

Introduction

The Chatham Park PDD Master Plan lays out the requirement for the submittal of additional information in twelve areas that will govern land use and development within the project. These twelve areas include:

Development Phasing	Signage
Open Space	Lighting
Tree Protection	Public Art
Landscaping	Affordable Housing
Stormwater	Transportation
Parking and Loading	Public Facilities

Each of these twelve elements are provided in this document and give more detail that will become part of the PDD Master Plan and will be used to guide the production of future small area plans, subdivision plans, and Site Plans throughout the development of Chatham Park.

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Definitions and General Provisions

The following defined words and terms and general provisions are applicable to and incorporated by reference in each Additional Element adopted by the Town as part of the Chatham Park Planned Development District Master Plan. The defined words and terms have the specified meanings, whether or not the first letter of the word is capitalized.

Definitions

- “Additional Element” and “Element” mean an Additional Element adopted by the Town in accordance with the Master Plan and applicable Town ordinances. Additional Element and Element are used interchangeably.
- “Chatham Park” and “Chatham Park PDD” means the Chatham Park Planned Development District approved by the Pittsboro Board of Commissioners on August 10, 2015.
- “development plan(s)” means any or all of the following, to the extent that Town approval is required by applicable law: application(s) for permit(s); permit(s); subdivision plan(s); site plan(s); construction drawings; subdivision plat(s); street right of way and/or easement dedication plat(s); recombination plat(s) and plan(s); and other plats and plans for development in Chatham Park. A development plan may or may not address one or more development standards established by an Additional Element, and a standard not addressed on a development plan may be addressed by a subsequent development plan. For example, sign, landscaping, and parking standards not addressed on a subdivision plat that creates one or more non-residential Lots may be addressed in subsequent development plans for the Lots established by that subdivision plat. References in an Additional Element to development plan(s) are to the applicable development plan(s).
- “Development Review Committee” or “DRC” means the Development Review Committee for Chatham Park PDD that is required to be established by the Master Plan as “the exclusive agency authorized to interact with the Town with respect to development applications in Chatham Park PDD from any person or legal entity”. Pursuant to restrictive covenants for Chatham Park recorded or to be recorded, the DRC is or will be authorized to make certain decisions with respect to development in Chatham Park, including one or more matters addressed in an Additional Element. References in an Additional Element to rights of and/or approvals by the DRC are based on the authority of the DRC pursuant to the restrictive covenants, are included solely for notice to the public and owners and users of property in Chatham Park of the authority of the DRC under the restrictive covenants, and do not delegate governmental regulatory authority to the DRC. Any approval or disapproval of any matter by the DRC may be done in the sole discretion of the DRC.
- “governmental entity” or “governmental authority” means and includes, as applicable, the Town of Pittsboro, Chatham County, the State of North Carolina, the United States

of America, and all other governmental entities and quasi-governmental entities that have jurisdiction over Chatham Park or any part thereof, and all applicable departments, divisions, sections, branches, agencies, and other subdivisions of such governmental entities.

- “Lot” (“lot”) or “Parcel” (“parcel”) or “Site” (“site”) or “Property” (“property”) means and includes any of the following: (i) a tract of real property identified on a plat recorded in the office of the Register of Deeds for Chatham County, North Carolina as a separate tract; or (ii) a separate tract described by metes and bounds or by reference to a recorded plat in a deed recorded in the office of the Register of Deeds for Chatham County, North Carolina; or (iii) a tract of real property for which a development plan has been submitted to the Town, whether or not such tract is separate from a larger tract that includes the tract subject to the development plan.
- “Master Plan” means the Master Plan for Chatham Park PDD. The Master Plan, including all defined words and terms therein, is incorporated by reference.
- “NCDOT” means North Carolina Department of Transportation.
- “Person” means and includes any one or more of the following: a natural person; a trust; an estate; the Town or other governmental entity or agency; or any legal entity.
- “Planning Director” means the Person employed as the Planning Director for the Town or the Person designated by the Planning Director or Town Manager to perform an action of the Planning Director
- “Section” and “Small Area” mean the same thing and are used interchangeably.
- “site plan” means a development plan for any development in Chatham Park other than a single-family detached residential subdivision.
- “standards” and “requirements” mean the same thing and are used interchangeably.
- “subdivision plan” means a development plan for a single-family detached residential subdivision in Chatham Park
- “Town Engineer” means the Person employed as the Town Engineer for the Town or other Person designated by the Town Engineer or Town Manager to perform an action of the Town Engineer
- “Town Manager” means the Person employed as the Town Manager for the Town, or an Assistant Town Manager, or other Person designated by the Town, the Town Manager, or an Assistant Town Manager to perform an action of the Town Manager.
- “Town of Pittsboro” and “Town” mean the Town of Pittsboro, North Carolina and are used interchangeably.

- “Village” means an area of land designated as a Village on any Small Area Plan (as defined in the Master Plan) that has been approved by the Town.

In addition to the foregoing, there may be other defined words and terms in one or more Additional Elements.

General Provisions

The provisions of each Element supplement, and in some instances may clarify, provisions in the Master Plan with respect to the matters addressed in that Element. If there is any conflict between any Element and the Master Plan, the terms of the Element control. Any Element may be supplemented and clarified by the “Development Agreement” for Chatham Park referenced in the Master Plan. The Master Plan, together with the Elements constitute the Town’s development regulations for Chatham Park. Each Additional Element adopted by the Town becomes a part of the Master Plan and will be enforceable in the same manner and to the same extent as the Master Plan. Development in Chatham Park that complies with the Master Plan and the standards contained in the Additional Elements adopted by the Town shall, as a matter of law, be deemed to be consistent and conforming with any subsequently adopted ordinance of the Town including, but not limited to any Unified Development Ordinance.

Any Element may be amended in the same manner as amendment to the text of the Town of Pittsboro Zoning Ordinance (or the text of any Unified Development Ordinance subsequently adopted by the Town that includes zoning).

Any “buffer” described or referenced in any Element that is to be located on real property in Chatham Park PDD may be located on the Lot to which the buffer is applicable or, subject to complying with applicable provisions of the Master Plan, including any applicable Additional Elements, the buffer may be located on an adjoining Lot owned by a property owners association or another Person.

Any photographs that appear in any Element are illustrative only and are not intended to limit or exclude other examples that comply with the requirements of that Element.

In the event that any part or all of any term, requirement, standard, exception, exclusion, provision or section of any Element shall be adjudged invalid or unenforceable by a court of competent and final jurisdiction, the same shall be severable from the remainder of that Element and that Element shall not be deemed void or voidable, but shall continue in full force and effect. If any such term, requirements, standard, exception, exclusion, provision or section of any Element is adjudged invalid due to its scope or breadth, such item shall be deemed valid to the extent of the scope or breadth permitted by law.

An Element is not applicable to development plans submitted to the Town prior to the Town’s approval of that Element (the “Approval”), except as follows: The owner of any Lot for which a development plan has been submitted to the town prior to the Approval may elect to make the Lot subject to that Element by giving written notice to the Town Manager or Planning Director of such

election on or before the later of the following dates: (i) date of approval of the applicable development plan; or (ii) not later than sixty (60) days following the date of Approval of the applicable Element. If such election is made, the Element shall apply to such Lot from and after the date of the election notice, but such election shall not render nonconforming in any respect, restrict, or adversely affect in any manner development on the Lot commenced or completed prior to the date of the election notice.

Any land on which development is prohibited, restricted, or limited in order to satisfy avoidance, minimization, compensation, and other regulatory requirements applicable to Chatham Park pursuant to Sections 404 and 401 of the United States Clean Water Act or any other United States, State of North Carolina, or other governmental entity regulatory requirements, also may be used to satisfy other requirements of the Master Plan, any Additional Element, or any other governmental entity regulatory requirement applicable to Chatham Park, including, without limitation, the use of the same land as Qualifying Open Space for Chatham Park under the Master Plan and Master Open Space Plan Additional Element. Any land that is used as Qualifying Open Space for Chatham Park also may be used to satisfy avoidance, minimization, compensation, and other regulatory requirements of Sections 404 and 401 of the United States Clean Water Act and any other United States, State of North Carolina, or other governmental entity regulatory requirement. It is the specific intent of this paragraph that the same land used to satisfy any one (1) governmental entity regulatory requirement also may be used to satisfy any one (1) or more other governmental entity regulatory requirements.

An “Administrative Alternative” is a proposal that includes a modification of a specific requirement or standard set forth in an Additional Element. An Administrative Alternative may be approved by the Planning Director if the Planning Director determines that it meets one of the following criteria:

- If specific requirements for approval of a particular Administrative Alternative are stated in the applicable Element, the proposed Administrative Alternative complies with those requirements.
- If specific requirements for approval of a particular Administrative Alternative are not stated in the applicable Element, the proposed Administrative Alternative satisfies the purpose and intent of the requirement or standard to which it relates.

The Planning Director may approve the requested alternative, approve the requested alternative with specified conditions, or deny the requested alternative, and shall issue the decision in writing to the applicant within thirty (30) days following receipt of the request. Within thirty (30) days of receipt of notice of the decision of the Planning Director, the applicant may file an appeal of the decision of the Planning Director with the Town’s Board of Adjustment in accordance with Town ordinances for appeal of matters to the Town’s Board of Adjustment. An approval or approval with conditions of an Administrative Alternative that is accepted by the applicant becomes the applicable requirement or standard for the purpose requested. For purposes of approval of an Administrative Alternative, any reference to Planning Director includes any assistant Planning Director or any other person designated by the Town Manager to have authority to approve an Administrative Alternative.

1. Development Phasing

Section 1. Purpose

The infrastructure needed to serve Chatham Park at build-out is substantially more than will be needed to serve the development expected in the early phases of the project. As a result, the provision of public infrastructure and facilities will occur as the development they serve takes place. Since Chatham Park development will occur incrementally, this Element provides a framework and threshold for providing the infrastructure necessary to serve development as it occurs.

The primary purpose of this Element is to assist the Town of Pittsboro in its planning and provisions of the extension of municipal services to Chatham Park and other parts of the Town. The provision of public facilities in an orderly fashion is an important consideration in protecting and safeguarding the health, safety and well-being of Pittsboro and Chatham County residents. The Town can use this Element as one of the tools to develop its own Comprehensive Plan that guides the provision of transportation improvements, water, sewer, fire and police protection, parks and recreation facilities, refuse collection and other municipal services.

Section 2. Phases

Full build-out of Chatham Park is anticipated to take approximately 35-40 years to the year 2055. Phase 1 of development will begin in the North Village (see Figure 1) and occur over the next 15 years. Phase 2 of the project will be, for the most part, non-residential or mixed use development and will generally be located along what will be the southern extension of Chatham Park Way from US 64 Business to US 15-501 south of Pittsboro. This roadway will serve as a temporary bypass around downtown Pittsboro helping mitigate traffic congestion until the permanent bypass is completed around the west side of Town.

Phases 3, 4, 5, and 6 are projected to develop sequentially moving from northwest to southeast, however, it is possible some residential neighborhoods located in Phase 3 would develop concurrently with Phase 2's non-residential development.

Actual phasing of development, including the configuration of development phases, may vary from the foregoing anticipated phasing, and will depend upon such factors as market conditions, economic considerations, and completion of infrastructure construction.

Additional details of Chatham Park's phasing plans will be described in Small Area Plans. These Small Area Plans will provide an analysis of the estimated annual development and its impacts on the Town, included projected Town revenues from the development.

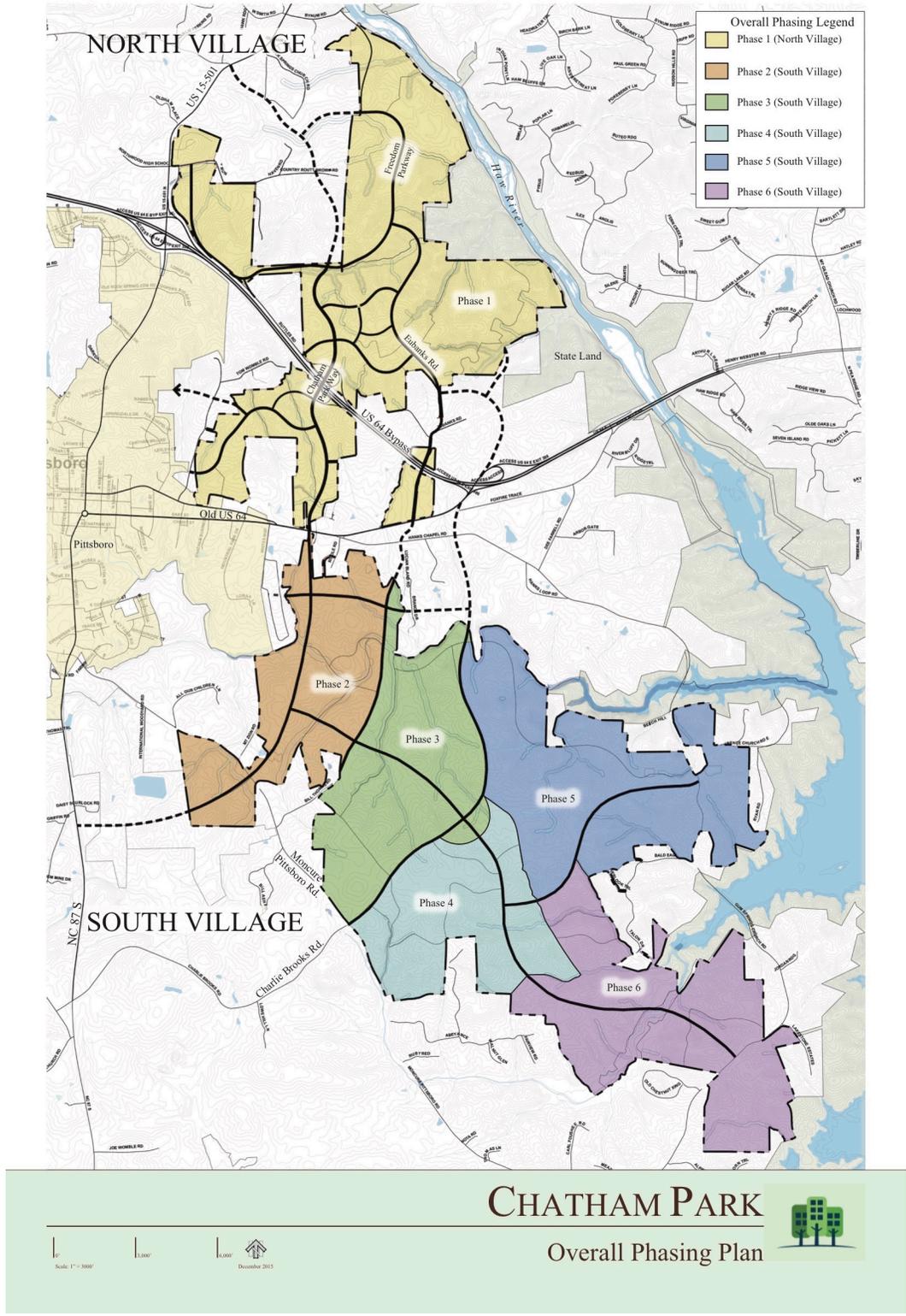


FIGURE 1

Chatham Park Additional Elements

Section 3. Objectives

This Element is based on general objectives which apply to the Town's and Chatham Park's planning efforts as a whole and specific functional program areas in particular. These objectives therefore should be viewed as the key principles for establishing an infrastructure network which is responsive to community expectations; the public health, safety, and general welfare; and development impacts.

Objective 1:

Locate new infrastructure that serves the greatest number of people.

1. Locate infrastructure appropriately in the area it is intended to serve.
2. Working in concert with the Town, program the extension of public infrastructure that meets public health or safety needs or required service levels.

Objective 2:

Balance the provision of public infrastructure with growth and development.

1. Determine the extension of public infrastructure in size and quantity which is consistent with the projected development phasing in Chatham Park.
2. Ensure that the extension of adequate public infrastructure is available, programmed in the Town's Capital Improvement Plan, or provided by new development, before increasing planned intensities.

Objective 3:

Mitigate the impact of the extension of public infrastructure on adjacent planned and existing land uses.

1. Locate the extension of public infrastructure in a manner that promotes and enhances the community character.
2. Provide for public infrastructure that is properly designed, constructed, screened and buffered in order to mitigate visual impact on adjacent planned development of a different use or nature.

Objective 4:

As part of Chatham Park Small Area Plan submittals, provide an estimate of the annual increase in the number of dwelling units, non-residential gross square footage, and population in Chatham Park to assist the Town in planning future public facilities.

1. Provide proposed phasing plans with the submittal of Small Area Plans in order to provide an accurate estimate of dwelling units and non-residential gross square footage built on an annual basis in Chatham Park.
2. Provide a timeline of when public facilities identified in the Master Public Facilities Plan Additional Element should be provided based on the population projections established in the Small Area Plan.
3. Work with the Town of Pittsboro and Chatham County to determine who provides particular public facilities, when where they are provided and, if identified as Chatham Park's responsibility, how reimbursement is to occur for the cost of public facilities constructed or installed by the developer of Chatham Park.

2. Open Space

Section 1. Purpose

The general purposes of the Master Open Space Plan Additional Element are to: preserve Open Space, sensitive natural areas, and riparian corridors; protect and enhance wildlife habitat; and protect water quality, by pursuing the following objectives where appropriate:

1. To preserve Open Space, including areas containing unique and sensitive natural features such as steeper slopes, streams, flood plains and wetlands, by protecting them from the direct effects of development, specifically buildings and intensive active recreational uses within these areas;
2. To provide greater design flexibility and efficiency in the siting of services and infrastructure, in order to achieve a reduction in the amount of roads, utilities, and impervious material required for residential development;
3. To create compact neighborhoods with direct visual access to open land, with amenities in the form of neighborhood Open Space, and with a strong neighborhood identity;
4. To reduce erosion and sedimentation by the retention or addition, to the extent practicable, of vegetation within Open Space; and
5. To create new woodlands through natural succession and reforestation where appropriate, and to encourage the preservation and improvement of habitat for various forms of wildlife.

Section 2. Open Space

Open Space Provided

Open Space land shall be provided at a ratio of 1/100th of an acre per dwelling unit and 1/20th of an acre per 1000 gross square feet (“GSF”) of non-residential floor area. Based on foregoing ratios, 1,320 acres of Open Space will be required in Chatham Park PDD if the maximum number of dwelling units and maximum GSF allowed by the Master Plan are constructed. However, the Master Plan requires at least 1,320 acres of Open Space in Chatham Park PDD, whether or not the maximum number of dwelling units and maximum GSF are constructed. Except when allowed by the Planning Director to be addressed on a subsequent development plan, Open Space necessary to satisfy the requirements of the Master Plan or this Element for property subject to a development plan submitted for approval by the Town shall either (i) identify any new Open Space to be established by that development plan, or (ii) identify Open Space previously established on a development plan approved by the Town that satisfies the Open Space requirements for the property on that development plan, or (iii) indicate that a payment-in-lieu will be made for any Open Space that otherwise would be required for the property on that development plan. If any new Open Space is identified on the applicable development plan, the total acreage of Open Space previously provided (either by land or payment-in-lieu) and the total acreage of new Open Space proposed will be shown thereon. As specified in the Master Plan, Open Space required for property included in a development plan is not required to be located in the same Small Area in which the property in the development plan is located.

A substantial amount of the Open Space in Chatham Park will be located in riparian buffers. The following are the “riparian buffers” provided in Chatham Park: (i) a “regulated buffer”, which is a 50 foot wide strip of land adjacent to each side of a stream bank; (ii) an “additional buffer”, which is any additional land provided as a buffer adjacent to the outside of a regulated buffer; and (iii) “Haw River Buffers”, which consist of a 300’ wide strip of land from the top of the bank of Haw River in Section 1.1 on the Master Plan and a 500’ wide strip of land from the top of the bank of Haw River in Section 1.5 on the Master Plan, as those Sections exist at the time of approval of the Master Plan on August 10, 2015. The Master Plan requires riparian buffers in Chatham Park that consist of a regulated buffer for intermittent streams and a regulated buffer plus a 50 foot wide additional buffer for perennial streams (for a total of 100 feet on each side of a perennial stream bank). A copy of the Town of Pittsboro’s “Riparian Buffer Protection Ordinance” (“RBPO”) as it exists as of its adoption date of February 14, 2011 is attached as Appendix “A” and incorporated by reference. The definition of regulated buffer in this Element is consistent with the definition of a regulated buffer under the RBPO. Pursuant to Section 8.B. of the RBPO, uses of land in regulated buffers are classified as either “Exempt” or “Allowable” or “Allowable with Mitigation”. Pursuant to this Element, all uses in regulated buffers in Chatham Park shall be governed by the RBPO and all uses classified as Exempt, Allowable, and Allowable with Mitigation in the RBPO are uses that are (i) allowed in all other Open Space in Chatham Park as if they were Exempt under the RBPO. In order to provide the appropriate connectivity within neighborhoods, stream crossings of streets through Open Space are allowed, but such stream crossings must be built to State of North Carolina standards in order to reduce stream impacts.

Payment-in-Lieu

Fee payments to the Town in lieu of establishing Open Space Land may be utilized to satisfy requirements for provision of Open Space Land in Chatham Park. Payments shall be calculated pursuant to applicable Town ordinances.

Qualifying Open Space

Among the land areas that may be designated on a development plan as Open Space in Chatham Park PDD are any or all of the following, or any combination thereof:

1. Riparian buffers;
2. 50 feet of Open Space on each side of Robeson Creek in addition to its 100 foot perennial stream riparian buffer;
3. Natural areas, wetlands, water bodies, 100 year flood plains, and areas of steeper slopes;
4. Small scale urban spaces, one-half acre or larger in area, located to accommodate aesthetic amenities or a variety of passive, active and entertainment activities for the public, and designated as Open Space in a development plan; Areas located within recorded conservation easements; and
5. Areas not built upon and designated on a development plan as Open Space, Tree Coverage Area (as defined in the Tree Conservation Plan Additional Element), buffer, or other area designated as not to be built upon.

3. Tree Protection

Introduction

In conjunction with the Master Open Space Plan Additional Element which establishes the criteria that preserves a minimum of 1,320 acres of land in Chatham Park as open space, and the Master Landscaping Plan Additional Element, which establishes tree planting standards, this Element establishes standards for the preservation and planting of trees within Chatham Park. The goal of this Element is to preserve and maintain existing tree coverage, where practical, and provide for the planting of trees in appropriate circumstances. There are several planned land uses and natural features within Chatham Park that naturally lend themselves to tree preservation. Highway buffers, stream buffers, floodplains, and other environmentally sensitive areas may serve as tree preservation areas. Lower density residential development areas, open space, and certain parks are also well suited to accommodate the preservation of existing trees.

There are areas within Chatham Park that will rely upon a combination of tree preservation and tree planting to meet the desired tree coverage goals of this Element. The provision for tree planting within more intensely developed areas of Chatham Park (e.g., Activity Centers) is intended to provide trees that are a part of the built environment and that may be enjoyed by future generations.

Visit many existing downtowns, urban centers, and higher density areas and you will often find that trees are woven into the fabric of the streetscapes, public areas, and parks. Historic photographs document how these areas were developed over time and often reveal that the mature trees we enjoy today, were not preserved from the onset, but rather planned and planted during or subsequent to development.

Section 1. Tree Coverage

Purpose and Intent

The purpose of this Element, in conjunction with the Master Open Space Plan Additional Element and the Master Landscaping Plan Additional Element, is the preservation and maintenance of existing tree coverage and the provision for planting trees on development sites in Chatham Park. Such areas that meet the requirements of this Element shall be referred to as “Tree Coverage Areas” or “TCA”. Through this Element Chatham Park seeks to:

- Preserve native ecology;
- Protect wildlife and sensitive ecosystems;
- Provide for planting of trees in certain areas where trees will be removed;
- Improve surface drainage and minimize flooding;
- Prevent excessive soil erosion;
- Reduce the impacts of air pollution;
- Reduce noise, heat, and glare;
- Provide a healthy living environment;

- Enhance property values;
- Facilitate water and energy conservation;
- Not prohibit or unduly inhibit development of private property; and
- Make Chatham Park an attractive place to live, work, and play.

Applicability

This Element, together with applicable provisions of other Additional Elements, are the applicable development standards for tree protection, tree coverage, and tree maintenance in Chatham Park. This Element shall apply to all areas in Chatham Park except for Villages and the Mixed-Use area along Highway 15/501 (Section 7.1 on the Land Use Plan Map in the Master Plan), as the foregoing may be configured at the applicable time, except that:

- Agricultural lands are exempt from the requirements of this Element until such time as the land is used for a non-exempt purpose; and
- Land under forestry management programs prepared by a registered forester in accordance with Chapter 89B of the North Carolina General Statutes are exempt from the requirements of this Element until such time as the land is used for a non-exempt purpose

Required Amount of Tree Coverage Area

When TCA is required under this Element, TCA shall be determined during the applicable development plan review process. TCA of not less than ten percent (10%) of the acreage of the property included in a development plan shall be provided for that property by existing trees and/or planted trees that satisfy the requirements of this Element. Site plans and subdivision plans for subdivisions with average Lot sizes of 10,000 square feet or less shall include clearing and grading information for the property or applicable phase of the property. Property for which there is an approved site plan and property for which there is an approved subdivision plan for average Lot size of 10,000 square feet or less may be cleared and graded in whole or in part to accommodate construction of improvements on that property. The Lots in property for which there is an approved subdivision plan for average Lot size greater than 10,000 square feet may be cleared and graded to prepare building pads for dwellings and to prepare other areas for improvements to be constructed on the Lots, and as may be necessary to prevent or correct drainage issues, deal with steeper slopes, or borrow or stockpile material. Clearing and grading may be done for construction and installation of public and private streets, driveways, alleyways, greenways, erosion control measures, stormwater control structures and facilities, stormwater drainage facilities, TCA planted areas, public and private utilities, and other improvements, on any property for which there is an approved site plan or subdivision plan.

Identification of TCA for one or more Lots on a subdivision plat may be deferred until the time of development plan review for the applicable Lot. TCA for a residential subdivision may be identified on a phase by phase by phase basis, and any phase may contain less TCA than is required by this Element for the acreage in that phase, as long as the total amount of required TCA for the entire subdivision is identified by the time of approval of the development plan for the last phase.

Excess TCA provided on a site may be applied to satisfy part or all of the TCA requirements for one of more other sites pursuant to a written assignment of the excess TCA area from the owner of the site with the excess TCA to the owner(s) of the other site(s) executed by both owners and recorded in the office of the Register of Deeds for Chatham County, North Carolina. The assignment shall not be revoked, amended, or modified without the written consent of the Planning Director. To be effective, such assignment shall be delivered to the Planning Director of the Town prior to approval of the development plan for the specific site(s) to which the excess TCA is assigned. No building permit may be issued for a site until the TCA for that site has been identified.

To qualify as TCA, an area must satisfy all of the following:

- The applicable trees are native to the piedmont region of North Carolina;
- The applicable trees, whether existing or planted, are not less than ten feet (10') in height (with respect to planted trees, at the time of planting); and
- There is not less than one (1) applicable tree in each 500 square feet of the TCA area. For example, in a TCA that contains 2500 square feet, each 500 square foot section of that TCA shall contain at least one qualifying tree.

Tree Coverage Inventory Field Report

A Tree Coverage Inventory Field Report shall be completed prior to establishing a TCA. The report shall be prepared by a certified arborist, registered landscape architect, or a registered forester and shall contain the following:

- An aerial photograph showing existing trees on the subject property;
- A map showing the proposed limits of the TCA on the Lot;
- A written description of the general vegetative characteristics present within the proposed TCA including, but not limited to, tree species varieties and sizes, forest canopy and understory characteristics, predominant natural communities, and areas devoid of tree coverage within the proposed TCA;
- Photographs representative of the size, species, location of trees and other vegetation within the proposed TCA; and
- If trees are to be planted to satisfy part or all of the TCA requirements of this Element, a description of the locations and types of trees.

Standards for Tree Coverage Areas

- **Distribution of TCA on development sites**
To the extent reasonably practicable, TCA on a property should be located to avoid the creation of small, isolated pockets of TCA.
- **Tree Coverage Areas provided via Tree Planting**
The ability to preserve existing trees is often limited by land characteristics, the proposed use of the land, and site conditions. The more intense the land use, the less likely that existing trees can be preserved while still meeting site design parameters that address accessibility, parking, grading, desired and required maximum and minimum slopes, and

other required development standards. Tree planting that meets the applicable standards may be used to satisfy the TCA requirements of this Element when there is not a sufficient number of existing trees or retaining existing trees is not a viable option due to land use intensity or other site constraints.

- **Restriction as to Use**

Once approved as part of a development plan and/or designated as such on a recorded plat, TCA shall remain undisturbed except as provided below:

- a. Removal of diseased trees posing a threat to adjacent trees or property, structures, traffic, utilities, or public safety;
- b. Removal of underbrush and invasive/exotic plants of the Southeast as identified by North Carolina State University Cooperative Extension;
- c. Removal of dead or naturally fallen trees;
- d. In case of emergencies due to acts of nature such as ice storms, windstorms, or other such events, the requirements of this Element may be waived by the Town or other governing jurisdiction so that this Element will in no way hamper efforts to restore essential services for the public good;
- e. Planting of trees and other vegetation;
- f. Construction and maintenance of greenways;
- g. Passive recreational uses not involving the clearing of existing trees;
- h. Installation and maintenance of public and private streets;
- i. Installation and maintenance of public and private utilities; and
- j. Disturbance as may be necessary for surveying, environmental investigation, and soil investigation;
- k. Activities permitted under the Master Plan, including other Additional Elements, any Development Agreement approved by the Town, or otherwise allowed by law.

With respect to any of the foregoing activities, permanent easements and temporary construction easements may be granted or reserved by recorded document or plat, and, with respect to public and private streets, street rights of way may be dedicated or conveyed to the applicable governmental entity or property owners association. The area of any TCA disturbed under the foregoing subparagraphs h and i, except for any areas taken by eminent domain, shall be replaced by additional TCA in accordance with the provisions of this Element.

TCA and Open Space

- a. TCA also can be used as qualifying open space in Chatham Park.
- b. Open space that meets the requirements of this Element may constitute TCA.
- c. Open space owned or to be owned by a property owners association may be applied to satisfy part or all of the TCA requirements of this Element for property for which there is an approved development plan.

Section 2. Protection of Tree Coverage Areas

Tree Coverage Areas, both existing and planted, shall be protected during construction activity. A tree protection fence or a fence that combines tree protection signage as part of a silt fence or other soil erosion control fence or device shall be shown on the applicable development plan with a standard detail of the proposed fence(s) and device(s) and shall be implemented on the Lot during construction of improvements.

Section 3. Definitions

Tree coverage area (TCA): Any area designated as tree coverage area for one or more properties in Chatham Park for which a development plan has been approved by the Town.

Agricultural lands: Lands that are part of a farm unit that is actively engaged in the commercial production or growing of crops, plants, or animals under a sound management program. (NC GS 105-277.2)

4. Landscaping

Section 1. Purpose & Applicability

Purpose

The primary purpose of this Master Landscaping Plan Additional Element is to establish an overall visual quality and character that is discernible and consistent throughout Chatham Park. The objectives of this Element are the following:

1. To promote and increase design compatibility between different land uses and provide attractive views from streets and adjacent properties;
2. To assist in delineating separations of spaces, structures, uses, and activities on a site, or between adjacent sites;
3. To shield properties from potentially adverse impacts of adjacent land uses and activities;
4. To enhance the streetscape by separating the pedestrian from motor vehicles, reducing glare, moderating temperatures of impervious areas, filtering air of fumes and dust, providing shade, attenuating noise, and lessening the visual impact of large expanses of pavement;
5. To mitigate adverse grade changes between adjacent properties;
6. To improve the quality of the built and natural environments through air quality enhancements, energy conservation, reductions in the amount and rate of stormwater runoff and soil erosion, improve the quality of stormwater runoff, and increase the capacity for groundwater recharge; and
7. To enhance the appearance and value of both residential and non-residential properties.

Applicability

The standards, requirements, and criteria (those words being used interchangeably herein) in this Element apply to both residential and nonresidential uses in Chatham Park unless otherwise indicated.

1. New Development: Except as otherwise provided herein, the standards apply to all new development projects in Chatham Park.
2. Expansions and Changes of Use: For all development of property that requires a site plan approval by the Town, the standards also apply to changes of use of previously developed property, and expansions of existing uses when the increase in the gross heated square footage of an existing building is more than 25% or expansions of parking areas are by more than 25%.
3. Administrative Alternative: The Planning Director may approve a request for an Administrative Alternative to any landscaping or buffer standard specified in this Element

in accordance with the requirements of this Element for approval of an Administrative Alternative.

Section 2. Perimeter Buffer Requirements

Applicability

Except as otherwise provided herein, a “perimeter buffer” in accordance with Table 2.1 of this Element shall be provided along that portion of a boundary line of a Lot in Chatham Park PDD that adjoins a boundary line of a Lot in Chatham Park PDD on which there is a different land use class (see subsection E of this Section for a listing of land use classes). Perimeter buffers may consist of existing vegetation, new landscaping material, or a combination of both. References in this Element to “planted trees”, “planted vegetation”, “plantings”, or other similar reference include existing trees and other existing vegetation that comply with the standards of this Element. Whenever new landscaping material is used, such material shall consist of drought-tolerant plantings to reduce the need for irrigation systems. Notwithstanding anything to the contrary in this Element, the perimeter buffer requirements in Table 2.1 are NOT applicable to any portion of a Lot that (i) is separated from what otherwise would be an adjoining Lot by a regulated buffer (as defined in the Master Open Space Plan Additional Element) and/or an additional buffer (as defined in the Master Open Space Plan Additional Element) and/or open space, and/or a conservation easement and/or a BMP (as defined in the Master Stormwater Manual Additional Element), or (ii) is a regulated buffer and/or additional buffer and/or open space and/or a conservation easement, or (iii) is separated from what otherwise would be an adjoining Lot by a public or private street right of way or private driveway, including Lots whose common boundary line is located in such public or private street right of way or private driveway, or (iv) is separated from what otherwise would be an adjoining Lot by a railroad right of way, utility easement or right of way, or body of water, including Lots whose common boundary line is located in such railroad right of way or in such utility easement or right of way or in such body of water.

With respect to Section 7.1 and Villages in Chatham Park PDD, the perimeter buffer requirements of this Element shall apply only to boundaries between Lots in Section 7.1 or the Village and Lots outside of Section 7.1 or the Village, and not to boundaries between Lots that are in Section 7.1 or the Village.

If adequate vegetation to satisfy the perimeter buffer requirements of this Element does not exist on a Lot, or has been disturbed as allowed by this Element, the perimeter buffer requirements of this Element may be satisfied by planting new vegetation meeting the requirements of this Element.

Type and Width of Required Perimeter Buffers

Table 2.1 specifies the type of perimeter buffer that must exist or be provided as development occurs. The buffer type is indicated by letter and the total buffer width in feet is indicated by

number. The width and density of the required perimeter buffers are determined based upon the land use classification described in Table 2.2.

Determination of Perimeter Buffer Width

Perimeter buffer widths shall be in accordance with the following:

1. A development plan submitted for approval by the Town for a Lot (“Lot A”) that is adjacent to a Lot (“Lot B”) for which no development plan specifying the perimeter buffer along the common boundary line between the Lots has been approved by the Town shall require a ten foot (10’) Type B Buffer on Lot A.
2. A development plan submitted for approval by the town for a Lot (“Lot A”) that is adjacent to a Lot (“Lot B”) for which a development plan specifying the perimeter buffer along the common boundary line of the Lots has been approved by the Town, shall not require the width of the perimeter buffer to be provided along the common boundary line on Lot A to be greater than the width of the applicable perimeter buffer less the width of the portion of that perimeter buffer provided along the common boundary line on Lot B.
3. Owners of adjacent Lots may enter into a written agreement that allocates the required perimeter buffer width along the common boundary line of those Lots in a manner different from the foregoing provisions of this subsection. The agreement shall be recorded in the office of the Chatham County Register of Deeds prior to the issuance of a building permit for either Lot, and a copy of the recorded agreement shall be provided to the Planning Director. The agreement shall not be modified or amended without the written approval of the Planning Director.

Perimeter Boundary Transitions

A perimeter boundary in Chatham Park is a boundary of land in Chatham Park that adjoins land that is not in Chatham Park. Unless an alternative perimeter boundary transition is approved by the Planning Director, the perimeter buffer requirements of this Element apply to perimeter boundary transitions between a Lot in Chatham Park PDD and an adjoining property not in Chatham Park PDD that has a dissimilar land use class.

Table 2.1. Required Width of Vegetated Perimeter Buffer by Land Use Class

Land Use Class	Adjacent Land Use Class						
	1	2	3	4	5	6	7
1	0	0	0	10	20	20	20
	-	-	-	B	B	B	B
2	10	0	20	20	30	30	50
	B	-	B	A	A	A	A
3	10	20	0	20	30	30	50
	B	B	-	A	A	A	A
4	20	30	20	20	20	20	30
	B	A	A	B	B	C	B
5	20	40	30	30	20	20	30
	B	A	A	B	C	C	B
6	30	30	30	30	30	20	20
	A	A	A	A	B	C	C
7	30	50	50	50	50	20	20
	A	A	A	A	B	B	C

Land Use Classes

The seven (7) land use classes appearing in Table 2.1 include the following uses and structures:

Table 2.2: Land Use Classes (per Chatham Park PDD Master Plan)

CLASS	USES INCLUDED
Class 1	<ul style="list-style-type: none"> -Uses permitted under the <i>Agricultural Uses</i> category, including produce stands. -Cemetery. -Public Parks and golf courses without sports lighting. -Open Space: Notwithstanding anything to the contrary in Table 2.1, no buffer is required for any use adjacent to open space.
Class 2	<ul style="list-style-type: none"> -Single-family detached dwellings in residentially zoned districts on lots that are six thousand (6,000) square feet in area or larger.
Class 3	<ul style="list-style-type: none"> -Single-family detached dwellings in residentially zoned districts on lots that are less than six thousand (6,000) square feet in area or larger.
Class 4	<ul style="list-style-type: none"> -Athletic fields (public and private) with sports lighting. -Uses permitted under the <i>Residential Uses</i> use category, except detached dwellings. -Neighborhood recreation centers, indoor and outdoor (public and private). -<i>Office</i> uses with a gross floor area on the property of fifty thousand (50,000) square feet or less. -Parking lots as a principal use containing less than fifty (50) parking spaces -Uses permitted under the <i>Educational & Institutional Uses</i> use category.
Class 5	<ul style="list-style-type: none"> -Uses permitted under the <i>Recreational Uses</i> use category other than athletic fields, public parks, and golf courses. - <i>Office</i> uses with a gross floor area on the property of more than fifty thousand (50,000) square feet. - Parking lots as a principal use containing more than fifty (50) parking spaces. -Utility substation, minor.
Class 6	<ul style="list-style-type: none"> -Uses permitted under the <i>Business, Professional, and Personal Services</i> use category. -Uses permitted under the <i>Retail Trade</i> use category.
Class 7	<ul style="list-style-type: none"> -Uses permitted under the <i>Transportation, Warehouse, and Utilities</i> use category. -Uses permitted under the <i>Wholesale Trade</i> use category.

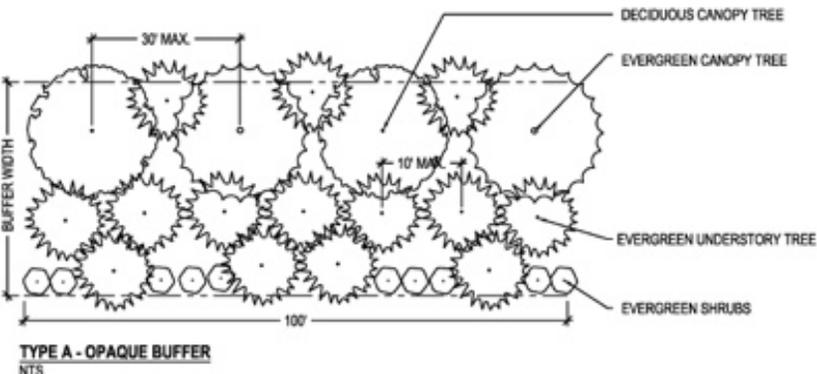
Types of Perimeter Buffers

The three (3) types of landscaped buffers that appear in Table 2.1 are as follows:

1. Type A: Opaque Buffer

This buffer is intended to provide the greatest degree of screening by the three buffer types and minimize visual contact between uses, creating a strong impression of total separation from the ground to a height at maturity of not less than eighteen (18) feet. Vegetative material within this buffer shall meet the following criteria:

- a. Canopy trees shall be planted at a density of four (4) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of thirty (30) feet between trees. Canopy trees shall be of a type expected to attain a height at maturity of not less than sixty (60) feet. Not less than 50% of the required canopy trees shall be evergreen.
- b. Evergreen understory trees shall be planted at a density of fourteen (14) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of ten (10) feet between trees. Understory evergreen trees shall be of a type expected to attain a height at maturity of not less than eighteen (18) feet.
- c. Type A buffers that are wider than thirty (30) feet shall include shrubs or ornamental grasses planted at a density of ten (10) shrubs/ornamental grasses per one hundred (100) linear feet of buffer. Shrubs and ornamental grasses shall be of a type expected to attain a height at maturity of not less than three (3) feet.



TYPE A BUFFER INTENT
 FORMATION OF AN OPAQUE SCREEN FROM THE GROUND TO A HEIGHT OF AT LEAST 18'.

MINIMUM PLANTING REQUIREMENTS

TREES

- * MINIMUM 4 CANOPY TREES PER 100 L.F.
- * 50% OF ALL PROPOSED TREES SHALL BE EVERGREEN
- * MATURE HEIGHT = 60'
- * INSTALLED SIZE = 2.5" CAL.

UNDERSTORY

- * MINIMUM 14 UNDERSTORY TREES PER 100 L.F.
- * 100% OF NEW UNDERSTORY SHALL BE EVERGREEN
- * MATURE HEIGHT = 18'
- * INSTALLED SIZE = 1.25" CAL.

SHRUBS/ ORNAMENTAL GRASSES

- * INSTALLED AT RATE OF 10 SHRUBS PER 100 L.F. FOR BUFFER WIDTH OF 30' OR MORE.
- * MATURE HEIGHT = 3'
- * INSTALLED SIZE = 18"

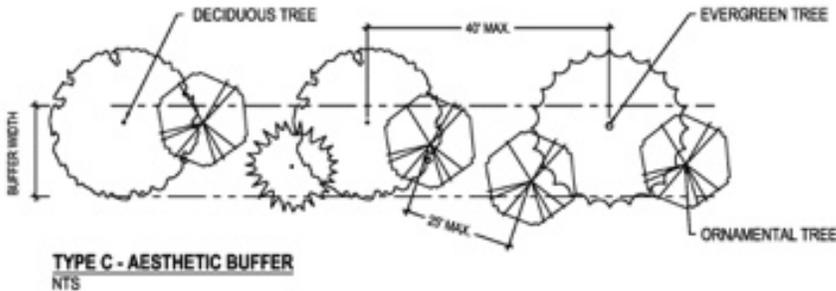
2. Type B: Semi-Opaque Buffer

This buffer is intended to function as a semi-opaque screen from the ground to a height at maturity of not less than six (6) feet. Vegetative material within this buffer shall meet the following criteria:

- a. Canopy trees shall be planted at a density of four (4) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of thirty (30) feet between trees. Canopy trees shall be of a type expected to attain a height at maturity of not less than forty (40) feet. Not less than 25% of the required canopy trees shall be evergreen.
- b. Shrubs and ornamental grasses shall be planted at a density of sixteen (16) shrubs/ornamental grasses for every one hundred (100) linear feet of buffer, with a

maximum spacing of eight (8) feet between shrubs/ornamental grasses. Not less than seventy-five (75) percent of the shrubs/ornamental grasses shall be an evergreen species locally adapted to the area and expected to attain a height at maturity of not less than three (3) feet.

- c. Type B buffers may include a wall, fence, landscaped earthen berm, planted vegetation, or any appropriate combination of the elements.



TYPE C BUFFER INTENT
FORMATION OF AN INTERMITTENT VISUAL OBSTRUCTION FROM THE GROUND TO A HEIGHT OF AT LEAST 20'.

MINIMUM PLANTING REQUIREMENTS
TREES

- * MINIMUM 3 TREES PER 100 L.F.
- * MATURE HEIGHT = 40'
- * INSTALLED SIZE = 2.5" CAL.

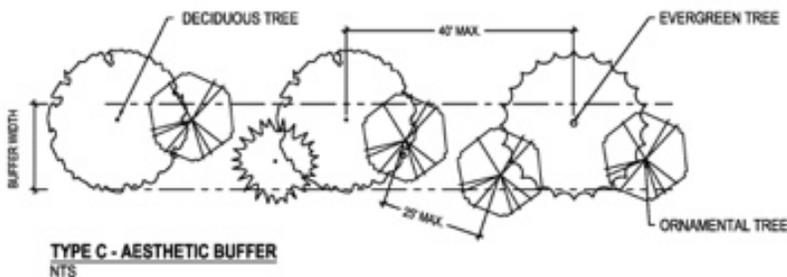
UNDERSTORY

- * MINIMUM 5 TREES PER 100 L.F.
- * MATURE HEIGHT = 15'
- * INSTALLED SIZE = 1.25" CAL.

3. Type C: Aesthetic or “Broken” Buffer

This buffer area is intended to function as an intermittent visual obstruction from the ground to a height of not less than twenty (20) feet, and create the impression of spatial separation without eliminating visual contact between uses. Vegetative material within this buffer shall meet the following criteria:

- a. Canopy trees shall be planted at a density of three (3) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of forty (40) feet between trees. Canopy trees shall be of a type expected to attain a height at maturity of not less than forty (40) feet.
- b. Understory or ornamental trees shall be planted at a density of five (5) trees for every one hundred (100) linear feet of buffer, with a maximum spacing of twenty-five (25) feet between trees. Understory or ornamental trees shall be of a type expected to attain a height at maturity of not less than fifteen (15) feet.
- c. Type C buffers may include a wall, fence, earth berm, planted vegetation, or any appropriate combination of these elements.



TYPE C BUFFER INTENT
FORMATION OF AN INTERMITTENT VISUAL OBSTRUCTION FROM THE GROUND TO A HEIGHT OF AT LEAST 20'.

MINIMUM PLANTING REQUIREMENTS
TREES

- * MINIMUM 3 TREES PER 100 L.F.
- * MATURE HEIGHT = 40'
- * INSTALLED SIZE = 2.5" CAL.

UNDERSTORY

- * MINIMUM 5 TREES PER 100 L.F.
- * MATURE HEIGHT = 15'
- * INSTALLED SIZE = 1.25" CAL.

Perimeter Buffer Standards

Perimeter buffers shall conform to the following standards:

1. To the extent reasonably practicable, new plantings shall be evenly distributed throughout the buffer. In instances where planting in a row or rows is necessary to achieve the desired performance objective, trees shall be planted in staggered rows whenever practicable. In cases where the entire buffer width may not be needed to achieve the desired performance objective of the buffer type, the remainder of the required buffer area should have a minimum spacing of trees as required by the associated buffer type.
2. Buffer performance requirements should be achieved as soon as reasonably practicable (preferably no more than five (5) years).
3. When detailed information regarding existing vegetation to be utilized to satisfy perimeter buffer standards is not available at the time of development plan approval, and when the applicant desires to utilize existing vegetation to satisfy perimeter buffer standards, then prior to issuance of a certificate of occupancy a Town Zoning Compliance Officer shall determine which existing vegetation may be utilized.
4. In instances where planting requirement calculations produce a fraction, the fraction shall be rounded to the nearest whole number, with fractions of $\frac{1}{2}$ or greater being rounded up and fractions of less than $\frac{1}{2}$ being rounded down.

Location of Perimeter Buffers

Except as otherwise provided herein, the perimeter buffers and/or perimeter landscaped areas required by this Element shall be located along the outer perimeter of the parcel and shall extend to the parcel boundary line or right-of-way line.

Land Use Change

A revised perimeter buffer plan, approved by the Planning Director, will be required if the land use class of a parcel changes to a land use class that requires a perimeter buffer of greater width than required for the previous land use class.

Section 4. Requirements for Streetscape Buffers and Street Trees

Applicability

Streetscape buffers shall be provided along publicly dedicated roads in Chatham Park as indicated in Table 2.3 below. The types of roads in Table 2.3 is based on the description of roads shown on Map 4 of the Town's Land Use Plan (a copy of which is included in the Master Plan), when applicable. If there is any question regarding the road type, it shall be determined by the Planning Director. The types of Perimeter Buffers described in Section 3 of this Element are incorporated by reference in this Section 4.

Type and Width of Highway Streetscape Buffers

All streetscape buffers shall be provided outside of the road right of way.

Table 2.3

Type of Road	Streetscape Buffer Width	Buffer Type
Freeway	50'	B
Boulevard	30'	C
Expressway	30'	C
Major Thoroughfare	30'	C
Minor Thoroughfare	30'	C
All Other Streets	0'	N/A

Note: Notwithstanding the Buffer Type designated in Table 2.3: (i) except with respect to any controlled access portions of US Highway 64 Bypass in Chatham Park, the use of Type C Aesthetic or “Broken” Buffers is allowed for all types of roads where non-residential uses front or border the road; (ii) the use of Type B Semi-Opaque Buffers is required where residential uses adjoin Major Thoroughfares, or Minor Thoroughfares; and (iii) where a service road runs adjacent to any Freeway, Boulevard, Expressway, or Major Thoroughfare, the streetscape buffer for such Freeway, Boulevard, Expressway, or Major Thoroughfare shall be on the portion of the applicable lot that adjoins the service road right of way

Street Trees

1. Thoroughfares

Except as prohibited by NCDOT on roads in Chatham Park under its control, in the streetscape buffer along Major Thoroughfares and Minor Thoroughfares, street trees shall be placed between the sidewalk and back of curb to provide a buffer between vehicles and pedestrians.

2. Medians

Except as prohibited by NCDOT on roads in Chatham Park under its control, medians, where provided, shall be planted with a mix of street trees, ornamental trees, and shrubs to provide both shade and seasonal interest.

3. Residential Streets

Along residential streets, as specified in applicable Small Area Plans and/or development plans, street trees shall be placed between the sidewalk and back of curb to provide a buffer between vehicles and pedestrians. One tree species should be used per street in order to create unity through the neighborhood. Changing species at intersections and on different streets is encouraged to avoid over-use of the same tree on long stretches of roadway and to reduce the potential for disease to impact large numbers of trees.

4. Credit Against Planting Requirements

Street trees shall be credited against all tree planting requirements in this Element.

5. General Requirements

1. Street trees shall be placed not less than ten (10) feet from light poles and not less than twelve (12) feet from electrical transformers in order to allow these utilities to be safely serviced. Subject to applicable easements, understory trees may be placed within five (5) feet of such devices.
2. The number of street trees shall average not less than one tree for every fifty (50) linear feet of roadway.
3. Street trees shall be located to minimize conflict between other trees and utilities, roadways, sidewalks, sight distances, and street lights. Street trees shall be medium to large deciduous trees, unless the use of smaller trees is required due to conflicts with sight lines or utilities.

Section 5. Buffer Averaging

Except for perimeter boundary transitions, buffer averaging may be used to satisfy buffer requirements if the following two conditions are satisfied:

1. No portion of the width of the buffer is less than one-half (1/2) of the width otherwise required by this Element for that type of buffer; and
2. The total area of the buffer (calculated in square feet or acreage) is equal to or greater than the total area would be if the entire buffer was the width required by this Element.

The exact amount of reduction of the width of the buffer shall be shown on the applicable development plan.

Section 6. Development within Buffers

Unless otherwise explicitly allowed by this Element, no development shall occur within required buffers, except for any one or more of the following:

1. Cross-access easements or driveways between Parcels.
2. Sidewalks, street-side trails or multi-purpose paths, and public transit amenities;
3. Public and/or private utilities, including but not limited to, the following, and including lines, pipes, poles, and equipment and facilities necessary for the proper operation and functioning of a utility, including, without limitation: water; sewer; electric; natural gas; telephone; cable television; and internet., provided that, to the extent reasonably practicable:
 - a. they are located perpendicular to the buffer or at an angle of not less than seventy-five (75) degrees; or

- b. they are located at an angle less than seventy-five (75) degrees and the area contained in the disturbed area is replaced with an equal amount of buffer area meeting the applicable buffer standard, in proximity to the disturbed area. Provided, however, the foregoing angle requirements are not applicable to public and private utilities that exist prior to development of the applicable parcel and are not applicable to public or private utility easements obtained through the power of eminent domain.
4. BMPs including, without limitation, constructed wetlands, bio-retention ponds, rain gardens, bio-swales or other BMPs planted with vegetation that meets the performance standards required of such BMPs and meets the applicable buffer standards of this Element. Such vegetation shall be credited against the requirements of this Element.

When development authorized by this Section occurs in a buffer, there shall be no requirement that the developed area of the buffer be replaced elsewhere. Provided, however, when such development occurs in a streetscape buffer, to the extent practicable, street trees shall be provided in accordance with the provisions of this Element.

Section 7. Administrative Alternative to Buffer Planting Standards

The Planning Director may approve an Administrative Alternative to any planting standard for a buffer if the Planning Director determines, in accordance with established horticultural guidelines, that achieving the anticipated degree of opacity while maintaining existing healthy vegetation within the buffer may not be feasible due to one or more of the factors listed below, and that the intended standard will be achieved to the extent practicable if the Administrative Alternative is allowed:

1. type and conditions of significant vegetation remaining within the landscape area or buffer,
2. availability of sunlight;
3. dimension of required planting area;
4. separation between plants;
5. impact of installation of new plant material on root zones of any existing material;
6. topography;
7. proximity of man-made features such as utilities, buildings, sidewalks and retaining walls;
8. lack of reasonable availability of plant material in southeastern United States; and
9. other factors or conditions affecting plant growth and long-term health of the buffer or landscape area.

Section 8. Vehicular Use Area Landscaping

Vehicular Use Area

A vehicular use area, or “VUA”, is an area, other than a public or private street right of way or driveway, where motor vehicles are either parked, stored, or driven, including, parking lots, motor vehicle display lots, and motor vehicle rental depots, but not including alleyways, parking structures or buildings, underground areas, or areas which are used exclusively as loading areas or service areas.

VUA Planting Requirements (See Figure 4.1)

1. Canopy trees shall be utilized in VUAs to provide shade to impervious areas therein.
2. All on-site parking spaces shall be located within sixty (60) feet of a canopy tree and all trees used to meet the VUA landscaping requirements of this Element shall be located within twenty (20) feet of the surface area of the VUA.
3. Existing trees and trees planted to meet other requirements of this Element or to meet requirements of the Tree Protection Plan Additional element may be applied to meeting the requirements of this Element. For example, perimeter buffer plantings, streetscape buffer plantings, building foundation plantings, trees in tree coverage areas (as defined in the Tree Protection Plan Additional Element), and VUA island plantings, or any combination thereof, may be used to satisfy the VUA planting requirements of this Element.
4. All canopy trees used for meeting the VUA landscaping requirements of this Element shall be planted in not less than 300 square feet of landscape area per tree, with the exception of Urban Tree Plantings as described in this Element.
5. If overhead utility lines are present and will not allow for installation of a canopy tree, two under-story trees (per approved plant list by applicable electric utility provider) shall be used instead.
6. BMPs meeting the foregoing planting requirements may be used to satisfy the canopy tree planting requirements in whole or in part.

VUA Islands (See Figure 4.1)

1. Perimeter islands.

- a. A perimeter island is an area that separates parking spaces in a VUA from a public or private street or primary internal access drive.
- b. A perimeter island must be a minimum of ten (10) feet wide.
- c. A perimeter island must be installed adjacent to at least one (1) side of each primary internal access drive.
- d. A perimeter island also may serve as the location for a sidewalk. In such case, the sidewalk shall be a minimum of five (5) feet.

2. Interior islands

- a. An interior island is an area inside a VUA that is at the end of a row of parking spaces or separates parking spaces. No more than thirty (30) parking spaces may be located between interior islands.
- b. An interior island must be a minimum of ten (10) feet in width and a minimum of 300 square feet in area.
- c. All rows of parking must terminate with an interior island (which may include the end of a perimeter island).
- d. Interior islands may be consolidated or VUA requirements may be expanded in order to preserve existing trees.
- e. An interior island may be any shape, including, without limitation, rectangular, square, oval, or I-shaped (Figure 4.1).

3. Median Islands

- a. A median island is an area that separates two (2) rows of parking spaces.
- b. A median island must be provided between a minimum of every three (3) bays of parking (6 individual rows of spaces).
- c. A median island must be a minimum of ten (10) feet wide.
- d. A median island also may serve as the location for a sidewalk connecting the parking and the use served by the parking area. The sidewalk must be a minimum of five (5) feet wide. If trees or shrubs are planted in the median, the median width must be expanded by not less than five feet.
- e. Median islands may be consolidated or intervals may be expanded in order to preserve existing trees.

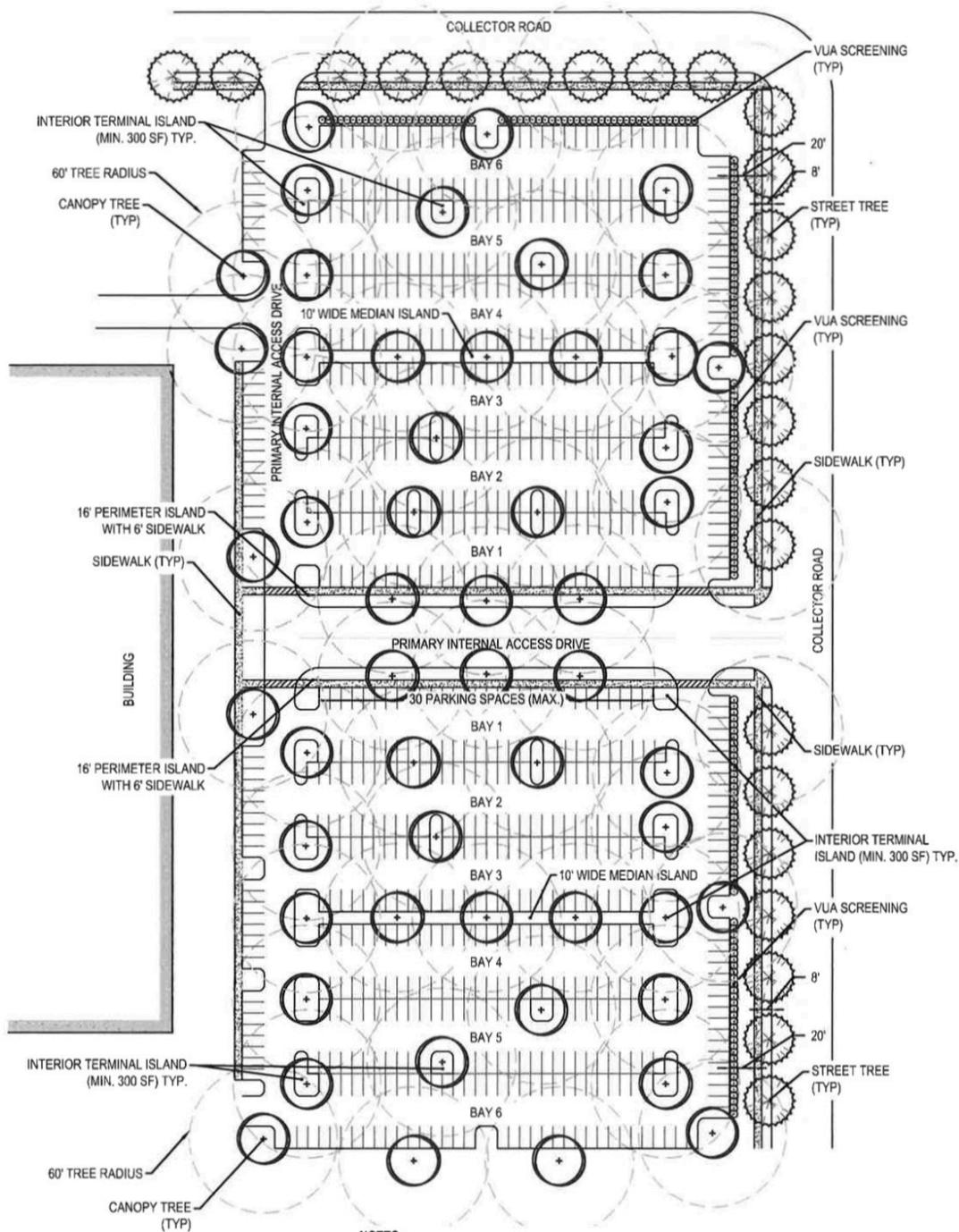
4. Vehicular Use Area Screening (See Figure 4.1)

Where there is a vehicular use area adjacent to a public street right of way, an opaque screen shall be provided between the right-of-way and the vehicular use area. The screen may be located in and be a part of any applicable streetscape buffer and may be used in whole or in part to satisfy the requirements of that streetscape buffer in addition to satisfying the opaque screening requirements. The screen may consist of plants, earthen berms, fences, walls, or any combination thereof, which meet the following requirements:

1. To the extent reasonably practicable the screen shall be continuous, occupying the full length of the vehicular use area, except for utility easements and except for sidewalks, driveways, and greenways that cut through the screen to connect the vehicular use area to streets and other properties. If shrubs and ornamental grasses are used, at the time of installation they shall be not less than two (2) feet in height above finished grade and be of a type expected not to exceed four (4) feet in height at maturity.
2. Berms may be used or installed in lieu of or in addition to plantings. If necessary to satisfy the applicable screening standards, plant materials shall be installed which meet these standards. The installation of additional plant materials is encouraged so as to

enhance the visual and aesthetic qualities of the screening. Plantings should be placed based upon topography of the site, usually at the top of the slope.

3. Berms must, at a minimum, be planted and maintained with a groundcover vegetation or grass that will permanently stabilize the soil.
4. Shrubs, plantings, and hedges shall be of a type expected to provide a screen or barrier for the first three (3) feet of height within three (3) years of planting. Walls shall be constructed to a minimum height of three (3) feet.
5. Exceptions for Underground Parking and Parking Structures: When parking is provided underground or within a building or a structure dedicated to parking or a portion of a building or structure dedicated to parking, the vehicular use area screening requirements shall not apply. Above ground parking structures shall be designed such that vehicles parked therein are not visible from public street rights of way.



- NOTES:**
1. BUILDING FOUNDATION PLANTINGS ADJACENT TO PRIMARY INTERNAL ACCESS DRIVE NOT SHOWN.
 2. STREETSCAPE PLANTINGS ADJACENT TO COLLECTOR ROAD NOT SHOWN.

Figure 4.1

Section 9. Fences and Walls

Fences and walls that comply with the following standards and other applicable standards in this Element and other Elements are allowed in Chatham Park. For the purposes of this Section, “wall” or “walls” include, without limitation, free-standing walls, retaining walls, stormwater device walls, and other walls.

Fence and Wall Height Outside of Required Setbacks

Fences and walls located outside of the applicable front, rear and/or side yard setbacks may be erected to any height permitted for buildings in the applicable land use class.

Fence and Wall Height within Required Setbacks

Fences and walls located within a front, rear and/or side yard setback shall not exceed eight (8) feet in height unless specifically approved as part of a buffer under applicable provisions of this Element. Provided, however, and notwithstanding the foregoing, fences and walls used on parcels with manufacturing, industrial, transportation, warehouse, and utility land uses described in the Table of Permitted Uses in the Master Plan shall not exceed twelve (12) feet in height. Fences, walls, and other features addressed in this subsection shall be located outside of required sight distance triangles.

Materials

1. Except as otherwise provided in this Element, fences and walls shall be constructed of wood, stone, brick, decorative concrete block, wrought iron, (or products created to resemble these materials), or a combination of any of these materials.
2. Materials such as, but not limited to, plywood, particleboard, sheet metal, concrete slabs, and concrete barriers shall not be used for fencing or for walls.
3. Chain link fencing may be used on parcels with non-residential land uses and shall be coated in black, brown or dark green vinyl. Provided, however, and notwithstanding the foregoing, vinyl coating is not required on chain link fencing used on parcels with manufacturing, industrial, transportation, warehouse, and utility land uses described in the Table of Permitted Uses in the Master Plan, or for any other public utility purposes.
4. On parcels with residential land uses (but excluding parcels used for active or passive recreation in residential use developments and parcels in residential use developments used temporarily for construction office and/or storage of construction materials), chain link fencing is allowed only in the side and/or rear yards of individual parcels and is not allowed to be used by the developer of a subdivision for buffering and screening. Provided, however, and notwithstanding the foregoing, chain link fencing may be used anywhere on parcels within residential use developments that are used for passive or active recreation, construction offices or storage of construction materials during development of the residential use development or construction of dwellings in the residential use development. All chain link fencing used on parcels with residential land

uses and on parcels within residential developments used for recreation or construction purposes, shall be vinyl coated in black, brown or dark green.

Landscaping and Screening of Fences and Walls

Fences and walls located within thirty (30) feet of any public street right of way, except for stormwater device walls, shall meet the following landscape requirements:

1. One (1) shrub/ornamental grass shall be installed for each five (5) linear feet of fence or wall. Plant material shall be a minimum of eighteen (18) inches tall at time of installation and 75% of the plant material shall be evergreen. Shrubs may be installed in a staggered, clustered, grouped or linear fashion, and all plantings required by this subsection shall be installed on the side of the fence or wall that faces the right-of-way.
2. Retaining walls that are forty-two (42) inches or more above an established grade and face a public street right of way must meet the following additional requirement:
 - a. A variety of individual block sizes and a blend of colors must be utilized; and
 - b. Not less than fifty percent (50%) of the retaining wall must be screened from view per from the public street right of way in accordance with the foregoing planting requirements.

Maintenance of Fences and Walls

The owner of a parcel on which a fence or wall is located and any other person responsible for maintenance of the fence or wall shall maintain the fence or wall in a safe and attractive condition and in a good state of repair at all times, including, without limitation, all of the following:

1. Repair or replacement of surface area that is damaged, disfigured, cracked, ripped or has peeling paint;
2. Repair or replacement of bent or broken supports, including loose or missing appendages;
3. Install and maintain fences and walls plumb (vertical) to the ground.

All of the foregoing repair and replacement shall be done as soon as reasonably practicable after the damage or condition occurs.

Exposed Framing

Fences that are visible from a public street right-of-way shall be constructed such that exposed framing faces the interior yard and not the public street right-of-way.

Fences and Walls within Buffers

Fences and walls in buffers shall be installed, to the extent reasonably practicable, so as to not disturb or damage existing vegetation protected under the Tree Protection Plan Additional Element or existing installed plant material that has been installed pursuant to this Element. Provided, however, existing plant material that has been installed pursuant to this Element may be removed

and replaced with new plant material, that satisfies the requirements of this Element or relocated in a manner that satisfies the requirements of this Element.

Setback Requirement

To allow sufficient room for plantings required by this Element to mature, fences and walls located within thirty (30) feet of an adjacent public street right-of-way shall be installed a minimum of five (5) feet from the lot line. There shall be no setback from a lot line required for fences not located adjacent to a public street right-of-way.

Fences Prohibited

Fences that are electrically charged and those constructed of barbed or razor wire shall be prohibited, except for such fences that serve a public or quasi-public purpose relating to public safety or security, and except that underground electric fences for household pets shall be allowed on parcels that have residential land uses.

Sight Distance

No fence or wall that obstructs sight distance triangles shall be constructed, installed, or allowed to remain.

Buffer Width

Except for perimeter boundary transitions, the portion of any other buffer required by this Element in which a fence or wall meeting the requirements of this Section of this Element is installed may be reduced in width by not more than one-half (1/2) of the width otherwise required if the following two conditions are satisfied with respect to the fence or wall:

1. The fence or wall is constructed in such a manner that the view from one side of the fence to the other side of the fence up to a height of six (6) feet is completely or substantially obstructed; and
2. The fence or wall is not less than six (6) feet in height measured from the surface of the ground on which the fence or wall is located.

The exact amount of reduction of the width of the buffer shall be shown on the applicable development plan.

Section 10: Screening

Stormwater Devices

BMPs shall be landscaped to provide transitions between BMPs and adjoining parcels, except where landscaping would interfere with BMP operation or maintenance. Culverts and other structures and devices associated with BMPs generally shall be landscaped to reduce their visual

impacts, except where landscaping is impracticable. All proposed landscaping shall be shown on the applicable development plan.

Where used, visible hardscape transitions shall be subject to the following criteria:

1. The exposed surface of the wall of a BMP structure shall consist of decorative material such as segmented block (that includes a variety of individual block sizes and a blend of colors), stone, or brick. Where visibility from a public street right of way is limited, other modular design may be used. Poured-in-place concrete walls shall not be used for edges of BMPs unless veneered with segmented block (that includes a variety of individual block sizes and a blend of colors), stone, or brick.
2. The stormwater device shall be located and designed such that it is accessible to the public and intended to serve as an aesthetic amenity to the site. The device shall be incorporated into or located in immediate proximity to pedestrian plazas or other active areas of the site.
3. The design of a BMP wall shall be tiered in order to accommodate plantings to soften the mass of the upper half of the wall height. Wall tiers shall not exceed six (6) feet in height and three (3) feet in depth. Draping plant material planted at the top of the wall may be used in circumstances in which the wall height is limited and a tiered structure is not utilized.

Mechanical and Utility Equipment

1. Heating, ventilation, air conditioning, and other mechanical and utility equipment, including but not limited to hoses, pipes, vents, fans, compressors, pumps, and heating and cooling units, ground based electrical transformers, telephone, or cable junction boxes, which are located on, beside, or adjacent to any building, shall be screened from the view of public streets and adjacent parcels.
2. The screen shall exceed the height of the equipment at the time of installation, shall not interfere with the operation of or access to the equipment, and shall use building materials and design which are compatible with those used for the exterior of the principal building or vegetative materials or a combination thereof.
3. Utility equipment and facilities associated with on-site electric, cable, telephone, gas or other similar utility, including ground-based electrical transformers and power meters, shall be placed, to the extent reasonably practicable, in service areas on the sides or rear of buildings, and shall be screened, to the extent reasonably practicable with evergreen plantings or other materials approved by the applicable utility provider.
4. Provided, however, the screening requirements of this subsection B are not applicable to lots in residential subdivisions with detached single-family dwellings.

Trash Containment Areas

Parcel owners must account for disposal of trash, including trash and recycling containment devices. Development plans for restaurants, large retail establishments, and other similar businesses must describe how cardboard recycling is to be handled. Except when placed in or near a street or drive for pick-up by the applicable collection entity, all trash containment devices, including compactors, dumpsters, and recycling containers, shall be located and/or screened so as not to be visible from public street rights of ways and adjacent parcels. The type of screening used shall be determined based on the proposed location of the trash containment area, existing site conditions, and the type and amount of existing and proposed vegetation on the site. The standards in subsections 1 through 7 apply to all parcels used for non-residential land uses and to all parcels used for residential land uses that have the particular trash collection and containment facilities and/or recycling facilities described in those subsections.

1. All trash containment areas shall be enclosed with solid gates to allow for access and security and contain windblown litter. In addition, the Planning Director may require self-closing gates for such enclosures. Gates must be maintained in good working order.
2. The enclosure shall be not less than eight (8) feet tall or two (2) feet taller than the highest point of the compactor or dumpster, whichever is greater.
3. The enclosure shall be made of a material that is opaque at the time of installation and compatible with the design and materials of the principal building. The material shall be masonry or other material that matches the building material or provides for a superior visual alternate. Wood and other similar materials may be used for gates.
4. All compactors and dumpsters shall be placed on a concrete pad that is large enough to provide adequate support for the compactor or dumpster and for the service vehicle that empties the compactor or dumpster, allows for positive drainage.
5. The enclosure shall be kept free of litter, debris, and residue.
6. The dumpster or compactor shall be accessible to the handicapped.
7. All recycling drop-off containers and storage bins, with the exception of roll-out carts located in residential developments and recycling containers located on school sites, shall be screened from view to not less than fifty (50) percent of the height of the containers and bins in the station. Roll out carts used with non-residential land uses shall be a neutral or earth tone color or other cart color required by the applicable service provider, shall not be visible from a public street, and when not

Foundation Landscaping

Foundation landscaping is required for all buildings requiring site plan approval, except for projects where urban streetscape design dictates otherwise (i.e. Villages and Section 7.1).

1. Location – Foundation landscaping areas shall be located: (i) adjacent to the building; or, (ii) so as to begin within twelve (12) feet of the building (in the case of a walkway which runs adjacent to the building).
2. Area – Foundation landscaping areas shall have a total area in square feet of not less than two (2) feet times the length of the wall (2' X length of wall = area for foundation landscaping) to which the foundation landscaping is oriented.
3. Type of Landscaping - Foundation landscaping areas shall be landscaped with trees or shrubs/hedge plants and grasses, with a minimum of 50% of the trees and shrubs/hedge plants consisting of evergreen plant material.
4. Minimum Dimension of Foundation Landscaping – Foundation landscaping areas shall maintain a minimum depth in the smallest dimension of three (3) feet. Foundation landscaping shall extend along the front, sides, and rear of a building, excluding those areas utilized as service courts.

Section 11: Planting Standards & Materials

General Specifications

Size and quality standards at time of installation. Height minimums are the distance above ground level and caliper minimums are measured at five (5) feet above ground level.

1. Evergreen trees of any classification shall not be less than six (6) feet in height with a minimum two inch (2") caliper.
2. Multi-stemmed trees of any classification shall not be less than eight (8) feet in height and have not less than three (3) stalks.
3. Canopy trees shall not be less than ten (10) feet in height with a minimum two-and-a-half inch (2½") caliper.
4. Understory trees shall not be less than six (6) feet in height with a minimum of one and a quarter inch (1¼") caliper.
5. Shrubs shall be not less than three (3) gallons in container size, have a minimum height of 18 inches and have a minimum spread of 12 to 15 inches.
6. Ornamental grass shall be not less than 1 gallon in container size, have a minimum height of 12" inches and have a spread of 12" inches.
7. Groundcovers shall be a minimum of one-and-a-half inch (1½") pots with a minimum spread of four (4) inches.

Species - Prohibited

There shall be no invasive/exotic plants of the Southeast, as identified by North Carolina State University Cooperative Extension, installed in Chatham Park.

Species - Drought Tolerant

1. To the extent reasonably practicable, new plant material shall complement existing vegetation native to the site. The use of drought tolerant, indigenous, native, wildlife friendly, and/or adaptive locally grown species of trees, shrubs and groundcovers shall be utilized in order to make planted areas compatible with existing native habitats and to reduce dependency on irrigation.
2. Non-drought tolerant plants are acceptable to use in naturally wet areas, bio-retention areas, or if an alternative to publicly supplied water for irrigation of such plants is used.

Species - Diversity

To reduce risks of future blight conditions, individual development plans shall not be approved with more than 33% of one species of tree.

Plant Quality

Plant materials shall be nursery grown and shall be healthy and vigorous, free from defects, decay, encircling roots, sunscald, injuries, abrasions, diseases, insects, pests, and all forms of infestations or objectionable disfigurements.

Sight Distance and Public Safety

1. Landscaping flanking a driveway entrance and landscaped areas within or adjacent to a street right-of-way must not interfere with vehicular sight lines.
2. Plants located at the end of parking lot islands, within sight distance triangles, or in medians shall be a species with a maximum mature height of 30 inches.
3. Trees planted within public rights-of-way or adjacent to site distance triangles shall be limbed up to a minimum height of 6 feet.

Tree Plantings in Urban Environments

1. Tree Grates

When utilized, tree grates shall meet the following requirements:

- a. The typical size shall be 4 feet x 6 feet, gray iron, ADA compliant.
- b. Tree grates shall have a provision for trunk expansion of the tree, such as pop out concentric rings in the grate around the trunk.
- c. No utilities or electrical conduits (with the exception of low voltage up-lighting) are permitted within the tree pit or grate (utilities may run below and through the subsurface root expansion infrastructure).
- d. Trees shall be centered in the pit.
- e. Tree pits shall accommodate a minimum depth of 3 feet of planting soil.
- f. High quality planting soil shall be used in the pit directly below the grate.
- g. Drainage shall be provided.

2. Required Subsurface Root Expansion

The following standards are applicable only in Activity Centers, Villages, and Section 7.1 in Chatham Park.

- a. High quality top soil or structural soil shall be used to accomplish the soil volume requirement.
- b. A minimum of 600 cubic feet of high quality top soil shall be provided per tree.
- c. Exceptions and design alternatives are encouraged to achieve soil volume. Designs that group trees and connect root spaces will be favored as well as the introduction of low impact development materials and technologies.
- d. Allowed design alternatives include, but are not limited to:
 - Structural soil
 - Subsurface soil containment structure
 - Minimum 6 root paths from each tree, three (3) on each side twenty feet (20') minimum extension for each path. Connect to adjacent pit path.
 - Suspended pavement
 - When root expansion paths extend under sidewalks, ensure minimum density requirements are met.

Section 12. Plans and Installation

1. A planting plan for new plantings and major changes to existing landscaping, prepared and sealed by a Landscape Architect or other qualified design professional, shall be included with the applicable development plan, except for development plans for detached single-family residential dwelling lots.
2. Warm season grasses shall be planted in grassed areas within all public street rights of way in Chatham Park. A ground cover of native and wildlife-friendly grasses and wildflowers is required for open, unimproved, and non-grassed areas in public street rights of way in Chatham Park.
3. Installation of landscaping may be temporarily delayed due to the unavailability of plant material or weather concerns, or if planting at a particular time would jeopardize the health of the plant material.

Section 13. Definitions

BMP or BMPs

Impoundment areas, control measures, facilities, and devices used for conveying collecting, storing, filtering, treating, and/or discharging stormwater.

Buffer

A portion of property designated to mitigate impacts between land uses or transportation routes, or to protect water features from pollutants

Canopy Tree

A large tree expected to grow to forty feet (40') or more in height at maturity, usually deciduous, that is planted to provide canopy cover shade

Drought Tolerant Vegetation

A species of plant that has adapted to survive in an environment with little liquid water.

Native Vegetation

Vegetation that is both native and grows locally. For example, longleaf pines are native to North Carolina, but they are not locally expected in the mountains, just as mountain laurel is not locally expected in coastal areas.

NCDOT or DOT

The North Carolina Department of Transportation.

Primary Internal Access Drive

A driveway that connects a vehicular use area to a public street right of way.

Residential Street

A street serving residential land uses, generally designed to carry low volumes of vehicular traffic at low speeds within residential areas.

Street Tree

A canopy tree within or adjacent to a street right of way and planted to the specifications of this Element.

Structural Soil

A medium that can be compacted to pavement design and installation requirements while permitting root growth. It is a mixture of gap-graded gravels (made of crushed stone), clay loam, or other materials of equivalent functionality and a hydrogel stabilizing agent to keep the mixture from separating. It provides an integrated, root penetrable, high strength pavement system that shifts design away from individual tree pits

Thoroughfare

A street designated as a Major Thoroughfare or Minor Thoroughfare on the Town's Land Use Plan.

Tree Grate

Devices designed to protect tree roots, manage stormwater and maintain neat, orderly and safe sidewalks.

Understory Tree

A tree expected to reach a maximum height of twenty-five feet (25') at maturity.

Wildlife-friendly plants

Plants and other vegetation that benefit native wildlife by providing food and habitat.

5. Stormwater

Introduction

Stormwater structures, systems, devices, control measures, and facilities constructed or installed in Chatham Park for any or all of collecting, controlling, transporting, storing, treating, and discharging stormwater are referred to herein individually and together as “best management practices” or “BMPs”. BMPs in Chatham Park:

1. Will be utilized to control and treat stormwater runoff from developed areas in order to protect natural watercourses from degradation and protect aquatic habitats;
2. May vary in size and location, including without limitation, regional facilities serving multiple Parcels; and
3. Also may serve as streetscapes, gardens, landscapes, open space, parks, and other land uses.

The Master Plan requires that BMPs for new development in Chatham Park meet the following standards:

1. Control and treat runoff generated from all surfaces by one inch (1”) of rainfall.
2. Limit nitrogen and phosphorous loads not to exceed 3.8 pounds per acre per year for nitrogen and 1.43 pounds per acre per year for phosphorous.
3. Have a minimum of 85% average annual removal for Total Suspended Solids.
4. Control post-development stormwater runoff rates so that there is no increase in peak flow rates from the pre-development condition for the 1-year, 2-year, 5-year and 10-year 24-hour duration storm events for the applicable site. For regional BMPs, there shall be no increase in flow rates from the pre-development conditions from the contributing watershed for the same storm events. All analyses shall be based on full buildout conditions within the site or watershed.

In accordance with the Master Plan, the foregoing standards may be achieved by all mitigation measures allowed by applicable law.

BMPs in Chatham Park will be designed, constructed, installed, operated, and maintained in accordance with the standards of this Element and applicable State of North Carolina requirements. Nutrient export limits will be calculated using the Jordan Falls Lake Stormwater Accounting Tool in effect at the time of permitting (or any applicable replacement method for making the calculations).

BMP Design for Chatham Park

The rational method or modified rational method shall not be used for design of stormwater detention BMPs in Chatham Park, but may be used for other purposes. The National Resource

Conservation Service (“NRCS”) method may be used for the design of stormwater detention BMPs in Chatham Park. Other design methods allowed by applicable laws or applicable governmental entities having jurisdiction may be used for design of BMPs in Chatham Park.

BMPs in Chatham Park must be constructed or installed in accordance with the major design elements: (i) outlined in the current version of the North Carolina Department of Environmental Quality (“NCDEQ”) Stormwater Best Management Practices Manual; or (ii) outlined in the current North Carolina Minimum Design Criteria for Stormwater Control Measures published by NCDEQ or successor State of North Carolina agency; or (iii) approved by NCDOT (with respect to roads in Chatham Park under the jurisdiction of NCDOT), or (iv) approved by the Town. Appendix “B” to this Element contains specific standards for construction, installation, inspection, operation, and maintenance of the various BMPs initially approved for use in Chatham Park PDD. BMPs approved for use in Chatham Park and the standards for their construction, installation, inspection, operation, and maintenance may be modified from time to time (such modifications being referred to herein as “Alternate Designs”) as revisions are made to the NCDEQ Stormwater Best Management Practices Manual, or as revisions are made to the current Minimum Design Criteria for Stormwater Control Measures published by NCDEQ or successor State of North Carolina agency, or as revisions are approved by NCDOT (with respect to roads in Chatham Park under the jurisdiction of NCDOT), or as revisions are approved by the Town Engineer. As Alternate Designs are adopted or approved they become part of Appendix “B” to this Element.

BMP Operation and Maintenance in Chatham Park

A stormwater administrator for Chatham Park will be designated by the Development Review Committee to work with the Town and applicable Chatham Park property owners associations to review proposed BMPs for compliance with the standards in the Master Plan and this Element, including, without limitation, review of all stormwater plans for individual developments and neighborhoods in Chatham Park and for regional devices that serve property in Chatham Park. All BMPs that serve Chatham Park require approval by the Town Engineer of an operation and maintenance plan/manual. Maintenance of BMPs that serve Chatham Park will be handled by individual property owners or applicable property owners associations. The party responsible for maintaining a BMP shall provide an annual inspection report to the stormwater administrator. The report shall be completed by a professional who is certified for BMP inspections by the State of North Carolina or other equivalent certification acceptable to the Town.

The stormwater administrator shall prepare an annual report of inspections and maintenance activity of all BMPs that serve Chatham Park. The annual report will be submitted to the Town Engineer in the first quarter of each calendar year with respect to inspections and maintenance activities that have occurred during the immediately preceding calendar year.

6. Parking and Loading

Section 1. Off-Street Parking and Loading

Applicability

New Development – Except as otherwise provided herein, the off-street parking and loading standards of this Element shall apply to all new development in Chatham Park.

Expansions and Alterations - The off-street parking and loading standards of this Element shall apply when an existing structure or use is expanded or enlarged.

Change of Use - Off-street parking and loading must be provided for any change of use or manner of operation that would, based on the Off-Street Parking Schedules of this Element, result in a requirement for more parking or loading spaces than the existing use.

Off-Street Parking Requirements

A. Off-Street Parking Schedule “A”

The minimum number of off-street parking spaces set forth in the following Schedules shall be provided for each development. The applicant may exceed such minimum number of spaces based upon its individual requirements. If a use is not addressed in the Schedules, or is designated “Schedule C”, the Planning Director shall determine a parking standard for the use based upon the standard specified in the Schedules for the most similar use. In every case, regardless of whether a use is addressed in the Schedules, an applicant may propose an Administrative Alternative based upon a parking study prepared by a North Carolina licensed design professional.

Table 1: Off-Street Parking Schedule “A”

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Agricultural Use		
Agricultural production (crops)	None	None
Agricultural production (livestock) but not including feeder/breeder operations	None	None
Animal Feeder/breeder operation	1 per 2 employees	None
Forestry	None	None
Game preserves, fish hatcheries, ponds	None	None
Nurseries, truck farms, commercial greenhouses	1 per 2 employees	None
Mining Uses		
Quarries and other extractive industries (see note 1)	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1/50 Parking Spaces

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Residential Uses		
Bed and Breakfast	1 per guest room	None
Bed and Breakfast with open dining	1 per guest room plus 1 per 50 square feet of floor space dedicated to public use	None
Condominiums, residential	1 per bedroom	1 per 20 Units, minimum of 4
Family care home	1 per each 4 beds	None
Manufactured home, Class A	2 per dwelling unit	None
Manufactured home, Class B	2 per dwelling unit	None
Manufactured home park	2 per dwelling unit	None
Modular home	2 per dwelling unit	None
Pocket neighborhoods	Schedule C	None
Rehabilitation homes, such as halfway houses	1 per each 4 beds plus 1 additional parking space, with a minimum of 4 parking spaces	1 per 20 Units, minimum of 4
Residences, Multi-family (e.g. Apartments)	1 per bedroom	1 per 20 Units, minimum of 4
Residences above commercial use	1 per bedroom	1 per 20 Units, minimum of 4
Residences, one-family detached	2 per dwelling unit	None
Residences Townhouses	2 per dwelling unit plus 0.25 per unit for guest parking	None
Residences, two-family	2 per dwelling unit	None
Accessory Uses and Structures		
Accessory buildings	None	None
Accessory dwelling units	1 per accessory dwelling unit	None
Home occupation	1 per 600 square feet of office space	None
Residences, for care taker or domestic employee on premises where employed	1 space per bedroom	None
Rural family occupation	Schedule C	None
Recreational Uses		
Amusement, commercial including bowling alleys, roller skating rinks	1 per 300 square feet; bowling alleys – 5 per lane	1 per 50 parking spaces
Athletic fields, play grounds	Schedule C	1 per 50 parking spaces
Bingo games	1 per 50 square feet of floor space devoted to public use	1 per 5000 square feet
Clubs and lodges; private, nonprofit	1 per 400 square feet	1 per 5000 square feet
Fairgrounds	Schedule C	1 per 50 parking spaces

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Game rooms	1 per 100 square feet	1 per 5000 square feet
Golf Courses, except par three or miniature courses	4 per hole plus 1 per 500 square feet of club house	None
Golf driving range	1 per teeing station	None
Hunting Clubs, recreational camps; commercial and non profit	Schedule C	None
Fitness centers – commercial	1 per 200 square feet	1 per 5000 square feet, minimum of 4
Fitness centers – accessory use	Schedule C	None
Public parks, recreational facilities	Schedule C	1 per 50 parking spaces
Stables, riding and boarding; commercial	1 per 3 stalls	None
Educational and institutional Uses		
Auditoriums, assembly halls	1 per 5 seats	1 per 50 parking spaces
Cemetery or mausoleum	None	None
Churches & other places of worship, rectories	1 per 4 seats in principal assembly area	1 per 50 parking spaces
College, universities, etc., and incidental uses on same property	Schedule C	1 per 20,000 square feet of academic space
Community buildings, not for commercial gain	1 per 400 square feet	1 per 5,000 square feet, minimum of 4
Correctional, penal institutions, jails	Schedule C	1 per 5,000 square feet, minimum of 4
Fire Station/emergency medical service	Schedule B	1 per 5,000 square feet, minimum of 4
Hospitals, Nursing Homes	Hospital: 1 per 2 beds plus 1 per employee NH: 0.25 per resident + 1 per each staff person	1 per 50 parking spaces
Philanthropic institutions	1 per 250 square feet	1 per 50 parking spaces
Post Office	Schedule B	1 per 5,000 square feet, minimum of 4
Public buildings (no outside storage) libraries, museums, art galleries	1 per 400 square feet	1 per 5,000 square feet, minimum of 4
Schools (academic) public or private; kindergarten, elementary, secondary	2 per classroom, or 1 per 3 seats in auditorium, whichever is more	2 spaces per classroom

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Business, Professional, and Personal Services		
Automobile painting, and fender works; truck repairing	1 per 600 square feet	1 per 10,000 square feet, minimum of 2
Automobile repair shops; all work within a completely enclosed building	1 per 600 square feet	1 per 10,000 square feet, minimum of 2
Agencies, including travel, broker, insurance, loan, employment	1 per 300 square feet	1 per 10,000 square feet, minimum of 2
Automobile parking lots serving uses permitted in districts in which the lot is located	None	None
Automobile parking lots, serving nonresidential uses in another district	None	None
Automobile parking lots, commercial	None	None
Automobile service station, no outside storage of used, wrecked, inoperable or dismantled automobiles; gasoline sales with or without gasoline sales	5 per service bay, including the service bay space	None
Banks, savings and loan, similar financial institutions	1 per 150 square feet	1 per 10,000 square feet, minimum of 2
Beauty salons, barber shops	3 per chair	None
Blacksmith and Horseshoeing shop	1 per 2 employees	None
Carwash, automated	Schedule C	None
Carwash, self-service	Schedule C	1 per 10,000 square feet, minimum of 2
Catering establishments	1 per 300 square feet	None
Cleaners, laundries	1 per 300 square feet	None
Cleaners, laundries, self-service	1 per 3 washing machines	None
Day care facility	1 per 6-person capacity	None
Electrical shops	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Equipment repair, heavy	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Funeral home	1 per 5 seats in chapel, plus 1 per each hearse, ambulance, or related vehicle	1 per 10,000 square feet, minimum of 2
Crematorium	1 per each 500 square feet	1 per 10,000 square feet, minimum of 2
Hotels, motels	3 spaces plus 1 per guest room	1 per 20 beds, minimum of 4

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Kennels, commercial, pet grooming	1 per 300 square feet	1 per 10,000 square feet, minimum of 2
Laboratories, experimental, photo or motion picture, film or testing	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Laboratories, medical, research	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Locksmith and gunsmith	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Medical, dental, paramedical, chiropractic offices	1 per 200 square feet of gross floor space	1 per 10,000 square feet, minimum of 4
Miscellaneous services, not listed	1 per 400 square feet	1 per 10,000 square feet, minimum of 2
Offices, general	1 per 300 square feet	1 per 10,000 square feet, minimum of 4
Offices, professional or nonprofit	1 per 300 square feet	1 per 10,000 square feet, minimum of 4
Printing or binding shop	1 per 300 square feet	1 per 10,000 square feet, minimum of 2
Repair and servicing of office and household equipment	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Service establishments, professional and personal services not otherwise listed	1 per 300 square feet	1 per 10,000 square feet, minimum of 2
Shoe repair	1 per 100 Square Feet	1 per 10,000 square feet, minimum of 2
Small item repair shop	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Spa	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Theater, indoor (except adult theater)	1 per 5 seats	1 per 500 seats, minimum of 4
Theater, outdoor	1 per every 3 fixed seats or 1 per each 35 sf of non-fixed seating	1 per 250 seats, minimum of 4
Decorator shops, upholstery, paper hanging	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Veterinary establishments	1 per 400 square feet	1 per 10,000 square feet, minimum of 2

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Vocational business, secretarial schools, music or dance studios	1 per 600 square feet of academic space plus 1 per each 5 seats in principal assembly room	1 per 10,000 square feet, minimum of 4
Wood working shops	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Retail Trade		
Adult bookstore, adult entertainment club, adult theater	1 per 60 square feet	1 per 10,000 square feet, minimum of 2
Antiques and gift retail stores	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Appliance sales and service	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Arts and crafts supply and retail sales	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Automobile accessories sales	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Automobile sales, new and used	2 spaces plus 1 per 800 square feet of floor area over 1600 square feet	1 per 10,000 square feet, minimum of 2
Bakeries, on-site retail sales	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Bicycle and motorcycle sales and repair	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Book (except adult) and stationary stores	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Building and hardware supplies with open storage	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Building and hardware supplies without open storage	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Clothing sales	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Convenience stores with gas pumps	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Convenience stores without gas pumps	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Craft production and retail sales	1 per 200 square feet	1 per 10,000 square feet, minimum of 2

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Drugstore	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Electronic gaming operation	1 per 300 square feet	1 per 10,000 square feet, minimum of 2
Drugstore with medical office, hospital or nursing facility	1 per 300 square feet	1 per 10,000 square feet, minimum of 2
Market, open air farmers market, etc.	Schedule B	1 per 10,000 square feet, minimum of 2
Food stores	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Fuel oils sales	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Furniture, home furnishings	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Garden center, retail nursery	1 per 800 square feet of lot area used for open air sales or display plus additional spaces for retail sales (computed per schedule B)	1 per 10,000 square feet, minimum of 2
LP gas refueling station	Schedule B	1 per 10,000 square feet, minimum of 2
Manufactured home sales	Schedule B	1 per 10,000 square feet, minimum of 2
Massage parlor	1 per 300 square feet	1 per 10,000 square feet, minimum of 2
Nightclubs (Except adult entertainment clubs), bars, taverns	1 per 50 square feet or 1 per every 4 persons of maximum of fire-rated capacity	1 per 10,000 square feet, minimum of 2
Photographic developing, processing and finishing	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
RV, boat, agriculture implement, heavy machinery sales, rental storage	Schedule B	1 per 10,000 square feet, minimum of 2
Restaurants	1 per 150 square feet of gross floor area or 1 per 5 seats, whichever is greater	1 per 25,000 square feet, minimum of 4
Restaurants, drive-in, drive thru	1 per 150 square feet of gross floor area or 1 per 5 seats, whichever is greater	1 per 25,000 square feet, minimum of 4
Retail business not otherwise listed	1 per 200 square feet	1 per 10,000 square feet, minimum of 2
Tattoo parlor/Tattoo studio establishment and/or body piercing	1 per 300 square feet	1 per 10,000 square feet, minimum of 2

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Wholesale Trade		
Appliance distributor	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Flowers, nursery stock, florist supplies	2 per 3 employees	1 per 10,000 square feet, minimum of 2
Wholesale establishment, not listed	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	1 per 10,000 square feet, minimum of 2
Transportation, Warehouse and Utilities		
Landing strip	Schedule C	None
Broadcasting studio, radio, TV	1 per 200 square feet of office or administrative area	1 per 10,000 square feet, minimum of 2
Construction storage yards	1 per 600 square feet of office space plus 1 per 3,000 square feet of additional indoor area	None
Flammable liquids or gasses, bulk storage, <100,000 gallons	Schedule B	None
Flammable liquids or gasses, bulk storage, >100,000 gallons	Schedule B	None
Garbage landfills, incinerators	Schedule B	None
Public utilities; no service and storage yards	Schedule B	None
Public utilities; with service and storage yards	Schedule B	None
Public water and wastewater treatment facilities	Schedule B	None
Storage, outdoor not otherwise listed	Schedule B	None
Telephone exchanges, radio, and TV towers, transmitting stations, communication towers over 50' height	Schedule B	None
Transportation terminals, freight	Schedule B	None
Transportation terminals, passenger	Schedule B	None
Warehouse, general	Schedule B	1 per 10,000 square feet, minimum 2
Warehouse for finished lumber and other wholesale goods in enclosed storage buildings	Schedule B	None
Warehouse, mini, no unit >400 square feet	Schedule B	None
Manufacturing and Industrial		
Animal slaughtering and rendering	Schedule B	None

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Assembling of electrical appliances, electronic instruments; manufacturing of small parts only	Schedule B	None
Bakeries, bottling works	Schedule B	None
Concrete plants, Asphalt plants	Schedule B	None
Electric and electronic machinery, equipment, supplies	Schedule B	None
Electroplating of metal	Schedule B	None
Foundry casting, light weight, nonferrous metal, not causing noxious fumes, noise or odors	Schedule B	None
Ice	Schedule B	None
Junkyards	Schedule B	None
Machine shop excluding punch press over 20 tons rated capacity, drop hammers and automatic screw machine	Schedule B	None
Manufacture of pottery and figurines, ceramic products, etc., fired only by electrical or gas kilns	Schedule B	None
Manufacture and assembly of electric and neon signs, billboards, light sheet metal products, etc.	Schedule B	None
Manufacture of musical instruments, toys, novelties, and rubber and metal stamps	Schedule B	None
Manufacturing, compounding, processing, packaging or treatment of such products as bakery goods, candy, cosmetics, dairy products, etc.	Schedule B	None
Metal shops involving fabrication of sheet metal only	Schedule B	None
Monument works, stone works	Schedule B	None
Planing or saw mills	Schedule B	None
Poultry dressing plants	Schedule B	None
Poultry and egg processing	Schedule B	None
Primary metal products	Schedule B	None
Sheet metal, roofing shops	Schedule B	None
Other Uses		
Any use not prohibited by law and not addressed elsewhere in this Table	Schedule C	Schedule C
Art and craft shows/fairs	Schedule C	None
Christmas tree sales	Schedule C	None
Condominiums, commercial	Schedule C	1 per 10,000 square feet, minimum 2

Use Type	Minimum Number of Spaces Required	Bicycle Accommodations
Exhibition building, galleries or showrooms	Schedule B	1 per 10,000 square feet, minimum 2
Fences and walls	None	None
Outdoor religious events	Schedule C	
Shopping centers	1 per 200 square feet	1 per 10,000 square feet, minimum 2
Signs	None	None
Temporary buildings incidental to a construction project		None
Adult care homes	1 per 4 beds	None

Note 1: square feet is gross square feet of interior building space.

Note 2: Where parking spaces are based on number of employees, the number of parking spaces is to be calculated based on the number of employees at the working shift that has the most number of employees.

Note 3: Unless otherwise specifically indicated, parking spaces in garages, carports, and motor vehicle service bays are credited against the total number of required parking spaces.

B. Off-Street Parking Schedule “B”

Uses subject to off-street parking schedule “B” shall provide the following minimum number of off-street parking spaces.

Table 2: Off-Street Parking Schedule “B”

Activity	Number of Spaces Required
Office or administrative area	1 per 300 square feet
Indoor sales area	1 per 200 square feet
Outdoor sales or display area (3,000 square feet or less)	1 per 750 square feet
Outdoor sales or display area (over 3,000 square feet)	
Motor vehicles/equipment sales	1 per 2,000 square feet
Other sales/display	1 per 1,000 square feet
Indoor storage/warehousing/vehicle service/manufacturing area	
1–3,000 square feet	1 per 250 square feet
3,001–5,000 square feet	1 per 500 square feet
5,001–10,000 square feet	1 per 750 square feet
10,001–50,000 square feet	1 per 1,250 square feet
50,001 square feet+	1 per 2,000 square feet

C. Off-Street Parking for Bicycles

New development shall provide off-street bicycle parking spaces in accordance with Schedule A. In all cases, required off-street vehicle parking may be reduced by one (1) space for each two (2) off-street bicycle parking spaces provided above the required minimum number of off-street bicycle parking spaces.

Off-street bicycle parking shall include a secure facility (i.e. racks, posts) to which to lock bicycles that comply with the following standards:

1. Bicycle parking facilities shall be located so as to be reasonably convenient to the on-site use.
2. Each bicycle parking area shall be designed in a manner not to interfere with pedestrian and automobile traffic.

Section 2. Rules for Computing Requirements

Multiple Uses:

When a development is proposed that includes a mix of uses, the applicant may propose a parking standard for approval by the Planning Director based upon a parking study prepared by a North Carolina licensed design professional.

Area Measurements:

When square footage is the basis for calculating parking or loading requirements of this Element, it means the gross square footage of interior building space.

Occupancy-Based or Capacity-Based Standards:

For the purpose of computing parking requirements based on employees, students, residents or occupants, calculations shall be based on the largest number of persons working on any single shift, the maximum enrollment, average daily membership, or the maximum fire-rated capacity, whichever is applicable.

Compact Vehicle Parking Spaces:

Up to 20 percent of the required number of off-street vehicle parking spaces may be designed to accommodate compact vehicles, which shall allow a reduction in the width of those parking stalls to eight (8) feet.

Electric Vehicle (EV) Charging Stations:

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.

Section 3. Off-Street Loading Requirements

Off-Street Loading Schedule:

Off-street loading spaces shall be required for industrial, office, institutional, business, and other uses that can be expected to regularly receive or deliver goods, pursuant to the following Off-Street Loading Schedule.

Table 3: Off-Street Loading Schedule

Gross Square Feet	Required Number of Loading Spaces
Less than 40,000	1
40,001 – 240,000	2
Each 90,000 (or fraction thereof) over 240,000	1

Dimensions:

Required loading spaces (bays) shall have the following minimum dimensions: 12-foot minimum width, 25-foot minimum length, and 14-foot minimum vertical clearance. If larger vehicles are to be used, development plans must reflect the larger size space needed.

Location:

1. Public streets may not be used to regularly receive or deliver goods.
2. Required off-street loading spaces shall be on the site of the use served or on an adjoining site.
3. No loading bay may intrude into any portion of a required parking aisle or access drive

Access:

1. A required loading space shall be accessible without requiring the backing of a truck on a public street.
2. An occupied loading space shall not prevent access to a required off-street parking space.

Section 4. Vehicular Use Area Standards

A vehicular use area, or “VUA”, is an area, other than a public street right of way, where motor vehicles are either parked, stored, or driven, including private driveways, private streets, parking lots, motor vehicle display lots, and motor vehicle rental depots, but not including alleyways, parking structures or buildings, underground areas, or areas which are used exclusively as loading areas or service areas.

Access to Parking Areas:

1. All off-street parking spaces shall be accessible without backing into or otherwise reentering a public right-of-way, unless it is physically impracticable to provide for such access or unless otherwise approved as an Administrative Alternative. An alley or private street or drive may be used as maneuvering space for access to off-street parking.
2. When a VUA does not abut a public street, there shall be provided an access drive not less than 24 feet in width for two-way traffic, or 12 feet for one-way traffic, connecting the VUA with a public street.

Dimensions

The following are the applicable minimum parking stall dimensions (stated in feet). See Figure 1 for examples.

FOR 90 DEGREE PARKING:

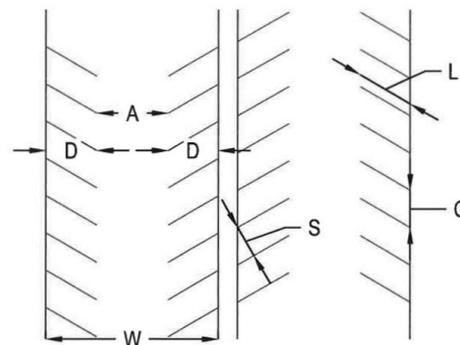
(S) Stall Width	9
(C) Stall Length	9.5
(D) Stall Depth	18
(L) Linear Depth	18
(A) Aisle Width	24
(W) Module Width	60

FOR 60 DEGREE PARKING:

(S) Stall Width	9
(C) Stall Length	11
(D) Stall Depth	15.6
(L) Linear Depth	18
(A) Aisle Width	21.8
(W) Module Width	53

FOR 45 DEGREE PARKING:

(S) Stall Width	9
(C) Stall Length	13.4
(D) Stall Depth	12.7
(L) Linear Depth	18
(A) Aisle Width	22.6
(W) Module Width	48



NOTES:

1. PROVIDE 4' - 6' SPACING BETWEEN ABUTTING PARKING BAYS.
2. C = S FOR 90 DEGREE PARKING.
3. D = L FOR 90 DEGREE PARKING.
4. L = 18' (FACE TO CURB).

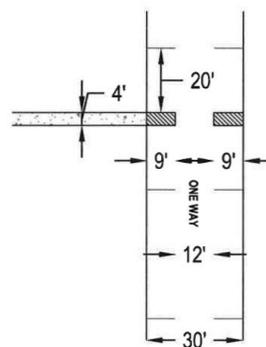


Figure 1

Surfacing

Each VUA shall be paved unless alternative materials are approved by the Planning Director.

Pedestrian Connectivity

Each VUA shall be designed to allow pedestrians to move safely from their vehicles to buildings and other areas served by the VUA.

Markings

Parking spaces, drive isles, and traffic control devices shall be installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) or other standards manual generally accepted by municipalities in the State of North Carolina.

Vehicle Stacking Areas

Vehicle stacking shall be provided in accordance with Table 4.

<u>Use</u>	<u>Stacking Requirement</u>
Bank or other financial institution	
Per teller lane	4
Per automatic teller machine (ATM)	3
Restaurant with drive through	8
Car wash - automated	
If primary use	6
If ancillary use	2
Car wash – self-service	3
Motor vehicle gas pump island	1 per pump island, in addition to the space at the pump

Mail Box Kiosk

Parking for mail box kiosks shall be designed in accordance with the requirements of this Element and any applicable requirements of the United States Postal Service or its successor or other provider of mail services (together, “USPS”). Unless otherwise required by USPS, the following parking requirements are applicable to developments used for single-family detached residential dwellings:

1. No parking shall be required for a mail box kiosk that contains thirteen (13) or less mail boxes (exclusive of any storage box required or maintained by USPS).
2. For mail box kiosks containing between 14 and 26 mail boxes (exclusive of any storage box required or maintained by USPS), 1 space plus 1 additional space meeting applicable requirements for persons with disabilities.
3. For mail box kiosks that contain 27 or more mail boxes (exclusive of any storage box required or maintained by USPS), in addition to the requirement for mail kiosks containing between 14 and 26 mail boxes (exclusive of any storage box required or maintained by USPS), 1 additional space for each 26 additional mail boxes (exclusive of any storage box required or maintained by USPS).

Unless otherwise required by USPA, no additional parking is required for mailbox kiosks used in connection with non-residential uses or with residential apartments, condominiums, townhouses, or other types of residential uses.

Section 5. Use of Vehicular Use Areas

Required VUAs are to be used solely for the parking of licensed motor vehicles in operating condition. Required spaces may not be used for the display of goods for sale or lease or for long-term storage of vehicles, boats, motor homes, campers, mobile homes, or building materials.

Section 6. Off-Street Parking Alternatives

Off-Site Parking:

The Planning Director, as an Administrative Alternative, may approve the location of required off-street parking spaces on a separate lot from the lot on which the principal use is located if the off-site parking complies with the all of following standards.

1. Ineligible Activities: Required parking spaces reserved for persons with disabilities may not be located off-site.
2. Location: No off-site parking space may be located more than 600 feet from the primary entrance of the use served (measured along the shortest legal pedestrian route) unless valet parking or remote parking shuttle service is provided. Off-site parking spaces may not be separated from the use served by a street right-of-way with a width of more than 60 feet, unless a grade-separated or signal-controlled pedestrian walkway is provided, or other traffic control or remote parking shuttle service is provided.
3. Agreement for Off-Site Parking: In the event that an off-site parking area is not under the same ownership as the principal use served, a written agreement between the record owners will be required. The agreement must guarantee the use of the off-site parking area for at least 10 years. Recordation of the agreement must take place before issuance of a certificate of occupancy or certificate of zoning compliance for any use to be served by the off-site parking area. No use shall be continued if the parking is removed unless substitute parking facilities meeting the requirements of this Element are approved by a development plan approval or approved by the Planning Director as an Administrative Alternative.

7. Signage

Section 1. Purpose & Applicability

Purpose

The purpose of the Master Signage Element is to provide regulations for the use of signs in Chatham Park which aid orientation and identify activities or uses, while at the same time enhancing the information displayed to the public, promoting public safety, and maintaining community wide aesthetics.

Applicability

The standards, requirements, and criteria (those words being used interchangeably herein) in this Element apply to all signs in Chatham Park PDD, unless otherwise indicated. With respect to any development plan submitted for approval or any sign permit applied for prior to the adoption of this Element, the owner of the Lot for which such development plan has been submitted or sign permit has been applied for may, at any time within six (6) months immediately following the later of the adoption of this Element, the approval of the development plan, or the issuance of the sign permit, elect to have this Element apply. If the owner so elects, the owner shall bring the signage on the Lot into compliance with this Element within one (1) year immediately following the date on which the owner elects to be subject to this Element. Any such election by an owner shall be in writing and the date of the election shall be the date it is delivered to the office of the Planning Director.

Section 2. Sign Plans

For each Small Area Plan, but excluding Villages and Section 7.1, a “Master Sign Plan” that complies with this Element shall be submitted to and approved by the Planning Director prior to issuance of any permit for a sign in the applicable Small Area. Each Master Sign Plan shall address the following:

1. Colors.
2. Materials.
3. Lettering fonts.
4. Graphics and logos.
5. Any other characteristic or unifying sign elements desired by the applicant.

Prior to issuance of a sign permit for any parcel, a “Parcel Sign Plan” for that parcel shall be submitted to and approved by the Town. For the purposes of this subsection, a parcel may be an entire residential subdivision, mixed-use development, non-residential development, or phase of any of the foregoing for which a Parcel Sign Plan is approved. A Parcel Sign Plan may be included with the applicable development plan. Each Parcel Sign Plan shall address the following:

1. Locations.
2. Design drawing showing sign dimensions.
3. Lighting.
4. Landscaping.
5. Supporting Structures.
6. Any other characteristic or unifying sign elements desired by the applicant.

Prior to issuance of a sign permit for any icon sign in Chatham Park, an “Icon Sign Plan” for Chatham Park shall be submitted to and approved by the Town. The Icon Sign Plan shall address the following, as applicable:

1. Proposed locations, which may be modified from time to time as approved by the Planning Director.
2. Number of icon signs, which may change from time to time as approved by the Planning Director.
3. Sizes of icon signs.
4. Colors.
5. Materials.
6. Lettering fonts.
7. Graphics and logos.
8. Any other characteristics or unifying elements desired by the applicant

Section 3. Signs Allowed in Chatham Park

Table 3.1 below lists signs that are allowed in Chatham Park by sign type and land use designation.

Table 3.1:

P= allowed with permit X= not allowed √ = allowed without permit

	Sign Type	Conditions	Residential Uses	Commercial Uses	Industrial Uses	Office & Institutional	Illumination
Permanent							
A	Awning	Sec 4 (A)	X	P	P	P	YES
B	Building Marker	Sec 4 (B)	√	√	√	√	YES
C	Civic Club Non-Profit (Off-Premise)	Sec 4 (C)	X	P	P	P	NO
D	Building Directory	Sec 4 (D)	X	P	P	P	YES
E	Ground Directory	Sec 4 (E)	P	P	P	P	YES
F	Flags	Sec 4 (F)	√	√	√	√	YES
G	Gasoline sales	Sec 4 (G)	X	√	√	X	YES
H	Governmental	Sec 4 (H)	√	√	√	√	YES
I	Health/Hospital	Sec 4 (I)	X	X	X	P	YES
J	Incidental	Sec 4 (J)	√	√	√	√	YES
K	Marquee	Sec 4 (K)	X	P	X	X	YES
L	Menu Board	Sec 4 (L)	X	P	X	X	YES
M	Principal Ground: - Non Residential	Sec 4 (M)	X	P	P	P	YES
N	- Residential	Sec 4 (N)	P	X	X	X	YES
O	Suspended	Sec 4 (O)	X	P	P	P	YES
P	Wall	Sec 4 (P)	X	P	P	P	YES
Q	Icon Signs	Sec 4 (Q)	P	P	P	P	YES
Temporary							
A	Construction/Development -Non-residential or mixed use - Residential	Sec 5 (A)1	P	P	P	P	NO
		Sec 5 (A) 2	P	P	P	P	NO
B	Contractor	Sec 5 (B)	√	√	√	√	NO
C	For Profit Event	Sec 5 (C)	X	P	P	P	NO
D	Nonprofit Event	Sec 5 (D)	P	P	P	P	NO
E	Public Event	Sec 5 (E)	√	√	√	√	NO
F	Grand Opening/Closing and Future Use	Sec 5 (F)	X	P	P	P	NO
G	Holiday	Sec 5 (G)	√	√	√	√	YES
H	Political	Sec 5 (H)	√	√	√	√	NO
I	Public Notice	Sec 5 (I)	√	√	√	√	NO
J	Real estate	Sec 5 (J)	√	√	√	√	NO
K	Seasonal Outdoor sales	Sec 5 (K)	P	P	P	P	YES
L	Window	Sec 5 (L)	X	√	√	√	NO
M	Yard Sale	Sec 5 (M)	√	√	√	√	NO
N	Home Occupation	Sec 5 (N)	P	X	X	X	NO
O	Sandwich Board	Sec 5 (O)	NO	√	NO	√	NO
P	Temporary Icon Sign	Sec 5 (P)	P	P	P	P	YES

Section 4. Permanent Signs

Permanent signs shall meet the specific requirements of this Element for the type of permanent sign and all other applicable requirements of this Element and other applicable Additional Elements (e.g., Master Lighting Plan Additional Element).

A. Awning

An awning sign is a material such as fabric, metal, flexible plastic, or vinyl that is supported by or attached to a frame and that extends from the exterior wall of a building without ground-mounted support:

Awning signs shall comply with the following requirements:

1. On a single-occupant property, one (1) awning sign may be allowed only in lieu of all other signage otherwise permitted on the wall to which the awning is attached.
2. On a multi-occupant property, one (1) awning sign may be allowed over each occupant entrance, in lieu of other wall signs.
3. The maximum area of an awning sign shall not exceed ten (10) percent of the total awning face front or side area.
4. Awning signs may be illuminated only with direct surface lighting and not with any form of backlighting, and otherwise are subject to the provisions of the Chatham Park Master Lighting Plan Additional Element.



Figure 4(A): Example of an awning sign.

B. Building Marker

A building marker sign is a name, stamp, or seal placed on a building to signify ownership or origin.

Building marker signs shall comply with the following requirements:

1. Such sign(s) shall not exceed one (1) on any single building;
2. Such sign(s) shall not exceed three (3) square feet in area;
3. Such sign(s) shall be made of permanent material, such as bronze or masonry, and be permanently affixed to or incorporated into the building wall.



Figure 4(B): Examples of permanent building markers.

C. Civic Club Non-Profit (Off-Premise)

A civic club non-profit (off-premise) sign is a sign (emblem or insignia) for a non-profit organization (charitable, civic, fraternal, patriotic, religious, or similar organization).

Civic club non-profit (off-premises) sign shall comply with the following requirements:

1. Not to exceed three (3) signs per organization.
2. No sign shall be located closer than fifteen (15) feet from any public right-of-way.
3. No sign shall exceed two (2) square feet in size and four (4) feet in height.
4. No sign shall be displayed in connection with a commercial promotion.
5. The owner of the property on which the sign is displayed has given written permission.

D. Building Directory

A building directory sign is a wall sign on the exterior of a building that lists tenants or occupants of a building or project with unit numbers, arrows or other identifying or directional information.

Building wall-mounted directory signs on non-residential multi-tenant buildings shall comply with the following requirements:

1. Such signs are limited to one (1) per building entrance not to exceed two (2) per building.
2. The total size of the wall-mounted directory sign does not exceed ten (10) square feet.

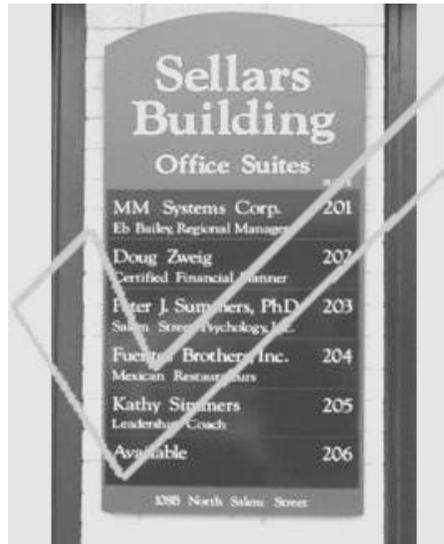


Figure 4(D): Example of wall mounted directory sign

E. Ground Directory

A ground directory sign is a sign with a continuous base less than two (2) feet in height that lists tenants or occupants of a building having more than one tenant or project with unit numbers, arrows or other identifying or directional information and meets the conditions below:

Ground Directory signs shall comply with the following requirements:

1. Non-residential
 - a. Non-residential logo/name ground directory signs internal to the site within a mixed use development shall be located not less than fifty (50) feet measured perpendicular from any vehicular entrance public right-of-way and at principal intersections within the site, where such intersections are not less than fifty (50) feet from any public right-of-way as shown on an approved Parcel Sign Plan.
 - b. Such signs shall not exceed twenty (20) square feet in area and forty-eight (48) inches in height.
 - c. Such signs shall not be located within a required buffer (as that term is defined in the Master Open Space Plan Additional Element).
 - d. Such signs may contain logos or business names with arrows or other directional information but shall not contain any commercial message.

- e. Such signs may be internally or externally lighted in accordance with Sec. 9 (B), Sign Illumination

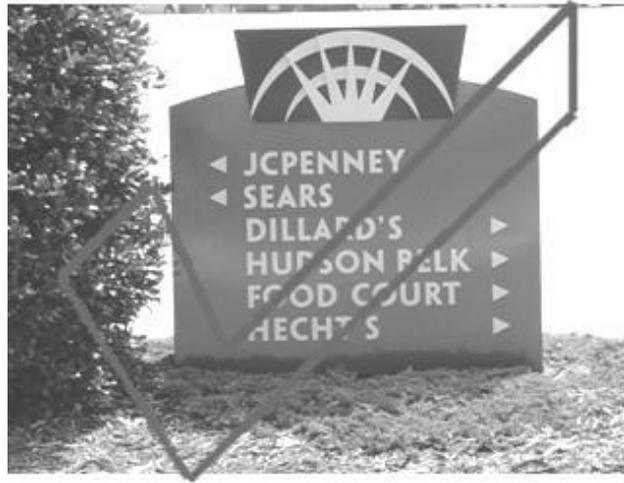


Figure 4(E): Example of non-residential ground directory sign.

2. Multi-Family Residential

- a. One (1) ground directory sign may be located near the principal entrance to a parking area for multi-family projects, as shown on an approved Master Signage Plan.
- b. Such sign shall be located away from any public right-of-way, so that drivers can conveniently pull up and read the directory without impeding traffic on any driveway or entrance serving the development.
- c. There are no limitations on the amount of information that may be included in such sign, as long as the sign meets all of the other applicable requirements.
- d. Such sign shall not exceed eight (8) square feet in area and five (5) feet in height.
- e. Such sign may be internally or externally lighted.

F. Flags

A flag is a fabric, usually rectangular or triangular in shape, representing a country, state or other governmental entity, corporation, business, or other private organization designed to be flown from a flag pole and that complies with the following:

Flags shall comply with the following requirements:

1. A maximum of 2 flags shall be allowed per a flag pole.
2. Flag poles shall not exceed 30 feet in height nor shall flags on these poles exceed a size of five (5) feet by eight (8) feet.
3. No building mounted flag or flag pole shall extend above the roofline.

4. Flags shall not be faded, tattered or torn at the time of installation and flags that become faded, tattered, or torn shall be removed or replaced promptly after such condition occurs.

G. Gasoline Sales

A gasoline sign is a sign advertising fuel prices in accordance with North Carolina General Statutes and that complies with the following:

Gasoline sales signs shall comply with the following requirements:

1. Gasoline price or self-service sign located and secured to each pump island shall not exceed nine (9) square feet.
2. A gasoline price/self-service changeable copy sign, not to exceed nine (9) square feet, may be included on the principal ground sign (not to exceed the total square footage shown in Table 3.1) if a principal ground sign is allowed. LED lights may be used to provide changeable copy for gasoline prices on either a principal ground sign or on the gasoline canopy, but not both. LED lights shall not be used on gasoline signs for any other purpose than to display gasoline prices.
3. An official North Carolina vehicle inspections sign shall be permitted provided said sign does not exceed four (4) square feet.
4. Signage and logos on pump island canopies are restricted to a maximum of ten (10) percent of the face of the canopy.

H. Governmental

Governmental signs are temporary or permanent signs erected and maintained by or required by the Town, Chatham County, the State of North Carolina, or the United States of America and that are for one or more of the following purposes:

1. Traffic or other regulatory signs.
2. Historical signs, markers, or monuments.
3. Signs denoting the location of underground utilities.
4. Signs posted by or under the authority of a governmental authority for crime prevention, public safety, public health, zoning, identification, or other public information.
5. Any other sign authorized by the statute or ordinance of the applicable governmental authority.



Figure 4(H): Examples of allowable governmental signs.

I. Health/Hospital

Health/hospital signs are permanent signs erected and maintained by a hospital or by healthcare facility with or without an emergency department.

Health/hospital signs shall comply with the following requirements:

1. Principal ground signs shall be allowed provided that:
 - a. Not more than one (1) principal ground sign is allowed at each Major Entrance.
 - b. Maximum height is six feet (6’).
 - c. Maximum size is seventy (70) square feet.
 - d. The principal ground sign shall identify only the facility name, not the tenants or occupants thereof.
2. In addition to principal ground signs, emergency department ground signs shall be allowed subject to the following:
 - a. One emergency department ground sign is allowed at each Major Entrance to the facility. Provided, however, if the primary entrance to the emergency department is not located at a Major Entrance, an emergency department ground sign also is allowed at the primary entrance to the emergency department.
 - b. Maximum height is eight feet (8’).
 - c. Maximum size is eighty (80) square feet.
 - d. The emergency department ground sign shall identify only the facility name and emergency department information, not the tenants or occupants thereof.
3. Wall signs shall be allowed provided that:
 - a. The sign surface area of a sign located on a wall of a structure may not exceed the lesser of ten (10) percent of the total surface area of the wall on which the sign is located or thirty-four (34) square feet. The emergency department band shall not be counted in calculating the square footage of the wall sign.
 - b. No wall sign attached to a building may project more than twelve (12) inches from the building wall.
4. Directory ground signs shall be allowed provided that:
 - a. Maximum height is four feet (4’).
 - b. Maximum sign face size is twenty-four (24) square feet.
 - c. Such signs may contain logos or business names with arrows or other directional information but shall not contain any commercial message.
 - d. Such signs may be internally or externally lighted.
 - e. Such signs shall be located at a distance or orientation so as not to be legible from a public street right-of-way. If this is not feasible, the signs can be located as close as fifty feet (50’) measured perpendicular from the nearest public street right-of-way.

J. Incidental

An incidental sign is a sign, generally informational, that has a purpose secondary to the use of the parcel on which it is located, such as “no parking”, “entrance”, “loading only”, and other similar directives.

1. Incidental signs shall comply with the following requirements:
 - a. Signs or plates on structures or parcels displaying the name or address of the occupant, mailboxes, paper tubes, and similar uses customarily associated with structures.
 - b. Signs posted upon private property relating to private parking or warning the public against trespassing, against danger from animals or other dangers or dangerous conditions so long as such signs are of an allowed size and description.
 - c. Private traffic signs indicating onsite directions, entrances, exits, or hazards.
2. Such signs shall not include logos or commercial messages.
3. The size of such signs shall not exceed two (2) square feet or four (4) feet in height.
4. Signs notifying persons that motor or other vehicles may be towed from a private parking lot shall be no less in size than the minimum, and no greater in size than the maximum, required or allowed by applicable statute or ordinance.

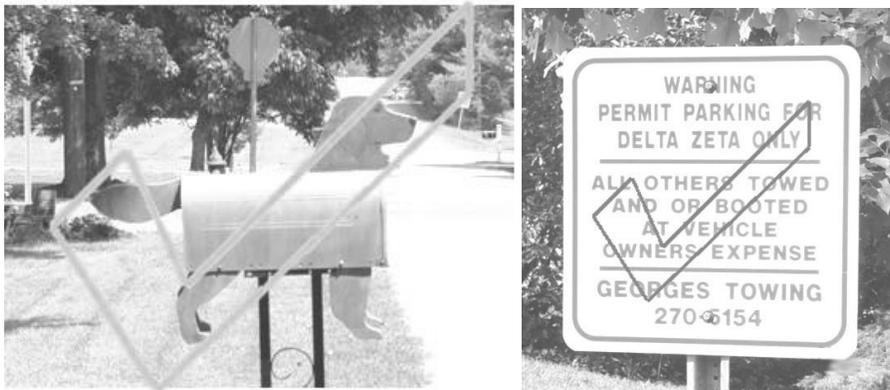


Figure 4(J): Examples of mailboxes (left) and signs posted upon private property relating to private parking (right).

K. Marquee

A marquee sign is a theater or performance venue wall sign designed to have changeable copy.

Marquee signs shall comply with the following requirements:

1. Such changeable copy signs shall cover not more than one (1) square foot of sign area for each linear foot of theater building frontage.
2. Non-electric copy only.

- Such signs shall be subject to total wall sign area limits and be affixed



Figure 4(K): Example of marquee sign with changeable copy

L. Menu Board

A menu board is an accessory sign providing items and price associated with a drive-thru window or walk-up window. Menu boards shall comply with the following requirements:

Changeable menu boards shall be allowed provided that:

- Such signs shall not exceed thirty-two (32) square feet in area and six (6) feet in height.
- Two (2) signs shall be permitted per drive-through lane not to exceed sixty-four (64) combined square feet.
- Such signs shall not be legible from a public street right-of-way.
- Such signs may be internally and externally illuminated.

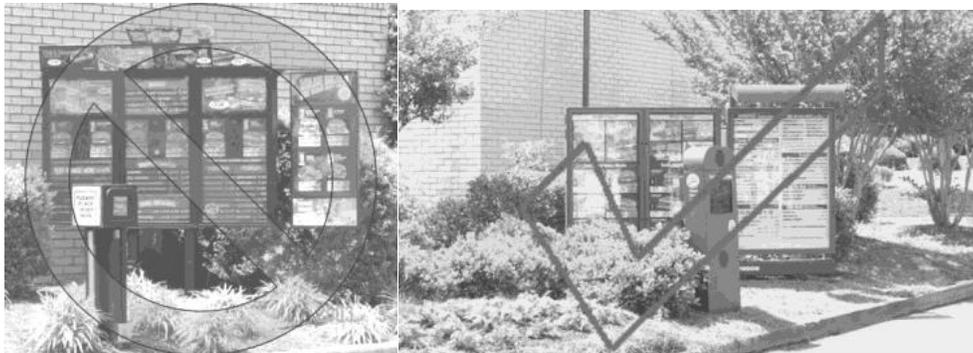


Figure 4 (L) 1: The menu board sign on the left is too large, whereas the sign on the right meets the requirements above.

M. Principal Ground: Non-Residential

A non-residential principal ground sign is a sign supported permanently upon the ground by a continuous base or two (2) or more support posts at the outside edge, not attached to any building and meets the conditions below. If supported by posts, the bottom of the sign shall be located no more than two (2) feet above grade:

Non-residential principal ground signs shall comply with the following size and height requirements:

Table 4.1: Ground signs

Street Frontage	Max. Sign Size (sq ft) (per side)	Max. Height (ft)
<200 feet	20	4
≥200 feet & <400 feet	30	5
≥ 400 feet & <1000 feet	40	6
≥1000' feet (see note below)	50	10

Note: The 1000 feet street frontage signage provisions above shall only apply to mixed use developments.

1. Single Use Parcel that is not part of a Mixed Use Parcel:
 - a. A single use parcel that is not part of a mixed use parcel shall be allowed one (1) principal ground sign at each Major Entrance. Provided, however, if the parcel is located at the intersection of two public streets and has a Major Entrance from each street, at the election of the parcel owner the principal ground sign may be located on the corner instead of at each Major Entrance.
 - b. If there is no Major Entrance, then one (1) principal ground sign is permitted at a location shown on the approved development plan or Parcel Sign Plan
 - c. A business located on a corner with a Major Entrance on each road may elect to have one (1) principal ground sign on the corner instead of a sign at each Major Entrance.
 - d. A principal ground sign may be located in the median of a Major Entrance where the median is a minimum of fifty (50) feet long and ten (10) feet wide, provided that the sign is not located closer than ten (10) feet to either end of the median.
 - e. A principal ground sign may be placed in the streetscape buffer for the parcel that is in close proximity to a Major Entrance, as shown on either the approved development plan or approved Parcel Sign Plan.
 - f. A principal ground sign may be internally and externally illuminated.

2. Mixed Use Development

A Mixed Use Development is a group of two (2) or more uses, businesses, or parcels planned and developed in a joint manner, whether or not governed by a common property owners' association or by common conditions, covenants, and restrictions.

Principal ground signs for a Mixed Use Development shall comply with the following requirements:

- a. One (1) principal ground sign shall be allowed at each Major Entrance or in close proximity to that Major Entrance.
- b. A principal ground sign may be placed in the streetscape buffer for the parcel that is in close proximity to a Major Entrance, as shown on either the approved development plan or approved Parcel Sign Plan.
- c. A principal ground sign may be located in the median of a Major Entrance where the median is a minimum of fifty (50) feet long and ten (10) feet wide, provided that the sign is not located closer than ten (10) feet to either end of the median.
- d. A principal ground sign may be mounted on a fence or wall that does not exceed the height and size parameters set forth in Table 4.1.
- e. A principal ground sign may be internally and externally illuminated.
- f. A principal ground sign may include the name of the development and the names of one (1) or more uses or businesses located in the development.



Figure 4(M): The non-residential entrance sign for multiple-use lots (left) should identify only the center name, not the tenants thereof. The sign on the right is located out of the right-of-way.

N. Principal Ground: Residential

A residential principal ground sign is a sign supported permanently upon the ground by a continuous base or two (2) or more support posts at the outside edge, and not attached to any building. If supported by posts, the bottom of the sign shall be located no more than two (2) feet above grade.

Principal residential ground signs also shall comply with the following requirements:

1. A maximum of two (2) principal ground signs is allowed at each vehicular entrance.
2. A principal ground sign may be placed in the streetscape buffer for the parcel that is in close proximity to a Major Entrance, as shown on either the approved development plan or approved Parcel Sign Plan.
3. In lieu of one (1) or two (2) principal ground signs on each side of the street at a vehicular entrance, a principal ground sign may be located in the median of a vehicular entrance where the median is a minimum of fifty (50) feet long and ten (10) feet wide, to either end of the median.
4. A principal ground sign shall not exceed a total of forty (40) square feet.
5. A principal ground sign may be mounted on a fence or wall that does not exceed eight (8) feet in height; however, the sign itself may not exceed the size limitations set forth in this subsection and the sign must be only an incidental part of the wall or fence design.
6. If illuminated, the principal ground sign shall be externally illuminated only.
7. Principal ground signs in developments other than detached single-family subdivisions may include as an integral part leasing information not to exceed ten (10) percent of the face of the sign.



Figure 4(N): Example of a Residential Subdivision Ground Sign

O. Suspended Sign

A suspended sign is a sign that is suspended from the underside of a horizontal plane surface and is supported by such surface.

Suspended signs shall comply with the following requirements:

1. Suspended signs shall not exceed one (1) per exterior doorway entrance on the ground floor of the building or one (1) building entrance or occupant, whichever is less.
2. A suspended sign shall not exceed two (2) square feet in total area.
3. Suspended signs shall not be externally or internally illuminated.
4. Suspended signs may be in addition to wall signs allowed by this Element.

5. Suspended signs shall contain only the address, suite number, logo or name of the occupant or business identified on the sign.



Figure 4(O): Example of a Suspended Sign

P. Wall Sign

A wall sign is a sign attached on or parallel to a wall, professionally painted on the wall surface or erected and confined within the limits of an outside wall of any building or structure, which is supported by such wall or building.

Wall signs shall comply with the following requirements:

1. The sign surface area may not exceed ten (10) percent of the total surface area of the wall on which the sign is located.
2. Buildings containing one business with a front façade 600 feet in length or greater may install wall-mounted customer directional signs identifying the business. Examples of such signs include but are not limited to “Pharmacy,” “Grocery,” and “Lumber Yard.” Such signs are limited to two per front façade and 100 square feet each.
3. No wall sign attached to a building may project more than 12 inches from the building wall.

Q. Icon Signs

An icon sign is a sign, structure, or work of art whose primary purpose is to create a sense of arrival or a permanent community identity or image for Chatham Park. Icon signs shall comply with the icon sign plan. An icon sign, in addition to identifying Chatham Park, also may identify one or more specific businesses, uses, or services provided or to be provided in Chatham Park.



Figure 4(Q): Example of an Icon Sign

Section 5. Temporary Signs

A. Construction and Development Signs

A construction/development sign is an on-site sign identifying the names of individuals and/or firms connected with the construction of an active project. Such sign may incorporate the name of any or all of the project, lender, owner, developer, architect, engineers, rental agencies, real estate agent/broker, financial institutions, contractor, address of business and telephone number, or other principals involved in the sponsorship, design, or construction of a structure or project.

A temporary construction/development sign shall comply with the following requirements:

1. Non-Residential or Mixed-Use (including both non-residential and residential uses)

Construction/Development signs:

- a. Limited to one (1) sign per site.
- b. No such sign shall exceed sixty-four (64) square feet and five (5) feet in height.
- c. Permits for such signs shall be limited to the earlier of issuance of a certificate of occupancy for the project or twelve (12) months from the date of issuance of the

permit. If a certificate of occupancy for the project has not been issued prior to the expiration of the original permit, the permit may be renewed once for an additional period that expires upon the earlier of issuance of a certificate of occupancy for the project or twelve (12) months from the renewal date.

- d. Preliminary development plan approval is required prior to issuance of the sign permit.
 - e. The sign shall be removed within ten (10) days immediately following issuance of a certificate of occupancy for the project or earlier expiration of the permit.
2. Residential Construction/Development signs shall be allowed provided that:
- a. Limited to one (1) sign per residential development, to be located at an entrance to the development.
 - b. No such sign shall exceed thirty-two (32) square feet and five (5) feet in height.
 - c. Preliminary development plan approval is required prior to issuance of the sign permit.
 - d. The sign shall be removed no later than ten (10) days immediately following the date that one hundred (100) percent of the lots within the residential development have initially been sold to an owner other than the developer or a builder. Provided, however, with respect to residential dwelling unit rental projects, the sign shall be removed no later than issuance of the first certificate of occupancy for the project.

B. Contractor Sign

A contractor sign is an on-site temporary sign identifying the name of the contractor performing a service such as but not limited to painters, building contractor, roof cleaning, and landscaper.

A contractor sign shall comply with the following requirements:

1. A contractor sign shall not exceed five (5) square feet and four (4) feet in height.
2. The number of signs shall not exceed one (1) sign per contractor per site.
3. The sign may be displayed during the time that the service or work is being performed and shall be removed within ten (10) days after the service or work is completed.



Figure 5(B): Example of a contractor sign.

C. For-Profit Event Sign or Banner

Temporary on-site signs and banners in connection with for profit events shall comply with the following:

1. Only one (1) sign or banner advertising promotional events or fairs, carnivals, horse shows, and similar events shall be permitted on-site.
2. The sign or banner shall not exceed sixteen (16) square feet and four (4) feet in height.
3. The sign or banner shall not be displayed earlier than one (1) week prior to the scheduled date of commencement of the event and shall be removed not later than two (2) days after the end of the event.



Figure 5(C): Example of a temporary event for profit sign.

D. Non-profit Event (on-site and off-site) Sign or Banner

On-Site

Temporary, on-site signs and banners for non-profit events shall be comply with the following requirements:

1. Signs and banners advertising non-profit events shall be limited to a total of three (3) per lot. The maximum height of any such sign or banner is five (5) feet, the square footage of any one sign or banner shall not exceed thirty-two (32) square feet, and the total square footage of all signs and banners shall not exceed thirty-two (32) square feet.
2. No sign or banner shall be displayed earlier than one (1) week prior to the scheduled date of commencement of the event and all signs and banners shall be removed not later than two (2) days after the end of the event.
3. If a sign display area is permanent but the message displayed is subject to periodic changes, then the sign shall be regarded as a permanent sign.

Off-Site

Temporary off-site signs and banners for non-profit events shall comply with the following requirements:

1. Signs and banners advertising fund raisers, school events, fairs, revivals and other similar events shall be limited to a total of thirty (30) per event. No sign or banner shall exceed five (5) square feet in size and four (4) feet in height.
2. No sign or banner shall be displayed earlier than one (1) week prior to the scheduled date of commencement of the event and all signs and banners shall be removed not later than two (2) days after the end of the event.
3. Written permission from the property owner(s) shall be obtained prior to display of any sign or banner.

E. Public Event (On-Premise and Off-Premise) Sign or Banner

Signs and banners for events open to the public shall comply with the following requirements:

1. Signs and banners may be located in the public right-of-way but outside of the sight triangles.
2. No sign or banner shall be displayed earlier than one (1) week prior to the scheduled date of commencement of the event and all signs and banners shall be removed not later than two (2) days after the end of the event.

F. Grand Opening/Closing and Future Use Signs

Grand Opening/Closing

A sign announcing the grand (or initial) opening or the closing of a business, use, or service shall comply with the following requirements:

1. Only one (1) sign per business, use, or service is allowed.
2. The sign shall not exceed thirty-two (32) square feet in size.
3. No sign shall be displayed for more than a total of sixty (60) days.



Figure 5(F): Example of a grand opening banner.

Future Use

A sign announcing the future location or opening of a business, use, or service shall comply with the following requirements:

1. Only one (1) sign (single-sided or double-sided) per business, use, or service is allowed.
2. Each side of the sign shall not exceed thirty-two square feet in size and the sign shall not exceed ten (10) feet in height.
3. The sign may be located on the proposed site or, with the consent of the property owner, within 2,000 feet of the proposed site.
4. Permits for such signs shall be limited to the earlier of issuance of a certificate of occupancy for the project or twenty-four (24) months from the date of issuance of the permit. If a certificate of occupancy for the project has not been issued by the expiration of the original permit, the permit may be renewed twice for additional periods of twenty-four (24) months each. Each renewal permit expires upon the earlier of issuance of a certificate of occupancy for the project or twenty-four (24) months from the renewal date.

G. Holiday Sign

A holiday sign is one or more sign, banner, flag, display, or lighting erected, placed, displayed, or utilized on a seasonal basis in observance of religious, national, or state holidays and which contain no commercial message.

A holiday sign shall comply with the following requirements:

1. No holiday sign, banner, or display shall be displayed for a total of more than sixty (60) days before, during and after the applicable holiday.
2. A holiday sign, banner, flag, display, or light may be internally or externally illuminated.



Figure 5(G): Example of a holiday display

H. Political Sign

A political sign is a temporary sign or banner of a candidate, party, or group supporting the candidacy of an individual for office or expressing or soliciting public support of, or opposition to, any public issue.

A political sign shall comply with the following requirements:

1. A sign may be displayed on-site or within the non-pavement portion of public street rights-of-way. No sign shall exceed five (5) square feet and a height of four (4) feet. No sign shall be displayed earlier than forty-five (45) days immediately prior to the scheduled date of the applicable vote or determination of the issue and shall be removed not later than one (1) week after such date.
2. No such shall be installed or located:
 - a. Within a sight triangle,
 - b. In a way that obscures vision or obstructs traffic,
 - c. In a manner that creates a hazard,
 - d. On utility poles or within street medians,
 - e. On other property owned or leased by the Town of other governmental entity

I. Public Notice Sign

A public notice sign is a sign advertising official notices or advertisements posted by or under the direction of a governmental authority court, statute, or ordinance. A public notice sign may be of any size or color, and may be displayed for such period of time, as necessary to meet the applicable requirements of the governmental authority, court, statute, or ordinance.

J. Real Estate Sign

A real estate sign is a sign advertising the real estate upon which the sign is located as being for rent, lease or sale. A real estate sign shall comply with the following requirements:

1. Single family, duplex, triplex, quadplex, townhome, condominium, or other residential lot or dwelling, excluding apartments:
 - a. A maximum of one (1) real estate sign per lot or unit advertising the lot or unit for sale or lease.
 - b. A maximum of one (1) real estate sign per lot or unit advertising an open house for viewing the dwelling. Such sign shall be displayed no longer than thirty-six (36) hours before the event and shall be removed at the conclusion of the event.

Such signs shall not exceed five (5) square feet in size and four (4) feet in height and shall be located on the property to which the advertisement is referring. The signs shall be removed within two (2) weeks after the date on which the closing of the sale occurs or the lease is executed. Signs are not allowed off-premise or in open space or common areas.

2. Apartment leasing signage is subject to the requirements in Section 4(N)2 of this Element.
3. Residential subdivision sales center or model home.
 - a. One (1) residential subdivision “sales center” or “model home” sign, not to exceed sixteen (16) square feet in size and five (5) feet in height is permitted on

the lot on which the sales center or model home is located. A sales center sign shall be removed within ten (10) days after 100% of the properties within the residential development have initially been sold to an owner other than a builder of residential dwellings in that development. A model home sign shall be removed within ten (10) days after the builder who owns the lot and dwelling that is serving as the model home has sold all lots in the development that are owned by that builder, including the lot on which the model home is located. A model home that also is serving as a sales center is allowed one (1) sign that meets the requirements of this subsection.

- b. Directional signs that direct traffic to a sales center or model home are allowed at the street intersection closest to each entrance to the development. Directional signs shall be a maximum of four (4) square feet in size and four (4) feet in height. All such directional signs shall be removed within same time as the removal of signs for the sales center or model home with which such directional signs are associated.
4. Non-residential.
A maximum of one (1) real estate sign per lot or business space advertising the sale or lease of a current or future non-residential lot or business space. These signs shall be a maximum of thirty-two (32) square feet in size and ten (10) feet in height and shall be located on the lot or business space to which the advertisement is referring. The sign shall be removed when the lot or business space is sold or leased, as applicable. These signs are not allowed off-premises or in open space or common areas.

K. Seasonal Outdoor Sales

Seasonal Agricultural Signs for Products Sold Where They Are Grown

1. *Definitions:*
 - a. “Seasonal Agricultural Signs” are signs that advertise seasonal agricultural products which were grown on the property where they are offered for sale and that contain no other messages;
 - b. “On-Site Agricultural Products” are seasonal agricultural products which were grown on the property where they are offered for sale; and
 - c. “Off-Site Agricultural Products” are seasonal agricultural products that were not grown on the property where they are offered for sale.
2. *On-Premises Signs.* On a private property where On-Site Agricultural Products are sold, Seasonal Agricultural Signs are not regulated.
3. *Off-Premises Signs.* For each private property where On-Site Agricultural Products are sold, thirty (30) Off-Premises Seasonal Agricultural Signs that advertise the products shall be allowed. Off-premises signs allowed by this subsection may be displayed only on private property and only with the permission of the off-premises private property owner. Only one off-premises sign is allowed per off-premises private property.

4. *Duration.* For each private property where On-Site Agricultural Products are sold, Off-Premises Seasonal Agricultural Signs may be displayed only while the advertised products are actually for sale, and only during one forty-five (45) consecutive day period per calendar year per On-Site Agricultural Product. The signs shall be removed immediately upon the sooner of the end of the forty-five (45) day period or the end of the sale of the products. At no time shall more than thirty (30) Off-Premises Seasonal Agricultural Signs be displayed for a given property regardless of the number of agricultural products being sold on that property.
5. *Physical Characteristics.* Each Off-Premises Seasonal Agricultural Sign shall not exceed five (5) square feet in size and four (4) feet in height. Off-Premises Seasonal Agricultural Signs may only be ground signs.
6. *Limitation on Off-Site Agricultural Products.* Off-Site Agricultural Products shall not be a majority of the agricultural products offered for sale on a property during any time that an Off-Premises Seasonal Agricultural Sign is being displayed related to the property.
7. *Contiguous Properties.* Contiguous properties owned by the same person, family, establishment, or entity shall be treated as one property for the purposes of the Section.
8. *Limitations Are Comprehensive.* The limitations on Off-Premises Seasonal Agricultural Signs stated in other subsections of this Section shall apply regardless of the number of persons, family members, establishments, or entities that sell the products on a property and regardless of the number of booths, stands, tables, tents, or the like that are located on a property.

Other Seasonal Outdoor Sales Signs

Outdoor temporary sales signs advertising a product of a particular shall comply with the following requirements:

1. The sign advertises the sale of seasonal products such as, but not limited to, Christmas trees, pumpkins, and fireworks.
2. The sign shall not exceed thirty-two (32) square feet in size and four (4) feet in height.
3. The sign shall be displayed for no more than sixty (60) days per season.
4. The sign may be displayed only on the premises where the seasonal products are being sold.

L. Window

A window sign is any sign, picture, symbol, or combination thereof, designed to communicate information about an activity, business, commodity, event, sale, or service that is placed inside a window or door and is visible from the exterior. Window signs shall comply with the following requirements:

1. The sign shall be allowed on the show window glass of non-residential buildings provided that such temporary signs, together with all permanent signs, do not exceed a combined maximum of 25 percent of the total window area per building side.

M. Yard Sale

A yard sale sign is a sign advertising the sale of household articles in a residential yard or garage. Yard sale signs shall comply with the following requirements:

1. The sign shall be no larger than five (5) square-feet in size and four (4) feet in height.
2. The sign shall be displayed no longer than thirty-six (36) hours before the event and shall be removed at the conclusion of the event.
3. One (1) such sign is allowed on-site. Not more than two (2) such signs are allowed off-site and only with the permission of the property owner on which the sign is displayed.

14. Home Occupation Signs

Signs advertising home occupations shall be permitted in those sections of Chatham Park PDD in which home occupations are allowed in the Land Use Table in the Master Plan. Home occupation signs shall comply with the following requirements:

1. A permit is required and must be obtained from the Town of Pittsboro Planning Department.
2. Plastic and/or acrylic sign faces are prohibited.
3. A home occupation sign attached to the dwelling, detached garage, or outbuilding is allowed provided that:
 - a. The sign shall be no larger than 12 inches by 12 inches;
 - b. The sign shall be placed no higher than 6' at an entrance door to the dwelling, detached garage, or outbuilding; and
 - c. The sign shall not be internally lit; external lighting shall be limited to traditional residential lighting fixtures.
4. Where a home occupation exists on a lot with a minimum of 300 feet of linear road frontage, one sign may be placed in the front yard, provided:
 - a. The sign shall be no larger than 18 inches by 24 inches;
 - b. The maximum height of the sign shall be 4 feet;
 - c. The sign shall not be internally lit;
 - d. The sign must be permanent and affixed to a permanent pole(s); and
 - e. The sign shall not be located in the street right-of-way and must be located so that it does not obscure vision at driveway sight triangles.

N. Sandwich Board Sign

A sandwich board sign is a sign consisting of two panels joined together at the top and configured in the shape of an inverted "V" so that the bottom of the sign rests upon or near the ground. Sandwich board signs shall comply with the following requirements:

1. The total area of the signboard (including both sides) shall not exceed fourteen (14) square feet.
2. A sandwich board sign shall not exceed two (2) linear feet in width and forty-two (42) inches in height. Within these specified maximum dimensions, creative shapes that reflect the theme of the business are allowed (e.g., ice cream shops may display a sign in the shape of an ice cream cone).

3. The sign must be constructed of materials that present a finished appearance. Rough cut plywood is not allowed. The lettering should be professionally painted or applied; a “yard sale” or “graffiti” look with hand painted or paint stenciled letters is not acceptable, provided, however, hand-lettered chalkboard signs are allowed.
4. The sign shall be located within six (6) feet of the main entrance to the business and its location shall not interfere with pedestrian or vehicular circulation;
5. The sign shall be removed at the end of each business day.
6. Any person erecting a sandwich board sign shall indemnify and hold harmless the Town of Pittsboro and its officers, agents, and employees from any claim or cause of action arising out of the presence of the sign on Town property or public right-of-way. This indemnification shall include the costs of defending against any such claim or cause of action, including reasonable attorneys’ fees.

P. Temporary Icon Sign.

A temporary icon sign is a sign, structure, or work of art whose primary purpose is to create a sense of arrival or a permanent community identity or image for Chatham Park. Temporary icon signs shall comply with the icon sign plan. A temporary icon sign, in addition to identifying Chatham Park, also may identify one or more specific businesses, uses, or services provided or to be provided in Chatham Park. A permit for a temporary icon sign shall be for twenty-four (24) months from the date of issuance of the permit and may be renewed for two (2) successive periods of twenty-four (24) months each.

Section 6. Prohibited Signs

The following signs are expressly prohibited in the portions of Chatham Park subject to this Element:

1. Signs within the public right-of-way, except for signs placed in a public right of way by a governmental entity or a utility provider or as specifically authorized elsewhere in this Element.
2. “Off-premise signs”, as defined in the Definitions Section of this Element, unless specifically allowed elsewhere in this Element.
3. Any sign located in a “sight triangle”, as defined in the Definitions Section of this Element.
4. “Abandoned signs”, as defined in the Definitions Section of this Element.
5. “Portable signs”, as defined in the Definitions Section of this Element.
6. “Animated Signs” or “Attracting Devices”, as defined in the Definitions Section of this Element, except that decorative banners with non-commercial messages displayed on residential property by the resident are allowed. Banners are permitted only in accordance with the specific authorizations provided in the Section of this Element dealing with Temporary Signs.
7. Signs comprised in whole or in part of exposed neon tubing. This requirement shall not prohibit the use of neon tubing when it is fully contained within a sign fixture or element

thereof, or if it is a two (2) square foot or smaller sign displaying the word “OPEN” with or without a logo.

8. “Pole signs” as defined in the Definitions Section of this Element.
9. “Billboards” as defined in the Definitions Section of this Element.
10. “Changeable copy” as defined in the Definitions Section of this Element, except for gasoline sales signs, menu boards, and marquees that comply with the requirements of this Element for those signs.
11. “Series signs” as defined in the Definitions Section of this Element.
12. Box-style signs with internally-illuminated backgrounds. Provided, however, individually illuminated letters are acceptable.
13. Exposed LED signs with the exception of LED signs used to display gas prices as allowed in this Element.

Section 7. Sign Area Measurement

Sign Surface Area Measurement

The surface area of a sign shall be measured in accordance with the definition of “Sign Surface Area” in the Definitions Section of this Element.

Double Faced Signs

1. Only one side of a sign surface area of a double faced, back-to-back sign with identical words on both sides shall be included in the surface area measurement.
2. A double-faced sign with non-parallel faces shall be regarded and calculated as two signs.

Section 8. Sign Permitting, Illumination, Maintenance and Landscaping

1. Procedure for Obtaining a Sign Permit

- a. Application for a sign permit, where required by this Element, shall be made to the Planning Director. Application for a sign permit may be made as part of a development plan or separately. Applications for sign permits shall be processed through the Development Review Committee in the same manner as development plan applications in Chatham Park.
- b. A sign shall become null and void if the sign is not erected within eighteen (18) months from the date of issuance of the permit. Provided, however, upon written request of the holder of the sign permit, the Planning Director may extend the sign permit for an additional six (6) months.
- c. If the sign or signs proposed in an application meet the requirements of this Element, then the Planning Director shall issue the sign permit.
- d. Construction or placement of a sign requiring a permit shall not be commenced or placed on-site until the permit therefor has been issued and all other applicable construction permits have been issued.

2. Sign Illumination

Unless otherwise prohibited by this Section, signs may be illuminated if such illumination is in accordance with this Element and the Master Lighting Plan Additional Element. All electric signs shall be in accordance with the Chatham Park Lighting Element, Section 4(F), *Building, Ground Mounted Fixtures and Accent Lighting*, the Building and National Electric Code and shall be subject to all required building permits. All wiring to ground signs or to lighting equipment erected after this Element is approved by the Town must be underground.

- a. *Signs near residential premises.* No sign within 150 feet of a residential premise may be illuminated between the hours of midnight and 6 a.m., unless there is no spillover of lighting or glare to the residential area beyond the boundaries of the lot where the lighting is located.
- b. *Shielding of lights.* External lighting directed toward a sign shall be shielded so that it illuminates only the face of the sign and does not shine directly into or cause glare onto a public right-of-way or residential premises other than the residential premises on which the sign is located.
- c. *Flashing or intermittent lights.* No sign shall contain or be illuminated by flashing or intermittent light or lights of changing degrees of intensity. Provided, however, this requirement is not applicable to any sign dealing with public safety that is displayed by or on behalf of a governmental authority.

3. Sign Maintenance

- a. *Maintenance of signs.* All signs and all components thereof, including but not limited to supports, braces, and anchors, shall be kept in a state of good repair at all times.
- b. *Abandonment of signs.* If a sign advertises any enterprise or activity, including but not limited to a business, service, commodity, accommodation, or attraction that is no longer operating or being offered or conducted, that sign shall be considered abandoned and shall, within 90 days of the enterprise or activity ceasing, be removed by the sign owner, sign lessee, owner of the property on which the sign is located or other person having control over the sign.
- c. *Removal of message portion of signs.* If the message portion of a sign is removed, leaving only the supporting "shell" of a sign or the supporting braces, anchors, or similar components, the owner of the sign, the lessee of the sign, or the owner of the property on which the sign is located or other person having control over such sign shall, within 60 days of the removal of the message portion of the sign, either replace the entire message portion of the sign or remove the remaining components of the sign.

4. Landscaping

A freestanding permanent sign shall include landscaping at the base of the sign. The landscaping shall be designed to include, but not limited to, one or more of the following: annual and/or perennial flower beds; ground cover; ornamental grass; and shrubs, and the landscaping shall comply with the applicable requirements of the Master Landscaping Plan Additional Element. Turf and other grasses are not permitted as part of the landscaping of the sign. Landscaping of the sign

shall be in keeping with the adjacent area landscaping. The required landscaping shall be well maintained at all times.

5. Unlawful Cutting of Vegetation

No person may, for the purpose of increasing or enhancing the visibility of a sign, damage, aggressively trim, destroy, or remove trees, shrubs or other vegetation located:

- a. Within the right-of-way of any public street, unless the work is done pursuant to the express written authorization of the governmental authority North Carolina Department of Transportation and/or the Town, as applicable.
- b. On off-site property that is not under the ownership or control of the person doing or responsible for such work.
- c. In an area where such trees or shrubs are required to remain under the Master Tree Protection Plan Additional Element or Master Landscaping Plan Additional Element.

Section 9. Villages and Section 7.1

Villages and Section 7.1 of Chatham Park PDD are distinct from other properties in Chatham Park PDD in that the concentration of retail, restaurant, and entertainment uses in those portions of Chatham Park PDD require variety and innovation in design treatments and approaches to signs in order to create vibrant, distinctive, and engaging gathering places. The same level of uniformity for signs in Chatham Park established by other Sections of this Element is neither desired nor required for Villages and Section 7.1. For example, distinctions between buildings and signs, methods of illumination, massing and size of signs, and architectural forms of signs are items that require greater flexibility in Villages and Section 7.1 than in other portions of Chatham Park PDD. Examples of the types of signs that can provide variety and innovation in Chatham Park PDD are included following the Definitions Section of this Element (Figure 1).

For the foregoing reasons, the Town will not exercise any jurisdiction over the signs utilized in the Villages and Section 7.1 in Chatham Park PDD and the standards of this Element are not applicable to Villages and Section 7.1.

Section 10. Definitions

Any sign that advertises any enterprise or activity, including but not limited to, a business, service, commodity, accommodation, or attraction that has not been operating, offered or conducted for a consecutive period of more than 90 days.

Animated Sign or Attracting Device

Any sign that uses movement or change of lighting to depict action or create a special effect, scene, or attract attention, including beacons, pennants, hand-held signs, streamers, balloons or other inflatables used as signs, spot lights and search lights, high-intensity illuminated signs, electronic or mechanical indications of time and temperature, or other moving or flashing signs.

Bracket Sign

A ground sign with one post and extending arm from which the sign hangs.

Banner

A temporary sign constructed of lightweight fabric or similar material such as, but not limited to vinyl, fabric, or paper.

Billboard

An off-premise outdoor advertising sign owned by a person or legal entity that engages in the business of selling the advertising or communicative space on that sign.

Building Façade

The entire area of a building facing or side extending from the roof or parapet to the ground and from one corner of the building to another, but does not include any structural or nonstructural elements which extend beyond the roof of a building.

Canopy

A structure constructed of rigid materials, including but not limited to metal, wood, concrete, canvas, or glass, which is attached to and supported by a building, or which is free-standing and supported by column, poles, or braces extended to the ground.

Changeable Copy

A sign or portion of a sign with characters, letters or illustrations that can be changed or rearranged without altering the face or the surface of the sign.

Commercial Message

Any sign, wording, logo, or other representation that names or advertises a business, product, service or other commercial activity.

Copy (permanent or temporary)

The wording or pictorial graphics on a sign surface either in permanent or removable form.

Exterior Lighting

Lighting, such as that used in and around buildings, recreation areas, parking lots, and signs designed to illuminate certain areas for visibility.

Gasoline Sales Sign

A service station sign advertising fuel prices in accordance with North Carolina General Statutes.

Illuminated Sign

A sign with an artificial light source incorporated internally or externally for the purpose of lighting the sign.

Internal Illumination

A light source concealed or contained within the sign itself, such as fluorescent or neon tubing, which lights the sign but where the light source is not visible.

Logo

A graphic sign which represents a particular trademark or business symbol for identification.

Major Entrance

A vehicular full access point (left and right turns in and out) from which to enter and exit.

Mechanical Movement

Animation, revolution, rotation, or other movement of any or all parts of a sign.

Off-premise Sign

A sign that directs attention to a business commodity, service, or establishment conducted, sold, or offered at a location other than the premises on which the sign is erected or affixed.

On-premise Sign

A sign that directs attention to a business commodity, service, or establishment conducted, sold, or offered on the premises on which the sign is erected or affixed.

Pennant

A lightweight plastic, fabric, or other material, whether or not containing a message of any kind, suspended from a rope, wire, string, or pole, usually in series, designed to move in the wind.

Pole Sign

A sign that is not attached to a building, but is supported by a pole(s) or mast which has as its principal function the support of the sign.

Portable Sign

A sign that is not permanently affixed to a building, structure or the ground or other permanent structure including but not limited to; sandwich board signs/A-frame, T-frame signs, products, costumed characters, hand-held signs, umbrellas that are not associated with a restaurant seating area, hot air or gas-filled balloons, or a sign designed to be transported, including, but not limited to the following: signs designed to be transported by means of wheels, signs attached to or painted on vehicles or trailers parked and visible from any public right-of-way.

Projecting Sign

A sign affixed to a building or wall in such a manner that its leading edge extends more than 12 inches beyond the surface of said building or wall.

Sandwich Board Sign

A sign consisting of two panels joined together at the top and configured in the shape of an inverted “V” so that the bottom of the sign rests upon or near the ground.

Series Signs

A message, copy, or announcement, which uses a series of two (2) or more signs placed in a line generally parallel to a street, highway, or expressway carrying a single message, copy, or announcement, a part of which is contained on each sign.

Sight Triangle

A triangular-shaped portion of land established at street intersections and driveways in which nothing is erected, placed, planted, or allowed to grow in such a manner as to limit or obstruct the sight distance of motorists entering or leaving the intersection, as set forth in applicable legal requirements.

Sign

An identification, description, animation, illustration, or attention getting device, illuminated or non-illuminated, which directs attention to a product, service, place, activity, person, institution, performance, commodity, firm, business or solicitation, including permanently installed or situated merchandise or an emblem, logo, painting, banner, poster, bulletin board, pennant, placard, or temporary sign designed to identify or convey information, with the exception of state, municipal, national, and religious flags.

Sign Face

The entire surface area of a sign upon, against, or through which copy is placed.

Sign Height

The vertical distance measured from the sign's average grade level, provided that no filling, berming, or mounding solely for the purpose of locating the sign at a higher level is done.

Sign Surface Area

The entire area of a sign shall be the area within a single, continuous eight-sided, straight-sided perimeter that encloses the entire sign inclusive of any border or trim and all the elements of the matter displayed, but excluding the base or apron, supports, and other structural members. In the case of three-dimensional or painted letters located directly on a wall surface, the surface area shall be defined as the combined area of the continuous eight-sided, straight-sided perimeter that encloses each individual letter.

Temporary Sign

A sign that is used in connection with a circumstance, situation or event that is designed, intended, or expected to take place or to be completed within a definite period of time after the erection of such sign or is anticipated to occur in the future. If a sign display area is permanent but the message displayed is subject to periodic changes, that sign shall not be regarded as temporary.



Figure 1

8. Lighting

Section 1. Purpose and Applicability

Purpose

The provision of outdoor lighting heightens nighttime safety and visibility, and is used to enhance the security of property and people. Lighting should be provided in areas of heavy vehicle and pedestrian use, and areas that are dangerous if unlit such as stairs, intersections, or changes in grade. It is important to set clear guidelines so that lighting adequately serves the site while minimizing negative impacts on surrounding properties.

Applicability

Except as otherwise provided, the standards in this Element apply to all lighting in Chatham Park.

Section 2. Lighting Plan

Any development that addresses exterior lighting shall include a detailed exterior lighting plan as part of the plan submission. This lighting plan shall include:

1. Specifications for the lighting fixtures such as: type of unit (cutoff, non-cutoff, glare shields, etc.), lamps (wattage, etc.), electrical load requirements, utility company involved, method of wiring, routing/location of lines, number and location of lights, and mounting heights.
2. An ISO foot-candle plan that shows typical foot-candle contours or a point photometric grid that indicates foot-candle levels measured at grade across the site. A point photometric plan is required with applicable development plans. Information with respect to maximum, average, and minimum site foot-candles, uniformity ratio (average/minimum), and depreciation factors should also be included. Foot-candle levels must be shown as of the time of installation
3. Plan certification by (i) a licensed lighting professional holding the PE, LC or CLEP certification or similar certification that indicates proficiency in the design of outdoor lighting, (ii) a lighting manufacturer, or (iii) the local electric utility. The certification must verify that the plans meet applicable design requirements and illumination standards of this Element.

Section 3. Illumination Standards

The tables below set forth standards for lighting intensity based upon the land use or activity involved. Values are presented in average foot-candles measured at grade at the time of installation. Site lighting shall not exceed these average foot-candle levels at the time of installation. Average values must be calculated using the levels found within the lighted area; for example, a parking lot must be calculated using the levels found within the curb to curb or paved parking area only.

Table 3.1 Lighting Standards for General Parking with Pedestrian Areas (foot-candles)

Use	Horizontal Illuminance Average	Uniformity Ratio (Average/minimum)
-Multi-family residential or condominium (stacked flat)	4	8/1
-Retail	4	4/1
Standards for the following: - Office -Industrial -Educational -Cultural, civic, and recreational -Church or place of worship -Townhomes and other attached residential	2	4/1

Table 3.2 Other Exterior Lighting Standards (foot candles)

Location	Horizontal Illuminance Average	Uniformity Ratio (Average/Minimum)
*Vital locations (entry/exit doors, service areas, ATMs, etc.)	5.0	4/1
Sidewalks	2.0	4/1
Vehicular use area** other than parking (drives and approach ways, private access roads, etc.)	2.0	4/1
Storage yards	4.0	4/1
Loading/unloading docks and platforms	15.0	4/1
Auto sales yard/enclosed outdoor display	10.0	8/1
General recreational areas (fields, playgrounds, courts, Pools)	10.0	4/1

**Average levels for vital locations shall be generally based on an area 10 feet by 10 feet or the limits of the specific area.*

*** A vehicular use area, or “VUA”, is an area, other than a public street right of way, where motor vehicles are either parked, stored, or driven, including private driveways, private streets, parking lots, motor vehicle display lots, and motor vehicle rental depots, but not including alleyways, parking structures or buildings, underground areas, or areas which are used exclusively as loading areas or service areas.*

Section 4. Design Requirements

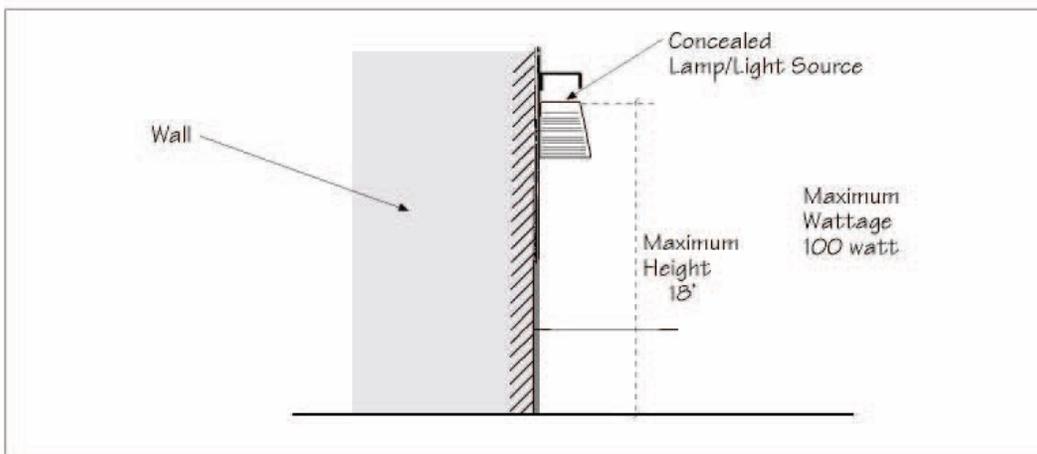
Exterior lighting, such as that used in and around buildings, recreation areas, parking lots, and signs, shall be designed to prevent the excessive spillover of light onto adjacent properties. It shall also be designed to protect against glare onto public rights of-way and private drives that would impair the vision of motorists and adversely impact adjoining properties. The impact of exterior lighting on adjacent properties shall be reduced by existing vegetation, thick evergreen vegetated buffers, berms, walls, or fences, and/or the use of directional lighting, lighting shields, special

fixtures, timing devices, appropriate light intensities, luminaries, and mountings at appropriate heights. External and/or internal shields are required on all lights in vehicular use areas and lights mounted to buildings where they are immediately adjacent to residential uses (such as along the edges of parking lots or mounted to the rear of buildings close to residential uses). All outdoor lighting shall conform to the following design standards:

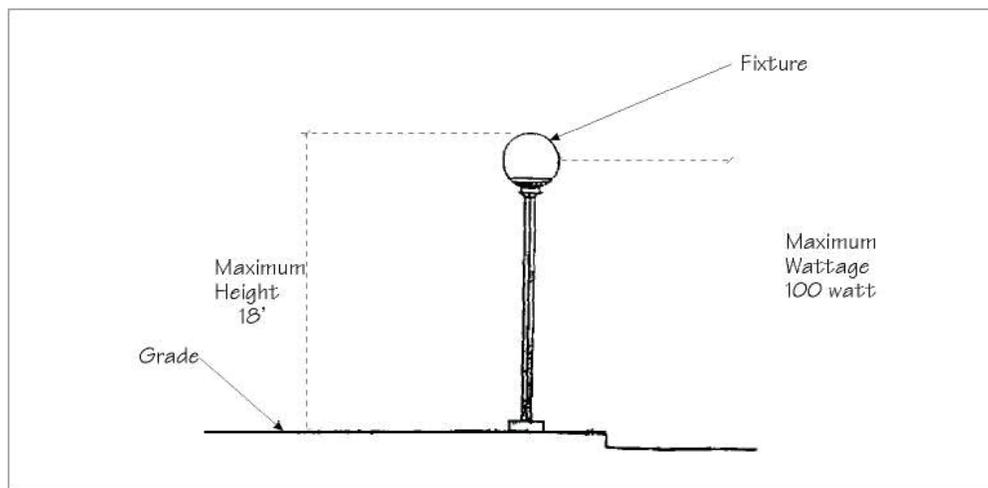
A. Mounting Heights

Outdoor lighting fixtures shall be designed, located and mounted at heights shown to be appropriate, but in no case shall be greater than:

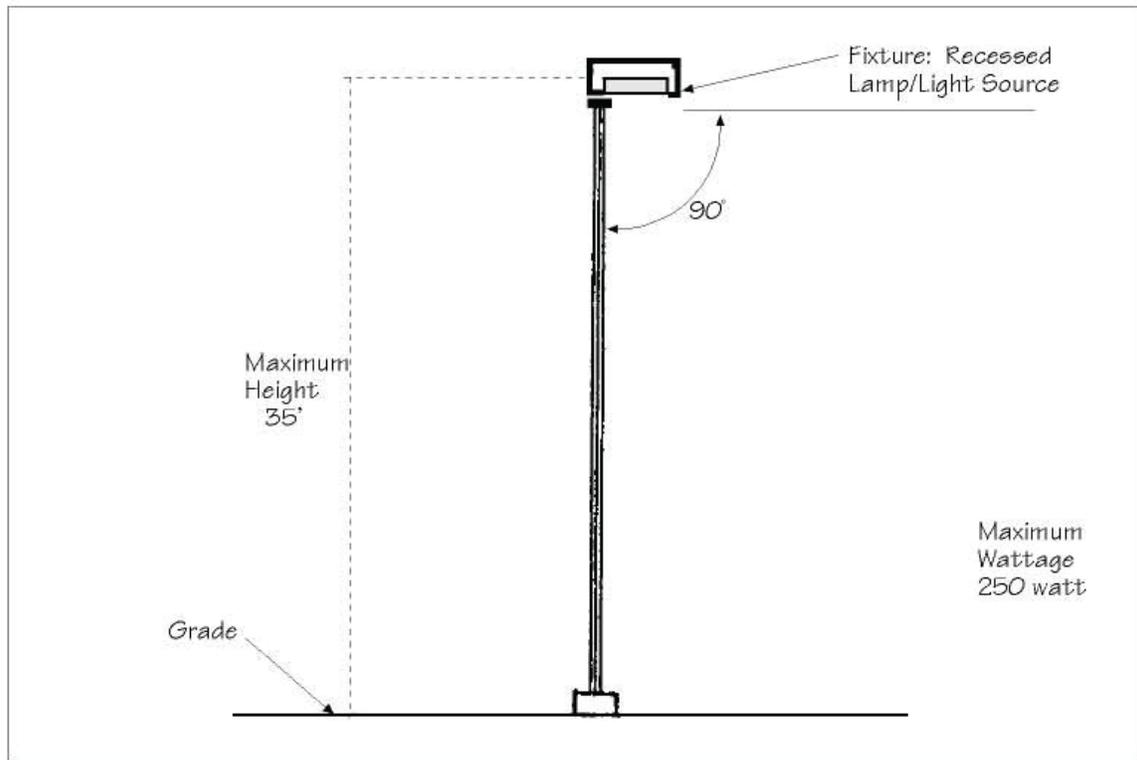
1. 18 feet above grade for *non-cutoff* lights (see Sec. 4(D)(2));
2. 35 feet above grade for *cutoff* lights (see Sec. 4(D)(3)).
3. Mounting height is measured from the finished grade or surface and includes the total height of the fixture, pole, and any base or other supporting structure required to mount the light(s).



WALL-PACK LIGHT FIXTURES



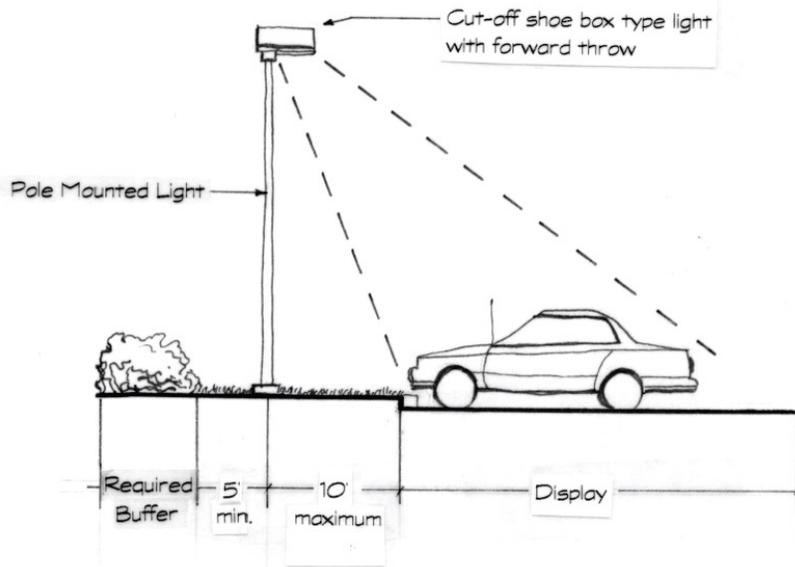
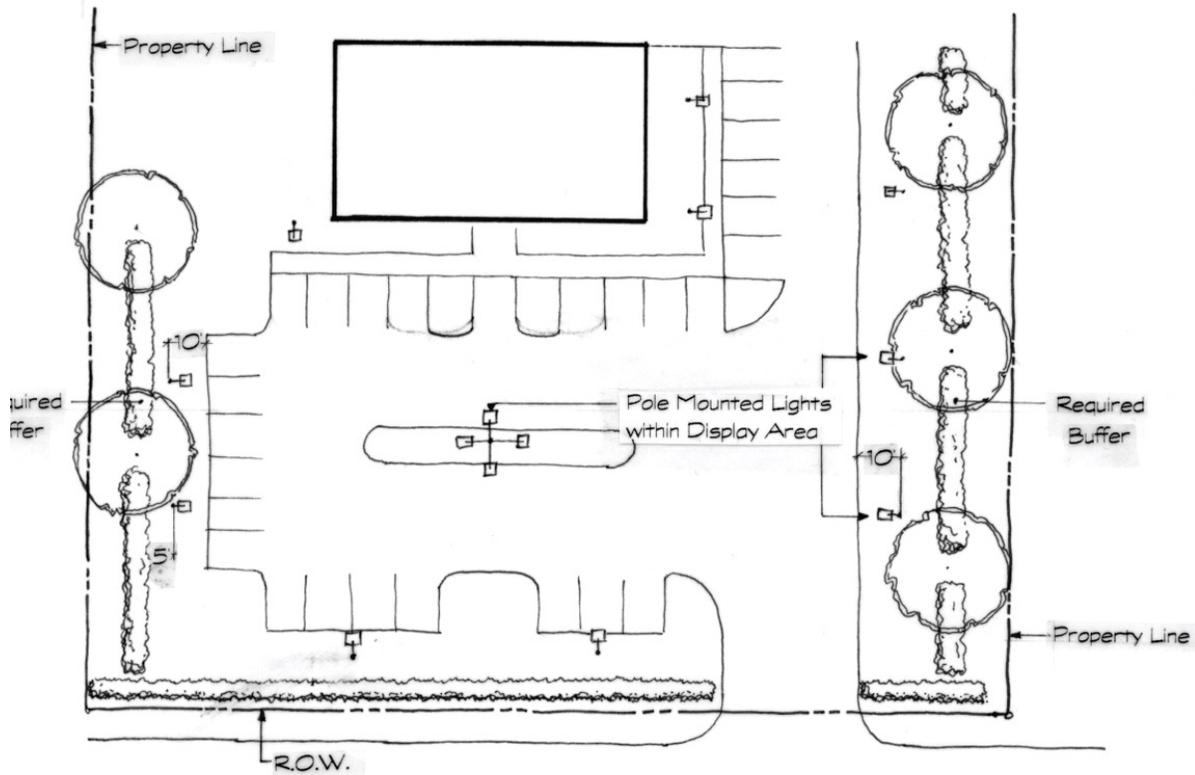
NON-CUTOFF LIGHT FIXTURE



CUTOFF LIGHT FIXTURE

B. Location

1. All outdoor lighting fixtures shall be located a minimum of 5 feet from a property or right-of-way line, and should be kept out of and at least 2 feet away from any required perimeter or streetscape buffer, and Tree Coverage Area (as defined in the Tree Protection Plan Additional Element).
2. The layout of lighting shall be designed so that poles do not interfere with other elements of the approved site such as trees, landscaping, and parking. In general, poles should be kept at least 20 feet away from the trunk of any canopy tree and at least 10 feet away from the trunk of any understory tree.
3. Lighting for outdoor display areas, such as auto dealerships, must be located inside the illuminated area or no more than 10 feet away from the outside edge of the illuminated area so that the amount of direct glare and the visual field of view does not present a safety hazard to the passing motorist.



C. Architectural/Site Compatibility

Lighting fixtures shall be of a design and size compatible with the principal building of a development and adjacent areas, and shall be designed to be an integral part of the entire development site. Light fixtures and poles will be considered neutral elements of the site and must be finished in black, dark brown, or architectural bronze. All light fixtures/poles on site including building mounted lighting shall be the same color throughout the development. White and other bright colors are prohibited.

D. Spillover Light and Glare Control

1. All outdoor lighting shall be designed and located such that the maximum illumination at the time of installation measured in foot-candles at the property line shall not exceed 0.5 onto adjacent residential sites and 1.0 onto adjacent non-residential sites and public rights-of-way.
2. Non-cutoff lights are prohibited along the perimeter of non-residential sites where they are immediately adjacent to adjoining residential properties. Non-cutoff lights may require external caps and/or internal shields to control glare.
3. Cutoff lights shall be *full* cutoff with no sag-type lenses;
4. Cutoff lights used along the perimeter of non-residential sites where they are immediately adjacent to adjoining residential properties must be fitted with externally mounted shields placed on the residential side. The shields must be appropriately sized to sufficiently limit visible glare from the light onto the residential properties. Additional internal shields or other devices may be required to direct the light away from residential properties.

E. Wattage

Lamps for non-cutoff fixtures shall not exceed 100 watts. Lamps for cut-off fixtures shall not exceed 250 watts.

F. Building, Ground Mounted Fixtures and Accent Lighting

Lighting shall not be mounted to buildings or used to illuminate buildings or other site features unless approved by the Planning Director as integral elements on the applicable development plan. Lighting will not be approved unless the light fixtures are located, aimed, and shielded so that light is directed only onto limited parts of the building façade, specimen landscape, and site features, and spillover light is minimized (see also Secs. 4(C) Architectural/Site Compatibility, 4(D) Spillover Light and Glare Control, and 4(E) Wattage). Building, ground mounted fixtures, and accent lighting must meet the following criteria:

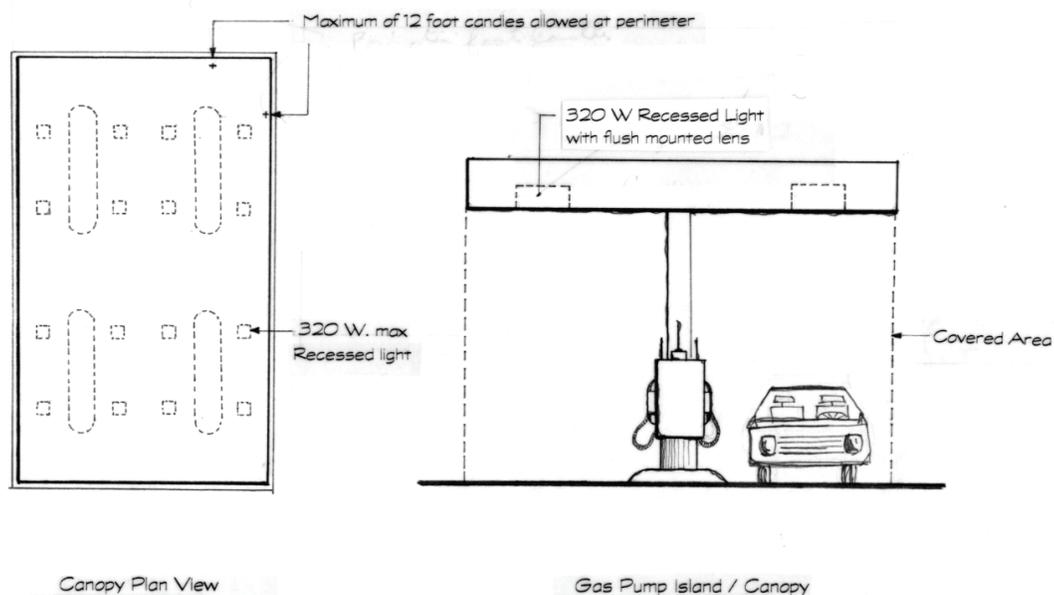
1. Lights must not be used to illuminate entire portions of building(s), landscape, or site features.
2. Building mounted lights such as wall-pack and goose-neck type fixtures shall be fully shielded, true cutoff type fixtures (concealed lamp/light source). The lighting must be directed downward, and the wattage must not exceed 100 watts.
3. Accent lights must be low-wattage or low-voltage and the maximum illumination on any surface shall not exceed 5.0 average foot-candles at the time of installation.
4. Awnings and canopies used for building accents over doors, windows, and etc. shall not be internally lit (i.e., from underneath or behind). If lit from above, the lighting must be spaced sparingly so that only limited portions of awnings and canopies are accented.
5. Lights that flash, move, revolve, rotate, scintillate, blink, flicker, vary in intensity or color, or use intermittent electrical pulsation are prohibited. Continuous lighting such as, but not limited to tubes or strings of lights on rooflines and building edges are prohibited, except in Villages and Section 7.1.

G. Floodlights

Floodlights or similar types of directional lighting attached to light poles or buildings to illuminate large portions of the site and/or building(s) are prohibited unless approved by the Planning Director. The use of floodlights or similar types of directional lighting will only be considered for special approval for industrial type uses or where it can be demonstrated that site or design constraints warrant their use.

H. Lighting for Gas Station/Convenience Store Canopies

Lighting for canopies for service stations and similar uses shall be restricted to no more than two 320 watt recessed lighting fixtures (including lenses) mounted flush with the bottom of the canopy on each side of a gasoline pump island, or any other design that meets the standards of this Element. Lighting for canopies for service stations and other similar uses including, but not limited to, bank and pharmacy drive through, and large covered main entrance canopies shall not exceed a maximum level of 12 foot-candles at the time of installation as measured at ground level at the inside of the outside edge of the canopy and an average level of 25 foot-candles under the canopy at the time of installation.



I. Sports and Athletic Field Lighting

Lighting for ball fields may need to exceed illumination standards for general recreational needs in order to meet higher standards required for tournament play. The Planning Director must approve any variance from the illumination standards; however, before any variance will be considered the sports lighting must meet these minimum standards:

1. Fixtures must not exceed 80 feet in mounting height (this includes bases and/or other mounting structures).

2. Fixtures must be fitted with the manufacturer's glare control package. If the manufacturer does not have a glare control package, the fixture specification must be changed to a manufacturer that offers a glare control package.
3. Fixtures must be designed and aimed so that their beams fall within the primary playing area and the immediate surroundings, so that direct illumination onto adjoining properties and street rights of way is significantly restricted. Spillover levels at the property line must not exceed 0.5 foot-candles onto residential properties.
4. Lighting shall be extinguished no later than one hour after the event ends.

J. Illuminated Tubing or Strings of Light

Illuminated tubing or strings of light on trees and landscaping or outlining property lines or open sales areas, rooflines or wall edges of buildings are allowed.

Section 5. Exemptions

The standards of this Element shall not apply to:

1. Individual residential lot and dwelling lighting, but these standards are applicable to outdoor recreational use lighting in residential subdivisions.
2. Lighting with Holiday Signs under the Master Landscaping Plan Additional Element.
3. Sign illumination as set forth in the Master Signage Additional Element.
4. Municipal lighting installed within public rights-of-way or on Town-owned property for the benefit of public health, safety, and welfare.

Section 6. Final Inspection

Before certificates of occupancy are issued, the parcel owner must supply the Town with a final letter of certification from (i) a licensed lighting professional holding the PE, LC or CLEP certification or similar certification that indicates proficiency in the design of outdoor lighting, (ii) a lighting manufacturer, or (iii) the local electric utility verifying that all site lighting is installed according to the standards of this Element, the approved development plans, and any applicable conditions. The certification must include a report indicating that all site and exterior mounted building lighting was inspected and the light levels measured and recorded (including spillover lighting).

9. Public Art

Introduction

Art in public space has a positive effect both socially and economically on a community and reaches across age, race, language, and socio-economic differences to provide a powerful way for people to engage with one another. A program for public art in public spaces will help Chatham Park establish its identity as a place and will provide an important contribution to the legacy of public art not only locally, but also nationally and internationally.

Section 1. Purpose

The primary purpose of this element is to establish a strong and enduring Public Art Program that will help shape the Chatham Park appearance and character. This Element will not define or limit what can be visual art. It also does not take the public art blueprint from any other municipality's public art master plan since Pittsboro and Chatham County are unlike any other municipality. It, however, seeks to establish a process that addresses how art relates to place, how it can have a positive impact on community and how its administration can allow visual arts to become an important part of the landscape of the Chatham Park Development.

Section 2. Objectives

The Public Art Element is based on general objectives which should apply to the Town of Pittsboro's public art planning efforts as a whole and specific functional program areas in particular. These objectives therefore should be viewed as the key principles for establishing a public art program which is responsive to community expectations and well-being.

Objective 1:

Develop a Chatham Park Public Art Program that has a positive aesthetic and economic impact on the community through the provision, selection, funding, and maintenance of public art.

1. Locations for potential public art installations will be provided in Small Area Plans.
2. Potential locations for public art include, but are not limited to:
 - a. Gateway locations
 - b. Streetscapes
 - c. Parks and greenways
 - d. Infrastructure projects such as bridges, water tanks, etc.
 - e. Performing Arts venues.

Objective 2:

Create a non-profit Chatham Park Public Arts Advisory Board (CPPAAB) that works with the developer to establish public art policies and implements the action steps necessary to create the Chatham Park Public Art Program. The responsibilities of the CPPAAB include the following:

1. Oversee the implementation of the Chatham Park Public Art Program
2. Review and propose policy concerning public art and conduct periodic reviews of the Public Art Program with associated updates.
3. Advocate for public art throughout Chatham Park.
4. Review and develop plans for the inventory, maintenance, acquisition and disposition of public art to be displayed in Chatham Park.
5. Establish a “Public Art Fund” that provides grants for the provision of public art in Chatham Park.
6. Identify public and private funding sources that establish the community investment necessary for the provision of new, permanent and temporary works of public art.
7. Review applications and approve grants for public art projects through the Public Art Fund.
8. Oversee the creation and implementation of an annual temporary public art exhibition in Chatham Park.

Objective 3:

Encourage the inclusion of “architectural art” components for non-residential building and site design in Chatham Park.

1. The Chatham Park Development Review Committee will work with the CPPAAB and future property owners to help establish architectural focal points for non-residential building and site design prior to submittal of development plans to the Town.
2. As part of the development plan review process, all non-residential projects in Chatham Park will submit a “public art statement” to the Development Review Committee by detailing architectural and/or site design treatments that will be included in development plans to address public art considerations.
3. When the Development Review Committee deems it appropriate, include a visual artist as a member of the architectural and landscape architectural design team to help establish the site/building art treatment.

10. Affordable Housing

Section 1. Affordable Housing Standards

The development of Chatham Park pursuant to the approved Planned Development District Master Plan, augmented by matching funds and coordination from Chatham County and the Town of Pittsboro, as hereafter discussed, will lead to the construction of a meaningful number of affordable housing units. This result will be particularly true taking into consideration all of the costs that a typical household incurs and the design elements that will characterize Chatham Park. Further, nonresidential development in Chatham Park and the jobs that result will make much of the housing in Chatham Park affordable to those living and working in the community.

As conceived, planned and approved, Chatham Park addresses many of the planning principles that support affordable housing:

1. Many Chatham Park neighborhoods will consist of smaller lots and attached dwellings such as townhouses and apartments.
2. Housing types and densities will be integrated with each other.
3. Housing and commercial uses will be integrated in portions of Chatham Park.
4. Housing will be near public transportation, public streets, sidewalks, and bike paths.
5. Housing will be near medical facilities, shopping and employment centers.
6. Chatham Park will have housing densities and flexible design options that allow for development of affordable housing.
7. Development in Chatham Park will occur in an urban setting.
8. Utilities, especially water and waste water, will be available throughout Chatham Park, thereby avoiding the need for large-lot subdivisions not served by water and waste water utilities.
9. Chatham Park will include a variety of housing types, including rental housing.

The Chatham County Subdivision Regulations (last amended on December 15, 2014) defines affordable housing as follows: “A commonly accepted standard for affordability is that a household’s monthly housing costs should not exceed 30 percent of its monthly net household income. Housing is usually considered ‘affordable’ if it would meet this 30 percent standard for families considered ‘low-income’, meaning they earn below 80 percent of the area median income (AMI). For example, the Raleigh-Durham-Chapel Hill MSA 2001 AMI is \$66,100; under this case $\$66,100 \times .80 = \$52,880$ $\times .30 = \$15,864/12$ (months) = \$1,322 per month for housing cost.”

The most recent data available for Chatham County shows that the 2013 Median Income for Chatham County was \$56,981.

For the purposes of this Element, “affordable housing” in Chatham Park is housing for which the monthly rental or monthly mortgage payment (principal + interest) on a loan not to exceed an amount equal to 95% of the appraised value of the property, together with monthly utilities, does not exceed an amount equal to $80\% \times 30\%$ x the most recent median income amount available for Chatham County. As an example, based on the 2013 Median Income for Chatham County,

affordable housing in Chatham Park would be housing for which the monthly rental or monthly mortgage payment, together with monthly utilities, does not exceed \$1,140 ($30\% \times \$56,981 = \$17,094.30 \times 80\% = \$13,675.44 \div 12 = \$1,140.00$) The median income/affordable housing number will be adjusted based on the most recent Chatham County median income information that is available.

Section 2. Affordable Housing Plan

The following is the Chatham Park PDD Affordable Housing Plan.

1. Not less than two hundred fifty (250) of all residential units built in Chatham Park will qualify as affordable housing units. For the purposes of satisfying this standard, “built in Chatham Park” includes all of the following, or any combination thereof: located within the boundaries of Chatham Park; located within the extraterritorial zoning jurisdiction of the Town and designated on a development plan or by the owner of the property as affordable housing units for Chatham Park; and located within one (1) mile of any boundary of Chatham Park and designated on a development plan or by the owner of the property as affordable housing units for Chatham Park. Determination as to whether a residential unit qualifies as an affordable housing unit will be determined (i) with respect to “for sale units”, at the time of the first sale of that unit by the builder, or (ii) with respect to “rental units”, at the time of the commencement of the first lease for that unit. Not less than a total of one hundred (100) of the residential units that qualify as affordable housing units for Chatham Park will be for sale units.
2. The maximum number of residential dwelling units allowed under the Chatham Park Master Plan will be increased by three (3) units for each of the affordable housing units built in Chatham Park.
3. The requirements of the Chatham Park Master Plan for land to be provided for open space and recreation will not apply to residential dwelling units that qualify as affordable housing units for Chatham Park. Provided, however, this exception will not reduce the 1,320 acres of open space required by the Master Plan regardless of the maximum number of dwelling units constructed or non-residential gross square footage constructed in Chatham Park.
4. \$100.00 for each for sale unit in Chatham Park, excluding the for sale units that qualify as affordable housing units, will be paid by or on behalf of the builder into an escrow fund to pay for the full or partial purchase or buy-down of land and/or homes for families in need of affordable housing in Chatham Park, the Town, and Chatham County (the “Affordable Housing Fund”). The payment will be made at the time of the closing of the sale. The Affordable Housing Fund will be administered jointly by the Town and Chatham County or, if only one of the Town and County participates, the Affordable Housing Fund will be administered by the one that participates.
5. The payments made from Chatham Park into the Affordable Housing Fund will be matched by both the Town of Pittsboro and Chatham County to maximize its

effectiveness. Matching funds by the Town or County can be in the form of cash, or development fee credits, or similar funding methods for developers of affordable housing. Chatham Park may create a separate escrow fund known as the “Chatham Park Affordable Housing Fund” (or other, similar name) to be administered by Chatham Park for affordable housing built in or to be built in Chatham Park, under either of the following circumstances: (i) if neither the Town nor the County participate in the Affordable Housing Fund, the funds from Chatham Park will be deposited into the Chatham Park Affordable Housing Fund; or (ii) if either or both of the Town and County participate in the Affordable Housing Fund but do not participate fully, there will be an annual accounting prior to April 15 of each calendar year to determine what payments to the Affordable Housing Fund from Chatham Park for the immediately preceding calendar year were not matched by the applicable participating governmental entity, and those funds will be disbursed to the Chatham Park Affordable Housing Fund on or before June 30 of each calendar year.

6. As an example of how funding of the Affordable Housing Fund can occur, if there are 15,000 dwelling units in Chatham Park sold in individual sales, and each of Chatham Park, the Town and Chatham County each contributes to the Affordable Housing Fund \$100.00 per sold dwelling unit, \$4.5 Million will be paid to the Affordable Housing Fund to provide affordable housing for the citizens of Pittsboro and Chatham County.

11. Transit

Introduction

The Master Plan provides the framework for a Multi-Modal Transportation Plan (MMTP), which will integrate all potential transportation modes for the overall development of Chatham Park. The multi-modal elements of the Master Plan were developed in consideration of various existing plans, including the following:

1. Pittsboro Pedestrian Transportation Plan (2009)
2. Pittsboro Comprehensive Transportation Plan (2011)
3. Chatham Transit Network Community Transportation Service Plan (2011)
4. Pittsboro Land Use Plan (2012)
5. NCDOT Complete Streets Planning and Design Guidelines (2012)

Section 1. Streets and Roadways

The N. C. Department of Transportation (NCDOT) adopted a “Complete Streets” policy in July 2009. The policy directs the Department to consider and incorporate several modes of transportation when building new projects or making improvements to existing infrastructure. The benefits of this approach include:

1. Making it easier for travelers to get where they need to go;
2. Encouraging the use of alternative forms of transportation;
3. Building more sustainable communities;
4. Increasing connectivity between neighborhoods, streets, and transit systems;
5. Improving safety for pedestrians, cyclists, and motorists.

Specifically, the NCDOT *Complete Streets Planning and Design Guidelines* (July 2012) recommends that designers balance the interest of each mode of travel when designing street projects. This approach recognizes that complete street designs are not “one size fits all,” and that designers should consider “functional and context-based criteria to help select the appropriate cross-section” for each street in a network.

Typical street sections, right of way widths, and street sections to be constructed initially, will be established in Small Area Plans. Final street section design and right of way dedication will be determined at the time of development plan approvals. Roads shown in the Master Plan or in Small Area Plans that are to have four (4) or more vehicular travel lanes are depicted at full build-out, which is expected to occur as Chatham Park develops. These roads initially will be constructed with two (2) vehicular travel lanes, and additional vehicular travel lanes and other improvements will be constructed in accordance with the recommendations of applicable TIAs.

A MMTP that delineates major multi-modal facilities and services planned for Chatham Park was approved as part of the *Chatham Park PDD Master Plan*. Further details on the planning and design for various modes of transportation are provided below.

While the typical roadway in Chatham Park will follow the NCDOT Complete Street Guidelines, alternate street designs will be used in situations not covered by the guidelines or where the Town approves a different design. Situations in which different design could be appropriate include, among others, alternate roadway sections, traffic calming measures, one way circulation, roadway terminations, and alleyways.

Section 2. Transportation Impact Analysis

The Master Plan provides that a “Transportation Impact Analysis” (“TIA” and also referred to herein as a “Traffic Impact Analysis”) is required for development in Chatham Park that will generate 100 new peak hour trips or 1000 new daily trips based on the most recent edition of the ITE Trip Generation Manual. TIAs in Chatham Park will be conducted by Kimley-Horn and Associates, Inc., or other North Carolina licensed engineers qualified to conduct TIAs (the “traffic consultant”) recommended by the Development Review Committee and approved by the Planning Director. The “study area” of each TIA will include the driveways for the proposed development, all signalized street intersections within ¼ mile of the proposed development, and other street intersections within ¼ mile of the proposed development that the traffic consultant determines should be included in the TIA. Each TIA will be based on existing traffic counts and traffic expected to be generated by the proposed development. Each TIA will include a recommendation for construction or installation of any public infrastructure improvements deemed appropriate by the traffic consultant to address the traffic impact of the proposed development. For purposes of development plan approval, construction or installation of the public infrastructure improvements recommended in the TIA will be deemed to adequately address the traffic impact of the proposed development.

Section 3. Bicycle Accommodations

On-street bicycle facilities will be provided for all roadways except low-volume, low-speed 2-lane streets where cyclists would be expected to comfortably travel in general purpose lanes. The types and locations of on-street bicycle facilities will be determined in development plan approvals. Where appropriate, on-street bicycle facilities will be provided as either 5-foot bike lanes in each direction or as 10-foot multi-use paths parallel to the street for connection to a greenway. Appropriate pavement markings and signs, in accordance with current design standards, also will be provided to clearly delineate bicycle facilities for both cyclists and motorists.

The Master Plan also calls for greenway/multi-use path facilities to be constructed to supplement on-road bicycle and pedestrian facilities and to connect to natural areas and amenities within and in close proximity to the development. These facilities will be constructed at a minimum of 10 feet wide and would typically accommodate recreation cyclists. Conceptual locations of greenways in Chatham Park will be shown in Small Area Plans and specific locations of greenways will be detailed in development plans.

Section 4. Pedestrian Accommodations

Sidewalks or a combination of sidewalks and multi-use paths will be provided on both sides of the streets in Chatham Park. Sidewalk widths will vary from 5 feet (typical) up to 20 feet in certain

areas of predominantly urban context with high pedestrian volumes. Typical locations and widths of sidewalks will be provided as part of the roadway cross sections included in Small Area Plans, with final details to be determined at the time of development plan approvals. All sidewalks in Chatham Park will be constructed with appropriate curb ramps and marked crosswalks.

Greenway locations will be established in Small Area Plans, subject to adjustment in accordance with development plan approvals. Greenways will be constructed with asphalt, but may utilize alternative materials based on site-specific conditions. Where multi-use paths parallel and are proximate to a specific roadway, they will replace the 5 foot sidewalk on that side of the road.

Section 5. Transit Accommodations

The Master Plan calls for Chatham Park to promote a transit system that would develop over time and be coordinated with local/County services as part of a comprehensive approach to transit. Existing transit services in Chatham County are provided by the Chatham Transit Network (CTN), and include the following:

1. Fixed route transit service between Pittsboro and Chapel Hill (PX Route);
2. Fixed route transit service between Pittsboro and Siler City (64 Route);
3. Health Rides service for residents 60 and older and other adults with driving impairment;
4. In-county on demand service; and
5. Subscription-based services for Central Carolina Community College and various human service agencies.

In addition, while the CTN Community Transportation Service Plan (CTSP) is not expected to be updated until 2017, that agency is in the process of adding vehicles and considering feeder service to provide transportation for residents within a certain distance (likely 5 miles) of existing fixed transit routes. This will enhance mobility for County residents, and specifically could provide more convenient transit service for residents and workers in Chatham Park as it develops.

The Master Plan incorporates development patterns intended to support transit ridership as the County develops and transit services are enhanced over time. Upon implementation of transit services in Chatham Park, appropriate transit stops in Chatham Park will be determined with subsequently submitted development plans.

Chatham Park's significant bicycle and pedestrian facilities, as detailed above, will provide connectivity to transit stops. In addition, detailed design information for curb extensions, bus stops, and other transit amenities will be determined with development plans where appropriate to support and promote transit ridership.

The Master Plan also calls for support for a local fixed-route circulator identified as the Primary Bus/Trolley Loop on the MMTP. This service, likely provided by a small bus or rubber-tire trolley vehicle, would circulate between downtown Pittsboro and the major commercial areas in the North Village. This loop would also provide service to the existing park and ride facility at Lowe's Home

Improvement, allowing riders to connect to the express routes to Chapel Hill and Siler City. As future transit services are planned, Chatham Park will continue to work with local and regional agencies to coordinate park and ride facilities and connections to these services as they are provided.

Section 5. Reimbursement

Reimbursement for funds expended for public street improvements within and outside of Chatham Park will be in accordance with the “Development Agreement” (required by the Master Plan) or other agreements between the Town and Chatham Park. Reimbursement may be in the form of development fee credits or other type of reimbursement specified in the Development Agreement or other agreements.

12. Public Facilities

Introduction

Public facilities are those facilities required to support the services and functions provided in Chatham Park by the Town government or public utility companies. Such facilities are essential to support the community and its development and to enhance the overall quality of life in Chatham Park. Public services addressed in this Element include Town administration, police, fire, schools, parks and recreation, water supply and distribution, and sewer collection and treatment.

Much of the anticipated growth of the Town of Pittsboro for the next twenty to thirty years is expected to occur in Chatham Park. The Town's present system of public facilities demonstrates a commitment to service provision and the community's expectations. However, as existing infrastructure in the Town ages, there will be increased competition between newer and older areas for facility dollars. Therefore, it will become increasingly important that future development occur in concert with the provision of adequate public facilities at a level of service that is maintained in a fiscally sound manner.

This Element recognizes that the level of public services enjoyed by area residents is a significant local attribute and its continuation requires sound and supportable planning guidelines. Such guidelines should provide for a balance between future land use intensity and facility quantity and address the location of new facilities to maximize accessibility while minimizing neighborhood impact. Therefore, it is the purpose of this Element to provide guidance on both the quality and location of Town public facilities and services based on impacts from development of Chatham Park.

General Objectives

This Element is based on general objectives which apply to the Town's public facility planning effort as a whole and specific functional program areas in particular. These objectives therefore should be viewed as the key principles for establishing a facility network which is responsive to community expectations, the public health, safety, and general welfare, and development impacts.

Objective 1:

Locate new facilities to provide convenient services to the greatest number of people or service consumers and users.

- a. Site facilities appropriately to the area they are intended to serve.
- b. Reduce service area overlap between like facilities, unless overlap is necessary to correct service deficiencies.
- c. Locate facilities in order to maintain acceptable levels of service while reducing duplication or underutilization.
- d. In consideration of service area, site conditions, and other matters, new facilities may be located within or outside of Chatham Park.

Objective 2:

Construct and maintain facilities in accord with expected levels of service objectives and fiscal limitations.

- a. Working in concert with the Town, program the establishment of facilities. Projects programmed for construction should be (1) demonstrated as required to meet public health or safety needs or appropriate service levels or (2) supported by a need analysis produced by the Town.
- b. Follow Town adopted public facility standards that identify facility requirements associated with level of need, appropriate quality and size, and relationship to population.
- c. Provide for adequate maintenance of existing facilities.

Objective 3:

Balance the provision of public facilities with growth and development.

- a. Determine new facilities in size and quantity which are consistent with projected Chatham Park impacts.
- b. Plan for availability of adequate facility space and services as development occurs, either as planned in the Town's capital improvement plan or as provided with new development.
- c. Designate and reserve future public facility sites that will be required by anticipated future growth and development.
- d. Anticipate alternate uses for public facilities when existing public facility sites are no longer needed for their original use.
- e. Determine sites for public facilities in advance of demand either through purchase or dedication.

Objective 4:

Mitigate the impact of public facilities on adjacent planned and existing land uses.

- a. Locate public facilities in areas of compatible land use if service efficiency and cost effectiveness can be achieved. Siting facilities in areas of different land uses is acceptable and at times required, to provide centrally located public facilities which are critical to the public interest, as long as the integrity of the Master Plan is not impaired.
- b. Jointly locate public facilities whenever appropriate to achieve convenience and economies of scale, as long as the integrity of the Master Plan is not impaired.
- c. Design facilities to promote and enhance the community character.
- d. Provide for proper screening and buffering in order to mitigate visual impact on adjacent existing or anticipated future development of a different use or nature.
- e. Require site size and development to conform to all applicable standards to achieve maximum compatibility with surrounding land uses.

Objective 5:

Site determination should be appropriate for the facility's specific purpose.

- a. Consider accessibility in siting facilities. In general, public facilities should have access to primary arterial roadways. Exceptions may include facilities with a

- community pedestrian orientation, such as a neighborhood park or an elementary school.
- b. Locate facilities on sites which have adequate acreage for short-term needs, but can also accommodate anticipated expansion.
 - c. Evaluate engineering considerations, such as slopes, soils, and other factors pertinent to knowing the extent of the site's development cost.
 - d. Locate, as possible, facilities on sites with public water and sewer.

Objective 6:

Financing Expansion of Public Facilities.

- a. When possible, public facilities and infrastructure will be expanded to serve Chatham Park in coordination with the growth of the Town's tax base that is attributable to Chatham Park.
- b. Consideration will be given to earmarking development fees paid with regard to development in Chatham Park for the expansion of public infrastructure serving Chatham Park.
- c. The Town will investigate and utilize, as appropriate, both traditional and innovative public financing techniques to fund the expansion of public facilities and infrastructure to serve Chatham Park.

Objective 7:

Easements for Public Facilities.

As public utilities are expanded to serve Chatham Park, the Town and the developer will work together to obtain the necessary public easements and rights of way, and the Town will exercise the power of eminent domain when the negotiated acquisition of those interests is not reasonably possible. Public easements and rights of way within Chatham Park will be dedicated by the owner of the applicable property.

Master Public Facilities Plan

This Master Public Facilities Plan Element is presented in the following seven (7) sections: Police, Fire, Schools, Water Supply, Sanitary Sewer, Parks and Recreation, and Town Administration.

For each of these sections, objectives are discussed and/or planning guidelines are presented. In most cases these guidelines provide policies and/or standards for one or more of the following factors:

Location – where facilities should be located in order to provide accessibility, support planned land uses, and adequately serve their function.

Size and Design – the appropriate facility size which should be constructed in relation to the population and design requirements to achieve neighborhood compatibility.

Other – factors which must be addressed to provide an acceptable level of service or community benefit.

Public Safety

The provision of public safety services is basic to an orderly society and the protection of the health and safety of Pittsboro residents. Primarily, this Element will consider the Police Department and Fire Department, while acknowledging there are other public safety services that are important to the health and safety of Pittsboro residents.

Objective 1:

Enhance the services provided by public safety officials through the provision of appropriate facilities.

- a. Provide and locate the major facilities and appurtenances in a manner that enables optimum public safety telecommunications and the rapid dispatch of police, fire, and rescue services to the scene of citizen or other agency requests for assistance.
- b. Effectively locate telecommunications facilities and equipment associated with public safety agencies.
- c. Select new public safety facilities sites that have adequate space for future expansions and that provide opportunities for shared utilization to the extent possible.

Police

Due to the nature of police work, which involves mobile patrol operations, the greatest need for facility space has been and primarily will be for administrative, operational support, and training functions. There are no nationally accepted standards for the provision of such facilities.

Similarly, there are no nationally accepted standards for the size of police patrol areas. Due to the flexibility and decentralized nature of police work, the day to day demands on police personnel change and local deficiencies can readily be alleviated through reassignment of officers and vehicles between station and patrol areas.

Location

Objective 2:

As part of the Chatham Park Small Area Plan process, locate police stations and related facilities so as to provide the most efficient and expeditious law enforcement/protective service to the Town as a whole and within individual police districts.

- a. Locate new police stations and substations: (i) near the geographical center of the service area; (ii) in or adjacent to commercial areas where practicable; (iii) in a manner and location that is compatible with adjoining areas; (iv) on major streets with good access to all parts of the service area; and (v) with adequate parking for officers, employees, and visitors.

Character and Extent

Objective 3:

Maintain or establish facilities that allow Police Department personnel to operate at maximum effectiveness.

- a. Size stations and substations to meet the expected level of police service required to protect people and property located or to be located in the service area.
- b. Locate new police stations on sites that will provide the necessary station square footage for officers, civilian personnel, persons in police custody, visitors, equipment, and vehicle parking.
- c. When locating new police stations with one other public facility such as fire and rescue, provide for adequate acreage to accommodate both uses.
- d. When police substations are appropriate instead of police stations, establish locations adjacent to an existing or proposed commercial area.

Objective 4:

Maintain an appropriate number of Police Department personnel to operate at maximum effectiveness in protecting public safety.

- a. Each Small Area Plan submitted for Chatham Park will provide an estimated number of additional Police Department personnel the Town will need based on population projections for that Small Area at full build out.
- b. Each Small Area Plan submitted for Chatham Park will include development phasing information to help the Town estimate the number of additional Police Department personnel and equipment that should be added on an annual basis until projected full development has occurred.

Fire

Historically, fire stations have been located to provide maximum coverage based on an acceptable response time. This Element assumes an acceptable response time totaling seven minutes after an emergency call is received, which consists of five minutes for travel and two minutes for preparation upon arrival at the location of the emergency. This response goal is critical to providing effective fire suppression as well as emergency medical services. The foregoing response time goal takes into consideration economic restraints that may adversely impact the ability to achieve the desired response time. Increased service requests and significant traffic volume are other factors that may impede attainment of this goal.

The fundamental component for facility planning is determining future demand for emergency services. While providing new facilities to meet increasing demand is expected to be a primary focus for the Fire Department, it is also true that existing facilities may require additions and rehabilitation to accommodate necessary emergency response equipment. Continued analysis of resource utilization may result in redeployment of equipment to heavier demand areas.

Location

Objective 1:

As part of the development of Chatham Park Small Area Plans, in conjunction with the Town's Fire Department identify a sufficient number of locations that maintain a seven- minute or less total response time coverage for fire and rescue emergencies to at least 90 percent of the Town's population.

- a. Identify locations for new fire stations based on national standards and guidelines when the projected service area is greater than three square miles and has a population density greater than 2,700 persons per square mile.
- b. Identify the location for each new fire station at the most strategic point in a proposed service area to achieve a seven-minute total response time coverage to all points of the area served by that fire station and/or provide the most optimum service to that area based on the following:
 - Identify the location close to intersections where there is optimal access to public roads;
 - Avoid hillside locations or locations at the bottom of hills when a significant part of the service area is located up grade;
 - Avoid locating stations directly on heavily traveled major thoroughfares; rather, locate on a parallel or cross street that includes a traffic signal with pre-emption capability at a nearby intersection for efficient egress/ingress;
 - Identify locations with relatively flat topography that provide the opportunity to buffer stations from adjoining properties;
 - Where there is either a man-made or natural obstacle such as a railroad or river, locate stations on the side where the greatest hazard or higher incident activity exists; and
 - Locate stations to minimize service area overlap and to provide coverage to areas not within five minutes of an existing station. When a new station is required to fill an existing service void and there is unavoidable overlap with another existing service area, the new station should be located so that any service overlap benefits the high risk/high density areas and alleviates the response requirements of other high activity areas.

Character and Extent

Objective 2:

Maintain or establish facilities that allow Fire Department personnel to operate at maximum effectiveness.

- a. New fire stations should be constructed on sites that will accommodate Town Fire Department operational criteria.
- b. New fire stations should be designed to be compatible with the architectural character of the surrounding area.

Objective 3:

Maintain an appropriate number of Fire Department personnel and the associated equipment to operate at maximum effectiveness in protecting public health and safety.

- a. Each Small Area Plan submitted for Chatham Park will provide an estimated number of additional Fire Department personnel the Town will need based on population projections for that Small Area at full build out.
- b. Each Small Area Plan submitted for Chatham Park will include development phasing information to help the Town determine the number of additional Fire Department personnel and equipment that should be added on an annual basis until projected full development of that Small Area has occurred.
- c. As part of Small Area Plan submittals for Chatham Park, development standards will be provided that give guidance to the Town in its analysis of equipment needs and vehicular upgrades necessary to operate at maximum effectiveness. Most particularly, this applies to maximum building heights and any resulting need to upgrade trucks and equipment.

Section 3. Schools

The Chatham County Public School system will be the major provider of education for Chatham Park, but private schools will also be used in order to provide a variety of school choices and meet a wider variety of public needs. The Chatham County Public School system has a wide range of educational facilities that accommodate instructional programs for Chatham County students from kindergarten through grade 12. In addition to accommodating educational programs, school facilities are used to meet a variety of recreational and cultural needs of the county through special programming. Generally, separate facilities are provided to serve three levels of education:

- Elementary ----- kindergarten to grade 5 or 6, as applicable
- Middle ----- grades 6, 7 and 8, or 7 and 8, or 7, 8 and 9, as applicable
- High ----- grades 9 through 12 or 10 through 12, as applicable

The fundamental component in capital facility planning for schools is determining future enrollments, a complex procedure established by Chatham County which continues to be refined. Chatham Park has worked with Chatham County Public School staff and consultants of the school system using their adopted methodology for determining the projected school population expected to be generated by Chatham Park development. These models are only effective with current data. Therefore, thorough knowledge of anticipated housing starts and use of appropriate dwelling-unit multipliers are essential, and Chatham Park will continue to work with Chatham County Public School staff in regularly providing this data.

Student enrollment forecasts, coupled with capacity estimates and facility standards, provide framework for capital facility planning. Locational criteria assist in site planning, identification, and selection.

The following Table 1 establishes the anticipated number of students and schools resulting from the maximum build out of Chatham Park:

TABLE 1

Residential Category	Number of Dwelling Units	Number of School Age Children Per Dwelling Unit	Total Number of School Age Children per Unit Type
Single Family			
Age Targeted	6,000	0	0
≤ 3 Bedroom	8,400	0.45	3780
> 3 Bedroom	3,600	0.7	2520
Multi Family			
1 Bedroom	1,400	0.1	140
2 & 3 Bedroom	2,600	0.45	1170
TOTAL	22,000		7610

Conclusion: 22,000 dwelling units will generate 7,610 students

	Percent of School Age Children	Number of Students	Standard School Capacity	Total Number of Schools Needed
Elementary	54%	4109	650	6.3
Middle	15%	1142	850	1.3
High	31%	2359	1200	2.0
TOTAL		7610		9.6

These numbers in the foregoing Table will be monitored through the development of Chatham Park and modified as development occurs to determine a more accurate number that reflects actual need.

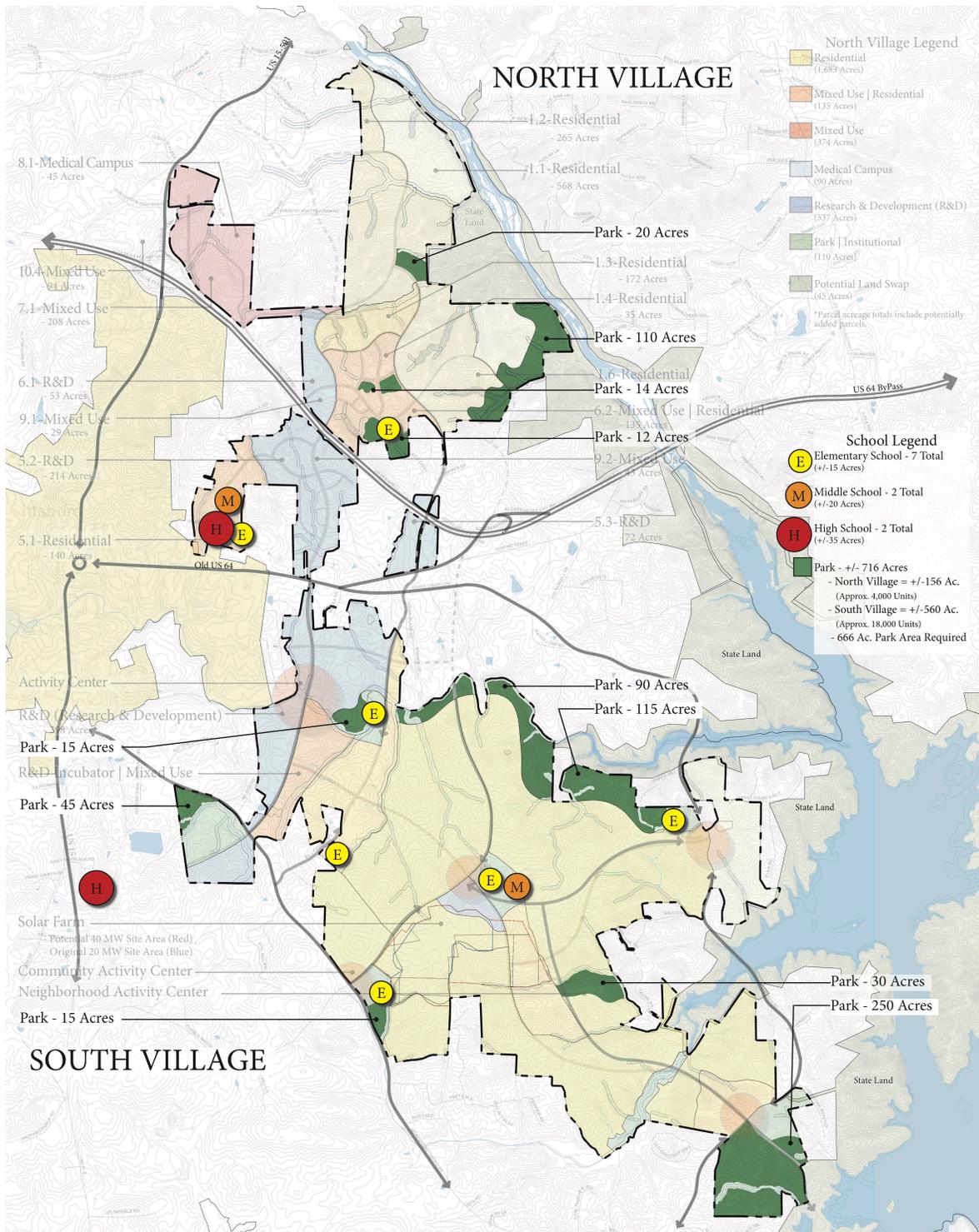
Location

Objective 1:

During the development of Small Area Plans in Chatham Park, determine sites to be reserved for future school sites to be acquired by Chatham County or other school provider.

- a. Place schools on parcels meeting the optimum number of location criteria addressed in this Element. Sites should be evaluated by the following factors:
 - Safe and convenient accessibility to pedestrian and road networks.
 - Acreage to accommodate expansion for initial and future needs.
 - Compatibility with adjoining existing and proposed future development.
 - Aesthetically pleasing physical qualities with appropriate site suitability (e.g. soils, topography, etc.)
 - Proximity to other public facilities, such as Police, Fire, and Rescue services.

- b. Locate school sites, when situated in areas conducive to pedestrian traffic, to take advantage of maximum walking and biking distances of one mile for elementary schools and one and a half miles for middle and high schools.
- c. Locate schools where they can be served by public water and sewer.
- d. Secure proposed school sites as far in advance of construction as possible, to provide for availability of both the preferred location and the necessary site features.
- e. Encourage site dedications which provide sufficient usable acreage to meet locational criteria.
- f. Coordinate the design of the school site's active recreational areas with the design of Chatham Park's park and recreational sites when possible.
- g. Based on the need for schools to serve school age children in Chatham Park, Chatham Park will identify and reserve up to eleven (11) school sites for future use as traditional public schools and/or public charter schools and/or private schools. Reserved school sites will be identified in Small Area Plans. Each school site reserved in an approved Small Area Plan shall be reserved until the first to occur of (i) the date that is five (5) years after public water service and public sanitary sewer service is available on, or in a road right of way or easement adjacent to, the site, and a public road is adjacent to part or all of a boundary of the site, or (ii) the date that is ten (10) years after the date on which that Small Area Plan is approved. Upon the occurrence of such date without the school site having been acquired by Chatham County or other school provider, the reservation of the site as a school site shall terminate. At any time during the reservation period, the location of a reserved school site may be relocated to another comparable site within the applicable Small Area or any other Small Area or any other property within one (1) mile of a boundary of Chatham Park that is acceptable to Chatham County or other school provider. The following Map 1 shows the preliminary locations of eleven (11) school sites in Chatham Park.



MAP 1
Chatham Park Additional Elements
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Section 4. Water Supply

Chatham Park plans to obtain all its potable water from the Town of Pittsboro's public water supply system. The Town currently operates a water treatment facility permitted at a capacity of 2.0 million gallons per day ("MGD") with proposed expansions to a total of 6.0 MGD. The Town has requested an additional 6.0 MGD of capacity as part of the Jordan Lake Coalition, which, if granted, would bring the Town's total capacity to 12 MGD. Chatham Park has developed a hydraulic water model to determine appropriate water main line sizes to be installed to and throughout Chatham Park to provide adequate capacity, pressures and fire flows. These proposed improvements will follow the traditional model of developer funded infrastructure dedicated to the Town, with reimbursements to the developer or other person or entity who funds the improvements as provided in this Element.

As currently proposed and approved by the Town, the first schedule of water system improvements to serve the North Village of Chatham Park is planned in two (2) phases. Phase 1 consists of water main extensions and a 300,000 gallon elevated water storage tank that will provide a new higher pressure zone. Phase 2 will include improvements to the Town's existing high service pump station and a 1.0 million gallon elevated water storage tank. After completion of Phase 2, the 300,000 gallon elevated water storage tank will be converted to a reclaimed water storage tank for the reclaimed water system serving the North Village.

These planned improvements, together with other future improvements, will be in accordance with the following design standards:

Location

Objective 1:

Locate sites for adequate and appropriate infrastructures to transmit and distribute a safe and adequate potable water supply system which conforms to the land use goals of the Master Plan and the Small Area Plans for Chatham Park.

- a. Where feasible, elevated tanks may be grouped together and designed, as practicable, to harmonize with the surrounding existing and proposed development.
- b. Locate necessary booster pumping stations in buffered sites when feasible.
- c. Locate water mains to minimize impacts to environmental features such as wetlands, riparian buffers, streams and forested areas.
- d. Locate water system features like control valves, pressure reducing valves, and master meters in below grade vaults and, when feasible, in buffered sites.

Character and Extent

Objective 2:

Plan, design and provide for water system infrastructure to transmit and distribute a safe and adequate potable water supply to Chatham Park residents.

- a. Elevated water storage tanks shall be designed in accordance with the state of North Carolina requirements and may include additional design features pertinent to Chatham Park. Elevated tank(s) may be provided, as needed, in different pressure zones in order to maintain adequate pressure and fire flows for each zone.

- b. Provide for and maintain a hydraulic water model of the Chatham Park water distribution system. The model may be updated from time-to-time to reflect actual water demands and to reflect adjustments to Small Area Plans and development plans in Chatham Park.
- c. Potable water demands shall be determined in accordance with State of North Carolina requirements.
- d. All potable water infrastructure improvements shall be designed and plans prepared in accordance with State of North Carolina requirements and the Town’s standard details and requirements.
- e. All potable water infrastructure plans shall be submitted to the Town and to the appropriate State of North Carolina agency, department, division, and/or section for permit approvals and any required authorization to construct.

Reimbursement

Objective 3:

Establish a procedure to reimburse a party who expends funds for construction of water infrastructure improvements.

- a. Reimbursement for funds expended for water infrastructure improvements within and outside of Chatham Park will be in accordance with the “Development Agreement” (required by the Master Plan) or other agreements between the Town and Chatham Park. Examples of the types of infrastructure improvements that may qualify for reimbursement are construction of the following: transmission lines; pumps; valves; storage tanks; plant capacity; and oversizing of lines to accommodate provision of service for properties located outside of Chatham Park. Acquisition of easements for water infrastructure improvements outside of Chatham Park also may be eligible for reimbursement.
- b. Reimbursement may be in the form of development fee credits or other type of reimbursement specified in the Development Agreement or other agreements.

Operation and Maintenance

Objective 4:

Provide for water infrastructure improvements to be owned and operated by the Town or appropriate private utility provider.

- a. Ownership of water infrastructure improvements constructed in Chatham Park will be transferred to the Town or appropriate private utility provider (who later may transfer ownership to the Town).
- b. Following transfer of ownership to the Town, which typically will occur after the improvement has been constructed and accepted by the Town for maintenance after the expiration of any applicable warranty period, the Town will assume all obligations for operation and maintenance of the applicable improvement.

Sanitary Sewer

Chatham Park plans to provide sanitary sewer services through a multi-faceted approach. It may include a combination of collaborative use of existing and improved public facilities, construction

of new private facilities, construction of a line to the City of Sanford or other governmental entity, and construction of new regional facilities. An overarching goal will be to maximize the conservation and reuse of water resources. In furtherance of this goal, a reclaimed water distribution system will be utilized in Chatham Park where practicable. Sanitary sewer improvements will be in accordance with the following design standards:

Location

Objective 1:

Locate sites for adequate and appropriate infrastructure to collect, transport, and treat sewage and distribute reclaimed water for beneficial reuse.

- a. Where located in Chatham Park, sewer treatment facilities will be located and designed to harmonize as may be practical with the surrounding development.
- b. Treatment facilities will be located and designed to minimize, to the extent reasonably practicable, any negative aesthetic or sensory impacts, and to minimize associated ingress/egress impacts.
- c. Locate required pumping stations in buffered sites when feasible.
- d. When feasible, locate system features like control valves, air release valves, and master meters in below grade vaults and in buffered sites.

Objective 2:

Plan, design and provide for system infrastructure to collect, transport, and treat sewage and to distribute reclaimed water for beneficial reuse.

- a. Make mutually agreeable best use of existing Town sewage treatment capacity and reuse water through strategic interconnections with existing Town system.
- b. Provide for additional sewage treatment capacity and reuse water through a satellite sewage treatment plant.
- c. Provide for additional future sewage treatment capacity through construction of a larger local regional treatment facility and/or construction of conveyance facilities to utilize capacity offered by the City of Sanford or other governmental entity.
- d. Demands for sewer treatment capacity shall be determined in accordance with State of North Carolina requirements.
- e. All sewer infrastructure improvements shall be designed and plans prepared in accordance with State of North Carolina and the Town's standard details and requirements.
- f. All sewer infrastructure plans shall be submitted to the Town and to the appropriate State of North Carolina department, agency, division, and/or section for permit approvals and to obtain any required authorization to construct.

Reimbursement

Objective 3:

Establish a procedure to reimburse a party who expends funds for construction of sewer infrastructure improvements.

- a. Reimbursement for funds expended for sewer infrastructure improvements within and outside of Chatham Park will be in accordance with the "Development Agreement"

(required by the Master Plan) or other agreements between the Town and Chatham Park. Examples of the types of infrastructure improvements that may qualify for reimbursement are construction of the following: gravity and force main lines; reclaimed water lines; pumps; valves; storage tanks; plant capacity; and oversizing of lines to accommodate provision of service for properties located outside of Chatham Park. Acquisition of easements for water infrastructure improvements outside of Chatham Park also may be eligible for reimbursement.

- b. Reimbursement may be in the form of development fee credits or other type of reimbursement specified in the Development Agreement or other agreements.

Operation and Maintenance

Objective 4:

Provide for sewer infrastructure improvements to be transferred to the Town.

- a. Ownership of sewer infrastructure improvements constructed in Chatham Park will be transferred to the Town or appropriate private utility provider (who later may transfer ownership to the Town).
- b. Following transfer of ownership to the Town, which typically will occur after the improvement has been constructed and accepted by the Town for maintenance after the expiration of any applicable warranty period, the Town will assume all obligations for operation and maintenance of the applicable improvement.

Parks and Recreation

The provision of parks and recreation facilities is one of the quality of life factors that demonstrate the Town's commitment to meeting the needs of its citizens. A good park system is developed through a systematic approach to assessing population growth, adequate park acreage and locations, safe and attractive facilities, maintenance standards, funding, and the ability to adapt to change in a proactive manner as citizen wants and needs evolve.

Location

National recreational standards have been developed by the National Recreation and Park Association (NRPA), and these can be helpful as communities assess their recreational needs and how best to meet them. However, the uniqueness of each community due to geographical, cultural, climatic, and socioeconomic characteristics makes it more likely that each community will need to develop its own standards for recreation, parks, and open space. This Parks and Recreation section of this Element takes national standards and local considerations into account to establish an appropriate service level for Chatham Park. Based on this analysis of local standards, and comparing them to NRPA standards, 10 acres of park and greenway land per 1,000 population will be the targeted goal in Chatham Park.

Park Classifications and Criteria

The table below is from the NRPA Parks, Recreation, Open Space and Greenways Guidelines. This table describes park classification along with location and size criteria.

Parks Classification Table			
Park Classification	General Description	Location Criteria	Size Criteria
Pocket Parks	Used to address limited, isolated, or unique recreation needs.	Less than a ¼ mile distance in residential setting.	Between 2500 sq. ft. and one acre in size.
Neighborhood Parks	Neighborhood Parks remain the basic units of the park system and serve as the recreational focus of the neighborhood. Focus is on the informal, active and passive recreation.	½ mile distance and uninterrupted by non-residential roads and other physical barriers.	5 acres is considered adequate size. 5-10 acres is optimal.
School Parks	Depending on the circumstances, combining parks with school sites can fulfill the space requirements for the other classes of parks, such as neighborhood, community, sports complex, and special use.	Determined by school property locations	Variable – depends on function.
Community Parks	Serve broader purpose than the neighborhood parks. Focus is on meeting community-based recreational needs, as well as preserving unique landscapes and open spaces.	Determined by the quality and sustainability of the site. Usually serves two or more neighborhoods and 2 to 3 mile distance.	As needed to accommodate desired uses. Usually between 30 and 50 acres.
Natural Resource Areas	Land set aside for preservation of significant natural resources, remnant landscapes, open space, and visual aesthetics/buffering.	Resource availability and opportunity.	Variable
Sports Complex	Consolidates heavily programmed athletic needs and associated facilities to larger and fewer sites strategically located throughout the community	Strategically located, community-wide facilities.	Determined by projected demand. Usually 25 acres or more with 40-80 acres being optimal.
Private Parks/Recreational Facilities	Parks and recreation facilities that are privately owned yet contribute to the public park and recreation system.	Variable – dependent on specific use.	Variable
Regional Parks	Typically offer a wide variety of active or passive recreational opportunities and owned by the County or State	Variable – dependent on specific use	As needed to accommodate desired uses. Site varies from 50-1,000 acres.

Objective 1:

Locate new parks and other recreation facilities that are convenient to the greatest number of Chatham Park residents and area facility users.

- a. Adopt NRPA facility guidelines in order to be consistent with standards employed by other municipalities in the region.
- b. Avoid service area overlap between like facilities unless this overlap is necessary to correct service deficiencies.
- c. Provide park locations for the larger facility types as part of Small Area Plans.
- d. Provide park locations for smaller facility types – pocket parks and neighborhood parks – either in Small Area Plans or in development plans.

Objective 2:

Develop a diversified park system that will satisfy the varied recreational needs of Chatham Park's residents and protect and enhance the quality of life in the Pittsboro area.

- a. Develop and implement facilities and programs that encourage public participation in both active and passive indoor/outdoor recreation programs.
- b. Work with the Town on a regular basis to revise the Town's Comprehensive Recreation Plan, with citizen preferences serving as a major input to this process.
- c. Explore the development of a capital improvement program that also identifies all necessary funding sources.
- d. Update and/or renovate existing parks and recreation facilities to maintain and/or improve the existing level of service.
- e. Design outdoor recreation facilities that are accessible to individuals and organized groups of all physical capabilities, skill levels, age groups, and income levels.
- f. Incorporate public art into the parks and other recreation facilities where appropriate.

Objective 3:

Create a system of greenways between residential neighborhoods, businesses, schools, public facilities, and other activity centers as an alternative to automobile transportation.

- a. Utilize greenways, multi-use paths, and sidewalks, wherever possible to connect residential areas with schools, parks and other public facilities.
- b. Design an interconnected, multifunctional parks and open space system which protects important natural, cultural, and visual resources while providing appropriate opportunities for recreation.
- c. Create trailhead improvements that support the greenway system with interpretive and directory signage, rest areas, drinking fountains, landscaping, restrooms, parking, and other services.

Character and Extent**Objective 1:**

Expand economic growth, improve the quality of life for citizens, and promote economic development opportunities through parks and recreation planning and programming.

- a. Promote the benefits of parks and recreation through creative planning and programming, realizing that these benefits can be effective tools for increasing property values, promoting economic development by attracting new businesses, improving the Town's image, and enhancing public health and wellbeing.
- b. Create and promote recreational and cultural events which enhance the public health and wellbeing.

Objective 2:

Increase safety and reduce maintenance and operational costs throughout the park system.

- a. Reduce maintenance costs by using materials that require less maintenance and by analyzing the life cycle costs of these materials.
- b. Evaluate standards to assess and correct safety related issues at existing facilities.
- c. Explore the use of vandal-resistant materials in new construction, and work with the police and fire departments to reduce the potential for vandalism in public areas.
- d. Promote the use of native plant materials and other drought tolerant species in all park and recreation facilities.

Objective 3:

Provide land for Parks and Greenways on a timely basis as needed to serve the residents of Chatham Park:

Park Land Provided

In accordance with the Master Plan, "Park Land" is land intended to be used for either active or passive recreation purposes, and Park Land that is dedicated to the Town is intended to become part of the Town's recreation system. Other Park Land could be privately owned. References in this Element to Park Land include land for greenway that is located outside of a "regulated buffer", as that term is defined in the Master Open Space Element. Park Land for Chatham Park PDD that satisfies the requirements of the Master Plan shall be provided at a ratio of no less than 1/33rd of an acre per dwelling unit constructed, which would result in 667 acres of Park Land if the maximum number of dwelling units (22,000) allowed by the Master Plan is constructed. However, in order to expedite provision of Park Land, the Master Plan requires that, until such time, if any, that the maximum required amount of Park Land (667 acres) has been provided, Park Land shall be provided at a rate of 1/25th acre per dwelling unit constructed in Chatham Park PDD. At the rate of 1/25th acre per dwelling unit, the maximum required 667 acres of Parkland would be provided when 16,667 dwelling units have been constructed in Chatham Park (the chart on page 37 of the Master Plan is amended by this Element to change 22,000 to 16,667).

With the submission to the Town of each subdivision plan or site plan for dwelling units in Chatham Park, information will be provided as to the previous number of dwelling units in Chatham Park approved by the Town, the amount of Park Land previously provided for Chatham Park (either by land or payment-in-lieu), and any new Park Land to be provided upon approval of the development plan. Any new Park Land proposed by a development plan will be provided prior to the issuance of the first building permit for a dwelling unit associated with that development plan. Land to satisfy the Park Land requirements of the Master Plan for Chatham Park may be

provided on land that is located in Chatham Park, or on land within one (1) mile of any boundary of Chatham Park, or on any other land approved by the Planning Director. For the purpose of satisfying Park Land requirements, Chatham Park PDD shall be considered as one development.

Qualifying Park Land

Among the land areas that may qualify as Park Land for Chatham Park PDD are the following:

1. Land identified as Park Land or Park on a plat recorded in the office of the Chatham County Register of Deeds.
2. Private park/recreation areas for public use within residential developments and mixed-use developments;
3. Small scale urban spaces, one-half acre or larger in area, located to accommodate aesthetic amenities or a variety of passive, active and entertainment activities for the public, and designated as Park Land or Park in a development plan or on a recorded plat;
4. Greenway land not located in a regulated buffer; and
5. Natural areas located within recorded conservation easements.

Greenways Provided

A preliminary greenway plan was provided as part of the Master Plan. A more detailed preliminary greenway plan for the applicable Small Area(s) will be provided with the submittal of each Small Area Plan, and locations will be finalized as development plans are submitted and approved. In accordance with the Master Plan, the land area (i.e., acreage or square footage) of greenways qualifies either as Park Land (if located outside of a regulated buffer) or Open Space (if located within a regulated buffer). Greenways that qualify as public Park Land in Chatham Park either will be conveyed to the Town or will be dedicated to the Town by easement in a recorded document or plat. A typical greenway lot or easement in Chatham Park will be 30 feet wide and include within it a trail that is 10 feet wide. Greenway trails within Chatham Park typically will be paved to reduce maintenance costs, but certain sections, as necessary to satisfy riparian buffer requirements or as otherwise approved or required by the Town or other applicable governmental entity, may be constructed of mulch or other allowable materials that will provide a different trail experience.

Payment-in-Lieu

One or both of the following payment in lieu options, at the election of the owner of the land to be developed, may be utilized to satisfy Park Land requirements in Chatham Park:

1. Fee payments to the Town in lieu of provision of Park Land, with these monies to be used by the Town to provide public recreation facilities within Chatham Park. This amount of each payment in lieu shall be equal to the tax value, at the time of submission of the applicable development plan, of the land that otherwise would be required to be provided by the Master Plan. For example, a 100 Lot subdivision for detached single-family dwellings would require 4 acres of Park Land (at 1/25th acre per dwelling unit), and a payment in lieu equal to 4 times the foregoing per acre tax value could be made to satisfy the Park Land requirement for that subdivision. For example, if the foregoing tax value is \$25,000.00 per acre, a payment of \$100,000.00 could be made to the Town

in lieu of provision of 4 acres of Park Land. Payments of fees to the Town in lieu of Park Land that are used by the Town to construct recreation facilities in Chatham Park can provide more useable recreation facilities sooner than otherwise may occur.

2. Construction of greenways and/or Park Land improvements, with the construction costs thereof being applied as payments-in-lieu of Park Land dedication based on the tax value of the land, at the time of construction of the greenway or Park Land improvements, in the portion of Chatham Park PDD in which the greenway or Park Land, as applicable, is located. For example, if applicable construction costs total \$500,000, and the tax value of the land is \$100,000 per acre, then the \$500,000 expended on construction costs would be equivalent to 5 acres of dedicated Park Land. For the purposes of this paragraph, “construction costs” include, but are not limited to, all “soft costs” (for example, design and engineering) and “hard costs” (for example, labor and materials) for the applicable improvements.

Town Administrative Services

Staffing considerations for public facilities required to support services provided by the Town of Pittsboro are typically controlled by the municipality. This portion of the Public Facilities Element is presented in order to provide guidance to the Town as it analyzes its need to add the necessary staff due to growth that will result from the development of Chatham Park. To assist the Town until such time as property tax revenues collected from Chatham Park total \$300,000.00 or more per annum, Chatham Park Investors LLC has entered into a financial contribution agreement with the Town to provide funds to help defray the additional costs expected to be incurred by the Town in dealing with development in Chatham Park.

The following departments will be included in this personnel analysis: administration, finance, economic development, planning, code enforcement, police, fire and rescue, engineering, public works, parks and recreation and public utilities.

Objective:

Provide an appropriate level of municipal personnel to conduct Town business at an acceptable level of effectiveness.

1. Each Small Area Plan submitted for Chatham Park will provide an estimate of the number of personnel the Town will need on a department by department basis based on population projections for that Small Area at full build out.
2. Each Small Area Plan submitted for Chatham Park also will include development phasing information to help the Town estimate the number of personnel the Town will need to add as development occurs.

Appendix A – The Town of Pittsboro Riparian Buffer Protection Ordinance

Riparian Buffer Protection Ordinance

Town of Pittsboro, North Carolina

Adopted February 14, 2011

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Section 1. Authority

This Ordinance is adopted pursuant to the authority vested in the Town of Pittsboro by the Session Laws and the General Statutes of North Carolina, particularly Session Law 2009-216 (House Bill 239), Session Law 2009-484 (Senate Bill 838), N.C Gen. Stat §153A-121, 153A-140, Chapter 153A, Article 18, N.C. Gen. Stat §160A-174, 160A-193, Chapter 160A, Article 19, and any special legislation enacted by the General Assembly for the Town of Pittsboro.

Section 2. Purpose and Intent

The purposes of the Town of Pittsboro in adopting the following Ordinance are to protect and preserve existing riparian buffers throughout the Jordan Watershed as generally described in Rule 15A NCAC 02B .0262 (Jordan Water Supply Nutrient Strategy: Purpose and Scope), in order to maintain their nutrient removal and stream protection functions. Additionally this Ordinance will help protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed, and provide additional watershed protection and preserve existing riparian buffers throughout Pittsboro's planning jurisdiction.

Buffers adjacent to streams 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 to minimize flood damage in flood prone areas. Well-vegetated streamside riparian areas help to remove nitrogen and prevent sediment and sediment-bound pollutants such as phosphorous from reaching the streams.

Section 3. Title

This Ordinance shall be known as the *Town of Pittsboro Riparian Buffer Protection*.

Section 4. Jurisdiction

This Ordinance shall be applied to all land in the planning jurisdiction of the Town of Pittsboro.

Section 5. Applicability

This Ordinance applies to all landowners and other persons conducting activities in the area described in Section 4, with the exception of activities conducted under the authority of the State, the United States, multiple jurisdictions, or local units of government, and forest harvesting and agricultural activities. The NC Division of Water Quality shall administer the requirements of Rule 15A NCAC 02B .0267 and .0268 (Jordan Water Supply Nutrient Strategy: Protection of Existing Riparian Buffers and Mitigation of Existing Riparian Buffers, respectively) for these activities.

Section 6. Relation to Other Ordinances

The requirements of this Ordinance shall supersede all locally implemented buffer requirements stated in Rules 15A NCAC 02B .0214 through .0216 as applied to WS-II, WS-III, and WS-IV waters in the Jordan watershed. If the provisions of this ordinance otherwise conflict with the provisions of any other validly enforceable ordinance(s) or laws, the most stringent provisions shall control. This Ordinance is not intended to

interfere with, abrogate, or annul any other ordinance, rule, regulation, or other provision of law.

Section 7. Riparian Area Protection

A. Buffers Protected

The following minimum criteria shall be used for identifying regulated buffers:

1. This Ordinance shall apply to activities conducted within, or outside of with hydrologic impacts in violation of the diffuse flow requirements set out in Section 7.(E) upon, 50-foot wide riparian buffers directly adjacent to surface waters (intermittent streams, perennial streams, lakes, reservoirs and ponds), excluding wetlands.
2. Wetlands adjacent to surface waters or within 50 feet of surface waters shall be considered as part of the riparian buffer but are regulated pursuant to Rules 15A NCAC 2B .0230 and .0231, Rules 15A NCAC 2H .0500, 15A NCAC 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.
3. For the purpose of this Ordinance, only one of the following types of maps shall be used for purposes of identifying a water body subject to the requirements of this ordinance:
 - a. The most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture.
 - b. The most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS).
 - c. A map approved by the Geographic Information Coordinating Council and by the NC Environmental Management Commission. Prior to approving a map under this Item, the Commission shall provide a 30-day public notice and opportunity for comment. Alternative maps approved by the Commission shall not be used for buffer delineation on projects that are existing and ongoing within the meaning of Section 7. (C) of this Ordinance.
4. Where the identification, classification, or specific origination point of a stream regulated under this Item is in question, upon request of the NC Division of Water Quality or another party, the Town of Pittsboro shall make an on-site determination. A Town of Pittsboro representative who has successfully completed the Division's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by the Division, shall establish that point using the latest version of the Division publication, *Identification Methods for the Origins of Intermittent and Perennial Streams*, available at http://h2o.enr.state.nc.us/ncwetlands/documents/NC_Stream_ID_Manual.pdf or from the NC Division of Water Quality - 401 Oversight Express Permitting Unit, or its successor. The Town of Pittsboro may accept the results of a site assessment made by another party who meets these criteria. Any disputes over on-site determinations made according to this Item shall be referred to the

Director of the Division of Water Quality c/o the 401 Oversight Express Permitting Unit, or its successor, in writing. The Director's determination is subject to review as provided in Articles 3 and 4 of G.S. 150B, unless the area in dispute lies outside the Jordan Reservoir Watershed. In such instance, the determination shall be made by the Town of Pittsboro.

5. Riparian buffers protected by this Ordinance shall be measured pursuant to Section 7. (D) of this Ordinance.
6. Parties subject to this Ordinance shall abide by all State rules and laws regarding waters of the state including but not limited to Rules 15A NCAC 2B .0230 and .0231, Rules 15A NCAC 2H .0500, 15A NCAC 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.
7. No new clearing, grading, or development shall take place nor shall any new building permits be issued in violation of this Ordinance.

B. Exemption Based on On-site Determination

When a landowner or other affected party including the Division believes that the maps have inaccurately depicted surface waters, he or she shall consult the Town of Pittsboro. Upon request, a Town of Pittsboro representative who has successfully completed the Division of Water Quality's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by the Division, shall make an on-site determination. The Town of Pittsboro may also accept the results of site assessments made by other parties who have successfully completed such training. Any disputes over on-site determinations shall be referred to the Director of the Division of Water Quality c/o the 401 Oversight Express Permitting Unit, or its successor, in writing. A determination of the Director as to the accuracy or application of the maps is subject to review as provided in Articles 3 and 4 of G.S. 150B. Surface waters that appear on the maps shall not be subject to these buffer requirements if a site evaluation reveals any of the following cases:

1. Man-made ponds and lakes that are not part of a natural drainage way that is classified in accordance with 15A NCAC 2B .0100, including ponds and lakes created for animal watering, irrigation, or other agricultural uses. (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.)
2. Ephemeral streams.
3. The absence on the ground of a corresponding intermittent or perennial stream, lake, reservoir, or pond.
4. Ditches or other man-made water conveyances, other than modified natural streams.

C. Exemption when Existing Uses are Present and Ongoing

This Ordinance shall not apply to uses that are existing and ongoing; however, this Ordinance shall apply at the time an existing, ongoing use is changed to

another use. Change of use shall involve the initiation of any activity that does not meet either of the following criteria for existing, ongoing activity:

1. It was present within the riparian buffer as of the effective date of this Ordinance and has continued to exist since that time. Existing uses shall 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. Only the portion of the riparian buffer occupied by the footprint of the existing use is exempt from this Ordinance. Change of ownership through purchase or inheritance is not a change of use. Activities necessary to maintain uses are allowed provided that the site remains similarly vegetated, no impervious surface is added within 50 feet of the surface water where it did not previously exist as of the effective date of this Ordinance, and existing diffuse flow is maintained. Grading and revegetating Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised, the ground is stabilized and existing diffuse flow is maintained.
2. Projects or proposed development that are determined by the Town of Pittsboro to meet at least one of the following criteria:
 - a. Project requires a 401 Certification/404 Permit and these were issued prior to the effective date this Ordinance, and prior to the effective date of this Ordinance.
 - b. Projects that require a state permit, such as landfills, NPDES wastewater discharges, land application of residuals and road construction activities, have begun construction or are under contract to begin construction and had received all required state permits and certifications prior to the effective date of this Ordinance;
 - c. Projects that are being reviewed through the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor and that have reached agreement with DENR on avoidance and minimization by the effective date of this Ordinance; or
 - d. Projects that are not required to be reviewed by the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor if a Finding of No Significant Impact has been issued for the project and the project has the written approval of the Town of Pittsboro prior to the effective date of this Ordinance.

D. Zones of the Riparian Buffer

The protected riparian buffer shall have two zones as follows:

1. Zone One shall consist of a vegetated area that is undisturbed except for uses provided for in the Table of Uses, Section 8. (B) of this Ordinance. The location of Zone One shall be as follows:
 - a. For intermittent and perennial streams, Zone One shall begin at the top of the bank and extend landward a distance of 30 feet on all sides of the surface water, measured horizontally on a line perpendicular to a vertical line marking the top of the bank.
 - b. For ponds, lakes and reservoirs located within a natural drainage way, Zone One shall begin at the normal water level and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to a vertical line marking the normal water level.
2. Zone Two shall consist of a stable, vegetated area that is undisturbed except for uses provided for in the Table of Uses, Section 8. (B) of this Ordinance. Grading and revegetating in Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised. Zone Two shall begin at the outer edge of Zone One and extend landward 20 feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones One and Two shall be 50 feet on all sides of the surface water.

E. 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:

1. 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;
2. Periodic corrective action to restore diffuse flow shall be taken as necessary and shall be designed to impede the formation of erosion gullies; and
3. As set out in Sections 7.(D) and 8.(B) of this Ordinance, The Zones of the Riparian Buffer and Table of Uses respectively, no new stormwater conveyances are allowed through the buffers except for those specified in the Table of Uses, Section 8.(B) of this Ordinance, addressing stormwater management ponds, drainage ditches, roadside ditches, and stormwater conveyances.

Section 8. Potential Uses and Associated Requirements

A. Approval for New Development

The Town of Pittsboro shall issue an approval for new development only if the development application proposes to avoid impacts to riparian buffers defined in Section 7. (A) of this Ordinance, or where the application proposes to impact such buffers, it demonstrates that the applicant has done the following, as applicable:

1. Determined the activity is exempt from requirements of this Ordinance;
2. Received an Authorization Certificate from the Division pursuant to Section 9.A of this Ordinance;

3. For uses designated as Allowable with Mitigation in the Table of Uses in Section 8.(B), received approval of mitigation plan pursuant to Section 9.(C) of this Ordinance; and
4. Received a variance pursuant to Section 9. (B).

B. Table of Uses

The following chart sets out potential new uses within the buffer, or outside the buffer with impacts on the buffer, and categorizes them as exempt, allowable, or allowable with mitigation. All uses not categorized as exempt, allowable, or allowable with mitigation are considered prohibited and may not proceed within the riparian buffer or outside the buffer if the use would impact the buffer, unless a variance is granted pursuant to Section 9. (C) of this Ordinance, Variances. The requirements for each category are given in Section 8. (C) of this Section following the Table of Uses.

Use	Exempt *	Allowable *	Allowable with Mitigation*
<p>Access trails: Pedestrian access trails leading to the surface water, docks, fishing piers, boat ramps and other water dependent activities:</p> <ul style="list-style-type: none"> • 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 as defined in this Ordinance and no impervious surface is added to the riparian buffer • Pedestrian access trails that exceed 4 feet in width of buffer disturbance, the installation or use results in removal of trees as defined in this Ordinance or impervious surface is added to the riparian buffer 	X	X	
<p>Airport facilities:</p> <ul style="list-style-type: none"> • Airport facilities that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Airport facilities that impact greater than 150 linear feet or one-third of an acre of riparian buffer • Activities necessary to comply with FAA requirements (e.g. radar uses or landing strips)¹ 		X X	X
Archaeological activities	X		
Bridges		X	
Canoe Access provided that installation and use does not result in removal of trees as defined in this Ordinance and no impervious surface is added to the buffer.	X		

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8. (C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Dam maintenance activities: <ul style="list-style-type: none"> <li data-bbox="365 352 976 516">• 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 <li data-bbox="365 537 976 701">• 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	X	

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8. (C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
<p>Drainage ditches, roadside ditches and stormwater conveyances through riparian buffers:</p> <ul style="list-style-type: none"> • 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 waterbodies. • 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. • 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 • 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 BMPs are employed. 	<p>X</p>	<p>X</p> <p>X</p>	<p>X</p>

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8. (C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
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: a grassed travel way on one side of the water body when less impacting alternatives are not practical. The width and specifications of the travel way shall be only that needed for equipment access and operation. The travel way shall be located to maximize stream shading.		X	
Mining activities: <ul style="list-style-type: none"> • Mining activities that are covered by the Mining Act provided that new riparian buffers that meet the requirements of Sections 7.(D) and 7.(E) of this Ordinance are established adjacent to the relocated channels • Mining activities that are not covered by the Mining Act OR where new riparian buffers that meet the requirements of Sections 7.(D) and 7.(E) of this Ordinance are not established adjacent to the relocated channels • Wastewater or mining dewatering wells with approved NPDES permit 	X	X	X
Playground equipment: <ul style="list-style-type: none"> • Playground equipment on single family lots provided that installation and use does not result in removal of vegetation • Playground equipment installed on lands other than single-family lots or that requires removal of vegetation 	X	X	

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8. (C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Ponds created by impounding streams and not used as stormwater BMPs: <ul style="list-style-type: none"> • New ponds provided that a riparian buffer that meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance is established adjacent to the pond • New ponds where a riparian buffer that meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance is NOT established adjacent to the pond 		X	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 Ordinance.			X
Railroad crossings of streams and other surface waters subject to this Ordinance: <ul style="list-style-type: none"> • Railroad crossings that impact equal to or less than 40 linear feet of riparian buffer • Railroad crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer • Railroad crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer 	X	X	X

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8. (C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Road relocation: Relocation of existing private access roads associated with public road projects where necessary for public safety: <ul style="list-style-type: none"> • Less than or equal to 2,500 square feet of buffer impact • Greater than 2,500 square feet of buffer impact 		X	X
Stormwater BMPs: <ul style="list-style-type: none"> • Wet detention, bioretention, and constructed wetlands in Zone Two if diffuse flow of discharge is provided into Zone One • Wet detention, bioretention, and constructed wetlands in Zone One 		X	X
Scientific studies and stream gauging	X		
Streambank 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, except that tree planting may occur during the dormant season. A one-time application of fertilizer may be used to establish vegetation: At the end of five years the restored buffer shall comply with the restoration criteria in Section 9.(C)(7) of this Ordinance: <ul style="list-style-type: none"> • Less than or equal to 2,500 square feet of buffer disturbance • Greater than 2,500 square feet of buffer disturbance • Associated with culvert installation or bridge construction or replacement. 	X	X X	

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Utility, electric, aerial, other than perpendicular crossings ⁵ : <ul style="list-style-type: none"> • Impacts in Zone Two • Impacts in Zone One^{2,3} 		X	X
Utility, electric, underground, perpendicular crossings ^{3,4,5} : <ul style="list-style-type: none"> • Disturb less than or equal to 40 linear feet of riparian buffer • Disturb greater than 40 linear feet of riparian buffer 	X	X	
Utility, electric, underground, other than perpendicular crossings ⁴ : <ul style="list-style-type: none"> • Impacts in Zone Two • Impacts in Zone One¹ 	X X		
Utility, non-electric, perpendicular crossings of streams and other surface waters subject to this Ordinance ^{3,5} : <input type="checkbox"/> <ul style="list-style-type: none"> • Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width • Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width • Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width • Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width • Disturb greater than 150 linear feet of riparian buffer 	X	X X	X X

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Utility, non-electric, other than perpendicular crossings ^{4,5} : <ul style="list-style-type: none"> • Impacts in Zone Two • Impacts in Zone One¹ 		X	X
Vegetation management: <ul style="list-style-type: none"> • Emergency fire control measures provided that topography is restored • Mowing or harvesting of plant products in Zone Two • Planting vegetation to enhance the riparian buffer • Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised • 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 streambank. • Removal of individual trees which are dead, diseased or damaged. • Removal of poison ivy • Removal of invasive exotic vegetation as defined in: <i>Smith, Cherri L. 1998. Exotic Plant Guidelines. Dept. of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30</i> 	X X X X X X X X		
<ul style="list-style-type: none"> • Vehicular access roads leading to water-dependent structures as defined in 15A NCAC 02B .0202, provided they do not cross the surface water and have minimum practicable width not exceeding ten feet. 		X	
<ul style="list-style-type: none"> • Water dependent structures as defined in 15A NCAC 02B .0202 where installation and use result in disturbance to riparian buffers. 		X	

* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 8.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Water supply reservoirs: <ul style="list-style-type: none"> • New reservoirs where a riparian buffer that meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance is established adjacent to the reservoir • New reservoirs where a riparian buffer that meets the requirements of Sections 7.(D) and 7.(E) of this Ordinance is not established adjacent to the reservoir 		X	X
Water wells <ul style="list-style-type: none"> • Single family residential water wells • All other water wells 	X	X	
Wetland, stream and buffer restoration that results in impacts to the riparian buffers: <ul style="list-style-type: none"> • Wetland, stream and buffer restoration that requires NC Division of Water Quality approval for the use of a 401 Water Quality Certification • Wetland, stream and buffer restoration that does not require Division of Water Quality approval for the use of a 401 Water Quality Certification 	X	X	
Wildlife passage structures		X	

¹Provided that:

- 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.
- Zones one and two meet the requirements of Sections 7.(D) and 7.(E)

²Provided that, in Zone One, all of the following BMPs for overhead utility lines are used. If all of these BMPs are not used, then the overhead utility lines shall require a no practical alternative evaluation by the Town of Pittsboro, as defined in Section 9.(A).

- 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.

³Provided that poles or aerial infrastructure shall not be installed within 10 feet of a water body unless the Town of Pittsboro completes a no practical alternative evaluation as defined in Section 9.(A).

⁴Provided that, in Zone One, all of the following BMPs for underground utility lines are used. If all of these BMPs are not used, then the underground utility line shall require a no practical alternative evaluation by the Town of Pittsboro, as defined in Section 9.(A).

- 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 upon completion of construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
- In wetlands, mats shall be utilized to minimize soil disturbance.

⁵Perpendicular crossings are those that intersect the surface water at an angle between 75 degrees and 105 degrees.

C. Requirements for Categories of Uses

Uses designated in Section 8.(B) of this Section as exempt, allowable, and allowable with mitigation within a riparian buffer shall have the following requirements:

1. Exempt.

Uses designated as exempt are permissible without authorization by the Town of Pittsboro provided that they adhere to the limitations of the activity as defined in Section 8.(B) of this Section, the Table of Uses. In addition, exempt uses shall be designed, constructed and maintained to minimize soil disturbance and to provide the maximum water quality protection practicable, including construction, monitoring, and maintenance activities.

2. Allowable.

Uses designated as allowable may proceed provided that there are no practical alternatives to the requested use pursuant to Section 9.(A) of this Section. This includes construction, monitoring, and maintenance activities. These uses require written authorization from the Town of Pittsboro.

3. Allowable with Mitigation.

Uses designated as allowable with mitigation may proceed provided that there are no practical alternatives to the requested use pursuant to Section 9.(A) of this Section and an appropriate mitigation strategy has

been approved pursuant to Section 9.(C). These uses require written authorization from the Town of Pittsboro.

Section 9. Permits Procedures, Requirements, and Approvals

A. Determination of No Practical Alternatives / Request for Authorization Certificate

1. Persons who wish to undertake uses designated as allowable or allowable with mitigation shall submit a request for a “no practical alternatives” determination to the Town of Pittsboro. The applicant shall certify that the project meets all the following criteria for finding “no practical alternatives”:
 - a. The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality;
 - b. The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality; and
 - c. Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.
2. The applicant shall also submit at least the following information in support of their assertion of “no practical alternatives”:
 - a. The name, address and phone number of the applicant;
 - b. The nature of the activity to be conducted by the applicant;
 - c. The location of the activity, including the jurisdiction;
 - d. A map of sufficient detail to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimensions of any disturbance in riparian buffers associated with the activity, and the extent of riparian buffers on the land;
 - e. An explanation of why this plan for the activity cannot be practically accomplished, reduced or reconfigured to better minimize disturbance to the riparian buffer, preserve aquatic life and habitat and protect water quality; and
 - f. Plans for any best management practices proposed to be used to control the impacts associated with the activity.
3. Within 60 days of a submission that addresses Section 9.(A)(2) , the Town of Pittsboro shall review the entire project and make a finding of fact as to whether the criteria in Section 9.(A)(1) of this Section have been met. A finding of “no practical alternatives” shall result in issuance of an Authorization Certificate. Failure to act within 60 days shall be construed as a finding of “no practical alternatives” and an Authorization Certificate shall be issued to the applicant unless one of the following occurs:
 - a. The applicant agrees, in writing, to a longer period;
 - b. The Town of Pittsboro determines that the applicant has failed to furnish requested information necessary to the Town of Pittsboro decision;
 - c. The final decision is to be made pursuant to a public hearing; or

- d. The applicant refuses access to its records or premises for the purpose of gathering information necessary to the Town of Pittsboro's decision.
4. The Town of Pittsboro may attach conditions to the Authorization Certificate that support the purpose, spirit and intent of this Ordinance.
5. Any appeals of determinations regarding Authorization Certificates shall be referred to the Director of the Division of Water Quality, c/o the 401 Oversight Express Permitting Unit, or its successor. The Director's decision is subject to review as provided in G.S. 150B Articles 3 and 4.

B. Variances

1. Requirements for Variances.

Persons who wish to undertake prohibited uses may pursue a variance. The Town of Pittsboro may grant minor variances. For major variances, the Town of Pittsboro shall prepare preliminary findings and submit them to the Division of Water Quality, 4 01 Oversight Express Permitting Unit, or its successor for approval by the Environmental Management Commission. The variance request procedure shall be as follows:

- a. For any variance request, the Town of Pittsboro shall make a finding of fact as to whether there are practical difficulties or unnecessary hardships that prevent compliance with the riparian buffer protection requirements. A finding of practical difficulties or unnecessary hardships shall require that the following conditions are met:
 - i. If the applicant complies with the provisions of this Ordinance, he/she can secure no reasonable return from, nor make reasonable use of, his/her property. Merely proving that the variance would permit a greater profit from the property shall not be considered adequate justification for a variance. Moreover, the Town of Pittsboro shall consider whether the variance is the minimum possible deviation from the terms of this Ordinance that shall make reasonable use of the property possible;
 - ii. The hardship results from application of this Ordinance to the property rather than from other factors such as deed restrictions or other hardship;
 - iii. The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, such that compliance with provisions of this ordinance would not allow reasonable use of the property;
 - iv. The applicant did not cause the hardship by knowingly or unknowingly violating this Ordinance;
 - v. The applicant did not purchase the property after the effective date of this Ordinance, and then request a variance; and
 - vi. The hardship is rare or unique to the applicant's property.

- b. The variance is in harmony with the general purpose and intent of the State’s riparian buffer protection requirements and this Ordinance and preserves its spirit; and
- c. In granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.

2. Minor Variances

A minor variance request pertains to activities that will impact only Zone Two of the riparian buffer. Minor variance requests shall be reviewed and approved based on the criteria in Section 9.(A)(1) through Section 9.(A)(3) by the Town of Pittsboro pursuant to G.S. 153A-Article 18, or G.S. 160A-Article 19. The Town of Pittsboro may attach conditions to the variance approval that support the purpose, spirit and intent of the riparian buffer protection program. Request for appeals to decisions made by the Town of Pittsboro shall be made in writing to the Director of the Division of Water Quality c/o the 401 Oversight Express Permitting Unit, or its successor. The Director’s decision is subject to review as provided in G.S. 150B Articles 3 and 4.

3. Major Variances

A major variance request pertains to activities that will impact any portion of Zone One or any portion of both Zones One and Two of the riparian buffer. If Town of Pittsboro has determined that a major variance request meets the requirements in Section 9.(B)(1)) through 8.(C)(3), then it shall prepare a preliminary finding and submit it to the NC Environmental Management Commission c/o the Division of Water Quality, 401 Oversight Express Permitting Unit, or its successor, for approval. Within 90 days after receipt by the Town of Pittsboro, the Commission shall review preliminary findings on major variance requests and take one of the following actions: approve, approve with conditions and stipulations, or deny the request. Appeals from a Commission decision on a major variance request are made on judicial review to Superior Court.

C. Mitigation

- 1. This item shall apply to persons who wish to impact a riparian buffer when one of the following applies:
 - d. A person has received an Authorization Certificate pursuant to Section 9.(A) of this Ordinance for a proposed use that is designated as “allowable with mitigation;” or
 - e. A person has received a variance pursuant to Section 9.(B) of this Ordinance and is required to perform mitigation as a condition of a variance approval.
- 2. Issuance of the Mitigation Approval
The Town of Pittsboro shall issue a mitigation approval upon determining that a proposal meets the requirements set out in this Ordinance. The approval shall identify at a minimum the option chosen, the required and proposed areas, and either the mitigation location or the offset payment amount as applicable.
- 3. Options for Meeting the Mitigation Requirement

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

- a. Payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A NCAC 02B .0269 (Jordan Water Supply Nutrient Strategy: Riparian Buffer Mitigation Fees to the NC Ecosystem Enhancement Program) contingent upon acceptance of payments by the NC Ecosystem Enhancement Program, or to a private mitigation bank that complies with banking requirements of the US Army Corps of Engineers, currently set out at <http://www.saw.usace.army.mil/WETLANDS/Mitigation/mitbanks.html> or from the US Army Corps of Engineers, P.O. Box 1890, Wilmington, NC, 28402-1890, and the applicable trading criteria in Rule 15A NCAC 02B .0273;
- b. Donation of real property or of an interest in real property pursuant to Section 9.(C)(6) of this Ordinance; or
- c. Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Section 9.(C)(7) of this Ordinance.

4. The Area of Mitigation

The Town of Pittsboro shall determine the required area of mitigation, which shall apply to all mitigation options identified in Section 9.(C)(3) of this Ordinance and as further specified in the requirements for each option set out in this Section, according to the following:

- a. The impacts in square feet to each zone of the riparian buffer shall be determined by the Town of Pittsboro by adding the following:
 - i. The area of the footprint of the use causing the impact to the riparian buffer;
 - ii. The area of the boundary of any clearing and grading activities within the riparian buffer necessary to accommodate the use; and
 - iii. The area of any ongoing maintenance corridors within the riparian buffer associated with the use.
- b. The required area of mitigation shall be determined by applying the following multipliers to the impacts determined in Section 9.(4)(a) of this Ordinance to each zone of the riparian buffer:
 - i. Impacts to Zone One of the riparian buffer shall be multiplied by three;
 - ii. Impacts to Zone Two of the riparian buffer shall be multiplied by one and one-half; and
 - iii. Impacts to wetlands within Zones One and Two of the riparian buffer that are subject to mitigation under 15A NCAC 2H .0506 shall comply with the mitigation ratios in 15A NCAC 2H .0506.

5. The Location of Mitigation

For any option chosen, the mitigation effort shall be located within the same subwatershed of the Jordan watershed, as defined in 15A NCAC 02B.0262, and the same distance from the Jordan Reservoir as the proposed impact, or closer to the Reservoir than the 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 watershed, as defined in 15A NCAC 02B.0262, provided that the mitigation proposal accounts for differences in delivery of nutrients to the affected arm of Jordan Reservoir resulting from differences between the locations of the buffer impact and mitigation. Additional location requirements for the property donation option are enumerated in Section 9.(C)(6)(c)(i) of this Ordinance. With respect to mitigation outside the Jordan watershed, the applicant may propose mitigation anywhere within the same subwatershed.

6. 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:

- a. 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 NCAC 02B .0273. The value of the property interest shall be determined by an appraisal performed in accordance with Section 9. (C)(6)(d)(iv) of this Ordinance. 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 NCAC 02B .0273, the applicant shall pay the remaining balance due.
- b. The donation of conservation easements to satisfy compensatory mitigation requirements shall be accepted only if the conservation easement is granted in perpetuity.
- c. Donation of real property interests to satisfy the mitigation determination shall be accepted only if such property meets all of the following requirements:
 - i. In addition to the location requirements of Section 9. (C)(5) of this Ordinance, 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* developed by NC Division of Water Quality pursuant to G.S. 143-214.10;
 - ii. The property shall contain riparian buffers not currently protected by the State's riparian buffer protection program that are in need of restoration as defined in Section 9.(7)(d) of this Ordinance;
 - iii. The restorable riparian buffer on the property shall have a minimum length of 1000 linear feet along a surface water and a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water;

- iv. 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 9.(C)(4) of this Ordinance;
 - v. Restoration shall not require removal of man-made structures or infrastructure;
 - vi. The property shall be suitable to be successfully restored, based on existing hydrology, soils, and vegetation;
 - vii. The estimated cost of restoring and maintaining the property shall not exceed the value of the property minus site identification and transaction costs;
 - viii. 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;
 - ix. The property shall not contain any hazardous substance or solid waste;
 - x. 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 owner's expense in accordance with state and local health and safety regulations;
 - xi. The property and adjacent properties shall not have prior, current, and known future land use that would inhibit the function of the restoration effort; and
 - xii. The property shall not have any encumbrances or conditions on the transfer of the property interests.
- d. At the expense of the applicant or donor, the following information shall be submitted to the Town of Pittsboro with any proposal for donations or dedications of interest in real property:
- i. Documentation that the property meets the requirements laid out in Section 9.(C)(6)(c) of this Ordinance;
 - ii. US Geological Survey 1:24,000 (7.5 minute) scale topographic map, county tax map, USDA 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;
 - iii. 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 Registration for Professional Engineers and Land Surveyors in "Standards of Practice for Land Surveying in North Carolina." Copies may be obtained from the North Carolina State Board of Registration for Professional Engineers and Land Surveyors, 3620 Six Forks Road, Suite 300, Raleigh, North Carolina 27609;

- iv. 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." Copies may be obtained from the Appraisal Foundation, Publications Department, P.O. Box 96734, Washington, D.C. 20090-6734; and
 - v. A title certificate.
7. Riparian Buffer Restoration or Enhancement
- Persons who choose to meet their mitigation requirement through riparian buffer restoration or enhancement shall meet the following requirements:
- a. The applicant may restore or enhance a non-forested riparian buffer if either of the following applies:
 - i. The area of riparian buffer restoration is equal to the required area of mitigation determined pursuant to Section 9.(C)(4) of this Ordinance; or
 - ii. The area of riparian buffer enhancement is three times larger than the required area of mitigation determined pursuant to Section 9.(C)(4) of this Ordinance;
 - b. The location of the riparian buffer restoration or enhancement shall comply with the requirements in Section 9.(C)(5) of this Ordinance;
 - c. The riparian buffer restoration or enhancement site shall have a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water;
 - d. Enhancement and restoration shall both have the objective of establishing a forested riparian buffer according to the requirements of this Item. Enhancement shall be distinguished from restoration based on existing buffer conditions. Where existing trees are sparse, that is greater than or equal to 100 trees per acre but less than 200 trees per acre, a buffer may be enhanced. Where existing woody vegetation is absent, that is less than 100 trees per acre, a buffer may be restored;
 - e. The applicant shall first receive an Authorization Certificate for the proposed use according to the requirements of Section 9. (A) of this Ordinance. After receiving this determination, the applicant shall submit a restoration or enhancement plan for approval by the Town of Pittsboro. The restoration or enhancement plan shall contain the following:
 - i. A map of the proposed restoration or enhancement site;
 - ii. A vegetation plan. The vegetation plan shall include a minimum of at least two native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity;
 - iii. A grading plan. The site shall be graded in a manner to ensure diffuse flow through the riparian buffer;
 - iv. A fertilization plan; and

- v. A schedule for implementation;
- f. Within one year after the Town of Pittsboro has approved the restoration or enhancement plan, the applicant shall present proof to the Town of Pittsboro that the riparian buffer has been restored or enhanced. If proof is not presented within this timeframe, then the person shall be in violation of both the State's and the Town of Pittsboro riparian buffer protection program;
- g. The mitigation area shall be placed under a perpetual conservation easement that will provide for protection of the property's nutrient removal functions; and
- h. The applicant shall submit annual reports for a period of five years after the restoration or enhancement showing that the trees planted have survived and that diffuse flow through the riparian buffer has been maintained. The applicant shall replace trees that do not survive and restore diffuse flow if needed during that five-year period.

Section 10. Compliance and Enforcement

A. Site Inspections

1. Agents, officials, or other qualified persons authorized by the Town of Pittsboro may periodically inspect riparian buffers to ensure compliance with this ordinance.
2. Notice of the right to inspect shall be included in the letter of approval of each variance and buffer authorization.
3. Authority to Enter Property and Conduct Investigations and Inspections

Authorized agents, officials or other qualified persons shall have the authority, upon presentation of proper credentials, to enter and inspect at reasonable times any property, public or private, for the purpose of investigating and inspecting the site of any riparian buffer. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of the Town of Pittsboro, while that person is inspecting or attempting to inspect a riparian buffer nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out their official duties. The Town of Pittsboro shall have the power to conduct such investigations as deemed reasonably necessary to carry out the duties as prescribed in this Ordinance.

4. Notice of Violation
 - a. If it is determined that a person has failed to comply with the requirements of this Ordinance, or rules, or orders adopted or issued pursuant to this Ordinance, a notice of violation shall be served upon that person. The notice may be served by any means authorized under G.S. 1A-1, rule 4. In the event service cannot be accomplished by registered or certified mail, it may be accomplished in any manner provided in rule (4) j of the North Carolina Rules of Civil Procedure.

b. The notice shall specify the violation and inform the person of the actions that need to be taken to comply with this Ordinance, or rules or orders adopted pursuant to this Ordinance. The notice shall direct the person to correct the violation within a specified reasonable time. The notice shall inform the person that any person who violates or fails to act in accordance with any of the provisions of this Ordinance or rules or orders adopted or issued pursuant to this Ordinance is subject to the civil and criminal penalties and other enforcement actions as provided in this Ordinance.

5. Power to Require Statements

The Town of Pittsboro shall also have the power to require written statements, or the filing of reports under oath, with respect to pertinent questions relating to land-disturbing activities.

B. Civil Penalties

1. Assessment of Penalties

Any person who violates or fails to act in accordance with any of the provisions of this Ordinance or rules or orders adopted or issued pursuant to this Ordinance shall be subject to a civil penalty. A civil penalty for a violation may be assessed in an amount not to exceed ten thousand dollars (\$10,000) per day. If any violation for which a penalty may be assessed is continuous, a civil penalty may be assessed for each day of the violation in an amount not to exceed twenty-five thousand dollars (\$25,000) per day for as long as the violation occurs. Each day of a continuing violation shall constitute a separate violation under Section 10. (B)(1).

2. Notice of Civil Penalty Assessment

The governing body of the Town of Pittsboro shall provide written notice of the civil penalty amount and the basis for the assessment to the person assessed. The notice of civil penalty assessment shall be served by any means authorized under G.S. 1A-1, Rule 4, and shall direct the violator to either pay the assessment or contest the assessment, within thirty (30) days after receipt of the notice of assessment by written demand for a hearing.

3. Hearing

A hearing on the civil penalty shall be conducted by the Town of Pittsboro Board of Commissioners within 30 days after the date the written demand for the hearing is received by the Town of Pittsboro Board of Commissioners. The Board shall make its recommendation within 30 days after the date of the hearing.

4. Final Decision.

The Board shall issue a final decision on the civil penalty within 30 days of the recommended decision. A copy of the final decision shall be served on the violator by any means authorized under G.S. 1A-1, Rule 4.

5. Appeal of Final Decision.

Appeal from the final decision of the governing body shall be to the Superior Court of the county in which the violation occurred. Any appeal must be filed with thirty days of receipt of the final decision. A copy of the appeal must be served on the (City manager/County board/other appropriate person) by any means authorized under G.S. 1A-1, Rule 4.

6. Demand for Payment of Penalty

An assessment that is not contested is due when the violator is served with a notice of assessment. The civil penalty must be paid within 30 days of the assessment, if not appealed, or within 30 days after the conclusion of the administrative or judicial review of the assessment. If payment is not received within 30 days after demand for payment is made, the Town of Pittsboro may institute a civil action to recover the amount of the assessment. The civil action may be brought in the Superior Court where the violation occurred, or the violator's residence or principal place of business is located. Such civil actions must be filed within three (3) years of the date the assessment was due.

7. Use of Penalties

Civil penalties collected pursuant to this Ordinance shall be credited to the general fund of the Town of Pittsboro as nontax revenue.

C. Criminal Penalties

1. Any person who negligently violates any provision of this Ordinance or rule or order adopted pursuant to this Ordinance, shall be guilty of a Class 2 misdemeanor which may include a fine not to exceed fifteen thousand dollars (\$15,000) per day of violation, provided that such fine shall not exceed a cumulative total of two hundred thousand dollars (\$200,000) for each period of 30 days during which such a violation continues.
2. Any person who knowingly or willingly violates any provision of this Ordinance or rule or order adopted pursuant to this Ordinance, shall be guilty of a Class I felony which may include a fine not to exceed one hundred thousand dollars (\$100,000) per day of violation, provided that this fine shall not exceed a cumulative total of five hundred thousand dollars (\$500,000) for each period of 30 days during which such a violation continues.
3. Any person who knowingly violates any provision of this Ordinance or rule or order adopted pursuant to this Ordinance, shall be guilty of a Class C felony which may include a fine not to exceed two hundred fifty thousand dollars (\$250,000) per day of violation, provided that this fine shall not exceed a cumulative total one million dollars (\$1,000,000) for each period of 30 days during which such a violation continues.

D. Injunctive Relief

1. Civil Action in Superior Court

Whenever the governing body of the Town of Pittsboro has reasonable cause to believe that any person is violating or threatening to violate

this Ordinance or any rule or order adopted or issued pursuant to this Ordinance, it may, either before or after the institution of any other action or proceeding authorized by this Ordinance, institute a civil action in the name of the Town of Pittsboro for injunctive relief to restrain the violation or threatened violation. The action shall be brought in the Superior Court of Chatham County.

2. Order to Cease Violation

Upon determination by a court that an alleged violation is occurring or is threatened, the court shall enter any order or judgment that is necessary to abate the violation, to ensure that restoration is performed, or to prevent the threatened violation. The institution of an action for injunctive relief under this section shall not relieve any party to the proceedings from any civil or criminal penalty prescribed for violations of this Ordinance.

E. Compliance with Requirements

Any person engaged in new activities as defined by this Ordinance who fails to meet the requirements of this Ordinance shall be deemed in violation of this Ordinance.

Section 11. Severability

If any one or more sections or portions thereof of this Ordinance are held to be invalid or unenforceable, all other sections and portions thereof shall nevertheless continue in full force and effect.

Section 12. Effective Date

This Ordinance will become effective upon approval by the NC Environmental Management Commission and adoption by the Pittsboro Board of Commissioners.

Section 13. Revisions to this Ordinance

The Town of Pittsboro shall review any revisions to this Riparian Buffer Protection Ordinance made by the Environmental Management Commission and, within 60 days of receipt of the recommended revisions, submit draft amendments to the Commission for its consideration and comments. Within 90 days after receipt of the Commissions' comments, the Town of Pittsboro will incorporate amendments into this ordinance.

Section 14. Definitions

For the purpose of this Ordinance, these terms shall be defined as follows:

- A. 'Access Trails' means pedestrian trails constructed of pervious or impervious surfaces and related structures to access a surface water, including boardwalks, steps, rails, and signage.
- B. 'Airport Facilities' means all properties, facilities, buildings, structures, and activities that satisfy or otherwise fall within the scope of one or more of the definitions or uses of the words or phrases 'air navigation facility', 'airport', or 'airport protection privileges' under G.S. 63-1; the definition of 'aeronautical facilities' in G.S. 63-79(1); the phrase 'airport facilities' as used in G.S. 159-48(b)(1); the phrase 'aeronautical facilities' as defined in G.S. 159-81 and G.S. 159-97; and the phrase 'airport facilities and improvements'

as used in Article V, Section 13, of the North Carolina Constitution, which shall include, without limitation, any and all of the following: airports, airport maintenance facilities, clear zones, drainage ditches, fields, hangars, landing lighting, airport and airport-related offices, parking facilities, related navigational and signal systems, runways, stormwater outfalls, terminals, terminal shops, and all appurtenant areas used or suitable for airport buildings or other airport facilities, and all appurtenant rights-of-way; restricted landing areas; any structures, mechanisms, lights, beacons, marks, communicating systems, or other instrumentalities or devices used or useful as an aid, or constituting an advantage or convenience to the safe taking off, navigation, and landing of aircraft, or the safe and efficient operation or maintenance of an airport or restricted landing area; easements through, or interests in, air space over land or water, interests in airport hazards outside the boundaries of airports or restricted landing areas, and other protection privileges, the acquisition or control of which is necessary to ensure safe approaches to the landing areas of airports and restricted landing areas, and the safe and efficient operation thereof and any combination of any or all of such facilities. Notwithstanding the foregoing, the following shall not be included in the definition of ‘airport facilities’:

1. Satellite parking facilities;
 2. Retail and commercial development outside of the terminal area, such as rental car facilities; and
 3. Other secondary development, such as hotels, industrial facilities, free-standing offices and other similar buildings, so long as these facilities are not directly associated with the operation of the airport, and are not operated by a unit of government or special governmental entity such as an airport authority, in which case they are included in the definition of ‘airport facilities’.
- C. ‘Channel’ means a natural water-carrying trough cut vertically into low areas of the land surface by erosive action of concentrated flowing water or a ditch or canal excavated for the flow of water.
- D. ‘DBH’ means diameter at breast height of a tree measured at 4.5 feet above ground surface level.
- E. ‘Development’ means the same as defined in Rule 15A NCAC 2B .0202(23).
- F. ‘Ditch or canal’ means a man-made channel other than a modified natural stream constructed for drainage purposes that is typically dug through inter-stream divide areas. A ditch or canal may have flows that are perennial, intermittent, or ephemeral and may exhibit hydrological and biological characteristics similar to perennial or intermittent streams.
- G. ‘Ephemeral stream’ means a feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the aquatic bed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and physical characteristics commonly associated with the continuous or intermittent conveyance of water.

- H. 'Existing development' means development, other than that associated with agricultural or forest management activities, that meets one of the following criteria:
1. It either is built or has established a vested right based on statutory or common law as interpreted by the courts, for projects that do not require a state permit, as of the effective date of either local new development stormwater programs implemented under Rule 15A NCAC 2B .0265 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development) or, for projects requiring a state permit, as of the applicable compliance date established in Rule 15A NCAC 2B .0271 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development), Items (5) and (6); or
 2. It occurs after the compliance date set out in Sub-Item (4) (d) of Rule .0265 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development) but does not result in a net increase in built-upon area.
- I. 'Greenway / Hiking Trails' means pedestrian trails constructed of pervious or impervious surfaces and related structures including but not limited to boardwalks, steps, rails, and signage, and that generally run parallel to the shoreline.
- J. 'High Value Tree' means a tree that meets or exceeds the following standards: for pine species, 14-inch DBH or greater or 18-inch or greater stump diameter; or for hardwoods and wetland species, 16-inch DBH or greater or 24-inch or greater stump diameter.
- K. 'Intermittent stream' means a well-defined channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff. An intermittent stream often lacks the biological and hydrological characteristics commonly associated with the continuous conveyance of water.
- L. 'Jordan nutrient strategy' or 'Jordan water supply nutrient strategy' means the set of Rules 15A NCAC 2B .0262 through .0273 and .0311(p).
- M. 'Jordan Reservoir' means the surface water impoundment operated by the US Army Corps of Engineers and named B. Everett Jordan Reservoir, as further delineated for purposes of the Jordan nutrient strategy in Rule 15A NCAC 2B .0262(4).
- N. 'Jordan watershed' means all lands and waters draining to B. Everett Jordan Reservoir.
- O. 'New Development' means any development project that does not meet the definition of existing development set out in this Ordinance. "Perennial stream" means a well-defined channel that contains water year round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a perennial stream, but it also carries stormwater runoff. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.
- P. "Perennial waterbody" means a natural or man-made basin, including lakes, ponds, and reservoirs, that stores surface water permanently at depths

sufficient to preclude growth of rooted plants. For the purpose of the State's riparian buffer protection program, the waterbody must be part of a natural drainage way (i.e., connected by surface flow to a stream).

- Q. 'Shoreline stabilization' is the in-place stabilization of an eroding shoreline. Stabilization techniques which include "soft" methods or natural materials (such as root wads, or rock vanes) may be considered as part of a restoration design. However, stabilization techniques that consist primarily of "hard" engineering, such as concrete lined channels, riprap, or gabions, while providing bank stabilization, shall not be considered stream restoration.
- R. 'Stream restoration' is defined as the process of converting an unstable, altered or degraded stream corridor, including adjacent riparian zone and flood-prone areas to its natural or referenced, stable conditions considering recent and future watershed conditions. This process also includes restoring the geomorphic dimension, pattern, and profile as well as biological and chemical integrity, including transport of water and sediment produced by the stream's watershed in order to achieve dynamic equilibrium. 'Referenced' or 'referenced reach' means a stable stream that is in dynamic equilibrium with its valley and contributing watershed. A reference reach can be used to develop natural channel design criteria for stream restoration projects.
- S. "Stream" means a body of concentrated flowing water in a natural low area or natural channel on the land surface.
- T. 'Stump diameter' means the diameter of a tree measured at six inches above the ground surface level.
- U. "Surface waters" means all waters of the state as defined in G.S. 143-212 except underground waters
- V. "Tree" means a woody plant with a DBH equal to or exceeding five inches or a stump diameter exceeding six inches.
- W. 'Temporary road' means a road constructed temporarily for equipment access to build or replace hydraulic conveyance structures such as bridges, culverts, pipes or water dependent structures, or to maintain public traffic during construction.

Appendix B – Chatham Park Stormwater Manual

Operation & Maintenance Agreement



Project Name: _____

Location: _____

Cover Page

Maintenance records shall be kept on the following BMP(s). This maintenance record shall be kept in a log in a known set location. Any deficient BMP elements noted in the inspection will be corrected, repaired, or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the pollutant removal efficiency of the BMP(s).

The BMP(s) on this project include (check all that apply & corresponding O&M tables will be added automatically):

Bioretention Cell	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Dry Detention Basin	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Grassed Swale	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Green Roof	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Infiltration Basin	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Infiltration Trench	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Level Spreader/VFS	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Permeable Pavement	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Proprietary System	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Rainwater Harvesting	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Sand Filter	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Stormwater Wetland	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Wet Detention Basin	Quantity: <input type="text"/>	Location(s): <input type="text"/>
Disconnected Impervious Area	Present: <input type="checkbox"/>	Location(s): <input type="text"/>
Tree Wells	Quantity: <input type="text"/>	Location(s): <input type="text"/>
User Defined BMP	Present: <input type="checkbox"/>	Location(s): <input type="text"/>

I acknowledge and agree by my signature below that I am responsible for the performance of the maintenance procedures listed for each BMP above, and attached O&M tables. I agree to notify the Chatham Park POA and the Town of Pittsboro of any problems with the system or prior to any changes to the system or responsible party.

* Responsible Party:	<input type="text"/>
Title & Organization:	<input type="text"/>
Street address:	<input type="text"/>
City, state, zip:	<input type="text"/>
Phone number(s):	<input type="text"/>
Email:	<input type="text"/>

Signature: _____

Date: _____

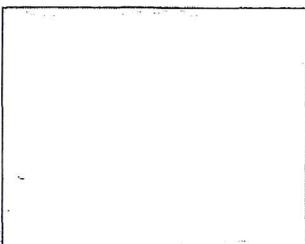
I, _____, a Notary Public for the State of _____

County of _____, do hereby certify that _____

personally appeared before me this _____ day of _____ and

acknowledge the due execution of the Operations and Maintenance Agreement .

Witness my hand and official seal, _____



Seal

My commission expires _____

BIORETENTION

Bioretention Maintenance Requirements

Important operation and maintenance procedures:

- Immediately after the bioretention cell is established, the plants will be watered twice weekly if needed until the plants become established (commonly six weeks).
- Snow, mulch or any other material will NEVER be piled on the surface of the bioretention cell.
- Wheeled or tracked equipment will NEVER be driven over the bioretention planting surface.
- Special care will be taken to prevent sediment from entering the bioretention cell.
- If standing water is present 2 days after rainfall, conduct an infiltration test of the soil media.

After the bioretention cell is established, inspect it **quarterly**. Inspection activities shall be performed as follows and maintenance activities shall commence **immediately** to remediate any problems observed per the table below.

BMP element:	Potential problem:	How to remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the BMP	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil to remove the gully, and plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at a height of approximately six inches.
The inlet device	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged.	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.
The pretreatment area	Flow is bypassing pretreatment area and/or gullies have formed.	Regrade if necessary to route all flow to the pretreatment area. Restabilize the area after grading.
	Sediment has accumulated to a depth greater than three inches.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and restabilize the pretreatment area.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand.
The bioretention cell: vegetation	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices.
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	Tree stakes/wires are present six months after planting.	Remove tree stake/wires (which can kill the tree if not removed).

Bioretention Maintenance Requirements (continued)

BMP element:	Potential problem:	How to remediate the problem:
The bioretention cell: soils and mulch	Mulch is breaking down or has floated away.	Spot mulch if there are only random void areas. Replace whole mulch layer if necessary. Remove the remaining much and replace with triple shredded hard wood mulch at a maximum depth of three inches.
	Soils and/or mulch are clogged with sediment.	Determine the extent of the clogging - remove and replace either just the top layers or the entire media as needed. Dispose of the spoil in an appropriate off-site location. Use triple shredded hard wood mulch at a maximum depth of three inches. Search for the source of the sediment and remedy the problem if possible.
	An annual soil test shows that pH has dropped or heavy metals have accumulated in the soil media.	Dolomitic lime shall be applied as recommended per the soil test and toxic soils shall be removed, disposed of properly and replaced with new planting media.
The underdrain system (if applicable)	Clogging has occurred.	Wash out the underdrain system.
The drop inlet	Clogging has occurred.	Clean out the drop inlet. Dispose of the sediment off-site.
	The drop inlet is damaged	Repair or replace the drop inlet.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

DRY DETENTION BASIN

Dry Detention Pond Maintenance Requirements

Important maintenance procedures:

- The drainage area will be managed to reduce the sediment load to the dry extended detention basin.
- Immediately after the dry extended detention basin is established, the vegetation will be watered twice weekly if needed until the plants become established (commonly six weeks).
- No portion of the dry extended detention pond will be fertilized after the first initial fertilization that is required to establish the vegetation.
- The vegetation in and around the basin will be maintained at a height of approximately six inches.
- If cracks, seepage, or woody vegetation is present, consult a dam safety expert for a dam inspection.

The measuring device used to determine the sediment elevation shall be such that it will give an accurate depth reading and not readily penetrate into accumulated sediments.

After the dry detention basin is established, it will be inspected **quarterly**. Inspection activities shall be performed as follows and any problems identified will be remediated immediately per the table below.

BMP element:	Potential problem:	How to remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the BMP	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at a height of approximately six inches.
The inlet device	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged.	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.
The forebay	Trash/debris is present.	Remove the trash/debris.
	Erosion has occurred or riprap is displaced.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If pesticides are used, wipe them on the plants rather than spraying.

Dry Detention Pond Maintenance Requirements (continued)

BMP element:	Potential problem:	How to remediate the problem:
The main treatment area	Sediment has accumulated and reduced the depth to 75% of the original design depth (per pond design data sheet)	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP. Revegetate disturbed areas immediately with sod (preferred) or seed protected with securely staked erosion mat.
	Water is standing more than 5 days after a storm event.	Check outlet structure for clogging. If it is a design issue, consult an appropriate professional.
	Weeds and noxious plants are growing in the main treatment area.	Remove the plants by hand or by wiping them with pesticide (do not spray).
The embankment	Shrubs or trees have started to grow on the embankment.	Remove shrubs or trees immediately.
	Grass cover is unhealthy or eroding.	Restore the health of the grass cover – consult a professional if necessary.
	Signs of seepage on the downstream face.	Consult a professional.
	Evidence of muskrat or beaver activity is present.	Use traps to remove muskrats and consult a professional to remove beavers.
	An annual inspection by an appropriate professional shows that the embankment needs repair.	Make all needed repairs.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

Dry Detention Pond Design Summary

Dry Pond Diagram

<p>DRY POND ID <input style="width:100%;" type="text"/></p> <p>Pretreatment <input type="checkbox"/> Yes Has Veg. Filter <input type="checkbox"/> Yes</p>	<p>FOREBAY</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>	<p>MAIN POND</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>
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<p>DRY POND ID <input style="width:100%;" type="text"/></p> <p>Pretreatment <input type="checkbox"/> Yes Has Veg. Filter <input type="checkbox"/> Yes</p>	<p>FOREBAY</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>	<p>MAIN POND</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>
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<p>DRY POND ID <input style="width:100%;" type="text"/></p> <p>Pretreatment <input type="checkbox"/> Yes Has Veg. Filter <input type="checkbox"/> Yes</p>	<p>FOREBAY</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>	<p>MAIN POND</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>
<p>DRY POND ID <input style="width:100%;" type="text"/></p> <p>Pretreatment <input type="checkbox"/> Yes Has Veg. Filter <input type="checkbox"/> Yes</p>	<p>FOREBAY</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>	<p>MAIN POND</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>
<p>DRY POND ID <input style="width:100%;" type="text"/></p> <p>Pretreatment <input type="checkbox"/> Yes Has Veg. Filter <input type="checkbox"/> Yes</p>	<p>FOREBAY</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>	<p>MAIN POND</p> <p>Temporary Pool El: <input type="text"/> Clean Out Depth: <input type="text" value="0"/> Sediment Storage El: <input type="text"/> Bottom Elevation: <input type="text"/></p>

LEVEL SPREADER & VEGETATED FILTER STRIP

Level Spreader-Vegetated Filter Strip / Restored Riparian Buffer Maintenance Requirements

Important maintenance procedures:

- Immediately after the filter strip is established, any newly planted vegetation will be watered twice weekly if needed until the plants become established (commonly six weeks).
- Once a year, the filter strip will be reseeded to maintain a dense growth of vegetation
- Stable groundcover will be maintained in the drainage area to reduce the sediment load to the vegetation.

Two to three times a year, grass filter strips will be mowed and the clippings harvested to promote the growth of thick vegetation with optimum pollutant removal efficiency. Turf grass should not be cut shorter than 3 to 5 inches and may be allowed to grow as tall as 12 inches depending on aesthetic requirements (NIPC, 1993). Forested filter strips do not require this type of maintenance.

- Once a year, the soil will be aerated if necessary.
- Once a year, soil pH will be tested and lime will be added if necessary.

After the filter strip is established, it will be inspected **quarterly and within 24 hours after every storm event greater than 1.0 inch (or 1.5 inches if in a Coastal County)**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the BMP	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at a height of approximately six inches.
The flow splitter device (if applicable)	The flow splitter device is clogged.	Unclog the conveyance and dispose of any sediment off-site.
	The flow splitter device is damaged.	Make any necessary repairs or replace if damage is too large for repair.
The inlet device	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged.	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.

LS-VFS / Restored Riparian Buffer Maintenance Requirements (Continued)

The swale and the level lip	The swale is clogged with sediment.	Remove the sediment and dispose of it off-site.
	The level lip is cracked, settled, undercut, eroded or otherwise damaged.	Repair or replace lip.
	There is erosion around the end of the level spreader that shows stormwater has bypassed it.	Regrade the soil to create a berm that is higher than the level lip, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Trees or shrubs have begun to grow on the swale or just downslope of the level lip.	Remove them.
The bypass channel	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then reestablish proper erosion control.
	Turf reinforcement is damaged or ripap is rolling downhill.	Study the site to see if a larger bypass channel is needed (enlarge if necessary). After this, reestablish the erosion control material.
The filter strip	Grass is too short or too long (if applicable).	Maintain grass at a height of approximately three to six inches.
	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Sediment is building up on the filter strip.	Remove the sediment and restabilize the soil with vegetation if necessary. Provide lime and a one-time fertilizer application.
	Plants are desiccated.	Provide additional irrigation and fertilizer as needed.
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application.
	Nuisance vegetation is choking out desirable species.	Remove vegetation by hand if possible. If pesticide is used, do not allow it to get into the receiving water.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

GRASSED SWALE

Grassed Swale Maintenance Requirements

Important maintenance procedures:

- The drainage area of the grassed swale will be carefully managed to reduce the sediment load to the grassed swale.
- After the first-time fertilization to establish the grass in the swale, fertilizer will not be applied to the grassed swale.

The grassed swale will be inspected **once a quarter**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
The perimeter of the BMP	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at a height of approximately six inches.
The entire length of the swale	Trash/debris is present.	Remove the trash/debris.
	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then re-sod (or plant with other appropriate species) and water until established. Provide lime and a one-time fertilizer application.
	Sediment covers the grass at the bottom of the swale.	Remove sediment and dispose in an area that will not impact streams or BMPs. Re-sod if necessary.
	Vegetation is too short or too long.	Maintain vegetation at a height of approximately six inches.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

INFILTRATION BASIN

Infiltration System Maintenance Requirements

Important maintenance procedures:

- The drainage area will be carefully managed to reduce The sediment load to The infiltration basin.
- Immediately after the infiltration basin is established, the vegetation will be watered twice weekly if needed until the plants become established (commonly six weeks).
- No portion of the infiltration basin will be fertilized after the initial fertilization that is required to establish the vegetation.
- The vegetation in and around the basin will be maintained at a height of approximately six inches.

After the infiltration basin is established, it shall be inspected **once a quarter and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County)**. Records of operation and maintenance shall be kept in a known set location and shall be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the infiltration basin	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
The inlet device: pipe or swale	The pipe is clogged (if applicable).	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged (if applicable).	Replace the pipe.
	Erosion is occurring in the swale (if applicable).	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
The forebay	Sediment has accumulated and reduced the depth to 75% of the original design depth.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP.
	Erosion has occurred or riprap is displaced.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If pesticides are used, wipe them on the plants rather than spraying.
The main treatment area	A visible layer of sediment has accumulated.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP. Replace any media that was removed in the process. Revegetate disturbed areas immediately.
	Water is standing more than 5 days after a storm event.	Replace the top few inches of filter media and see if this corrects the standing water problem. If so, revegetate immediately. If not, consult an appropriate professional for a more extensive repair.
	Weeds and noxious plants are growing in the main treatment area.	Remove the plants by hand or by wiping them with pesticide (do not spray).
The embankment	Shrubs or trees have started to grow on the embankment.	Remove shrubs or trees immediately.
	An annual inspection by an appropriate professional shows that the embankment needs repair.	Make all needed repairs.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.

The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.
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PERMEABLE PAVEMENT

Permeable Pavement Maintenance Requirements

At all times, the pavement shall be kept free of:

- Debris and particulate matter through frequent blowing that removes such debris, particularly during the fall and spring.
- Piles of soil, sand, mulch, building materials or other materials that could deposit particulates on the pavement.
- Piles of snow and ice.
- Chemicals of all kinds, including deicers.

The permeable pavement will be inspected **once a quarter**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the permeable pavement	Areas of bare soil and/or erosive gullies	Regrade the soil if necessary to remove the gully, then plant ground cover and water until established.
	A vegetated area drains toward the pavement.	Regrade the area so that it drains away from the pavement, then plant ground cover and water until established.
The inlet device	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged.	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.
The surface of the permeable pavement	Trash/debris present	Remove the trash/debris.
	Weeds	Do not pull the weeds (may pull out media as well). Spray them with a systemic herbicide such as glyphosate and then return within the week to remove them by hand. (Another option is to pour boiling water on them or steam them.)
	Sediment	Vacuum sweep the pavement.
	Rutting, cracking or slumping or damaged structure	Consult an appropriate professional.
Observation well	Water present more than five days after a storm event	Clean out clogged underdrain pipes. Consult an appropriate professional for clogged soil subgrade.
Educational sign	Missing or is damaged.	Replace the sign.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

SAND FILTER

Sand Filter Maintenance Requirements

Important maintenance procedures:

- The drainage area will be carefully managed to reduce the sediment load to the sand filter.
- The sedimentation chamber or forebay will be cleaned out whenever sediment depth exceeds six inches.
- Once a year, sand media will be skimmed.
- The sand filter media will be replaced whenever it fails to function properly after maintenance.

The sand filter shall be inspected **quarterly and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County)**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
Entire BMP	Trash/debris is present.	Remove the trash/debris.
Adjacent pavement (if applicable)	Sediment is present on the pavement surface.	Sweep or vacuum the sediment as soon as possible.
Perimeter of sand filter	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at an appropriate height.
Flow diversion structure	The structure is clogged.	Unclog the conveyance and dispose of any sediment offsite.
	The structure is damaged.	Make any necessary repairs or replace if damage is too large for repair.
The inlet device	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged.	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.
Forebay or pretreatment area	Sediment has accumulated to a depth of greater than six inches.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and stabilize or dispose of it in a location where it will not cause impacts to streams or the BMP.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If a pesticide is used, wipe it on the plants rather than spraying.
Filter bed and underdrain collection system	Water is ponding on the surface for more than 24 hours after a storm.	Check to see if the collector system is clogged and flush if necessary. If water still ponds, remove the top few inches of filter bed media and replace. If water still ponds, then consult an expert.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

STORMWATER WETLAND

Stormwater Wetland Maintenance Requirements

Important maintenance procedures:

- Immediately following construction of the stormwater wetland, bi-weekly inspections will be conducted and wetland plants will be watered bi-weekly until vegetation becomes established (commonly six weeks).
- No portion of the stormwater wetland will be fertilized after the first initial fertilization that is required to establish the wetland plants.
- Stable groundcover will be maintained in the drainage area to reduce the sediment load to the wetland.
- Once a year, a dam safety expert should inspect the embankment.

After the stormwater wetland is established, it shall be inspected **monthly and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County)**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How I will remediate the problem:
Entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the BMP	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at a height of approximately six inches.
Forebay	Sediment has accumulated in the forebay to a depth that inhibits the forebay from	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If a pesticide is used, wipe it on the plants rather than spraying.
The inlet device	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged.	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.

Stormwater Wetland Maintenance Requirements (Continued)

Deep pool, shallow water and shallow land areas	Algal growth covers over 50% of the deep pool and shallow water areas.	Consult a professional to remove and control the algal growth.
	Cattails, phragmites or other invasive plants cover 50% of the deep pool and shallow	Remove invasives by physical removal or by wiping them with pesticide (do not spray) – consult a professional.
	Shallow land remains flooded more than 5 days after a storm event.	Unclog the outlet device immediately.
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if necessary.
	Best professional practices show that pruning is needed to maintain optimal plant	Prune according to best professional practices.
	Sediment has accumulated and reduced the depth to 75% of the original design depth of	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP.
Embankment	A tree has started to grow on the embankment.	Consult a dam safety specialist to remove the tree.
	An annual inspection by appropriate professional shows that the embankment	Make all needed repairs.
	Evidence of muskrat or beaver activity is present.	Consult a professional to remove muskrats or beavers.
Micropool	Sediment has accumulated and reduced the depth to 75% of the original design depth.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

WET DETENTION BASIN

Wet Detention Pond Maintenance Requirements

The wet detention basin system is defined as the wet detention basin, pretreatment including forebays and the vegetated filter if one is provided.

Important maintenance procedures:

- Immediately after the wet detention basin is established, the plants on the vegetated shelf and perimeter of the basin should be watered twice weekly if needed, until the plants become established (commonly six weeks).
- No portion of the wet detention pond should be fertilized after the first initial fertilization that is required to establish the plants on the vegetated shelf.
- Stable groundcover should be maintained in the drainage area to reduce the sediment load to the wet detention basin.
- If the basin must be drained for an emergency or to perform maintenance, the flushing of sediment through the emergency drain should be minimized to the maximum extent practical.
- Once a year, a dam safety expert should inspect the embankment.

After the wet detention pond is established, it should be inspected **once a month and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County)**. Records of operation and maintenance should be kept in a known set location and must be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How I will remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the BMP	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at a height of approximately six inches.
The inlet device	The pipe is clogged.	Unclog the pipe. Dispose of the sediment off-site.
	The pipe is cracked or otherwise damaged.	Replace the pipe.
	Erosion is occurring in the swale.	Regrade the swale if necessary to smooth it over and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Stone verge is clogged or covered in sediment (if applicable).	Remove sediment and replace with clean stone.
The forebay	Sediment has accumulated to a depth greater than the original design depth for sediment storage.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If pesticide is used, wipe it on the plants rather than spraying.
The vegetated shelf	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	Weeds are present.	Remove the weeds, preferably by hand. If pesticide is used, wipe it on the plants rather than spraying.

Wet Detention Pond Maintenance Requirements (Continued)

The main treatment area	Sediment has accumulated to a depth greater than the original design sediment storage depth.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the BMP.
	Algal growth covers over 50% of the area.	Consult a professional to remove and control the algal growth.
	Cattails, phragmites or other invasive plants cover 50% of the basin surface.	Remove the plants by wiping them with pesticide (do not spray).
The embankment	Shrubs have started to grow on the embankment.	Remove shrubs immediately.
	Evidence of muskrat or beaver activity is present.	Use traps to remove muskrats and consult a professional to remove beavers.
	A tree has started to grow on the embankment.	Consult a dam safety specialist to remove the tree.
	An annual inspection by an appropriate professional shows that the embankment needs repair. (if applicable)	Make all needed repairs.
The outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged	Repair or replace the outlet device.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.
<p align="center">The measuring device used to determine the sediment elevation shall be such that it will give an accurate depth reading and not readily penetrate into accumulated sediments.</p>		

Wet Detention Pond Design Summary

Wet Pond Diagram

WET POND ID	FOREBAY	MAIN POND
<input style="width: 100%;" type="text"/> Pretreatment other than forebay? <input type="checkbox"/> No Has Veg. Filter? <input type="checkbox"/> Yes	Permanent Pool El. <input style="width: 50%;" type="text"/> Temporary Pool El. <input style="width: 50%;" type="text"/> Clean Out Depth: <input style="width: 50%; text-align: center;" type="text" value="0"/> Sediment Removal El. <input style="width: 50%;" type="text"/> Bottom Elevation: <input style="width: 50%;" type="text"/>	Permanent Pool El. <input style="width: 50%;" type="text"/> Temporary Pool El. <input style="width: 50%;" type="text"/> Clean Out Depth: <input style="width: 50%; text-align: center;" type="text" value="0"/> Sediment Removal El. <input style="width: 50%;" type="text"/> Bottom Elevation: <input style="width: 50%;" type="text"/>
<input style="width: 100%;" type="text"/> Pretreatment other than forebay? <input type="checkbox"/> No Has Veg. Filter? <input type="checkbox"/> Yes	Permanent Pool El. <input style="width: 50%;" type="text"/> Temporary Pool El. <input style="width: 50%;" type="text"/> Clean Out Depth: <input style="width: 50%; text-align: center;" type="text" value="0"/> Sediment Removal El. <input style="width: 50%;" type="text"/> Bottom Elevation: <input style="width: 50%;" type="text"/>	Permanent Pool El. <input style="width: 50%;" type="text"/> Temporary Pool El. <input style="width: 50%;" type="text"/> Clean Out Depth: <input style="width: 50%; text-align: center;" type="text" value="0"/> Sediment Removal El. <input style="width: 50%;" type="text"/> Bottom Elevation: <input style="width: 50%;" type="text"/>
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ATTACH ADDITIONAL SHEETS IF NECESSARY

GREEN ROOF

Rooftop Runoff Management Maintenance Requirements

Important operation and maintenance procedures:

- The plants will be watered during extended periods of dry weather.
- Fertilize only once per year as long as the rooftop runoff system is not intended for nutrient removal.

The rooftop runoff management system will be inspected **once a quarter and within 24 hours** after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County). Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
The plants materials	Weeds are present.	Remove the weeds by hand.
	Vegetation is dead or diseased.	Try to determine the cause of the problem (may wish to consult an expert). Correct the problem and replace the plants.
The flow diversion structure	The structure is clogged.	Unclog the conveyance and dispose of any sediment off-site.
	The structure is damaged.	Make any necessary repairs or replace if damage is too large for repair.
Gutters, drains and spouts	Clogging has occurred.	Remove leaves, debris, and other foreign matter and dispose of in a manner that will not impact streams or the BMP.
	Damage has occurred.	Repair or replace the damaged conveyances.

RAINWATER HARVESTING

Rainwater Harvesting Maintenance Requirements

Important operation and maintenance procedures:

- The roof area will be maintained to reduce the debris and sediment load to the system. Excess debris can clog the system and lead to bypass of the design storm, and reduced reuse volume.
- To ensure proper operation as designed, a licensed Professional Engineer, Landscape Architect, or other qualified professional will inspect the system annually.
- The system components will be repaired or replaced whenever they fail to function properly.
- If the outlet is metered, use must be recorded at a minimum of monthly. These records shall be kept on site for inspection by DWQ.

The system will be inspected by the owner/operator at least **monthly and within 24 hours** after each rain event. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
The entire system	A component of the system is damaged or leaking.	Make any necessary repairs or replace if damage is too large for repair.
	Water is flowing out of the overflow pipe during a design rainfall or smaller (usually a 1" or 1.5" rainfall).	Check system for clogging and damage. Repair as needed so the design volume is stored properly without discharging during a design storm.
		Check that the pump is operating properly and that the water is actually being used at the volume designed. If it is still not operating properly, then consult an expert.
The captured roof area	Excess debris or sediment is present on the rooftop.	Remove the debris or sediment as soon as possible.
The gutter system	Gutters are clogged, or water is backing up out of the gutter system.	Unclog and remove debris. May need to install gutter screens to prevent future clogging.
	Rooftop runoff not making it into gutter system.	Correct the positioning or installation of gutters. Replace if necessary to capture the roof runoff.
The pump	Pump is not operating properly.	Check to see if the system is clogged and flush if necessary. If it is still not operating, then consult an expert.
The overflow pipe	Erosion is evident at the overflow discharge point.	Stabilize immediately.
	The overflow pipe is clogged.	Unclog or replace if it cannot be unclogged.
	The outflow pipe is damaged.	Repair or replace the pipe.
The secondary water	Not operating properly.	Consult an expert.
The cistern	Sediment accumulation of 5% or more of the design volume.	Remove sediment.
	Algae growth is present inside the cistern.	Do not allow sunlight to penetrate the cistern. Treat the water to remove/prevent algae.
	Mosquitoes in the cistern.	Check screens for damage and repair/replace. Treat with 'mosquito dunks' if necessary.
The screens and filters	Debris and/or sediment has accumulated. Screens and filters are clogged.	Search for the source of the debris/sediment and remedy the problem if possible. Clean/clear debris/sediment from screen or filter. Replace if it cannot be cleaned.

PROPRIETARY SYSTEM

Proprietary System Maintenance Requirements

How many devices are
Contech StormFilters?

1

< < Number does not match Cover
Sheet.

Important operation and maintenance procedures:

- The drainage area will be carefully managed to reduce the sediment load to the StormFilter.
- The sedimentation chamber or forebay will be cleaned out whenever sediment depth exceeds six inches.

The StormFilter system will be inspected **quarterly**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
Adjacent pavement (if applicable)	Trash/debris is present.	Remove the trash/debris.
Flow diversion structure	Sediment is present on the pavement surface.	Sweep or vacuum the sediment as soon as possible.
StormFilter Cartridges	The structure is clogged.	Unclog the conveyance and dispose of any sediment offsite.
	The structure is damaged.	Make any necessary repairs or replace if damage is too large for
Outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment offsite.
	The outlet device is damaged	Repair or replace the outlet device.
Receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

All other operation and maintenance activities should be in accordance with Contech's **StormFilter Inspection and Maintenance Procedures** document. Any problems that are found shall be repaired immediately. The responsible party shall have received and understand Contech's **StormFilter Inspection and Maintenance Procedures** document.

ATTACH MANUFACTURER'S MAINTENANCE MANUAL FOR ALL PROPRIETARY DEVICES

DISCONNECTED IMPERVIOUS AREA

Disconnected Impervious Area Maintenance Requirements

Important operation and maintenance procedures:

The roof area will be maintained to reduce the debris and sediment load to the system. Excess debris can clog the system and lead to bypass of the design storm, and reduced infiltration and pollutant removal.

To ensure proper operation as designed, a licensed Professional Engineer, Landscape Architect, or other qualified professional will inspect the system annually.

The system components will be repaired or replaced whenever they fail to function properly.

The system will be visually inspected by the owner/operator at least **quarterly**. Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How to remediate the problem:
The captured impervious area	Excess debris or sediment is present on the rooftop or impervious surface.	Remove the debris or sediment as soon as possible.
The gutter system (if applicable)	Gutters are clogged, or water is backing up out of the gutter system.	Unclog and remove debris. May need to install gutter screens to prevent future clogging.
	Rooftop runoff not making it into gutter system.	Correct the positioning or installation of gutters. Replace if necessary to capture the roof runoff.
	Rooftop runoff causing erosion at outlet.	Install or repair splash blocks as needed.
Roadways & parking lots (if applicable)	Runoff flows to the pervious area as concentrated flow.	Remove any sediment or obstructions at the edge of the impervious area, repair gravel verge
	Energy dissipaters are unevenly settled, undercut, eroded or otherwise damaged.	Repair or replace energy dissipater.
The pervious area	Erosion is evident	Repair the eroded area and stabilize immediately.
	There is erosion around the end of the pervious area that shows stormwater has bypassed it.	Regrade the soil to create a small berm, and then plant turf grass and water until it is established. Provide lime and a one-time fertilizer application.
	Unintended trees or shrubs have begun to grow in the pervious area.	Remove them and re-establish vegetation per the original landscaping plan.
	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant with turf grass and water until it is established. Provide lime and a one-time fertilizer application.
	Standing water is present 24 hours after rainfall.	Fill shallow depressions with topsoil and seed mix. Regrade the area as necessary to reestablish sheet flow across the pervious area.
	Vegetation is too long.	Maintain vegetation at a height of approximately 2 to 6 inches.
Property Owner Participation	Homeowners have re-routed gutters or otherwise altered the system in a manner which adversely impacts performance.	Provide educational materials to homeowners, and contact the Chatham Park POA.

TREE WELLS

Stormwater Tree Well Maintenance Requirements

Important operation and maintenance procedures:

- Immediately after the tree well is established, the plants will be watered twice weekly if needed until the plants become established (commonly six weeks).
- Wheeled or tracked equipment will NEVER be driven over the tree well planting surface.
- Special care will be taken to prevent sediment from entering the tree well.
- If standing water is present 2 days after rainfall, conduct an infiltration test of the soil media.

After the tree well is established, visually inspect it **monthly**. Inspection activities shall be performed as follows and maintenance activities shall commence **immediately** to remediate any problems observed per the table below.

BMP element:	Potential problem:	How to remediate the problem:
The entire BMP	Trash/debris is present.	Remove the trash/debris.
The perimeter of the BMP	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil to remove the gully, plant new vegetation, and plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Broken or damaged concrete or edge material	Repair concrete or edge material to original design specifications.
Curb Cuts / Inlets	The inlet is clogged.	Unclog the inlet, remove sediment / debris / trash. Dispose of the sediment off-site.
	Erosion is occurring in the tree well.	Regrade the splash pad and planting surface to smooth it over and provide erosion control devices such as additional / larger river rock, reinforced turf matting or riprap to avoid future problems.
The pretreatment area	Sediment has accumulated to a depth greater than three inches.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and restabilize the pretreatment area.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand.
The tree well vegetation:	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices.
	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	Tree stakes/wires are present six months after planting.	Remove tree stake/wires (which can kill the tree if not removed).

Stormwater Tree Well Maintenance Requirements (continued)

BMP element:	Potential problem:	How to remediate the problem:
The tree well soils and mulch:	Mulch is breaking down or has floated away.	Spot mulch if there are only random void areas. Replace whole mulch layer if necessary. Remove the remaining mulch and replace with triple shredded hard wood mulch at a maximum depth of three inches.
	Soils and/or mulch are clogged with sediment.	Determine the extent of the clogging - remove and replace either just the top layers or the entire media as needed. Dispose of the spoil in an appropriate off-site location. Use triple shredded hard wood mulch at the depth indicated on the construction plans. Search for the source of the sediment and remedy the problem if possible.
	An annual soil test shows that pH has dropped or heavy metals have accumulated in the soil media.	Dolomitic lime shall be applied as recommended per the soil test and toxic soils shall be removed, disposed of properly and replaced with new planting media.
The underdrain system (if applicable)	Clogging has occurred.	Wash out the underdrain system. Pipe repair may be needed if underdrain pipe is crushed.
The atrium grate	Clogging has occurred.	Cleanoff the grate. Dispose of debris off-site.
	The atrium grate is damaged	Repair or replace broken grates.
The receiving water	Erosion or other signs of damage have occurred at the outlet.	Contact the Chatham Park POA or the Town of Pittsboro.

USER DEFINED BMP

