CHATHAM PARK

PITTSBORO, NORTH CAROLINA

PLANNED DEVELOPMENT DISTRICT MASTER PLAN

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APPROVED
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BY

CHATHAM PARK INVESTORS LLC

PREPARED BY

SASAKI ASSOCIATES, INC
TEAM CULPEPPER, LLC
KIMLEY-HORN AND ASSOCIATES, INC.
WITHERS & RAVENEL
MORRIS, RUSSELL, EAGLE & WORLEY, PLLC
McKIM & CREED
SOIL & ENVIRONMENTAL CONSULTANTS, PA
VICUS DEVELOPMENT

PREPARED FOR
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THE VISION OF CHATHAM PARK

(Illustrations and photographs are illustrative.)

Chatham Park is envisioned as a comprehensive live-work-play community that will preserve open space, create parks, establish vibrant village centers as focal points for work, entertainment, shopping, dining and recreation and create attractive connections among neighborhoods, businesses, schools and parks, both inside and outside *Chatham Park*.

Chatham Park recognizes the intrinsic value and character of historic Pittsboro and its downtown and will stay connected to this area, to this character, because this connection offers a sense of community that cannot be replaced and must be preserved.

Chatham Park will offer residents the opportunity to walk, bike or drive short distances to work, send their children to nearby schools, and socialize at shops, recreation centers, libraries or parks.

Chatham Park is located adjacent to Haw River and Jordan Lake, which have over 45,000 acres of preserved parkland and natural areas. An extensive network of trails in Chatham Park will connect every resident to these outstanding natural and recreational areas, as well as to historic downtown Pittsboro through the Town's trail network.

Chatham Park is envisioned as having five villages. In combination with the historic downtown, these will serve as activity centers for the region. Creeks and stream valleys will serve as natural buffers between neighborhoods and as trail connection points connecting neighborhoods of distinct personalities.

In addition to the integration of the built and natural settings, *Chatham Park's* master plan proposes a regional mixed use center to offer residents and workers every convenience: shopping, dining, education, recreation and housing will be integrated into a rewarding urbane place. As envisioned, *Chatham Park* will provide essential retail, services and housing into the future without the need to sprawl beyond the Town's service limits. Also, a wide variety of housing choices will be provided.

In accordance with the vision, *Chatham Park* has formed a partnership with the Research Triangle Region's Cleantech Cluster whose goal is to strengthen the region's position as an international hub for technologies that enhance resource conservation, community operating efficiency, convenience of life, and sustainability.

Chatham Park's "Chatham Technology Corridor", with two major highways conveniently connecting it to all parts of the region, provides the region with a new focal point for the expansion of its high quality knowledge workforce. However, this time new jobs will be situated in the same community as the homes of the employees and their families.

The development of *Chatham Park* will evolve in distinct phases, starting with North Village. The gradual unfolding of the development ensures a comfortable pace of organic growth in the community and allows *Chatham Park* dynamic and flexible growth for many years to come. It will also allow opportunities for residents to move to different neighborhoods as their needs change without having to leave their community and friends behind.

Chatham Park, in partnership with Pittsboro, is envisioned as the place where you can live, work, play, enjoy, and continue to be inspired for years to come.

Zoning District Change Application

Chatham Park Investors LLC is requesting that the Town of Pittsboro (or "Town") amend the current zoning on the real property known as *Chatham Park* (or "PDD Property") to the Town's Planned Development District (or "PDD") zoning district. A request for zoning to a PDD requires the applicant to submit a Planned Development District Master Plan ("PDD Master Plan" or "Master Plan"). The documents that follow constitute the PDD Master Plan for *Chatham Park.* As required by the Town's Zoning Ordinance, the PDD zoning and the PDD Master Plan shall be treated as a single item when acted on by the Board of Commissioners.

The actual application, fees and specific attachments related to this requested zoning action have been submitted to the Town separately. A copy of the application form is included for reference. (See Attachment #1.)

The Planned Development District

The PDD zoning district is established and intended to promote innovative land planning, design and layout of large development projects that may not otherwise be permitted under general zoning district standards, subdivision regulations, or other development requirements. The PDD district promotes innovative land planning, design and layout by:

(1) Reducing or eliminating the inflexibility that sometimes results from strict application of zoning and development standards or regulations that were designed primarily for individual lots;
(2) Allowing greater freedom in selecting the means to provide access, light, open space, and design amenities;
(3) Allowing greater freedom for a broad mix of various land uses in the same development;
(4) Promoting quality urban design and environmentally sensitive development by allowing development to take advantage of special site characteristics, locations, and land uses;
(5) Encouraging quality urban design by allowing higher densities when such increases are supported by superior design or the provision of additional amenities; and
(6) Advancing public health, safety and general welfare.

In return for greater flexibility, planned developments in this district are expected to deliver communities of exceptional design, character and quality that preserve critical environmental resources and provide open space amenities. Such communities incorporate creative design in the layout of buildings, open space, and circulation; assure compatibility with surrounding land uses and neighborhood character; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. Because flexibility is essential for the development of such communities, variations from

otherwise applicable regulations and standards may be granted with the adoption of the required Planned Development District Master Plan (PDD Master Plan).

The Planned Development District Master Plan (PDD Master Plan)

The proposed PDD Master Plan for *Chatham Park* is presented here in text, tables and maps and also has been submitted to the Town in electronic form. As the maps contained in this binder are not of a size that can easily viewed, a larger set of maps, also has been submitted to the Town with this application.

In accordance with the Town's Zoning Ordinance, the PDD Master Plan for *Chatham Park* has the following required elements (the following is a summary of the required elements, which are described in greater detail in other sections of this PDD Master Plan):

I. *SITE ANALYSIS ELEMENTS*

(1) A maps identifying the parcels proposed for *Chatham Park* PDD.

(2) A topographic map of the parcels proposed for *Chatham Park* PDD.

(3) A map showing the locations of water bodies, within or adjacent to *Chatham Park* PDD.

(4) Maps showing the locations of wetlands, the 100-year floodplain, slopes greater than 20%, and, stream buffers in *Chatham Park* PDD including comments about these stream buffers.

(5) A map showing the location of known historic structures or sites in *Chatham Park* PDD and comments about the source of the information and the map.

II. *LAND USE ELEMENTS*

(1) A land use map showing the general location of proposed uses in *Chatham Park* PDD and a description of how land uses are arranged.

(2) A table of permitted uses proposed in the *Chatham Park* PDD and discussion of how these apply to the PDD Property.

(3) A summary of the amount or quantity of those proposed uses and discussion of how these apply to the PDD Property.

(4) A boundary buffer plan describing transition treatments between the proposed *Chatham Park* PDD and adjacent properties.

III. *UTILITY AND STORMWATER ELEMENTS*

(1) Utility plans and maps for *Chatham Park* PDD that include the type and general location of existing and proposed potable water, wastewater and reuse water public utilities. Maps for all three are included,

(2) A plan addressing the handling of stormwater and maintenance of stormwater structures, systems, and other stormwater control measures in *Chatham Park* PDD.

IV. *PUBLIC SERVICE ELEMENTS*

(1) A public service plan for *Chatham Park* PDD that evaluates potential impacts on police service, fire service and schools.

V. *TRANSPORTATION ELEMENTS*

(1) A multi-modal transportation plan and map that includes the location of existing and proposed major roads in or adjacent to *Chatham Park* PDD and a general plan for an on-site transportation system that addresses vehicular, bicycle, transit and pedestrian circulation in *Chatham Park* PDD.

VI. *PARKS, GREENWAY, RECREATION AND OPEN SPACE ELEMENTS*

(1) A Parks plan that proposes locations and standards for Greenways and Parks within *Chatham Park* PDD.

(2) An Open Space plan that proposes locations and standards for Open Space within *Chatham Park* PDD.

VII. *DEVELOPMENT STANDARDS / REGULATIONS AND PHASING PLAN*

(1) Proposed land development standards/regulations for *Chatham Park* PDD.

(2) A plan for phasing the development of *Chatham Park* PDD.

VIII. *ADDITIONAL ELEMENTS*

(1) The PDD Master Plan may also include other items or plans that the applicant chooses to include. Several are suggested in this PDD Master Plan for *Chatham Park.*

IX. *SMALL AREA PLANS*

X. ADDITIONAL PROVISIONS

I. *SITE ANALYSIS ELEMENTS*

(1) A map is included that identifies the parcels proposed to be included in *Chatham Park* PDD (**Chatham Park Planned Development District Zoning Map).**

As proposed, the PDD Property currently contains approximately 7,100 acres consisting of 103 parcels. The PDD Property lies between the Town of Pittsboro and the waters of the Haw River and Jordan Lake.

(2) A topographic map of *Chatham Park* PDD and the surrounding area is included. **(Topography)**

(3) A map showing the locations of water bodies within or adjacent to the proposed *Chatham Park* PDD is included. **(Water Bodies)**

(4) Individual maps showing the locations of wetlands, the 100-year floodplain, slopes greater than 20%, and stream buffers follow. **(Wetlands, Floodplains, Slopes Greater than 20%,** and **Stream Buffers)** Of particular importance to the analysis of *Chatham Park* PDD and to the surface waters of the region are the riparian stream buffers. Below is a discussion about the attached map and what it depicts.

Notes with regard to the* Stream Buffers *map.

Pursuant to the Town's Riparian Buffer Protection Ordinance and Zoning Ordinance, riparian buffers will be protected and preserved along all intermittent and perennial streams as shown on either the USGS or Chatham County Soil Survey maps, unless exempted by the Town. Not all of the streams shown on these maps will meet the criteria necessary to require riparian buffers per the ordinances. The attached, **Stream Buffer** map depicts streams and other waters as delineated by Soil & Environmental Consultants, PA and verified by the U.S. Army Corps of Engineers. Stream buffers shown are fifty (50) feet on either side for intermittent streams and perennial streams shown on the NRCS soil survey and for intermittent streams shown on the USGS topographic map. Buffers shown are one-hundred (100) feet on either side for streams shown as perennial on the USGS topographic map.

Any streams shown on the USGS or Chatham County Soil Survey maps beyond those shown on this map, or any streams or waters shown on these maps later determined not to meet buffer requirements, will be evaluated with the Town prior to final application of the riparian buffer ordinance. Any new development within these riparian buffers will be done in compliance with *Section 8: Potential Uses and Associated Requirements of the Riparian Buffer Protection Ordinance* and other relevant sections of the Town's ordinances.

Put simply, riparian buffers of one hundred (100) feet for perennial streams and fifty (50) feet for intermittent streams will be protected and preserved but the final determination of

where these buffers apply will be made in the future by the Town or other certified personnel.

Additional Buffers Along the Haw River

Additional buffers are provided at two locations along the Haw River. First, a three hundred foot (300') buffer from the bank (top of bank) of the Haw River is provided along the river at the most northern river frontage of the PDD Property. This area is within Section 1.1. The second buffer is five hundred feet (500') in width and is located south of the first in Section 1.5. These buffers, while providing additional protection for the river, create greenway linkages, especially for the State-owned parklands along the river. As approved by the Town Board of Commissioners, utilities, greenways and recreation sites may be allowed within these additional buffers. These buffers are shown on two maps, "Stream Buffers" and the "Potential Open Space".

For streams flowing to the Haw River within Sections 1.1, 1.2, 1.3 and 1.5, where Federally listed species currently inhabit this portion of the river and would be protected by the Endangered Species Act of 1973, perennial streams shall have two hundred foot (200') buffers and intermittent streams shall have one hundred foot (100') buffers, measured from the top of bank. The applicability of these additional buffers shall be determined at the time of Small Area Plan submittal.

(5) A map showing the location of known historic structures or sites was produced by the Chatham County Historical Association, Inc. in their report "A PRELIMINARY HISTORICAL ASSESSMENT OF THE AREAS PROPOSED FOR DEVELOPMENT AS CHATHAM PARK, CHATHAM COUNTY, NORTH CAROLINA". This report was delivered in November of 2008. A copy of that map and a description of the sites follow this page. A complete copy of this report can be found as Attachment #2.

II. *LAND USE ELEMENTS*

(1) A map showing the general location of proposed uses is included and identified as the **Land Use Plan**. This map divides *Chatham Park* into twenty-seven (27) "Sections" and identifies five "Activity Centers". These sections are further delineated by their primary land uses as "Residential-East", "Residential", "Residential-Parkway", "Residential-Mixed Use", "Research and Development", "Mixed Use", and "Park/Institutional". The five activity centers, moving from north to south, are identified as "A" through "E".

The lines separating the sections on the **Land Use Plan** map are generally based on both proposed roadway location and natural features. The section boundaries are subject to change, but the cumulative totals of the proposed land uses within *Chatham Park* PDD will not change.

(2) A **Table of Permitted Uses** proposed by this PDD Master Plan is included. This table is based on the Town's "Table of Permitted Uses" as found in the Zoning Ordinance. The table included here identifies the permitted land uses within each of the "Sections" and "Activity Centers". While all uses within the PDD are treated as a "use by right", not all uses permitted in the Town are permitted under this PDD Master Plan. One notable example is that while "Quarries and other extractive industries" are treated as an allowed use, "Hydraulic Fracturing and related processes are prohibited".

This table will be reformulated to match, to the fullest extent possible, the future adopted Unified Development Ordinance but, will retain all uses as listed in this PDD Master Plan.

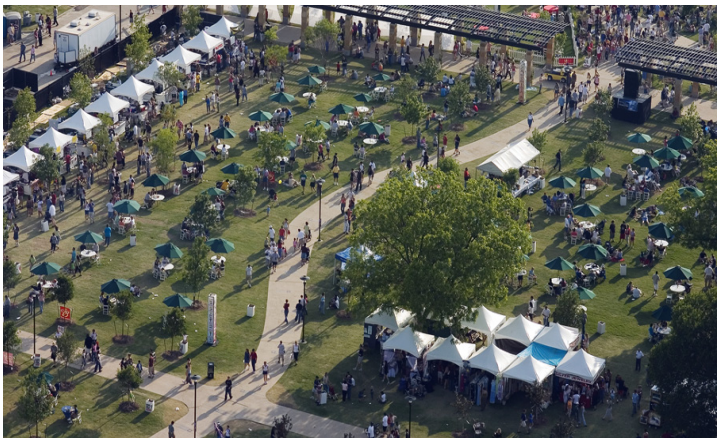
By examining the **Land Use Plan** map and the **Table of Permitted Uses** the proposed locations for uses can be generally identified. The description of the PDD zoning district states that "(a) mix of land uses is expected in the PDD..." and that the PDD Master Plan must identify how uses will be mixed within the PDD. It is clear, based on the map and table presented, that land uses have been mix and mixed in a way that meets the intent of the PDD zoning district. The ordinance also acknowledges, "…that the mix of uses may need to change over time." Procedures for making such changes are also included in the ordinance.

(3) For the purpose of establishing the quantity of land uses within the *Chatham Park* PDD, land uses are divided into two categories, "Residential" and "Non-Residential". "Residential" under this PDD Master Plan is defined as any use that is a dwelling unit or residence. Examples include single-family detached homes and apartments. "Non-Residential" uses are all those uses that are not residences. Examples include grocery stores, offices, community clubhouse, and places of worship. A summary of the quantity of uses within *Chatham Park* PDD is presented in tabular form on the attached **Land Use Summary Table**. Note that this table identifies the relevant quantities for each of the twenty-seven (27) sections and the five (5) activity centers.

Sections having "Residential" uses as their principal use, list the number of "Dwelling Units" (DUs) permitted. Sections having "Non-Residential" uses as their principal use, list the "Gross Square Feet" (GSF) and the "DUs" permitted. "Activity Centers" quantities are listed in GSF. The specific uses permitted in each Section and Activity Center are identified in the **Table of Permitted Uses**. In addition, for Sections whose principal use is Residential, up to ten percent (10%) of the gross land area of that Section may be used for Non-Residential uses that are identified in the **Table of Permitted Uses**. Such uses are those typically associated with residential development such as places of worship, community buildings, and day care centers. This allowance permits uses to be mixed in the form envisioned by the PDD and this PDD Master Plan. Uses such as police and fire stations, public schools, or other public facilities are not counted against the allocated Non-Residential GSF otherwise allowed in any section. Sections 1.5 and 4.5 are intended to be established as public parks and are not identified as having either Residential or Non-Residential uses. Areas of Sections 1.5 and 4.5 not used as public parks will transferred to and become part of the adjacent section or sections. This revision shall be made at the time of approval for small area plans for these areas.

For the Activity Centers shown on the **Land Use Plan**, only GSF is listed. This plan envisions an Activity Center as a location that will foster a compact mixed-use development pattern. Activity Centers are intended to be moderate in scale and contain a mix of uses that serve as convenient, accessible service and retail destinations for surrounding neighborhoods. These Activity Centers are intended primarily for Non-Residential development that is best located at or near a road intersection and not spread across the Sections. The Non-Residential uses and square footage are overlaid on the allocations for each Section. The square footage allocated to an Activity Center is in addition to the allocation assigned to the underlying Section. This allows uses to occur at the Activity Centers that are not allowed in the remainder of the Section. Activity Centers included in this PDD Master Plan do not have fixed boundaries with specific limits. They are general locations that will be identified more specifically as development occurs in *Chatham Park* PDD and as various site plans and subdivision plans are approved. They are limited in size by their allocated square footage, not by their area. In addition, not less than 35% of Dwelling Units shall be within ¾ of a mile of the boundary of an Activity Center.

Each Activity Center shall contain public green(s)/commons area(s) totaling a minimum of two (2) acre~~s~~ in size, centrally located and accessible. A contiguous area is preferred. Areas across from and adjoining a common urban street shall be considered contiguous.



This PDD Master Plan establishes the maximum number of Residential dwelling units at 22,000 DUs and the maximum gross square footage for Non-Residential development at 22,000,000 GSF. When the quantities are added together for all of the Sections, the total numbers are greater than the maximum number of DUs and maximum GSF. This allows flexibility in establishing the actual number of DUs and GSF in Sections as development occurs. However, the maximum number of DUs and GSF cannot be exceeded unless an amendment to *Chatham Park* PDD is approved by the Town Board of Commissioners. In order to assist the Town's staff, the developers of *Chatham Park* PDD, or the master property owners association for *Chatham Park* PDD (the "POA"), will maintain a record of all DUs and GSF approved for development in *Chatham Park* PDD by site plans and subdivision plans approved by the Town, and each applicant who submits a site plan or subdivision plan to the Town for approval shall include with the submittal information on the quantities of DUs or GSF, as applicable, that previously have been approved by the Town.

(4) Perimeter Boundary Transitions must be addressed in the PDD Master Plan. While there are no buffers or transitions areas required between land uses <u>within</u> a PDD, such transitions are required between land uses along the perimeter boundary of a PDD and dissimilar land uses on properties adjoining the perimeter boundary of a PDD. These boundary transitions may include buffers, specific compatible land uses, and/or other transitions and may be varied over their length and/or width to meet the desired intent of this requirement.

To transition between dissimilar land uses along the perimeter of the PDD, three methods may be applied either singularly or in combination. First, development within the PDD will avoid, not prohibit, the placement of land uses that are dissimilar to those adjacent at the perimeter of the PDD. Second, if a dissimilar land use is to be placed at the perimeter of the PDD, the impact of that use will be mitigated by establishing a reasonable distance between the dissimilar land uses. For example, if an office building is to be placed near the perimeter and a single-family home is adjacent, the distance between the structures will be established that mitigates the impact on the neighboring home. The third method is to maintain existing vegetation or to plant additional vegetation that will buffer the dissimilar uses. All three of these methods will depend on how dissimilar the land uses are and the specific site conditions.

Because development within *Chatham Park* PDD will require approval by the Town of either a site plan or subdivision plan, the final design for these perimeter boundary transitions will be approved during the applicable process. These transitions should generally be identified during the review of a Small Area Plans, however the details of these transitions will be approved as part of those specific site plans or subdivision plans that are adjacent to the perimeter. The guiding principle for these transitions is, to the extent reasonably possible, that uses within *Chatham Park* PDD will be compatible with land uses adjacent to *Chatham Park* PDD or the impact of that use will be mitigated.

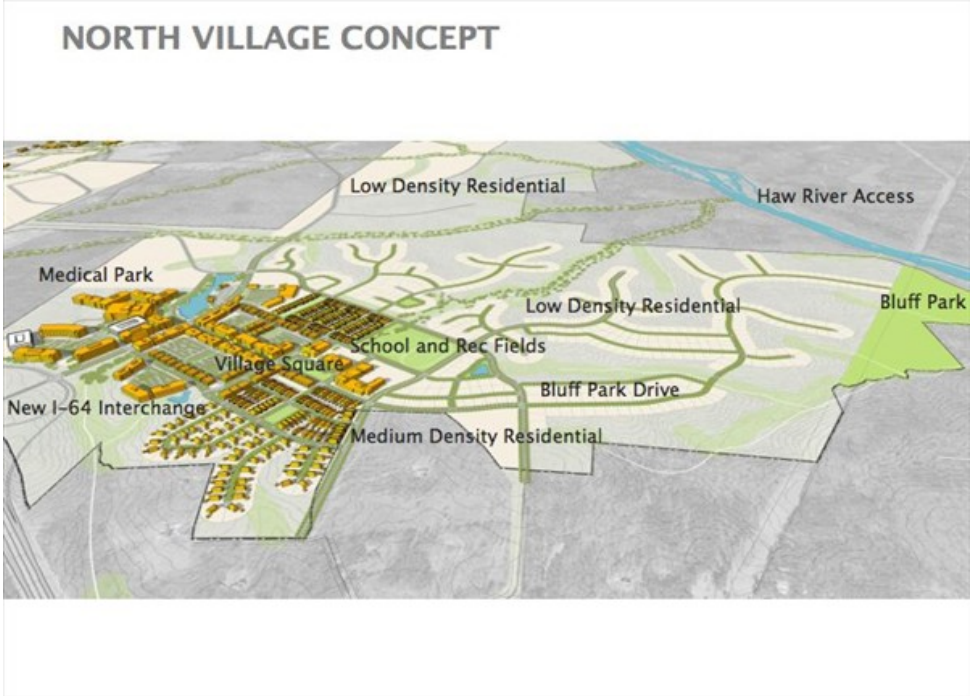
For land uses allowed in Chatham Park that are identified as "permitted by SUP (Special Use Permit) only" in the Town's Zoning Ordinance, when proposed within 500 feet of

the perimeter boundary shall include proposed Perimeter Boundary Transition treatments with the required Site Plan applications. In these cases the Town's review of the site plan and the Perimeter Boundary Transition treatments shall include a Public Hearing.

(5) As described previously, additional buffers shall be applied along the Haw River. (See "*SITE ANALYSIS ELEMENTS,* Additional Buffers Along the Haw River" above.) These additional buffers are part of a **River Transition Zone**. While the **River Transition Zone** is one thousand feet (1,000') in width, it is different for each of the two identified areas.

For the first River Transition Zone, the more northern of the two areas, the buffer along the river is three hundred feet (300') wide. Moving away from the river and parallel to the buffer, the next two hundred feet (200') is limited to a residential development density of one dwelling unit per gross acre (1du/ga). The next two hundred and fifty feet (250') is limited to a residential development density of two units per gross acre (2du/ga). The forth area of two hundred and fifty feet (250') in width is limited to a residential development density of two and a half dwellings units per gross acre (2.5du/ga).

For the second River Transition Zone, as previously described, the buffer along the river is five hundred feet (500') wide. Moving away from the river and parallel to the buffer, the next five hundred feet (500') is limited to one dwelling unit per gross acre (1du/ga).



III. *UTILITY AND STORMWATER ELEMENTS*

Utility Plans for Water, Wastewater and Reuse Water

(1) The Master Plan for a PDD is required to include utility plans for potable water, wastewater and reuse water. Such plans will, by necessity, become more specific as development progresses and the installation of utility infrastructure shall not be required before it is needed to service property subject to the PDD Master Plan.

The following summarizes water, wastewater and reuse water utilities for the proposed PDD Master Plan for *Chatham Park*. For each utility type, the analysis includes:

1. Identification of existing public utilities
2. Identification of proposed utilities in the Town of Pittsboro Capital Improvement Program and adopted municipal plans
3. Analysis of how, if possible, existing or planned utilities can be used or incorporated into *Chatham Park* PDD
4. Description of conceptual plan for proposed utilities and phasing for the *Chatham Park* PDD.

The current copy of the Town of Pittsboro Capital Improvement Program (CIP), included in the Adopted Budget, Fiscal Year 2012/2013 dated June 25, 2012, was reviewed. In addition, the following reports were reviewed for water and wastewater utility planning:

- Engineering Report – 2007, Hydraulic Model Update and Planning Study by Hydrostructures, PA, dated March 30, 2007
- Planning Report – 2007, Sewer Collection System Master Plan by Hydrostructures, PA, dated May 15, 2007
- 2011 Water and Sewer Planning Update by Hydrostructures, PA, dated March 4, 2011
- Summary, 2011 Update on Water and Sewer Planning by Hydrostructures, PA, dated May 17, 2011

(Copies of these reports are <u>not</u> included in this document.)

Water System

The Town of Pittsboro does not currently provide water service into *Chatham Park* PDD. Nearby water mains include a 6-inch line east of the PDD Property along US Hwy 64 Business (near the Christian Village) and a 16-inch line west of the PDD Property along US Hwy 15/501 (Hillsboro St) between the existing Water Treatment Plant (WTP) and Water Tank Road.

The Town of Pittsboro does not currently have any water system Capital Improvement projects programmed and funded that would impact the *Chatham Park* PDD.

The 2007 Planning Study, Figure 2 through 5 and Table 3.3 and 2011 Planning Update, Figure 3, indicated several individual developments that are now partially or wholly part of the PDD Property. These include River Oaks Commons, North Pittsboro Station, Indian Trace, Chatham Forest East, Chatham Park, and White Mountain. The hydraulic modeling and analysis reviewed four planning scenarios – 2010, 2015, 2020, and 2025. Model results from the 2007 report indicated that water pressure deficiencies exist on the east end of Town near the Christian Village resulting in insufficient fire flow. A number of system improvements were presented to increase fire flow in this area as well as extend water service to the future developments. Projects to implement these system improvements are not included in the current Town of Pittsboro CIP.

Currently, water treatment is provided by a 2.0 million gallons per day ("mgd") surface water treatment plant located on Hwy 15/501. The plant was constructed in the 1960s. The 2011 planning report indicates that due to equipment age and tighter water quality standards it is doubtful the existing plant can operate at current full rated capacity of 2.0 mgd for an extended period. A water treatment plant renovation or expansion is anticipated when the average daily production reaches 1.2 mgd. Average daily production at the time of the 2011 study was 0.602 mgd. The 2007 planning report estimated approximately 6.67 mgd of demand by 2025 (the report indicates a 1.66 peak factor was utilized to develop some of these projected demands). As indicated above, a number of the proposed developments in the 2007 study are now included as part of the PDD Property. The area of these proposed developments were not provided in the study. With the exception of the White Mountain development, estimated demands were provided for these developments. The 2007 estimated flows are presented in the table below.

Proposed Development	**Demand Projections for 2025 (mgd)[1]**
River Oaks	0.698
North Pittsboro Station	0.146
Indian Trace	0.244
Chatham Forest East	0.080
Chatham Park	2.20
White Mountain	Not Provided
Total	**3.368**
[1] Table 3.3, Engineering Report – 2007 Hydraulic Model Update and Planning Study	

Preliminary demand projections for the *Chatham Park* PDD have been estimated at an average daily demand of 4.4 mgd at buildout conditions. This demand does not include any peaking factors. The drinking water demand assumes that an additional 2.0 mgd of demand will be satisfied by non-potable reuse water for uses such as toilet flushing, cooling tower make-up, and irrigation. Additional discussion on the reuse water system is included below.

It is anticipated that the Town of Pittsboro's water system will provide potable water for the *Chatham Park* PDD and will have sufficient capacity to meet *Chatham Park* PDD's

initial needs. The water treatment plant will need to be upgraded and expanded as development in *Chatham Park* PDD and properties occurs. The Town is a member of the Jordan Lake Regional Water Supply Partnership, which will request water allocation from Jordan Lake. It is expected that the Town of Pittsboro and Chatham County can obtain the additional capacity needed to supply the future growth demands through these sources. Even so, there are possibilities – if both warranted and feasible – for interconnections with adjoining public water systems in Durham, Wake, and Lee counties that may be able to provide additional capacity on either an extended or emergency basis.

The proposed system for *Chatham Park* PDD will include elevated storage and booster pump stations, as necessary, to provide adequate pressure and fire flow to the *Chatham Park* PDD. The map titled **Potable Water** shows a conceptual layout of the water distribution system. Connection and extension of the Town's water system will be undertaken in a phased approach based on the size and needs of each area of future development. Multiple interconnection locations with the Town's existing and proposed system could be accomplished.

Wastewater System

The Town of Pittsboro does not currently provide wastewater service into *Chatham Park* PDD. Wastewater is treated at the Town's 0.75 mgd extended aeration treatment facility with discharge into Robeson Creek.

The Town of Pittsboro does not currently have any wastewater system Capital Improvement Projects programmed and funded that would impact *Chatham Park* PDD. There has been a prior study to evaluate the possibility of sending 2.0 mgd of wastewater to the City of Sanford. Also, the Town's CIP includes an unfunded item for construction of a 3.22 mgd Wastewater Treatment Plant (WWTP) with discharge to the Haw River, and notes it as in the planning stage. The Town obtained a new NPDES permit, effective July 1, 2011, to discharge 2.47 mgd to the Haw River (outfall 001) in addition to the 0.75 mgd to Robeson Creek (Outfall 001). As of the date of this report, this discharge permit is not being utilized by the Town. As of the most recent update on this project by the Town Manager (March 25, 2013), the Town was holding discussions with NCDENR regarding increased discharge to Roberson Creek. None of these planning efforts appear to have contemplated any significant generation and usage of reclaimed water for beneficial reuse.

In fact, these very large centralized wastewater concepts create significant impediments to the increased use of reclaimed water, as well as the cost-effective completion of large developments. First, tremendous physical and environmental resources are consumed in the centralized collection and transport of wastewater to be treated, and then summarily returned via transmission networks back to the point of use. Secondly, the conveyance systems are very difficult to phase in or yield any economy of scale without a huge investment in unused and therefore stranded capacity - capacity which must be paid by current users and investors in advance of the future user base, and sometimes making the operation of lightly loaded and used facilities more difficult.

The 2007 Sewer Master Plan, Figures 1 through 2 and Table 4.2 and 2011 Planning Update, Figure 2, and Table 5.0 indicated several individual developments that are now partially or wholly incorporated into *Chatham Park* PDD. These include River Oaks Commons, North Pittsboro Station, Indian Trace, Chatham Forest East, Chatham Park, and White Mountain. The 2007 Sewer Master Plan and 2011 Planning Update indicate that insufficient capacity exists in the current WWTP and NDPDES permit to provide service for proposed developments. In addition, the existing wastewater collection system lacks sufficient large diameter sewer interceptors to accommodate growth. A number of conceptual plans for infrastructure upgrade are provided in these planning documents; however, the ultimate location and scope of upgrades will be dependent on the phasing of development and, critically, the funding and construction of the treatment plant replacement and effluent discharge piping. As indicated in the 2011 Planning Update, the location of the proposed 3.22 mgd WWTP would be placed upgradient to much of the future service areas and might require modification to the approved Environmental Impact Statement (EIS).

Based on this information, wastewater collection and treatment for *Chatham Park* PDD is proposed to be decentralized and phased to minimize or eliminate the need to utilize the Town's existing treatment capacity and infrastructure, accommodate growth in *Chatham Park* PDD as needed, and provide for treated effluent disposal to the maximum extent practical through reuse within *Chatham Park* PDD.

Chatham Park PDD is anticipated to produce an average daily flow of 4.8 mgd of wastewater at buildout conditions. The included map titled **Sewer** shows a conceptual layout of this wastewater treatment and collection system. The conceptual layout assumes that wastewater collection will be accomplished by a series of gravity interceptors and pump stations, as required by the site topography. Alternative sewer technologies - such as low pressure, variable grade, and vacuum sewer - could also be integrated into the collection system, if subsequent phasing and technical evaluations indicate they could be appropriate and cost effective. The conceptual layout also attempts to make the best use of existing facilities and excess stranded capacity by conveying a portion of the flow generated in the western part of *Chatham Park* PDD to the existing Town of Pittsboro wastewater collection system. As previously mentioned, the existing wastewater collection system lacks larger diameter interceptors. Therefore, any usage of the existing system will have to be further evaluated for available capacity, possibility of additional flow from other developments, and the need for upsizing. Utilizing a decentralized wastewater system will allow flexibility in utilizing the existing Town infrastructure in locations that provide benefits due to the proximity, condition and size of infrastructure, and capital costs.

In this conceptual layout, wastewater treatment can be accomplished by six water reclamation facilities. These reclamation facilities are not the "package plants" commonly associated with small decentralized systems. They are very complex yet simple adaptive ecosystems, utilizing natural systems which are enhanced by science and technology to reliably produce very high quality water with a greatly reduced physical

and carbon/energy footprint. The water reclamation facilities can be tailored to the phased wastewater to be generated and associated demand for reclaimed water, and upgraded or expanded as informed by the phasing of development in *Chatham Park* PDD. The decentralized approach provides flexibility to adapt and be compatible with the character of *Chatham Park* PDD's neighborhood development, minimizes stranded initial capital investment in large capacity treatment facilities and collection system infrastructure, and reduces future operations & maintenance costs associated with maintaining larger, underutilized infrastructure.

Finally, it is obvious that technological advances in society in general are and will continue to be profound. The water industry is no exception. It is a certainty that the way we use water, and the way we obtain it, will see tremendous changes in the future. The system(s) should be as adaptable to this potential change as possible. This would argue for a phased implementation in a way that is able to react to and adopt practical innovations in water and wastewater treatment and use as they become available and feasible – which means not committing oneself to a large capital investment in today's technology in a way that locks it into exclusive use for 10 years, 20 years, or even longer and makes it economically infeasible to embrace new and more cost-effective and environmentally sensitive advances.

Reuse System

The Town does not currently provide reuse water service into the PDD Property or surrounding areas. The Town does not currently have any wastewater system Capital Improvement Projects programmed and funded that would impact *Chatham Park* PDD. No reuse (reclaimed water) master plan has been completed by the Town of Pittsboro at the time of this application.

The Town does provide reuse water to 3M Company for cooling water. According to the 2011 study, this system is not a Reclaimed Water System and does not meet the effluent standards required for reclaimed water per regulation. NCDENR has issued a special permit to the Town due to 3M's consumptive use of the water without human contact. The system consists of an 8" main and 500,000 gallon storage tank. This reuse water is not taken into consideration for the reduction of discharge to Roberson Creek.

As discussed above, the conceptual plan for *Chatham Park* PDD proposes decentralized wastewater treatment facilities, which will provide for reuse quality effluent, and the beneficial reuse of that water is to be the principal means of utilization/dispersal of the treated wastewater. Preliminary reuse demand projections for *Chatham Park* PDD have been estimated at an average daily demand of 2.0 mgd at buildout conditions. The included map titled **Reclaimed Water** shows a conceptual layout of this reuse distribution and storage system. It is anticipated that reuse water will be used for cooling towers, irrigation of commercial and residential landscaping and golf course, and other amenities such as greenways, fountains, and ponds. It may also be used for toilet flushing. The reuse system will be tied to the phasing of the wastewater collection and treatment systems discussed previously. Utilizing a decentralized water reclamation

facility approach places the production and distribution of reuse water closer to potential end users minimizing capital investment in large transmission mains, pressure booster pump stations, and storage.

Further, as the use of reclaimed water matures, many other uses currently satisfied by the use of potable water, or not satisfied at all, will emerge. These include the use of reclaimed water for various forms of environmental restoration (from wetland restoration, to stream base flow augmentation, and streambank restoration), to more aggressive in-home use of reclaimed water, along with indirect potable use itself. The ability of the system(s) to easily and rapidly adjust to these new demands will be important going forward. If necessary or practical, excess treated effluent not utilized for beneficial reuse could be discharged to the Haw River utilizing a portion of the capacity of the Town's new NPDES permit. The decentralized nature of the wastewater system will allow for proximity to the Haw River at the potential discharge point(s), minimizing size and scope of infrastructure. These discharge points could be utilized during periods of low reuse demand.

Paying for Water, Wastewater and Reuse Water Systems

Thus far the types of systems proposed has been discussed, but nothing has been said about how the construction of these systems would be paid for or who would maintain them. The answer to these questions is different for each of the three systems.

- For potable water, the Town is currently the supplier. As construction takes place in *Chatham Park* PDD and other parts of Town, the Town would sell water and place revenues in reserve for the expansion of the existing plant or interconnections to other systems. Fees paid for connecting new development would also be placed in this account. By using current available capacity, the Town should be able to secure enough funds to pay for needed expansions. As described, operations and maintenance would remain the responsibility of the Town.

- For wastewater, the Town's existing treatment and collection capacity would be utilized to the extent practical. This capacity could be used to treat wastewater within the current service area or those areas that are easily served by the existing system. New development area, such as *Chatham Park* PDD will require new treatment facilities to be constructed. **These new wastewater collection and reclamation facilities would be funded by the property developers requiring the treatment capacity.** A developer could construct the system and maintain ownership, operation, and maintenance by establishing a contract with a third party firm. Under this operation scenario, users would pay the developer or its selected contractor for use of this utility. Alternatively, following negotiations with the Town of Pittsboro, a developer may choose to construct the system and receive credits from the Town for sewer fees equal to the cost of construction. The developer would then relinquish ownership and operation and maintenance of the collection system and treatment facility to the Town, which would collect the fees from the customers using the system. There are other scenarios that combine these, but the

developer would still be responsible for funding the new facilities. Any wastewater treatment system must be approved by the Town.

- For a reuse water system, paying for construction, operation and maintenance would depend largely on who will be operating the wastewater reclamation facilities. But, it is important to remember that these systems are more cost effective when they are being used to serve an area near a decentralized facility.

Summary for Water, Wastewater and Reuse Water

The PDD will increase demands for water and reuse water and subsequently increase sewer flows in the Town of Pittsboro. At this time, the Town does not have any water, reuse water, or sewer infrastructure projects that are funded and in design or construction that would provide service to *Chatham Park* PDD or otherwise need to be incorporated into the planning or development of these utility systems.

Review of current and historical planning documents, as well as discussions with local utility managers, indicate that *Chatham Park* PDD could be served by an expansion of the Town's existing water distribution and treatment systems and integration of additional sources of water from local interconnects. Sanitary sewer service could be best provided to *Chatham Park* PDD by decentralized collection and treatment systems, allowing *Chatham Park* PDD growth and increased sewer flows to be handled in a phased approach utilizing the best available technologies at the time and minimizing large, up front, investment of capital, physical, and environmental resources. The decentralized wastewater systems will also allow for greater access to reuse water, providing a resource for non-potable water needs in the area and reducing the required potable demand. The proposed water, wastewater, and reuse water utility systems allow for service to *Chatham Park* PDD to be implemented in a manner that is both beneficial to the community, fiscally responsible, and environmentally sustainable.

The Town would continue to fund and operate the water system. Funding for the decentralized wastewater treatment system would start with the developer but could become either a private or a public system. Funding for a reuse water system depends on who operates the wastewater reclamation facilities.

For additional information related to requirements for certifying the availability, capacity and cost of Town water and wastewater, see Section X, Paragraph 8.

Stormwater Management Plan

(2) The Master Plan for a PDD is required to include general plan addressing stormwater within the proposed PDD. Such plans will, by necessity, become more specific as development progresses.

Best Management Practices

Stormwater control measures, stormwater systems, and stormwater treatment practices (together, "Best Management Practices" or "BMPs") for new development in the *Chatham Park* will be designed to meet the following standards (subject to and/or utilizing variances and/or lesser standards and/or offset payments that may be granted, adopted or accepted by the Town or other applicable governmental entity):

1. Control and treat the 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 one (1) year, two (2) year, five (5) year and ten (10) year 24 hour storm events for that 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.
5. Standards specified above are established as minimum standards.

BMPs in the *Chatham Park* PDD will consist of one or both of the following: Conventional Stormwater Controls and/or Low Impact Stormwater Controls. Either of these may be used in Regional Stormwater Systems utilized to serve two or more separately owned lots or development parcels. Examples of development parcels are (i) tracts of land proposed for later subdivision into two or more individually owned lots and (ii) a tract of land on which an apartment site is proposed for development.

Conventional Stormwater Controls

The following are examples of Conventional Stormwater Controls that may be utilized in Chatham Park PDD:

- wet detention pond
- level spreaders
- constructed wetlands
- other constructed stormwater control devices designed to receive, hold, and discharge stormwater

An example of a Conventional Stormwater Control is a pond that receives stormwater from lots in a residential subdivision.

Low Impact Stormwater Controls

Low Impact Stormwater Controls are stormwater controls other than Conventional Stormwater Controls. Examples of Low Impact Stormwater Controls are:

- sheet flow
- rainwater harvesting or reuse
- pervious pavement surfaces
- soil amendments
- other controls integrated into the development landscape

Development will be deemed complaint with all applicable stormwater regulations (e.g., water quality, flood control and nutrient export) if it can be demonstrated that post development hydrology can be managed using Low Impact Stormwater Controls so that it matches the hydrology expected from pre-development conditions for the design storm event. The North Carolina Division of Water Quality ("NCDWQ") currently is developing standard calculations and permit requirements for Low Impact Development Controls, and development within *Chatham Park* PDD choosing this option will meet NCDWQ's Low Impact Development Controls permitting standards.

Regional Stormwater Systems

Individual stormwater controls typically are located on the same lot or development parcel as the proposed development. Regional Stormwater Systems are designed to serve two or more lots and/or development parcels and may or may not be located on the specific lot(s) or development parcel(s) that it is designed to serve.

Individual stormwater controls and Regional Stormwater Systems in *Chatham Park* PDD will be built in accordance with applicable U. S. Army Corps of Engineers 404/401 regulations and Town buffer regulations and ordinances. Where 404, 401, or buffer permits are required, no development which proposes to use an individual stormwater control or Regional Stormwater System shall be approved within the contributing watershed until such permits are issued.

Regional Stormwater Systems will document compliance with water quality standards and peak flow requirements at a point in the natural waterway downstream of the outlet structure. Each Regional Stormwater System will be designed for full build out within the upstream basin. For each Regional Stormwater System in the *Chatham Park* PDD, the master property owners association for the *Chatham Park* PDD (the "POA") will maintain files that document the total allowable impervious area within the watershed and the impervious area permitted and constructed to date. If development to be served by a particular Regional Stormwater System would cause the impervious area to exceed the maximum impervious area approved for that Regional Stormwater System, such development shall not be issued a permit until that Regional Stormwater System design has been modified to meet water quality and peak flow regulations for the increased

impervious area, or additional onsite controls are designed to control and treat runoff from the additional impervious area.

Nutrient loading calculations will be performed on a lot by lot or development parcel by development parcel basis within the contributing watershed. If a nutrient credit purchase is required, it will be obtained prior to approval of the site plan or subdivision plan for the lot or development parcel. On a case by case basis, the owner or developer of a lot or development parcel may choose to purchase credits for the contributing watershed. In such cases, the POA will maintain a credit log to document that sufficient credits have been procured for each proposed development.

The POA will also maintain records for tracking and reporting of "impervious surface", also known as "built upon area". Public facilities shall be included in this metric and therefore an allocation for such identified facilities shall be preserved.

BMP Maintenance

A Master Stormwater Manual will be developed for the *Chatham Park* PDD which will specify inspection requirements, maintenance requirements and schedules for all types of BMPs to be used in *Chatham Park* PDD. The Master Stormwater Manual may be modified, amended, or replaced from time to time to accommodate new technologies and/or reflect changes in methods or standards for handling stormwater runoff and related issues. Maintenance of all BMPs in the *Chatham Park* PDD will be administered by the POA. The POA will file annual reports with the Town documenting BMP inspections and maintenance activities, and confirming that each BMP either is controlling stormwater quality and quantity to the degree or amount of function for which it was designed or specifying the maintenance, repairs, reconstructions, or replacements to be completed so that the applicable BMP will control stormwater quality and quantity to the degree or amount of function for which it was designed and a proposed completion date. Costs of inspection and maintenance of BMPs will be funded by owners of lots and development parcels in the *Chatham Park* PDD through assessments paid to the POA.

In addition to inspections and maintenance of BMPs to be paid out of assessments, to ensure viability of long term operation of each BMP in *Chatham Park* PDD, including major repair, reconstruction, and/or replacement (together, "major repairs"), a major repairs perpetual escrow account for each BMP will be established in the name of the POA in an amount equal to 15% of the original construction costs of the BMP (the "minimum fund amount"). Each escrow account will be funded to the minimum fund amount not later than five (5) years after issuance of the first certificate of occupancy for a residential dwelling or other building on the lot(s) or development parcel(s) served by the BMP, either by contributions from the developer of the lot(s) or development parcel(s) served by the BMP or by assessments paid to the POA by the developer or other owners of the lot(s) or development parcel(s) served by the BMP. Funds disbursed from an escrow account for major repairs will be replaced by assessments paid to the POA by owners of the lot(s) or development parcel(s) served by the applicable BMP. With respect to each escrow account, the POA will provide to the Town an annual report

documenting all receipts, disbursements, current fund balance, and, if disbursements have been made from the escrow account, the proposed time period (not to exceed 5 years) for returning the fund balance to the minimum fund amount.

The Town shall have the right to perform BMP inspections in *Chatham Park* PDD. Access to all BMPs in Chatham Park PDD that do not adjoin a publicly dedicated street will be provided to the POA and the Town by an access easement from the BMP to a publicly dedicated street. The POA will maintain a map showing all permitted BMPs within the *Chatham Park* PDD and provide a copy of the map to the Town. The map will be revised as BMPs are added in the *Chatham Park* PDD.

IV. *PUBLIC SERVICE ELEMENTS*

(1) The PDD Master Plan for *Chatham Park* includes public service plans that evaluate potential impacts on police service, fire service and schools. These plans will, by necessity, become more specific as development progresses.

Police

The Town of Pittsboro has twelve (12) full-time officers and five (5) reserve officers. According to the Town's *Land Use Plan*; "For the Town's population of 3,764 residents, this is a rate of 3.2 officers per 1,000 inhabitants". According to that plan, as cities grow larger, the rate of law enforcement employees (officers and employees) tends to decrease. In fact, rates as low as 2.6 officers per 1,000 inhabitants were identified.

The 2010 Census set the number of persons per household in Pittsboro as approximately 2.54. By applying this rate to the maximum number of dwellings proposed by this PDD Master Plan, the project population for *Chatham Park* PDD*,* at full build out, is 55,880. By using a suggested rate of 3.0 law enforcement employees per 1,000 inhabitants, the estimated size of the Pittsboro Police Department will be approximately 168 employees. Important factors to consider are that this projection is based on "full build out" of the project and that this reflects the number of employees needed for three shifts. It should be noted that it is estimated that *Chatham Park* PDD will take thirty or more years to build out. Also, other areas of the Town will be developing over this same time and *Chatham Park* PDD will not be solely responsible for creating the demand or addressing the needs for an expanded police department.

Currently the Police Department is located within Town Hall. Already this department lacks space and facilities for the current staff. No plans have yet been adopted as to where addition space for the department might be located, but addition space will be needed. In order to best serve the Town and *Chatham Park,* a comprehensive plan for the Police Department must be undertaken. Such a plan might consider including a police station within the project. Consideration should also be given to the placement of a combination site that includes police, fire services and EMS. *Chatham Park* is committed to working closely with the Town to determine how best to serve the people of Pittsboro and to assist in the implementation of that plan.

Fire

According to the Town's *Land Use Plan*; "The Town of Pittsboro contracts with the Pittsboro Volunteer Fire Rescue Department, Inc. for fire suppression services." This department uses full time employees, part time employees and volunteers. This crew of nearly forty members serves 103 square miles from three (3) fire stations. The Main Station is just south of the Courthouse, Station 2 is located on Old Graham Road and Station 3 is located on Walter Bright Road. Also, a portion of southern *Chatham Park* PDD is served by the Moncure Volunteer Fire Department, Inc. It is expected that both of these departments will need to expand to serve development within *Chatham Park*

PDD and other development in the area. Because the majority of the projected development will occur in Pittsboro's territory, they will experience the greatest impact and will likely, by necessity, move towards a municipal fire department that is staffed by a higher percentage of employees.

It is also clear that additional fire stations will be needed in locations to be determined later. A comprehensive plan for the fire services must be undertaken. Such a plan should consider including fire stations or combination sites. *Chatham Park* PDD is committed to working closely with the Town to determine how best to serve the people of Pittsboro and to assist in the implementation of that plan but, it should be repeated, other areas of the Town will be developing over this same time and *Chatham Park PDD* will not be solely responsible for addressing the needs of an expanded fire department.

Additional analysis will be necessary to determine fire response needs. This is expected to be included in a future Development Agreement. For additional information see Section X, Paragraph 8.

Schools

Chatham County Schools currently operates seventeen (17) schools serving 8,120 students. The system has been adding new schools to address growth in the student populations. A fourth high school has been planned for the northeast portion of the county but the Board of Education has decided to delay moving forward on that site. Part of the reason for this delay is to evaluate the impacts from development in *Chatham Park* PDD. In order to assist the Chatham County Schools, the applicant has met with Superintendent Logan and members of the staff. Based on those meetings, student enrolment and facility needs have been projected.

The Schools use a factor of 0.45 students per household to determine the impacts of new residential development. When this factor is applied to the maximum number of dwellings proposed, 22,000, the expected student population increase is 9,900. In order to estimate the projected need for new facilities, this population is applied to specific grades. Based on this projected student population, it is estimated that an addition 9,900 students would result in the need to construct as many as eight (8) elementary schools, two (2) middle schools, and two (2) high schools. Some of this increase may be handled through the expansion of existing schools. It must also be remembered that it is estimated that *Chatham Park* PDD will take thirty or more years to develop completely, so the increase in student populations also will also many years to reach the levels suggested above.

It should be clearly noted that these figures are not a plan proposed by Chatham County Schools or the Board of Education. It will take time and hard work by all involved to create a plan for serving this additional and the existing student population and is beyond the scope of this PDD Master Plan. *Chatham Park* PDD, like any new development, will have an impact on schools. Also to be noted is that these figures are not suggesting that all of these schools must be built within *Chatham Park* PDD, although it is likely and desirable that some of the schools, especially elementary schools, will be built in *Chatham Park* PDD. Through a close working relationship between the developers of *Chatham Park* PDD and the Board of Education and Superintendent's office, a plan can be designed and implemented that best serves the children of Chatham County.

V. *TRANSPORTATION ELEMENTS*

(1) A multi-modal transportation plan that includes the location of existing and proposed major roads and a general plan for an on-site transportation system that addresses vehicular, bicycle, transit and pedestrian circulation is a required element of a PDD Master Plan.

The multi-modal transportation concepts for a PDD ordinance states:

> "…developments containing both residential and non-residential uses shall be designed, located, and oriented on the site(s) so that non-residential uses are accessible to residents of the development. In general, the proposed development shall provide for connectivity of land uses through a network of roadway improvements and pedestrian sidewalks and/or trails and/or bicycle facilities, the final layout of which will be determined as specific site plans or subdivision plans are approved."

and

> "To the extent practicable, the on-site transportation system shall be integrated with the off-site transportation system shown on the adopted Town Comprehensive Transportation Plan."

In order to identify the location of existing and proposed major roads, a copy of the **Map 4: Highways** from the Town's *Land Use Plan* has been included. This map includes "Recommendations from the Highway Element of the Pittsboro Comprehensive Transportation Plan. (CTP) - Adopted by NCDOT Nov. 3, 2011".

In order to address the requirement for "…a general plan for an on-site transportation system…", the following multi-modal transportation plan is presented for *Chatham Park* PDD.

Multi-Modal Transportation Plan

Transportation Framework

…"as the Town grows it will be important to continue to improve the local network, the bicycle and pedestrian facility network, and the transit system in Pittsboro…. and to maintain balance between land development and transportation infrastructure."
(Pittsboro Land Use Plan)

The Multi-Modal Transportation Plan for *Chatham Park* PDD ("MMTP") establishes the transportation planning approach and recommends strategies to enhance access and mobility for *Chatham Park* PDD and the Town. The goal of the MMTP is an integrated, balanced intermodal transportation system that safely and efficiently moves people and

goods, consistent with the goals stated in the Town of Pittsboro's *Comprehensive Transportation Plan* (CTP).

Pedestrian Network

" *There are a number of puzzle pieces needed to make a truly walkable community. These include mixing land uses, building placement and building forms that do not create barriers to walking, and a network of safe, comfortable, and efficient paths and sidewalks to get people where they want to go."* (Pittsboro Land Use Plan)

The MMTP considers various means for creating a network of pedestrian connectivity based on the following concepts:

- To develop pedestrian facilities along all public streets and connectivity to downtown, schools, places of work, and shopping areas
- To design crossings for the safety of pedestrians
- To take advantage of open space and natural buffers to construct greenway trails to create a natural recreational experience for pedestrians supplementing on-road pedestrian facilities

The MMTP will employ various means for creating a network of pedestrian connectivity based on the following types of facilities:

> **Sidewalks and walkways** are the backbone of the pedestrian network and are supported by amenities including curb ramps, marked crosswalks, and safety enhancements such as raised crosswalks, pedestrian refuge islands, and curb extensions. All public roadways shall have sidewalk facilities and pedestrian safety features on two sides, except where the subdivision ordinance provides alternatives due to site-specific conditions. In cases where greenways parallel a public right-of-way, the greenway may be constructed within the proposed right-of-way as a multi-use trail in place of a sidewalk.
>
> **Greenways / Multi-use paths** are designed to accommodate bicyclists and pedestrians and separate non-motorized users from automobile traffic. Multi-use paths on independent alignments (such as greenways) provide a high-quality cycling and walking experience independent from the roadway system and motorized traffic. Sidepaths essentially are multi-use paths oriented along a road. A Greenway Plan is provided later in this document. All greenways shall be a minimum of 10 feet wide. Greenways along with roadways shall be asphalt paved except, depending on specific site conditions, alternative materials may be use. Greenways not along roadways may be asphalt paved or constructed of alternative materials with the approval of the POA and the Town.

Bicycle Network

"Bicycle facilities may not increase bicycle ridership if complimentary land uses are not in place… It is important to balance the need for both on-road and off-road bicycle facilities." (Pittsboro Land Use Plan)

The MMTP focuses on the vision of a bicycle-friendly community throughout *Chatham Park* PDD to serve a majority of the development. *Chatham Park* PDD is planned on a foundation of mixed-use development and complimentary land uses to encourage and support the use of bicycles as an alternative means of transportation. A combination of both on-road and off-road bicycle facilities will be developed along with the road network. The specific type of facilities associated with each road or greenway, to best serve the network, will be determined during the design phase of roads, subdivision and site plans.

> **On-street bicycle facilities** are designated by striping, signing, and pavement markings on the public right-of-way for the preferential or exclusive use of bicyclists. The preferred type of on-street facility depends on the roadway classification and characteristics. Several types of on-street facilities can be used in conjunction with each other to create a well-developed bicycle network. On-street bicycle facilities include striped bike lanes, wide outside lanes, and paved shoulders.
>
> **Shared roadways** will be used where bicyclists safely can share the travel lanes with motor vehicles, typically on low traffic volume /low speed road sections that do not need special bicycle accommodations to be bicycle-friendly. Shared roadways will be designated with "Share the Road" or "Bike Route" signs.
>
> **Multi-use paths** will accommodate bicyclists and pedestrians and separate non-motorized users from automobile traffic. Multi-use paths on independent alignments (such as greenways) provide a high-quality cycling and walking experience independent from the roadway system and motorized traffic. Sidepaths are multi-use paths oriented along a road and may replace sidewalks where appropriate.
>
> **Ancillary bicycle facilities and amenities** shall be a part of all bicycle facilities and include bicycle racks and other storage provisions, bicycle racks on buses and amenities at transit stops, and bicycle-friendly drainage inlets. Specific requirements for these elements shall be determined during the site plan or subdivision plan application process.

Streets and Highway Network

"…focus on primary issues related to streets and highways: the Comprehensive Transportation Plan, which focus on major streets and highways in town; the issue of connectivity, which is important on minor and neighborhood streets…" (Pittsboro Land Use Plan)

A transportation plan identified as **Multi-Modal Transportation Plan** is provided for in this PDD Master Plan. This plan is coordinated with the Town's Comprehensive Transportation Plan ("CTP") to serve *Chatham Park* PDD with connectivity to the existing and future roadway network. The plan structure provides for an extensive set of east-west and north- south arterials within *Chatham Park* PDD as well as connectivity to a future interchange on US 64 Bypass to serve the anticipated growth in concert with the Town CTP.

Connectivity

"…a connected road network emphasizes more direct travel with traffic dispersed over more roads, while a hierarchical road network emphasizes mobility by accommodating higher traffic volumes and speeds on fewer roads…" (Pittsboro Land Use Plan)

Connectivity within *Chatham Park* PDD will be provided via a variety of roadway typologies, transportation technologies and multi-modal facilities associated with the roadway network. All major roads should be designed with future transit technologies in mind, and minor and local streets set up to accommodate multi-modal facilities for pedestrian and bikes. The ultimate roadway cross sections and detailed street typologies within *Chatham Park* PDD will result from future Transportation Impact Analysis (TIA) tied to future development plans, land uses and intensities. (A TIA will be required for a development 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. Pass-by and internal captures rates will be applied using ITE criteria.) In addition, *Chatham Park* PDD will promote a mix of land uses throughout to encourage more pedestrian and bicycle trips and a reduction of vehicle trips.

Complete Streets – The NCDOT adopted *Complete Streets Planning and Design Guidelines* shall be applied to all public roadway design.

NCDOT's *Complete Streets Planning and Design Guidelines* typologies are situational and dependent on several factors. Therefore, typical cross sections are those shown in the guidelines. A Transportation Planning Analysis using current transportation models will be prepared for Small Area Plans in order to determine appropriate typology for each street.

Multi-modal alternatives including sidewalks, bicycle lanes, and transit stops shall be incorporated unless exceptional circumstances exist or are not recommended by Transportation Planning Analysis.

Transit Network

Chatham Park PDD will promote a transit system in a plan that identifies strategic corridors for transit as well as the proper technology as determined by land use conditions and ridership trends. Over time, the system can mature by laying the groundwork with simple, cost-effective technology such as shuttles or buses. The transit system must be

coordinated with all local and County transit services for a comprehensive approach to transit.

Plans should consider accommodations for transit technologies including:

Buses - Local fixed route bus networks operating on local streets with curbside bus stops to provide a flexible transit technology capable of responding to the evolution of land use types and intensities. A primary bus, or rubber-tire trolley, loop is proposed to serve *Chatham Park* PDD and downtown Pittsboro. As shown on the **Multi-Modal Transportation Plan**, a trolley loop is proposed that would serve *Chatham Park* PDD, Park-and-Ride lots, and downtown Pittsboro.

Paratransit and Other Services - Paratransit systems provide critical dial-a-ride (on-demand) services to persons with disabilities, the elderly, and others who do not live near a fixed bus route. Other services include neighborhood shuttles, employment center shuttles, and vanpool and carpool services.

Transit Support Facilities: Park-and-Ride - The MMTP recommends establishing areas for park-and-ride lots in Pittsboro and *Chatham Park* PDD to serve carpools and vanpools. As participation in rideshare increases, express bus services should be considered.

The North Carolina Department of Transportation (NCDOT)

It should be noted that most aspects of the MMTP presented require involvement with or approval by NCDOT and the Town. *Chatham Park* PDD is committed to working with both to develop a transportation system that serve the needs of this community.

VI. *PARKS, GREENWAYS, RECREATION and OPEN SPACE ELEMENTS*

(1) A plan for recreation space and an open space plan that includes the locations and standards for greenways, open spaces, and recreation areas within *Chatham Park* PDD is required. The PDD Master Plan for *Chatham Park* provides for an extensive network of park and open space that meets the needs of the community for both active and passive recreation opportunities and protects natural areas. Land for open space and future park development will be provided for in a variety of ways including, but not limited to, the following:

- Natural areas - within state or locally regulated buffers
- Natural areas - within recorded conservation areas
- Greenways - dedicated easements, land conveyed to a government entity, and/or constructed facilities
- Future public neighborhood park sites
- Committed public community park sites
- Private Recreation Areas and Open Spaces

The overall approach to satisfying park and recreation needs for *Chatham Park* PDD is intended to create a system of public and private parks and open space, interconnected by a multi-modal transportation system. Park facilities will be added as *Chatham Park* PDD develops, such that the amount, location, and type of facilities properly serve the growing community over time. As conceived here, "Park Land" is land that is intended to become part of the Town's recreation system but could also be privately held. Park Land could be used for either active or passive recreation purposes, including intensive active recreation facilities such as lighted sports fields. As conceived here, "Open Space" is land that is protected from development, specifically buildings, and where intensive active recreational uses are not allowed. Open Space may be kept it its natural state but also could be used for some recreational uses. Greenways may encroach into Open Space. Open Space can include buffers, areas covered by conservation easements, lands held by the Town, lands held by property owners associations or private owners, so long as the land is adequately protected from future development.

A. Amounts of Park Land and Open Space to be provided:

(1) Park Land shall be provided at a ratio of no less than 1/33rd and Open Space at a ratio 1/100th of an acre per dwelling unit. The total amount of land area provided for Park Land and Open Space shall be based upon the number of residential dwelling units constructed. For example, if the maximum number of dwellings were constructed (22,000), the required Park Land would equal 667 acres and the Open Space required would be an additional 220 acres.

(2) In addition to the Open Space required per dwelling unit, 1/20th of an acre for each 1,000 GSF of non-residential development shall be provided. The total amount of land area provided for Open Space shall be based upon the total gross square footage of non-residential constructed. For example, if the maximum amount of non-residential development is constructed, 1,100 acres of open space will be provided.

(3) The combined amount of Open Space for both residential and non-residential described in the examples above is 1,320 acres. *Chatham Park* shall include at least 1,320 acres of qualifying Open Space *(see below)* throughout the development of the project. *Chatham Park* shall include this amount of qualifying Open Space, at a minimum, regardless of the maximum number of dwelling units constructed or non-residential gross square footage constructed.

(4) *Chatham Park* PDD may also satisfy the applicable Park Land requirements through the fee-in-lieu payment options, with approval and in coordination with the Town of Pittsboro, and as provided for by the Town's Subdivision Regulations (§6.5 A (2) b). In addition, the construction value of built greenways may be applied to fee-in-lieu calculations with approval from the Town of Pittsboro. As currently allowed in the Town's Subdivision Regulations, the net effect of fee-in-lieu payments could potentially be a reduction in the overall land required for parks and open space within *Chatham Park* PDD.

(5) The Town may also choose to accept a fee-in-lieu payment option for Open Space. (This option is not included in current regulations.)

B. Qualifying Park Land and Open Space

Land that may be applied to meeting total land area requirements for Park Land and Open Space may include the following, in any combination, as provided for herein;

Park Land

(1) **Greenways** and regulated buffers – greenways (includes easements) outside of regulated buffers may be applied toward meeting land area requirements for Park Land in *Chatham Park* PDD. Greenways within a regulated buffer shall be considered part of the Open Space. Land area calculations for greenway located outside of regulated buffers will be based upon an amount of land equal to the overall acreage within the greenway and associated easement. Greenway locations shall be generally consistent with the **Park Land Plan** map and will be constructed to Town standards. In cases where the greenways parallel a public street right-of-way, the greenway may be constructed within the public street right-of-way as a multi-use trail in place of a sidewalk.

(2) **Committed Major Public Parks** – two (2) major public park areas, totaling approximately 160 acres, are identified on the **Park Land Plan**. The exact size and configuration of these committed park areas shall be determined in conjunction with future subdivisions and site plans, and in coordination with the Town of Pittsboro.

(3) **Future Public Parks** – the **Park Land Plan** identifies a potential number of future parks intended to serve *Chatham Park* PDD. These facilities are generally located to serve "Park Service Planning Areas" based upon land uses, roadways, topography and other committed park/open space areas. The intent of these facilities is to be distributed in size and location so as to adequately serve the ultimate residential population of *Chatham Park*, in a manner consistent with national park planning standards for neighborhood and community parks. It is intended that one park site of at least ten (10) acres shall be provided for within each "Park Service Planning Area" (A-G). The exact number of park sites, location, size and configuration of these parks shall be determined in conjunction with future subdivisions plans and site plans and in coordination with the Town of Pittsboro.

In addition to neighborhood and community park sites, smaller scale urban parks and open spaces may be appropriately located to accommodate a variety of passive, active and entertainment activities for residents of *Chatham Park* PDD. Public spaces of this type, one-half acre or larger, may be allocated toward the overall Park Land and Open Space land area requirements for *Chatham Park* PDD.

(4) **Private Recreation Facilities** – private park/recreation areas provided to serve as common open space for public use within residential development and mixed-use developments in *Chatham Park* PDD may be applied toward satisfaction of Park Land or Open Space land area requirements.

("Private" applies to ownership and maintenance. Space must be open to the public.) Small-scale urban spaces may be appropriately located to accommodate a variety of passive, active and entertainment activities for the public. Spaces of this type, one-half acre or larger, may be allocated toward the overall Park Land or Open Space land area requirements of the PDD Master Plan for *Chatham Park*.

(5) **Natural areas** - located within a recorded conservation easement may also be applied to meet the Park Land requirement.

Open Space

(1) **Natural areas** - within state or locally regulated stream buffers, transition buffers or located within a recorded conservation easement and protected from development.

(2) **Open or Undeveloped Property under the control of a Property Owners Association or Private Property Owner-** or similar, not built upon and protected from being built upon. May include Perimeter Boundary Transitions and buffers not required by regulations.

(3) **Open or Undeveloped Property under the control of the Town, County or State -** not built upon and protected from being built upon.

(4) **Water Bodies and Flood Plain**

(5) **Other areas** - deemed acceptable by the Town Board of Commissioners.

(6) **Robeson Creek** - fifty feet (50') of Open Space is designated on each side of Robeson Creek in addition to the one hundred foot (100') stream buffers.

C. Park Land and Open Space Implementation

The general size and location of certain public parks and open space areas are identified on the **Park Land Plan**. Potential locations for Open Space are shown on the map titled **Potential Open Space**. The exact size and shape of these land areas may vary in conjunction with subdivision plans or site plan submittals and taking into account site specific characteristics such as topography, final road alignments and other site features. Alternate locations of required park facilities may be allowed subject to review and final approval by the Town of Pittsboro. These spaces shall comply with Town adopted park plans and standards for improvements, usability, and access.

In order to properly serve the development and achieve the prescribed amounts of Park Land, the PDD Master Plan for *Chatham Park* provides for additional public park facilities throughout the development at unspecified locations. The intent of these

facilities is to be of appropriate size and location relative to residential development and to provide for the parks and recreation needs of the community within identified "Park Service Planning Areas". The exact number, size, and location of these facilities will be determined as subdivision plan and site plan applications are submitted.

The timing for the provision of Park Land is intended to track growth and development in order to properly serve the community. As noted above, Park Land shall be provided at a ratio of no less than 1/33rd of an acre per dwelling unit. In order to expedite the delivery of Park Land, it shall be provided at a rate equal to 1/25th of an acre per dwelling unit until the maximum amount of up to 667 acres is reached. Therefore, required Park Land shall be provided in the following manner.

- Twenty (20) acres of Park Land space for every 500 residential units.

- The amount of dedication shall be calculated on a pro-rated basis relative to the total number of residential building permits issued. The minimum required land area shall be available for development prior to the issuance of the building permit for the specified unit increment (i.e., 500; 1000; etc.). The following chart illustrates how minimal land areas thresholds may track building permits.

Park Land / Development timeline - EXAMPLE

# Units (Building Permits Issued)	***Minimum Acres of Park / Open Space Required***		***# Units (Building Permits Issued)***	***Minimum Acres of Park / Open Space Required***
500	*20.0*		*5000*	*200.0*
1000	*40.0*		*10000*	*400.0*
2000	*80.0*		*15000*	*600.0*
2500	*100.0*		*22000*	*667.0*

Open Space shall be identified in each Small Area Plan based on the proposed uses. However, the Open Space provided does not have to be placed in the area covered by that Small Area Plan. When Open Space is identified within the boundary of another Small Area, that Open Space shall be treated as established at that location. This will be binding on that Small Area plan. Flexibility shall be allowed for meeting this requirement. This requirement is further addressed in "Section VIII, Additional Elements", below.

Management of Greenways, Parks and Natural Open Space

Greenways, Parks and Open Space may be placed under the control of a public entity, such as the Town, or a private entity, such as the POA, another property owner association, or a property owner. The determination as to which entity or person will control, manage and/or maintain these areas will be established in a mutually agreed to document executed by those parties directly involved. This document must address the

long-term maintenance responsibility for these areas. Private recreation facilities are to remain the responsibility of the owner(s) thereof, except that these facilities may be transfer to the Town if mutually agreed to by such owner(s) and Town.

VII. *DEVELOPMENT STANDARDS/REGULATIONS ELEMENTS AND PHASING PLAN*

(1) Development Standards/Regulations Elements

Proposed land development standards/regulations for the PDD established by the approved PDD Master Plan shall be the applicable development standards within the PDD. Already presented are those revisions related to public utilities and stormwater management regulations. In this portion of the PDD Master Plan, applicable development standards and/or regulations are established that relate to the Town's Zoning Ordinance and Subdivision Regulations. Standards contained in the Town's Zoning Ordinance-and the Town's Subdivision Regulations-are the applicable standards and regulations that apply to the *Chatham Park* Planned Development District and PDD Master Plan except as they may be amended by this document or by procedures established by this document.

With regard to specific sections of the Zoning Ordinance the following revisions to the standards/regulations contained in that ordinance shall apply within the *Chatham Park* PDD:

1. §3.2, shall not apply to this PDD.
2. Permitted uses within this PDD are established by the PDD Master Plan for *Chatham Park*.
3. §5.2.2. Where allowed in *Chatham Park* PDD, the uses shall comply with this section unless contrary to the intent of PDD Master Plan for *Chatham Park*.
4. §5.4. Within *Chatham Park* PDD there is no minimum lot size. Lot frontage, front yard setback, rear yard setback, or side yard setback may be zero feet. This also applies to multi-family residences. In addition, there are no minimum lot sizes for non-residential development and setbacks may be zero feet. Within *Chatham Park* PDD there is no maximum building height for residential or non-residential structures. Provided however, within areas identified as "Residential" or Residential-East" on the Land Use Plan Map in Section II of this document, buildings exceeding five (5) stories require specific approval from the Board of Commissioners. For all other areas shown on this map, buildings exceeding eight (8) stories require specific approval from the Board of Commissioners. This request must be made at the time a site plan or a small area plan is submitted, whichever occurs first.
5. §5.5.10, Approval of the PDD and PDD Master Plan for *Chatham Park* grants approval for *Chatham Park* to develop under the High Density Option.
6. Article XIV, Approval of the PDD and PDD Master Plan for *Chatham Park* removes the application of the "Major Transportation Corridors" overlay district regulations.

With regard to specific sections of the Subdivision Regulations the following revisions to the standards/regulations contained in those regulations shall apply within the PDD:

1. The bulb of the cul-de-sac shall be a minimum of 55' and the corresponding R/W shall be 65'.
2. §6.4,B(4) applies to this PDD.

Except as otherwise provided by the approved PDD Master Plan for *Chatham Park*, property within *Chatham Park* PDD shall be subject to all applicable regulations, subdivision plan approvals, site plan approvals, and other permits and approvals required by Town ordinances. In cases where standards or regulations are not clear or moot on a specific topic, a standard or regulation will be applied that most directly support the intent of the Planned Development District.

(2) Phasing Plan

Chatham Park PDD will be developed in multiple phases over many years. The size of each phase of development, the order in which development occurs, and the pace at which development occurs will be determined by the owner of *Chatham Park* PDD (or applicable portion thereof) primarily based on market conditions, economic considerations, and the completion of infrastructure construction. Any lot or development parcel or development phase within *Chatham Park* PDD may be developed or reconfigured at any time, provided that the necessary infrastructure is in place or is being constructed to serve such development, as determined by the Town of Pittsboro and/or other applicable governmental entities, or as specifically provided for in the PDD Master Plan for *Chatham Park*. Other plans for phasing the development of *Chatham Park* PDD are identified in other portions of this PDD Master Plan for *Chatham Park*. In addition, the following statements apply to phasing of development in *Chatham Park* PDD:

Roads will be designed and constructed in conjunction with subdivision plans and site plans in coordination with NCDOT and the Town in order to adequately serve proposed development.

Phasing of utility infrastructure improvements shall consider the need for both private and public systems to provide water and sanitary sewer service for lots and development parcels within *Chatham Park* PDD as well as contributing development within the larger drainage basin.

Adequate stormwater measures shall be in place to accommodate development such that the type, location, and size of facilities are able to properly mitigate development impacts in accordance with all applicable state and local regulations.

Required landscaping shall be established in conjunction with subdivisions plans and site plan applications and implemented concurrent with development. Implementation shall be limited to those areas directly adjacent to development parcels and roadway frontages unless otherwise provided for in approved subdivision plans or site plans.

VIII. *ADDITIONAL ELEMENTS*

As noted in the Zoning Ordinance, a PDD Master Plan may also include other items or plans that the applicant chooses to include. This PDD Master Plan for *Chatham Park* includes twelve (12) such items or plans, referred to herein as "Additional Elements", which will be submitted for Town approval at a later date as provided in this PDD Master Plan. One or more of the Additional Elements will provide more detail with respect to matters addressed in this PDD Master Plan and one or more of the Additional Elements will address matters not addressed in this PDD Master Plan. Each Additional Element approved by the Town will govern land use and development in Chatham Park with respect to the matters addressed by that Additional Element. Cooperation from municipal, county and/or state agencies may be essential for timely completion of approval of one or more of these Additional Elements.

1. Tree Protection Plan

The owners/developers of *Chatham Park* PDD understand and support efforts to protect and maintain tree cover in Pittsboro. However, tree protection ordinances can be onerous on property owners and demanding on the staff charged to enforce them. In addition, the owners of *Chatham Park* PDD are currently implementing a forest management plans that is harvesting wood products and supporting the local wood products industry. Tree protection and forest management can coexist, but some ordinances end up treating a specimen tree the same way it treats a commercial pulp wood tree. The owners/developers of *Chatham Park* PDD commit to assisting the Town in developing a reasonable, effective and fair tree protection ordinance. Until such time as a more comprehensive tree protection ordinance is approved for *Chatham Park* PDD, in order to protect desirable trees during development, each plan presented to the Town Board of Commissioners for approval will identify those areas where trees will be protected and saved and/or where trees will be planted.

2. Master Signage Plan

The owners/developers wish to implement a "Master Signage Plan" for *Chatham Park* PDD for the benefit of *Chatham Park* PDD and the community. However, the creation of such a plan will take significant time and money to produce. As proposed with this submittal, *Chatham Park* PDD will function under the Town's current sign regulations. The standards identified in §6.1 through §6.14 shall generally apply. For specific standards, the most similar regulations from §6.15 shall be applied.

3. Master Parking and Loading Plan

As proposed with this submittal, *Chatham Park* PDD will be developed under the current rules for off-street parking and off-street loading as shown in §7.1 through §7.3 of the Zoning Ordinance. In part because the application of these rules will require some interpretations in their application in *Chatham Park* PDD, the owner/developers wish to submit for the Town's approval a Master Parking and Loading Plan.

4. Master Lighting Plan

It has not been long since Pittsboro adopted its current lighting ordinance. But, the technology related to lighting has been changing rapidly. As proposed with this submittal, *Chatham Park* PDD will be developed under the current Town lighting ordinance. In order to take into account new lighting technology, the owners/developers wish to submit a Master Lighting Plan.

5. Master Landscaping Plan

According to the current Zoning Ordinance:

> Landscaping shall comply with the standards of Article XVIII of this ordinance, except that variations from or modifications to these standards may be permitted in accordance with the PDD Master Plan or when a site plan or subdivision plan is presented for approval. The proposed landscaping should ensure compatibility with land uses on surrounding properties, create attractive streetscapes and parking areas, and be consistent with the urban design objectives and/or character of the PDD.

The owners/developers desire to codify these standards in a Master Landscaping Plan. To do so would be a benefit to the project and the community.

6. Development Phasing Plan

The Development Phasing Plan will address additional items and/or provide more details with respect to items addressed in the development phasing plan included in this Master Plan.

7. Affordable Housing Plan

8. Master Public Facilities Plan

The Master Public Facilities Plan will address additional items and/or provide more details with respect to items addressed in the utility plan and public service plan included in this Master Plan. The Master Public Facilities Plan will address all of the following:

1) Town Administration.
2) Police.
3) Fire.
4) Schools.
5) Parks and Recreation.
6) Water Supply and Distribution.
7) Sewer Collection and Treatment.

9. Master Transit Plan

The Master Transit Plan will address additional items and/or provide more details with respect to items addressed in the multi-modal transportation plan included in this Master Plan.

10. Master Open Space Plan

The Master Open Space Plan will address additional items and/or provide more details with respect to items addressed in the greenways, recreation space, and open space plan included in this Master Plan.

11. Master Stormwater Manual

The Master Stormwater Manual will address additional items and/or provide details not addressed in the general plan addressing stormwater included in this Master Plan.

12. Master Public Art Plan

IX. *SMALL AREA PLANS*

The Land Use Plan Map and Table of Permitted Uses identify twenty-seven (27) sections. Each of these sections equals a "Small Area." The plan required for development within these areas is referred to as a "Small Area Plan." (These Small Area Plans are not site plans or subdivision plans as identified in Town ordinances, although site plans and subdivisions are required for development within these areas.)

Small Area Plans for each of the twenty-seven (27) sections shall be submitted and approved prior to development, except that five percent (5%) of the maximum number of residential units and fifteen (15%) of the maximum amount of non-residential square footage allowed under the Master Plan may be developed prior to the approval of a Small Area Plan. Activity Centers may be considered separate from the underlying Section(s). Where a Section lies under an Activity Centers, the Small Area Plan for that Section shall include the Activity Center. Small Area Plans at a minimum shall include:

- Detailed descriptions of proposed development including design guidelines, particularly in mixed-use areas
- Location and quantity of proposed uses
- A transportation planning analysis using current transportation models.
- Water and sewer demand projections
- Road layout and types based on NCDOT Complete Street Guidelines
- Proposed Water distribution and Sewer collection/treatment network
- Stormwater Management
- Public Facilities
- Historic Sites
- Public Art concept
- Open Space
- Financial Impact Analysis
- Environmental features
    - Streams, buffers, wetlands, steep slopes
    - Significant Natural Heritage Areas
    - Upland Mature Hardwood Forests
    - Sub watersheds containing federally listed aquatic species
    - Game land hunting safety buffers

All such plans shall be acceptable to the Town and shall reasonably reflect the anticipated needs and services for the development in that area and the methods proposed to provide the same.

The applicant may expect that a proposed Small Area Plan, or amendments to a Small Area Plan, will be processed in a timely manner. The legislative process for review and approval of Small Area Plans, including amendments of approved Small Area Plans, will be determined by the Town.

The “Southwest Shore Conservation Assessment” is a reference document that has been, and will continue to be, a useful document in development planning for *Chatham Park*. While *Chatham Park* finds much to agree with in this document, it is not to be suggested that *Chatham Park* is in complete agreement with the recommendations contained in this document.

Specifically identified in that assessment are eleven recommendations that "are provided to guide future development in this area." These recommendations include:

1. Protect Water Quality
2. Protect and Enhance Wildlife Habitat
3. Protect Sensitive Natural Areas
4. Protect and Restore Riparian Corridors
5. Identify and Preserve Landscape Linkages
6. Develop a Network of Open Space and Trails
7. Minimize Development Footprint
8. Preserve Areas of Cultural or Historic Significance
9. Protect Working Lands
10. Protect Scenic Viewsheds
11. Develop and Implement a Long-term Conservation and Management Plan

Chatham Park accepts these recommendations "as a guide to future development" that shall be considered as small area plans are developed and presented to the Town. However, acceptance of these recommendations "as a guide" does not mean that a Small Area Plan must conform to all of the recommendations in this report nor does it mean that a Small Area may not be approved if it does not include the suggested recommendations.

X. ADDITIONAL PROVISIONS

The following are "Additional Provisions" that are incorporated in and are part of the *Chatham Park* PDD Master Plan (the "Master Plan") and are applicable to the real property constituting *Chatham Park* PDD.

1. By December 8th, 2016, the applicant will submit the following "Additional Elements" for review by the Town of Pittsboro (the "Town"):

    a. Tree Protection Plan.
    b. Master Signage Plan.
    c. Master Parking and Loading Plan.
    d. Master Lighting Plan.
    e. Master Landscaping Plan.
    f. Development Phasing Plan, which will address additional items and/or provide more details with respect to items addressed in the development phasing plan included in this Master Plan.
    g. Affordable Housing Plan.
    h. Master Public Facilities Plan, which will address additional items and/or provide more details with respect to items addressed in the utility plan and public service plan included in this Master Plan. The Master Public Facilities plan will address all of the following:
        1) Town Administration.
        2) Police.
        3) Fire.
        4) Schools.
        5) Parks and Recreation.
        6) Water Supply and Distribution.
        7) Sewer Collection and Treatment.
    i. Master Transit Plan, which will address additional items and/or provide more details with respect to items addressed in the multi-modal transportation plan included in this Master Plan.
    j. Master Open Space Plan, which will address additional items and/or provide more details with respect to items addressed in the greenways, recreation space, and open space plan included in this Master Plan.
    k. Master Stormwater Manual, which will address additional items and/or provide details not addressed in the general plan addressing stormwater included in this Master Plan.
    l. Master Public Art Plan.

    The Town Board of Commissioners may extend the time within which Applicant is required to submit one or more of the foregoing Additional Elements. Additional Elements approved by the Town will be part of the Master Plan. Applicant will work with the Town in developing the Additional Elements, as it is anticipated that the

Town may incorporate part or all of the Additional Elements in a new Unified Development Ordinance ("UDO").

The process for review and approval of Additional Elements shall be the same as the legislative process described in the "Town of Pittsboro Zoning Ordinance" for an amendment to the text of that ordinance. As of the date of this PDD Master Plan, that legislative process is described in "ARTICLE X, AMENDMENT PROCEDURE" of the Town of Pittsboro `Zoning Ordinance. Provided, if the Town adopts a Unified Development Ordinance, thereafter the legislative process for review and approval of Additional Elements shall be the same as the legislative process for amending the text of the Unified Development Ordinance.

As appropriate, in lieu of the foregoing legislative process for review and approval of Additional Elements" one or more Additional Elements may be addressed and approved in a Development Agreement between Applicant and the Town.

2. By December 8th, 2016, the applicant, working cooperatively with the Town, will submit for consideration by the Town a Development Agreement in accordance with Section 160A-400.20 et seq. of the North Carolina General Statutes. Any conflict between the Master Plan and the provisions of a Development Agreement, agreed to by Applicant and the Town, shall be controlled by the Development Agreement.

3. Until such time as all of the Additional Elements and a Development Agreement are approved by the Town, development in Chatham Park PDD will be limited as follows:

   a. Site plans or preliminary subdivision approvals will not be issued by the Town for more than a total of five percent (5%) of the maximum number of residential units allowed under the Master Plan.

   b. Site plans or preliminary subdivision approvals will not be issued by the Town for more than a total of fifteen percent (15%) of the maximum amount of non-residential square footage allowed under the Master Plan.

4. Excepting matters addressed in (a) VII of this Master Plan, (b) the Additional Elements approved by the Town, and (c) any Development Agreement between Applicant and the Town, all development within *Chatham Park* PDD, including subdivisions, site plans and public facilities and services, must be designed and constructed to conform to (i) at least the minimum requirements of the local, state or federal regulatory governmental unit or agency having jurisdiction, including the Town, in effect at the time the proposed development is submitted to the Town; and (ii) any future Unified Development Ordinance or other land use ordinance applicable throughout the planning jurisdiction of the Town. Provided, however, the maximum number of residential units and maximum square footage of non-residential

development authorized in II of this Master Plan shall not be reduced without the written consent of Applicant.

5. Prior to or contemporaneously with submittal of any subdivision, site plan, or other development plan for any property in *Chatham Park* PDD, if such property is not already in the Town limits, a petition for voluntary annexation of such property into the Town also will be submitted. Unless otherwise allowed by the Town, the property in *Chatham Park* PDD that is described in any such annexation petition shall be contiguous to property that already is in the Town limits or that is described in a previously submitted annexation petition that is pending consideration by the Town.

6. Applicant acknowledges that it will help defray the estimated additional costs expected to be incurred by the Town in dealing with development in *Chatham Park* PDD, including, without limitation, preparation of a Unified Development Ordinance, additional Town staff and private consultants that may be needed to review the proposed Additional Elements, Small Area Plans, requests for subdivision or site plan approvals (together, "development approvals"), extension of public services to *Chatham Park* PDD, Development Agreement(s) and other agreements, and engineering and construction drawings as well as capital and operational costs incident to the development of Chatham Park PDD.

7. Applicant will establish a "Development Review Committee" for Chatham Park PDD. Applications for development in Chatham Park PDD shall be submitted to the Town by the Development Review Committee and it will be the exclusive agency authorized to interact with the Town with respect to development applications in Chatham Park PDD from any person or legal entity.

8. Unless otherwise agreed by the Town and the Development Review Committee, development in *Chatham Park* PDD will be served by Town water and wastewater services and by other public infrastructure and services provided by the Town or with the Town's consent by other applicable government units with jurisdiction. Each request for a development approval for property in *Chatham Park* PDD shall identify the Town infrastructure and services needed to serve the proposed development and, in instances in which capacity of the Town to provide such infrastructure and services does not exist at the time of submittal, how the costs of providing such infrastructure and services for that proposed development, including the proportionate share to be paid by the proposed development, will be paid.

   Whether by way of extension of existing services or construction of new facilities and infrastructure, such public facility needs and services shall be designed, constructed, operated and maintained in a manner satisfactory to the Town and any other governmental unit with jurisdiction. The reasonably anticipated public facility needs generated by development of *Chatham Park* PDD shall be provided by the Applicant or by the person or legal entity seeking approval for development in *Chatham Park* PDD. Among the methods to provide for such public facility needs could be payment of applicable capacity fees to utilize existing water or sewer capacity available from

the Town, paying for construction of new public facilities with credits for oversizing of facilities or credits applicable to future development, or prepayment of water or sewer capacity fees for which the payor receives credits for payment of such capacity fees with respect to future development.

9. If any section, subsection, paragraph, sentence or other part of this Master Plan is adjudged unconstitutional or invalid, such judgment shall not affect or invalidate the remainder of this Plan, but shall be confined in its effect to the section, subsection, paragraph, sentence or other part of this Plan directly involved in the controversy in which said judgment shall have been rendered and all other provisions of this Plan shall remain in full force and effect.

10. All provisions of the Master Plan which are inconsistent with the provisions of these Additional Provisions are deleted to the extent of any such inconsistency and the provisions hereof shall control.

11. As used herein, the word "Applicant" includes Chatham Park Investors LLC and its successors and assigns, including successor owners of *Chatham Park* PDD or applicable portions thereof.

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ATTACHMENT #1

ATTACHMENT #2