

## SOUTHWEST SHORE CONSERVATION ASSESSMENT

Section IX of the Master Plan addressing Small Area Plans provides that the recommendations made in the Southwest Shore Conservation Assessment (SWSCA) are accepted “as a guide to future development that shall be considered as small area plans are developed and presented to the Town”. The following address these recommendations and how they have been considered in the formulation of the North Village Small Area Plan in Chatham Park (the SWSCA recommendations are in italics):

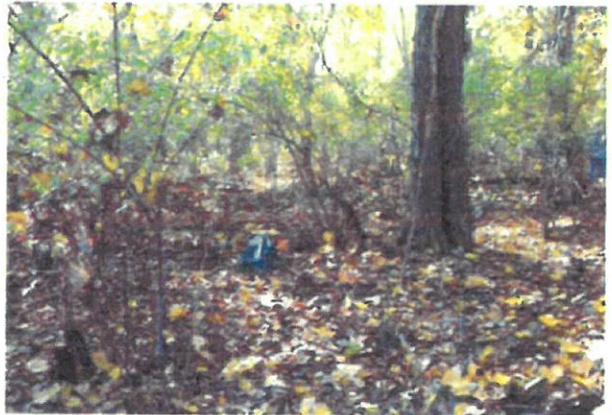


*Preserved areas create links throughout the North Village.*

### **A. Preserve Areas of Cultural or Historic Significance**

1. *Conduct a full, on-the-ground, historical inventory of the site before development occurs. The study area’s unique history should be preserved and incorporated into development plans for the site.*

An on-the-ground historical survey will be completed for Sections in each Small Area Plan prior to the submittal of a development plan for that portion of the Small Area Plan, except for development plans submitted for development allowed to occur under the Master Plan prior to approval of the applicable Small Area Plan. The Development Review Committee will include in each development plan submitted for approval in the applicable Small Area Plan the recommendations from the historical survey that it determines are appropriate for the proposed development.



*Riddle George Straughan Cemetery*

2. *Investigate the potential historic significance of the man-made rock wall and ditch that borders the south-side of Robeson Creek on Preston Property across from Allen Phillips land.*

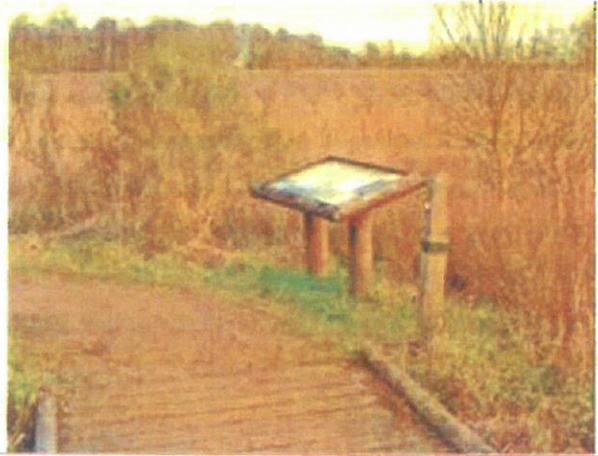
As described above, assessments will be provided prior to site development occurring. These features are located in the South Village which is outside of the planning area covered in this document.

## **B. Identify and Preserve Landscape Linkages**

1. Conserve areas adjacent to the Lower Haw River Corridor, Robeson Creek, and Jordan Lake. In particular, the area adjacent to the Haw River Slopes State Natural Area should be added to the Haw River Slopes State Natural Area. At a minimum, the eastern portion of this area – the missing gap between the Lower Haw River State Natural Area tracts – should be added to the Park unit.

An approximately 110 acre (Section 1.5) park and open space area within Chatham Park, located in the eastern portion of the Haw River Slopes State Natural Area, will be preserved as a linkage between the State Natural Area and the Lower State Natural Area. This area will be part of three core conservation areas provided in Chatham Park.

An exact description and final location of this park will be provided either prior to or as part of the development plan approval process for these areas.



Open space creates recreational areas that can also incorporate educational aspects.

2. Develop a trail system that connects the proposed development to key cultural and natural features including Stinking Creek and Robeson Creek riparian corridors, Jordan Lake, the Lower Haw State Natural Area, and the Town of Pittsboro.

This SAP includes updated greenway information for the North Village in Chapter 9 – Public Facilities. A preliminary greenway plan was provided as part of the approved Chatham Park Master Plan that provides specific locations linking the Haw River to parks, schools, and neighborhoods within the North Village, as well as connecting to the Town of Pittsboro, Chatham County, and other regional greenway systems, the Lower Haw State Natural Area, and the Stinking Creek and Robeson Creek riparian corridors. This Small Area Plan includes more detailed information for that portion of the greenway system located in the North Village.

3. Design and conserve an integrated network of habitats and corridors, connecting core natural areas with wildlife corridors inside and outside of the study area. To conserve wildlife habitat, the network will need to consist of large core areas of un-fragmented habitat that are connected by wildlife corridors.



Natural areas that meander throughout the North Village.

An integrated network of 200 foot wide wildlife corridors, primarily running with the riparian buffers, will be provided connecting Chatham Park with other Open Space and wildlife habitat locations in the Jordan Lake area. As previously mentioned, a core conservation area has been preserved as part of this SAP that links the Haw River Slopes State Natural Area to the Lower Haw River Slopes State Natural Area. Over 100 acres of protected land will be provided, which will serve to enhance wildlife habitat areas along the Haw River. When combined with adjacent public open space, a core area of over 400 acres of protected open space is located in the North Village and Haw River area. A final delineation of this land area will be provided at the time of the associated development plan submittal.

4. *Design wildlife core areas to be large enough (200+ acres) to discourage edge-dwelling species. Design wildlife corridors so they are as wide as possible, trail widths are minimized, the canopy cover is maintained, and layers of shrubs and groundcover are maintained.*

As described above, there is over 450 acres of wildlife core area located on public and private land in and adjacent to the North Village along the Haw River. Two hundred foot wide wildlife corridors will extend through the North Village as part of the riparian buffer network connecting neighborhoods to this larger wildlife core area along the Haw River. Canopy cover as well as understory plantings will be protected in these areas.



*Path network with narrow trails to preserve natural open space.*

### **C. Protect Sensitive Natural Areas**

1. *Conserve lands adjacent to US Army Corps of Engineers Jordan Lake Lands, particularly the areas adjacent to the Robeson Creek Significant Heritage Area, as well as areas of steep and dissected lands.*

Most of this land area is adjacent to portions of the South Village, that will be discussed in future SAPs, but as has been previously mentioned, approximately 110 acres of land has been set aside as open space and passive park along the eastern edge of the North Village adjacent to land owned by the State of North Carolina.

2. *Protect and enhance wetlands, floodplains and seeps, such as those along Robeson Creek. This not only diversifies terrestrial and aquatic habitat, but also filters water, thereby improving water quality for the creek as well as Jordan Lake.*

All wetlands and areas within the 100 year floodplain located in Chatham Park will be preserved as part of the minimum of 1,320 acres of open space required under the Chatham Park PDD Master Plan.

3. *Avoid development on areas with slopes greater than 15%.*

The Appendix in this SAP includes a map depicting areas in the North Village that have slopes greater than 20%. Typically, areas that include land with slopes greater than 20% will be avoided for development, particularly when these are located along riparian buffers. However, where isolated pockets of steeper slopes are located in the midst of more gentle slopes, grading for the construction of streets, utilities, and building pads will be allowed.

#### **D. Minimize Development Footprint**

1. *Cluster development to preserve large contiguous forested areas, particularly those areas adjacent to existing protected lands and areas identified as important for recreation or wildlife habitat. In addition, cluster developed areas as close to existing roads and Pittsboro as possible and away from ecologically important areas. Utilize the Department of Environment and Natural Resources' comprehensive Planning Tool to plan for conservation, restoration and site development ([www.conservision-nc.net](http://www.conservision-nc.net)).*

Many of the Open Space features to be preserved in the North Village have been described earlier, and the smart growth tools typically employed to minimize the development footprint were included in the approved Chatham Park Master Plan including, but not limited to:

- Locating more intense development and higher densities closer to Pittsboro and existing thoroughfares;
- Reducing the number of stream crossings as much as possible (Chapter 4 - Transportation of this SAP details how many stream crossings in the North Village have been eliminated);
- Locating more high density residential uses closer to the workplace to reduce vehicle miles driven; and
- Incorporating a multi-modal transportation system into the development to reduce vehicle miles driven.

Residential neighborhoods within Chatham Park and the North Village in particular will not be developed as part of a conservation development plan although many of the conservation and restoration planning tools have been used here and will continue to be followed as subdivision plans are developed.

2. During site design, incorporate recommendations from the NC Wildlife Resources Commission's "Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality" (August 2002) found at [http://www.ncwildlife.org/pg07\\_WildlifeSpeciesCon/pg7c3\\_impacts.pdf](http://www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7c3_impacts.pdf).

While recommendations from the NC Wildlife Resources Commission's "Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality" (August 2002) have not been adopted by the Town of Pittsboro as a standard for development, many have already been committed to in the approval of the Chatham Park Master Plan and have been employed during the early development plan submittals for the development. The following recommendations developed by the Wildlife Resources Commission will be employed in the development of the North Village:

- Incorporate 100 foot buffers around perennial streams and 50 foot buffers around intermittent streams;
- All utility crossings of streams will be kept to a minimum. This includes careful routing design and combining utility crossings into the same right-of-way;
- Commercial or residential development will be prohibited within the 100-year floodplain;
- Bridges will typically be used for permanent Town roadway crossings of streams and associated wetlands to reduce the need to fill and culvert; and
- The use of Best Management Practices and Low Impact Development will be employed as part of storm water solutions.

#### **E. Protect and Restore Riparian Buffers**

1. Preserve 300 foot wildlife corridors along both sides of the Haw River, Robeson Creek, Stinking Creek, and US Army Corps of Engineers lands. Robeson Creek is a major floodplain – a wide buffer would accommodate more floodwater storage. The corridor could be used for a narrow trail to connect historic Pittsboro and Preston development [Note: the reference should be to Chatham Park] to Robeson Creek Boat Ramp on land under the jurisdiction of the Army Corp of Engineers.

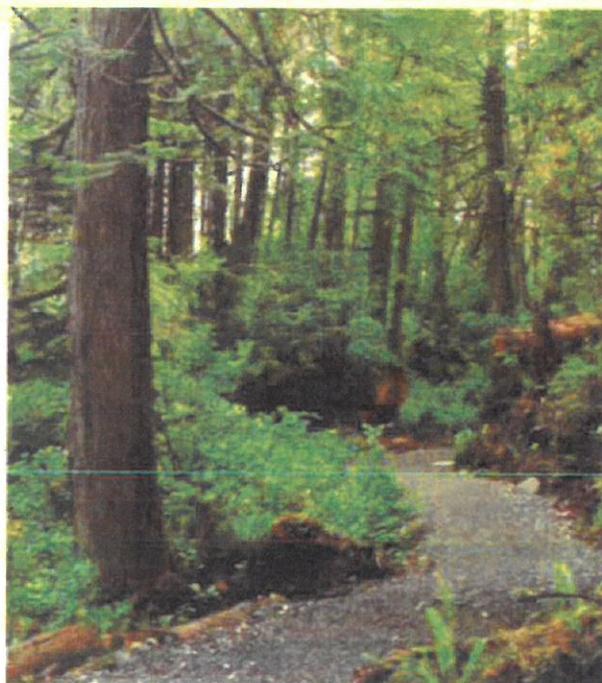


Preservation of riparian buffers.

As part of the Master Plan, a 300 foot buffer and a 500 hundred foot buffer, which can serve as wildlife corridors, have been established in the North Village along the Haw River. In addition, the rear 50 feet of residential lots backing up to this buffer, as specified in this SAP, will be left undisturbed thereby increasing this Haw River buffer by 10-16% over what was previously approved.

2. *Follow Chatham County Riparian Buffer Ordinances for protecting streams, as well as wetlands, seeps and springs throughout the property. This would protect perennial streams with 100 foot buffers, intermittent streams and wetlands with 50 foot buffers, and ephemeral streams, seeps and springs with 30 foot buffers. Ephemeral and intermittent streams funnel water to larger order streams and thus merit protection. Plant native vegetation in the buffer to enhance habitat and stabilize stream banks. Tree and shrub planting is recommended.*

As previously noted, perennial streams have been protected with 100 foot undisturbed buffers and intermittent streams with 50 foot buffers through commitments made in the Chatham Park Master Plan. Requirements in the Town of Pittsboro Riparian Buffer Protection Ordinance will be followed in the administration of these buffers.



*Creating strategic trails that will minimize erosion.*

3. *Maintain upland buffers along riparian areas as well in order to minimize erosion and help prevent runoff from entering the riparian buffer. Maintaining buffers is crucial to protecting the health of creeks in the study area, particularly Robeson Creek, and could help prevent this and other creeks from becoming listed for biological impairment.*

As was provided in the approved Master Plan, Chatham Park riparian buffers are two times the State requirement providing increased stream protection. Additional areas of steeper slopes will be preserved in areas adjacent to these riparian buffers. In the North Village, the detail of these steeper slopes to be preserved will be defined as part of the development plan approval process.

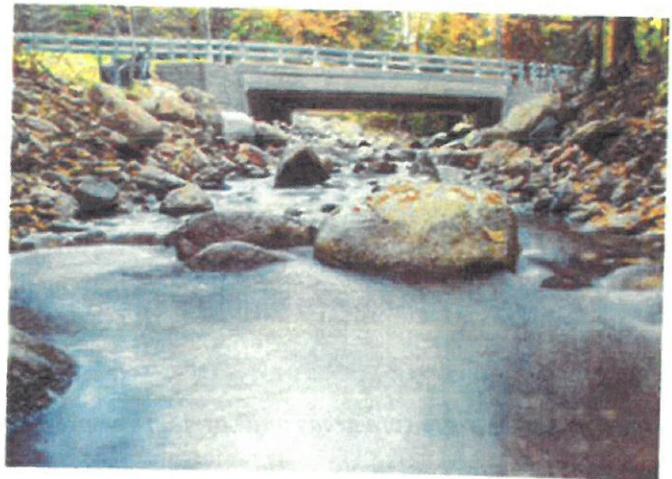
4. *Conduct a riparian corridor assessment on Stinking Creek and other major tributaries in the study area, since only Robeson Creek was assessed as part of the inventory.*

Robeson Creek was assessed as part of the SWSCA and, as a result, this area is to be protected as the second core conservation area within Chatham Park. As part of future SAP's for the South Village, specific open space and recreation treatments will be presented that are adjacent to Robeson Creek with final details provided at the time of development plan submittal.

#### **F. Protect Water Quality**

1. *Minimize new stream crossings by roads and utilities, and avoid alteration to natural stream flow.*

Roadways that are a part of the Town of Pittsboro Thoroughfare Plan were defined and located in the Chatham Park Master Plan. As previously presented in Chapter 3 – Transportation – the thoroughfares approved in the Master Plan have been further evaluated resulting in fewer stream crossings and reduced environmental impacts. As previously mentioned in item 2 under Minimize Development Footprint, bridges will also be typically used on Town roadways to avoid stream impacts and to avoid alteration to natural stream flow.

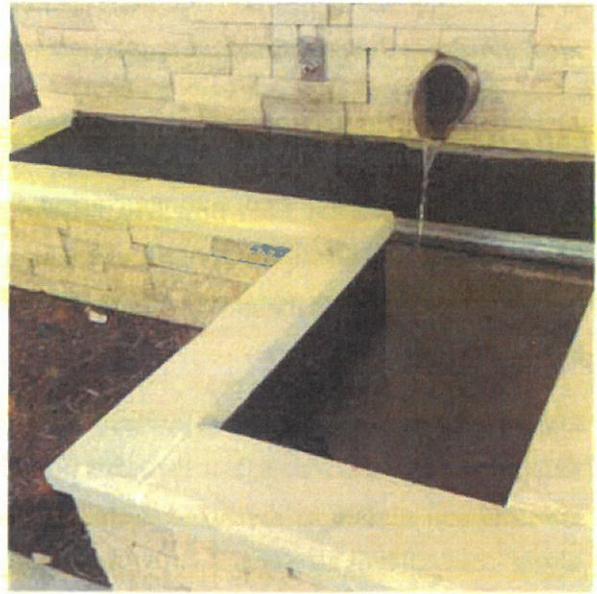


*Minimizing stream impacts by incorporating bridges.*

2. *Develop and implement a local storm water ordinance to minimize storm water runoff. Implement alternative building techniques to limit impervious surfaces, for example, green roofs, rain gardens, and pervious pavement.*

Pursuant to the Storm Water Additional Element, best management practices, or “BMPs”, will be implemented in Chatham Park to comply with State of North Carolina laws and Town of Pittsboro ordinances designed to protect water quality.

3. *Implement and develop infrastructure systems that can support the use of reclaimed water. For example, reclaimed water can be used for irrigation of landscaped areas.*



*Incorporate storm water runoff for water features and natural irrigation for plants.*

Section 5 – Utilities - in the Master Plan describes how a reuse water system will be implemented in the North Village.

4. *Revise subdivision ordinances to allow for the implementation of Low Impact Development practices.*

While Chatham Park cannot revise the Town's subdivision ordinances, the protection of water quality has been enhanced through storm water measures described in the Storm Water Additional Element.

5. *Use native, drought tolerant species for landscaping.*

The Landscape Additional Element specifies and describes the situations in which drought tolerant plant material and grasses will be used in Chatham Park.

## **G. Protect and Enhance Wildlife Habitat**

1. *Design wildlife core areas and corridors to preserve the highest quality wildlife habitats in the area, which include any vernal pools, wetlands, rock outcrops, mature hardwood forests, lands adjacent to existing protected areas, or other unique sites identified in the Natural Heritage Inventory report.*

Three primary wildlife core areas and corridors will be preserved in Chatham Park as previously described in the Open Space Additional Element and this Small Area Plan.

2. *Incorporate wildlife-friendly landscaping materials into the design of built infrastructure. See <http://ncsu.edu/goingnative/> for detailed instructions.*

The Landscape Additional Element provides a description of how wildlife-friendly, native landscape materials will be incorporated into the Chatham Park landscape.

3. *Allow prescribed burning and timber management in the study area to continue. To avoid conflicts between current management activities and future residents of the Preston Development [Note: the reference should be to Chatham Park], limit built structures within ½ mile of areas where large scale prescribed burning occurs.*

Burning and timber management practices will typically not occur in the developing portions of Chatham Park. Distance restrictions between built structures and areas where large scale burning may occur outside of Chatham Park are not contemplated at this time.

4. *Locate all permanently inhabited structures outside the recommended 150 yard hunting safety buffer external to Game Land boundaries. Doing so will help prevent conflicts between hunters and future residents.*

No permanently inhabited structures are anticipated to be built in Chatham Park within 150 yards of Corps of Engineer Game Lands for approximately twenty years. If such structures are proposed before that time, specific recommendations will be made as part of the South Village Small Area Plan or development plan submittals for these sections.

5. *Keep all utility lines out of Game Lands and other protected areas.*

No utilities will be installed by the developers of Chatham Park in areas of Corps of Engineers designated Game Lands. That being said, public utilities outside of the control of the developers of Chatham Park (i.e. electric, gas, phone) are not bound by this statement. Utilities may be installed in riparian buffers and Open Space areas as allowed by the RBPO, the Master Plan, and other applicable laws.

6. *The North Carolina Wildlife Resources commission, in partnership with other organizations, is in the process of developing a wildlife-friendly development certification program Enrolling development projects – such as Preston [Note: the reference should be to Chatham Park] – in this program will help conserve habitats alongside developed areas on the Southwest Shore.*

The North Carolina Wildlife Resource Commission has adopted a certification program which is only for residential projects and is contemplated for application closer to the time when actual development occurs. The Development Review Committee will encourage developers of appropriate residential neighborhoods within Chatham Park to apply for this certification prior to finalizing development plans. At the same time, many of the standards used in that program have been included in the approved Master Plan, Additional Elements and this Small Area Plan, and all Chatham Park neighborhoods will be required to follow these standards. It should be noted, however, that prerequisites for this certification include having no roadways with rights-of-way greater than 80 feet. Chatham Park has numerous roadways greater than 100 feet in order to meet NCDOT requirements.

## **H. Protect Working Lands**

1. *Set aside land for small produce farm lease areas on prime soils. Set aside larger areas of land for biofuel crops, native plant nurseries, and/or hayfields. These areas could be used for spray irrigation of effluent.*

While not impossible, it is unlikely that land will be set aside for working farms within the North Village.

2. *Incorporate a local farmer's market into development plans.*

A minimum of one farmer's market will be established in the North Village within ten years of the approval of this SAP.



*Outdoor Farmer's Market with locally grown produce.*

## **I. Develop a Network of Open Spaces and Trails**

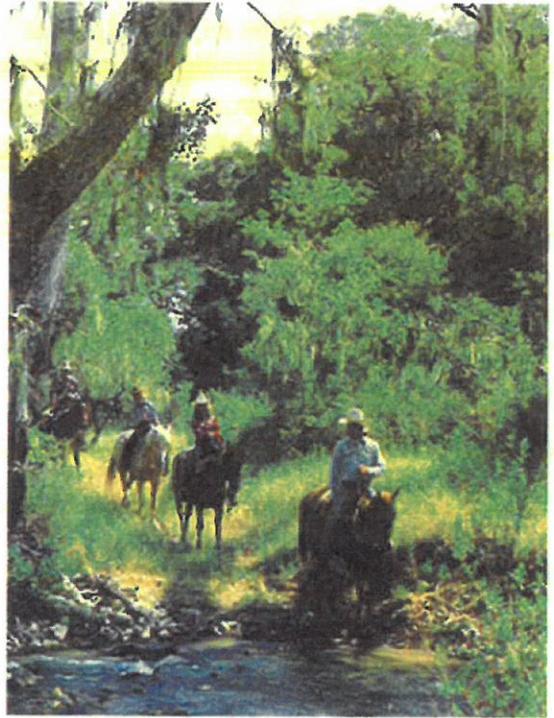
1. *Plan for and set aside land to develop a trail system that could help establish and eventually connect the Haw River Corridor to the Deep River along the western shore of Jordan Lake. Provide passive recreation hub sites (200+ acres) with walking trails and nature observation areas.*

In addition to Open Space information presented in this Chapter, more detailed trail information is provided in Chapter 9 - Public Facilities. This trail system connects North Village neighborhoods and recreation amenities with the Haw River Corridor, the Deep River, and other regional destinations in the future.

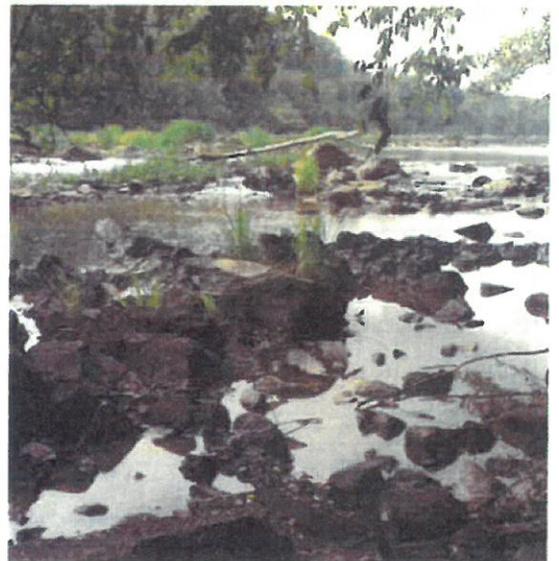
2. *Incorporate natural and stone trail surfaces in order to limit the impact of impervious surfaces on trails and trail facilities.*

Greenway and trail surfaces will be made up of a variety of materials, and, as previously mentioned, trail details and specific locations will be finalized at the time of development plan submittals; however, many of the trails will be paved to allow a larger variety of users and reduce on-going maintenance costs.

3. *Avoid sensitive environmental areas (e.g., steep slopes, wetlands, or habitat for rare or endangered species) in selecting routes for trails. Place trails outside of a 50 foot riparian buffer along streams and water bodies. Incorporate wide riparian corridors (150 + feet) in order to provide room for trails, riparian buffers, and wildlife.*



Natural trails in less sensitive areas.



Enhanced views of key elements by preserving areas.

Sensitive environmental areas such as wetlands and steeper slopes will be avoided as final greenway and trail routes are determined. When trails are located within riparian buffers, as previously noted the PRBDO will serve as the standard for the design of these amenities.

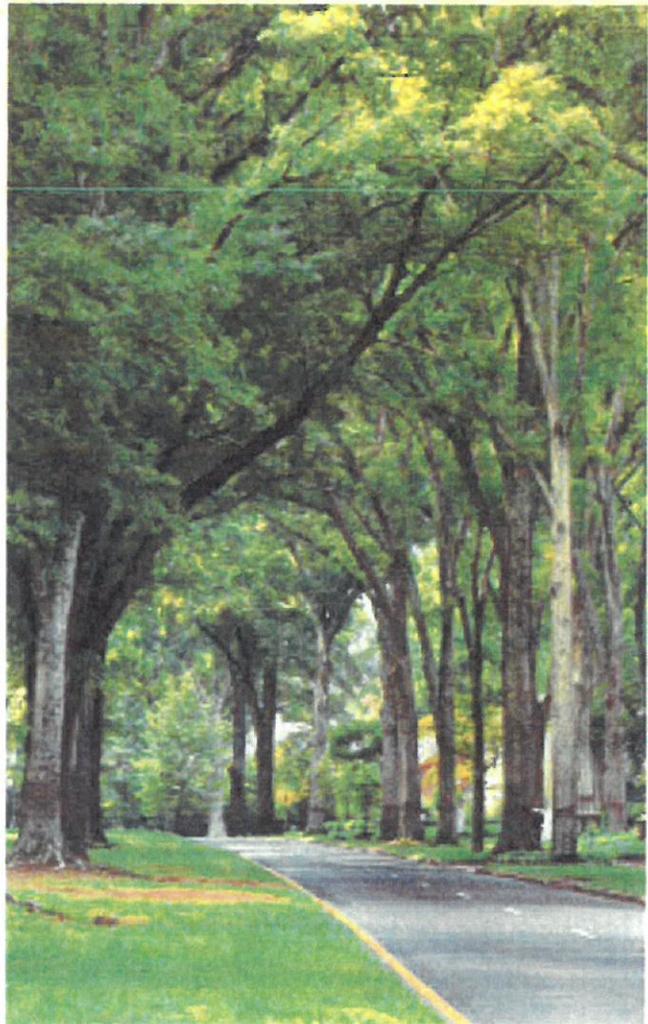
4. *Place mountain biking and horseback riding trails on less sensitive environmental areas.*

Any trail types including walking, running, and biking trails will typically be located on less sensitive environmental areas.

## **J. Protect Scenic Viewsheds**

1. *Set aside prominent hills and scenic views in the study area as conservation areas.*

Natural resources previously discussed such as wetlands, 100 year floodplain, steeper slopes, riparian buffers, wildlife corridors, and habitat protection will be the focus of preservation efforts in the North Village. The protection of scenic views is an important design consideration that has been followed in portions of Chatham Park along the Haw River, where views from the river have been protected by expanded riparian buffers. To enhance views along future major roadways in the North Village (as shown in Chapter 4 – North Village Thoroughfare Plan) the Landscape Element has established landscape buffers that will be protected from development.



*Preserving existing trees with layout of road network.*

2. *Incorporate the existing tree canopies and natural views into road design.*

Natural views and tree canopies will be considered in addition to design standards and guidelines when designing roadways in the North Village. To supplement this, however, the roadway sections included in this SAP that provide the Chatham Park standard of planting street trees between the back of curb and the sidewalk in an eight-foot planting strip will further enhance canopy provisions along roadways.

3. *New development should be respectful of the rural nature of the county and town entrances.*

New development within the North Village will be respectful of the existing rural nature of entrances into the Town of Pittsboro, but at the same time, acknowledge that this character likely will evolve through time as the growth that is coming into the region extends into Chatham County. As a result, 50 foot landscape buffers have been established in this SAP along both Highway 64 Bypass and Business, to maintain a planted edge along these roadways, and the Griffin House, a historic home located on Highway 64 Business, has been given to Preservation North Carolina.

#### **K. *Develop and Implement a Long-Term Conservation and Management Plan***

1. *Develop a plan, based on the findings and recommendations of this report, to conserve and manage sensitive or unique natural resources such as riparian corridors, wetlands, steep slopes, and wildlife habitat.*

The Master Plan, together with the Additional Elements and this SAP, establish the conservation plan for Chatham Park. A property owners association for Chatham Park will be involved in the management and preservation of open space that is protected by this plan.

2. *Control and reduce invasive species throughout the study area. Several areas are overrun by invasive species. For example, much of the area adjacent to the Lower Haw River Corridor is heavily overrun by the exotic autumn olive. The construction of roads and utility rights-of-way will only exacerbate this problem.*

As development occurs in the North Village, maintenance of the related landscapes will begin to take place. The control of invasive species will be part of this maintenance program, particularly in areas of road and utility rights of way where Chatham Park Investors LLC or its related entities controls these land areas. Utility rights of way controlled by others (i.e., electrical, gas, phone, etc.) will follow their own operational guidelines for maintenance.

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3. Create a long term funding mechanism to implement goals and objectives of the conservation and management plan, such as collecting fees from future businesses and the HOA that will become part of the Preston Development [Note: the reference should be to Chatham Park].

4. Hire a qualified conservation land manager to implement the plan, oversee all resource management activities, and organize environmental education programs for future residents. See the “conservation director” position in the Harmony, Florida development as an example (<http://www.harmonyfl.com/harmonypreserve.html>).

5. Actively manage open spaces and protected natural areas on the Southwest Shore. Use habitat management techniques such as burning, thinning, reforestation, exotic plant control, feral cat control, snag creations and canopy gap creations. Without active management, habitat quality will decline.

With respect to the foregoing paragraphs 3, 4, and 5, a property owners association will be involved in managing and preserving Open Space and BMPs in the North Village, as well as all of Chatham Park and it will be funded by fees paid by owners of properties in Chatham Park.

Figure 5.1 shows the land area in both the North Village and nearby parcels where conservation and preservation is suggested.

