

- Administrative procedures for floodplain development are addressed in Section 8.3.3.C, Floodplain Development Permit.
- Administrative procedures for flood damage prevention variances are consolidated with zoning variances procedures and addressed in Section 8.3.5.B, Variance (Zoning and Flood Damage Prevention).

the work being permitted. Failure to submit the certification or make required corrections shall be cause to issue a stop work order for the development.

3. A final as-built Elevation Certificate (FEMA Form 81-31) is required after construction is completed and before issuance of a Certificate of Compliance/Occupancy. It shall be the duty of the holder of a Floodplain Development Permit to submit to the Planning Director a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The Planning Director shall review the certificate data submitted. The permit holder shall correct deficiencies detected by such review immediately, and before issuance of a Certificate of Compliance/Occupancy. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

B. Floodproofing Certificate

If nonresidential floodproofing is used to meet the regulatory flood protection elevation requirements, a Floodproofing Certificate (FEMA Form 81-65), with supporting data and an operational plan, is required before the actual start of any new construction. It shall be the duty of the applicant for a Floodplain Development Permit to submit to the Planning Director a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification shall be prepared by or under the direct supervision of a licensed Professional Engineer or architect and certified by same. The Planning Director shall review the certificate data and plan. The applicant shall correct deficiencies detected by such review before the application for a Floodplain Development Permit may be approved. Failure to submit the certification or make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

C. Foundation Certificate

If a manufactured home is placed within Zone AE or Zone X (Future) and the elevation of the chassis is more than 36 inches in height above grade, an engineered foundation certification is required in accordance with subsection A above.

D. Watercourse Alteration Certification

If a watercourse is proposed to be altered or relocated, the applicant for a Floodplain Development Permit shall submit to the Planning Director a description of the extent of watercourse alteration or relocation, a licensed Professional Engineer's certified report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream, and a map showing the location of the proposed watercourse alteration or relocation.

E. Certification Exemptions

The following structures, if located within Zone AE or Zone X (Future), are exempt from the elevation/floodproofing certification requirements specified in subsections A and B above:

1. Recreational vehicles meeting requirements of 4.5.5.F, Recreational Vehicles;
2. Temporary nonresidential structures meeting requirements of 4.5.5.G, Temporary Nonresidential Structures; and
3. Accessory structures meeting requirements of 4.5.5.H, Accessory structures.

4.5.3. Determinations for Existing Buildings and Structures

For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Planning Director, in coordination with the Building Official, shall:

- A. Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work (in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made);
- B. Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;
- C. Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and
- D. Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the North Carolina Building Code and this Ordinance is required.

4.5.4. General Standards for All Special Flood Hazard Areas¹⁵⁸

In all areas of special flood hazard the following standards are required:

- A. All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse and lateral movement of the structure.
- B. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- C. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.
- D. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during flooding conditions.
- E. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- F. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.
- G. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- H. Any alteration, repair, reconstruction or improvements to a structure, which complies with the provisions of this article, shall meet the requirements of "new construction" as contained in this article.
- I. Nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ordinance and located totally or

¹⁵⁸ This section is modified to include standards for subdivisions.

partially within the floodway, non-encroachment area, or stream setback, provided there is no additional encroachment below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.

- J.** New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area or Future Conditions Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the regulatory flood protection elevation and certified according to Section 4.5.2, Required Certificates.
- K.** All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.
- L.** All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- M.** All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.
- N.** All subdivision proposals and other development proposals shall have received all necessary permits from those governmental agencies for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

4.5.5. Standards for Special Flood Hazard Areas with Base Flood Elevation Data

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, and in Future Conditions Flood Hazard Areas where Future Conditions Flood Elevations data has been provided (see Section 10.5, Terms and Uses Defined) the following standards shall apply in addition to the standards in Section 4.5.4, General Standards for All Special Flood Hazard Areas:

A. Residential Construction

New construction and substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation.

B. Nonresidential Construction

New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation. Structures located in AE and X (future) zones may be floodproofed to the regulatory flood protection elevation in lieu of elevation, provided that a licensed Professional Engineer or architect certifies to the Planning Director that all areas of the structure, together with attendant utility and sanitary facilities, below the regulatory flood protection elevation are watertight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A licensed Professional Engineer or architect shall certify that the standards of this subsection are satisfied.

C. Manufactured Homes

1. New or replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the regulatory flood protection elevation.
2. Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, in accordance with an engineer's certification or the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to N.C.G.S. 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above 36 inches in height, an engineering certification is required.
3. All enclosures below the lowest floor shall meet the requirements of subsection 4 below.
4. An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the Planning Director and the local Emergency Management coordinator.

D. Elevated Buildings

Fully enclosed areas of new construction and substantially improve structures that are below the lowest floor:

1. Shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas;
2. Shall be constructed entirely of flood resistant materials below the regulatory flood protection elevation;
3. Shall include, in Zones AE and X (Future), flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a licensed Professional Engineer or architect or meet or exceed the following minimum design criteria:
 - a. A minimum of two flood openings on different sides of each enclosed area subject to flooding;
 - b. The total net area of all flood openings must be at least one square inch for each square foot of enclosed area subject to flooding;
 - c. If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;
 - d. The bottom of all required flood openings shall be no higher than one foot above the adjacent grade;

- e. Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and
- f. Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.

E. Additions/Improvements

1. Where additions and/or improvements to pre-FIRM structures, in combination with any interior modifications to the existing structure, do not constitute a substantial improvement, the addition and/or improvements shall be designed to minimize flood damages and shall not be any more nonconforming than the existing structure.
2. Where additions and/or improvements to pre-FIRM structures, in combination with any interior modifications to the existing structure, constitute a substantial improvement, both the existing structure and the addition and/or improvements shall comply with the standards for new construction.
3. Where additions to post-FIRM structures constitute a substantial improvement and involve no modifications to the existing structure other than a standard door in the common wall, only the addition is required to comply with the standards for new construction.
4. Where additions and/or improvements to post-FIRM structures, in combination with any interior modifications to the existing structure, do not constitute a substantial improvement, only the addition and/or improvements is required to comply with the standards for new construction.
5. Where additions and/or improvements to post-FIRM structures, in combination with any interior modifications to the existing structure, constitutes a substantial improvement, both the existing structure and the addition and/or improvements shall comply with the standards for new construction.
6. Where any combination of repair, reconstruction, rehabilitation, addition, or improvement of a building or structure takes place during a ten-year period and their cumulative cost equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started, the improvement or repair must comply with the standards for new construction. For each building or structure, the ten-year period begins on the date of the first improvement or repair of that building or structure subsequent to the effective date of this Ordinance. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The requirement does not, however, include either:
 - a. Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the Building Official and that are the minimum necessary to assume safe living conditions; or
 - b. Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.
7. Where an independent perimeter load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and only the addition is required to comply with the standards for new construction.

F. Recreational Vehicles

Unless a recreational vehicle is on-site for fewer than 180 consecutive days and is fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions), it shall be required to meet all the requirements for new construction.

G. Temporary Nonresidential Structures

An application for a Floodplain Development Permit (see Section 8.3.3.C, Floodplain Development Permit) for a temporary nonresidential structure shall include a plan for the removal of such structure in the event of a hurricane, flash flood, or other type of flood warning notification. The plan shall include the following information:

1. A specified time period, not exceeding three months, for which the temporary structure will be permitted, which may be renewed for up to one year;
2. The name, address, and phone number of the individual responsible for the removal of the temporary structure;
3. The time frame before the flood event for removal of the temporary structure (e.g., a minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);
4. A copy of the contract or other suitable instrument with the entity responsible for physical removal of the temporary structure; and
5. Documented designation of a location outside the Special Flood Hazard Area or Future Conditions Flood Hazard Areas to which the temporary structure will be moved.

H. Accessory Structures

1. The following standards shall apply to accessory structures (sheds, detached garages, etc.) placed within a Special Flood Hazard Area or Future Conditions Flood Hazard Area:
 - a. The accessory structure shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas).
 - b. The accessory structures shall not be temperature-controlled.
 - c. The accessory structures shall be designed to have low flood damage potential.
 - d. The accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
 - e. The accessory structures shall be firmly anchored in accordance with Section 4.5.4.A, General Standards for All Special Flood Hazard Areas).
 - f. All service facilities such as electrical shall be installed in accordance with Section 4.5.4, General Standards for All Special Flood Hazard Areas.
 - g. Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below the regulatory flood protection elevation in accordance with Section 4.5.5.D, Elevated Buildings.
2. An accessory structure that has a footprint less than 150 square feet, or represents a minimal investment of \$3,000 or less, and satisfies the standards in subsection 1 above shall not require an elevation or floodproofing certificate. Elevation or floodproofing

certifications are required for all other accessory structures in accordance with 4.5.2, Required Certificates.

I. Tanks

The following standards shall apply when gas and liquid storage tanks are placed within a Special Flood Hazard Area:

1. Underground Tanks

Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty.

2. Elevated Above-Ground Tanks

Above-ground tanks in flood hazard areas shall be elevated to or above the design flood elevation on a supporting structure that is designed to prevent flotation, collapse, or lateral movement during conditions of the design flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area.

3. Non-Elevated Above-Ground Tanks

Above-ground tanks that do not meet the elevation requirements of Section 4.5.5.B, Nonresidential Construction, shall be permitted in flood hazard areas provided the tanks are anchored or otherwise designed and constructed to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty and the effects of flood-borne debris.

4. Tank Inlets and Vents

Tank inlets, fill openings, outlets, and vents shall be:

- a. At or above the design flood elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the design flood; and
- b. Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

J. Other Development

Prior to the issuance of a Floodplain Development Permit for a temporary structure, the applicant shall submit to the Planning Director for review and written approval a plan for the removal of such structure(s) in the event of a hurricane, flash flood, or other type of flood warning notification. The plan shall include information demonstrating compliance with the following standards:

1. Fences in Regulated Floodways and NEAs

Fences that have the potential to block the passage of floodwaters, such as stockade fences and wire mesh fences, shall meet the limitations of Section 4.5.7, Standards for Floodways and Non-Encroachment Areas.

2. Retaining Walls, Sidewalks, and Driveways in Regulated Floodways and NEAs

Retaining walls, sidewalks, and driveways that involve the placement of fill in regulated floodways shall meet the limitations of Section 4.5.7, Standards for Floodways and Non-Encroachment Areas.

3. Roads and Watercourse Crossings in Regulated Floodways and NEAs

Roads and watercourse crossings—including roads, bridges, culverts, low-water crossings, and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side—that encroach into regulated floodways shall meet the limitations of Section 4.5.7, Standards for Floodways and Non-Encroachment Areas.

4.5.6. Standards for Floodplains Without Established Base Flood Elevations

In Special Flood Hazard Areas designated as Approximate Zone A, where no Base Flood Elevation (BFE) data has been provided by FEMA, the following standards shall apply in addition to the standards in 4.5.5, Standards for Special Flood Hazard Areas with Base Flood Elevation Data:

- A. No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of 20 feet each side from top of bank, or five times the width of the stream, whichever is greater, unless a licensed Professional Engineer provides certification, with supporting technical data, that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B. The Base Flood Elevation (BFE) used in determining the regulatory flood protection elevation shall be determined based on one of the following criteria set in priority order:
 - 1. If Base Flood Elevation (BFE) data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this ordinance and shall be elevated or floodproofed in accordance with standards in 4.5.5, *Standards for Special Flood Hazard Areas with Base Flood Elevation Data*.
 - 2. All subdivision, manufactured home park, and other development proposals shall provide Base Flood Elevation (BFE) data if development is greater than five acres or has more than 50 lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference to be utilized in implementing this Ordinance.
 - 3. When Base Flood Elevation (BFE) data is not available from a federal, State, or other source, the reference level shall be elevated to or above the regulatory flood protection elevation.

4.5.7. Standards for Floodways and Non-Encroachment Areas

Areas designated as floodways or non-encroachment areas within the Special Flood Hazard Areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following standards shall apply to all development within such areas in addition to the standards in 4.5.5, Standards for Special Flood Hazard Areas with Base Flood Elevation Data:

- A.** No encroachments—including fill, new construction, substantial improvements, and other development—shall be permitted unless it has been demonstrated that:
 - 1.** The proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Planning Director before issuance of a Floodplain Development Permit (see Section 8.3.3.C, Floodplain Development Permit), or
 - 2.** A Conditional Letter of Map Revision has been approved by FEMA and a Letter of Map Revision is obtained upon completion of the proposed encroachment.
- B.** If subsection A above is satisfied, all development shall comply with all applicable flood hazard reduction standards set forth in Sections 4.5.3 through 4.5.6.
- C.** Manufactured homes may be permitted provided the following provisions are met:
 - 1.** The anchoring and the elevation standards of Section 4.5.5.C, *Manufactured Homes*; and
 - 2.** The no encroachment standard of subsection 1 above.

Section 4.6. Perimeter Buffers¹⁵⁹

4.6.1. Purpose

- A. Perimeter buffers are intended to provide spacing and landscaping between proposed development and adjoining property developed or zoned for significantly different uses to help mitigate potential negative impacts on or from development activities on adjoining properties.
 - B. Streetyard buffers are intended to provide spacing and landscaping between proposed development and adjoining streets to mitigate potential adverse impacts from traffic on the adjoining street, provide a transition between public and private realms, and create an attractive edge along the street for motorists and pedestrians.
-

4.6.2. Applicability

A. New Development

- 1. All new development shall provide a perimeter buffer to separate it from an existing use on adjoining land, or from vacant adjoining property located in a less intense zoning district, in accordance with Section 4.6.3, *Required Buffer Type*, and Section 4.6.4, *Buffer Type Standards*.
- 2. This requirement shall apply to new development within the Downtown District only where the development:
 - a. Adjoins property outside the district that contains an existing residential development; or
 - b. Adjoins property that is located within a Residential Base Zoning District.
- 3. All new development outside the Downtown District shall provide a streetyard buffer to separate it from an adjoining street, in accordance with Section 4.6.3, *Required Buffer Type*, and Section 4.6.4, *Buffer Type Standards*.

¹⁵⁹ This section carries forward and modified current buffer strip standards from Section 7.4, Screening Requirements, in the current ordinance. Standards are modified to make them more flexible and easier to understand and apply, as follows:

- A purpose statement is added in order to define the intent of the section and distinguish it from related screening and landscaping standards.
- The matrix of required buffer types set forth in Section 7.5, Table of Screening Requirements, in the current ordinance is modified to include various classes of land use, which avoids unnecessary references to the use table in Article 3: Use Regulations.
- Buffer standards set forth in Section 7.4.13, Buffer Specifications, are expanded to increase the number of "buffer types" and incorporating buffer width as an additional variable to screening in defining at least two options for each buffer type. Buffer types are also illustrated with plan graphics that include objective and measurable screening standards rather than the current reliance on written descriptions (as currently provided in Section 7.4.12, Types of Screening Required, in the current ordinance).
- Standards are added which address where required perimeter buffers must be located, and where exceptions may be made due to access or utility easements.
- Standards are also added that help clarify that required perimeter buffers can be credited toward meeting open space, tree canopy, and landscaping standards.

B. Existing Development

1. Change in Use

Any change of the use of an existing development shall provide any additional buffer width to the maximum extent practicable and screening necessary to comply with the perimeter buffer required under Section 4.6.3, Required Buffer Type, for the use type or category of the new use.

2. Upgrading of Buffer Nonconformities

Where existing development is nonconforming in terms of compliance with this section's standards for perimeter and streetyard buffers, such development is subject to the limitations and upgrading requirements in Section 6.7, Nonconforming Site Features.

C. Credit Toward Other Standards¹⁶⁰

Perimeter and streetyard buffer areas and associated vegetation within such areas may be credited toward compliance with the following, to the extent they comply with applicable standards:

1. Tree preservation (see Section 4.2, Tree Preservation);
2. Open space areas (see Section 4.3.1.D, Required Open Space Area);
3. Public recreation areas (see Section 4.3.2.C, Required Public Recreation Area);
4. Screening requirements (see Section 5.7, Screening); and
5. Landscaping requirements (see Section 5.6, Landscaping).

4.6.3. Required Buffer Type

Table 4.6.3, Required Buffer Type, specifies the type of perimeter or streetyard buffer that a new development shall provide between it and an adjoining, developed property or street. The type of buffer to be provided is indicated by a letter corresponding to one of the buffer types depicted in Table 4.6.4, Buffer Type Standards

- A. For perimeter buffers, the required buffer type shall be based on proposed use type on the development site and the existing use type on the adjoining property. If the adjoining property is vacant, the required buffer type shall be based on the zoning classification of the adjacent land.
- B. For streetyard buffers, the required buffer type is based on the classification of the adjoining street.

¹⁶⁰ This provision is added to allow for compliance with related standards, as appropriate.

Table 4.6.3: Required Buffer Type

A, B, C, D, E = Type of Perimeter Buffer (see Section 4.6.4, Buffer Type Standards)
 F, G, H, I, J, K = Type of Streetyard Buffer (see Section 4.6.4, Buffer Type Standards)

n/a = Not Applicable (no buffer required)

Existing Use Type or Category on Adjoining Land [2] or Classification of Adjoining Street [3]	Zoning of Adjoining Vacant Land [2]	Proposed Use Type or Category [1]					
		Single-Family Detached, Duplex, or Manufacture d Home Dwelling	Single-Family Attached Dwelling	Multifamily Dwelling	Institutional Use	Commercial or Mixed-Use Development	Industrial Use
Perimeter Buffers							
Single-family detached, Single-family attached, duplex, or manufactured home dwelling	AF, RA-2, RA-1, R-15, R-12M, R-10, R-5	D [4]	D	C	C	B	A
Multifamily or manufactured home park	MR	C	C	D	C	B	A
Institutional use	OI	C	C	C	D	C	B
Commercial use, or mixed-use development	NMUC, CMUC	B	B	B	C	C	B
Industrial use	LI, HI	A	A	A	B	B	C
Major utility facility	n/a	E	E	E	E	E	E
Streetyard Buffers							
Principal arterials and major arterials	n/a	G	G	G	G	G	G
Minor arterials and collector streets		H	H	H	H	H	H
Residential streets, loop streets and cul-de-sacs	n/a	K	K	J	J	J	J
Marginal access and service drives (nonresidential)	n/a	K	J	I	I	I	I

NOTES:

- [1] Where a development includes multiple buildings, buffer requirements shall apply to the zoning lot rather than to individual buildings or outparcels in the development.
- [2] Where the adjoining land is vacant and located within another zoning jurisdiction, the perimeter buffer type required shall be based on the Town zoning classification that, in the Planning Director's opinion, most closely matches the zoning classification given the land by the adjoining jurisdiction.
- [3] For street classifications, see Section 10.5, Terms and Uses Defined, Terms and Uses Defined.
- [4] Applicable only to single-family detached and duplex dwellings along the perimeter of a residential subdivision.

4.6.4. Buffer Type Standards

Table 4.6.4, Buffer Type Standards, describes five types of perimeter buffer and six different types of streetyard buffer in terms of their function, opacity, width, and screening requirements. Buffers shall comply with standards set forth in Table 4.6.4: Buffer Type Standards (including table notes).

Table 4.6.4: Buffer Type Standards MINIMUM WIDTH AND SCREENING REQUIREMENTS <i>Also see general requirements for all buffer types at bottom of table.</i>		
Buffer Type A (Perimeter)		
This perimeter buffer provides a continuous opaque screen to a height of at least six feet. It serves as a visual and noise barrier between developments on adjoining properties.		
Option 1	<p style="text-align: center;">Adjoining Property</p>	<ul style="list-style-type: none"> • Shade trees: 6 per 100 linear feet, with at least 5 feet between mature canopies • Understory trees: 4 per 100 linear feet • Evergreen shrubs: 20 per 100 linear feet and at least 6 feet high at maturity • At least 50% of all trees must be evergreen
Option 2	<p style="text-align: center;">Adjoining Property</p>	<ul style="list-style-type: none"> • Shade trees: 5 per 100 linear feet, with at least 5 feet between mature canopies • Understory trees: 3 per 100 linear feet • Evergreen shrubs: 15 per 100 linear feet and at least 3 feet high at maturity • A solid fence or wall at least 6 feet high [3] • At least 50% of all trees must be evergreen

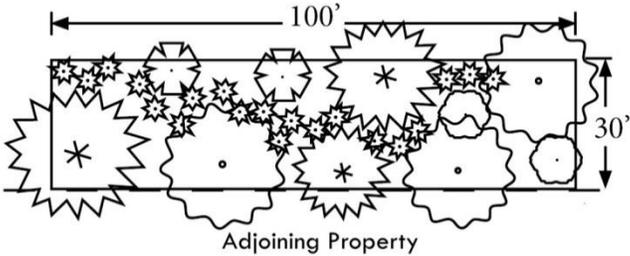
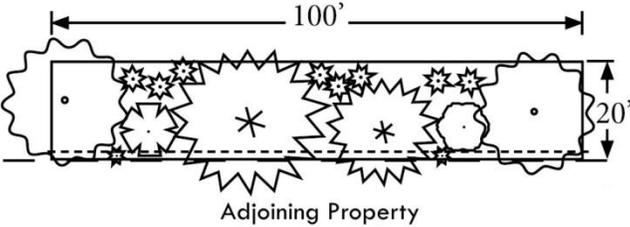
Table 4.6.4: Buffer Type Standards

MINIMUM WIDTH AND SCREENING REQUIREMENTS

Also see general requirements for all buffer types at bottom of table.

Buffer Type B (Perimeter)

This perimeter buffer provides a continuous opaque screen to a height of at least six feet. It serves as a visual and noise barrier between developments on adjoining properties, but less separation between developments than the Buffer Type A.

<p>Option 1</p>		<ul style="list-style-type: none"> • Shade trees: 6 per 100 linear feet, with at least 5 feet between mature canopies • Understory trees: 4 per 100 linear feet • Evergreen shrubs: 20 per 100 linear feet and at least 6 feet high at maturity • At least 50% of all trees must be evergreen
<p>Option 2</p>		<ul style="list-style-type: none"> • Shade trees: 4 per 100 linear feet, with at least 5 feet between mature canopies • Understory trees: 2 per 100 linear feet • Evergreen shrubs: 10 per 100 linear feet and at least 3 feet high at maturity • A solid fence or wall at least 6 feet high [3] • At least 50% of all trees must be evergreen

Buffer Type C (Perimeter)

This perimeter buffer provides semi-opaque screening atop a continuous opaque screen to a height of at least three feet. It allows views between developments on adjoining properties.

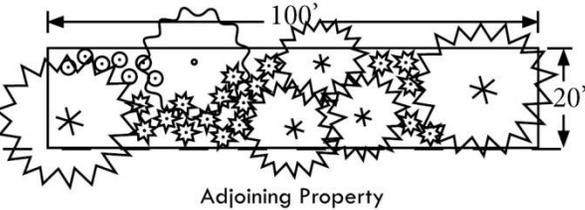
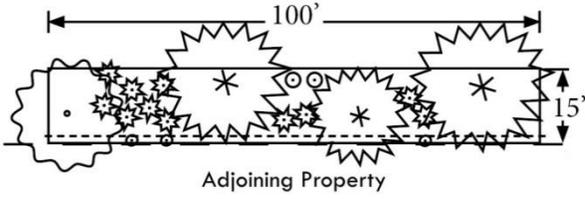
<p>Option 1</p>		<ul style="list-style-type: none"> • Shade trees: 6 per 100 linear feet, with at least 10 feet between mature canopies • Shrubs: 25 per 100 linear feet, at least 75% evergreen, and at least 3 feet high at maturity
<p>Option 2</p>		<ul style="list-style-type: none"> • Shade trees: 4 per 100 linear feet, with at least 10 feet between mature canopies • Shrubs: 15 per 100 linear feet, at least 75% evergreen, and at least 3 feet high at maturity • A solid fence or wall at least 6 feet high [3]

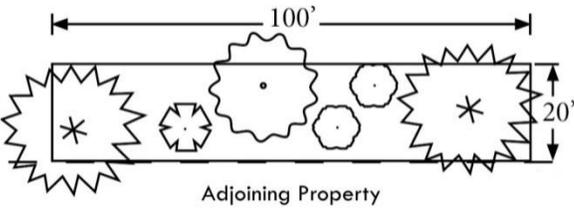
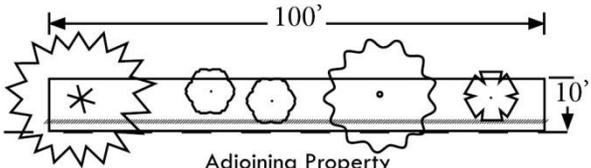
Table 4.6.4: Buffer Type Standards

MINIMUM WIDTH AND SCREENING REQUIREMENTS

Also see general requirements for all buffer types at bottom of table.

Buffer Type D (Perimeter)

This perimeter buffer provides a relatively open tree buffer between developments on adjoining properties. It is not intended to screen views but to enhance visual appeal of the development.

Option 1	 <p>Adjoining Property</p>	<ul style="list-style-type: none"> • Shade trees: 3 per 100 linear feet, with at least 20 feet between mature canopies • Understory trees: 3 per 100 linear feet
Option 2	 <p>Adjoining Property</p>	<ul style="list-style-type: none"> • Shade trees: 2 per 100 linear feet, with at least 20 feet between mature canopies • Understory trees: 3 per 100 linear feet • A solid fence or wall at least 3 feet high or solid evergreen hedge at least 3 feet and 2 feet wide [3]

Buffer Type E (Perimeter)

This perimeter buffer provides a continuous opaque screen to a height of at least six feet. It serves as a visual and noise barrier between a development and an adjoining major utility facility.

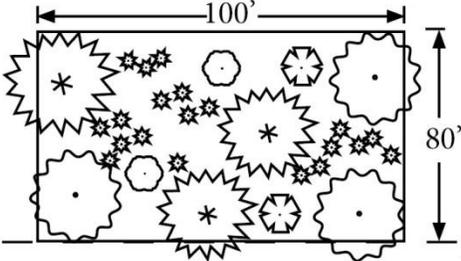
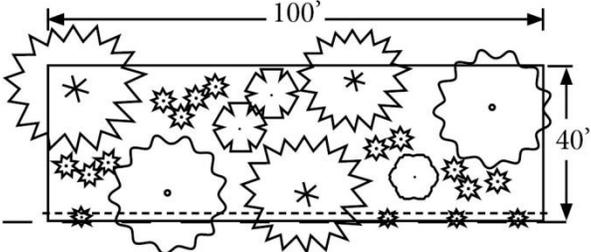
Option 1	 <p>Adjoining Property</p>	<ul style="list-style-type: none"> • Shade trees: 6 per 100 linear feet, with at least 5 feet between mature canopies • Understory trees: 4 per 100 linear feet • Evergreen shrubs: 20 per 100 linear feet and at least 6 feet high at maturity • At least 50% of all trees must be evergreen
Option 2	 <p>Adjoining Property</p>	<ul style="list-style-type: none"> • Shade trees: 5 per 100 linear feet, with at least 5 feet between mature canopies • Understory trees: 3 per 100 linear feet • Evergreen shrubs: 15 per 100 linear feet and at least 3 feet high at maturity • A solid fence or wall at least 6 feet high [3] • At least 50% of all trees must be evergreen

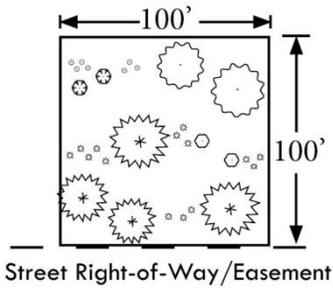
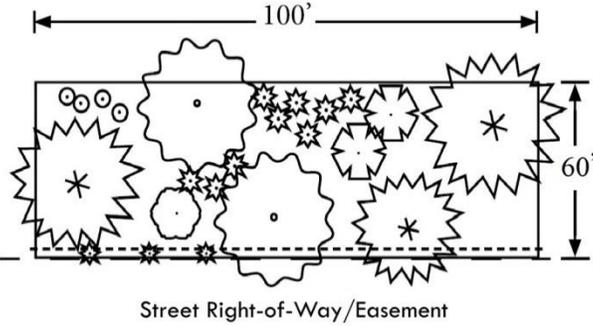
Table 4.6.4: Buffer Type Standards

MINIMUM WIDTH AND SCREENING REQUIREMENTS

Also see general requirements for all buffer types at bottom of table.

Buffer Type F (Streetyard)

This streetyard buffer provides a continuous opaque screen to a height of at least six feet. It serves as a visual and noise barrier between the developments and an adjoining controlled access highway.

Option 1		<ul style="list-style-type: none"> • Shade trees: 6 per 100 linear feet, with at least 5 feet between mature canopies [5] • Understory trees: 4 per 100 linear feet [5] • Shrubs: 20 per 100 linear feet, at least 75% evergreen, and at least 6 feet high at maturity • At least 50% of all trees must be evergreen
Option 2		<ul style="list-style-type: none"> • Shade trees: 5 per 100 linear feet, with at least 5 feet between mature canopies [5] • Understory trees: 3 per 100 linear feet [5] • Evergreen shrubs: 15 per 100 linear feet, at least 75% evergreen, and at least 3 feet high at maturity • A solid fence or wall at least 6 feet high [3] • At least 50% of all trees must be evergreen

Buffer Type G (Streetyard)

This streetyard buffer provides intermittent visual obstruction and creates the impression of spatial separation without eliminating visual contact between the street and the development.

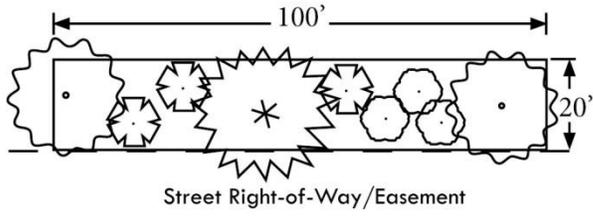
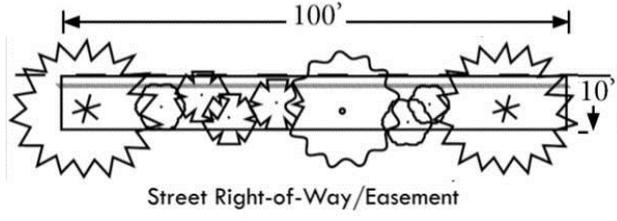
Option 1		<ul style="list-style-type: none"> • Shade trees: 3 per 100 linear feet, with at least 25 feet between mature canopies [5] • Understory trees: 6 per 100 linear feet [5]
Option 2		<ul style="list-style-type: none"> • Shade trees: 3 per 100 linear feet, with at least 25 feet between mature canopies [5] • Understory trees: 6 per 100 linear feet [5] • A solid masonry wall at least 3 feet high with 15 evergreen shrubs per 100 linear feet between the wall and the street [3]

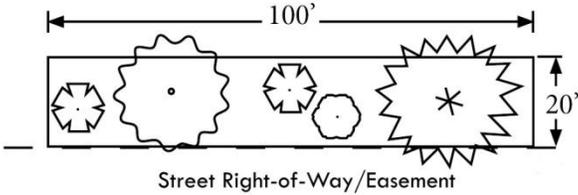
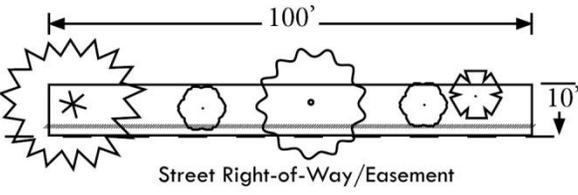
Table 4.6.4: Buffer Type Standards

MINIMUM WIDTH AND SCREENING REQUIREMENTS

Also see general requirements for all buffer types at bottom of table.

Buffer Type H (Streetyard)

This streetyard buffer provides spacing and landscaping that strongly defines the boundary between the street corridor and the development.

Option 1		<ul style="list-style-type: none"> • Shade trees: 2 per 100 linear feet [5] • Understory trees: 3 per 100 linear feet [5]
Option 2		<ul style="list-style-type: none"> • Shade trees: 2 per 100 linear feet [5] • Understory trees: 3 per 100 linear feet [5] • A solid fence or wall at least 3 feet high or solid evergreen hedge at least 3 feet and 2 feet wide [3]

Buffer Type I (Streetyard)

This streetyard buffer provides spacing and landscaping that moderately defines the boundary between the street corridor and the development.

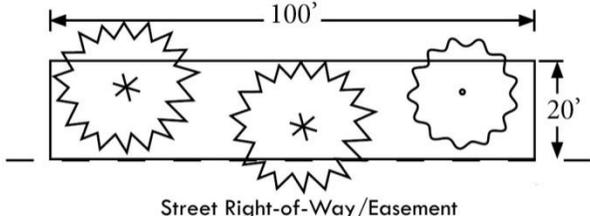
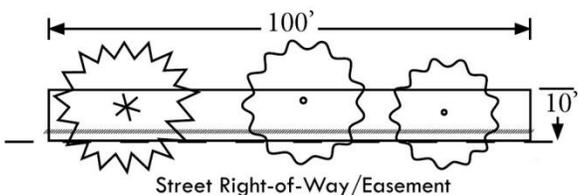
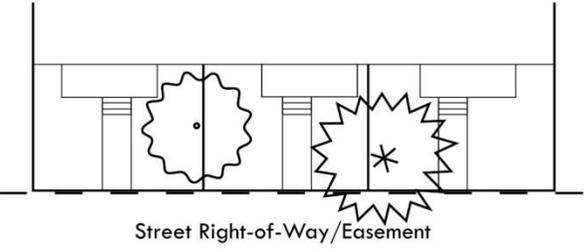
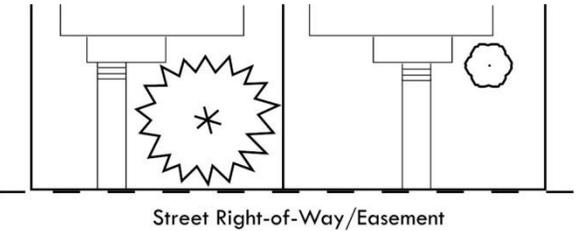
Option 1		<ul style="list-style-type: none"> • Shade trees: 3 per 100 linear feet [5]
Option 2		<ul style="list-style-type: none"> • Shade trees: 3 per 100 linear feet [5] • A solid fence or wall at least 3 feet high or solid evergreen hedge at least 3 feet and 2 feet wide [3]

Table 4.6.4: Buffer Type Standards MINIMUM WIDTH AND SCREENING REQUIREMENTS <i>Also see general requirements for all buffer types at bottom of table.</i>		
Buffer Type J (Streetyard)		
This streetyard buffer provides basic landscaping along the street corridor.		
Single Option		<ul style="list-style-type: none"> • 2 trees (shade or understory) per every 3 dwelling units in buildings fronting the street [5]
Buffer Type K (Streetyard)		
This streetyard buffer provides minimal landscaping along the street corridor.		
Single Option		<ul style="list-style-type: none"> • 1 tree (shade or understory) per dwelling fronting the street [5]
<p>% = percent</p> <p>NOTES:</p> <p>[1] Required shade trees shall generally be distributed evenly along the length of the buffer (e.g., 4 shade trees per 100 linear feet should result in shade trees spaced approximately every 25 feet of buffer length) and spaced to maximize their future health and effectiveness. Other required vegetation and shall be distributed within the buffer as appropriate to the function of the buffer.</p> <p>[2] Where an adjacent existing development is designed for solar access, the Planning Director may allow understory trees to be substituted for any shade trees where necessary to ensure such solar access.</p> <p>[3] Fences or walls within a buffer shall comply with the standards of Section 5.8, <i>Fences and Walls</i>.</p> <p>[4] Berms may be used in conjunction with shrubs or fences or walls atop them to achieve required screening. Berms within a buffer shall comply with the standards of Section 5.6.4.E, <i>Berms</i>.</p> <p>[5] Trees in streetyard buffers shall be of species and varieties appropriate to their location next to roadways and sidewalks. (See appropriate street tree species and varieties listed in the Administrative Manual.)</p> <p>[6] Deviations from the buffer width and screening standards may be authorized an alternative landscaping plan approved in accordance with Section 5.6.4.I, <i>Alternative Landscaping Plan</i>.</p>		

4.6.5. Location of Buffers

- A. Required buffers shall be located along the outer perimeter of the lot containing the proposed development, just inside its boundary with the adjoining property or street right-of-way/easement. Where an access or utility easement runs along that boundary and the easement precludes or restricts provision of required screening, the required buffer shall be located along the interior boundary of the easement.
- B. Where a perimeter buffer meeting the standards in this section has already been provided by the adjoining existing development, the proposed development is required to provide

only 50 percent of the minimum buffer width and screening required in Section 4.6.4 for the requisite buffer type, and the existing development may reduce the width and screening of the buffer on the adjoining property to 50 percent of the minimum buffer width and screening required in Section 4.6.4 for the requisite buffer type. The Planning Director may approve a written agreement between the owners of the adjoining properties establishing an alternative arrangement to share responsibility for providing a buffer in full accordance with the standards of this section.

4.6.6. Development within Required Buffers

- A.** The required buffer shall not contain any development, impervious surfaces, or site features (except fences or walls) that do not function to meet the standards of this section, unless otherwise permitted or required in this Ordinance.
- B.** Walkways, trails, and other elements associated with passive recreation, as well as overhead and underground utility lines and low-impact stormwater management facilities, may be located within a required buffer if;
 - 1.** All required landscaping is provided;
 - 2.** The element, line, or facility crosses the buffer as close to a right angle as practicable; and
 - 3.** The Planning Director and Town Engineer determine that installation or maintenance of such element, line, or facility will minimize impacts on to required vegetation to the maximum extent practicable.

4.6.7. Alternative Configuration

The Planning Director may approve an alternative buffer location, width, or planting configuration through submittal of an alternative landscape plan (Section 5.6.4.I, Alternative Landscaping Plan).

4.6.8. Credit Toward Other Required Landscaping

Required buffers, and the trees and other vegetation within such buffers, may be credited toward compliance with tree protection, common open space and public recreation area, landscaping, and screening requirements to the extent they comply with applicable standards in *Section 4.2, Tree Preservation, Section 4.3, Open Space and Recreation Area, Section 5.6, Landscaping, and Section 5.7, Screening.*

Section 4.7. Stormwater Management¹⁶¹

4.7.1. General Provisions

A. Findings

1. It is hereby determined that:
 - a. Development and redevelopment alter the hydrologic response of local watersheds and increases stormwater runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint and point source pollution, and sediment transport and deposition, as well as reducing groundwater recharge;
 - b. These changes in stormwater runoff contribute to increased quantities of water-borne pollutants and alterations in hydrology that are harmful to public health and safety as well as to the natural environment; and
 - c. These effects can be managed and minimized by applying proper design and well-planned controls to manage stormwater runoff from development and redevelopment sites.
2. It is further determined that the Federal Water Pollution Control Act of 1972 ("Clean Water Act") and federal Phase II Stormwater Rules promulgated under it, as well as rules of the North Carolina Environmental Management Commission promulgated in response to federal Phase II requirements, compel certain urbanized areas, including this jurisdiction, to adopt minimum stormwater controls such as those included in this Ordinance.
3. Additionally, the North Carolina Environmental Management Commission has identified B. Everett Jordan reservoir, a water supply reservoir, as nutrient sensitive waters; has identified all or a portion of the reservoir as impaired waters under the federal Clean Water Act due to exceedances of the chlorophyll a standard; and has promulgated rules that have been amended and affirmed by the North Carolina General Assembly (the "Jordan Rules") to reduce the average annual loads of nitrogen and phosphorus delivered to Jordan Reservoir from all point and nonpoint sources of these nutrients located within its watershed, including stormwater from new development in this jurisdiction;
4. Therefore, the Pittsboro Board of Commissioners establishes this set of water quality and quantity regulations to meet the requirements of state and federal law regarding control of stormwater runoff and discharge for development and redevelopment.

B. Purpose

1. The purpose of this article is to protect, maintain and enhance the public health, safety, environment, and general welfare by establishing minimum requirements and procedures to control the adverse effects of: increased post-development stormwater runoff, nitrogen; phosphorus, and total suspended solids in stormwater runoff; nonpoint and point source pollution associated with new development and redevelopment; and illicit discharges into municipal stormwater systems. It has been determined that

¹⁶¹ This section carries forward provisions from the current stormwater management ordinance. As noted in Section 8.3.2.B, Stormwater Management Permit and Section 8.3.5.C, Variance (Stormwater), administrative procedures are integrated into Article 8: Development Review Procedures, for consistency with the Ordinance structure, and referenced in this section for consistency with the state's model ordinance promulgated by the North Carolina Department of Environment and Natural Resources.

proper management of construction-related and post-development 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 resources.

2. This article seeks to meet its general purpose through the following specific objectives and means:
 - a. Establishing decision-making processes for development and redevelopment that protects the integrity of watersheds and preserves the health of water resources;
 - b. Requiring that new development and redevelopment maintain the pre-development hydrologic response in their post-development state for the applicable design storm to reduce flooding, streambank erosion, nonpoint and point source pollution, and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats;
 - c. Establishing minimum post-development stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;
 - d. Establishing design and review criteria for the construction, function, and use of structural stormwater best management practices (BMPs) that may be used to meet the minimum post-development stormwater management standards;
 - e. Encouraging the use of better management and site design practices, such as the use of vegetated conveyances for stormwater and the preservation of greenspace, riparian buffers, and other conservation areas to the maximum extent practicable;
 - f. Establishing provisions for the long-term responsibility for and maintenance of structural and nonstructural stormwater BMPs to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety;
 - g. Establishing administrative procedures for the submission, review, approval and disapproval of stormwater management plans, for the inspection of approved projects, and to assure appropriate long-term maintenance; and
 - h. Controlling illicit discharges into the municipal separate stormwater system.

C. Authority

The Pittsboro Board of Commissioners is authorized to adopt this article pursuant to North Carolina law, including but not limited to Article 14, Section 5 of the Constitution of North Carolina; N.C.G.S. Chapter 143-214.7, and rules promulgated by the Environmental Management Commission thereunder; Chapter 143-215.6A; Session Laws 2009-216, 2009-484; Chapter 153A-454; Chapter 160A, §§ 174, 185, 459.

D. Applicability and Jurisdiction

1. General

Beginning with and subsequent to its effective date, this article shall be applicable to all development and redevelopment—including, but not limited to, applications for Site Plan Approval, Subdivision Approval, Construction Plan Approval, and grading approval—unless exempt pursuant to this article.

2. Exemptions

- a. Development of single-family detached, duplex, and manufactured home dwellings that cumulatively disturb less than one acre and are not part of a larger common plan of development.
- b. Development of commercial, industrial, institutional, single-family attached and multifamily residential uses that cumulatively disturbs less than one-half acre and are not part of a larger common plan of development or sale.
- c. Development and redevelopment that disturbs less than the above thresholds are not exempt if such activities are part of a larger common plan of development or sale and the larger common plan exceeds the relevant threshold, even though multiple, separate, or distinct activities take place at different times on different schedules.
- d. Development or redevelopment that is exempt from permit requirements of Section 404 of the federal Clean Water Act as specified in 40 CFR 232 (primarily, ongoing farming and forestry activities)..
- e. Per the requirements of 15A N.C.A.C. 02B .0265 and the Town's Phase II Permit NCS000465, new development undertaken by a local government solely as a public road project shall be deemed compliant with the purposes of this article if it meets the riparian buffer protection requirements set forth in *Section 4.4, Riparian Buffers*. For these public road projects, the following shall be done to the maximum extent practicable:
 - (1) Minimize built-upon area;
 - (2) Divert runoff away from surface waters; and
 - (3) Implement BMPs.

3. No Development or Redevelopment until Compliance and Permit

No development or redevelopment shall occur except in compliance with the provisions of this article or unless exempted. No development or redevelopment for which a permit is required pursuant to this article shall occur except in compliance with the provisions, conditions, and limitations of the permit.

E. Map

1. The provisions of this article shall apply within the areas designated on the map titled "Stormwater Map of Pittsboro, North Carolina" ("the Stormwater Map"), which is adopted simultaneously herewith. The Stormwater Map and all explanatory matter contained thereon accompanies and is hereby made a part of this Ordinance.
2. The Stormwater Map shall be kept on file by the Town Engineer and shall be dated to take into account changes in the land area covered by this Ordinance and the geographic location of all engineered stormwater controls permitted under this article. In the event of a dispute, the applicability of this article to a particular area of land or BMP shall be determined by reference to the North Carolina Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

F. Design Manual

1. Reference to Design Manual

- a.** The Town Engineer shall use the policy, criteria, and information, including technical specifications and standards, in the Design Manual as the basis for decisions about stormwater permits and about the design, implementation, and performance of engineered stormwater controls and other practices for compliance with this article.
- b.** The Design Manual includes a list of acceptable stormwater treatment practices, including specific design criteria for each stormwater practice. Stormwater treatment practices that are designed, constructed, and maintained in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards of the Jordan Rules, Phase II and other applicable stormwater laws.

2. Relationship of Design Manual to Other Laws and Regulations

If the specifications or guidelines of the Design Manual are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the Design Manual.

3. Changes to Standards and Specifications

If the standards, specifications, guidelines, policies, criteria, or other information in the Design Manual are amended subsequent to the submittal of an application for approval pursuant to this article, but prior to approval, the new information shall control and shall be utilized in reviewing the application and in implementing this article with regard to the application.

4. Amendments to Design Manual

- a.** The Design Manual may be updated and expanded from time to time, based on advancements in technology and engineering, improved knowledge of local conditions, or local monitoring or maintenance experience.
- b.** Prior to amending or updating the Design Manual, proposed changes shall be generally publicized and made available for review, and an opportunity for comment by interested persons shall be provided.

4.7.2. Administration and Procedures

A. Town Engineer

1. Designation

The Town Engineer shall be designated as the stormwater administrator for purposes of administering and enforcing this article.

2. Powers and Duties

In addition to the powers and duties that may be conferred by other provisions of this Ordinance and other laws, the Town Engineer shall have the following powers and duties under this article:

- a.** To review and approve, approve with conditions, or disapprove applications for approval of plans pursuant to this article.

- b.** To make determinations and render interpretations of this article. Any person may request an interpretation by submitting a written request to the Town Engineer, who shall respond in writing within 30 days. The Town Engineer shall keep on file a record of all written interpretations of this article.
- c.** To establish application requirements and schedules for submittal and review of applications and appeals, to review and make recommendations to other Town staff and Town boards on applications for development or redevelopment approvals.
- d.** To enforce the provisions of this article in accordance with its enforcement provisions.
- e.** To maintain records, maps, forms, and other official materials as relate to the adoption, amendment, enforcement, and administration of this article.
- f.** To provide expertise and technical assistance to the Town, on request.
- g.** To designate appropriate other person(s) who shall carry out the powers and duties of the Town Engineer.
- h.** To take any other action necessary to administer the provisions of this article.

B. Review Procedures

1. Stormwater Management Permit Required; Must Apply for Permit

A Stormwater Management Permit is required for all development and redevelopment unless exempt pursuant to this article. A Stormwater Management Permit may only be issued subsequent to a properly submitted and reviewed permit application, pursuant to this section.

a. Effect of Permit

- (1)** A Stormwater Management Permit shall govern the design, installation, and construction of stormwater management and control practices on the site, including engineered stormwater controls and elements of site design for stormwater management other than engineered stormwater controls.
- (2)** The Stormwater Management Permit is intended to provide a mechanism for the review, approval, and inspection of the approach to be used for the management and control of stormwater for the development or redevelopment site consistent with the requirements of this article, whether the approach consists of engineered stormwater controls or other techniques such as low-impact or low-density design. The permit does not continue in existence indefinitely after the completion of the project; rather, compliance after project construction is assured by the maintenance provisions of this article.

b. Authority to File Applications

All Stormwater Management Permit applications required pursuant to this article shall be submitted to the Town Engineer by the landowner or the land owner's duly authorized agent.

2. Establishment of Application Requirements, Schedule, and Fees

a. Application Contents and Form

The Town Engineer shall establish requirements for the content and form of all Stormwater Management Permit applications and shall amend and update those requirements from time to time. At a minimum, the Stormwater Management Permit application shall describe in detail how post-development stormwater runoff will be controlled and managed, the design of all stormwater facilities and practices, and how the proposed project will meet the requirements of this article.

b. Submission Schedule

The Town Engineer shall establish a submission schedule for Stormwater Management Permit applications. The schedule shall establish deadlines by which complete applications must be submitted for the purpose of ensuring that there is adequate time to review applications, and that the various stages in the review process are accommodated.

c. Permit Review Fees

The Town Board of Commissioners shall establish Stormwater Management Permit review fees as well as policies regarding refund of any fees upon withdrawal of an application, and may amend and update the fees and policies from time to time.

d. Administrative Manual

For Stormwater Management Permit applications required under this Code, the Town Engineer shall compile the application requirements, submission schedule, fee schedule, a copy of this article, and information on how and where to obtain the Design Manual in an Administrative Manual, which shall be made available to the public.

3. Submittal of Complete Application

a. Stormwater Management Permit applications shall be submitted to the Town Engineer pursuant to the application submittal schedule, and in the form established by the Town Engineer, along with the appropriate fee established pursuant to this section.

b. A Stormwater Management Permit application shall be considered as timely submitted only when it contains all elements of a complete application pursuant to this article, along with the appropriate fee. If the Town Engineer finds that an application is incomplete, the applicant shall be notified of the deficient elements and shall be provided with an opportunity to submit a complete application. However, the submittal of an incomplete application shall not suffice to meet a deadline contained in the submission schedule established above.

4. Review

Within the timeframe specified in the submission schedule after a complete Stormwater Management Permit application is submitted, the Town Engineer shall review the application and determine whether the application complies with the standards of this article.

a. Approval

If the Town Engineer finds that the Stormwater Management Permit application complies with the standards of this article and this Ordinance, the Town Engineer shall approve the application. The Town Engineer may impose conditions of approval as needed to ensure compliance with this article. The conditions shall be included as part of the approval.

b. Fails to Comply

If the Town Engineer finds that the Stormwater Management Permit application fails to comply with the standards of this article, the Town Engineer shall notify the applicant and shall indicate how the application fails to comply. The applicant shall have an opportunity to submit a revised application.

c. Revision and Subsequent Review

- (1) A complete revised Stormwater Management Permit application shall be reviewed by the Town Engineer within the timeframe specified in the submission schedule after its resubmittal and shall be approved, approved with conditions or disapproved.
- (2) If a revised Stormwater Management Permit application is not re-submitted within six months from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee for a new submittal.
- (3) Two resubmittals of a revised Stormwater Management Permit application may be submitted without payment of an additional permit review fee. Any resubmittal after the second resubmittal shall be accompanied by an additional permit review fee, as established pursuant to this Ordinance.

c. Applications for Approval

1. Concept Plan and Consultation Meeting

a. Consultation Meeting

Before a Stormwater Management Permit application is deemed complete, the Town Engineer or developer may request a consultation on a concept plan for the post-construction stormwater management system to be utilized in the proposed development project. This consultation meeting should take place at the time of the preliminary plan of subdivision or other early step in the development process. The purpose of this meeting is to discuss the stormwater management measures necessary for the proposed project, as well 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:

(1) Existing Conditions/Proposed Site Plans

Existing conditions and proposed site layout sketch plans, which illustrate at a minimum: existing and proposed topography; perennial and intermittent streams; mapping of predominant soils from soil surveys (if available); stream and other buffers and features used in designing buffers and meeting any applicable buffer requirements; boundaries of existing predominant vegetation; proposed limits of clearing and grading; and location of existing and proposed roads, buildings, parking areas, and other impervious surfaces.

(2) 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.

(3) 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 4.7.3, 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 Town Engineer. Incomplete submittals shall be treated pursuant to Section 4.7.2.B.3, *Submittal of Complete Application*.

3. 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. 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 Town Engineer shall occur before the release of any performance securities.

4. Other Permits

No Certificate of Compliance/Occupancy shall be issued without final as-built plans and a final inspection and approval by the Town Engineer, except where multiple units are served by the stormwater practice or facilities, in which case the Planning Director 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.

D. Approvals

1. Effect of Approval

Approval of a Stormwater Management Permit authorizes the applicant to go forward with only the specific plans and activities authorized in the permit. The approval shall not be construed to exempt the applicant from obtaining other applicable approvals from local, State, and federal authorities.

2. Time Limit/Expiration

- a.** An approved plan shall become null and void if the applicant fails to make substantial progress on the site within one year after the date of approval. The Town Engineer may grant a single, one-year extension of this time limit, for good cause shown, upon receiving a written request from the applicant before the expiration of the approved plan.
- b.** In granting an extension, the Town Engineer may require compliance with standards adopted since the original application was submitted unless there has been substantial reliance on the original permit and the change in standards would infringe the applicant's vested rights.

E. Stormwater Variances

See Section 8.3.5.C, Variance (Stormwater).

- 1.** Any person may petition the Town for a variance granting permission to use the person's land in a manner otherwise prohibited by this article. For all proposed major and minor variances from the requirements of this article, the Board of Adjustments shall make findings of fact showing that:
 - a.** There are practical difficulties or unnecessary hardships that prevent compliance with the strict letter of the article;
 - b.** The variance is in harmony with the general purpose and intent of the local watershed protection regulations and preserves their spirit; and

- c. In granting the variance, the public safety and welfare have been assured and substantial justice has been done.
2. In the case of a request for a minor variance, the Board of Adjustment may vary or modify any of the regulations or provisions of the article so that the spirit of the article shall be observed, public safety and welfare secured, and substantial justice done, and may impose reasonable and appropriate conditions and safeguards upon any variance it grants.
3. The Board of Adjustment may attach conditions to the variance approval that support the purpose of the local watershed protection regulations. If the variance request qualifies as a major variance, and the Board of Adjustment decides in favor of granting the major variance, the Board shall then prepare a preliminary record of the hearing and submit it to the North Carolina Environmental Management Commission for review and approval. If the Commission approves the major variance or approves with conditions or stipulations added, then the Commission shall prepare a Commission decision which authorizes the Board of Adjustment to issue a final decision which would include any conditions or stipulations added by the Commission. If the Commission denies the major variance, then the Commission shall prepare a decision to be sent to the Board of Adjustment. The Board of Adjustment shall prepare a final decision denying the major variance.
4. Appeals from the local government decision on a variance request are made on certiorari to the local Superior Court. Appeals from the Commission decision on a major variance request are made on judicial review to Superior Court.
5. On request of the Town Engineer, any person who petitions the Board of Adjustment for a variance under this section shall provide notice to the affected local governments of the variance request as required under the Jordan Rule, 15A N.C.A.C. 2B.0104(r). For purposes of this notice requirement, "affected local governments" means any local governments that withdraw water from Lake Jordan or its tributaries downstream of the site of the proposed variance. If the proposed variance is located in a water supply watershed, "affected local governments" also includes any other local governments in the same water supply watershed as the proposed variance. The notice shall provide a reasonable period for comments and shall direct the comments to be sent to the Town Engineer. The person petitioning for the variance shall supply proof of notification in accordance with this section to the Town Engineer.

F. Appeals

See Section 8.3.5.E, Appeal.

4.7.3. Standards

A. General Standards

All development and redevelopment to which this article applies shall comply with the standards of this section. The approval of the Stormwater Management Permit shall require an enforceable restriction on property usage that runs with the land, such as a recorded deed restriction or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans.

B. Nitrogen and Phosphorus Loading

1. Nitrogen and phosphorus loads contributed by the proposed new development shall not exceed the following unit-area mass loading rates: 2.2 and 0.82 pounds per acre per year for nitrogen and phosphorus, respectively.
2. Notwithstanding 15A N.C.A.C. 2B.104(q), redevelopment subject to this article that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option of either meeting the loading standards identified in subsection 1 or meeting a loading rate that achieves the following nutrient loads compared to the existing development: 35 percent and five percent reduction for nitrogen and phosphorus, respectively.
3. The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the approved accounting tool.

C. Nitrogen and Phosphorus Standard

The nitrogen and phosphorus loading standards in this article are supplemental to, not replacements for, stormwater standards otherwise required by federal, state, or local law, including without limitation any riparian buffer requirements applicable to the location of the development. This includes, without limitation, the riparian buffer protection requirements of 15A N.C.A.C. 2B.0267 and .0268.

D. TSS Removal

All stormwater systems used to meet these requirements shall be designed to have a minimum of 85 percent average annual removal for Total Suspended Solids (TSS).

E. Control and Treatment of Runoff Volume

1. Stormwater systems shall be designed to control and treat the runoff volume generated from all built-upon area by one inch of rainfall; the treatment volume. This treatment volume shall not exceed the maximum ponding depth and be drawn down pursuant to standards specific to each practice as provided in the Design Manual. Additionally, stormwater systems shall be designed to control the runoff volume generated from all built-upon area by an additional one-half inch of rainfall. This additional runoff volume shall not exceed the maximum ponding depth and be drawn down pursuant to standards specific to each practice as provided in the Design Manual.
2. To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the development or redevelopment shall not contribute to degradation of waters of the State. At a minimum, the development or redevelopment shall not result in a net increase in peak flow leaving the site from pre-development conditions for the 1-year, 24-hour storm; 2-year, 24-hour storm; and 10-year, 24-hour storm events.

F. Partial Offset of Nutrient Control Requirements

1. Development subject to this article shall attain a maximum nitrogen loading rate on-site of six pounds per acre per year for single-family detached and duplex residential development and ten pounds per acre per year for other development, including multifamily residential, commercial, and industrial, and shall meet any requirements for engineered stormwater controls otherwise imposed by this article. A developer subject to this article may achieve the additional reductions in nitrogen and phosphorus loading required by this article by use of the following options:

- a. Purchasing offset credits from an approved private seller with a project located within the same eight-digit Hydrologic Unit Code as the proposed development. Refer to the North Carolina Department of Environmental and Natural Resources Division of Water Resources for approved mitigation banks with applicable and eligible credits to Pittsboro.
 - b. Making offset payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program.
 - c. Making offset payments to the Town of Pittsboro for equivalent nutrient credits at 80 percent of the rate calculated by the NC Ecosystem Enhancement Program.
 - d. A developer may propose other offset measures to the Town, including providing his or her own off-site offset.
2. All offset measures permitted by the ordinance shall meet the requirements of 15A N.C.A.C. 02B .0273 (2) through (4) and 15A N.C.A.C. 02B .0240. Documentation and proof of purchase for offset credit options is required prior to construction plan approval.

G. Evaluation of Standards for Stormwater Control Measures

1. Evaluation According to Contents of Design Manual

All stormwater control measures, stormwater systems and stormwater treatment practices (also referred to as Best Management Practices, or BMPs) required under this article shall be evaluated by the Town Engineer according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each stormwater practice, in the Design Manual. The Town Engineer shall determine whether proposed BMPs will be adequate to meet the requirements of this article.

2. Determination of Adequacy; Presumptions and Alternatives

Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the Design Manual and the approved accounting tool will be presumed to meet the minimum water quality and quantity performance standards of this article. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the Design Manual, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this article. The Town Engineer may require the applicant to provide the documentation, calculations, and examples necessary for the Town Engineer to determine whether such an affirmative showing is made.

H. Dedication of BMPs, Facilities, and Improvements

The Town may accept dedication of any existing or future stormwater management facility for maintenance, provided such facility meets all the requirements of this article and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

4.7.4. Maintenance

A. General Standards for Maintenance

1. Function of BMPs as Intended

The owner of each engineered stormwater control installed pursuant to this article shall maintain and operate it so as to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the engineered stormwater control was designed.

2. Annual Maintenance Inspection and Report

a. The person responsible for maintenance of any engineered stormwater control installed pursuant to this article shall submit to the Town Engineer an inspection report from one of the following persons performing services only in their area of competence: a qualified licensed North Carolina Professional Engineer or registered surveyor, landscape architect, or person certified by the North Carolina Cooperative Extension Service for stormwater treatment practice inspection and maintenance. The inspection report shall contain all of the following:

- (1) The name and address of the land owner;
- (2) The recorded book and page number of the lot of each engineered stormwater control;
- (3) A statement that an inspection was made of all engineered stormwater controls;
- (4) The date the inspection was made;
- (5) A statement that all inspected engineered stormwater controls are performing properly and are in compliance with the terms and conditions of the approved maintenance agreement required by this article; and
- (6) The original signature and seal of the engineer, surveyor, or landscape architect.

b. All inspection reports shall be on forms supplied by the Town Engineer. An original inspection report shall be provided to the Town Engineer beginning one year from the date of as-built certification and each year thereafter on or before the date of the as-built certification.

B. Operation and Maintenance Agreement

1. In General

a. Prior to the conveyance or transfer of any lot or building site to be served by a engineered stormwater control pursuant to this article, and prior to issuance of any permit for development or redevelopment requiring a engineered stormwater control pursuant to this article, the applicant or owner of the site must execute an operation and maintenance agreement that shall be binding on all subsequent owners of the site, portions of the site, and lots or parcels served by the engineered stormwater control. Until the transference of all property, sites, or lots served by the engineered stormwater control, the original owner or applicant shall have primary responsibility for carrying out the provisions of the maintenance agreement.

- b. The operation and maintenance agreement shall require the owner or owners to maintain, repair, and, if necessary, reconstruct the engineered stormwater control, and shall state the terms, conditions, and schedule of maintenance for the engineered stormwater control. In addition, it shall grant to the Town a right of entry in the event that the Town Engineer has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the engineered stormwater control; however, in no case shall the right of entry, of itself, confer an obligation on the Town to assume responsibility for the engineered stormwater control.
- c. The operation and maintenance agreement must be approved by the Town Engineer prior to plan approval, and it shall be referenced on the final plat and shall be recorded with the Register of Deeds of the county in which the stormwater control is located upon final plat approval. A copy of the recorded maintenance agreement shall be given to the Town Engineer within 14 days following its recordation.

2. Special Requirement for Homeowners' and Other Associations

For all engineered stormwater controls required pursuant to this article and that are to be or are owned and maintained by a homeowners' association, property owners' association, or similar entity, the required operation and maintenance agreement shall include all of the following provisions:

- a. Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities.
- b. Establishment of an escrow account, which can be spent solely for sediment removal, structural, biological or vegetative replacement, major repair, or reconstruction of the engineered stormwater controls. If engineered stormwater controls are not performing adequately or as intended or are not properly maintained, the Town, in its sole discretion, may remedy the situation, and in such instances the Town shall be fully reimbursed from the escrow account. Escrowed funds may be spent by the association for sediment removal, structural, biological or vegetative replacement, major repair, and reconstruction of the engineered stormwater controls, provided that the Town shall first consent to the expenditure.
- c. Both developer contribution and annual sinking funds shall fund the escrow account. Prior to plat recordation or issuance of construction permits, whichever shall first occur, the developer shall pay into the escrow account an amount equal to 15 percent of the initial construction cost of the engineered stormwater controls. Two-thirds of the total amount of sinking fund budget shall be deposited into the escrow account within the first five years and the full amount shall be deposited within ten years following initial construction of the engineered stormwater controls. Funds shall be deposited each year into the escrow account. A portion of the annual assessments of the association shall include an allocation into the escrow account. Any funds drawn down from the escrow account shall be replaced in accordance with the schedule of anticipated work used to create the sinking fund budget.
- d. The percent of developer contribution and lengths of time to fund the escrow account may be varied by the Town depending on the design and materials of the stormwater control and management facility.
- e. Granting to the Town a right of entry to inspect, monitor, maintain, repair, and reconstruct engineered stormwater controls.

- f. Allowing the Town to recover from the association and its members any and all costs the Town expends to maintain or repair the engineered stormwater controls or to correct any operational deficiencies. Failure to pay the Town all of its expended costs, after 45 days written notice, shall constitute a breach of the agreement. In case of a deficiency, the Town shall thereafter be entitled to bring an action against the association and its members to pay, or foreclose upon the lien hereby authorized by the agreement against the property, or both. Interest, collection costs, and attorney fees shall be added to the recovery.
- g. A statement that this agreement shall not obligate the Town to maintain or repair any engineered stormwater controls, and the Town shall not be liable to any person for the condition or operation of engineered stormwater controls.
- h. A statement that this agreement shall not in any way diminish, limit, or restrict the right of the Town to enforce any of its ordinances as authorized by law.
- i. A provision indemnifying and holding harmless the Town for any costs and injuries arising from or related to the engineered stormwater control, unless the Town has agreed in writing to assume the maintenance responsibility for the BMP and has accepted dedication of any and all rights necessary to carry out that maintenance.

C. Inspection Program

- 1. Inspections and inspection programs by the Town may be conducted or established on any reasonable basis, including but not limited to routine inspections, random inspections, inspections based upon complaints or other notice of possible violations, and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in BMPs; and evaluating the condition of BMPs.
- 2. If the owner or occupant of any property refuses to permit such inspection, the Town Engineer shall proceed to obtain an administrative search warrant pursuant to N.C.G.S. 15-27.2 or its successor. No person shall obstruct, hamper or interfere with the Town Engineer while carrying out his or her official duties.

D. Performance Security for Installation and Performance

1. Performance Security

The Town shall require the submittal of a performance security with cash escrow prior to issuance of a permit in order to ensure that the engineered stormwater controls are:

- a. Installed by the permit holder as required by the approved stormwater management plan, and/or
- b. Maintained by the owner as required by the operation and maintenance agreement.

2. Amount

a. Installation

The amount of an installation performance security shall be the total estimated construction cost of the BMPs approved under the permit, plus 50 percent.

b. Maintenance

The amount of a maintenance performance security shall be a one-time cash payment equal to 30 percent of the total estimated construction cost of the BMPs approved under the permit.

3. Uses of Performance Security

a. Forfeiture Provisions

The performance security shall contain forfeiture provisions for failure, after proper notice, to complete work within the time specified, or to initiate or maintain any actions which may be required of the applicant or owner in accordance with this article, approvals issued pursuant to this article, or an operation and maintenance agreement established pursuant to this article.

b. Default

Upon default of the owner to construct, maintain, repair and, if necessary, reconstruct any engineered stormwater control in accordance with the applicable permit or operation and maintenance agreement, the Town Engineer shall obtain and use all or any portion of the security to make necessary improvements based on an engineering estimate. Such expenditure of funds shall only be made after requesting the owner to comply with the permit or maintenance agreement. In the event of a default triggering the use of installation performance security, the Town shall not return any of the unused deposited cash funds or other security, which shall be retained for maintenance.

c. Costs in Excess of Performance Security

If the Town takes action upon such failure by the applicant or owner, the Town may collect from the applicant or owner the difference between the amount of the reasonable cost of such action and the amount of the security held, in addition to any other penalties or damages due.

d. Refund

Within 60 days of the final approval, the installation performance security shall be refunded to the applicant or terminated, except any amount attributable to the cost (plus 50 percent) of landscaping installation and ongoing maintenance associated with the BMPs covered by the security. Any such landscaping shall be inspected one year after installation with replacement for compliance with the approved plans and specifications and, if in compliance, the portion of the financial security attributable to landscaping shall be released.

E. Notice to Owners

1. Deed Recordation and Indications on Plat

The applicable operations and maintenance agreement pertaining to every engineered stormwater control shall be referenced on the final plat and shall be recorded with the Register of Deeds of the county in which the stormwater control is located upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement shall be recorded with the Register of Deeds of the appropriate county so as to appear in the chain of title of all subsequent purchasers under generally accepted searching principles.

2. Signage

Where appropriate in the determination of the Town Engineer to assure compliance with this article, engineered stormwater controls shall be posted with a conspicuous sign stating who is responsible for required maintenance and annual inspection. The sign shall be maintained so as to remain visible and legible and comply with the standards in *Section 5.10, Signage*.

F. Records of Installation and Maintenance Activities

The owner of each engineered stormwater control shall keep records of inspections, maintenance, and repairs for at least five years from the date of creation of the record and shall submit the same upon reasonable request to the Town Engineer.

G. Nuisance

The owner of each stormwater BMP, whether engineered stormwater control or non-engineered stormwater control, shall maintain it so as not to create or result in a nuisance condition.

H. Maintenance Easement

Every engineered stormwater control installed pursuant to this article shall be made accessible for adequate maintenance and repair by a maintenance easement. The easement shall be recorded and its terms shall specify who may make use of the easement and for what purposes.

4.7.5. Enforcement and Violations

A. General

1. Authority to Enforce

The provisions of this article shall be enforced by the Town Engineer, his or her designee, or any authorized agent of the Town. Whenever this section refers to the Town Engineer, it includes his or her designee as well as any authorized agent of the Town.

2. Violation Unlawful

Any failure to comply with an applicable requirement, prohibition, standard, or limitation imposed by this article, or the terms or conditions of any permit or other development approval or authorization granted pursuant to this ordinance, is unlawful and shall constitute a violation of this Ordinance.

3. Each Day a Separate Offense

Each day that a violation continues shall constitute a separate and distinct violation or offense.

4. Responsible Persons/Entities

- a. Any person who erects, constructs, reconstructs, alters (whether actively or passively), or fails to erect, construct, reconstruct, alter, repair, or maintain any structure, BMP, engineered stormwater control, practice, or condition in violation of this article shall be subject to the remedies, penalties, and/or enforcement actions in accordance with this section. Persons subject to the remedies and penalties set forth herein may include any architect, engineer, builder, contractor,

developer, agency, or any other person who participates in, assists, directs, creates, causes, or maintains a condition that results in or constitutes a violation of this article, or fails to take appropriate action so that a violation of this article results or persists; or an owner, any tenant or occupant, or any other person, who has control over, or responsibility for, the use or development of the property on which the violation occurs.

- b. For the purposes of this article, responsible person(s) shall include, but not be limited to:

(1) Person Maintaining Condition Resulting in or Constituting Violation

An architect, engineer, builder, contractor, developer, agency, or any other person who participates in, assists, directs, creates, causes, or maintains a condition that constitutes a violation of this article, or fails to take appropriate action so that a violation of this article results or persists.

(2) Person Responsible for Land or Use of Land

The owner of the land on which the violation occurs, any tenant or occupant of the property, any person who is responsible for stormwater controls or practices pursuant to a private agreement or public document, or any person, who has control over, or responsibility for, the use or development of the property.

B. Remedies and Penalties

The remedies and penalties provided for violations of this article, whether civil or criminal, shall be cumulative and in addition to any other remedy provided by law, and may be exercised in any order.

1. Remedies

a. Withholding of Certificate of Compliance/Occupancy

The Town Engineer or other authorized agent may refuse to issue a Certificate of Compliance/Occupancy for the building or other improvements constructed or being constructed on the site and served by the stormwater practices in question until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.

b. Disapproval of Subsequent Permits and Development Approvals

As long as a violation of this article continues and remains uncorrected, the Town Engineer or other authorized agent may withhold, and the Town Board of Commissioners may disapprove, any request for permit or development approval or authorization provided for by this Ordinance and/or building regulations, as appropriate for the land on which the violation occurs.

c. Injunction, Abatements, Etc.

The Town Engineer may, with written authorization from the Town Manager, institute an action in a court of competent jurisdiction for a mandatory or prohibitory injunction and order of abatement to correct a violation of this article. Any person violating this article shall be subject to the full range of equitable remedies provided in the General Statutes or at common law.

d. Correction as Public Health Nuisance, Costs as Lien, etc.

If the violation is deemed dangerous or prejudicial to the public health or public safety and is within the geographic limits prescribed by N.C.G.S 160A-193, the Town Engineer, with the written authorization of the Town Manager, may cause the violation to be corrected and the costs to be assessed as a lien against the property.

e. Stop Work Order

The Town Engineer may issue a stop work order to the person(s) violating this article. The stop work order shall remain in effect until the person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violation or violations described therein. The stop work order may be withdrawn or modified to enable the person to take the necessary remedial measures to cure such violation or violations.

2. Civil Penalties

The Town Engineer may assess a civil penalty against any person who violates any provision of this article or of a permit or other requirement pursuant to this article. Civil penalties may be assessed up to the full amount of penalty authorized by N.C.G.S. 143-215.6A.

3. Criminal Penalties

Violation of this article may be enforced as a misdemeanor subject to the maximum fine permissible under North Carolina law.

C. Procedures

1. Initiation/Complaint

Whenever a violation of this article occurs, or is alleged to have occurred, any person may file a written complaint. Such complaint shall state fully the alleged violation and the basis thereof, and shall be filed with the Town Engineer, who shall record the complaint. The complaint shall be investigated promptly by the Town Engineer.

2. Inspection

The Town Engineer shall have the authority, upon presentation of proper credentials, to enter and inspect any land, building, structure, or premises to ensure compliance with this article.

3. Notice of Violation and Order to Correct

a. When the Town Engineer finds that any building, structure, or land is in violation of this article, the Town Engineer shall notify, in writing, the property owner or other person violating this article. The notification shall indicate the nature of the violation, contain the address or other description of the site upon which the violation is occurring, order the necessary action to abate the violation, and give a deadline for correcting the violation. If civil penalties are to be assessed, the notice of violation shall also contain a statement of the civil penalties to be assessed, the time of their accrual, and the time within which they must be paid or be subject to collection as a debt.

- b. The Town Engineer may deliver the notice of violation and correction order by any means authorized for the service of documents by Rule 4 of the North Carolina Rules of Civil Procedure.
- c. If a violation is not corrected within a reasonable period of time, as provided in the notification, the Town Engineer may take appropriate action under this article to correct and abate the violation and to ensure compliance with this article.

4. Extension of Time

A person who receives a notice of violation and correction order, or the owner of the land on which the violation occurs, may submit to the Town Engineer a written request for an extension of time for correction of the violation. On determining that the request includes enough information to show that the violation cannot be corrected within the specified time limit for reasons beyond the control of the person requesting the extension, the Town Engineer may extend the time limit as is reasonably necessary to allow timely correction of the violation, up to, but not exceeding 30 days. The Town Engineer may grant 30-day extensions in addition to the foregoing extension if the violation cannot be corrected within the permitted time due to circumstances beyond the control of the person violating this article. The Town Engineer may grant an extension only by written notice of extension. The notice of extension shall state the date prior to which correction must be made, after which the violator will be subject to the penalties described in the notice of violation and correction order.

5. Enforcement after Time to Correct

After the time has expired to correct a violation, including any extension(s) if authorized by the Town Engineer, the Town Engineer shall determine if the violation is corrected. The Town Engineer may act to impose one or more of the remedies and penalties authorized by this article whether or not the violation has been corrected.

6. Emergency Enforcement

If delay in correcting a violation would seriously threaten the effective enforcement of this article or pose an immediate danger to the public health, safety, or welfare, then the Town Engineer may order the immediate cessation of a violation. Any person so ordered shall cease any violation immediately. The Town Engineer may seek immediate enforcement, without prior written notice, through any remedy or penalty authorized by this article.

4.7.6. Illicit Discharges and Connections

A. Illicit Discharges

1. No person shall cause or allow the discharge, emission, disposal, pouring, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in manner and amount that the substance is likely to reach a stormwater conveyance or the waters of the State, any liquid, solid, gas, or other substance, other than stormwater; provided that non-stormwater discharges associated with the following activities are allowed and provided that they do not significantly impact water quality:
 - a. Water line flushing;
 - b. Landscape irrigation;
 - c. Diverted stream flows;

- d. Rising ground waters;
 - e. Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
 - f. Uncontaminated pumped ground water;
 - g. Discharges from potable water sources;
 - h. Foundation drains;
 - i. Air conditioning condensation;
 - j. Irrigation water;
 - k. Springs;
 - l. Water from crawl space pumps;
 - m. Footing drains;
 - n. Lawn watering;
 - o. Individual residential car washing;
 - p. Flows from riparian habitats and wetlands;
 - q. Dechlorinated swimming pool discharges;
 - r. Street wash water; and
 - s. Other non-stormwater discharges for which a valid NPDES discharge permit has been approved and issued by the State of North Carolina, and provided that any such discharges to the municipal separate storm sewer system shall be authorized by the Town.
2. Prohibited substances include but are not limited to: oil, anti-freeze, chemicals, animal waste, paints, garbage, and litter.

B. Illicit Connections

1. Connections to a stormwater conveyance or stormwater conveyance system that allow the discharge of non-stormwater, other than the exclusions described in subsection A above, are unlawful. Prohibited connections include, but are not limited to: floor drains, waste water from washing machines or sanitary sewers, wash water from commercial vehicle washing or steam cleaning, and waste water from septic systems.
2. Where such connections exist in violation of this section and said connections were made prior to the adoption of this provision or any other regulation prohibiting such connections, the property owner or the person using said connection shall remove the connection within one year following the effective date of this article. However, the one-year grace period shall not apply to connections which may result in the discharge of hazardous materials or other discharges which pose an immediate threat to health and safety, or are likely to result in immediate injury and harm to real or personal property, natural resources, wildlife, or habitat.
3. Where it is determined that said connection (a) may result in the discharge of hazardous materials or may pose an immediate threat to health and safety, or is likely to result in immediate injury and harm to real or personal property, natural resources, wildlife, or habitat, or (b) was made in violation of any applicable regulation or ordinance other than this section, the Town Engineer shall designate the time within

which the connection shall be removed. In setting the time limit for compliance, the Town Engineer shall take into consideration:

- a. The quantity and complexity of the work,
- b. The consequences of delay,
- c. The potential harm to the environment, to the public health, and to public and private property, and
- d. The cost of remedying the damage.

C. Spills

1. Spills or leaks of polluting substances released, discharged to, or having the potential to released or discharged to the stormwater conveyance system, shall be contained, controlled, collected, and properly disposed. All affected areas shall be restored to their preexisting condition.
2. Persons in control of the polluting substances immediately prior to their release or discharge, and persons owning the property on which the substances were released or discharged, shall immediately notify the Fire Chief of the release or discharge, as well as making any required notifications under State and federal law. Notification shall not relieve any person of any expenses related to the restoration, loss, damage, or any other liability which may be incurred as a result of said spill or leak, nor shall such notification relieve any person from other liability which may be imposed by State or other law.

D. Nuisance

Illicit discharges and illicit connections which exist within the Town are hereby found, deemed, and declared to be dangerous or prejudiced to the public health or public safety and are found, deemed, and declared to be public nuisances. Such public nuisances shall be abated in accordance with the procedures set forth in Code of Ordinances, Chapter 18, Article III (Storm Drainage).

Section 4.8. Green Development Incentives¹⁶²

4.8.1. Purpose

The purpose of this Section is to encourage green building practices. Specifically, this section is intended to provide incentives for developments that incorporate green building features that support:

- A. Energy conservation;
 - B. Alternative energy use;
 - C. Water conservation;
 - D. Water quality;
 - E. Healthy landscaping;
 - F. Alternate forms of transportation; and
 - G. Urban agriculture.
-

4.8.2. Applicability

The incentives in this section shall apply to development and redevelopment in Mixed-Use and Nonresidential Base Districts.

4.8.3. Incentive Eligibility Points

- A. Development seeking to use green building incentives shall include a written request with the permit application that demonstrates how compliance with the standards in this section will be achieved.
- B. Review for compliance and granting of requests for incentives in accordance with this section shall occur in conjunction with the following permit types (see *Section 8.3, Application-Specific Review Procedures*):
 - 1. Special Use Permit;
 - 2. Major or Minor Subdivision; or
 - 3. Major or Minor Site Plan.
- C. Review and decision-making bodies for the permit application shall also be responsible for review and decision regarding the green building incentive request.
- D. The incentive(s) shall be based on the number of green building features provided, in accordance with Table 4.8.3: Green Building Incentives, and Section 4.8.4, Menu of Green Building Features. The table shall be used as follows.
 - 1. To obtain the right to a particular incentive identified in the left column of Table 4.8.3: Green Building Incentives (for example, a density bonus of up to one additional

¹⁶² This section establishes new green development incentives to encourage green building practices. Consistent with the Pittsboro Code Assessment, this section adds point- and menu-based standards that reward green development with additional intensity, height, or reduced parking allowances. The standard establishes the minimum number of points that a development project needs to achieve to qualify for specified incentives, alongside a list of green development certifications and practices (for example alternative energy or water conservation). These menu items are assigned a point value reflecting the degree to which the activity or practice contributes to green development.

dwelling unit per acre beyond the maximum allowed in the base zone), the proposed development shall provide the minimum number of green building features associated with schedule A and schedule B in Table 4.8.3: Green Building Incentives.

2. For example, in order to achieve a density bonus of up to one additional dwelling unit per acre beyond the maximum allowed in the base zone, the proposed development is required to include:
 - (1) Two green building features from Schedule A; and
 - (2) Four green building features from Schedule B.
3. Green building features used to obtain the individual type of incentive shall only be counted for that incentive. If an applicant wants to achieve a second type of incentive the proposed development shall provide the minimum number of green building features in Schedule A and Schedule B for both incentives.
4. For example, in order to achieve the density bonus incentive and the lot coverage incentive, the proposed development is required to include:
 - (1) Two green building features from Schedule A and four green building features from Schedule B for the density bonus incentive; and
 - (2) Two green building features from Schedule A and three green building features from Schedule B for the lot coverage incentive.

Table 4.8.3: Green Building Incentives		
Type Of Incentive	Minimum Number of Green Building Practices Provided	
	Schedule A	Schedule B
A density bonus of up to one additional dwelling unit per acre beyond the maximum allowed in the base zone	2	4
An increase in the maximum allowable height by up to one story or 14 feet beyond the maximum allowed in the base zone	2	3
An increase in the maximum allowable lot coverage by 10 percent beyond the maximum allowed in the base zone	2	3
A reduction from the minimum parking space requirements by 15 percent, or an increase to the maximum allowable number of parking spaces provided by 15 percent	2	2

4.8.4. Menu of Green Building Features

One or more of the green building features in Table 4.8.4: Menu of Green Building Features, may be offered by an applicant for proposed development in accordance with Table 4.8.3: Green Building Incentives.

Table 4.8.4: Green Building Features	
Schedule [1][2][3]	Type of Green Building Features
Energy Conservation	
A	Meet ASHRAE standard 189.1 (Section 7.4.6) for lighting [4]
A	Meet Energy Star standards for low rise residential or exceed ASHRAE 90.1-2004 energy efficiency standards by 15 percent [5]
A	Install a "cool roof" for at least 50 percent of the total roof area of the primary buildings in a multi-building complex. Cool roofs shall have a Solar Reflectance Index of 78 for flat roofs or 29 for roofs with a slope greater than 2:12
A	Install a "cool roof" on a minimum of 50 percent of the single-family dwellings in the development or subdivision. The "cool roof" shall cover the entire roof of the dwelling.
A	Use central air conditioners that are Energy Star qualified
A	Use only solar or tank-less water heating systems throughout the structure
B	Provide skylights in an amount necessary to ensure natural lighting is provided to at least 15 percent of the habitable rooms in the structure
B	Construct roof eaves or overhangs of three feet or more on southern or western elevations
B	Use a structure design that can accommodate the installation and operation of solar photovoltaic panels or solar thermal heating devices (including appropriate wiring and water transport systems)
Alternative Energy	
AA	Generate 50 percent or more of energy on-site by alternative energy (e.g., solar wind, geothermal)
A	Pre-wire a minimum of 75 percent of residential dwelling units in the development for solar panels
A	Install small-scale wind energy conversion systems to provide electricity for 25 percent of single-family, two-family, or townhouse dwelling(s)
LEED® Certification	
AAA	Construct the principal building(s) to meet or exceed LEED @ Platinum certification standards
AA	Construct the principal building(s) to meet or exceed LEED @ Gold certification standards
A	Construct the principal building(s) to meet or exceed LEED @ Silver certification standards
BB	Construct the principal building(s) to meet or exceed LEED @ Bronze certification standards
Passive Solar	
A	Orient a minimum of 50 percent of the single-family detached dwellings or lots in the development within 20 percent of the east-west axis for maximum passive solar exposure
B	Orient a minimum of 25 percent of the single-family detached dwellings or lots in the development within 20 percent of the east-west axis for maximum passive solar exposure
B	Orient at least 25 percent of the non-residential buildings with an axis oriented east-west for maximum solar exposure

Table 4.8.4: Green Building Features	
Schedule [1][2][3]	Type of Green Building Features
Water Conservation and Water Quality	
AAA	Install a green vegetated roof on the primary building(s), or at least 50 percent of primary buildings in a multi-building complex – green or vegetated roofs shall include vegetation on at least 50 percent of the roof area (25 percent for renovated buildings) and shall use only plant materials permitted by the Landscape Manual
A	Include rain water capture and re-use devices such as cisterns, rain filters, and underground storage basins with a minimum storage capacity of 500 gallons for every two residential units
A	Provide rain gardens or other appropriate storm water infiltration system(s) that accommodate a minimum of 25 percent of the runoff
Vegetation	
A	Retain at least 20 percent of existing pre-development natural vegetation
A	Remove all lawn or turf in favor of ground cover consisting of plant material or mulch
Urban Agriculture	
A	Provide a fenced, centrally located community garden space (which may be located as a rooftop garden) for residents and for urban gardening purposes at a ratio of 50 square feet. per dwelling unit
B	Provide a fenced, community garden space for employees at an office, for gardening purposes at a ratio of 15 square feet. per employee
Transportation	
A	Provide an electric vehicle (EV) level 3 charging station that is made available to those using the building
B	Provide an electric vehicle (EV) level 1 or 2 charging station that is made available to those using the building
B	Provide a minimum of five percent of required automobile parking spaces that are signed and reserved for hybrid/electric/low energy vehicles in preferred locations near the primary building entrance
B	Include showering and dressing facilities in nonresidential developments for employees using alternative forms of transportation
<p>NOTES:</p> <p>[1] AA means credited as provision of two schedule "A" features.</p> <p>[2] AAA means credited as provision of three schedule "A" features.</p> <p>[3] BB means credited as provision of two schedule "B" features.</p> <p>[4] Standard for the Design of High-Performance Green Buildings, American Society of Heating, Refrigerating, and Air-Condition Engineers, 2014.</p> <p>[5] Energy Standard for Buildings Except Low-Rise Residential, American Society of Heating, Refrigerating, and Air-Condition Engineers, 2004.</p>	

4.8.5. Verification

Failure to install or maintain approved green building features that are to be provided to comply with this section is a violation of this Ordinance, and may result in revocation of the development approval.

Commentary

Article 5: Development Standards, groups development standards related to the physical layout and design of new development (except for environmental standards, which are contained in Article 4: Environmental and Open Space Standards). Within this article, development standards are grouped and ordered in accordance with the general order a developer or plan reviewer might approach a proposed development—from general and broad scope issues that largely define those parts of a site that can be developed to the finer-grained site-specific elements of development. Standards from Pittsboro's Subdivision Regulations and Lighting Ordinance are included in this article.

Adoption of this UDO will establish building and site requirements that will, in many cases, be different from requirements under which many existing sites were developed prior to the adoption of this UDO. All such previously-approved development can lawfully continue under the UDO's nonconformity provisions established in Article 6: Nonconformities.

- **Section 5.1, General Intent**, describes the purpose of the article.
- **Section 5.2, General Site Layout and Design**, establishes standards for site layout, streets, blocks, and lots.
- **Section 5.3, Access and Circulation**, establishes access and circulation standards for an integrated, multi-modal transportation system. Standards in this section promote connectivity and integrations across transportation modes and infrastructure elements, update design standards for vehicular, bicycle, and pedestrian accessways, and tailor access and circulation requirements and standards to the context of the development site.
- **Section 5.4, Parking and Loading**, establishes standards related to vehicular parking and loading and bicycle parking. The section also provides for alternative parking arrangements and compact vehicle parking spaces, and includes basic standards related to parking lot location and design.
- **Section 5.5, Utilities and Services**, establishes a single location for standards related to the provision of utility services and facilities.
- **Section 5.6, Landscaping**, establishes general landscaping and planting requirements, and also street and parking lot landscaping requirements.
- **Section 5.7, Screening**, establishes common screening requirements for mechanical equipment, service and loading areas and commercial containers.
- **Section 5.8, Fences and Walls**, establishes location and height requirements for fences and walls, and basic appearance standards.
- **Section 5.9, Outdoor Lighting**, establishes lighting location, placement, and shielding requirements. This section also includes energy efficiency performance standards.
- **Section 5.10, Signage**, establishes sign standards, including specific standards for mixed-use and nonresidential areas and provisions that provide flexibility from certain requirements.
- **Section 5.11, Commercial Development Design**, establishes basic form standards that supplement all commercial development, and also specific standards for large retail ("big-box") establishments.
- **Section 5.12, Neighborhood Compatibility**, establishes standards that provide physical compatibility and transition between residential areas and more intense development in adjoining, higher-density districts.
- **Section 5.13, Pocket Neighborhoods**, adjusts standards that allow for smaller, alternative forms of residential development and help accommodate a diverse range of housing needs.

This comment box and the footnotes included in this draft are provided for reference purposes and will not be included in the adopted zoning ordinance.

Article 5: Development Standads - Table of Contents

ARTICLE 5:	DEVELOPMENT STANDARDS	5-5
Section 5.1.	General Intent	5-5
Section 5.2.	General Site Layout and Design	5-5
5.2.1.	General	5-5
5.2.2.	Street, Block and Lot Design Standards	5-6
Section 5.3.	Access and Circulation	5-11
5.3.1.	Purpose	5-11
5.3.2.	Applicability	5-11
5.3.3.	Consistency with Plans	5-11
5.3.4.	Multimodal Transportation System	5-11
5.3.5.	Vehicular Access and Circulation	5-12
5.3.6.	Transit Facilities	5-20
5.3.7.	Bicycle Access and Circulation	5-20
5.3.8.	Pedestrian Access and Circulation	5-22
Section 5.4.	Parking and Loading	5-26
5.4.1.	Purpose	5-26
5.4.2.	Applicability	5-26
5.4.3.	Off-Street Vehicle and Bicycle Parking Space Requirements	5-27
5.4.4.	Off-Street Loading Space Requirements	5-35
5.4.5.	General Standards for Off-Street Vehicle Parking and Loading Areas	5-36
5.4.6.	Off-Street Parking Arrangement and Design	5-38
5.4.7.	Off-Street Loading Area Arrangement and Design	5-43
5.4.8.	Off-Street Bicycle Parking Arrangement and Design	5-43
5.4.9.	Off-Street Parking Alternatives	5-44
Section 5.5.	Utilities and Services	5-50
5.5.1.	General	5-50
5.5.2.	Public Water and Sewer Systems	5-50
5.5.3.	Public Water	5-52
5.5.4.	Storm Drainage	5-52
5.5.5.	Easements, Dedications, and Reservations	5-52
5.5.6.	Compliance with Standards for Utility Providers	5-53
5.5.7.	Solid Waste Removal	5-53
Section 5.6.	Landscaping	5-54
5.6.1.	Purpose	5-54
5.6.2.	Applicability	5-54
5.6.3.	Credit Toward Other Standards	5-54
5.6.4.	General Landscaping Standards	5-54
5.6.5.	Street Landscaping	5-58

Article 5: Development Standads - Table of Contents

5.6.6.	Parking Lot Landscaping	5-58
Section 5.7.	Screening	5-60
5.7.1.	Screening of Exterior Mechanical Equipment.....	5-60
5.7.2.	Screening of Off-Street Loading and Service Areas.....	5-62
5.7.3.	Location and Screening of Commercial Containers.....	5-63
Section 5.8.	Fences and Walls	5-66
5.8.1.	Purpose	5-66
5.8.2.	Applicability.....	5-66
5.8.3.	Prohibited Fences and Walls.....	5-66
5.8.4.	Limited Fences and Walls Allowed in the Downtown District.....	5-66
5.8.5.	Temporary Fences	5-67
5.8.6.	General Requirements for Fences and Walls	5-67
5.8.7.	Height Requirements for Fences and Walls	5-67
5.8.8.	Appearance	5-68
5.8.9.	Security Plan Fences and Walls	5-71
Section 5.9.	Outdoor Lighting	5-72
5.9.1.	Purpose	5-72
5.9.2.	Light Measurement	5-72
5.9.3.	General Lighting Standards.....	5-72
5.9.4.	Lighting Standards for Specific Areas and Site Features	5-74
5.9.5.	Lighting Standards for Bikeways, Walkways, and Parks.....	5-76
Section 5.10.	Signage	5-77
5.10.1.	Purpose	5-77
5.10.2.	Sign Types	5-77
5.10.3.	General Sign Standards.....	5-77
5.10.4.	Prohibited Signs	5-79
5.10.5.	Signs Not Requiring A Permit.....	5-79
5.10.6.	Standards for Specific Sign Types.....	5-79
5.10.7.	Standards Specific to Temporary Signs.....	5-80
5.10.8.	District-Specific Sign Standards	5-81
5.10.9.	Sign Flexibility Option.....	5-85
5.10.10.	Outdoor Advertising Signs.....	5-85
Section 5.11.	Commercial Development Design	5-86
5.11.1.	Purpose and Intent.....	5-86
5.11.2.	Applicability.....	5-86
5.11.3.	General Standards	5-86
5.11.4.	Large Retail Establishment Form and Design Standards	5-91
Section 5.12.	Neighborhood Compatibility	5-94
5.12.1.	Purpose and Intent.....	5-94

Article 5: Development Standads - Table of Contents

5.12.2.	Applicability.....	5-94
5.12.3.	Neighborhood Compatibility Standards.....	5-96
Section 5.13.	Pocket Neighborhoods	5-102
5.13.1.	Purpose and intent	5-102
5.13.2.	Development Standards.....	5-102

Article 5: DEVELOPMENT STANDARDS

Section 5.1. General Intent

This Article includes standards and guidelines for developing property or establishing new uses of property within the Town of Pittsboro's zoning jurisdiction, to ensure the protection of the health, welfare, safety, and quality of life for local residents, visitors, and business owners. These provisions address the physical relationship between development and adjacent properties, public streets, neighborhoods, and the natural environment, in order to implement the Land Use Plan vision for a more attractive, efficient, and livable community.

Section 5.2. General Site Layout and Design^{163 164}

5.2.1. General

Development in all zoning districts shall comply with the following standards.

- A. The general location, character, and extent of new, extended, or widened or expanded streets, public utilities and service facilities, and parks and other public areas shall be consistent with the Comprehensive Plan.
- B. Developments shall be laid out and designed to functionally and visually integrate their design elements (open spaces, buildings, parking, utilities, stormwater management facilities, etc.)—both within the development and in relationship to surrounding developments—to the maximum extent practicable.
- C. The layout of streets, lots, building sites, and other elements of development shall be designed to minimize alteration of natural and historic site features to be preserved.
- D. Developments shall minimize impacts to sensitive natural resources and other unique and fragile site elements—including, but not limited to, wetlands and steep slopes—and significant stands of mature trees shall be preserved where practicable, with development reserved for environmentally stable areas.

¹⁶³ This section consolidates and modernizes standards pertaining to subdivision design and site plans. Provisions related to general site layout and performance standards from Subdivision Regulations are carried forward (primarily Sections 6, General Requirements and Minimum Standards for Improvements, Reservation, and Design), and modified for clarity and consistency with this ordinance, and to establish minimum infrastructure standards for other development types in addition to subdivisions.

¹⁶⁴ The following sections have been deleted from Subdivision Regulations or are addressed in other sections of the Ordinance as noted below:

- Section 1, General Provisions, is addressed in this UDO in *Article 1: General Provisions* and *Article 8: Development Review Procedures*.
- Relevant terms from Section 2, Definitions, of the Subdivision Regulations, are located in *Article 10: Interpretation and Definitions*.
- Section 3, Assurance for Completion and Maintenance of Improvements, of the Subdivision Regulations, is to be included in the Administrative Manual that will accompany this UDO.
- Section 4, Subdivision Application Procedure and Approval Process, of the Subdivision Regulations, is addressed in *Article 8: Development Review Procedures*.
- Section 5, Subdivision Plat Process, of the Subdivision Regulations, is recommended to be included in the Administrative Manual that will accompany this UDO.
- Section 8, Special Development Standards for Planned Unit Developments and Section 9, Design Standards for Planned Unit Development Districts, of the Subdivision Regulations, are addressed in this UDO in *Article 2: Zoning Districts*, and *Article 8: Development Review Procedures*.
- Section 6.1, Standards for Subdivisions, of the Subdivision Regulations, is addressed in in this UDO in *Article 10: Interpretation and Definitions*.

- E. All new lots shall be located wholly outside any riparian buffer required in accordance with *Section 4.4, Riparian Buffers*.
- F. Streets, building sites, and the buildable areas of lots shall be located outside floodways and non-encroachment areas.

5.2.2. Street, Block and Lot Design Standards

A. Streets¹⁶⁵

1. Streets required for Major and Minor Subdivisions (see *Section 8.3.4, Subdivision*) shall be public and shall comply with minimum safety standards established by the North Carolina Department of Transportation.¹⁶⁶
2. Subdivisions that adjoin only one side of existing streets shall dedicate one-half of the additional right-of-way needed to meet minimum width requirements. If any part of the subdivision includes both sides of an existing street all the required additional right-of-way shall be dedicated.
3. Subdivision streets intersecting with arterials shall comply with the following standards.
 - a. For principal arterials, the minimum interval for street intersections shall be 1200 feet.
 - b. For major arterials, the minimum interval for street intersections shall be 800 feet.
 - c. For minor arterials, the minimum interval for street intersections shall be 600 feet.
4. Streets shall be bordered by sidewalks on both sides (except on alleys, service drives and principal arterials). The Commissioners may grant exceptions upon recommendation of the Planning Board if it is shown that local pedestrian traffic warrants their location on one side only, or if it is demonstrated that adverse impacts would occur from stormwater runoff.
5. Residential sidewalks shall be a minimum of five feet in width. Sidewalks serving mixed use and commercial areas shall be eight feet in width unless excepted by the Commissioners. New streets and modifications to existing streets shall adhere to the design standards in the *Town of Pittsboro Pedestrian Transportation Plan*.
6. New streets shall include street trees as follows:
 - a. Streets located in Mixed-Use and Nonresidential Base Districts shall have trees which complement the face of the buildings and shade the sidewalk.
 - b. Streets located in all other districts shall provide an appropriate canopy which shades both the street and the sidewalk. Street trees shall not obstruct movement of emergency vehicles.
7. Vertical alignment for streets shall comply with the following standards.
 - a. For arterials and collectors, street grade shall not exceed seven percent.
 - b. For residential streets, the grade shall not exceed 10 percent.
8. New streets shall be designed to minimize the removal of significant trees to the extent practicable.
9. New streets shall comply with *Table 5.2.2.A: Street Classifications and Design Standards*.

¹⁶⁵ This section carries forward portions of *Section 6.2, Streets*, of the *Subdivision Regulations*, that relate to general street standards for subdivisions. Other provisions of the *Subdivision Regulations* related to connectivity, pedestrian circulation, vehicular access, and definitions are addressed in this UDO in *Section 5.3, Access and Circulation* and *Article 10: Interpretation and Definitions*.

¹⁶⁶ This standard is expanded so that all new streets are public and comply with NC DOT standards. Rural large lot subdivisions are still exempt from installing curb and gutter systems.

Table 5.2.2.A: Street Classifications and Design Standards				
Street Classification	Right-of-Way Width	Design Speed	Minimum Stopping Sight Distance	Minimum Radius of Curvature
Principal Arterial	120 ft	50 mph	350 ft	690 ft
Major Arterial	80 ft	40 mph	260 ft	430 ft
Minor Arterial	60 ft	35 mph	210 ft	310 ft
Collector	60 ft	30 mph	180 ft	230 ft
Residential	50 ft	25 mph	125 ft	150 ft
Loop Street	50 ft	20 mph	75 ft	90 ft
Cul-de-sac	50 ft	15 mph	40 ft	50 ft
Marginal Access	50 ft	15 mph	40 ft	50 ft
Service Drive	24 ft	15 mph	40 ft	50 ft
ft = feet mph = miles per hour				
NOTES:				
[1] Street width in Mixed-Use and Nonresidential Base Zoning Districts shall be increased 10 feet to accommodate vehicular and pedestrian circulation and on-street parking.				

10. Street jogs with centerline offsets less than the minimum stopping site distance as provided in Table 5.2.2.A: Street Design Standards, shall be prohibited.
11. All streets shall intersect at right angles.
12. Reserve strips controlling access to streets are prohibited.
13. The use of gates, manned or unmanned, to control vehicular access on any public street or alley is prohibited except at railroad crossings.
14. The use of gates, manned or unmanned, to control vehicular access on a private street, alley, or driveway may be allowed only with if the Town Engineer, after consulting the Fire Chief, determines that gate would not restrict vehicular access to an existing street, restrict timely access by emergency vehicles, or solely serve to isolate or segregate an organization or segment of the population from access. This requirement does not apply to a driveway serving an individual single-family detached, duplex, manufactured home (on an existing lot), or single-family attached dwelling.
15. Streets shall be located outside of riparian buffers when practicable. If streets cannot be located outside of riparian buffers, they shall be designed and constructed to minimize water quality impact.
16. Street extensions shall bear the same name as the existing street. For new streets, the street name shall not duplicate an existing street name, regardless of suffix.
17. For Major and Minor Subdivisions (see 8.3.4, Subdivision), street name signs and traffic signs shall be installed consistent with design standards for the Town of Pittsboro and State of North Carolina.¹⁶⁷
18. Curb and gutter systems are required for all streets, except streets serving Major or Minor Subdivisions in Rural Base Districts with lot sizes greater than one acre.
19. For Major and Minor Subdivisions, the total area of all streets shall not exceed four percent of the project site unless the first half inch of stormwater runoff will be managed on site.

¹⁶⁷ This is carried forward from Section 7.1 (H), Street Names and Signs, in the current Subdivision Regulations.

B. Blocks¹⁶⁸

1. Blocks shall be laid out to provide a functional street pattern and circulation and connectivity in accordance with the standards in *Section 5.3, Access and Circulation*.
2. Blocks shall have sufficient width to provide for two back-to-back rows of street-fronting lots of appropriate depth for the zoning district, excluding any water bodies, public alleys, or other public rights-of-way. Exceptions shall be permitted in blocks adjacent to arterials, railroads, or waterways, or due to limiting topographical conditions, the size or configuration of the site, or for approved through lots.
3. Blocks shall be at least 400 feet long and no more than 1,200 feet long except as necessary to secure efficient use of land or desired features of the street pattern, or to reflect the size and configuration of the site.
4. The lengths, widths, and shapes of blocks shall be determined based on the following:
 - a. Lot area and width standards;
 - b. Needs for convenient access, circulation, control, and safety of vehicular, bicycle, and pedestrian traffic;
 - c. Relationship to existing utilities;
 - d. Layout of the water system with regard to eliminating stagnant water, providing adequate fire flow, appropriately placing fire hydrants, and meeting minimum pressure requirements.;
 - e. Layout of the sanitary sewer system with regard to utilizing gravity sewer system wherever possible and minimizing the use of sewer force mains;
 - f. Layout of the stormwater management system with regard to utilizing natural outfalls adjacent to the land being subdivided, and effectively using existing public stormwater or drainage systems;
 - g. Location of existing and proposed easements; and
 - h. Environmental or topographical limitations.

C. Lots¹⁶⁹

1. Each lot shall meet the applicable lot area and width standards set forth in *Article 2: Zoning Districts*, and otherwise be developable in accordance with the standards in this Ordinance.
2. Lots shall be arranged in relationship to topography, flood hazards, tree protection requirements, or other site conditions to minimize difficulties in providing a reasonable building site and yard area in accordance with requirement of this Ordinance.
3. Each lot shall be situated so that stormwater may be easily directed away from buildings in subsequent site-specific development. Lots shall be configured so that buildings and general flood sensitive site facilities are not located in drainage ways.
4. Lots shall include at least 20 feet of frontage on a public street right-of-way for each of the following dwelling types:
 - a. Single-family detached;
 - b. Single-family attached;
 - c. Duplex; and

¹⁶⁸ This section carries forward and modifies section 6.3, Blocks, in the current Subdivision Regulations.

¹⁶⁹ This section modifies section 6.4, Lots, in the current Subdivision Regulations.

- d. Manufactured home (on an existing lot).
- 5. Lots shall include at least 20 feet of frontage on a public or private street with a right-of-way or easement that is at least 50 feet wide, for any the following:
 - a. Multifamily dwellings;
 - b. Nonresidential uses; and
 - c. Mixed-use development.
- 6. Creation of through lots shall be avoided except where necessary to provide access to residential development from a street other than a major or minor arterials, or to overcome specific disadvantages of existing, pre-development topography and lot configuration.
- 7. A lot shall be of a regular shape based on lot lines that intersect a fronting street right-of-way (or easement) in a substantially perpendicular manner, or radially to curves or cul-de-sacs. Variation in lot shape is allowed to account for natural features such as streams and ridgelines. The creation of new flag lots is prohibited.
- 8. Where land is subdivided into parcels large enough to be further divided into ordinary sized building lots, such parcels shall be arranged to allow for the opening of future streets and logical further subdivision.
- 9. The size, shape, and orientation of nonresidential lots shall be suitable for anticipated building and use types.

D. Conservation Subdivision¹⁷⁰

1. Purpose

Conservation subdivisions allow for buildings to be grouped in suitable locations within a site in order to protect sensitive environmental features and provide for innovative project design.

2. Applicability

- a. Conservation subdivisions are allowed in Rural Base Districts, the WCAO District, and the WPAO District.
- b. Conservation subdivisions are required in the NRCO District.

3. Development Standards

Conservation subdivisions shall comply with the following standards.

a. Lot size¹⁷¹

Minimum lot sizes may be reduced for single-family conservation subdivision projects, however, the total number of lots shall not exceed four dwelling units per acre.

b. Built-upon Area

Maximum built-upon area shall be 25 percent of the total project site.

c. Stormwater Management

All built-upon area shall be designed and located to minimize stormwater runoff impact to the receiving waters and minimize concentrated stormwater flow.

¹⁷⁰ This carries forward and renames Section 5.5.5, Cluster Developments, in the current Zoning Ordinance.

¹⁷¹ This standard is modified to allow higher residential densities in order to increase opportunities for natural resources protection and flexible site design.

d. Open Space

The remainder of the tract not built upon shall remain in a vegetated or natural state and comply with Section 4.3.1.D.2, Allowable Common Open Space Areas. Where the development has an incorporated homeowners or property owners association, the title of the reserved open space area shall be conveyed to the association for management. Where a property association is not incorporated, a maintenance agreement shall be filed in conjunction with the property deeds.

e. Utilities

Conservation subdivisions shall be served by public water and sewer facilities.

Section 5.3. Access and Circulation¹⁷²¹⁷³

5.3.1. Purpose

The purpose of this section is to ensure that development is served by a coordinated, multimodal transportation system that, to the extent practicable, permits the safe and efficient movement of motor vehicles, emergency vehicles, transit, bicyclists, and pedestrians within the development and between the development and external transportation systems, neighboring development, and local destination points such as places of employment, schools, parks, and shopping areas. Such a multimodal transportation system is intended to:

- A. Provide transportation options;
- B. Increase the effectiveness of local service delivery;
- C. Reduce emergency response times;
- D. Promote healthy walking and bicycling;
- E. Facilitate use of public transportation;
- F. Contribute to the attractiveness of the development and community, connect neighborhoods and increase opportunities for interaction between neighbors;
- G. Reduce vehicle miles of travel, travel times and greenhouse gas emissions;
- H. Improve air quality, minimize congestion and traffic conflicts; and
- I. Preserve the safety and capacity of community transportation systems.

5.3.2. Applicability

Except as otherwise provided in this Ordinance, the standards in this section shall apply to all development.

5.3.3. Consistency with Plans

The design and construction of access and circulation systems associated with a development shall be consistent with the transportation goals, objectives, and actions in the Comprehensive Plan, and other Town-adopted plans addressing transportation.

5.3.4. Multimodal Transportation System

Access and circulation systems associated with a development shall provide for multiple travel modes (vehicular, transit, bicycle, and pedestrian), as appropriate to the development's size, character, and relationship to existing and planned community transportation systems. Vehicular, transit, bicycle, and pedestrian access and circulation systems shall be coordinated and integrated as necessary to offer the

¹⁷²This section consolidates access and circulation standards currently located in both the Zoning Ordinance and Subdivision Regulations. This section establishes a single set of standards addressing the full range of transportation needs and improvements (not just subdivision streets and certain driveways), and modifies and expands the current standards to reflect Complete Streets principles as noted in the Pittsboro Code Assessment. The key changes include:

- Addressing multimodal access, circulation, and safety (vehicle, bicycle, pedestrian, transit);
- Promoting access and circulation systems that connect to adjoining developments;
- Context-sensitive standards;
Modernizing design standards and allowing for flexibility

¹⁷³ All sections are new unless otherwise noted.

development's occupants and visitors improved transportation choices while enhancing safe and efficient mobility throughout the development and the community.

5.3.5. Vehicular Access and Circulation

A. Circulation Plan

1. Circulation plans shall be included for the following development applications (see Section 8.3, Application-Specific Review Procedures):
 - a. Major or Minor Subdivisions; and
 - b. Major or Minor Site Plans.
2. Circulation plans shall address:
 - a. Street connectivity;
 - b. Emergency and service vehicle access;
 - c. Designated parking areas and circulation;
 - d. Loading areas and circulation; and
 - e. Turning radii, traffic calming measures where "cut-through" traffic could occur; and
 - f. Any other related issues.
3. The Planning Director may waive the requirement for a circulation plan on determining that a proposed development is expected to have no impact on circulation or proposes no change in existing circulation patterns. This provision shall not be construed to exempt development that includes additional parking, driveways, or substantial modifications to the existing pedestrian network.

B. Vehicular Connectivity

1. Purpose

The purpose of the following vehicular connectivity standards is to enhance safe and convenient mobility within and between developments that helps integrate and connect neighborhoods, allow people to conveniently access activity centers without compromising the capacity of the Town's streets to accommodate through traffic, improve opportunities for comprehensive and convenient transit service, enhance efficient provision of public services, improve the speed and effectiveness with which emergency services and police and fire protection can be provided to Town residents and properties, and implement other connectivity objectives and policies in the Comprehensive Plan.

2. Required Vehicular Access and Circulation

- a. A development shall be served by an internal system of vehicular accessways (including alleys, fire lanes, and parking lot lanes) that permits safe, convenient, efficient, and orderly movement of vehicles among origin and destination points within the development in accordance with the following standards for the type of vehicle:
 - (1) Firefighting and other emergency vehicles shall be provided access to points within 150 feet of all portions of buildings and facilities, or such smaller distance required in accordance with requirements for fire apparatus access roads in the Fire Prevention Code.

- (2) Public transit and school buses shall be provided access to designated or planned bus stops and shelters.
- (3) Garbage trucks shall be provided access to bulk refuse containers and to points within 150 feet of individual refuse receptacle storage/collection sites.
- (4) Large delivery trucks shall be provided access to off-street loading spaces.
- (5) Small delivery trucks, service vehicles, and passenger motor vehicles shall be provided access to points within 100 feet of the following:
 - (A) Single-family detached dwellings;
 - (B) Duplex dwellings;
 - (C) Manufactured home dwellings (on an existing lot); and
 - (D) Off-street parking spaces serving any other types of development.
- b. The development's internal system of vehicular accessways shall also permit safe, convenient, efficient, and orderly movement of vehicles between the development's internal origin and destination points and the external roadway system and adjacent transit stations.

3. Required Multiple Means of Vehicular Access

- a. A residential development shall provide each building or facility at least two separate means of vehicular access, which provide an outlet to two different public streets, meeting Fire Code requirements for fire apparatus access roads if the development includes:
 - (1) More than 30 single-family detached, duplex, or manufactured home dwellings, or subdivision lots designed to contain more than 30 such dwellings; or
 - (2) More than 60 single-family attached or multifamily dwelling units.
- b. A nonresidential or mixed-use development shall provide:
 - (1) At least two separate means of vehicular access to each building or facility that has a height exceeding 30 feet or three stories; or
 - (2) At least two separate means of vehicular access, which provide an outlet to two different public streets, to each building or facility that has a gross floor area exceeding 62,000 square feet.
- c. Where two means of vehicular access are required, the distance between the points where such access enters the development site shall be at least one-half the maximum overall diagonal dimension of the development site.
- d. The required two means of vehicular access shall be provided before issuance of a Building Permit authorizing the 31st single-family detached, duplex, or manufactured home dwelling, or the 61st single-family attached or multifamily dwelling unit.
- e. The Planning Director, after consulting with the Fire Chief, may waive these requirements on determining provision of a second access is impractical due to topography, natural features, cultural resources, or the configuration of adjacent developments and/or the dwellings, buildings, or facilities are equipped with an approved automatic sprinkler system.

4. Public Street Connectivity

- a. The vehicular access and circulation for a development shall incorporate the continuation and connection of public street roadways and associated rights-of-way that have been

extended or connected to the boundary of the development site from existing or approved adjoining developments.

- b.** The vehicular access and circulation for a development shall provide for the extension or connection of proposed internal public street roadways and associated rights-of-way to those boundaries of the development site that adjoin potentially developable or redevelopable property whenever such extensions or connections are or may be necessary to ensure that the development site or the adjoining property will have:

 - (1)** At least two vehicular access points to and from an external through street system, plus one additional vehicular access point for each additional 2,000 vehicles per day, or fraction thereof, expected to be generated by the proposed development or by the maximum allowable development of the adjoining property;
 - (2)** Convenient and efficient access by vehicles needed to provide police, fire, and emergency services; and
 - (3)** Convenient and efficient access by vehicles needed to provide other public services.
- c.** Roadway extensions and connections to adjoining properties shall be spaced at intervals along each principal boundary direction (north, south, east, west) that do not exceed the maximum block length established in Section 5.2.2, Street, Block and Lot Design Standards.
- d.** An extension or connection of a public street roadway and right-of-way to an adjoining property shall also include the extension or connection of associated bikeways or sidewalks.
- e.** The Planning Director may require the provision of a temporary turnaround at the end of a roadway extension on determining that the turnaround is needed to facilitate traffic flow or accommodate emergency vehicles pending the roadway's connection to other roadways.
- f.** The Planning Director may waive or modify the requirements or standards for extension or connection of a public roadway from or to adjoining property on determining that such extension is impractical or undesirable because it would:

 - (1)** Require crossing a significant physical barrier or environmentally sensitive area (e.g., railroads, watercourses, floodplains, wetlands, steep slopes);
 - (2)** Require the extension or connection of a proposed internal public street to an adjoining property with existing development whose design makes it unlikely that the street will ever be part of a network of public streets (e.g., the adjoining existing development has no public streets, or there are no 'stubbed-out' street rights of way or open corridors between the proposed development site and public streets in the adjoining development to accommodate a current or future extension or connection);
 - (3)** Require the extension or connection of a proposed internal public street to an adjoining property owned by a government or public utility to which vehicular access is restricted, or other property to which vehicular access is restricted by a conservation easement; or
 - (4)** Require the extension or connection of a proposed internal public street to an adjoining property that is developed or zoned for a use whose level and type of generated traffic would be incompatible with the proposed development—provided, however, that residential, institutional, and commercial uses shall generally be deemed compatible.
- g.** A roadway extension sign shall be installed for the following development applications (see Section 8.3, Application-Specific Review Procedures):

 - (1)** Major or Minor Subdivisions; and
 - (2)** Major or Minor Site Plans.

- h. Roadway extension signs and final plats referenced in subsection g, above, shall include information notifying the public of the intent to extend the roadway.

5. Cross Access Between Adjoining Development

New single-family attached dwellings, multifamily dwellings, nonresidential, and mixed-use development or redevelopment shall comply with the following standards.

- a. Internal vehicular circulation systems shall be designed to allow for vehicular cross-access between the proposed development's common vehicle use areas and existing common vehicle use areas for the following types of adjoining development (see Fig 5.3.5.B.5(A): Public Street Connections to and from Adjoining Development):
 - (1) Single-family attached dwellings;
 - (2) Multifamily dwellings;
 - (3) Nonresidential development; and
 - (4) Mixed-use development.

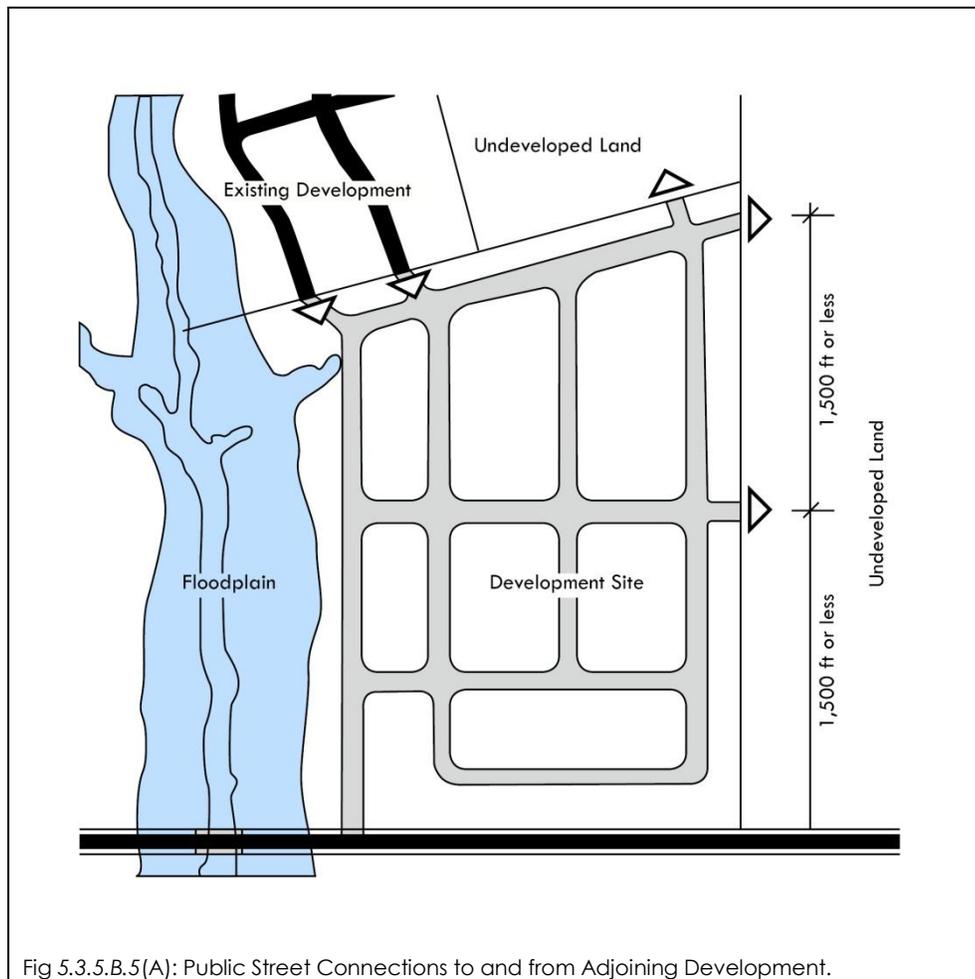
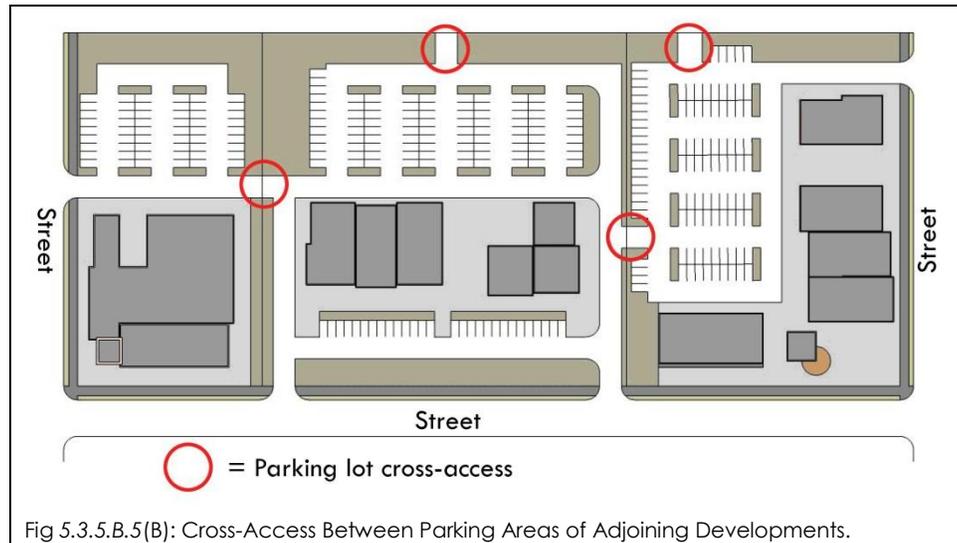


Fig 5.3.5.B.5(A): Public Street Connections to and from Adjoining Development.

- b. Vehicular cross access between adjoining lots shall be provided through the use of a frontage or service street (if the lots front on a major arterial right-of-way), a single two-way driveway or

drive aisle, or two one-way driveways or aisles that are sufficiently wide to accommodate traffic by automobiles, service vehicles, loading vehicles, and emergency vehicles.

- c. Cross-access between parking areas of adjoining developments shall be provided (see Fig 5.3.5.B.5(B): Cross-Access Between Parking Areas of Adjoining Developments).



- d. The Planning Director, in conjunction with the Town Engineer, may waive or modify the requirement for vehicular cross access on determining that such cross access is impractical or undesirable because it would require crossing a significant physical barrier or environmentally sensitive area (e.g., railroad, watercourse, floodplain, wetlands, steep slopes), or would create unsafe conditions.
- e. Easements allowing cross access to and from properties served by a vehicular cross-access, along with agreements defining maintenance responsibilities of property owners, shall be recorded with the Register of Deeds for the county in which the properties are located before issuance of a Building Permit for the development.

C. Vehicular Access Management

1. Purpose

The purpose of the access management standards in this subsection is to control vehicular access to developments from adjacent streets in a way that preserves the safe and efficient flow of the traffic on the streets while providing property owners a right to reasonable access to a general system of streets and highways. Specifically, the standards are intended to limit the number of traffic conflicts, separate basic conflict areas, separate turning volumes from through movements, and maintain progressive speeds along arterials.

2. Driveway Intersections

a. Limitation on Direct Driveway Access Along Arterials

Direct driveway access to a development's principal origin or destination points (including individual lots in a subdivision) may be provided directly from a major or minor arterial only if:

- (1) No alternative direct vehicular access from a lower-classified accessway (e.g., collector street, residential street or service drive) is available or feasible to provide;
- (2) Only one two-way driveway, or one pair of one-way driveways, is allowed onto lots with 250 or less feet of lot frontage on the major or minor arterial, and no more than one additional two-way driveway or pair of one-way driveways per additional 250 feet of frontage; or
- (3) The development(s) served by the driveway is expected to generate an average daily traffic (ADT) count of 1,000 trips or less, or the Planning Director determines that the origin or destination points accessed by the driveway will generate sufficiently low traffic volumes, and the adjacent major or minor arterial has sufficiently low travel speeds and traffic volumes, to allow safe driveway access while preserving the safety and efficiency of travel on the arterial.

b. Limitation on Direct Driveway Access Along Other Roadways

The following standards shall apply to vehicular access along a roadway other than a freeway or a major or minor arterial.

- (1) No more than two direct driveway access points shall be allowed for the following dwelling types:
 - (A) Single-family detached;
 - (B) Duplex; and
 - (C) Manufactured Home.
- (2) Vehicular access points along a street shall be minimized to protect the function, safety, and efficiency of street travel for the following types of development:
 - (A) Single-family attached dwellings;
 - (B) Multifamily dwellings;
 - (C) Institutional uses;
 - (D) Commercial uses,
 - (E) Industrial uses; and
 - (F) Mixed-use developments.
- (3) Where a corner lot or double frontage lot fronts on roadways of different classifications (see Table 5.2.2.A: Street Classifications and Design Standards), direct driveway access to the lot shall be from the lower-classified fronting street, to the maximum extent practicable.

c. Spacing of Driveway Intersections

- (1) Intersections of driveways along major or minor arterials shall be spaced at least 250 feet from any street intersection, as measured from the point of tangency of the radius curvature of the intersecting street.
- (2) Intersections of driveways serving traffic volumes exceeding 300 ADT (average daily traffic), based on the most recent edition of the Institute of Transportation Engineers Trip Generation Manual, shall be spaced at least 400 feet apart, as measured between centerlines, and shall be spaced at least 250 feet from any street intersection, as measured from the point of tangency of the radius curvature of the intersecting street.

- (3) Intersections of full access driveways open to signalization shall be spaced at least 1,000 feet apart, as measured between centerlines.
- (4) Intersections of driveways into major and neighborhood shopping centers shall be spaced at least 400 feet apart, as measured between centerlines.
- (5) Intersections of driveways along a collector street shall be spaced at least 100 feet from any street intersection, as measured from the point of tangency of the radius curvature of the intersecting street.
- (6) Intersections of driveways along a residential street shall be spaced at least 40 feet from any street intersection, as measured from the point of tangency of the radius curvature of the intersecting street.

d. Shared Driveways

- (1) Driveway access shared between adjoining lots is encouraged and may be required to limit direct vehicular access along streets (see subsections *a* and *b* above) or comply with driveway intersection spacing requirements (see subsection *c* above).
- (2) Easements allowing cross-access to and from properties served by a shared driveway, along with agreements defining maintenance responsibilities of property owners, shall be recorded with the Register of Deeds for the county in which the driveway is located before issuance of a Building Permit for the development proposing the shared driveway access.
- (3) Median breaks should be spaced at intervals no less than the applicable minimum block length (see Section 5.2.2.B, Blocks).

D. Intersection Sight Distance Triangles¹⁷⁴

Intersection sight distance triangles shall be established at each corner of all intersections of streets, as well as intersections of driveways and streets. Within intersection sight distance triangles, development and landscaping shall be restricted to enable motorists approaching the intersection to see and react to vehicular traffic approaching the intersection from other directions.

E. Fire Lanes

Fire lanes shall be installed where deemed necessary by the Fire Chief as necessary to provide the Fire Department firefighting access and comply with the Fire Code.

F. Vehicular Accessway Design Standards

All vehicular accessways (including streets, alleys, driveways, and fire lanes) and intersections of such accessways shall be designed and constructed in accordance with standards in the Town's Infrastructure and Utility Construction Standard Specifications manual.

G. Vehicle Stacking Space for Drive-Through and Related Uses

1. Required Number of Stacking Spaces

For uses with drive-through facilities and other auto-oriented uses where vehicles queue up in a driveway or drive aisle to access a service facility, the driveway or drive aisle shall include the minimum number of stacking spaces established in Table 5.3.5.G.1: Minimum Stacking Spaces for Drive-Through and Related Uses.

¹⁷⁴ This carries forward Section 7.1, Site Improvements, in the current Subdivision Regulations. It is modified so that the requirement for maintaining sight distance triangles applies to additional development types beyond subdivisions.

Table 5.3.5.G.1: Minimum Stacking Spaces for Drive-Through and Related Uses

Use	Minimum Number of Vehicle Stacking Spaces	Measured From
Automobile Service Station	1 per pump island	Each end of the outermost gas pump island
Car Wash/Detailing	2 per bay	Bay entrance
Restaurant with Drive-Through Service Facility	3 per lane [1]	Window
School, Elementary, Middle or High	40 [2]	Building entrance
Retail Sales and Service Uses with Drive-Through Service Facility	3 per lane	Window
All Other Uses	Uses not specifically listed are determined by the Planning Director based on standards for comparable uses, or alternatively based on a parking demand study	

NOTES:

- [1] Restaurants with drive-through service facilities shall provide at least four additional stacking spaces between the order box and the pick-up window—see Fig 5.3.5.G.1: Stacking Spaces for Restaurants with Drive-through Service Facility.
- [2] Drop-off/pick-up spaces for schools may include the temporary, supervised use of dual stacking lanes.

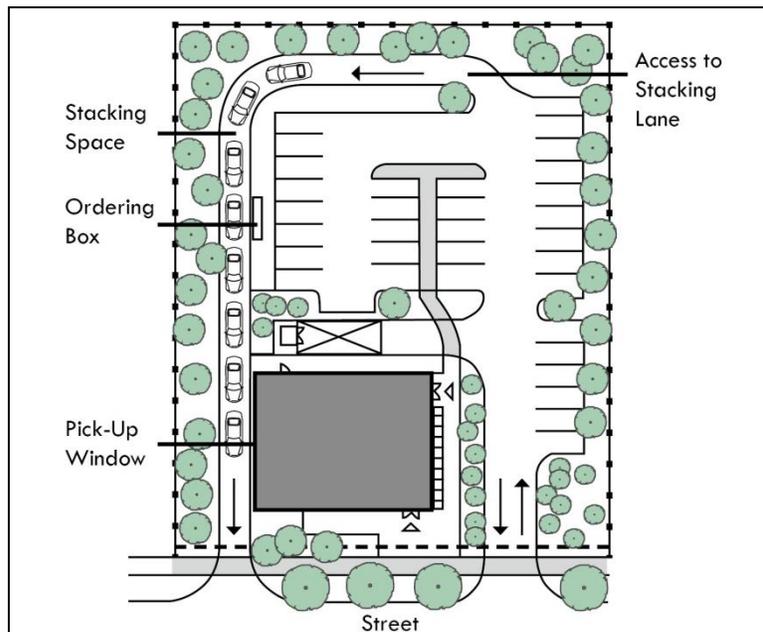


Fig 5.3.5.G.1: Stacking Spaces for Restaurant with Drive-through Service Facility.

2. Design and Layout

Required stacking spaces are subject to the following design and layout standards:

- a. Stacking spaces shall be a minimum of ten feet wide and 20 feet long.
- b. Stacking spaces shall not impede on-site or off-site vehicular traffic movements or movements into or out of off-street parking spaces.
- c. Stacking spaces shall not impede on-site or off-site bicycle or pedestrian traffic movements.
- d. Stacking spaces shall be separated from other internal driveways by raised medians that are at least four feet wide if deemed necessary for traffic movement and safety by the Planning Director.

5.3.6. Transit Facilities¹⁷⁵

Bus stops shall be located at least 100 feet from street intersections.

5.3.7. Bicycle Access and Circulation

A. Required Bicycle Access

1. All new development except single-family detached, duplex, or manufactured home (on an existing lot) dwellings shall be served by an internal bicycle circulation system (including shared roadway lanes, widened outside roadway lanes, bike lanes, shoulders, and/or separate bike paths) that permits safe, convenient, efficient, and orderly movement of bicyclists among the following origin and destination points within the development.
 - a. Bicycle parking facilities or areas near the primary entrance(s) of principal buildings (or the buildable area of lots, for subdivisions);
 - b. Any designated or planned bus stops and shelters; and
 - c. Recreation facilities and other common use area and amenities.
2. The development's internal bicycle circulation system shall also permit safe, convenient, efficient, and orderly movement of vehicles between the development's internal origin and destination points and adjoining parts of an existing or planned external, community-wide bicycle circulation system as well as any adjoining transit stations, bus stops and shelters, public parks, greenways, schools, community centers, and shopping areas.

B. Bike Lanes Required

1. All new development except single-family detached, duplex, or manufactured home (on an existing lot) dwellings shall provide bike lanes within the development site and along the entire frontage of the development site with an existing street where bike lanes are called for by the Comprehensive Plan or other Town-adopted plans addressing transportation (unless an existing bike lane meeting Town standards is already in place).
2. Such bike lane shall be provided within the right-of-way of the street unless the Planning Director determines that location within the right-of-way is not practicable or preferable—in which case, the bike path may be provided on the development site, within a dedicated widening of the right-

¹⁷⁵ This standard is based on policy direction set forth in the Pittsboro Pedestrian Transportation Plan, 2009.

of-way or a dedicated public easement running parallel and adjacent to the thoroughfare or collector street.

C. Bicycle Connectivity

1. Bikeway Connections to/from Adjoining Development and Developable Land

- a. Where a public street is extended to or from a development's boundary in accordance with Section 5.3.5.B.4, *Public Street Connectivity*, such extension shall include the extension of any bike lanes within the right-of-way of the street.
- b. The pedestrian access and circulation system for a development shall incorporate the continuation and connection of public bike paths and associated rights-of-way or easements that have been extended or connected to the boundary of the development site from existing or approved adjoining developments.
- c. The pedestrian access and circulation system for a development shall provide for the extension or connection of proposed internal public bike paths and associated rights-of-way or easements to those boundaries of the development site that adjoin potentially developable or redevelopable land.
- d. The Planning Director may waive or modify the requirements or standards for extension of a public bikeway from or to adjoining property on determining that such extension is impractical or undesirable because it would:
 - (1) Require crossing a significant physical barrier or environmentally sensitive area (e.g., railroads, watercourses, floodplains, wetlands); or
 - (2) Require the extension or connection of a proposed public bike path to an adjoining existing development whose design makes it unlikely that the bike path will ever be part of a network of public bikeways.

2. Cross Access Between Adjoining Development

To facilitate vehicular access between adjoining developments, new single-family attached dwellings, multifamily dwellings, nonresidential, and mixed-use development or redevelopment shall comply with the following standards.

- a. Any internal bicycle circulation system shall be designed to allow for bicycle cross access between it and any internal bicycle circulation system in an adjoining single-family attached, multifamily, nonresidential, and mixed-use development, or to the boundary of adjoining vacant land that is zoned to allow such single-family attached, multifamily, nonresidential, and mixed-use development.
- b. The Planning Director, in conjunction with the Town Engineer, may waive or modify the requirement for bicycle cross access on determining that such cross access is impractical or undesirable because it would require crossing a significant physical barrier or environmentally sensitive area (e.g., railroad, watercourse, floodplain, wetlands), or would create unsafe conditions.
- c. Easements allowing cross-access to and from properties served by a bicycle cross-access, along with agreements defining maintenance responsibilities of property owners, shall be recorded with the Register of Deeds for the county in which the properties are located before issuance of a Building Permit for the development.

5.3.8. Pedestrian Access and Circulation

A. Required Pedestrian Access

1. General Pedestrian Access¹⁷⁶

- a. All new development except individual single-family detached, duplex, or manufactured home (on an existing lot) dwellings on an existing lot shall be served by a system of pedestrian walkways (including sidewalks, pedestrian paths, and/or trails) that permits safe, convenient, efficient, and orderly movement of pedestrians among the following origin and destination points within the development:
 - (1) The primary entrance(s) of principal buildings (or the buildable area of lots, for subdivisions);
 - (2) Off-street parking bays (including any parking serving on-site transit stations or facilities);
 - (3) Any designated or planned bus stops and shelters; and
 - (4) Recreation facilities and other common use area and amenities.
- b. The development internal pedestrian circulation system shall also provide safe, convenient, efficient, and orderly movement of pedestrians between the development's internal pedestrian origin and destination points and adjoining parts of an existing or planned external, community-wide pedestrian circulation system as well as any adjoining transit stations, bus stops and shelters, public parks, greenways, schools, community centers, and shopping areas.

2. Sidewalks Required¹⁷⁷

- a. All new development except an individual single-family detached, duplex, or manufactured home (on an existing lot) dwellings shall install sidewalks along both sides of roadways proposed within the development site and along the entire frontage of the development site with an existing street (unless an existing sidewalk meeting Town standards is already in place). Sidewalks shall be:
 - (1) At least eight feet wide in Mixed-Use and Nonresidential Base Districts, and
 - (2) At least five feet wide in all other districts.
- b. Such sidewalks shall be provided within the right-of-way of the street unless the Planning Director determines that location within the right-of-way is not practicable—in which case, the sidewalk may be provided on the development site, within a dedicated widening of the right-of-way or a dedicated public easement and running parallel and adjacent to the street.
- c. The Planning Director may require additional sidewalks where warranted by the safety and welfare of the general public—including, but not limited to:
 - (1) Along one side of all driveway entrances to residential and nonresidential parking lots;
 - (2) In nonresidential parking lots to maximize pedestrian travel to and from each business; and
 - (3) In parking lots in accordance with Section 5.4.6.C, *Pedestrian Walkways through Large Vehicle Parking Areas*.

¹⁷⁶ This is carried forward from Section 7.1(G) in the current Subdivision Regulations. It is modified so that sidewalks and pedestrian connectivity are required, not encouraged. It is also expanded to other development applications in addition to subdivisions.

¹⁷⁷ This is carried forward from section 6.2(B), Relation to Present, Proposed, and Future Street System, of the Subdivision Regulations, and modified to promote improved pedestrian access, circulation and safety.

- d. Additional sidewalks or pedestrian walkways may be required where called for by the Comprehensive Plan.

B. Greenway Paths Required

All new development except individual lot development of a single-family detached, duplex, or manufactured home (on an existing lot) dwellings shall incorporate into its required open space any greenway path or multi-use path called for across the development site by the Parks and Recreation Master Plan. Such incorporation shall include installation of the path and recording of an associated pedestrian access easement, if applicable.

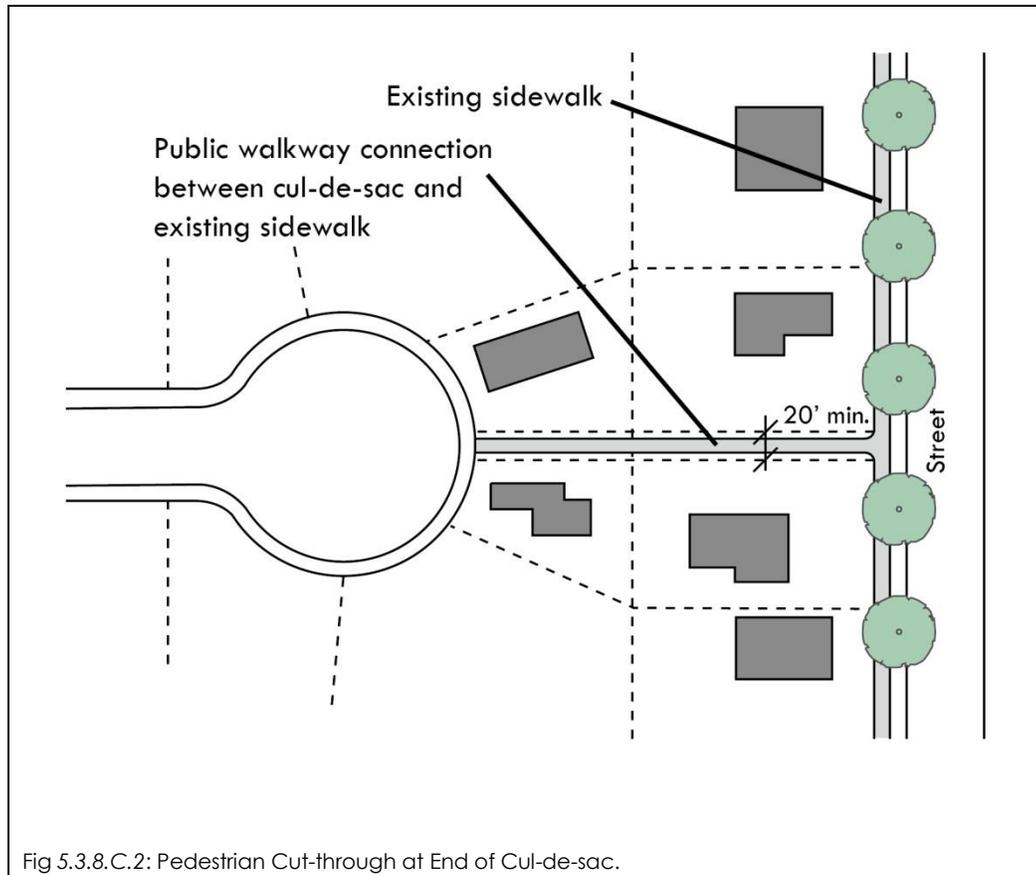
C. Pedestrian Connectivity

1. Walkway Connections to/from Adjoining Development and Developable Land

- a. Where a public street is extended to or from a development site's boundary in accordance with Section 5.3.5.B.4, *Public Street Connectivity*, such extension shall include the extension of any sidewalks within the right-of-way of the street.
- b. The pedestrian access and circulation system for a development shall incorporate the continuation and connection of public walkways and associated rights-of-way or easements that have been extended or connected to the boundary of the development site from existing or approved adjoining developments.
- c. The pedestrian access and circulation system for a development also shall provide for the extension or connection of proposed internal public walkways and associated rights-of-way or easements to those boundaries of the development site that adjoin potentially developable or redevelopable land.
- d. The Planning Director may waive or modify the requirements or standards for extension of a public walkway from or to adjoining property on determining that such extension is impractical or undesirable because it would:
 - (1) Require crossing a significant physical barrier or environmentally sensitive area (e.g., railroads, watercourses, floodplains, wetlands); or
 - (2) Require the extension or connection of a proposed public walkway to an adjoining existing development whose design makes it unlikely that the walkway will ever be part of a network of public walkways (e.g., the adjoining existing development has no public walkways or there are no open corridors between the proposed development site and public walkways in the adjoining development to accommodate a current or future extension or connection).

2. Pedestrian Cut-Throughs

- a. On determining that such connection is necessary to provide convenient pedestrian access within a development or to adjacent schools, transit facilities, recreation facilities, or commercial developments, the Planning Director may require pedestrian walkways to be provided between the ends of cul-de-sacs and the nearest existing or proposed public walkway (e.g., sidewalk, pedestrian path, or trail). (See Fig 5.3.8.C.2: Pedestrian Cut-through at End of Cul-de-sac.)



- b. On determining that such connection is necessary to provide convenient pedestrian access within a development or to adjacent schools, transit stations, recreation facilities, or commercial developments, the Planning Director may require a pedestrian walkway to be provided through approximately the centers of blocks more than 900 feet long.
- c. These pedestrian cut-through walkways shall be located within a right-of-way or a public access easement within common open space. The easement shall be at least 20 feet wide.

3. Cross Access Between Adjoining Development

To facilitate pedestrian access between adjoining developments, new single-family attached dwellings, multifamily dwellings, nonresidential, and mixed-use development shall comply with the following standards:

- a. The internal pedestrian circulation system shall be designed to allow for pedestrian walkway cross-access between the development's buildings and parking areas and adjoining properties with single-family attached dwellings, multifamily dwellings, nonresidential, mixed-use development or zoning that would allow for such development.
- b. The Planning Director, in conjunction with the Town Engineer, may waive or modify the requirement for pedestrian cross-access on determining that such cross-access is impractical or undesirable due to the presence of topographic conditions, natural features, or safety factors.
- c. Easements allowing cross-access to and from properties served by a pedestrian cross-access, along with agreements defining maintenance responsibilities of property owners, shall be

recorded with the Register of Deeds for the county in which the properties are located before issuance of a Building Permit for the development.

Section 5.4. Parking and Loading¹⁷⁸¹⁷⁹

5.4.1. Purpose

The purpose of this section is to ensure provision of off-street parking and loading facilities in proportion to the generalized parking and loading demand of the different uses allowed by this Ordinance. The standards in this section are intended to provide for adequate off-street parking and loading while allowing the flexibility needed to accommodate alternative solutions.

The standards are also intended to achieve Town policies of supporting development and redevelopment of transit-oriented development and commercial corridors, accommodating appropriate infill development, and encouraging pedestrian-oriented development while avoiding excessive paved surface areas, promoting low impact development, and safeguarding historic resources.

5.4.2. Applicability¹⁸⁰

A. New Development

All new development shall provide off-street parking and loading areas in accordance with the standards of this section, except for development in the Downtown District.

B. Existing Development

1. Change in Use

Any change in use of an existing development shall be subject to these parking and loading standards to the maximum extent practicable.

2. Expansion

If an existing structure or use is expanded or enlarged in terms of the size unit used in this section to determine the minimum number of off-street parking spaces or loading spaces required for the applicable use (e.g., number of dwelling units, floor area, number of employees, seating capacity) such expansion or enlargement shall be accompanied by provision of any additional off-street parking and loading spaces needed to make up the difference between the minimum number of spaces required by this section for the existing development and the minimum number of spaces required by this section for the expanded or enlarged development.

¹⁷⁸ This section consolidates existing standards related to vehicle parking and loading, and bicycle standards. Standards are also modified and expanded in order to modernize parking and loading standards as noted in the Pittsboro Code Assessment. The key changes include:

- Updating parking ratios;
- Allowing alternative parking arrangements;
- Providing for compact vehicle parking spaces;
- Limiting the amount of parking that is located in front of a building; and
- Breaking up large parking lots.

¹⁷⁹ All sections are new unless otherwise noted. The following sections in the Zoning Ordinance have been deleted or are addressed in other sections of the Ordinance as noted below:

- Sections 7.1.1(B) and (C) are recommended to be located in the Administrative Manual.
- Section 7.1.1(D) is addressed in *Article 8: Development Review Procedures*.

¹⁸⁰ This section carries forward section 7.1.1(A) in the current Zoning Ordinance.

3. Upgrading of Parking and Loading Nonconformities

Where existing development is nonconforming in terms of compliance with this section's standards for off-street parking and loading, such development is subject to the limitations and upgrading requirements in Section 6.7, Nonconforming Site Features.

5.4.3. Off-Street Vehicle and Bicycle Parking Space Requirements¹⁸¹

A. Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces

Except as otherwise provided in this Ordinance, new development shall provide the minimum number of off-street vehicle and bicycle parking spaces in accordance with Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces, based on the principal use(s) involved and the extent of development. Interpretation of the off-street vehicle parking space requirements for uses with variable parking demands or unlisted uses is provided in Section 5.4.3.B, *Uses with Variable Vehicle Parking Demand Characteristics and Unlisted Uses*.

Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces [1]

Use Category	Use Type	Minimum Number of Vehicle Parking Spaces [2][3][4][5][6]	Minimum Number of Bicycle Parking Spaces
Agricultural and Animal Related Uses			
Agriculture	Community Garden	2	n/a
	Farm	n/a	
	Garden Center	1 per 375 sf of sales and service area	
	Forestry	n/a	
	Game Preserves, Fish Hatcheries, and Ponds		
	Greenhouse/ Nursery	1 per 375 sf of sales and service area	
Agricultural Support Services	Equestrian Facility	1 per 2 stalls	n/a
	Grain Storage Facility	2	n/a
	Sawmill	2	n/a

¹⁸¹ This section carries forward section 7.2.1, Off-street Parking Requirements, in the current Zoning Ordinance. Use types are modified consistent with Article 3: Use Standards, and ratios are modified to align with best practices for vehicle parking and to include bicycle parking.

Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces [1]

Use Category	Use Type	Minimum Number of Vehicle Parking Spaces [2][3][4][5][6]	Minimum Number of Bicycle Parking Spaces	
Animal Related Uses	Kennel, Indoor and Outdoor	1 per 300 sf of sales, grooming, or customer waiting area plus 2/3 employees on the largest shift	2	
	Stable	1 per 5 stalls	n/a	
	Veterinary Clinic/Hospital	4 per doctor plus 1 per employee including doctors	2	
Residential Uses				
Household Living	Dwelling, Duplex	2 parking spaces per dwelling unit on the same lot	n/a	
	Dwelling, Live/Work			
	Dwelling, Manufactured Home			
	Dwelling, Multifamily	1 bedroom	1.25 parking spaces per dwelling unit	Greater of 4 per building or 1 per 25 du Greater of 2 per building or 1 per 50 du
		2 bedroom	1.5 parking spaces per dwelling unit	
		3+ bedrooms	2.0 parking spaces per dwelling unit	
	Dwelling, Single-Family Detached	2 parking spaces per dwelling unit on the same lot	n/a	
	Dwelling, Single-Family Attached [7]	1.25 per du	n/a	
	Family Care Home	1 per 4 bed plus 1 per employee and visiting specialist plus 1 per vehicle used in operation	2	
	Group Care Home		2 per building	
Pocket Neighborhood				
Group Living	Congregate Living Facility	1 per 3 bedrooms + 1 per 300 sf of office area	2 per building	
	Rehabilitation Center	1 per resident staff member, plus 2/3 nonresidential staff member and/or volunteers on the largest shift, plus 1 per each vehicle used in operation		
	Continuing Care Retirement Community	Sum of minimum for component parts		
	Dormitory	1 space per 5 beds	4 per building	
	Rooming House	1 per guest room	2	
	Manufactured Home Park	2 parking spaces per dwelling unit on the same lot	n/a	
Institutional Uses				
Community and	Clubs, Lodges, and Banquet Halls	1 per 120 sf of assembly space	Greater of 2 or 1 per 50 vehicle parking spaces	

Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces [1]

Use Category	Use Type	Minimum Number of Vehicle Parking Spaces [2][3][4][5][6]	Minimum Number of Bicycle Parking Spaces
	College, University, or Vocational School	7 per classroom plus ¼ beds on main campus dorms plus 1/250 sf of office space plus 1/5 fixed seats in assembly halls and stadiums	1 per 20 students and employees
	Community Center	1 per 450 sf of gross floor area for public use plus 2 per 3 employees on largest shift	Greater of 6 or 1 per 25 vehicle parking spaces
	Correctional Facility	1 per 10 inmates plus 2/3 employee on largest shift plus 1 per vehicle used in the operation	
	Cultural Facility	1 per 450 sf of gross floor area for public use plus 2 per 3 employees on largest shift	Greater of 6 or 1 per 25 vehicle parking spaces
	Day Care Center	1 per employee plus 1 per 10 children with parking located on site	2
	Emergency Services	1 per employee on largest shift	2
	Government Services, Administrative	1 per 150 sf of public service area plus 2 per 3 employees on largest shift	Greater of 2 per building or 1 per 25,000 sf
	Government Maintenance, Storage, or Distribution Facility	1 per 600 sf	2
	Place of Worship	1 per 4 seats in main chapel	1 per 50 vehicle parking spaces
	Public Park or Recreation Facility	See Section 5.4.3.B	Greater of 6 or 1 per 25 vehicle parking spaces
	School, Elementary	3 per room used for offices plus 3 per classroom	1 per 20 students above 2 nd grade and all employees
	School, High	3 per room or offices plus 7 per classroom	1 per 20 students and employees
	School, Middle	3 per room used for offices plus 3 per classroom	
Health Care	Hospital	1 per 4 in-patient or out-patient beds plus 2/3 employees on largest shift plus 1 per staff doctor	Greater of 2 per building or 1 per 25,000 sf
	Nursing Home	1 per 4 beds plus 1 per employee and visiting specialist plus 1 per vehicle used in the operation	2 per building
	Urgent Care Facility	1 per 300 sf	Greater of 2 per building or 1 per 25,000 sf
	Office, Medical/ Dental	3 per examining room plus 1 per employee including doctor	
	Office Park, Medical/ Dental	1 per 300 sf	
Transportation, Communication, and Utility Uses	Broadcasting Station	1 per 1,000 sf	Greater of 2 per building or 1 per 25,000 sf
	Broadcast Studio		
	Airport Facilities	1 per 4 seats plus 2 per 3 employees on the largest shift	n/a
	Office, Utility	1 per 300 sf	Greater of 2 per building or 1 per 25,000 sf

Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces [1]

Use Category	Use Type	Minimum Number of Vehicle Parking Spaces [2][3][4][5][6]	Minimum Number of Bicycle Parking Spaces	
	Park and Ride Terminal	n/a	1 per 20 vehicle parking spaces	
	Parking Deck or Lot (as a principal use)			
	Railroad Yard		n/a	
	Solar Energy Collection System (as a principal use)			
	Telecommunications Facility	No required parking		
	Transit Station	1 per 400 sf of passenger waiting area	1 per 20 vehicle parking spaces	
	Utility Facility, Major	See Section 5.4.3.B	n/a	
	Utility Facility, Minor			
Commercial Uses				
Eating and Drinking Establishments	Restaurant	1 per 4 seats plus 2/3 employees on the largest shift & 11 total stacking spaces with minimum 5 spaces at or before ordering station	Greater of 2 or 1 per 50 vehicle parking spaces	
	Specialty Food Service	1 per 200 sf		
	Bar or Nightclub	1 per 3 persons based upon the design capacity of the building plus 2/3 employees on the largest shift, located on the same zone lot		
Office Uses	Office Building	1 per 300 sf	Greater of 2 per building or 1 per 25,000 sf	
	Office Park	1 per 400 sf		
Recreation and Entertainment	Adult Establishment	1 per 300 sf	Greater of 2 or 1 per 50 vehicle parking spaces	
	Country Club	1 per tee	Greater of 6 or 1 per 50 vehicle parking spaces	
	Golf Course	1 per tee		
	Fairgrounds	1 per 200 sf of activity area		
	Theater, Indoor	1 per 4 seat		
	Theater, Outdoor	1 per 5 persons based upon the design capacity of the building		
	Private Recreation/Entertainment Facility, Indoor	Basketball facility		2 per basket
		Bowling alley		4 per lane
		Health exercise facility		1 per 200 sf gross floor area
Racquet sports facility		3 per court		
Skating rink		1 per 500 sf 1 per 250 sf		

Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces [1]

Use Category	Use Type	Minimum Number of Vehicle Parking Spaces [2][3][4][5][6]	Minimum Number of Bicycle Parking Spaces
		Sport shooting range	1 per firing point
		Swimming pool	1 per 100 sf of water and deck space
		Other	See Section 5.4.3.B
	Private Recreation/Entertainment Facility, Outdoor	Basketball facility	2 per basket
		Racquet sports facility	3 per court
		Swimming pool	1 per 100 sf of water and deck space
		Other	See Section 5.4.3.B
Gaming Operation		1 per 200 sf	
Funeral Related Uses	Funeral Home or Crematorium	1 per 4 seats in main chapel plus 2/3 employees on the largest shift plus 1 per vehicle used in the largest operation	2
	Cemetery	1 per 500 sf of office area plus 1 per 5 seats in assembly area	n/a
Retail Sales and Service Uses	Convenience Store	1 per 200 sf gross floor area plus 4 stacking spaces at pump islands	2
	Farmers' Market	1 per 500 sf of sales area	
	Retail Store	1 per 300 sf	Greater of 2 or 1 per 50 vehicle parking spaces
	Service Establishment	3 per operator	
	Service Establishment, Personal		
	Shopping Center	1 per 250 sf	Greater of 2 per building or 1 per 25,000 sf
Vehicle Service, Sales, And Related Uses	Automobile Repair, Major	3 per service bay plus 1 per wrecker or service vehicle plus 2/3 employees on the largest shift	n/a
	Automobile Repair, Minor		
	Automobile Repair, Commercial		
	Automobile Sales or Rental	1 per 400 sf of indoor display area and office space	Greater of 2 or 1 per 50 vehicle parking spaces
	Automobile Sales or Rental, Commercial	5 spaces plus 1 per 10,000 sf of display area plus 2/3 employees on shift	
	Automobile Service Station	2 + 1 per pump	2
	Car Wash/Detailing	Full service: Stacking for 30 vehicles or 10 per approach lane whichever is greater plus 3 spaces in the manual drying area plus 2/3 employees on the largest shift. Self service: 3 stacking spaces per approach lane plus 2 drying spaces per stall	n/a

Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces [1]

Use Category	Use Type	Minimum Number of Vehicle Parking Spaces [2][3][4][5][6]	Minimum Number of Bicycle Parking Spaces
	Tire Capping and Retreading	1 per 500 sf	n/a
	Vehicular Fleet Storage	2 per 3 employees on the largest shift plus 1 per vehicle used in the operation	
Lodging	Bed and Breakfast	1 per bedroom plus 2/3 employees on the largest shift	2
	Hotel/Motel	1.1 or 1.25 per rental unit (see article 7 standards)	
Industrial Uses			
Industrial and Services Uses	Construction-Related Activities	1 per 400 sf of office space	2
	Industrial Park	1 per 1,000 sf	
	Industrial and Large Equipment Sales and Rental	1 per 200 sf gross floor area	
	Mini-Storage	1 space per 5,000 sf devoted to storage	2
	Outdoor Equipment Performance Testing Facility	2/3 employees on the largest shift plus 1 per 250 sf of office space	
	Research Laboratory		2
	Warehousing and Distribution	2 per 3 employees on the largest shift plus 1 per vehicle used in operation	
	Wholesale Food Preparation	1 per 1,000 sf	
	Wholesale Establishment	2 per 3 employees on the largest shift plus 1 per 200 sf of retail sales or customer service area plus 1 per vehicle used in the operation	
		Fuel Oil Sales	2 per 3 employees on largest shift plus 1 per vehicle used in the operation
Manufacturing	Brewery	1 per 300 sf of accessory public retail sales, restaurant, or tasting room space plus 1 per 1,000 sf of other space	2
	Manufacturing, Custom		
	Manufacturing, Light		
	Manufacturing, Medium		
	Manufacturing, Heavy		
	Micro-Brewery		
	Micro-Winery		
	Winery		
Extraction and Landfill Uses	Composting Facility	See Section 5.4.3.B	2
	Excavation		n/a
	Landfill, Debris	No required parking	n/a

Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces [1]

Use Category	Use Type	Minimum Number of Vehicle Parking Spaces [2][3][4][5][6]	Minimum Number of Bicycle Parking Spaces
	Landfill, Sanitary / Transfer Station / Recycling Center	1 per employee	2
	Recycling Drop-off Station		

sq ft = square feet du = dwelling unit

NOTES:

- [1] See Sections 5.4.5, *General Standards for Off-Street Vehicle Parking and Loading Areas*, Section 5.4.6, *Off-Street Parking Arrangement and Design*, and Section 5.4.8, *Off-Street Bicycle Parking Arrangement and Design*, for applicable design standards.
- [2] When computation of the number of required parking spaces results in a fraction, the result shall be rounded upward to the next highest whole number.
- [3] Except as otherwise provided in this section, where the minimum off-street parking space requirement is based on square feet of floor area, all computations shall be based on gross floor area.
- [4] Except as otherwise provided in this section, where the minimum off-street parking space requirement is based on the number of seats, all computations shall be based on the design capacity of the areas used for seating.
- [5] Except as otherwise provided in this section, where the minimum off-street parking space requirement is based on the maximum occupancy capacity, all computations shall be based on the occupant load of the building or facility as established in accordance with the Building Code.
- [6] Except as otherwise provided in this section, where the minimum off-street parking space requirement is based on the number of employees, students, or residents, all computations shall be based on the largest number of persons working on any single shift (for employees), or the maximum enrollment (for students), or the fire-rated capacity (for residents), as appropriate.
- [7] Off-street parking spaces for a single-family attached dwelling may be provided on the lot containing the individual dwelling unit or within common parking areas, provided such off-lot spaces serving the resident or guest parking needs of the unit are located within convenient walking distance of the unit.

B. Uses with Variable Vehicle Parking Demand Characteristics and Unlisted Uses

For some listed uses, Table 5.4.3.A refers to this Section (5.4.3.B) because the use has widely varying vehicle parking and loading demand characteristics, making it difficult to establish a single appropriate off-street vehicle parking or loading standard. On receiving an application proposing such a use, or proposing a use not expressly listed in Table 5.4.3.A: Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces, the Planning Director is authorized to:

1. Apply the minimum off-street parking space requirement specified in Table 5.4.3.A for the listed use that is deemed most similar to the proposed use; or
2. Establish the minimum off-street parking space requirement by reference to standard parking resources published by the National Parking Association or the American Planning Association; or
3. Establish the minimum off-street parking space requirement based on a parking demand study prepared by the applicant that estimates parking demand based on the recommendations of the Institute of Traffic Engineers or other acceptable source of parking demand data, and that includes relevant data collected from uses or combinations of uses that are the same or comparable to the proposed use in terms of density, scale, bulk, area, type of activity, and location.

C. Requirements for Developments with Multiple Uses¹⁸²

Developments containing more than one principal institutional or commercial use shall provide vehicle parking spaces in an amount equal to the total of the requirements applied to all individual principal uses. This provision shall not limit the opportunity to reduce the minimum number of required off-street vehicle parking spaces through approval of an alternative parking plan that justifies the feasibility of shared parking (See Section 5.4.9.B, Shared Parking.)

D. Maximum Number of Off-Street Vehicle Parking Spaces

The number of off-street vehicle parking spaces shall not exceed 125 percent of the minimum number of parking spaces, unless allowed in accordance with Section 5.4.9.A, Provision Over Maximum Allowed.

E. Compact Vehicle Parking Spaces

1. Up to 20 percent of the required number of off-street vehicle parking spaces may be designed to accommodate compact vehicles.
2. Compact vehicle parking spaces may only be used where the parking angle is 90 degrees.
3. Compact vehicle parking spaces shall consist as one or more group(s) of contiguous spaces located where they can be readily identified by vehicle drivers through signage and/or pavement marking.

F. Electric Vehicle (EV) Charging Stations

1. Up to ten percent of the required number of off-street vehicle parking spaces may be used and designated as electric vehicle (EV) charging stations, subject to the use-specific standards in Section 4.3.5 and subsection 2 below. Such spaces may include one required accessible parking space (see subsection K below). The Planning Director shall have authority to approve the use and designation of additional required parking spaces as electric vehicle charging stations, provided that such additional spaces shall count as only one-half of a parking space when computing the minimum number of parking spaces required.
2. Vehicle parking spaces used as electric vehicle charging stations shall consist as one or more group(s) of contiguous spaces located where they can be readily identified by electric vehicle drivers (e.g., through directional signage), but where their use by non-electric vehicles is discouraged (e.g., not in locations most convenient to the entrances of the buildings served).

G. On-Street Vehicle Parking

Except as authorized as part of an alternative parking plan in Section 5.4.9, Off-Street Parking Alternatives, on-street vehicle parking on streets or driveways shall not be used to satisfy the off-street vehicle parking standards of this section.

H. Shared Parking¹⁸³

Parking spaces shall not be counted toward a building or use if similarly included for a separate building or use unless authorized by Section 5.4.9.B, Shared Parking.

I. Off-site Parking¹⁸⁴

Unless authorized by Section 5.4.9.C, Off-Site Parking, Off-street parking spaces shall be located on the same lot as the use, or on a separate lot if:

¹⁸² This carries forward Section 7.2(C), in the current Zoning Ordinance.

¹⁸³ This carries forward Section 7.2(A), in the current Zoning Ordinance.

¹⁸⁴ This carries forward Section 7.2(B), in the current Zoning Ordinance. It is modified to align with best practices.

1. The parking area is located within 200 feet of the use's principal entrance; and
2. The lot is owned or managed by the same owner as the use.

J. Driveways Used to Satisfy Off-Street Vehicle Requirements

For single-family detached, duplex, manufactured home, and single-family attached dwellings, only driveways may be used to satisfy minimum off-street vehicle parking space requirements, provided sufficient space is available outside a street right-of-way or easement to satisfy the standards of this section and this Ordinance. The use of a garage or carport to meet this requirement shall be prohibited.

K. Accessible Parking Spaces for Physically Disabled Persons

In each off-street parking area, a portion of the total number of off-street vehicle parking spaces shall be spaces specifically designated, located, and reserved for use by persons with physical disabilities ("accessible parking spaces"), in accordance with the standards of the North Carolina Accessibility Code for Building Construction.

5.4.4. Off-Street Loading Space Requirements¹⁸⁵

A. Minimum Number of Off-Street Loading Spaces

1. New development involving the routine vehicular delivery or shipping of goods, supplies, or equipment to or from the development site shall provide a sufficient number of off-street loading spaces to accommodate the delivery and shipping operations of the development's uses in a safe and convenient manner.
2. Table 5.4.4.A: *Minimum Number of Off-Street Loading Spaces*, sets forth the minimum number of loading spaces that presumptively satisfies the loading space needs of medium-sized and large-sized delivery/shipping trucks based on the use classification or category of the principal use and the size of the development. It is assumed that the needs of small delivery/shipping trucks can be met through the temporary use of parking spaces or vehicle use areas, without impeding or blocking the use of adjacent driveways or fire lanes.
3. The Planning Director may require a higher or lower number of loading spaces than called for by Table 5.4.4.A: *Minimum Number of Off-Street Loading Spaces*, on determining that the characteristics of the particular development warrant such an increase or decrease and the general standard in subsection 1 is met.

Table 5.4.4.A: Minimum Number of Off-Street Loading Spaces^[1]		
Gross Floor Area (GFA)	Minimum Number of Loading Spaces	
	Medium-Sized Truck	Large-Sized Truck
Institutional and Office Uses [2]		
Up to 10,000 sf	0	0
10,001 to 50,000 sf	1	0

¹⁸⁵ This section carries forward Section 7.2(B), in the current Zoning Ordinance. Standards are modified to align use classifications set forth in Article 3: Use Standards, and units of measurement and ratios are modified to simplify the table structure and align with best practices.

Table 5.4.4.A: Minimum Number of Off-Street Loading Spaces ^[1]		
Gross Floor Area (GFA)	Minimum Number of Loading Spaces	
	Medium-Sized Truck	Large-Sized Truck
50,001 to 500,000 sf	2	0
Over 500,000 sf	2 medium-sized truck spaces; additional spaces based on development-specific assessment	
Commercial Uses Other than Office Uses [2]		
Up to 5,000 sf	0	1
5,001 to 20,000 sf	0	1
20,001 to 50,000 sf	1	1
50,001 to 100,000 sf	1	2
100,001 to 200,000 sf	2	2
Over 200,000 sf	3 medium-sized truck spaces and 2 large-sized truck space; additional spaces based on development-specific assessment	
Industrial Uses		
Up to 5,000 sf	0	0
5,001 to 10,000 sf	1	0
10,001 to 50,000 sf	0	1
50,001 to 100,000 sf	0	2
100,001 to 150,000 sf	0	3
Over 150,000 sf	3 large truck spaces; additional spaces based on development-specific assessment	
sf = square feet		
NOTES:		
1. See Sections 5.4.5, <i>General Standards for Off-Street Vehicle Parking and Loading Areas</i> , and Section 5.4.7, <i>Off-Street Loading Area Arrangement and Design</i> , for applicable design standards.		
2. For mixed-use developments, gross floor area devoted to residential uses is excluded.		

5.4.5. General Standards for Off-Street Vehicle Parking and Loading Areas

A. Use of Parking and Loading Areas

1. Off-street vehicle parking areas required by this section shall be used solely for the parking of licensed motorized vehicles in operating condition.
2. Required off-street vehicle parking spaces and loading spaces for nonresidential uses other than hotels shall not be used for:
 - a. Overnight parking of vehicle or containers—including, but not limited to, semi-trailer trucks, semi-trailers, or recreational vehicles, mobiles homes, and other vehicles providing transient residency, or similar uses;
 - b. The display or storage of goods for sale or lease (except storage of vehicles as part of an automobile or recreational vehicle sales or rental use, or a temporary portable storage unit);
 - c. The dismantling or service of any motor vehicles, recreational vehicles, or manufactured homes; or
 - d. Other vehicles or containers used for storage of building materials, equipment, or supplies.

B. Surfacing¹⁸⁶

All off-street vehicle parking, loading areas, fire lanes, vehicle fleet storage, and permanent fire access roads/areas shall be surfaced with asphalt, concrete, brick, pavers, or an equivalent hard, dustless, and bonded surface material. Use of surfacing that includes recycled materials is encouraged. These surfaces shall be maintained in a smooth, well-graded, clean, orderly, and dust-free condition. The use of gravel is prohibited.

C. Safe and Convenient Access

1. Off-street vehicle parking and loading areas shall be arranged for convenient access between an adjacent street and all parking spaces and loading spaces to facilitate ease of mobility, ample clearance, and safety of vehicles and pedestrians. Each off-street parking space and loading space shall have adequate, unobstructed means for the ingress and egress of vehicles.
2. Except for driveways serving as off-street vehicle parking areas for single-family detached, duplex, manufactured home, and single-family attached dwellings, off-street vehicle parking and loading areas shall:
 - a. Include painted lines, wheel stops, or other methods of identifying individual parking spaces and loading spaces and distinguishing such spaces from aisles;
 - b. Be arranged so that no vehicle maneuvering incidental to parking or loading shall occur on a public street or sidewalk (but such maneuvering may occur on an alley or driveway);
 - c. Provide suitable maneuvering room so that vehicles may enter an abutting public street in a forward direction; and
 - d. Be arranged so an automobile may be parked or unparked without moving another automobile (unless within an automated or mechanical parking deck or garage or part of valet or tandem parking in accordance with Section 5.4.9.E, Valet and Tandem Parking).
3. Driveways that may serve as off-street vehicle parking areas for single-family detached, duplex, manufactured home, and single-family attached dwellings shall provide at least 20 feet of separation between the street right-of-way or easement and the entrance into any garage or carport (to accommodate the outside parking of at least one vehicle on the driveway without it encroaching into the street right-of-way or easement).
4. Off-street loading areas shall be arranged so that no loading space extends into the required aisle of a parking lot.

D. Markings

1. Except for driveways serving as off-street vehicle parking areas for single-family detached, duplex, manufactured home, and single-family attached dwellings, each required vehicle off-street parking area and space, and each off-street loading area and space, shall be identified by surface markings that are arranged to provide for orderly and safe loading, unloading, parking, and storage of vehicles. Such markings shall include 4-inch-wide striping, directional arrows, lettering on signs and in handicapped-designated areas, and labeling of the pavement.
2. One- and two-way entrance driveways into required vehicle parking facilities shall be identified by directional arrows. Any two-way entrance driveway located at any angle other than 90 degrees to a street shall be marked with a traffic separation stripe running the length of the access. This requirement does not apply to aisles within parking bays.

¹⁸⁶ This carries forward and modifies Sections 7.2(F) and (G), in the current Zoning Ordinance.

E. Exterior Lighting

Lighted off-street vehicle parking and loading areas shall comply with the standards of Section 5.9, Outdoor Lighting.

F. Landscaping

Except for driveways serving as off-street vehicle parking areas for single-family detached, duplex, manufactured home, and single-family attached dwellings, all off-street vehicle parking and loading areas shall comply with the standards of Section 5.6, Landscaping.

G. Maintained In Good Repair

1. Maintained at All Times

All off-street vehicle parking and loading areas shall be maintained in safe condition and good repair at all times so as not to constitute a hazard to public safety or a visual or aesthetic nuisance to surrounding land.

2. Periodically Restored

All off-street vehicle parking and loading areas shall be periodically painted or otherwise restored to maintain a clear identification of separate parking spaces or loading spaces.

5.4.6. Off-Street Parking Arrangement and Design

Parking Lot Location

1. Mixed-Use and Nonresidential Base Districts

- a. For nonresidential and mixed-use developments located in a Mixed-Use and Nonresidential Base District (except as provided in Section 5.11, Commercial Development Design), no more than one single-loaded bay of off-street surface vehicle parking may be located between the development's principal buildings(s) and abutting streets (see Fig 5.4.6.1: Single-loaded Bay of Off-street Surface Vehicle Parking).

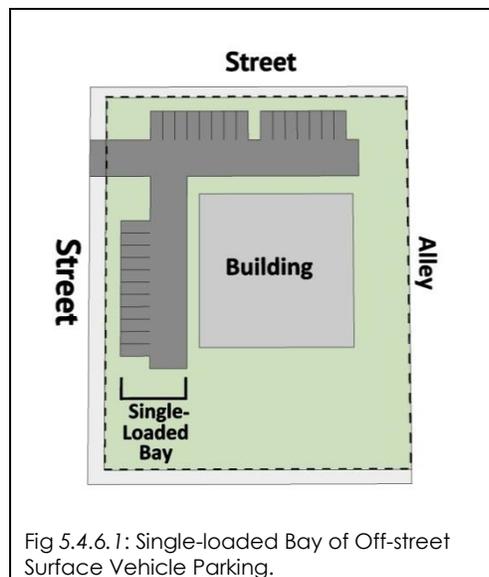


Fig 5.4.6.1: Single-loaded Bay of Off-street Surface Vehicle Parking.

- b. On determining that it is impracticable to locate only one single-loaded bay of off-street surface vehicle parking between the development's principal buildings(s) and abutting

streets, the Planning Director may allow alternative locations and arrangements of the surface parking—provided that in addition to vehicle use area screening required by Section 5.7, Screening, a Type G, Option 2 streetyard buffer shall be provided between a street and any surface vehicle parking located between it and the development's principal building(s) (see Section 4.6, Perimeter Buffers).

2. Other Districts

- a. For nonresidential and mixed-use developments located within a Mixed-Use and Nonresidential Base District (except as provided in Section 5.11, Commercial Development Design), no more than 50 percent of the overall required parking shall be located between the development's principal building(s) and abutting streets (see Fig 5.4.6.2: Fifty Percent of Overall Parking Located Between the Buildings and Abutting streets.)
- b. On determining that it is infeasible to locate 50 percent or less of the overall required parking between the development's principal building(s) and abutting streets, the Planning Director may allow alternative locations and arrangements of the surface parking—provided that in addition to vehicle use area screening requirements required by Section 5.7, Screening, a Type I, Option 2 streetyard buffer shall be provided between a street and any surface vehicle parking located between it and the development's principal building(s) (see Fig 5.4.6.2: Fifty Percent of Overall Parking Located Between Buildings and Abutting Streets).

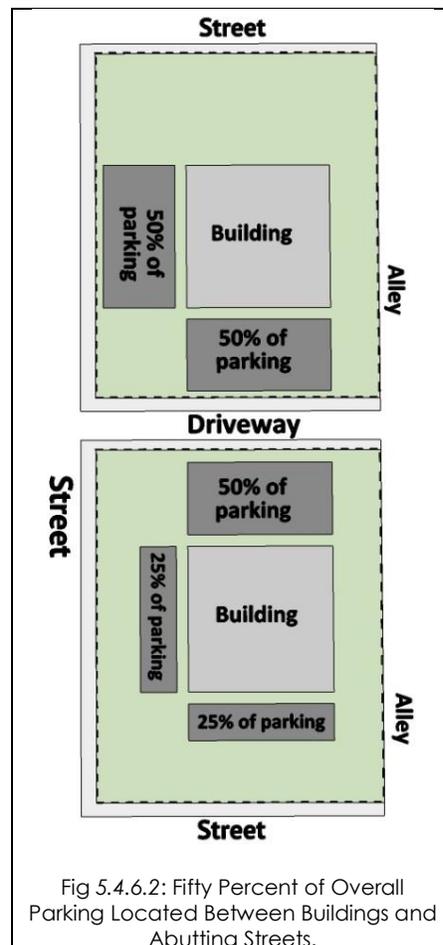


Fig 5.4.6.2: Fifty Percent of Overall Parking Located Between Buildings and Abutting Streets.

B. Vehicle Stacking Space for Parking Area Entrance Driveways

1. Driveway openings shall not exceed 25 feet in width unless the Planning Director determines a greater width is necessary.¹⁸⁷
2. No parking stall shall be located in a manner that would require a vehicle to back onto a public right-of-way.¹⁸⁸
3. Except for driveways serving as off-street vehicle parking areas for single-family detached, duplex, manufactured home, and single-family attached dwellings, the length of a driveway serving as the vehicular entrance to any off-street surface vehicle parking area shall comply with the minimum stacking lane distance established in Table 5.4.6.B: Minimum Stacking Lane Distance for Parking Lot Entrance Driveways (see Section 10.4.1.N, Stacking Lane Distance for a Parking Lot Entrance Driveway).

Table 5.4.6.B: Minimum Stacking Lane Distance for Parking Lot Entrance Driveways	
Number of Off-Street Parking Spaces [1]	Minimum Stacking Lane Distance (feet) [2,3]
1 – 49	25
50 – 249	50
250 – 499	100
500 or more	100 + 15 ft for every additional 50 spaces beyond 500

NOTES:

[1] Entrances into parking structures may be credited toward the stacking lane distance requirement provided the parking structure entrance is accessed from a development driveway and not a primary drive aisle.

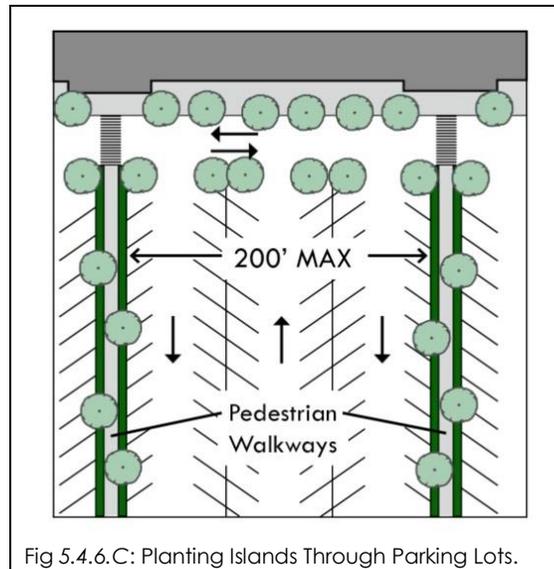
[2] Stacking lane distance is measured from the intersection of the driveway with the street right-of-way, along the centerline of the stacking lane, to its intersection with the centerline of the first entrance into a parking area or other internal intersecting driveway.

[3] If the parking area is served by more than one entrance driveway, the Planning Director can approve a reduction or increase in the stacking distance for any one entrance driveway in order to allow the minimum requirement to be allocated to other driveway(s). The sum of all driveways must meet or exceed the minimum stacking lane distance requirement in this table.

C. Pedestrian Walkways through Large Vehicle Parking Areas

1. All vehicle parking lots and parking structures containing more than 50 parking spaces shall provide a clearly identified pedestrian route between parking areas and the primary pedestrian entrance(s) to the building(s) served by the parking areas, or to a pedestrian walkway providing direct access to the primary building entrance(s).
2. A vehicle parking lot containing more than 50 parking spaces shall provide a planting island between at least every three parking bays. The planting island shall comply with Section 5.6.6, Parking Lot Landscaping (see Fig 5.4.6.C: Planting Islands Through Parking Lots).

¹⁸⁷ This carries forward Section 7.1.1(E) in the current Zoning Ordinance.
¹⁸⁸ This carries forward Section 7.2(D), in the current Zoning Ordinance.



3. Where a vehicle parking lot containing more than 50 parking spaces has parking bays running parallel to the front of the building(s) served by the parking, a pedestrian walkway shall be provided connecting landscaped islands along or at the ends of the parking bays as necessary to provide walkways through the parking lot at intervals of 200 feet or less.
4. Crosswalks shall be provided where pedestrian walkways through large parking lots cross a drive aisle within the parking bays or between them and the building(s) served by the parking.
5. Walkways providing pedestrian access between parking areas and associated buildings may be extended to provide the connections to abutting street sidewalks or to adjoining development required by Section 5.3.8.A.1, *General Pedestrian Access*, and Section 5.3.8.B, *Pedestrian Connectivity*.

D. Minimum Dimensions for Vehicle Parking Spaces and Aisles¹⁸⁹

1. Spaces

- a. Standard vehicle parking spaces shall be in accordance with that shown in Table 5.4.6.D: *Minimum Dimensions for Vehicle Parking Spaces and Aisles*, for the proposed parking angle.
- b. Compact vehicle parking spaces shall comprise a rectangle that is at least eight feet wide and at least 16 feet long.
- c. Where the ends of spaces within a row of parking spaces abut a wall or fence, the minimum parking depth of all spaces in the row shall be increased by 1.5 feet.

2. Aisles

The minimum width of a drive aisle through a parking bay shall be in accordance with that shown in Table 5.4.6.D: *Minimum Dimensions for Vehicle Parking Spaces and Aisles*, for the proposed parking space/drive aisle angle. The other dimensions in Table 5.4.6.D, are representative of minimum standard parking space and parking bay dimensions for the arrangement shown in Fig 5.4.6.D: *Minimum Dimensions for Vehicle Parking Spaces and Aisles*.

¹⁸⁹ This carries forward and modifies Section 7.2(H), in the current ordinance.

Table 5.4.6.D: Minimum Dimensions for Vehicle Parking Spaces and Aisles

Parking Angle (degrees) [1]	Minimum Parking Space Width (feet)	Minimum Parking Row Depth (feet) [2]	Minimum Aisle Width (feet) [3][4][5]		Minimum Double Row Parking Bay Width (feet)	
			One-Way	Two-Way	One-Way	Two-Way
A [6]	B	C	D	D	E	E
Parallel	20	9	12	23	30	41
30	9	17	14	n/a	48	57
45	9	19	15	n/a	53	61
60	9	20	16	n/a	56	63
90	9	18	20	23	56	59
No Parking	n/a	n/a	20	24	n/a	n/a

NOTES:

- [1] The same angle shall be used along the full length of one side of a parking bay, though different angles may be used on each side of a double-loaded parking bay.
- [2] Where a space includes a wheel stop, the length of the space shall be increased by 1.5 feet.
- [3] Where the angle is other than 90 degrees or 0 degrees (parallel), the drive aisle shall be designed for one-way traffic.
- [4] A greater aisle width may be necessary to Fire Prevention Code requirements.
- [5] Where each side of a double loaded parking bay uses different parking space/drive aisle angles, the drive aisle shall comply with the greater applicable minimum drive aisle width standard.
- [6] Letters correspond to dimension measurement lines in Fig 5.4.6.D: *Minimum Dimensions for Vehicle Parking Spaces and Aisles*.

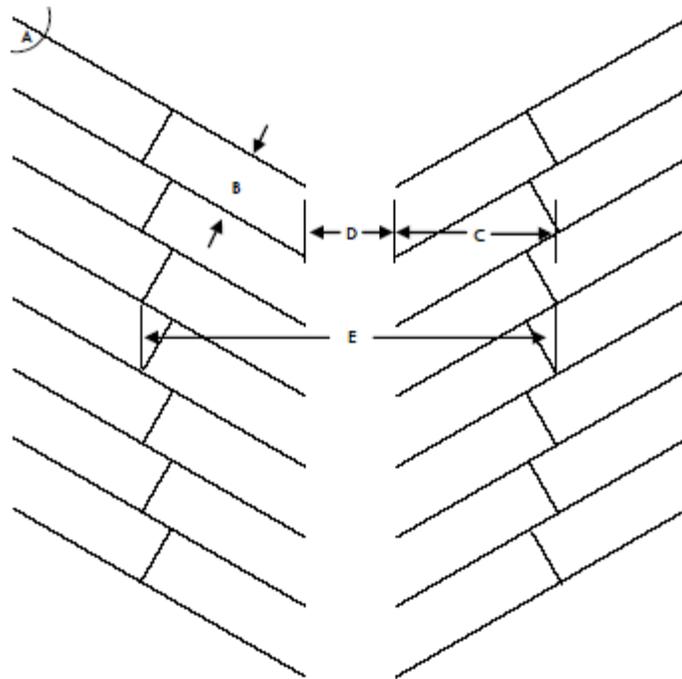


Fig 5.4.6.D: Minimum Dimensions for Vehicle Parking Spaces and Aisles.

3. Vertical Clearance

All off-street parking spaces shall have a minimum overhead clearance of seven feet.

E. Curbs and Wheel Stops¹⁹⁰

1. Except for driveways serving as off-street vehicle parking areas serving single-family detached, duplex, manufactured home, and single-family attached dwellings, each off-street vehicle parking space shall be bounded by curbing as necessary to prevent vehicles from overhanging a public right-of-way, walkway, landscaped areas, or adjoining property.
2. Where the development uses depressed landscaping island, rain gardens, or other techniques to catch, store, and filter stormwater runoff, curbing shall be designed, or wheel stops installed, to allow stormwater runoff to flow into such areas.

5.4.7. Off-Street Loading Area Arrangement and Design

A. Location of Loading Areas

Where possible, a loading area shall be located to the rear of the principal building(s) it serves. In addition, the loading area shall be located adjacent to the building's loading doors, in an area that promotes its practical use.

B. Dimensional Standards for Loading Areas¹⁹¹

1. Each loading space shall be of sufficient size to accommodate the types of delivery/shipping vehicles likely to use the loading area.
2. The size of a loading space that presumptively satisfies the needs of a medium-sized truck is at least 12 feet wide and 35 feet long, and has at least 13 feet of vertical clearance.
3. The size of a loading space that presumptively satisfies the needs of a large-sized truck is at least 12 feet wide and 75 feet long, and has at least 14 feet of vertical clearance.
4. The Planning Director may require larger or smaller loading spaces than called for by subsections 2 and 3 above upon determining that the characteristics of the particular development warrant such a variation and the general standard in subsection 1 is met.

5.4.8. Off-Street Bicycle Parking Arrangement and Design

Off-street bicycle parking spaces required by Section 5.4.3, Off-Street Vehicle and Bicycle Parking Space Requirements, shall be provided with bike racks, bike lockers, or similar parking facilities that comply with the following standards:

- A.** The parking facility shall be located in a visible, well-lit ground-level area that:
1. Is conveniently accessible to the primary entrances of a development principal building(s);
 2. Does not interfere with pedestrian traffic; and
 3. Is protected from conflicts with vehicular traffic.
- B.** Each bicycle parking space within a bicycle parking facility shall be at least two feet wide and six feet long (see Fig 5.4.8: Bike Rack Placement).
- C.** The parking facility shall have an overhead clearance of at least seven feet, at least six feet of horizontal clearance around its perimeter, and at least four feet of separation between bike racks.

¹⁹⁰ This carries forward and modifies section 7.2(E), in the current ordinance.

¹⁹¹ This carries forward and modifies Section 7.3(A), in the current ordinance.

- D. The parking facility shall be securely anchored and designed to support parked bicycles securely and enable them to be locked.
- E. Bike lockers or other indoor parking spaces shall be clearly demarcated.

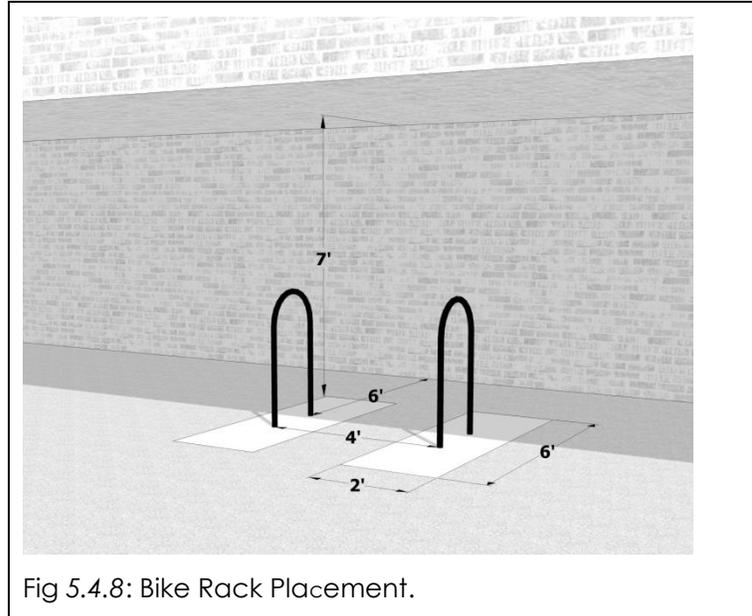


Fig 5.4.8: Bike Rack Placement.

5.4.9. Off-Street Parking Alternatives

A. Provision Over Maximum Allowed

An alternative parking plan may propose to exceed the maximum number of off-street vehicle parking spaces allowed by Section 5.4.3.D, Maximum Number of Off-Street Vehicle Parking Spaces, in accordance with the following standards:

1. Parking Demand Study

The alternative parking plan shall include a parking demand study demonstrating how the maximum number of parking spaces specified by Section 5.4.3.D, Maximum Number of Off-Street Vehicle Parking Spaces, is insufficient for the proposed development.

2. Minimum Exceedance Required

The number of additional off-street vehicle parking spaces allowed beyond that specified by Section 5.4.3.D, Maximum Number of Off-Street Vehicle Parking Spaces, shall be limited to the minimum number of additional spaces recommended as needed by the required parking demand study.

B. Shared Parking

An alternative parking plan may propose to meet a portion of the minimum number of off-street parking spaces required for a use with shared parking—i.e., use of parking spaces used or proposed to be used to meet the minimum number of off-street parking spaces required for one or more other uses—in

accordance with the following standards. This alternative and these standards (except Section 5.4.9.B.4, Signage Directing Public to Parking Spaces) may also be applied to bicycle parking.

1. Maximum Shared Spaces

Up to 50 percent of the number of parking spaces required for a use may be used to satisfy the number of parking spaces required for other uses that generate parking demands during different times of the day or different days of the week.

2. Location

- a. Shared parking spaces shall be located within 500 feet walking distance of the primary pedestrian entrances to the uses served by the parking.
- b. Shared parking spaces shall not be separated from the use they serve by a major or minor thoroughfare unless pedestrian access across the thoroughfare is provided by a grade-separated pedestrian walkway or appropriate traffic controls (e.g., signalized crosswalk).

3. Pedestrian Access

Adequate and safe pedestrian access shall be provided between the shared parking areas and the primary pedestrian entrances to the uses served by the parking.

4. Signage Directing Public to Parking Spaces

Signage complying with the standards of Section 5.10, Signage, shall be provided to direct the public to the shared parking spaces.

5. Justification

The alternative parking plan shall include justification of the feasibility of shared parking among the proposed uses. Such justification shall address, at a minimum, the size and type of the uses proposed to share off-street parking spaces, the composition of their tenants, the types and hours of their operations, the anticipated peak parking and traffic demands they generate, and the anticipated rate of turnover in parking space use.

6. Shared Parking Agreement

- a. An approved shared parking arrangement shall be enforced through written agreement among all the owners or long-term lessees of lands containing the uses proposed to share off-street parking spaces. The agreement shall provide all parties the right to joint use of the shared parking area for as long as the shared parking spaces are needed to comply with this Ordinance, and shall be binding on subsequent owners or long-term lessees. The agreement shall be submitted to the Planning Director for review and approval. An attested copy of an approved and executed agreement shall be recorded with the Register of Deeds for the county in which the site is located before issuance of a Certificate of Compliance/Occupancy for any use to be served by the shared parking area.
- b. Any termination of the agreement does not negate the parties' obligations to comply with parking requirements and thus shall constitute a violation of this Ordinance. No use served by the shared parking may be continued if the shared parking becomes unavailable to the use unless substitute off-street parking spaces are provided in accordance with this section.

C. Off-Site Parking

An alternative parking plan may propose to meet a portion of the minimum number of off-street vehicle parking spaces required for a use with off-site parking (i.e., off-street parking spaces located on a lot

separate from the lot containing the use) in accordance with the following standards. This alternative and these standards may also be applied to bicycle parking.

1. Zoning Classification

The zoning district classification of the off-site parking area shall be one that allows the use served by off-site parking (and thus off-street parking is accessory to such use) or that allows parking as a principal use.

2. Location

- a. Off-site parking spaces shall be located within 500 feet walking distance of the primary pedestrian entrances to the uses served by the parking.
- b. Off-site parking spaces shall not be separated from the use they serve by a major or minor thoroughfare unless safe pedestrian access across the street is provided by a grade-separated pedestrian walkway or appropriate traffic controls (e.g., signalized crosswalk).

3. Pedestrian Access

Adequate and safe pedestrian access shall be provided between the off-site parking areas and the primary pedestrian entrances to the use served by the parking.

4. Off-Site Parking Agreement

- a. If land containing the off-site parking area is not under the same ownership as land containing the principal use served, the off-site parking arrangement shall be established in a written agreement between the owners or long-term lessees of land containing the off-site parking area and land containing the served use. The agreement shall provide the owner or long-term lessee of the served use the right to use the off-site parking area for as long as the shared parking spaces are needed to comply with this Ordinance, and shall be binding on subsequent owners or long-term lessees. The agreement shall be submitted to the Planning Director for review and approval. An attested copy of an approved and executed agreement shall be recorded with the Register of Deeds for the county in which the site is located before issuance of a Certificate of Compliance/Occupancy for any use to be served by the shared parking area.
- b. Any termination of the agreement does not negate the landowner's obligation to comply with parking requirements and thus shall constitute a violation of this Ordinance. No use served by the off-site parking may be continued if the off-site parking becomes unavailable unless substitute off-street parking spaces are provided in accordance with this section.

D. Deferred Parking

An alternative parking plan may propose to defer construction of up to 20 percent of the number of off-street vehicle parking spaces required by Section 5.4.3.A, Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces, in accordance with the following standards:

1. Justification

The alternative parking plan shall include a study demonstrating that because of the location, nature, or mix of uses, there is a reasonable probability the number of parking spaces actually needed to serve the development is less than the minimum required by Section 5.4.3.A, Minimum Number of Off-Street Vehicle and Bicycle Parking Spaces.

2. Reserve Parking Plan

The alternative parking plan shall include a reserve parking plan identifying: (a) the amount of off-street parking being deferred, and (b) the location of the area to be reserved for future parking, if future parking is needed.

3. Parking Demand Study

- a. The alternative parking plan shall provide assurance that within 18 months after the initial Certificate of Compliance/Occupancy is issued for the proposed development, an off-street parking demand study evaluating the adequacy of the existing parking spaces in meeting the off-street parking demand generated by the development will be submitted to the Planning Director.
- b. If the Planning Director determines that the study indicates the existing parking is adequate, then construction of the remaining number of parking spaces shall not be required. If the Planning Director determines that the study indicates additional parking is needed, such parking shall be provided consistent with the reserve parking plan and the standards of this section, and shall be provided within 12 months after the Planning Director's determination.

4. Limitations on Reserve Areas

Areas reserved for future parking shall be brought to the finished grade and shall not be used for buildings, storage, loading, or other purposes.

5. Landscaping of Reserve Areas Required

Areas reserved for future off-street parking shall be landscaped with an appropriate ground cover, and if ultimately developed for off-street parking, shall be landscaped in accordance with Section 5.6.6, Parking Lot Landscaping.

E. Valet and Tandem Parking

An alternative parking plan may propose to use valet and tandem parking to meet a portion of the minimum number of off-street vehicle parking spaces required for a development with commercial uses in accordance with the following standards:

1. Number of Valet or Tandem Spaces

- a. The development provides a total of at least 75 or more off-street parking spaces.
- b. No more than 30 percent of the total number of parking spaces provided shall be designated for valet or tandem spaces except for hotels, where up to 100 percent of parking spaces may be designated for valet parking.

2. Drop-Off and Pick-Up Areas

The development shall provide a designated drop-off and pick-up area. The drop-off and pick-up area may be located adjacent to the building served, but may not be located in a fire lane or where its use would impede vehicular and/or pedestrian circulation or cause queuing in a public street or internal drive aisle serving the development.

3. Valet Parking Agreement

Except where associated with a hotel, valet parking may be established and managed only in accordance with a valet agreement. The agreement shall include provisions ensuring that a valet parking attendant will be on duty during hours of operation of the uses served by the valet parking. The agreement shall be submitted to the Planning Director for review and approval. An attested copy of an approved and executed agreement shall be recorded with the Register of Deeds for

the county in which the site is located before issuance of a Zoning Compliance Certificate for any use to be served by the shared parking area.

F. On-Street Parking

An alternative parking plan may propose to meet a portion of the minimum number of off-street vehicle parking spaces required for a use with on-street vehicle parking spaces, in accordance with the following standards. This alternative and these standards may also be applied to bicycle parking, where bicycle parking facilities are provided within the street right-of-way or easement.

1. The use shall be located within a Mixed-Use and Nonresidential Base District, Planned Development District, or Mixed-Use Planned Development District;
2. The on-street parking spaces are located along the development site's street frontage or within 150 linear feet of walking distance from the primary entrance of the proposed use;
3. The on-street parking spaces are not counted toward meeting the off-street parking requirement for any other development;
4. No more than 25 percent of the off-street parking requirement is met through the use of on-street parking; and
5. There is no negative impact to existing or planned traffic circulation patterns.

G. Payment of Fee in Lieu of Providing Required Parking

1. Within the Downtown District, the Town Board of Commissioners may authorize applicable off-street parking requirements for a nonresidential use to be satisfied, in whole or in part, by the applicant's payment of a proportionate share in-lieu fee established by the Town Board of Commissioners that is consistent with, but does not exceed, costs the Town will incur to provide the equivalent number of public parking spaces that can serve the use.
2. A request to pay an in-lieu fee shall be submitted in writing to the Planning Director, who shall forward it to the Town Board of Commissioners for review. The Town Board of Commissioners may approve such a request on determining that:
 - a. Due to the availability of transit or unique characteristics of the use or area, the unavailability of the off-street parking spaces for which the fee is made as part of the development will not result in traffic congestion and will be compatible with the character of surrounding properties, and
 - b. Sufficient public parking exists or is budgeted and scheduled within one-quarter mile feet of the development to satisfy the parking demand it generates.
3. If an applicant requests to pay an in-lieu fee for a number of parking spaces exceeding 25 spaces or 50 percent of the minimum number of off-street parking spaces required by this section, the request shall be accompanied by a transportation study documenting that additional traffic congestion will not occur as a result of not installing additional off-street parking spaces.
4. The developer shall pay an in-lieu fee before issuance of a building permit.
5. The Town shall deposit the fee into the account designated for the provision of parking spaces and shall spend it within a reasonable time period only toward provision of public parking spaces that reasonably accommodate the parking demand generated by the development. Town costs for which in-lieu fees may be spent include, but are not limited to, the cost of land, leases, rights, easements and franchises; financing charges; interest paid before and during construction; cost of plans and specifications; cost of engineering and legal services and other expenses necessary or incidental for determining the feasibility or practicability of construction, reconstruction or use; cost

of all labor and materials; and administrative expenses and such other expenses as may be necessary or incidental to the provision of public parking spaces.

6. The Town Board of Commissioners may, by resolution, accept an interest in land instead of accepting all or a portion of an in-lieu parking fee on determining that land would be used in connection with the provision of public parking and the value of the land equals or exceeds the in-lieu parking fee that would otherwise be required. In making its determinations, the Town Board of Commissioners may consider the size of the land, the feasibility of constructing a parking facility on the land, and the land's proximity to parking demands.

Section 5.5. Utilities and Services¹⁹²

5.5.1. General

A. Compliance with Provider Standards

All utility lines and facilities—such as, but not limited to, those providing sewage disposal, drinking water, nonpotable reclaimed water, electric power, natural gas, telecommunication, or cable television service—shall be located, designed, and constructed or installed in accordance with the standards of the utility entity providing the utility service.

B. Installation

1. General Standards¹⁹³

- a. All utility lines and facilities shall be installed in such a manner and at such a time as to minimize interference with other utility lines and facilities, disruption of roadways or other infrastructure improvements, and disruption of vehicular or pedestrian traffic, and to facilitate maintenance of the utility lines and facilities without undue damage to infrastructure improvements.
- b. Utility easements shall be provided for utilities along lot lines where necessary to provide utilities to all platted lots. Easement widths shall be based on the service provider's standards.
- c. Drainage easements shall be provided for all developments traversed by stream. Easement width shall be sufficient to accommodate drainage improvements required by *Section 4.7, Stormwater Management*.
- d. Public infrastructure improvements and utility facilities shall be located and constructed to minimize exposure to flood hazards.
- e. Monuments (see *Section 10.4.1.M, Monuments*) shall be installed to delineate new lots for all Minor and Major Subdivisions (see *Section 8.3.4, Subdivision, Subdivision*).

2. Underground Installation Required¹⁹⁴

In all new development, electric distribution feeder lines and all other utility lines located on the development site and/or along the public right-of-way abutting the site shall be installed underground. The Town Engineer may waive this requirement in response to demonstration that undergrounding the line will be detrimental to the overall safety and/or reliability of the circuit or utility system, or because the development involves the adaptive reuse of an existing structure.

5.5.2. Public Water and Sewer Systems

- A. Sanitary sewers, reclaimed water distribution systems, and water supply systems shall be installed in such a manner as to serve adequately all lots with connection to the public system, and shall comply with Table 5.5.2: Public Sewer and Water System Applicability.

¹⁹² This section carries forward utility standards from Section 6.5(B), Easements, Dedications, and Reservations, and Section 7, Development Prerequisite to Final Approval, in the current Subdivision Regulations. Standards are modified for clarity and consistency with the ordinance. Standards pertaining to stormwater management are addressed in *Section 4.7, Stormwater Management*, of this UDO, and standards pertaining to outdoor lighting are addressed in *Section 5.9, Outdoor Lighting*.

¹⁹³ Section 6.5(B)(5), Dedication of Waterways, in the current subdivision ordinance is replaced by Section 4.3.2, Public Recreation Area, which provides a comprehensive set of public recreation area standards for subdivisions.

¹⁹⁴ This is carried forward from Section 7.1(F), Installation of Utilities, in the current Subdivision Regulations.

Table 5.5.2: Public Sewer and Water System Applicability	
Number of Lots	Distance to Existing Sewer Line
1 – 5	300 ft, plus 50 ft for each additional lot over one
6 – 20	300 ft, plus 75 ft for each additional lot over six
21 – 50	1,375 ft, plus 100 ft for each additional lot over 21
50+	4,375 ft, plus 125 ft for each additional lot over 51
ft = feet NOTES: [1] The facade area shall be measured from the grade to the underside of the eaves, or from story line to story line on upper building stories. [2] Facades abutting sidewalks, plazas, gathering areas, or other pedestrian areas shall incorporate transparent glazing. [3] The first two feet of facade area closest to the grade are not required to be glazed and shall be excluded from the facade area calculation.	

- B.** Sewer lines shall be installed according to the standards and regulations of the Chatham County Health Department and/or the Town of Pittsboro.
- C.** Water supply lines shall conform with accepted standards of good practice for water systems, as specified in the regulations of the Town of Pittsboro water system extension policy.
- D.** For Major Subdivisions (see Section 8.3.4.C, Major Subdivision, Major Subdivision), where an adequate public water supply system is available, the developer shall install fire hydrants in accordance with the following standards.
 - 1.** The subdivision shall be afforded adequate fire protection or as provided in the Town of Pittsboro water system extension policy.
 - 2.** Fire hydrants shall be located so that no lot is further than 500 feet from a hydrant.
 - 3.** Water lines on which fire hydrants are to be installed shall not be less than six inches in diameter.
 - 4.** There shall be no closed or dead end lines servicing fire hydrant locations, unless an alternate method is approved.
- E.** When located outside the service area of a public water supply system and/or outside the distance of an existing line as specified in Table 5.5.2: Public Sewer and Water System Applicability, lot sizes may be allowed to be reduced for having water available, provided adequate water is available for domestic use in the community water system to be installed by the developer; and provided six-inch water lines are installed to service fire hydrant locations such that no lot is farther than 500 feet from such a location, and stub-outs with gate valves are provided at said fire hydrant locations. If the subdivision does not meet these provisions, it shall be considered a subdivision that does not have public water available.
- F.** Where, in the opinion of the Planning Board and the utility agency, lots cannot be economically connected with a sewage system or water supply system they must contain adequate area (based on soil survey, percolation tests, source of water supply, etc.) for the installation of approved septic tanks and disposal fields, or installation of private water supply systems, and must be approved in writing by the Chatham County Health Department.

5.5.3. Public Water

- A.** Development with public sewer and potable and reclaimed water are conditioned on the availability of sufficient sewer or water capacity in the Town sewer and/or water systems to serve the proposed development.
- 1.** If sufficient sewer and/or water capacity for the proposed development is available, then sewer and/or water lines and facilities for the development shall be connected to the Town sewer and/or water system. Public sewer and/or water lines and facilities shall be constructed to the standards, sizes, and specifications of the Town, and dedicated to the Town for operation and maintenance.
 - 2.** If sufficient sewer and/or water capacity for the proposed development is not available, then the developer may request Town approval of plans for the construction of alternative public sewer and/or water systems. Sewer and/or water lines for an alternative community sewer or water system shall be built to the standards, sizes, and specifications of the Town.
 - 3.** Oversized sewer and/or water improvements shall be provided where required by the Town in accordance with its policies and regulations.
 - 4.** The developer shall pay all water and sewer development fees to the Town before plat recordation or issuance of a Building Permit, whichever occurs first.
 - 5.** For development located outside the corporate limits of the Town and proposing service by a public sewer and/or water system, the owner of the development site shall submit a petition for voluntary annexation of an area that includes the development site before submitting development applications for the following permits types (see *Section 8.3, Application-Specific Review Procedures*):
 - a.** Major Site Site Plan;
 - b.** Minor Site Plan;
 - c.** Special Use Permit;
 - d.** Major Subdivision Preliminary Plat; and
 - e.** Minor Subdivision.

5.5.4. Storm Drainage

Storm drainage shall comply with *Section 4.7, Stormwater Management*.

5.5.5. Easements, Dedications, and Reservations

A. Utility Easements

Easements shall be provided for utilities along lot lines where necessary to provide utilities to every platted lot. The subdivider and the utility companies shall agree on the width of easements needed.

B. Pedestrian Easements

In such cases and at such locations as the Planning Board deems advisable, easements alongside or near lot lines not exceeding 20 feet in width may be required for pedestrian or bicycle traffic to and from schools, neighborhood parks, and other public places.

C. Drainage Easements

In cases in which a subdivision is traversed by a stream or drainage channel there shall be provided a storm water easement of such width along each side of the stream as the Planning Board deems

necessary for the purpose of otherwise improving such drainage easement. Other drainage easements may be required for the proper drainage of all lots.

D. Sight Distance Easements at Intersections

Sight distance easements shall be in accordance with the requirements of this Ordinance, and shall remain free of all structures, trees, shrubbery, driveways, and signs, except utility poles, fire hydrants, and traffic control signs.

E. Dedication of Waterways

Lakes, ponds, creeks, and similar areas will be accepted by the Town for maintenance only if sufficient land is dedicated as a public recreation area or park or if such area constitutes a necessary part of the drainage control system. The suitability of such dedicated areas shall be evaluated by the Planning Board prior to being considered for acceptance by the Town Board of Commissioners.

F. Waste Disposal

The Planning Board may require easements for garbage dumpster sites in subdivisions when appropriate. Such a requirement may take into consideration the number of lots in the subdivision, the availability of other sites in close proximity to the subdivision.

5.5.6. Compliance with Standards for Utility Providers

Development within utility easements shall comply with the standards and restrictions of the appropriate utility service provider(s).

5.5.7. Solid Waste Removal

A. Purpose

The purpose of this section is to minimize the impact that noise associated with the removal of solid waste may have on adjacent residential development.

B. Hours of Collection

Solid waste shall not be collected from exterior commercial containers located within a residential development or within 500 feet of a residential dwelling between the hours of 9:00 PM and 7:00 AM. Notice of this limitation shall be posted on the gate screening the container.

Section 5.6. Landscaping¹⁹⁵

5.6.1. Purpose

The purpose of this section is to:

- A. Enhance the visual quality of non-residential development;
 - B. Soften the appearance of expansive paved areas and building mass; and
 - C. Create and maintain a pleasing appearance in the community; reduce the effects of glare and heat caused by parking areas and to reduce visual clutter along commercialized streets.
-

5.6.2. Applicability

Landscaping shall be installed in accordance with this section for the following:

- A. All new construction, development or any expansion in developed site area land uses; or
 - B. For all existing commercial development when more than 50 percent of the existing developed land area at the time of application for a Zoning Compliance Certificate (see Section 8.3.2.C, Zoning Compliance Certificate) is distributed, redesigned, altered or reconstructed.
 - C. Where buffering requirements identified in Section 4.6, Perimeter Buffers, Perimeter Buffers, conflict with any requirements of this section, the more stringent requirements shall control, provided no wall, fence or berm is substituted for any requirements in this Section.
-

5.6.3. Credit Toward Other Standards¹⁹⁶

Landscaping areas and associated vegetation within such areas may be credited toward compliance with the following, to the extent they comply with applicable standards:

- A. Tree preservation (see Section 4.2, Tree Preservation);
 - B. Open space areas (see Section 4.3.1.D, Required Open Space Area, Required Open Space Area);
 - C. Public recreation areas (see Section 4.3.2.C, Required Public Recreation Area);
 - D. Perimeter and streetyard buffers (see Section 4.6.3, Required Buffer Type, Required Buffer Type); and
 - E. Screening requirements (see Section 5.7, Screening).
-

5.6.4. General Landscaping Standards¹⁹⁷

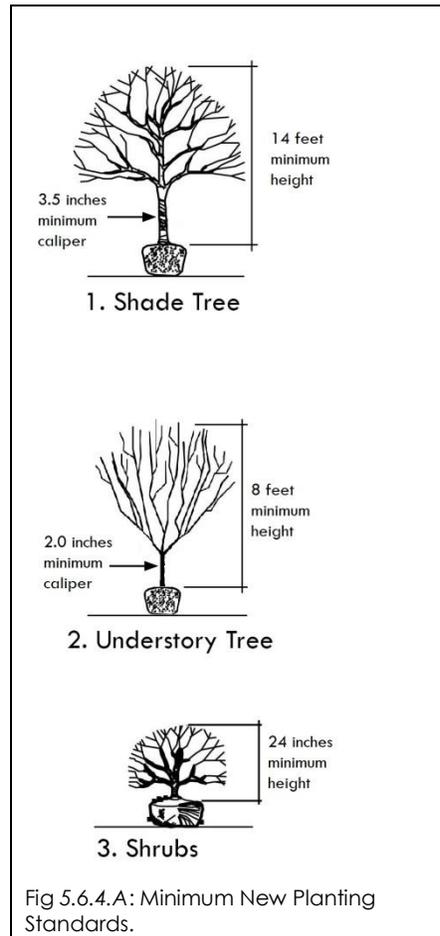
A. New Planting Standards

1. All plants, shrubs and trees shall be native non-invasive species (See Appendix 1, Recommended Plant List).
2. Required vegetation shall be planted in accordance with American Standards of Nursery Stock guidelines (see Fig 5.6.4.A, Minimum New Planting Standards).

¹⁹⁵ This section carries forward Article XVIII, Landscaping, in the current Zoning Ordinance. It is expanded for consistency with the ordinance and to incorporate best practices for landscaping installation and maintenance.

¹⁹⁶ This provision is added to allow for compliance with related standards, as appropriate.

¹⁹⁷ This section expands upon Section 18.5, Landscaping Installation and Maintenance, in the current Zoning Ordinance. It is expanded for consistency with the ordinance and to include new standards that incorporate best practices.



3. At the time of planting, vegetation included as part of required landscaping shall comply with the following size standards.
 - a. Shade trees shall have a caliper of at least three and one-half inches and be at least 14 feet in height above ground level. They shall be capable of attaining a height of at least 35 feet and a crown diameter of at least 30 feet at maturity.
 - b. Understory trees shall have a caliper of at least two inches and shall be at least eight feet in height above ground level.
 - c. Shrubs shall be upright in nature and at least 24 inches in height above ground level. They shall be capable of attaining a height of at least 30 inches within three years after planting.
4. All landscape plant materials shall be of standard quality or better, true to name and type of species or variety.
5. The use of drought-tolerant vegetation native to the Pittsboro area is strongly encouraged (see the list of acceptable native plant species in the Administrative Manual).
6. Required landscaping areas shall be protected from vehicular damage by the installation of curbing, wheel stops, or extra width in the landscaping strip.

B. Existing Vegetation

The use of existing healthy, well-formed canopy trees, understory trees, evergreen trees, and shrubs shall be maximized wherever practical to comply with these landscaping standards. The use of existing vegetation shall be credited toward meeting tree protection standards (see *Section 4.2, Tree Preservation*), perimeter and streetyard buffer standards (see *Section 4.6, Perimeter Buffers, Perimeter Buffers*) and the landscaping standards in this section provided the vegetation meets those standards, is protected before and during development of the site in accordance with *Section 4.2.6, Tree Protection During Development Activity*, and maintained thereafter in a healthy growing condition.

C. Stabilization

All required landscape planting areas shall be stabilized and maintained with turf, ground covers, or other approved materials to prevent soil erosion and allow rainwater infiltration.

D. Easements

Nothing except ground cover shall be planted or installed within any underground or overhead utility, drainage or gas easement, or within three feet of a fire protection system, except in accordance with the consent, standards, or guidelines of the utility provider, easement holder, or the Town, as appropriate.

E. Berms

All berms shall comply with the following standards.

1. Berms shall be at least one and one-half feet high, with side slopes not exceeding a ratio of three horizontal feet to one vertical foot, and with a crown at least two feet wide.
2. Berms proposed to be placed along street rights-of-way shall be designed and constructed to provide adequate sight distances at intersections and shall not impair safe operation of vehicles.
3. In no case shall berms be located or designed so they damage the roots or trunks of existing healthy vegetation designated to be preserved.
4. Berms shall not be located or designed so as to block or divert a natural drainage flow on to or off of any other land.

F. Time for Installation of Required Landscaping¹⁹⁸

1. Installation Before Certificate of Compliance/Occupancy

All required landscaping (including ground cover) shall be installed in accordance with the required planting standards set forth in this section prior to issuance of a Certificate of Compliance/Occupancy unless the Planning Director allows delayed installation in accordance with subsection 2 below.

2. Allowance of Deferred Installation

- a. The Planning Director may, for good cause shown, allow installation of required landscaping to be deferred until after issuance of a Certificate of Compliance/Occupancy. Circumstances that may warrant an extension include, but are not limited to, the following:
 - (1) Unusual environmental conditions, such as drought, hurricanes, or over-saturated soil;
 - (2) The inappropriateness of the current season for planting the approved plant species; or

¹⁹⁸ This carries forward section 18.6, Screening and Landscaping Required Prior to Issuance of a Certificate of Occupancy, in the current Zoning Ordinance.

(3) Utility work occurring in a proposed landscaped area that is incomplete or delayed.

- b. Any allowance of deferred installation shall be conditioned on the required landscaping being installed as soon as practicable after the circumstances warranting deferral cease to exist, but no later than six months after such time, and the provision of a performance guaranteeing compliance with this section.

G. Maintenance of Required Landscaping¹⁹⁹

1. The owner shall be responsible for maintaining, in perpetuity, all required landscape areas and landscaping materials (including berms, walls, and fences as well as vegetation) in accordance with the approved landscape plan or alternative landscape plan and the standards of this section.
2. Required vegetation shall be maintained in a healthy condition and landscape areas shall be kept in an orderly appearance, free from refuse and debris.
3. All required vegetation shall be maintained in their characteristic natural shape and shall not be severely pruned or sheared. Trees shall not be topped or shaped as shrubs. Vegetation that has been severely pruned, sheared, topped, or shaped shall be considered damaged and shall be replaced with healthy comparable plant material.
4. Actions shall be taken to protect required landscaping materials from unnecessary damage during all facility and site maintenance operations.
5. Landscaping materials shall be maintained in a way that does not obstruct sight visibility within intersection sight distance triangles (see Section 5.3.5.D, *Intersection Sight Distance Triangles*), obstruct traffic signs or devices, or interfere with the use of bikeways and walkways.
6. Landscaping shall comply with Building Code restrictions on placing or storing combustible materials near buildings.
7. If landscaping materials used to meet the requirements of this section die, are seriously damaged, or are removed, they shall be replaced with comparable landscaping materials meeting the standards of this section within the next six months—or within the next year if the death, damage, or removal of the landscaping materials was due to an unusual weather occurrence or other act of nature. In determining the extent of replacement required, the Planning Director shall consider the type and location of the required landscaping materials as well as the propensity for natural re-vegetation.
8. All initial and replacement landscaping shall be subject to a two-year performance guarantee that ensures proper maintenance and replacement.

H. Alteration of Required Landscaping

Landscaping may be altered through replacement or relocation by a maximum of ten percent over the life of the development without submittal of a revised landscape plan provided that the overall landscaping remains in compliance with this section. A revised plan shall not be required for plantings that exceed the requirements of this section.

I. Alternative Landscaping Plan²⁰⁰

Alternative landscaping arrangements may be allowed if compliance with this section would result in undue hardship due to lot-specific constraints. Alternative landscaping must be equivalent to standards set forth in this section to the extent practicable.

¹⁹⁹ This carries forward section 18.5, Landscaping Installation and Maintenance, in the current Zoning Ordinance.

²⁰⁰ This provision currently applies to street landscaping. It is broadened to include all landscaping elements.

5.6.5. Street Landscaping²⁰¹

- A. Street landscaping shall be required in Mixed-Use and Nonresidential Base Districts.
- B. Landscaping shall include, at a minimum, the first ten feet of front yard and corner side yards.
- C. The following shall be installed for each 100 linear feet of landscaping:
 - 1. Ground cover or natural mulching material;
 - 2. A minimum of four small trees and twelve shrubs, or alternatively, four large trees.
- D. Decorative fences and masonry walls are limited to three feet in height within the landscaped area.
- E. Landscaping shall not impeded sight distance triangles at driveway or street intersections. Plantings greater than two and one-half feet in height shall be located behind the sight distance triangle.

5.6.6. Parking Lot Landscaping²⁰²

- A. Nonresidential parking lots shall be landscaped in accordance with this section.
- B. The provisions of this section do not apply to rear parking lots (parking lots located between the rear building setback line and the rear lot line).
- C. The requirements of the Phase Two Stormwater requirements of the State of North Carolina Department of Environment and Natural Resources Low Impact Design Manual shall apply in the design of parking areas.
- D. The amount of plant materials required for parking lot landscaping shall be in addition to any plant materials required by the buffer requirements of this Ordinance (see Section 4.6, Perimeter Buffers).
- E. The following minimum number of plants (see Appendix 1, Recommended Plant List) shall be required for each parking space (calculations resulting in a fraction shall be increased to the next whole number):
 - 1. Large trees -- 0.10
 - 2. Small trees -- 0.125
- F. The following rules shall apply to the arrangement and installation of required parking lot landscaping.
 - 1. Large trees shall be planted so that no point of the tree's main trunk is closer than four feet from parking lot or driveway surfaces.
 - 2. If large trees are planted in an island peninsula or median, there shall be sufficient pervious planting area and infusion area that drain into the plating area for viable growth. To be counted for required parking lot landscaping, a large tree must be planted within ten feet of the parking lot or parking space.
 - 3. Small tress shall be planted so that no point of the tree's main trunk is closer than four feet from the parking lot or driveway surfaces. To be counted for required parking lot landscaping a small tree must be planted within 10 feet of the parking lot or parking space.
 - 4. No shrubs shall be located within any vehicle overhang area.
 - 5. Required parking lot landscaping shall be distributed throughout the parking entranceways and on interior features such as islands, peninsulas and medians. Points of infiltration shall be required to

²⁰¹ This carries forward section 18.2, Street Landscaping, in the current Zoning Ordinance.

²⁰² This carries forward section 18.3, Parking Lot Landscaping, in the current Zoning Ordinance.

ensure that planting materials receive adequate storm water infiltration and to ensure compliance with Section 4.7, Stormwater Management.

6. Parking lot landscaping shall comply with Table 5.6.6: Minimum Percentage of Plant Materials For Parking Lot Landscaping.

Table 5.6.6: Minimum Percentage of Plant Materials For Parking Lot Landscaping	
Number of Spaces	Minimum Percent of Plant Materials to be Planted on Interior Features
40 or fewer spaces	n/a
40 to 100 spaces	30 percent
More than 100 spaces	40 percent

- G. Each parking space shall be located within 75 feet of a tree.
- H. Trees should be located so as to maximize shading of parking spaces during summer months.
- I. All parking lot landscaped areas shall include ground cover or natural mulching materials. Areas subject to vehicle overhang may be covered with brick, stone, mulch or other inorganic material.

Section 5.7. Screening²⁰³

5.7.1. Screening of Exterior Mechanical Equipment

A. Applicability

1. General

- a. Except for single-family detached, duplex, and manufactured home dwellings, all new development, and expansions to principal structures shall screen the following exterior mechanical equipment and similar features from line of sight of adjacent streets, sidewalks, on-site walkways, and public greenways in accordance with the standards of this subsection:
 - (1) Electrical and gas-powered mechanical equipment and power systems equipment (e.g., permanent electrical generators, refrigeration equipment and ductwork, swimming pool pumps, back-flow prevention devices); and
 - (2) Heating, ventilating, and air conditioning equipment, tanks, and ductwork (e.g., air conditioning condensers and compressors, heat pump condensers and evaporators, air filtration systems, bottled gas tanks, propane tanks), and vent openings greater than eight inches wide.
- b. Roof- or wall-mounted antennas, vent openings no more than eight inches wide, the tower and blades of a small wind energy system, or the solar panels or modules of a solar energy collection system shall not be considered exterior mechanical equipment for purposes of these screening standards.

2. Change in Use

Any change in use of an existing development shall be subject to these screening of exterior mechanical equipment standards to the maximum extent practicable.

3. Credit Toward Other Standards²⁰⁴

Screening areas and associated vegetation within such areas may be credited toward compliance with the following, to the extent they comply with applicable standards:

- a. Tree preservation (see Section 4.2, Tree Preservation);
- b. Open space areas (see Section 4.3.1.D, Required Open Space Area);
- c. Public recreation areas (see Section 4.3.2.C, Required Public Recreation Area);
- d. Perimeter and streetyard buffers (see Section 4.6.3, Required Buffer Type, Required Buffer Type); and
- e. Landscaping requirements (see Section 5.6, Landscaping).

²⁰³ This new section consolidates standards for screening in the current Zoning Ordinance, which are predominantly located within use-specific standards for individual use types. Screening provisions are also expanded so that the standards include any use type that may include commonly-screened facilities such as mechanical equipment, off-street loading and service areas, and commercial containers. Standards pertaining to buffer requirements as set forth in Section 7.4, Screening, in the current Zoning Ordinance, are located in Section 4.6, Perimeter Buffers, in this UDO.

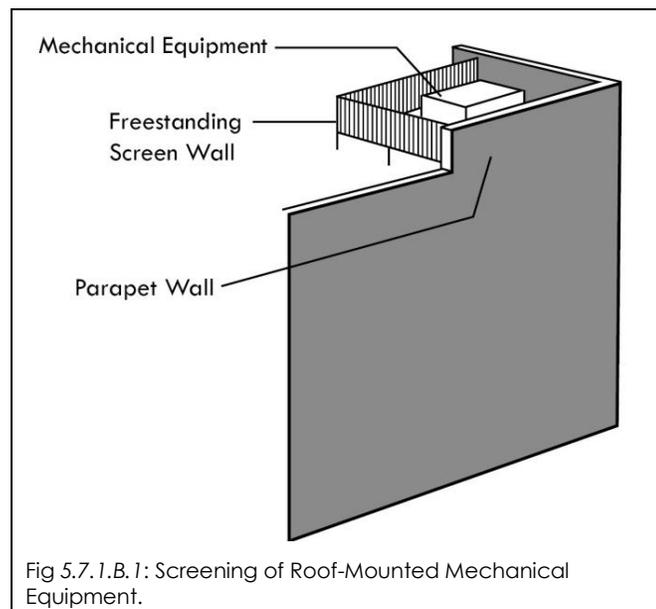
²⁰⁴ This provision is added to allow for compliance with related standards, as appropriate.

B. Screening Standards

1. Roof-Mounted Mechanical Equipment

Mechanical equipment mounted on the roof of a building shall be screened from line of sight of adjacent streets, sidewalks, and greenways by a parapet wall, freestanding screen wall, or similar device (see Fig 5.7.1.B.1: Screening of Roof-Mounted Mechanical Equipment).

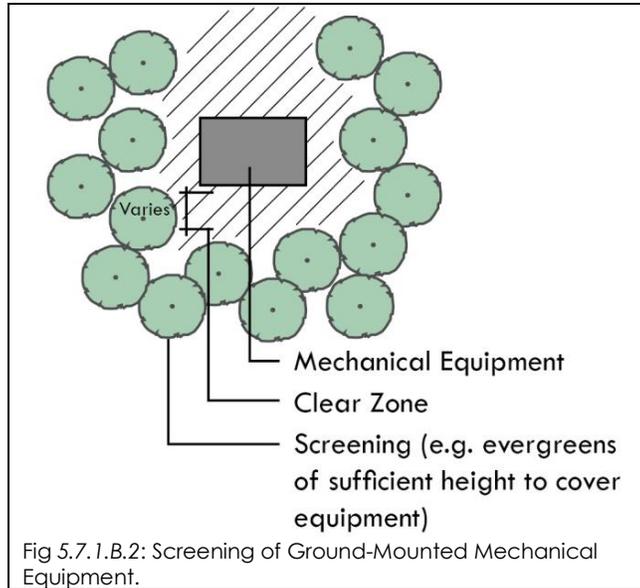
- a. The screening shall incorporate materials, colors, and design that are visually consistent with the building's architectural design.
- b. The height of the screening shall equal or exceed that of the mechanical equipment being screened.



2. Ground- or Wall-Mounted Mechanical Equipment

Mechanical equipment mounted on or near ground-level or on a building wall shall be screened from line of sight of adjacent streets, sidewalks, and greenways by any combination of adjacent buildings and durable and sight-obscuring walls, or in residential developments only, dense continuous hedges (see Fig 5.7.1.B.2: Screening of Ground-Mounted Mechanical Equipment).

- a. Screening walls shall incorporate at least one of the primary materials of the nearest wall of the primary structure on the lot.
- b. The height of the screening walls, fences, or hedges shall equal or exceed that of the mechanical equipment being screened.



3. Deviation of Standards

The Planning Director may approve deviations from the screening standards in this subsection on making one or more of the following findings:

- a. The deviation is necessary to comply with overriding life safety requirements of other regulations.
- b. The design of the proposed building and/or mechanical equipment is equally or more effective in mitigating the negative impacts of the mechanical equipment as the required screening.
- c. The required screening itself creates a greater negative impact than the mechanical equipment it is intended to screen.
- d. The deviation is necessary to accommodate existing utility connections or utility easements.

5.7.2. Screening of Off-Street Loading and Service Areas

- A. All exterior off-street loading areas and service areas (e.g., refuse or recyclables collection areas, equipment cleaning areas, and delivery truck areas) shall be located, oriented, and designed to reduce the adverse visual and acoustic impacts of their use on adjacent streets, sidewalks, and properties to the maximum extent practicable.
- B. Exterior off-street loading and service areas shall be screened from view from adjacent streets, sidewalks, and properties by any combination of adjacent buildings, durable and sight-obscuring walls or fences, or dense continuous hedges.
 1. Points of vehicular access into or from the loading or service area need not be screened, provided they are located, oriented, and designed to minimize direct views into the service or loading area from adjacent streets and properties.
 2. Screening walls, fences, and hedges shall extend at least six feet above ground level.
 3. Screening walls and fences shall incorporate materials, colors, and design that are visually consistent with those of the primary structure on the lot.

5.7.3. Location and Screening of Commercial Containers

A. Applicability

1. General

Except as otherwise provided in subsection 2 below, all exterior commercial containers shall be located and screened from line of view from adjacent streets and properties in accordance with the standards in this subsection.

2. Change in Use

Any change in use of an existing development shall be subject to these location and screening for commercial container standards to the maximum extent practicable.

3. Exemptions

These standards shall not apply to commercial containers placed by or on authority of the Town on a temporary basis or placed for the temporary purpose of disposing of waste generated during construction (e.g., construction waste bins) or demolition activity on the site.

B. Location

Commercial containers shall not be placed in the following locations:

1. Any required tree protection area, buffer, or landscaped area;
2. Any front, corner side, or side yard in the Downtown District, or any front yard or corner side yard in all other districts, to the maximum extent practicable;
3. Any fire lane;
4. Any off-street parking space;
5. Any location that blocks vehicular, bicycle, or pedestrian traffic;
6. Any location that interferes with utility lines or facilities; and
7. Any location where runoff from the container could flow directly into a stormwater drainage system or a water body.

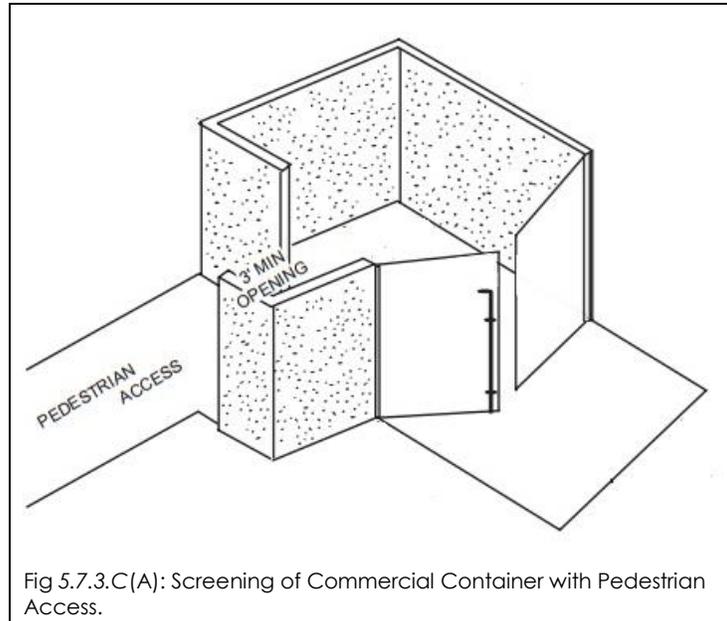
C. Screening of Commercial Containers

1. Commercial containers shall be screened on three sides by a durable, sight-obscuring wall, and enclosed on the fourth side by an opaque, secured gate.
2. If a container is one regularly accessed by pedestrians, the required screening walls shall include an opening at least three feet wide for pedestrian access. This pedestrian opening shall be screened from view by an "L"-shaped extension of a screening wall or a secured metal door (see Fig 5.7.3.C(A): Screening of Commercial Container with Pedestrian Access).

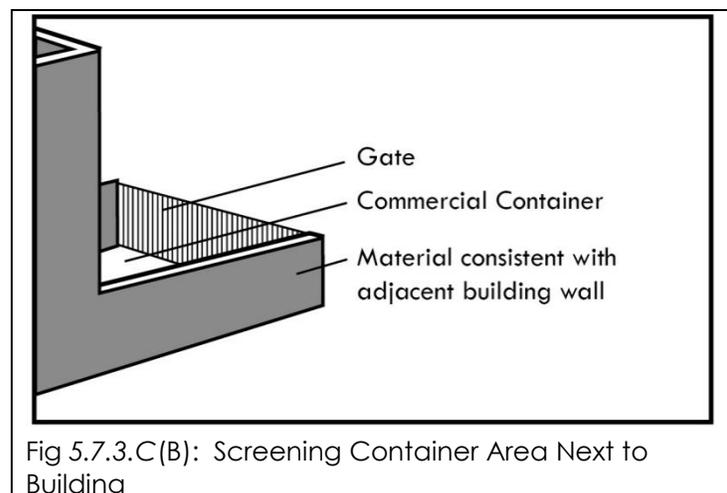
Article 5: Development Standards

Section 5.7. Screening

5.7.3. Location and Screening of Commercial Containers

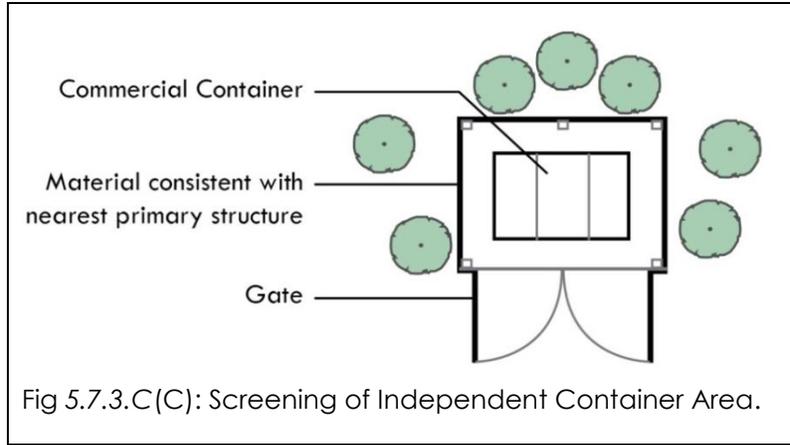


3. The height of the screening walls and the gate shall be at least six inches higher than the height of the container.
4. Where the container is located next to a building wall, the building wall may serve as a screening wall, and the other screening walls (including any extension from the building wall (e.g., "wing wall") shall incorporate materials, colors, and design that are visually consistent with that of the adjacent building wall (see Fig 5.7.3.C(B): Screening Container Area Next to Building, Screening of Container Area Next to Building).



5. Where the container is not located next to a building, the screening walls shall be constructed of brick, stone, pre-cast or tilt-up concrete, or tinted or textured concrete masonry units. The external sides of the screening walls shall incorporate materials, colors, and design that are visually

consistent with those of the nearest primary structure on the lot (see Fig 5.7.3.C(C), Screening of Independent Container Area).



6. Where practicable, the external sides of screening walls shall be landscaped to soften their visual impact in accordance with Section 5.8.8.A.5, *Fence and Wall Landscaping*.
7. The gate shall be constructed of metal or composite wood and shall incorporate colors and design that are visually consistent with those of the screening walls.

Section 5.8. Fences and Walls²⁰⁵

5.8.1. Purpose

The purpose of this section is to regulate the location, height, and appearance of fences and walls to maintain visual harmony within neighborhoods and the Town, protect adjacent properties from the indiscriminate placement and unsightliness of fences and walls, and ensure the safety, security, and privacy of properties.

5.8.2. Applicability

This section shall apply to all development, new fences or walls associated with the expansion of an existing principal structure, new fences or walls associated with a change in use, or replacement of fences or walls not required for support of a principal or accessory structure, or any other linear barrier intended to delineate different portions of a lot. If there is any inconsistency between the provisions of this section and any screening standard in Section 5.7, Screening, the standards in Section 5.7 shall control.

5.8.3. Prohibited Fences and Walls

A. Barbed Wire, Concertina Wire, and Above Ground Electrified Fences

Fences using barbed or concertina wire and above ground electrified fences shall be prohibited unless used in association with agricultural activities or allowed through an approved security plan (see Section 5.8.9, Security Plan Fences and Walls). Underground electric fences designed for control of domestic animals are allowed.

B. Debris, Junk, Rolled Plastic, Sheet Metal, Plywood, or Other Waste Materials

Fences or walls made of debris, junk, rolled plastic, sheet metal, plywood, or waste materials are prohibited unless such materials have been recycled and reprocessed for marketing to the general public as building materials that resemble new building materials (e.g., picket fencing made from recycled plastic and fiber).

5.8.4. Limited Fences and Walls Allowed in the Downtown District

To promote an integrated pattern of development and provide for frequent pedestrian connection, fences and walls in the Downtown District shall be limited to:

- A. Fencing used for tree protection (see Section 4.2, Tree Preservation);
 - B. Fences and walls used for required screening (see Section 4.6, Perimeter Buffers, Section 5.7, Screening, and the use-specific standards in Section 3.2.5, Principal Use-Specific Standards, and Section 3.3.5, Accessory Use-Specific Standards);
 - C. Decorative metal sectional fencing used to define outdoor dining areas;
 - D. Decorative metal sectional fencing used to define outdoor child play spaces; and
 - E. Fences required around swimming pools by the Building Code.
-

²⁰⁵ This new section consolidates standards for fences and walls in the current Zoning Ordinance, which are predominantly located within use-specific standards for individual use types. Standards are expanded to address basic appearance requirements such as offsets along long uninterrupted fences and walls, restrictions on the use of certain materials, and special standards for the Downtown district.

5.8.5. Temporary Fences

Temporary fences for construction sites or a similar purpose are exempt from this section provided they comply with the requirements of the Building Code and all applicable standards of *Section 3.4, Temporary Uses and Structures*.

5.8.6. General Requirements for Fences and Walls

A. Location

Fences and walls are permitted along the perimeters of properties and within front, corner side, side, and rear yards except where expressly prohibited by this Ordinance, the Building Code, or other Town ordinances.

B. Fences and Walls near Fire Hydrants

Fences and walls shall not be located where they would prevent immediate view of, or access to, fire hydrants or other fire-fighting water supply devices, in accordance with the Fire Prevention Code.

C. Fences in Easements

Fences shall be prohibited within utility easements except to the extent approved by the Town Engineer as appropriate, after finding the fence would not impede the purpose or function of the easement, including access to the easement for maintenance purposes. The Town shall not be responsible for damage to, or the repair or replacement of, fences that must be removed to access such easements. Appropriate access gates may be required to allow maintenance of the easement.

D. Blocking Natural Drainage Flow

No fence shall be installed so as to block or divert a natural drainage flow on to or off of any other land.

E. Fences Around Swimming Pools

Fences and wall shall be provided around outdoor swimming pools in accordance with the Building Code's swimming pool barrier enclosure standards.

5.8.7. Height Requirements for Fences and Walls

A. Applicability

1. General

- a. Except where exempted by subsection 2, fences or walls shall comply with the height limits in this subsection.
- b. Fence or wall height is measured from natural grade.
- c. If a fence is constructed on top of a wall or berm, the combined height of the fence plus wall or berm shall not exceed the maximum height that would apply to the fence or wall alone.

2. Exemptions

a. Required Screening

A fence or wall provided to meet the standards of *Section 5.7, Screening*, is exempt from the height standards of this subsection.

b. Recreational Fencing

Customary fencing provided as a part of a permitted tennis court, athletic field, or other recreational facility shall be exempt from the height restrictions of this subsection.

B. Fences and Walls Within Intersection Sight Distance Areas

The height of a fence or wall within an intersection sight distance triangle shall be limited as necessary to avoid obstructing sight visibility.

C. Fences and Walls Within Landscaped Areas²⁰⁶

Fences and walls are limited to three feet in height within any landscaped area required by *Section 5.6, Landscaping*.

D. Public Safety Use Fences and Walls

Major utilities, telecommunications towers, government facilities, and other public safety uses shall be allowed to increase maximum fence or wall heights to ten feet in front, corner side, side, and rear yards, unless further increased through an approved security plan—see *Section 5.8.9, Security Plan Fences and Walls*.

E. Fences and Walls in Residential Base Districts

1. No solid fence or wall within a front yard shall exceed a height of four feet.
2. No fence or wall within a corner side yard, side yard, or a rear yard shall exceed a height of eight feet.

F. Fences and Walls in the Downtown District

Fences and walls in the Downtown District shall comply with the following standards.

1. Fencing used to define outdoor dining areas shall not exceed a height of three feet.
2. Fencing used to define outdoor child play spaces shall not exceed a height of six feet.

5.8.8. Appearance

A. General

The following appearance standards shall apply to all fences and walls unless specifically stated otherwise.

1. Customary Materials

Except where otherwise provided in this Ordinance, fences shall be constructed of any combination of treated or composite wood posts and planks, rot-resistant wood (such as cypress or redwood), wrought iron, vinyl, or decorative metal materials. Walls shall be constructed of brick, stone, masonry materials, or products designed to resemble these materials. Where certain materials are specified for particular types of buffer or screening fences or walls, all other materials are prohibited.

2. Chain Link Fencing

Chain link fencing is allowed only:

²⁰⁶ This is carried forward from section 18.2, Street Landscaping, in the current Zoning Ordinance.

- a. In the Heavy Industrial District, as part of security fencing approved in accordance with Section 5.8.9, *Security Plan Fences and Walls*; or
- b. In any district, around ball fields, telecommunications towers, pump stations, stormwater detention/retention ponds, and outdoor exercise runs associated with kennels—provided such fence is clad in black vinyl.

3. Finished Side to Outside

Fences and walls located within 15 feet of a greenway, and fences and walls in a single-family attached, multifamily, or nonresidential development that are located within 15 feet of a public street right-of-way, shall have their “finished” side face the adjacent greenway or public street (see Fig 5.8.8.A.3: Fence with Finished Side Out).



Fig 5.8.8.A.3: Fence with Finished Side Out.

4. Compatibility of Materials Along a Single Lot Side

All fencing or wall segments located along a single lot side shall be composed of a uniform style and colors compatible with other parts of the fence and with any nearby primary buildings on the lot.

5. Fence and Wall Landscaping

Except on lots containing single-family detached, duplex, or manufactured home dwellings, fences and walls over four feet in height and located within 15 feet of a greenway or a street right-of-way or easement shall be supplemented with landscape screening to soften the visual impact of the fence, in accordance with the standards below (see Fig 5.8.8.A.5: Fence and Wall Landscaping).

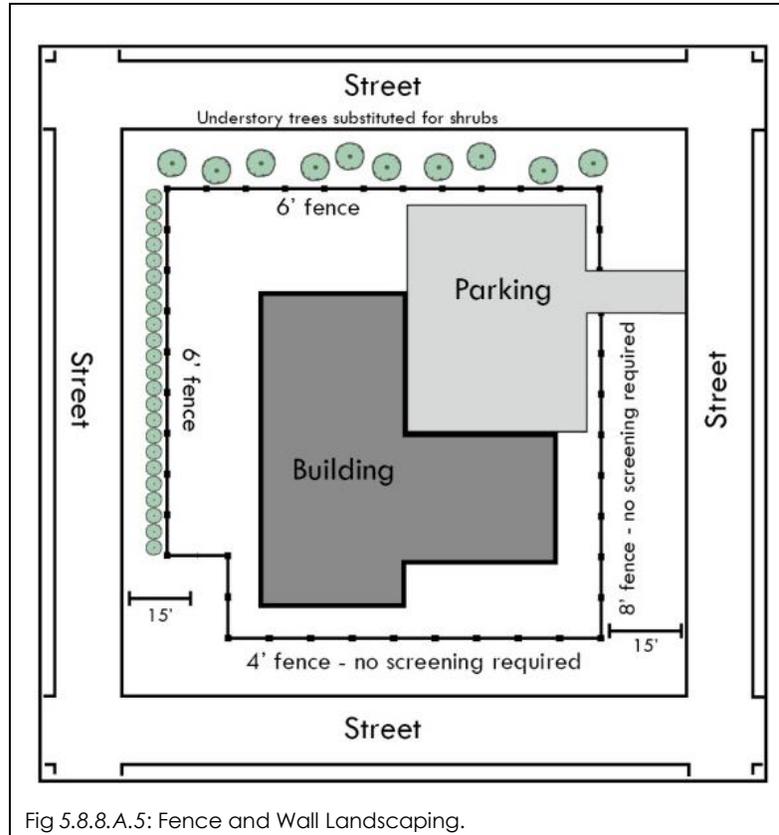


Fig 5.8.8.A.5: Fence and Wall Landscaping.

- a. Evergreen shrubs shall be installed on the exterior side of the fence or wall at an average spacing of one per five linear feet of fence or wall length.
- b. Shrubs shall meet the size standards of Section 5.6.4.A, *New Planting Standards*, and may be installed in a staggered, clustered, grouped, or linear fashion.
- c. One understory tree may be substituted for every three evergreen shrubs, provided the tree meets the size standards of Section 5.6.4.A, *New Planting Standards*.
- d. Required fence and wall landscaping may be integrated into the plant materials provided to meet standards for perimeter or streetyard buffers (see Section 4.6, *Perimeter Buffers*,) or vehicular use area screening (see Section 5.7.2, *Screening of Off-Street Loading and Service Areas*).

B. Fences and Walls in the Downtown District

Fences and walls in the Downtown District shall comply with this section.

1. Fencing Defining Outdoor Dining Areas

- a. Fencing shall have an open character, with slats or other decorative elements spaced at least three inches apart. Opaque fencing is prohibited.
- b. Fencing shall be constructed of aluminum, steel, iron, or similar material. Wood, chain link, or other materials not specifically manufactured for pedestrian control are prohibited.

2. Fencing Defining Child Play Spaces

- a. Fencing shall have an open character, with slats or other decorative elements spaces at least three inches on apart unless more stringent standards are required by a state regulatory agency. Opaque fencing is prohibited.
- b. Fencing shall be constructed of aluminum, steel, iron, or similar material with unpainted masonry columns. Wood, chain link, or other materials are prohibited.
- c. Fencing shall be divided by individual four-sided masonry columns spaced no more than 50 feet on center. Each column shall have a cross-section of at least two feet by two feet, project at least one foot from the wall of fence plane toward the adjacent street, be topped with a cap detail for visual interest, and be constructed of the same masonry material on all four sides.

3. All Other Fences and Walls

- a. Walls shall be constructed of a masonry material that is consistent with that of the principal building on the lot.
- b. Fences made of chain link, wire mesh, or other similar materials are prohibited.
- c. Walls and fences shall be divided by individual four-sided masonry columns spaced no more than 50 feet on center. Each column shall have a cross-section of at least two feet by two feet, project at least one foot from the wall of fence plane toward the adjacent street, be topped with a cap detail for visual interest, and be constructed of the same masonry material on all four sides.

5.8.9. Security Plan Fences and Walls

An owner or tenant of property, or a representative of a public agency responsible for a public facility, may submit to the Planning Director a site security plan proposing fences or walls taller than those permitted by this section, or the use of barbed or concertina wire atop a fence or wall. The Planning Director shall approve, or approve with conditions, the site security plan and its proposed exemption of fences or walls from the standards of this subsection, on finding that:

- A. The condition, location, or use of the land, or the history of activity in the area, indicates the land or any materials stored or used on it are in significantly greater danger of theft or damage than surrounding land; and
- B. The proposed taller fences or walls, or use of barbed or concertina wire, will not have a significant adverse effect on the security, functioning, appearance, or value of adjacent lands or the surrounding area as a whole.

Section 5.9. Outdoor Lighting²⁰⁷

5.9.1. Purpose

The purpose of this section is to control light trespass, pollution and glare so as not to adversely affect motorist, pedestrians, and land uses of adjacent properties inside the town limits and within the ETJ planning jurisdiction of the Town of Pittsboro. Lighting standards are also intended to preserve and protect the nighttime use and enjoyment of all property.

Levels of illumination (light) to achieve a certain function or desired effect should also reduce or eliminate the hazardous aspects and nuisance of glare and lighting trespass for all exterior lighting installations. This includes but is not limited to:

- A. Façade building lighting;
 - B. Recreation and sports areas;
 - C. Public and private streets; and
 - D. Parking areas and signs.
-

5.9.2. Light Measurement

See section 10.4.1.I, Maintained Footcandle.

5.9.3. General Lighting Standards²⁰⁸

Outdoor lighting shall comply with the following standards unless specifically stated otherwise.

A. Perimeter Light Levels²⁰⁹

1. The maximum light level shall be 0.5 maintained footcandles at any property line in a Residential Base District, or on a lot occupied by a dwelling unit.²¹⁰
2. Floodlights shall not be directed toward residential property.

B. Lighting Type

1. Lighting fixtures of more than 2,000 lumens shall be full cutoff fixtures.
2. Nighttime security lighting must be fully shielded to provide full cutoff light distribution.

C. Lighting Height

1. The mounting height of all outdoor lighting shall not exceed thirty-seven feet above finished grade, except for outdoor sports field lighting.
 2. The Planning Director may approve greater mounting heights if no adverse impact would occur.
-

²⁰⁷ This section carries forward Chapter 28, Pittsboro Lighting Ordinance, and replaces lighting standards currently set forth in Subdivision Regulations, Section 7.1(K). Sections noted below are deleted or located elsewhere in this UDO.

- Section 28.13, Permitting and Approval Process, is to be located in the Administrative Manual.
- Section 28.14, Exemptions, is addressed in Article 6: Nonconformities.
- IESNA Cutoff Classifications and Definitions are located in Section 10.5, Terms and Uses Defined.
- Section 28.10, Residential Subdivisions, is deleted because it is redundant.

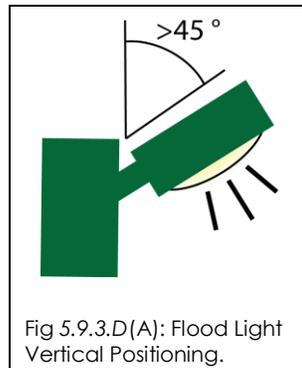
²⁰⁸ This section groups lighting standards related to specific areas and facilities.

²⁰⁹ Section 28.3(A), General Standards for Outdoor Lighting, is recommended to be located in the Administrative Manual.

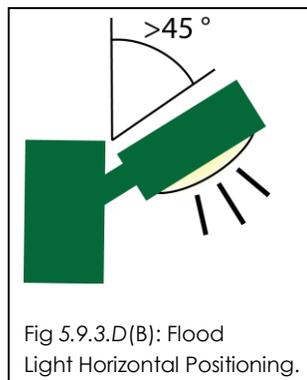
²¹⁰ This section is modified to include all dwellings units.

D. Floodlights

1. Flood lights shall be aimed down at least forty-five degrees from vertical (see Fig 5.9.3.D(A): Flood Light Positioning).



2. Any flood light located within fifty feet of a right-of-way shall be mounted perpendicular to the right-of-way. The side-to-side horizontal positioning shall not exceed an orientation greater than 15 degrees from perpendicular to the right-of-way (see Fig 5.9.3.D(B): Flood Light Horizontal Positioning).



3. All flood lamps emitting 1,000 or more lumens shall be aimed at least 60 degrees down from horizontal or shielded such that the main beam from the light source is not visible from adjacent properties or the public street right-of-way.

E. Lighting Performance

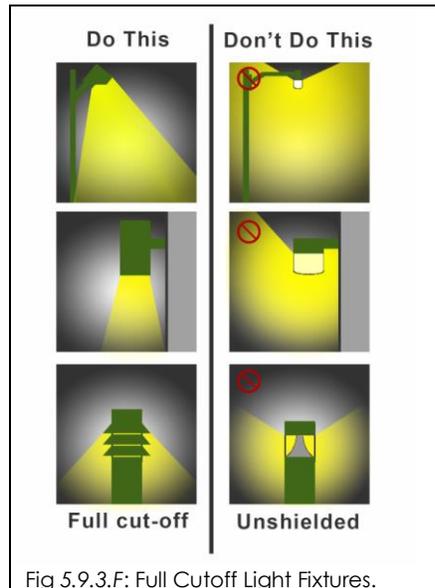
All exterior lighting fixtures shall produce at least 80 lumens per watt of energy consumed, as documented by manufacturer's specifications or the results of an independent testing laboratory.²¹¹

F. Shielding²¹²

All exterior lighting fixtures shall be full cutoff (see Fig 5.9.3.F, Full Cutoff Light Fixtures).

²¹¹ This is a new standard for energy efficiency.

²¹² This expands the current standard so that all styles of lighting fixtures (not just wall pack lighting) must be fully shielded.



G. Remedies for Light Trespass

The Planning Director may require the following remedies if compliance with this section would still cause light trespass, for example to account for different land elevations:

1. Installation of internal or external shields;
2. Adjusting the aim of offending fixtures;
3. Adjusting the location and/or mounting height or the offending poles;
4. Adjusting the light distribution pattern and/or fixture type; or
5. Remove the offending poles and fixtures from the site.

H. Lighting Color

The same or similar light source color temperature must be used on any one site that is part of a Planned Development District. This applies to:

1. All street light fixtures; and
2. Area and parking lot light fixtures that are mounted on a pole or to the side of a building.

5.9.4. Lighting Standards for Specific Areas and Site Features²¹³

A. Open Parking Facilities²¹⁴

1. Illumination

- a. For residential parking lots, the range of maintained footcandles shall be 0.2 to 0.7.

²¹³ This section groups lighting standards related to specific areas and facilities.

²¹⁴ This section modifies Section 28.4(D), of the Lighting Ordinance, for clarity, and to eliminate redundancy. In addition, Section 28.4(E) is deleted because it is redundant.

- b. For nonresidential parking lots, the range of maintained footcandles shall be 0.2 to 0.9.

2. Lighting Type and Height

- a. Non-cutoff decorative post-mounted fixtures shall be equipped with a solid top. Mounting heights lower than 18 feet are allowed when the maximum initial lumens generated by each fixture does not exceed 9500 initial lamp lumens.
- b. All metal halide, mercury vapor, fluorescent, induction, white high pressure sodium and color improved high pressure sodium lamps 9500 lumens and less used in non-cutoff fixtures shall be coated with an internal white frosting inside the outer lamp envelope.
- c. All metal halide solid-top decorative post fixtures equipped with a medium base socket must use an internal refractive lens, a diffuse outer lens or a wide-body refractive globe.

3. Modification of Standards

- a. The Planning Director may require or allow higher light levels based on the following criteria:
 - (1) Safety and security;
 - (2) Special events;
 - (3) Existing lighting conditions on adjacent property; andIf use of full cutoff fixture does not provide ample lighting.

B. Covered Parking Facilities

Lighting for covered parking facilities shall comply with the *IESNA Handbook, 9th Edition*.

C. Vehicular Canopies

- 1. Areas under a vehicular canopy shall have an average maximum horizontal illuminance of 20 maintained footcandles. The maximum shall be 15 maintained footcandles for LED lighting.²¹⁵
- 2. Lighting under vehicular canopies shall be designed so as not to create glare off-site. Acceptable methods to reduce glare include:
 - a. Installing a lens cover that is either recessed or flush with the bottom surface (ceiling) of the vehicular canopy, and provides a full cutoff or fully-shielded light distribution; or
 - b. Installing flat glass that provides a full cutoff or fully-shielded light distribution.

D. Outdoor Sports and Performance Areas²¹⁶

- 1. The mounting height of outdoor sports field and outdoor performance area lighting fixtures shall not exceed 80 feet from finished grade unless approved by the Town Board of Commissioners.
- 2. All outdoor sports field and outdoor performance area lighting fixtures shall be equipped with a glare control package (louvers, shields, or similar devices).
- 3. The fixtures must be aimed so that their beams are directed and fall within the primary playing or performance area. The maximum light level shall be 0.5 maintained footcandle at any property line in a Residential Base District, or on a lot occupied by a dwelling unit.²¹⁷
- 4. The hours of operation for the lighting system for any game or event shall not exceed one hour after the end of the event.

²¹⁵ This is a new standard.

²¹⁶ Section 28.6(D), of the Lighting Ordinance, is addressed in Article 6, Nonconformities.

²¹⁷ This section is modified to include all dwelling units.

E. Outdoor Display and Sales Areas

1. Lighting for outdoor display areas shall not exceed 20 maintained footcandles. The maximum shall be 15 maintained footcandles for LED lighting.²¹⁸
2. If adjacent to any residential use, the maximum shall be 15 maintained footcandles and the fixtures shall be full cutoff.
3. All light fixtures shall be full cutoff fixtures or directional fixtures such as floodlights.
4. The mounting height of outdoor display area fixtures shall not exceed 37 feet above finished grade, unless the Planning Director determines that no adverse effect would occur.
5. Glare from any surface may not exceed a maximum average maintained illuminance of 20 footcandles.
6. Car dealership parking lot lighting shall comply with the following standards.
 - a. Only cutoff or full cutoff fixtures shall be used.
 - b. The maximum mounting height shall be 35 feet, in addition to a two-foot raised base for parking areas.
 - c. Glare from the car bumper in the first row closest to the right-of-way may not exceed a maximum average maintained illuminance of 20 footcandles.
 - d. Lighting at the first row or closest paved display area adjacent to a public right-of-way.
 - e. Lighting in the non-merchandising areas of the parking lot shall be a maximum average maintained illuminance of five footcandles.

F. Building Facades

1. Lighting fixtures shall be focused exclusively on the building façade, plantings, and other intended site features, and away from adjoining properties and the public street right-of-way.
2. Illumination on any vertical surface or angular roof shall not exceed a maximum average maintained illuminance of five footcandles.
3. Where possible, lighting fixtures shall be directed downward.
4. The Planning Director may allow lighting to be aimed upward, if a downward orientation is impractical. In such case, low-wattage fixtures with shields (as needed) shall be used, and located close to the building to minimize reflected light from windows and other surfaces.

G. Signs and Billboards

1. Lighting fixtures that externally illuminate signs shall comply with *Section 5.10, Signage*.
2. Lighting for outdoor advertising signs shall be lighted from the top and oriented downward.

5.9.5. Lighting Standards for Bikeways, Walkways, and Parks

Ground areas along bikeways, walkways, and lighted areas in parks shall be illuminated between 0.2 and 0.5 average maintained footcandle.

²¹⁸ This is a new standard.

Section 5.10. Signage²¹⁹

5.10.1. Purpose

The purpose of this section is to:

- A. Ensure that signs are designed, constructed, installed, and maintained so that public safety and traffic safety are not compromised;
- B. Minimize distractions and view obstructions;
- C. Encourage a high standard for signs so that they are appropriate to and enhance the aesthetic appearance and attractiveness of the community;
- D. Create an aesthetic environment that contributes to the ability of the community to attract sources of economic development and growth; and
- E. Allow for adequate and effective signs for communicating identification while preventing signs from dominating the visual appearance of the area in which they are located.

5.10.2. Sign Types

Sign types identified in this section are defined in *Section 10.5, Terms and Uses Defined* (immediately following the entry for "sign").

5.10.3. General Sign Standards

The following standards apply to all sign types.

A. Construction

All signs shall be constructed and installed in accordance with the applicable provisions of the North Carolina State Building Code.

B. Electricity

All illuminated signs shall be installed in accordance with the applicable provisions of the North Carolina State Building Code and all detached signs shall be so illuminated by an underground electrical source.

²¹⁹ This section carries forward Article VI, Signs, in the current Zoning Ordinance, Sections noted below are deleted or located elsewhere in this UDO.

- Section 6.2, Definitions, is located in *Section 10.5, Terms and Uses Defined*.
- Section 6.11, Removal of Certain Signs, is located in *Article 6: Nonconformities*.
- Section 6.2.1, Amortization, is deleted as this term is not used in the new Ordinance.
- The following terms from Section 6.2, Definitions, is located in *Section 10.4.1, Measurement: Grade; Roof Line; Sign Face Area; and Sign Height*.
- Section 6.2.22(S), Nonconforming sign, is located in *Article 6: Nonconformities*.
- Section 6.3, Procedures, is addressed in *Section 8.3.3.D, Sign Permit*. Items pertaining to application processes (application materials and fees) are recommended to be located in an administrative manual.
- Section 6.12, Enforcement, is addressed in *Article 9: Enforcement*.
- Section 6.13, Variances and Appeals, is addressed in *Section 8.3.5.B, Variance (Zoning and Flood Damage Prevention)* and *Section 8.3.5.E, Appeal*.
- Section 6.14, Effective Date of Regulations, is addressed in *Section 1.2.1, Effective Date*.

C. Maintenance

All signs shall be maintained in good structural and aesthetic condition. Deficiencies such as chipped paint, broken plastic, missing letters and exposed light bulbs shall be evidence of a lack of maintenance.

D. Content

If a commercial sign is allowed by a provision of this Ordinance, then a noncommercial sign shall likewise be permitted subject to the applicable standards herein. In addition, any commercial sign permitted by this ordinance may display or publish noncommercial message. This includes signs requiring and not requiring a permit.

E. Changeable Copy

The following regulations shall apply to all changeable copy signs.

1. Either computer-driven or manually changeable copy is permitted.
2. Changeable copy signs shall be limited to one change per day.
3. A changeable copy sign on which copy other than time and temperature shall be considered a flashing sign.
4. No more than 25 percent of the area of a single sign shall be usable for changeable copy.
5. In residential zoning districts, changeable copy signs are prohibited unless used in conjunction with an approved institutional use.

F. Illumination

1. Signs may be illuminated from within or from an external source, and shall avoid glare or reflection. Any external source of illumination such as spot or floodlights shall be placed so that it is not directly visible from any adjacent residential property.
2. In all Residential Base Districts, internally illuminated signs shall be permitted only if the background of the sign is opaque and copy is either translucent and trans-illuminated or opaque and backlit.
3. All business signs shall not be illuminated between the hours of 12:00p.m. 6:00a.m. except for businesses which are open for business during these hours.

G. Sight Distance Triangle

Signs with a vertical clearance less than 10 feet between grade and the bottom of the sign face are prohibited within sight distance triangles.

H. Proximity to Residential Base Districts

Signs located in a Mixed-Use and Nonresidential Base District shall be located at least 20 feet from the property line if the adjoining property is zoned with a Residential Base District.

I. Proximity to Right-of-Way

Signs shall be located a minimum of 15 feet from a right-of-way if:

1. The sign is greater than two and one-half in height; or
2. Has a vertical clearance less than 10 feet.

5.10.4. Prohibited Signs

The following signs are prohibited:

- A. Signs extending into the public right-of-way other than those permanent signs approved by the Town and/or the North Carolina Department of Transportation;
- B. Roof signs;
- C. Portable signs, unless exempt as provided in Section 8.3.3.D, *Sign Permit*;
- D. Flashing, fluttering, animated, swinging, or rotating signs other than time and/or temperature signs;
- E. Signs that are similar in color, design, and appearance to traffic control signs;
- F. Vehicular signs;
- G. Off-premises signs, unless exempt as provided in Section 8.3.3.D, *Sign Permit*;
- H. Changeable copy signs on which copy other than time and temperature is in fact changed more than once in any one day; and
- I. Other signs not authorized by this Ordinance.

5.10.5. Signs Not Requiring A Permit

See Section 8.3.3.D.2.b, Signs Not Requiring a Permit.

5.10.6. Standards for Specific Sign Types

The following standards apply to specific types of signs, notwithstanding additional standards set forth in Section 5.10.8, District-Specific Sign Standards.

A. Wall Signs

1. Signs may be located on any building wall of a nonresidential structure, provided the maximum sign surface area of all signs on one wall does not exceed 10 percent of the total building wall area (excluding canopies).
2. The maximum allowable wall sign area is not transferable to another wall.
3. The total area of wall signs may be increased by 10 percent if:
 - a. The sign consists of only individual, outlined alphabet, numeric, and/or symbolic characters without background; or
 - b. No detached sign is used on the premises.
4. Wall signs shall not extend above the parapet or roof line of the building to which the sign is attached, or project more than 18 inches from the building wall.
5. Wall signs or supporting structures shall not cover or obstruct any of the following:
 - a. Window or portion of a window;
 - b. Door, fire escape, or stairway; or
 - c. Other opening intended to provide light, air, ingress, or egress for any building or lot.
6. Lamps and fixtures used to illuminate a wall sign:
 - a. Shall not project into a required yard more than two feet beyond building walls; and

- b. Shall have a minimum clearance of nine feet above a pedestrian walkway or 12 feet above a vehicular drive.

B. Canopy Signs

Signs may be attached, painted, or printed upon a canopy or awning, provided the maximum allowable area for canopy or awning signs or a combination of canopy awning, and/or wall signs shall not exceed that maximum permitted in Section 5.10.6.A, Wall Signs.

C. Projecting Signs

A projecting sign may be used in lieu of a detached sign, provided it complies with the following standards.

1. The sign shall not project more than three feet from a building wall or exceed a maximum sign face area of six (6) square feet.
2. The sign shall not extend vertically above the roof line or parapet wall of a building.
3. The minimum height from grade to the lowest edge of a projecting sign shall be nine feet above a pedestrian walkway or 12 feet above a vehicular drive.

D. Detached Signs

1. Detached signs shall not exceed four feet in height unless specifically stated otherwise in this Ordinance.
2. Ground-mounted and monument signs greater than two and one-half feet in height are prohibited within sight distance triangles.
3. Detached signs shall be located no closer than two feet from a right-of-way;
4. The maximum angle of a double-faced sign shall be 45 degrees. On corner lots the maximum shall be 90 degrees.

E. Marquee Signs

1. Marquee signs may extend over a required front yard or sidewalk, provided that a vertical clearance of at least nine feet is maintained beneath the sign.
2. No marquee sign shall be closer than two feet to any right-of-way.
3. Marquee signs may extend for the full length and width of the marquee.
4. Marquee signs shall not exceed five feet in height. Signs for theaters; clubs, lodges and banquet halls; and community centers shall not exceed eight feet in height.

5.10.7. Standards Specific to Temporary Signs

A. Temporary Planned Development Signs

1. Only one primary sign shall be allowed per property.
2. The maximum sign face area of a primary sign shall not exceed 16 square feet for Residential Base Districts, and 32 square feet in Mixed-Use and Nonresidential Base Districts.
3. One permit is required for all temporary planned development signs for each planned development, in accordance with Section 8.3.3.D, Sign Permit.
4. Permits shall be valid until a project is completed or two years, whichever occurs first.
5. All secondary signs shall be removed when the first permit issued expires.

6. Temporary directional signs may be located within a planned development, provided they do not exceed 12 square feet in sign area.
7. Temporary signs shall not be visible from external rights-of-way.
8. Signs shall be removed upon completion of the corresponding portion of the project.

B. Temporary Banners

Temporary banners to announce the opening of a new business or change of ownership in Mixed-Use and Nonresidential Base Districts are allowed, provided they comply with the following standards.

1. Only one banner per establishment shall be allowed at a time.
2. All banners shall be attached to a building wall or permanent canopy extending from a building.
3. Paper banners are prohibited.
4. Banners shall be erected for no more than 30 days.
5. No banner shall extend above the second floor level of a building or 45 feet above grade, whichever is less.

5.10.8. District-Specific Sign Standards

Signs shall comply with Table 5.10.8: District-Specific Sign Standards. Signs not permitted in this section are prohibited unless specifically stated otherwise in this Ordinance.

This page intentionally left blank.

Table 5.10.8: District-Specific Sign Standards

Zoning District													
AF, RA-2, RA-1, R-15, R-12A, R-10, R-5, MR								OI		NMUC, CMUC, D, LI, HI			
Use Category													
Household Living Uses	Group Living Uses	Community and Government Services Uses; Health Care Uses	Recreation and Entertainment Uses	Accessory Uses	Funeral-Related Uses	All Other Nonresidential Uses	Office Uses	All Other Uses	Retail Sales and Services Uses	Retail Sales and Services Uses	All Other Uses		
Use Type													
Multifamily (less than eight units)	Multifamily (more than eight units), Mobile Home Park, Continuing Care Retirement Community	Dormitory Place of Worship, School, Community Center, Cultural Facility, Day Care Center, Hospital, Nursing Home	Country Club, Golf Course, Private Recreation/Entertainment Facility,	Family Child Care Home	Ceme-tary	All Other Nonresidential Uses	Office Uses	All Other Uses	Shopping Centers	Shopping Center Out-parcels	All Other Uses		
Identification Signs													
Max. Number	1	1 [1]	1 [2]	1	1	1	1	1	1	1 [3]	x	1 [3]	
Max. size	6 sf	24 sf	24 sf	24 sf	4 sf	16 sf	4 sf	24 sf	1 sf for every 10 linear feet of lot frontage [4][5]	<50,000 sf	24 sf	x	[6]
										50,001-200,000 sf	32 sf		
										>200,000 sf	40 sf		
Max. Height	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	<50,000 sf	4 ft	x	[7]
										50,001-200,000 sf	6 ft		
										>200,000 sf	8 ft		
Ground-mounted Identification Signs													
Max. Number	x	x	x	x	x	x	x	x	x	x	1	x	
Max. Size	x	x	x	x	x	x	x	x	x	x	[8]	x	
Max. Height	x	x	x	x	x	x	x	x	x	x	4 ft [9]	x	
Business Signs													

Table 5.10.8: District-Specific Sign Standards

Zoning District												
AF, RA-2, RA-1, R-15, R-12A, R-10, R-5, MR									OI		NMUC, CMUC, D, LI, HI	
Use Category												
	Household Living Uses	Group Living Uses	Community and Government Services Uses; Health Care Uses	Recreation and Entertainment Uses	Accessory Uses	Funeral-Related Uses	All Other Nonresidential Uses	Office Uses	All Other Uses	Retail Sales and Services Uses	Retail Sales and Services Uses	All Other Uses
Use Type												
	Multifamily (less than eight units)	Multifamily (more than eight units), Mobile Home Park, Continuing Care Retirement Community	Dormitory Place of Worship, School, Community Center, Cultural Facility, Day Care Center, Hospital, Nursing Home	Country Club, Golf Course, Private Recreation/Entertainment Facility,	Family Child Care Home	Ceme-tary	All Other Nonresidential Uses	Office Uses	All Other Uses	Shopping Centers	Shopping Center Out-parcels	All Other Uses
Max. Number	x	x	x	x	x	x	x	x	x	1 [3]	x	1 [3]
Max. Size	x	x	x	x	x	x	x	x	x	<50,000 sf	24 sf	x
										50,001-200,000 sf	32 sf	
										>200,000 sf	40 sf	
Max. Height	x	x	x	x	x	x	x	x	x	<50,000 sf	4 ft	x
										50,001-200,000 sf	6 ft	
										>200,000 sf	8 ft	
Directory Signs												
Max. Number	x	x	x	x				1				
Max. Size	x	x	x	x				16 sf [10]				
Max. Height	x	x	x	x				n/a				

Table 5.10.8: District-Specific Sign Standards

Zoning District												
AF, RA-2, RA-1, R-15, R-12A, R-10, R-5, MR								OI		NMUC, CMUC, D, LI, HI		
Use Category												
Household Living Uses	Group Living Uses	Community and Government Services Uses; Health Care Uses	Recreation and Entertainment Uses	Accessory Uses	Funeral-Related Uses	All Other Nonresidential Uses	Office Uses	All Other Uses	Retail Sales and Services Uses	Retail Sales and Services Uses	All Other Uses	
Use Type												
Multifamily (less than eight units)	Multifamily (more than eight units), Mobile Home Park, Continuing Care Retirement Community	Dormitory Place of Worship, School, Community Center, Cultural Facility, Day Care Center, Hospital, Nursing Home	Country Club, Golf Course, Private Recreation/Entertainment Facility,	Family Child Care Home	Ceme-tary	All Other Nonresidential Uses	Office Uses	All Other Uses	Shopping Centers	Shopping Center Out-parcels	All Other Uses	

Max. = Maximum sf = square feet ft = feet n/a = not applicable X = not allowed

NOTES:

- [1] Two separate sign faces may be used in conjunction with a wall, fence or other architectural entrance feature.
- [2] A primary sign no greater than six square feet and a secondary sign no greater than two square feet is allowed.
- [3] The changeable copy on a business sign shall not exceed 25 percent of the total sign face.
- [4] The maximum shall be 24 square feet.
- [5] Sign size may be increased by 25 percent if located at least 30 feet from right-of-way.
- [6] The maximum size shall be 24 sf for lots with less than 150 ft of street frontage, and 32 sf for lots with more than 150 sf of street frontage.
- [7] The maximum height shall be four feet for lots with less than 150 ft of street frontage, and eight feet for lots with more than 150 sf of street frontage
- [8] Sign size shall be 50 percent of allowable size for shopping center.
- [9] Signs shall be located at least 15 feet behind right-of-way.
- [10] Signs shall be located behind the front yard setback.

This page intentionally left blank.

5.10.9. Sign Flexibility Option²²⁰

A. Purpose

Flexibility from this section may be granted, provided it contributes to a high-quality, coordinated system of signage.

B. Applicability²²¹

The sign flexibility option may be granted for the following development types:

1. Planned Development District;
2. Mixed Use Planned Development District;
3. Major Subdivision; and
4. Major Site Plan.

C. Review Criteria

Flexibility from sign regulations shall be granted through an approved Special Use Permit, consistent with Section 8.3.3.A, Special Use Permit. The Planning Board shall review the proposal and evaluate whether it complies with the following criteria.

1. The proposal will result in a coordinated, well-designed signage system.
2. All signs include consistent design features.
3. The maximum size of detached signs does not vary from established standards by more than 25 percent.
4. No more than three detached signs along a street frontage is proposed.
5. The maximum height of detached signs do not exceed 12 feet.
6. Multi-information directional signs do not exceed 16 square feet and are located in the interior of the proposed development.
7. Changeable copy highlighting special events on signs for institutional uses do not exceed 25 percent of the sign face area.

5.10.10. Outdoor Advertising Signs

Nonconforming outdoor advertising signs shall be removed in accordance with Section 6.5.3, Removal of Nonconforming Signs.

²²⁰ This section is carried forward from Section 6.9, Planned Development Flexibility Option, of the Zoning Ordinance. The following sections are deleted, modified, or located elsewhere in the UDO as noted.

- The "Planned Development" reference in the section heading is modified as the provision extends to other types of development.
- Subsection 6.9(B) is recommended to be located in the Administrative Manual.

²²¹ This section carries forward and modifies subsection 6.9(A) in the current Zoning Ordinance. It is modified to clarify which development types are eligible for the Sign Flexibility Option.

Section 5.11. Commercial Development Design

5.11.1. Purpose and Intent

The purpose and intent of this section is to ensure a minimum quality of form and design for commercial and mixed-use development that results in greater predictability during the development review process. More specifically, the purposes of this section are to:

- A. Encourage establishment of a stronger sense of place with vibrant commercial and mixed-use development;
- B. Encourage a more pedestrian-friendly environment through attention to human-scale design and site features to limit large, bulky buildings with few architectural details;
- C. Foster greater compatibility between adjacent residential and nonresidential development;
- D. Limit the impacts of automobile-oriented development in commercial and mixed-use areas; and
- E. Improve the appearance of the Town generally.

5.11.2. Applicability

This section shall apply to:

- A. All new commercial and mixed-use development;
- B. Any expansion or alteration of an existing commercial or mixed-use development if the expansion increases the development's gross floor area by 50 percent or more or the alteration involves 50 percent or more of the development's gross floor area; and
- C. Where requirements identified in this section conflict with any other provisions in this Ordinance, the more stringent requirement shall control.

5.11.3. General Standards

A. Building Orientation

1. Front Streets

The front facade of all buildings, as defined by the primary entrance, shall front onto a street, a courtyard, or plaza, not an off-street surface parking area. In the case of corner lots, the primary entrance shall face the street from which the building derives its street address. Nothing shall prohibit a secondary entrance from facing a surface parking area.

2. Single-Building Development Parallel to Street

All single-building developments shall be configured with the long axis of the building parallel to the street it fronts, or be consistent with existing development patterns, rather than being sited at unconventional angles.

3. Multi-Building Development

- a. Development composed of multiple buildings totaling 50,000 or more square feet of floor area shall be configured to:
 - (1) Break up the site into a series of smaller "blocks" defined by on-site streets, vehicle accessways, pedestrian walkways, or other circulation routes;

Article 5: Development Standards

Section 5.11. Commercial Development Design

5.11.3. General Standards

- (2) Frame the corner of an adjacent street intersection or entry point to the development;
- (3) Frame and enclose a "Main Street" pedestrian or vehicle access corridor within the development site;
- (4) Frame and enclose on at least three sides of parking areas, public spaces, or other site amenities; or
- (5) Frame and enclose outdoor dining or gathering spaces for pedestrians between buildings.
- (6) The primary entrances of buildings shall be oriented toward a street along the perimeter of a development, toward streets or driveways interior to the development, or toward open space areas, courtyards, or plazas.

B. Outparcel Development

- 1. To the maximum extent practicable, outparcels and their buildings shall be configured and located to define street edges, development entry points, and spaces for gathering or seating between buildings.

Spaces between buildings on outparcels shall be configured with small scale pedestrian amenities such as plazas, seating areas, pedestrian connections, and gathering spaces (see Fig 5.11.3.B: Outparcel Development).

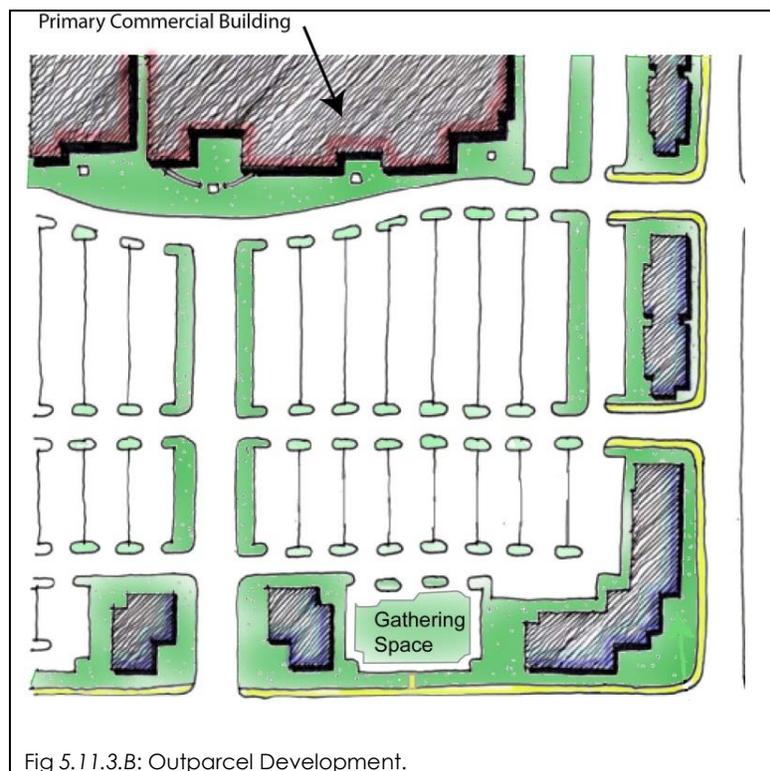


Fig 5.11.3.B: Outparcel Development.

C. Base, Middle, and Top

Buildings of three or more stories shall include a clearly recognizable base, middle, and top configured in accordance with the following standards (see Fig 5.11.3.C: Base, Middle and Top).

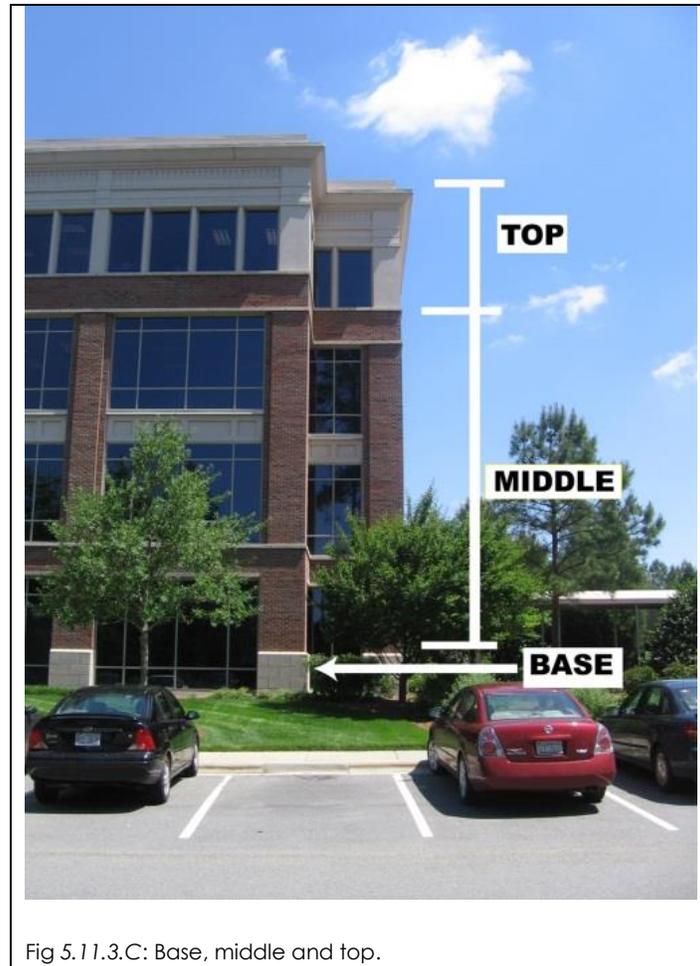


Fig 5.11.3.C: Base, middle and top.

1. Building bases shall incorporate one or more of the following:
 - a. Thicker walls, ledges, or sills;
 - b. Integrally-textured materials such as stone or other masonry;
 - c. Integrally-colored and patterned materials such as smooth-finished stone or tile; or
 - d. Lighter or darker colored materials, mullions, or panels.
2. Building tops shall include two or more of the following features:
 - a. Three-dimensional cornice treatments with integrally-textured materials such as stone or other masonry or differently colored materials;
 - b. Sloping roofs with overhangs and brackets;
 - c. Stepped parapets; or
 - d. Aligned openings and articulations.

D. Facade Articulation

1. Offsets Required

Street-facing front building facades that are greater than 60 feet wide shall be articulated with wall offsets (e.g., projections or recesses in the facade plane) that are

at least one foot deep, at least ten feet wide, and spaced no more than 40 feet apart (see Fig 5.11.3.D.1: Front Facade Offsets).

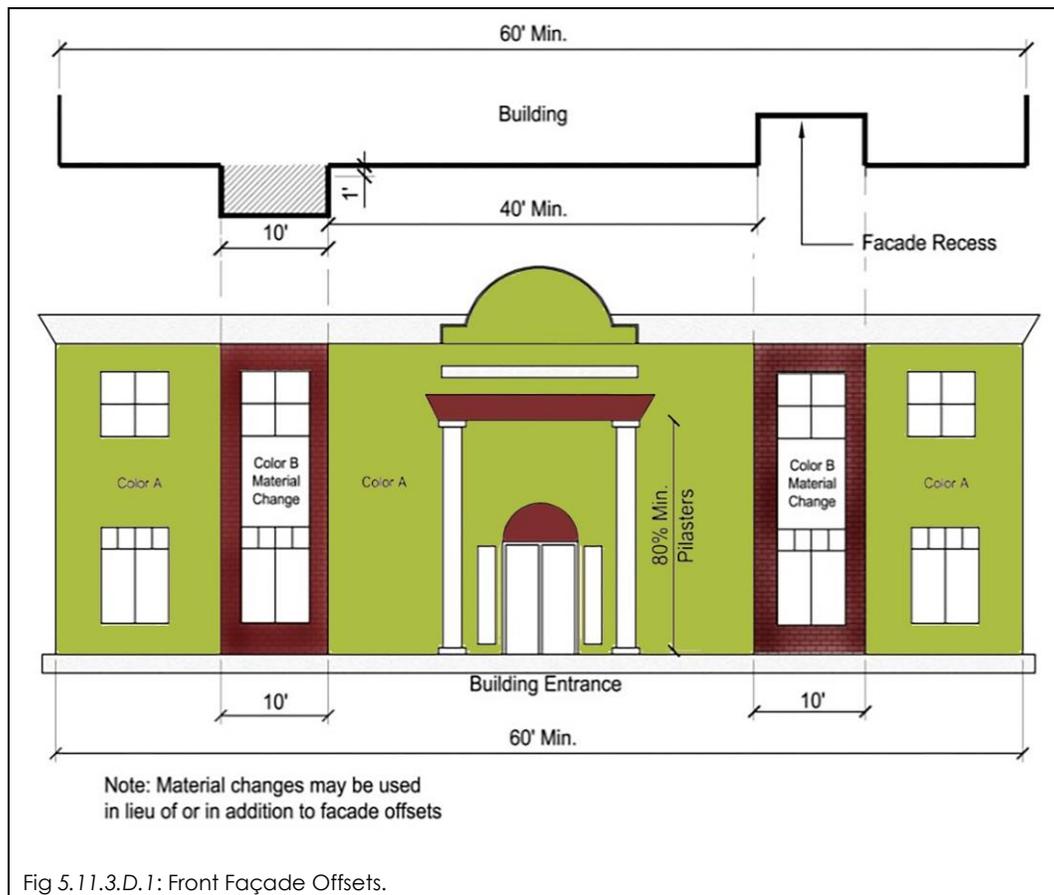


Fig 5.11.3.D.1: Front Facade Offsets.

2. Offset Alternatives

The following alternatives can be used alone or in combination as an alternative to the required front facade offsets:

- a. Changes in facade color or material that follow the same dimensional standards as the offset requirements;
- b. Columns or pilasters that are at least eight inches deep and at least eight inches wide, and have a height equal to at least 80 percent of the facade's height; or
- c. Roofline changes that vertically align with a corresponding wall offset or change in facade color or material, including changes in roof planes and changes in the height of a parapet wall (such as extending the top of pilasters above the top of the parapet wall).

3. Side Facades

The street-facing side facades of buildings shall be articulated with the same facade details as provided on the building's front facade, or be screened from off-site views through fences, walls, or landscaping at least eight feet high.

4. Outbuildings

Outbuildings located in front of other buildings within the same development shall include a consistent level of façade articulation and architectural detail on all sides of the building as well as exterior materials and colors that are compatible with the primary building in the development.

E. Facade Materials

1. The use of aluminum siding, vinyl siding, corrugated metal siding, or other metal cladding is prohibited on any facade visible from a street right-of-way. Nothing shall limit the use of high-quality, decorative metal (e.g., brass, copper, steel) as a building accent material.
2. Primary facade materials shall not change at outside corners and shall continue along any side facade visible from a street right-of-way for at least 15 feet; however, materials may change where side or rear wings meet the main body of the structure.
3. Materials changes shall occur along a horizontal line or where two forms meet; however, changes of materials may be used as accents around windows, doors, cornices, at corners, or as a repetitive pattern.
4. Where two or more materials are proposed to be combined on a facade, the heavier and more massive elements shall be located below the lighter elements (i.e., brick shall be located below stucco or wood). The heavier material may be used as a detail on the corner of a building or along cornices or windows.

F. Fenestration/Transparency

1. At least 25 percent of the street-facing facade area of the ground-level floor of buildings (as measured from the grade to the underside of the eave, top of the parapet, or the story line denoting the second floor) shall be occupied by windows or doorways. This figure may be reduced to 20 percent of the first-floor front facade of a structure containing a retail sales establishment greater than 60,000 square feet.
2. All ground-level windows on street-facing facades shall be transparent. Mirrored or heavily-tinted glass that prevents views into the building is prohibited on street-facing front building facades. This provision does not apply to a building facade enclosing an adult establishment.

G. Roofs

1. Sloped roofs on principal buildings shall include two or more different sloping roof planes, each with a minimum pitch between 3:12 and 12:12.
2. Flat roofs on principal buildings shall be concealed by parapet walls that extend at least three feet above the roof level and have three-dimensional cornice treatments that project at least eight inches outward from the parapet facade plane.
3. Alternative roof forms or pitches may be allowed for small roof sections over porches, entryways, or similar features.
4. All roof-based mechanical equipment, as well as vents, pipes, antennas, satellite dishes, and other roof penetrations (except chimneys), shall be located on the rear elevations or otherwise be configured, to the maximum extent practicable, to have a minimal visual impact as seen from the street.

H. Location of Off-Street Parking

1. Development in the Downtown District

Any off-street parking areas provided with new development in the Downtown District shall be located to the side or rear of the front facade of the building.

2. Development in Other Districts

No more than two bays of off-street surface parking may be located between the front building facade and the street it faces. This may be doubled for buildings of two or more stories.

I. Loading, Service, and Equipment Areas

1. Loading, service, and equipment areas shall be located in a manner that minimizes their visibility from off-site areas, to the maximum extent practicable.
2. Outdoor storage areas shall be fully screened from adjacent streets and single-family development.
3. Loading, service, and equipment areas that are associated with an outparcel building shall be screened through the use of structural elements and similar materials attached to and integrated with the building.

5.11.4. Large Retail Establishment Form and Design Standards

A. General

In addition to the general nonresidential and mixed-use form and design standards in Section 5.11.3, General Standards, single-tenant buildings that have a gross floor area of 60,000 square feet or more and devote 60 percent or more of the total floor area to retail sales activities ("large retail establishments") shall also comply with the following standards.

B. Building Entrances

Buildings shall have clearly defined, highly visible customer entrances featuring no less than three of the following:

1. Canopies or porticos above the entrance;
2. Roof overhangs above the entrance;
3. Entry recesses or projections;
4. Arcades that are physically integrated with the entrance;
5. Raised corniced parapets above the entrance;
6. Gabled roof forms or arches above the entrance;
7. Outdoor patios or plazas adjacent to the entrance;
8. Display windows that are directly adjacent to the entrance;
9. Architectural details, such as tile work and moldings, that are integrated into the building structure and design and are above or directly adjacent to the entrance; or
10. Integral planters or wing walls that incorporate landscaped areas or seating areas.

C. Facades and Massing

1. To reduce their perceived mass and scale, buildings shall incorporate two or more of the following design elements on each façade facing a street:

Article 5: Development Standards

Section 5.11. Commercial Development Design

5.11.4. Large Retail Establishment Form and Design Standards

- a. Variations in roof form and parapet heights;
 - b. Pronounced wall offsets that are at least two feet deep;
 - c. Distinct changes in texture and color of wall surfaces;
 - d. Ground level arcades and second floor galleries or balconies;
 - e. Protected and recessed entries; and
 - f. Vertical accents or focal points.
2. Side building walls that do not face a street and exceed 30 feet in length shall have façade-articulating elements such as columns and/or changes in plane, texture, or masonry pattern (see Fig 5.11.4.C: Large Retail Building Entrances and Massing).



D. Off-Street Parking Location Standards

1. Up to 60 percent of the total off-street surface parking provided may be located between the front facade of the building and the street it faces.
2. Off-street surface parking lots with 300 or more spaces shall be organized into a series of parking bays surrounded by buildings, landscaping, or accessways designed to appear as streets (see Fig 5.11.4.D: Parking Location for Large Retail Establishments).



Section 5.12. Neighborhood Compatibility²²²

5.12.1. Purpose and Intent

The purpose of these neighborhood compatibility standards is to provide a proper transition and ensure compatibility between single-family detached and two-family dwellings, vacant lands in the single-family residential zones, and other more intense forms of development. More specifically, it is the intent of these standards to:

- A. Provide effective transitions between single-family and two-family dwellings and vacant lands in the single-family residential zones, and more intense uses;
- B. Protect the character of existing neighborhoods consisting of primarily single-family detached and two-family dwellings from potentially-adverse impacts resulting from more intense and incompatible adjacent forms of development;
- C. Limit the excessive consumption of available land through the utilization of large vegetated buffers in favor of development form and design treatments; and
- D. Establish and maintain vibrant pedestrian-oriented areas where differing uses can operate in close proximity to one another.

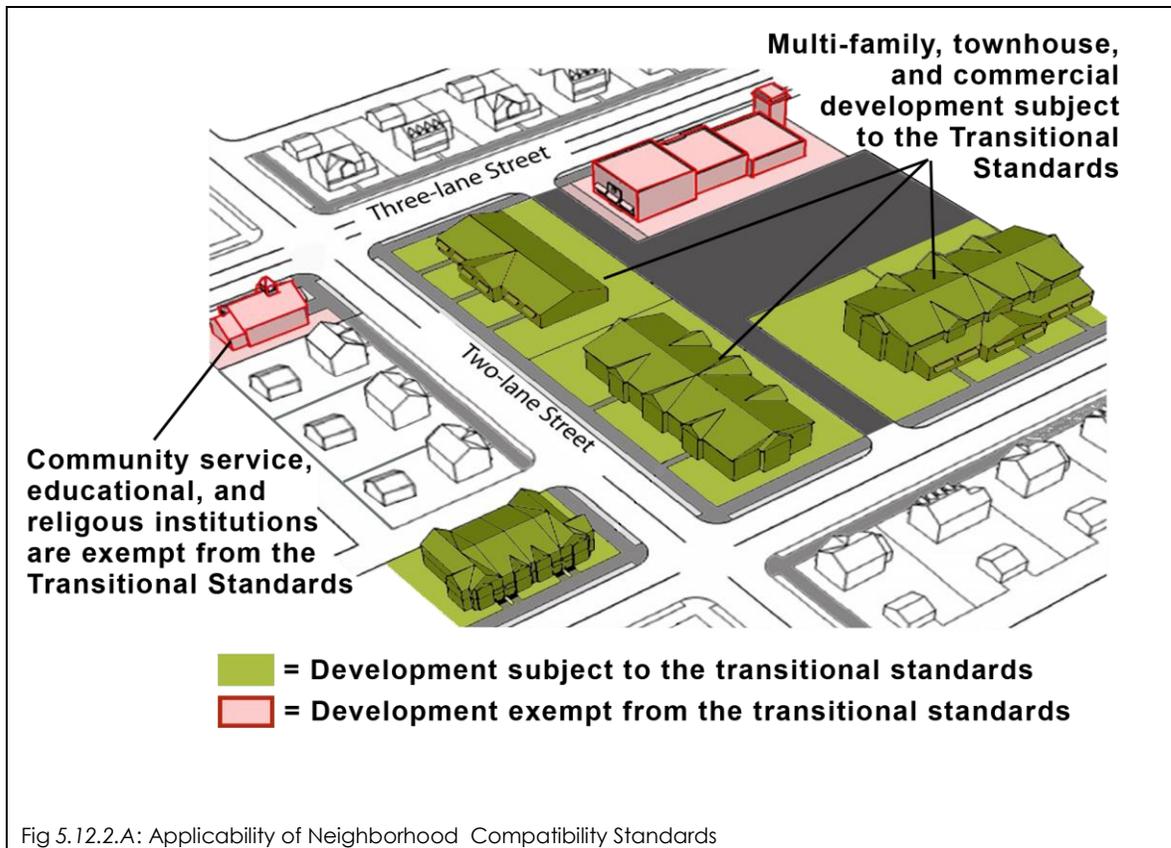
5.12.2. Applicability

A. General

Unless exempted as provided in subsection 2 below, these standards apply to (see Fig 5.12.2.A, Applicability of Neighborhood Compatibility Standards).

1. New multifamily, nonresidential, and mixed-use development when located on land adjacent to, or across a street or alley from, existing single-family detached or two-family dwellings, or vacant lands in Rural or Residential Base Districts; and
2. Any expansion or alteration of an existing multifamily, nonresidential, or mixed-use development located on land abutting or across a local street or alley from existing single-family detached or two-family dwellings, or vacant lands in a Rural or Residential Base District, where the expansion increases the development's gross floor area by 50 percent or more, or the alteration involves 50 percent or more of the development's gross floor area.
3. For the purposes of this section:
 - a. "Multifamily" shall include multifamily dwellings and live/work dwellings.
 - b. "Nonresidential development" shall include:
 - (1) Group Living uses;
 - (2) Health Care uses;
 - (3) Transportation, Communication and Utility Uses; and
 - (4) All Commercial and Industrial uses.

²²² This is a new section that adds neighborhood compatibility standards, as noted in the Pittsboro Code Assessment. These standards are intended to protect existing single-family residential neighborhoods from the potential adverse impacts of new multifamily, nonresidential, or mixed-use development occurring on adjacent lands.



B. Exemptions

The following types of development shall be exempt from this section:

1. Multifamily, nonresidential, and mixed-use development adjacent to a single-family or two-family detached dwelling located on a lot within a Mixed-Use and Nonresidential Base Zoning District.
2. Multifamily, nonresidential, and mixed-use development located on lots separated from single-family residential development by a street with four or more lanes.
3. Transportation, Communication and Utility Uses;
4. Community Service Uses; and
5. Educational Uses Categories.

C. Timing of Review

Review for compliance with these standards shall occur at the time of review for any of the following applications, as appropriate (see Section 8.3, Application-Specific Review Procedures):

1. Site Plan (Major or Minor);
2. Special Exception;
3. Zoning Certification; and
4. Building Permit.

D. Conflict

In the case of conflict between these Neighborhood Compatibility Standards and other standards in this Ordinance, these Neighborhood Compatibility Standards shall control.

5.12.3. Neighborhood Compatibility Standards

Development subject to this section shall comply with the following standards:

A. Building Height/Setbacks

1. Building setbacks shall be consistent with other buildings on the block face and across the street to maintain a consistent plane or edge of buildings along public frontages. Building setbacks shall vary no more than ten percent than the adjacent buildings setbacks.
2. Building height shall not exceed the maximum height established in Table 5.12.3.A: Maximum Height in Transitional Areas.

Table 5.12.3.A: Maximum Height in Transitional Areas	
DISTANCE FROM SINGLE-FAMILY DWELLING, DUPLEX, OR SUBDIVISION [1]	MAXIMUM HEIGHT
Less than 150 feet	Lesser of: 3 stories or 35 feet
150 to 200 feet	Lesser of: 4 stories or 45 feet
NOTES: [1] All required minimum zoning district setbacks shall apply.	

3. Buildings over three stories in height shall be broken up into modules or wings with the smaller and shorter portions of the structure located adjacent to single-family detached or two-family dwellings and vacant lands in Rural or Residential Base Districts (see Fig 5.12.3.A, Building Height Modulation).

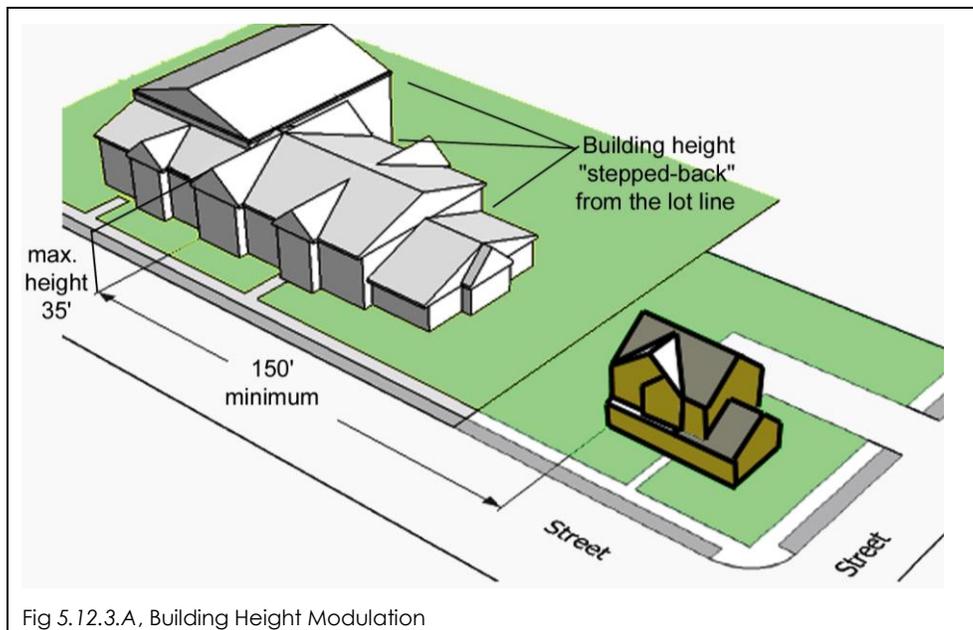


Fig 5.12.3.A, Building Height Modulation

B. Building Orientation

Buildings shall be oriented toward the street from which they derive their street address.

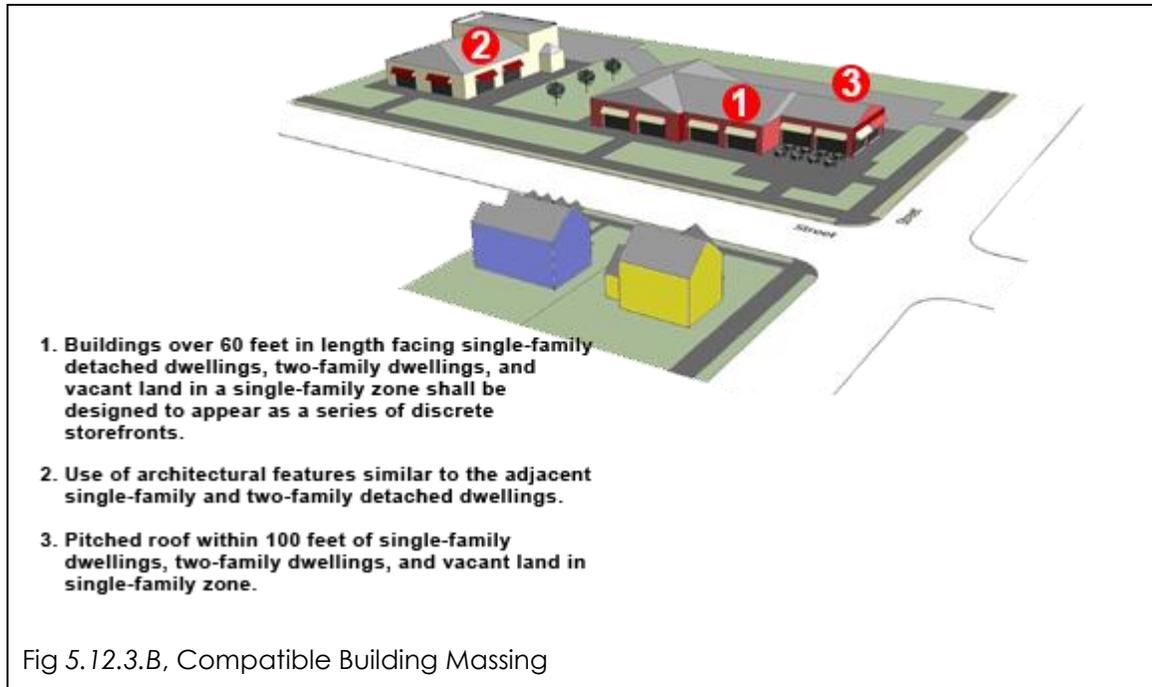
1. Building Design²²³

a. Buildings shall:

- (1) Use a similar roof type to adjacent single-family detached or two-family dwellings in terms of slope and arrangement to prevent abrupt changes in roof form;
- (2) If within 100 feet of a lot on which a single-family detached or two-family dwelling is located, or vacant lands in a Rural or Residential Base District, maintain a pitched roof;
- (3) Configure all roof-mounted equipment to avoid or minimize its view from adjacent streets and single-family detached or two-family dwellings, or vacant lands in a Rural or Residential Base District;
- (4) Use exterior colors that are similar to those found on adjacent single-family detached or two-family dwellings;
- (5) Use similarly sized and patterned architectural features such as windows, doors, awnings, arcades, pilasters, cornices, wall offsets, building materials, and other building articulations found on adjacent single-family detached and two-family dwellings; and
- (6) Orient porches, balconies, and outdoor activity areas away from adjacent single-family detached and two-family dwellings, and vacant lands in a Rural or Residential Base District.

- #### b. Retail commercial building facades that face single-family detached and two-family dwellings and vacant lands in a Rural or Residential Base District shall be designed to appear as a series of discrete storefronts, with no single storefront occupying more than 50 percent of the total facade width of the building (see Fig 5.12.3.B, Compatible Building Massing).

²²³ Standards in this subsection are intended to ensure architectural compatibility.



C. Building Materials

1. Glazing

Building facades facing single-family detached or two-family dwellings, or vacant lands in Rural or Residential Base Districts, shall comply with the standards in Table 5.12.3.C: Glazing Standards.

Table 5.12.3.C: Glazing Standards	
Building Story	Minimum Facade Area Percentage to be Glazed [1]
Less than 150 feet [2]	Lesser of: 3 stories or 35 feet [3]
150 to 200 feet	Lesser of: 4 stories or 45 feet
NOTES: [1] The facade area shall be measured from the grade to the underside of the eaves, or from story line to story line on upper building stories. [2] Facades abutting sidewalks, plazas, gathering areas, or other pedestrian areas shall incorporate transparent glazing. [3] The first two feet of facade area closest to the grade are not required to be glazed and shall be excluded from the facade area calculation.	

2. Colors

- a. Building facades shall incorporate a coordinated color scheme consisting primarily of matte finishes.
- b. Glossy paint finishes may be used for trim and accents. Fluorescent or metallic paint is prohibited.
- c. Colors and finishes shall be consistent throughout an individual development.

3. Exterior Materials

Facades facing single-family detached or two-family dwellings, or vacant lands in a Rural or Residential Base District shall comply with the following exterior materials standards:

- a. Materials and material configurations shall be consistent with those commonly used on adjacent single-family detached and two-family dwellings.
- b. Plywood, concrete block, and corrugated metal are prohibited as exterior materials.
- c. Split-face masonry unit and vinyl siding shall not exceed 25 percent of a building façade.

4. Multi-Building Placement

For multi-building development that includes varying use and/or development intensities in different buildings, the development shall locate buildings with the least intense use and/or development nearest to the abutting single-family detached or two family dwellings, and vacant lands in Rural or Residential Base Districts.

5. Off-Street Parking²²⁴

- a. The total amount of off-street parking shall not exceed 125 percent of the required minimum specified in Section 5.4.3, *Off-Street Vehicle and Bicycle Parking Space Requirements*, unless allowed in accordance with Section 5.4.9.A, *Provision Over Maximum Allowed*.
- b. The minimum number of required parking spaces may be reduced through an alternative parking plan (see Section 5.4.9, *Off-Street Parking Alternatives*) that demonstrates such reduction will not have an adverse impact on the adjacent single-family detached and two-family dwellings or vacant lands in Rural or Residential Base Districts.
- c. When required, off-street parking shall be established in one or more of the following locations, listed in priority order:
 - (1) Adjacent to off-street parking lots serving nonresidential development on abutting lots;
 - (2) Adjacent to lot lines abutting nonresidential development;
 - (3) Adjacent to lot lines abutting mixed-use development;
 - (4) Within a lot's corner side yard;
 - (5) Behind the building;
 - (6) In front of the building; or
 - (7) Adjacent to lot lines abutting single-family detached or two-family dwellings, or vacant lands in Rural or Residential Base Districts.
- d. Off-street parking areas shall be located at least 12 feet from a lot containing an existing single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts.
- e. Off-street surface parking areas located adjacent to single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts shall be

²²⁴ This subsection includes standards intended to minimize the adverse impact of parking areas on single-family detached and two-family development.

screened in accordance with Section 5.7.2, Screening of Off-Street Loading and Service Areas.

- f. The facade of any parking structure facing adjacent single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts, shall be configured to appear as an articulated or landscaped building wall, to soften its visual impact.

6. Other Site Features

a. Loading, Service, and Refuse Collection Areas

- (1) Loading, service, and refuse collection areas shall be:
 - (A) Located behind or to the sides of buildings away from adjacent single-family detached and two family dwellings and vacant lands in Rural or Residential Base Districts, and screened with walls and/or landscaping, and provided with access that is integrated with parking areas and the vehicular circulation network.
 - (B) Screened from view of single-family detached and two family dwellings, and vacant lands in Rural or Residential Base Districts, using materials that are the same as, or of equal quality to, the materials used for the principal building; or
 - (C) Incorporated into the overall design of the site so that the visual and acoustic impacts of these functions are fully contained within an enclosure or is otherwise out of view from adjacent single-family detached and two-family dwellings and vacant lands in Rural or Residential Base Districts.

b. Drive-Through Service Facilities

- (1) In no instance shall a drive through or pick-up window be located on a building façade that faces a single-family detached or two-family dwelling, or adjacent vacant lands in Rural or Residential Base Districts.
- (2) Order boxes associated with a drive through or pick-up window shall be at least 300 feet from a lot containing a single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts.

c. Exterior Lighting

- (1) Exterior lighting shall:
 - (A) Have a maximum height of 15 feet if within 50 feet of a lot containing a single-family detached or two-family dwelling or vacant lands in Rural or Residential Base District, and 30 feet if within between 50 and 100 feet of such lot or lands; and
 - (B) Be configured so that the source of illumination is not visible from a public street right-of-way or adjacent single-family detached or two-family dwellings, or vacant lands in Rural or Residential Base Districts.

d. Signage Standards

- (1) To the maximum extent practicable, signage shall be located a minimum of 50 feet from lot lines shared with a single-family detached or two-family dwelling, and vacant lands in Rural or Residential Base Districts.

- (2) Within 50 feet of lot lines shared with a single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts, the maximum sign copy area for signs shall be reduced by 25 percent.
- (3) Signage within 20 feet of a lot line shared with a single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts, shall be limited to directional or incidental signage.

e. Open Space Set-Asides

- (1) Required open space set-asides shall be located between a proposed development and an adjacent single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts, to the maximum extent practicable.
- (2) Outdoor recreation features such as swimming pools, tennis courts, playgrounds, and similar features shall be at least 50 feet from any lot line shared with a single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts.

f. Natural Features

Natural features such as existing vegetation, natural differences in topography, streams, wetlands, and other such features shall be used as transitions where possible. Where such natural features are used as transitions, pedestrian connections to adjoining land uses are strongly encouraged.

g. Utilities

All utilities serving individual buildings or developments shall be located underground.

7. Operational Standards

Development subject to these standards shall:

- a. Prohibit outdoor dining or other outdoor activities within 100 feet of a single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts;
- b. Prohibit trash collection or other service functions to only between the hours of 7:00 a.m. and 7:00 p.m.; and
- c. Extinguish amplified music, singing, or other forms of noise audible at lot lines shared with single-family detached or two-family dwelling, or vacant lands in Rural or Residential Base Districts, after 10:00 p.m. Sunday through Thursday nights, and 12:00 p.m. Friday and Saturday nights.

Section 5.13. Pocket Neighborhoods²²⁵

5.13.1. Purpose and intent

A pocket neighborhood housing development is an alternative type of detached housing providing small residences for households, and is particularly well-suited for infill development. Standards in this section encourage affordability, compatibility with existing neighborhoods, innovation in housing design, and a greater array of housing choices.

5.13.2. Development Standards

A. Number of Dwelling Units

An individual pocket neighborhood development shall be comprised of at least four single-family dwelling units with a maximum of 12 single-family dwelling units per development.

B. Density and Minimum Lot Area

A pocket neighborhood development shall not exceed 12 units per acre, and is not permitted on parcels less than 20,000 square feet. Lots must be a minimum of 2000 square feet. All residential units will count towards the maximum permitted density.

C. Lot Coverage and Yards

Dwelling unit footprints shall not exceed 60 percent of the lot. The front and rear setbacks must be a minimum of 8 feet. The side setbacks must be a minimum of five feet, and no less than 12 feet is permitted between two units.

D. Required Open Space

A minimum of 500 square feet of common open space per unit is required. At least 50 percent of the units shall abut common open space, and the common open space shall have dwelling units abutting at least two sides. Common open space shall be a centrally located, shared space that may be used by all occupants of the neighborhood.

E. Parking

Parking spaces at 0.75 spaces per bedroom per dwelling unit shall be required. Parking must be located within the pocket neighborhood property.

F. Housing Type

Housing types are limited to single-family residential dwelling units.

G. Accessory Dwelling Units

New accessory dwelling units (ADUs) are not permitted in pocket neighborhood housing developments.

H. Private Open Space

Each residential unit shall be provided an area of private open space. The private open space shall separate the primary entrance to the dwelling unit from the common open space to create a sense of privacy and shall be oriented to take advantage of solar orientation and other natural features to create a small but pleasant private yard area. The private open space shall be separated from the common open space with a small hedge, picket fence, or other similar visual separation to create a sense of separate ownership.

²²⁵ This carries forward Section 5.7, Pocket Neighborhoods, in the current Zoning Ordinance.

1. Each unit shall be provided with a minimum of 200 square feet of usable private open space oriented toward the primary entrance and separated from the common open space by a hedge or fence, or other similar visual separation not to exceed 36 inches in height.
2. No dimension of the private open space shall be less than eight feet.

I. Tree Preservation

In addition to minimum requirements set forth in *Section 4.2, Tree Preservation*, Pocket neighborhood developments shall be designed to incorporate existing trees to the extent practicable. New trees shall be located to create amenities in the common open space, private open space, provide shade where appropriate, to create separation between buildings when desired, and to screen and soften the perimeter of parking areas and street facing sides of the housing developments. Native trees and other vegetation shall be preserved to the extent practicable and the overall site design shall take advantage of the location of existing trees as well as natural openings or clearings on forested sites.

J. Setbacks

Minimum rear yard and exterior side yard setbacks for Pocket Neighborhoods shall be 15 feet.

K. Buffers

Pocket Neighborhoods must comply with perimeter and streetyard buffer standards for multifamily dwellings as set forth in Table: 4.6.3: Required Buffer Type.

This page intentionally left blank.