Sumter Connectivity & Greenways Master Plan for Shotpouch Creek

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INTRODUCTION: Project Purpose

The Shot Pouch Creek spans approximately 4 miles, connecting Dillon Park to Greenswamp Road. Along the way, it bisects Sumter's neighborhoods, commercial corridors, and public parks. It might not look like much today, but it has tremendous potential. Great places have great vision. The Master Plan for the Shot Pouch Creek envisions this natural greenway as a viable community amenity, designed to connect neighborhoods, encourage recreational walking and biking, and as a catalyst for new niche neighborhood commercial development nodes. In essence, this plan sees a linear park serving as a "spine" for greater connectivity in Sumter. Think of all the stops along Shot Pouch: Dillon Park, North Pike, Broad Street, the YMCA, Guignard Drive, Swan Lake, Second Mill fishing hole, and the Greenswamp bridge. The Shot Pouch can be a sustainable central artery for the community - one that does not require the use of a car! Dozens and dozens of Sumter's neighborhoods lie in close proximity and could be easily connected to the greenway.

On the following pages, the Master Plan proposes the concept, challenges, phases, and opportunities offered by the Shot Pouch Creek Greenway. We encourage citizen feedback. In fact, public participation will be a key to the success of this project.

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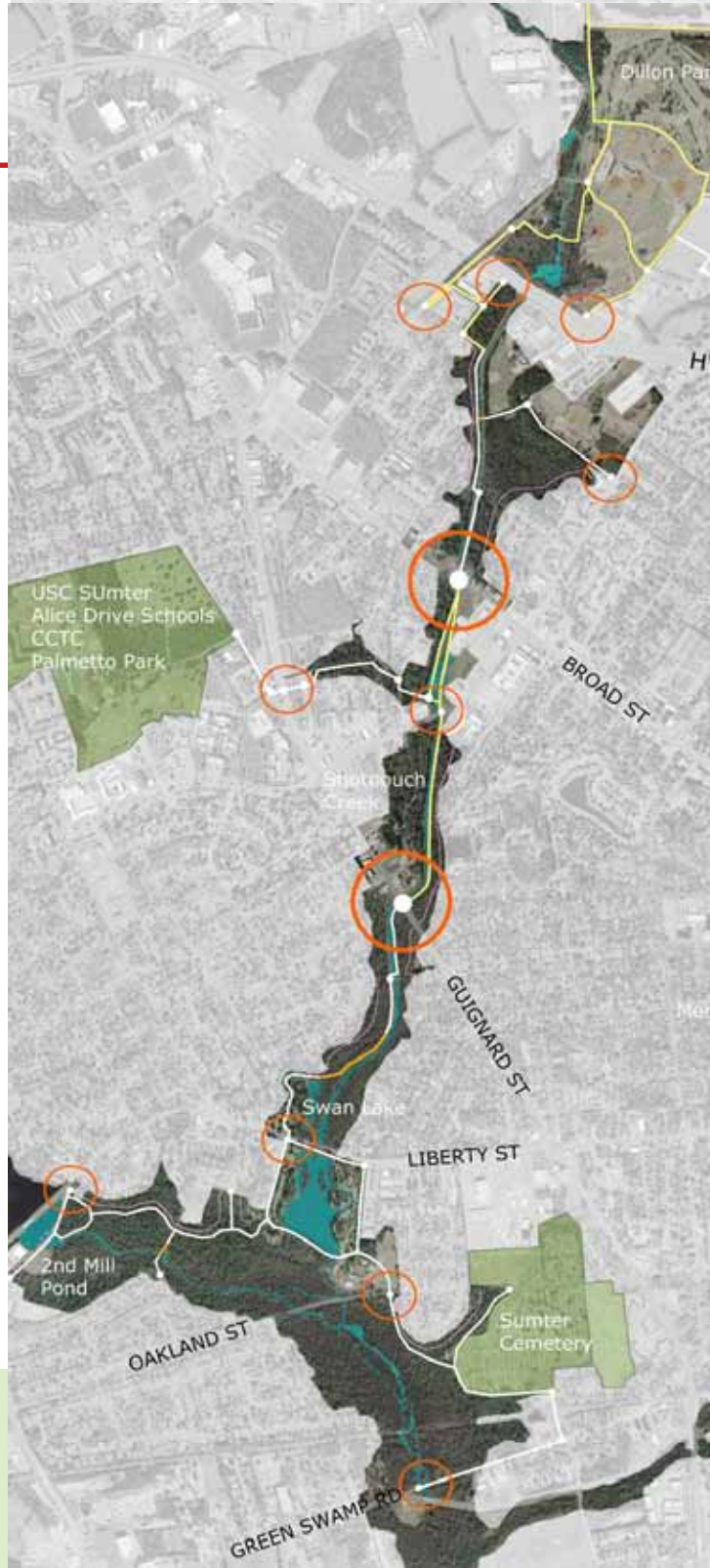
The primary goals of this project are to provide Sumter with a Master Plan for a greenway system, and to create a connected network between the primary amenities of the community (Downtown, Swan Lake, Palmetto Park, Dillon Park, Liberty, Guignard and Broad Streets, etc.) and this greenway. The vision is to be determined through public participatory design process. The ultimate goal of the process is to make possible many scenarios through creation of a greenway: families riding their bicycles on Saturday to get ice cream, professionals riding their bicycles to work, the entire Sumter community becoming more active and more actively engaged with the natural world.

KEY

- Commercial Node
- Transit Node
- Proposed Boardwalk
- Existing Path
- Proposed Path
- Proposed Fence
- Connection to Neighborhood or Road

Right: The overall concept for connecting existing spaces to create a Greenway system is as shown. Commercial Nodes are intended to be pedestrian-friendly retail environments that intersect both the Greenway and major corridors such as Broad Street.



INTRODUCTION: Case Studies

Existing greenways in the Carolinas were researched for this project to help guide the overall design, budgeting, and implementation strategies for Sumter's Shotpouch Greenway. Case studies help determine how other places have addressed such issues as land acquisition, funding, security, maintenance and public input. Connectivity and the interaction between the greenway and adjacent commercial or residential uses is also examined in these case studies.

Yadkin River Greenway
Wilkes & Catawba Counties, NC

Three Rivers Greenway
Metro Columbia, SC

Swamp Rabbit Trail
Metro Greenville, SC

Yadkin River Greenway

Wilkes & Catawba Counties, NC

The Yadkin River Greenway begins in North Wilkesboro, NC, and follows the river southwest towards Lenoir, NC. This greenway is not yet complete, but the portion staff visited left a good impression. The Yadkin River eventually joins with other streams to form the Great Pee Dee River.

The parking area is visible from the main road, *above*, as is the greenway sign, *right*. Good branding, visual connectivity and signage are important components for attracting greenway users.

***Below*: Signs explaining rules and trail etiquette are placed all along the greenway.**

Yadkin River Greenway

Wilkes & Catawba Counties, NC

Below: **There are a few access points along the river, such as the "beach"** *below* **which is discovered after following a small path.**

Below: **This country store is located next to the parking area, providing amenities for the greenway users as well as foot traffic for the store.**

Above:
A bridge connects the greenway to a local ballfield. Providing physical connectivity to amenities such as this is very important.

Above: **Local Boy and Girl Scout groups, garden clubs and master gardeners provided plants, handmade birdhouses, benches, and windchimes along the greenway.**

Three Rivers Greenway

Metro Columbia, SC

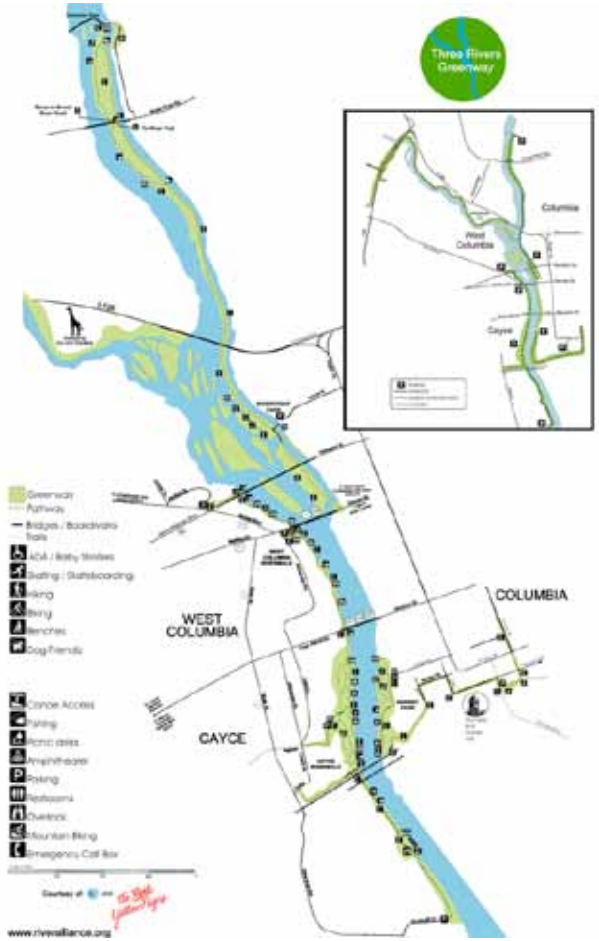
The Three Rivers Greenway links portions of Columbia, West Columbia and Cayce, SC, and extends more than 8 miles through the metro Columbia area. The Broad, Saluda and Congaree Rivers converge in the center of this area, and the greenway crosses and provides access to all three. One of the most interesting points about this greenway is the impact it has had on adjacent development: in several locations high-end residential development has followed the greenway installation. In one location, million-dollar residences overlook the greenway and are built on an old landfill site. The greenway system has provided many opportunities for neighborhood revitalization in the Columbia area.

Left: **A full parking lot at West Columbia Riverwalk on a weekday morning.**

Right: **The architecture of the restroom facilities is specifically designed to emulate historic styles common to the area.**

Three Rivers Greenway

Metro Columbia, SC



A map, *left*, of the Three Rivers Greenway system at present. A non-profit, intergovernmental organization was created to manage the greenway. Public input, or "dreamcatching", revealed immense interest in providing environmentally sensitive access to the rivers.

Left and above: **Views of the city and architectural features such as old bridges add visual and historical interest along the greenway.**

Three Rivers Greenway

Metro Columbia, SC

Right: **Path going beneath a bridge overpass.**

Right and below: **Recent residential development that is built on an old landfill site, overlooking the greenway.**

Left: **Residents of a nearby condominium were concerned about privacy, so a trellis covered path was constructed. A locked gate provides them with access.**

Three Rivers Greenway

Metro Columbia, SC

Above and below:
Stunning views of the river and a nicely designed public space begin the greenway at the Diversion Dam portion.

Above and left: **The Cayce portion of the greenway is shaded and sits on a high bluff with beautiful views of the river and the old railroad trellis.**

Swamp Rabbit Trail

Greenville, SC

Greenville has been diligently strategizing to revitalize their city for many years now. In the late 1970s they implemented a new trail system in Cleveland Park, and since then several trail networks have been built throughout the city, the most recent being the Hincapie Path, which was completed in summer of 2008. The trails extend beyond the city in several directions, linking nearby communities and rural county areas to the urban area. The most dramatic and exciting aspect of this trail network is Falls Park, completed in 2004, which features gorgeous views of a waterfall from a pedestrian bridge that crosses what was once a kudzu-entwined, littered wasteland.

Downtown revitalization began in the 1970's, when landscape architect Lawrence Halprin redesigned Main Street. Many new architectural additions have contributed to the energy and vitality of downtown Greenville in recent years.

Swamp Rabbit Trail

Greenville, SC

The Children's Garden features a rainbow garden, alphabet garden, native plants, sculptures and many interactive elements for children.

Swamp Rabbit Trail

Greenville, SC

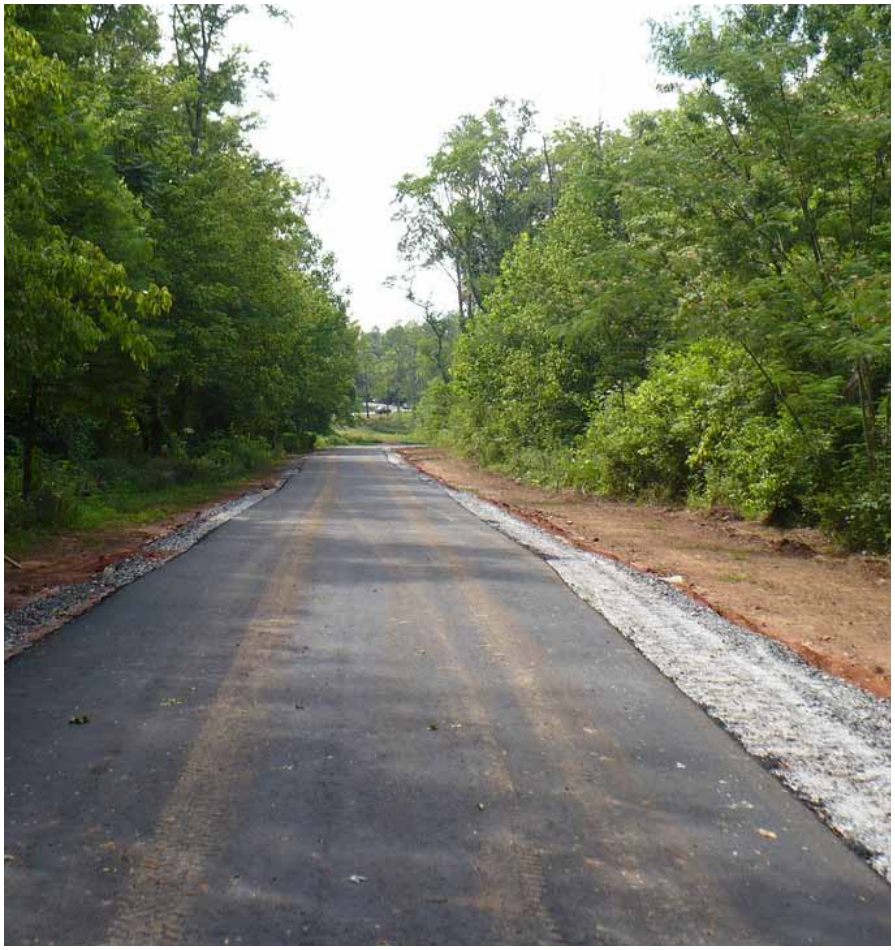
None of the trails in Greenville are lighted – it was decided that lighting would provide a false sense of security. The trails remain open from dawn to dusk. Public service announcements teach the community about rules and etiquette along the trails. So far, no crimes have been reported along the greenway itself, although there have been a few car break-ins at some of the more remote parking areas. The city is in the process of installing mile markers and navigation signs at this time. Police are a presence in the Central Business District and in Falls Park, as well as on some of the trails (on bicycles).

Swamp Rabbit Trail

Greenville, SC

Hospitality taxes have funded most of the Swamp Rabbit Trail. The city has also issued bonds to cover some of the costs. The local hospital system has given money in return for marketing and naming rights along the trails, and local businesses can also "buy" portions of the greenway and advertise within certain parameters in those areas. Greenville staff recommended conducting a feasibility study at the beginning of the planning process, to determine the cost of the proposed greenway.

GREENVILLE HOSPITAL SYSTEM
Swamp Rabbit
Tram Trail



INTRODUCTION: Safety & Security

Research indicates that women, particularly, often feel unsafe in public spaces such as parks. Older citizens, those with physical disabilities, and children are also less likely to feel safe in an urban open space environment. Urban greenways are criticized because they are linear in form, often with only single-route connections. The principle of prospect and refuge is very important to consider with regard to design of such public open spaces. Prospect refers to the ability to clearly see one's surroundings, and refuge is the ability to reach safety. Greenway design, therefore, must address the following with regard to safety and security.

Users must be placed in a position of control, where they can clearly see how to avoid and escape potentially dangerous places. Awareness of connections and routes to safe places are the keys to attaining this goal.

In the photograph to the right, a pedestrian has prospect (the point in the distance to which they are heading) and refuge (the open area to the left). This photo was taken at the Columbia Riverwalk.

Park design is just one of four important criteria to the safety of a public space, along with citizen involvement, programming and maintenance, and enforcement.

Left, A security guard stationed along the West Columbia portion of the Three Rivers Greenway. A fence in the background separates the greenway from residential areas. Privacy and security for neighborhoods adjacent to greenways is critically important.

A public space must be designed with a high level of imageability: that is, clearly visible entrances, a sense of openness within the space, and a lack of hidden or secluded spaces. Signs of antisocial behavior such as graffiti, trash, broken bottles and drug paraphernalia need to be kept under control within the space.

Left, Perception of environmental hazards will decrease the feeling of security about cleanliness, which can hinder use of a public space. This is at Shotpouch Creek, between Miller and Broad Streets in Sumter.

A lack of route choices, which is often inherent to a linear design such as a greenway, can result in predictable movement patterns, which is an unsafe situation. Therefore, the greater the connectivity to surrounding roads, neighborhoods and districts, the safer the path itself will be. Likewise, providing these connections will give police and 'passive police' (citizens and passersby) greater access and visibility to the greenway, which will enhance its safety.

Above left, This path along the Greenville Greenway leads into an enclosed wooded area. Many users are not comfortable with entering such an environment for safety reasons. The path above left is adjacent to the Children's Garden, *left*. The presence of parents at a children's playground or play area is one of the best forms of 'passive policing'. Parents act as hawks, surveying the environment carefully for dangers. Placing a parking area next to a playground is one of the best ways to prevent car break-ins and other crimes, for this reason.

Homeless people can present a problem in public parks and open spaces. The best way to control this issue is through enforcement, minimizing hidden spaces and sheltering environments. Statistically, crime rates do not increase significantly with the presence of homeless people. However, their presence can cause discomfort for other greenway users.

The concept of prospect, as mentioned before, includes the ability to recognize strangers and to visually survey the environment around oneself. Freedom of movement is important to the concept of refuge, giving a person the ability to avoid isolated places and escape threatening or annoying social encounters. Even within the linear context of a greenway, it is possible to design the space to achieve these goals.

Lighting is important to a greenway only if the space is designed to be used at night. Otherwise, it can actually encourage people to venture into a space that may not be safe. If lighting is to be used, it should be designed with an even, consistent level, and should avoid bright spots and pools of shadow. A person should be able to recognize another person's face at a distance of approximately 80 feet, for lighting to be effective and safe. If the decision is made to not light a space, this should be clearly communicated through signage.

Light poles or signage can also be numbered so that a person calling from a cell phone can state the number they are closest to along the greenway. This reference system can be coordinated with dispatch so that emergency personnel can easily reach a given location. The numbering system can also designate distance travelled, which aids in navigability.

Signage is important for providing navigability. The awareness of a person's relationship to their surroundings is paramount to their sense of security. Signs and maps should clearly show location along the greenway, where assistance is available, and provide landmarks to help the user navigate. Branding is another important element - note the logo on the right side of this sign for Greenville's Greenway System.

The single biggest factor in increasing safety in any public space is use. The more the greenway is used, the safer it will be for everyone on it. Therefore, it is critical to provide good anchors, or amenities along the greenway. These anchors generate activity along the greenway, and in turn benefit themselves from increased activity. It is a win-win situation for both sides. *Left*, the proximity of this path to downtown Columbia is probably the reason it is so crowded in the middle of a weekday.

INTRODUCTION: Benefits

Aside from the obvious health benefits offered by providing a recreational space to a cross-section of the city, the proposed greenway also provides many other secondary benefits. First, it will provide foot traffic to several proposed "neighborhood nodes" that will benefit from pedestrian activity. This commercial aspect is important not only to the economy of those businesses and to Sumter at-large, but also increases use along the greenway. Second, the greenway provides an alternate route for many people to get to work, particularly if they are employed on any of the following major corridors in the city: Pike Road, Broad St, Wise Drive, Guignard Drive, Miller Road, Alice Drive and Liberty Street. This will benefit not only those people who currently do not have access to a car, but also the many people who appreciate the health, environmental and economic benefits of walking or cycling to work.

INTRODUCTION: Connectivity

Connectivity is a critical component of any trail network. A path that leads nowhere does not encourage any sort of use. The greater the access to a greenway, the more intensive the use will be. Likewise, the greater the activity in any public space, the safer and more secure it will be. Therefore, it is of paramount importance that a greenway be well connected to the surrounding urban fabric. Physical connectivity in Sumter suffers because of a lack of sidewalks and walkable spaces. Numerous curb cuts and vast expanses of parking in front of businesses discourage a walkable environment along many of the city's priority commercial corridors. Visually, the connectivity in Sumter suffers for the same reasons.

Left: This path connects to a park within a neighborhood in Mt. Pleasant, SC. Connectivity is very beneficial within neighborhoods as well as in more urban areas, for providing access to green spaces.

Pedestrians prefer not to walk in deadened spaces, except by necessity. Providing better connectivity and destinations within the city will encourage everyone to walk more, for recreation and health benefits as well as to reach employment, shopping, etc. This enhanced connectivity not only promotes a more healthful lifestyle, it also creates a more sustainable environment that decreases reliance upon vehicular travel.

INTRODUCTION: Public Input

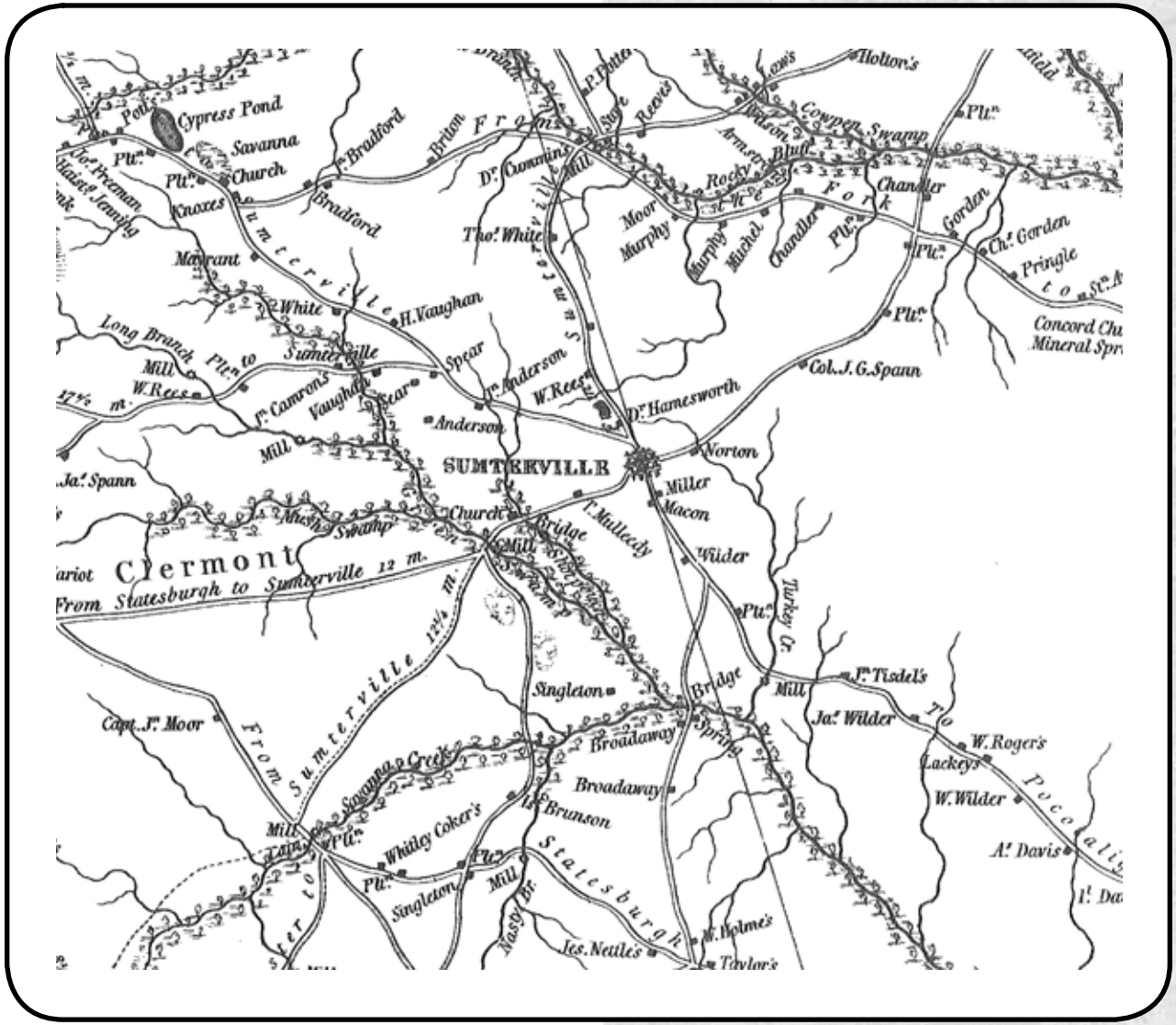
This draft plan provides a framework for public participation to streamline a specific vision. An extensive public participation process will help identify community members and stakeholders critical in the planning process. Public process is the key to creating a public greenway that serves the needs of the entire community.

ANALYSIS: Area of Focus

Large areas of Sumter County are either wetlands, floodplain or simply have poor soil conditions that make traditional development difficult or, in some cases, impossible. These areas were mapped and explored using GIS, to identify regions that were developed before current understanding of such environmentally sensitive habitats existed. There are both commercial and residential areas that are impacted by wet or flood-prone conditions. Careful redevelopment of these "overlap" areas can not only restore previously damaged habitats, but can also reduce potential cost to property owners through better design.

The focus area for this project was determined using GIS to identify the wetlands and floodplain areas. These areas are well suited for greenways and will provide public access to natural areas, alternative transportation options and recreational benefits.
The beautiful riparian corridors that weave through Sumter will provide a natural linkage through many neighborhoods and commercial areas in the city.

The canal that encompasses portions of Shotpouch Creek was probably built as the city expanded westward in the nineteenth century. Some engineering and fortification of the canal system in Sumter may have been part of WPA or CCC projects during the 1930s as well. The map at right shows some of the early property owners in the Sumter area.



Many species of birds migrate north every year along the Atlantic Flyway, which passes directly over Sumter County. Riparian corridors such as Shotpouch Creek serve as invaluable resting and feeding areas for these birds.

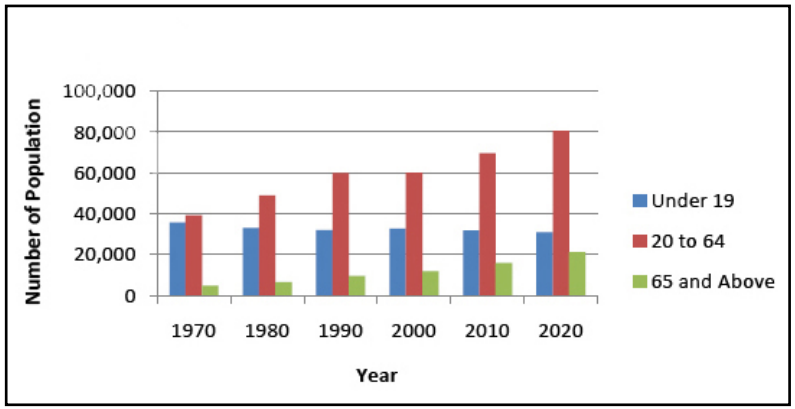
Birds such as the Great Blue Heron, *below*, live in Sumter year-round and utilize both natural and constructed wetlands for fishing and breeding. This photo was taken at the pond adjacent to the trail at Shotpouch Creek, between Broad and Miller.

Habitats such as the blackwater creek, *above*, are increasingly rare to find in South Carolina, particularly in urban areas such as this one at Second Mill Pond, near Liberty Street. Providing access to areas such as this is essential for city dwellers, for learning about and experiencing the natural world.

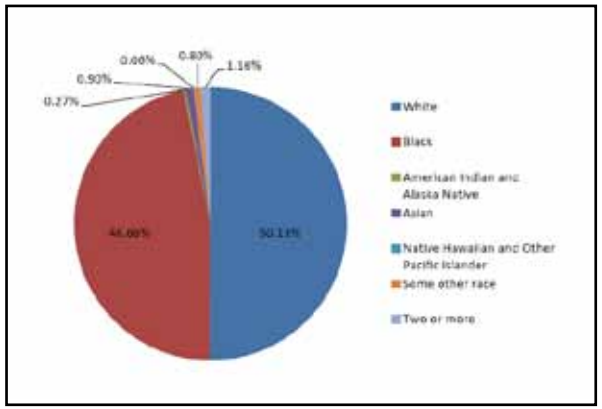
ANALYSIS: Sumter Demographics

All Data based on 2000 Census, representing the population of the City of Sumter

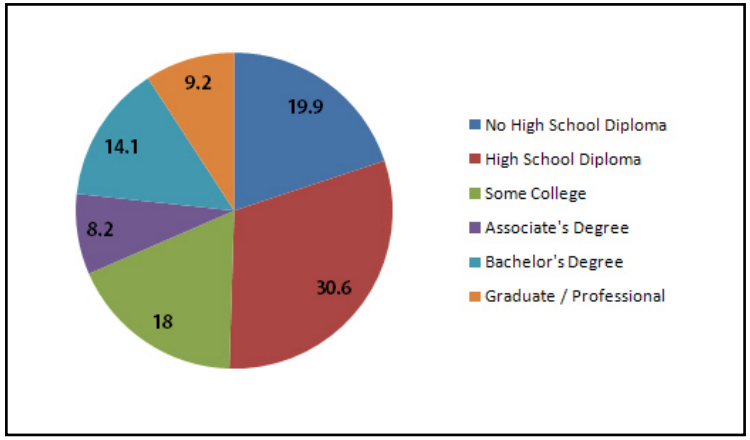
AGE



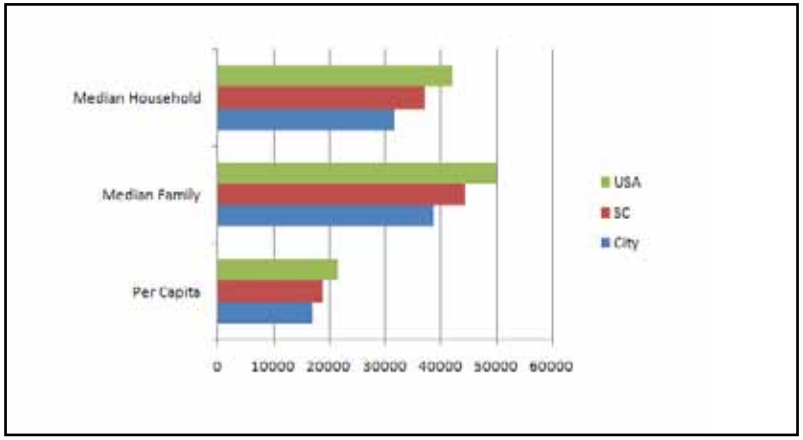
RACE



EDUCATION



INCOME

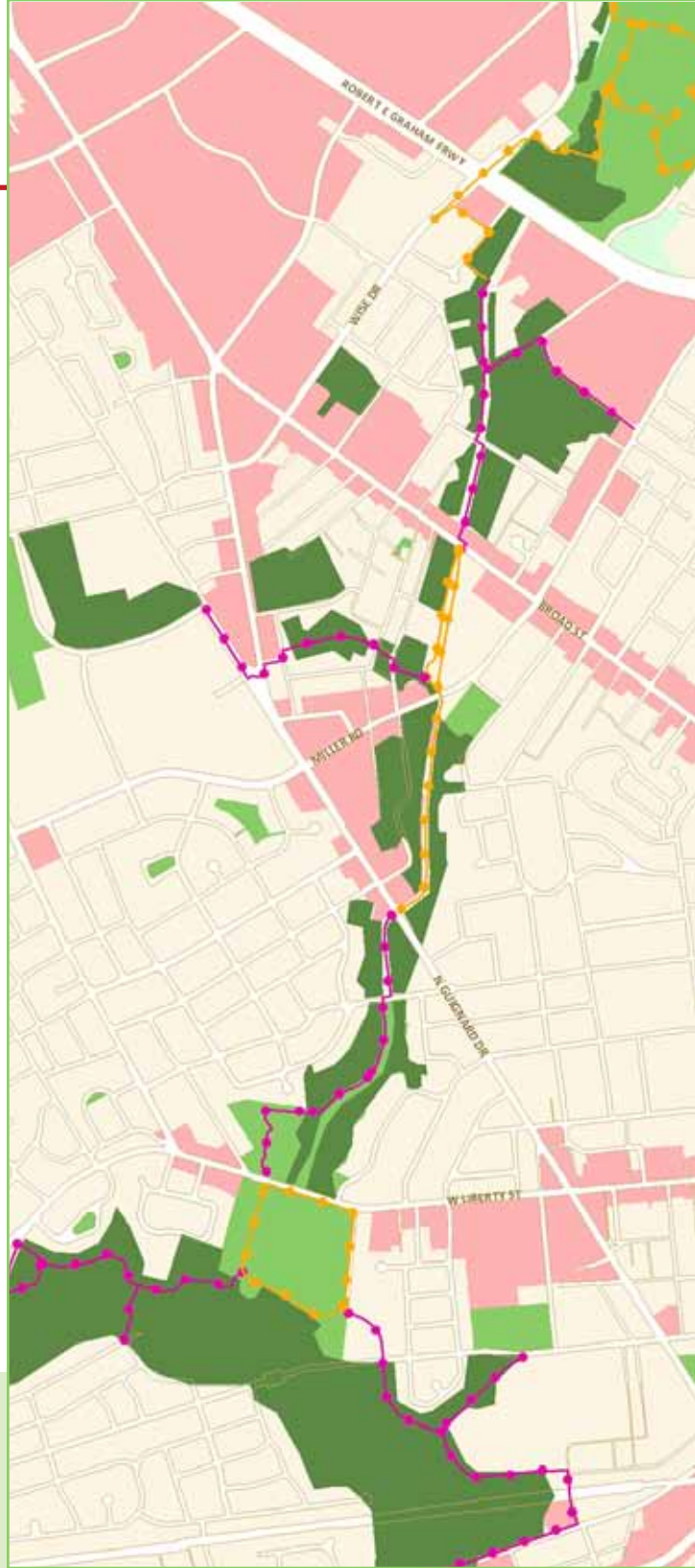


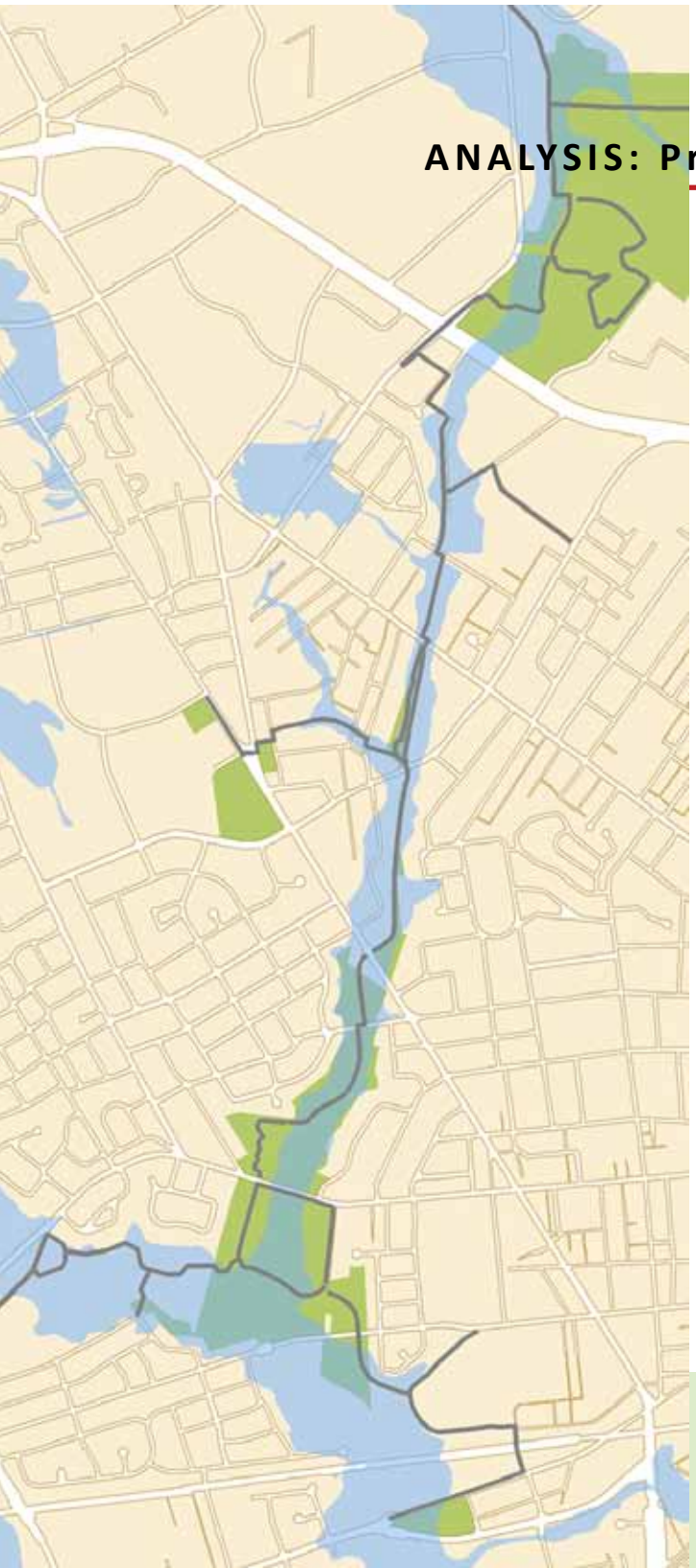
ANALYSIS: Land Use

KEY

- Existing Green Spaces
- Proposed Green Spaces
- Residential Areas
- Commercial Areas
- Proposed Paths
- Existing Paths

Land Use in the Shotpouch Creek area is a mixture of residential neighborhoods and commercial corridors such as Broad, Guignard and Liberty Streets. The proposed paths would connect these neighborhoods and commercial areas, providing access to shopping, work and recreation areas for many of Sumter's residents. The photo, *above left*, depicts an existing path that extends between a commercial use and an apartment complex near Wise Drive. Improving paths such as this, and connecting them to amenities and greenspaces, will enable many residential areas to access the greenway system.

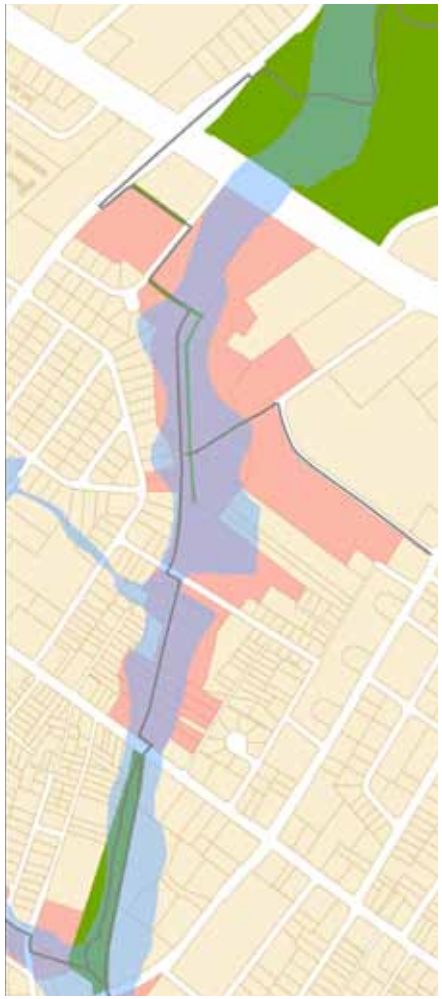




ANALYSIS: Property Ownership

Property Ownership along the proposed greenway spaces is a mixture of city and county-owned existing greenspaces, such as Swan Lake and Dillon Park, as well as residential and commercial parcels that are privately owned. Many of the parcels that comprise the proposed greenway path also lie in floodway, floodplain or wetland conditions. In order for this vision to succeed, participation in the process by private property owners is essential. Creating public greenspace will preserve those areas that are not suitable for other types of development. The lefthand map shows the entire Shotpouch area with green designating parcels already owned by the city or county. The blue area designates floodplains that impact those parcels. The right-hand map looks more closely at a specific area with regards to private property, shown in pink.

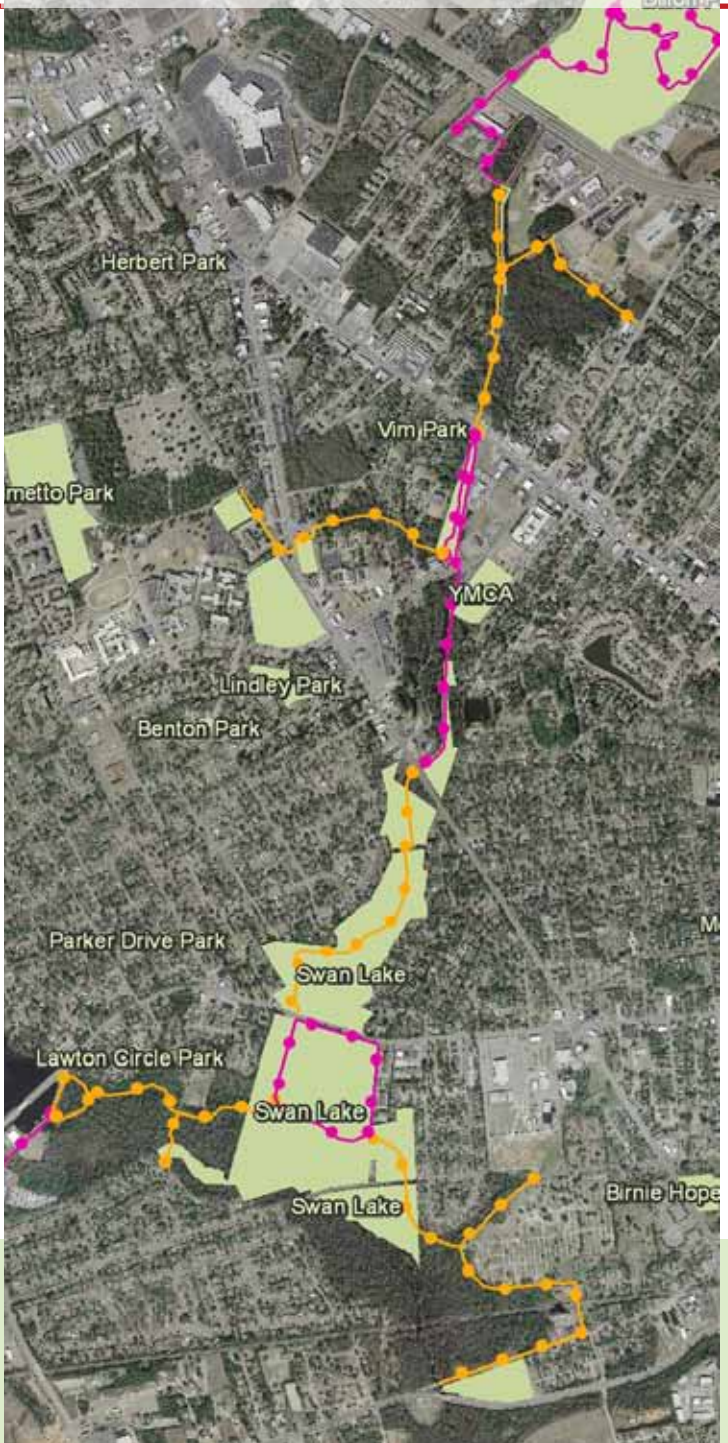
The complete set of property ownership maps is shown in Appendix A.



ANALYSIS: Floodplain & Wetlands

Sumter has several creeks that flow through the city. Shotpouch Creek is the area where the current proposed Greenway is to be located. The map to the right shows the various types of wetland and floodplain conditions that impact this area. Development is limited in those areas shown in light green (wetlands) or light blue (floodplain). The darker blue areas indicate floodway zones where development is not permitted at all. Further, the 2030 Comprehensive Plan (left) indicates that the areas in green are part of a conservation district that encourages preservation. The best approach for this area is to utilize it as natural habitat and encourage access by the public.

ANALYSIS: Existing Greenspaces



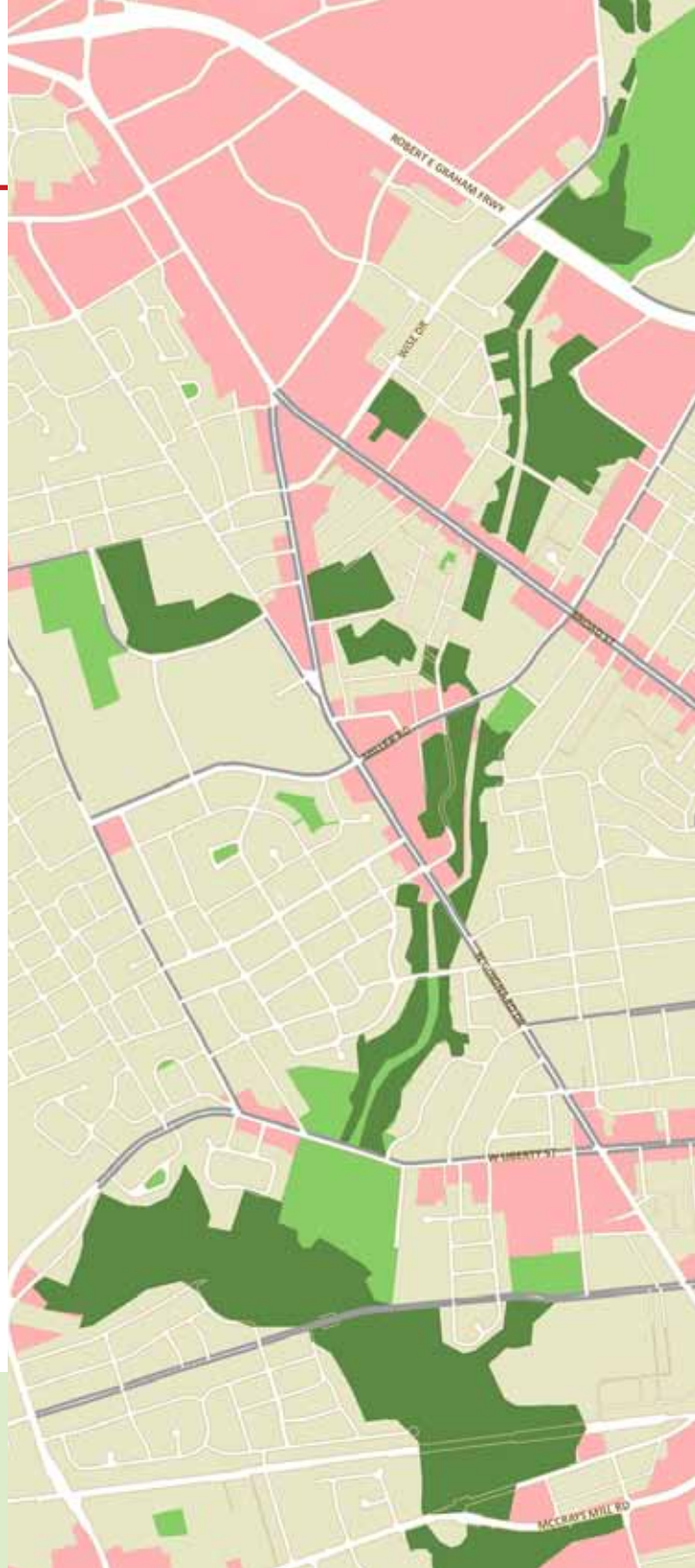
Sumter is already blessed with beautiful parks and functional recreational spaces. Swan Lake is exceptional and draws thousands of people every year to enjoy its scenery and wildlife. Dillon Park and Palmetto Park are important green spaces for area residents. The newly constructed Shotpouch Creek boardwalk is well designed and provides another access to natural beauty. However, the main problem with all of these destinations is that they are primarily accessible, at this time, by car. None of these greenspaces are easily accessed on foot or bicycle, unless one happens to live right next door to them. Connectivity is the major barrier to making these existing greenspaces accessible to everyone.

ANALYSIS: Existing Connectivity

KEY

- Existing Green Spaces
- Proposed Green Spaces
- Residential Areas
- Commercial Areas
- Existing Sidewalks

There are sidewalks in many parts of urban Sumter. However, many of these sidewalks suffer from poor connectivity. Connectivity with regards to sidewalks is a multi-faceted problem. An overabundance of curb cuts, wide street crossings and a lack of maintenance are all factors in the connection problems Sumter is currently experiencing.



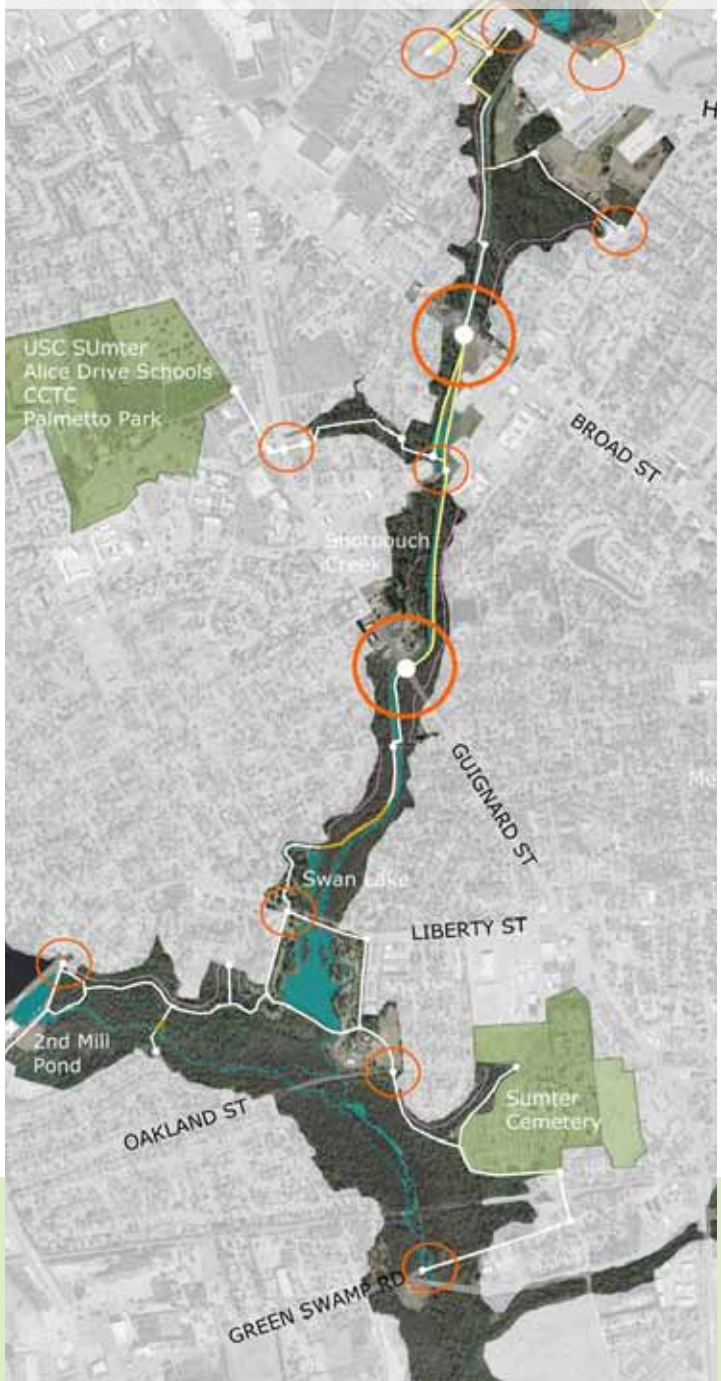
PROPOSED CONNECTIVITY: Major Nodes

The proposed greenway will cross two primary commercial corridors. For these spaces, good design is vital to creating a vibrant node of activity. Incidentally, both of these nodes are located in floodplain areas, where commercial development was implemented a long time ago. In the past, development in such areas was not restricted and the impact on flood management was not clearly understood. It is important to address the needs of commercial users and at the same time create spaces that do not conflict with the environmental needs of the area. The two commercial corridors identified as major nodes are Broad Street (*above right*) and Guignard Sreet (*below right*). They are noted on the map, *left*, as large orange circles.

PROPOSED CONNECTIVITY: Minor Intersections

The smaller orange circles in the map (*right*) indicate those smaller intersections that, while they do not cross major commercial areas, still require a safe crossing for pedestrians. Areas such as Liberty Street in front of Swan Lake (*above left*) and Oakland Avenue near the cemetery (*above right*) are particularly in need of safe pedestrian crosswalks.

PROPOSED CONNECTIVITY: Transit

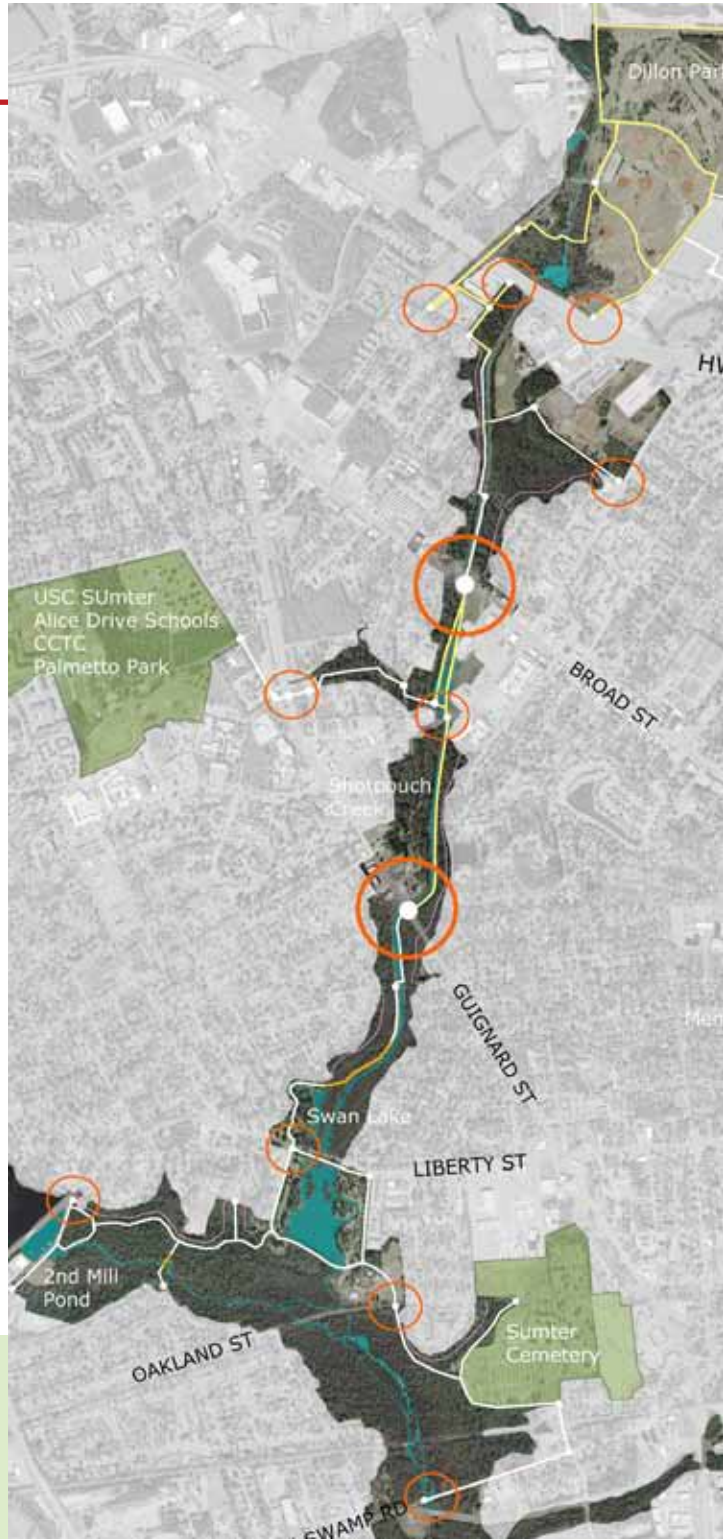


Having a well organized transit system is a critical component of a walkable environment and better connectivity in any urban area. The orange circles in the map (*left*) are all points at which reliable transit service should be provided. Riders can place a bicycle on the front of the bus, get off at one of the major commercial nodes such as Broad Street, and stop at a cafe for coffee and read the newspaper before heading to work downtown. Having all these components available makes scenarios like this possible for creating vibrant mixed-use nodes and a greenway that is used for both transportation and recreation. Ultimately this leads to an active, walkable city that does not rely so heavily on vehicular transportation.

GREENWAY MASTER PLAN

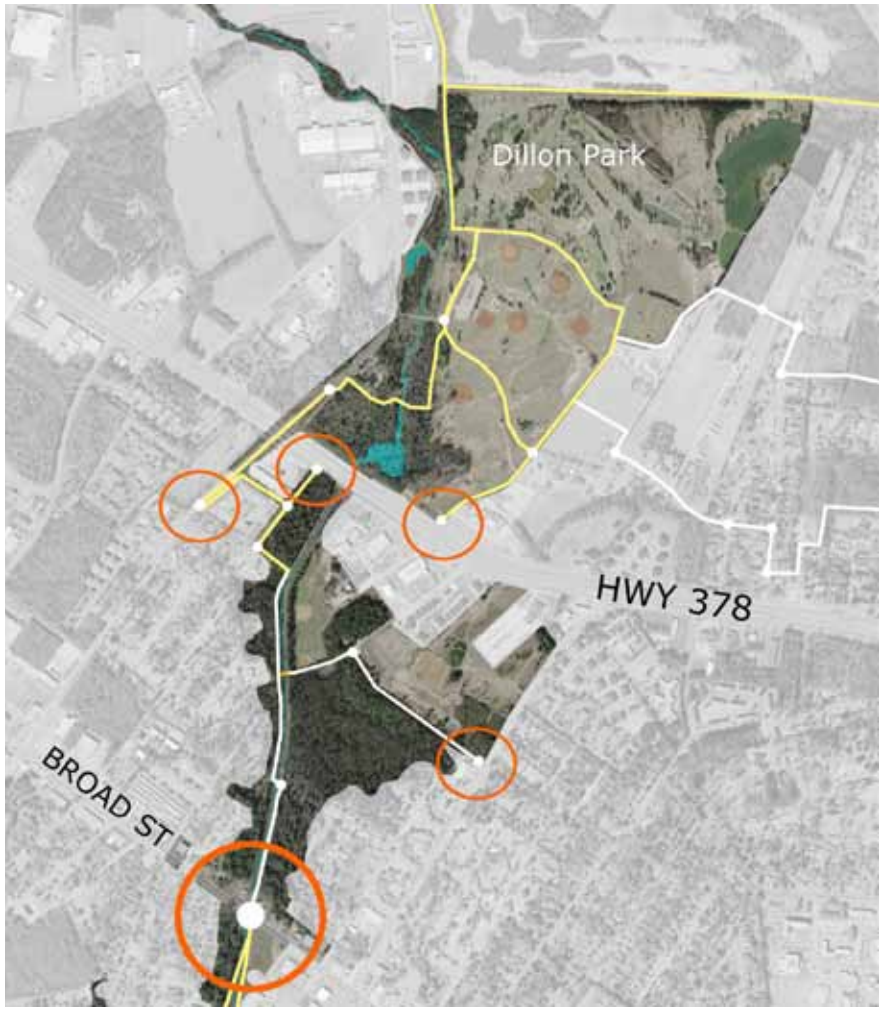
The Greenway Master Plan for Shotpouch Creek encompasses the area from Dillon Park to Greenswamp Road. This is a vertical "spine" that crosses many of the city's commercial corridors and natural features. It also links several existing parks, and strives to provide new amenities that make recreational excursions worthwhile.

The primary goal of this plan is to provide a wide variety of functional uses within a narrow space. As pointed out in the case study section, the more users in a space, the safer and more vibrant that space will be. It is extremely important with any sort of greenway to provide both excellent connectivity and great destinations. This master plan attempts to address these needs.

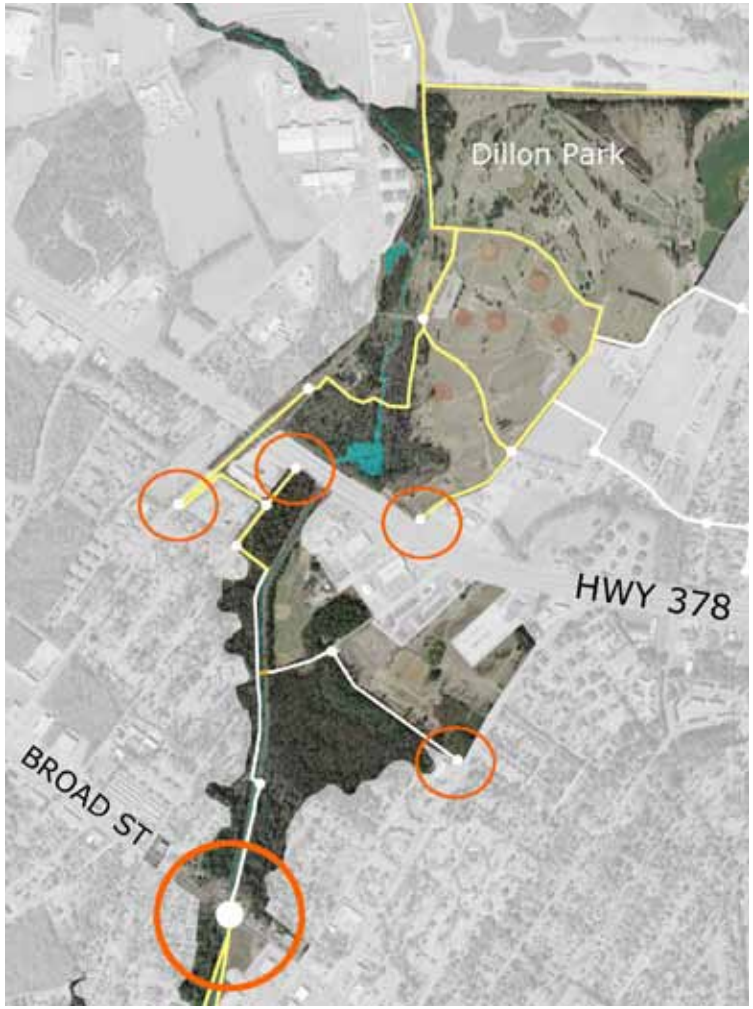


Dillon Park is a county facility with a wetland / floodplain area that runs along the western edge of the park. When the bypass and Pike Roads were constructed, the creek that flows through this portion of Sumter was undoubtedly piped underneath them. The water continues above ground after South Pike Road, where it becomes known as Shotpouch Creek.

Dillon Park is a very nice recreational facility with soccer fields, baseball diamonds, a running track and a golf course. Unfortunately, it is very disconnected from the rest of Sumter by the bypass, and is not well connected to the neighborhoods immediately adjacent to the park. While the bypass is not a barrier that can be removed, other strategies can be employed to link the park to Sumter better, both visually and physically.



A floodplain and wetlands map (*below left*) indicates that this area may have some flooding issues as well. The best use of floodway areas such as this (*shown in orange here*) is to utilize them as open greenspaces. The green area indicates potential wetlands, which can pose difficulties for development.



This path leaving Dillon Park is disconnected because it leads into a confined area with poor views (*above left*). The path leads to a spartan road with a poorly maintained sidewalk (*center*) and is completely disconnected when it reaches the overpass, since it is an unsafe crossing and does not appear to lead anywhere interesting (*right*).

This path on the other side of the bypass bridge over Wise Drive continues between some duplexes and a retail center. A well-designed interface between these uses would benefit all three. The greenway would have more users, the retail center would have more customers, and the residents of the apartments would have access to both. Privacy is also an issue to address in areas where the greenway is near homes.

The path continues along Hilliard Street, a quiet residential area (*above left*). It then turns and goes through a wooded area (*center*) before ending in the open area next to Shotpouch Creek. It is clear that this path was meant to continue, but is incomplete at this time.

This area is open and sunny, with good views in both directions and a nice natural habitat. A bench (*left center*) is further proof that this greenway is not a new idea. This portion of the proposed greenway ends at Dick Street bridge (*above right*).

The proposed path continues from Dick Street to Broad Street. There is a beautiful hackberry and a stone culvert at the edge of the commercial area at Broad Street that begs to be noticed.

This part of Broad Street was developed long ago and has many non-conforming lots and vacant, underutilized spaces. This area is also in the flood plain and is therefore not suitable for anything other than environmentally sensitive redevelopment.

This is an aerial view of the Broad Street Node that was taken in 2007. There are large areas of vacant asphalt which discourage pedestrian use of these spaces. And, the presence of floodway (*indicated in orange*) dictates that no development is possible within that area, and discouraged within a buffer surrounding it.

The Sumter County Watershed Planning Report states: "An example of an area that could benefit from a walking trail could be Shot Pouch Branch, a creek located between Dillon and Vim Parks within the Green Swamp watershed. By extending the trail alongside the riparian areas, conservation efforts to preserve the forested areas would be favorable to bike riders and pedestrians alike by keeping the area in its natural state and keeping users cool in the hot summer months. It would also preserve this wildlife corridor and help to maintain the natural state of riparian buffers within an urban setting."

Envision this possibility for Broad Street: A pedestrian friendly retail and dining space borders an interpretive center that teaches visitors about local wetland habitats. A miniature representation of both the Wateree River and Woods Bay are constructed to act as bioswales for the water which is on site, as well as a teaching tool and beautiful amenity. A bus stop is located here, and a safe crossing so that people can also enjoy the Shotpouch Creek boardwalks, or continue along the greenway. Trees and a centerlane refuge add traffic calming features to the area. An addition such as this would improve the entire Broad Street corridor.

A potential scenario of redevelopment at this node addresses the environmental concerns posed by the floodplain and floodway. Areas designated as floodway (*in orange*) are not suitable for development at all. Passive recreation such as walking paths are permissible if constructed of pervious materials, in this case a combination of pervious pavement and wooden decking (*noted by the hatched areas*). Development in the floodplain area (*light blue*) is permissible with careful structural design to address potential floods. Parking is located outside of the floodplain as much as possible.

This park in China (*above*)has a similar appearance to the constructed wetlands proposed for Broad Street's node. Reed Creek Nature Park (*right*) is a wetlands interpretive center in Evans, Georgia, that has a similar concept to the proposed center on Broad Street.

From Broad Street the greenway continues into an area recently developed by the city. This public space has great potential for being a main attraction to the greenway. A series of bridges, boardwalks and paths have been constructed around a canal and pond at this point. However, the entrance (*above left*) could benefit from attractive landscaping and relocation of the billboard to make it more inviting.

A few issues still need to be addressed in this area. Pipes leading into the creek lend a negative perception to the site (*above left*). Redirecting stormwater into a properly constructed bioswale is recommended. (*Center*) The existing canal has very steep banks that present a safety issue as well as greater erosion potential. These woods (*right*) could provide a connection to nearby neighborhoods.

The greenway continues across Miller Street towards the YMCA, and then veers to the right and is nicely developed along the canal, up to where it reaches Guignard Drive (*right*). Currently the greenway ends at this point. There is a marked crosswalk at Miller Street, which is helpful in providing safe access to pedestrians. However, a refuge and additional landscaping would further improve this crossing.

A streetview of Guignard Drive, facing north. Visual clutter, a wide expanse of street, flooding issues and large commercial front setbacks have over time created a space that is not pedestrian friendly.

(*Left*) **The floodplain impacting the proposed Guignard Drive Node. Orange indicates the actual floodway, where development is not permitted. The photo (*below*) indicates the presence of stormwater and poor drainage issues at this time. This photo was taken several days after a heavy rain.**

(*Left*) This area would serve as a smaller version of what is proposed for Broad Street - more of a "neighborhood node". Retail, dining and other pedestrian friendly uses would be located around the intersection of Burns Drive and Guignard Drive. Burns Drive and Community Drive are opposing streets that currently do not meet squarely at the intersection. Straightening and narrowing this intersection will make it safer and more pedestrian friendly. Centerline refuges and crosswalks make crossing the streets much safer. The structures are all built near the street and out of the floodway. Over time, existing businesses in the area could be relocated in the new development, thereby increasing their foot traffic while removing them from the floodway, where further development is not permitted.

The redevelopment of this node could address the environmental concerns posed by the floodplain and floodway. Structures that were once in the floodway (*in orange*) have been moved to floodplain areas (*light blue*), where they can be redeveloped with careful architectural design. Paths and parking are constructed of pervious materials such as pervious pavement and wooden decking. The greenway intersection might provide a pocket park for nearby residents, with a walking loop and beautiful wetland views. The site offers opportunities for nature based art installations. This would make the site a further destination point and amenity.

An existing view of Guignard Drive (left) has been modified (below) to show how the addition of landscaping, a crosswalk and street-level buildings activates the entire space. So many opportunities for shopping, dining and recreation are now possible within this scenario. An open space on the right becomes a pocket park for surrounding residences. A transit stop would also be located near the intersection.

Alice Drive Elementary and Middle Schools, Central Carolina Technical College, and USC Sumter, not to mention Palmetto Park and the cemetery at Wise Drive, are all located together in the block between Alice Drive, Guignard Drive, Miller Street and Wise Drive. A lateral connection to this educational complex from the proposed Shotpouch Greenway is very feasible. All that is required is a path following the creek that enters Shotpouch across from the YMCA, and a safe pedestrian crossing for Guignard Drive. Linking to the greenway would be of tremendous benefit to students and faculty of all four schools, and would also give Sumter residents easier access to Palmetto Tennis Center.

The proposed path leaves Guignard Drive and continues south through an area that is not developed at this time. The next path intersection is at Haynsworth Street, where a pedestrian bridge has already been built (*above right*). The path from here leads into Swan Lake, and becomes very wet and swampy. A barricade has been placed there (*below left*) to discourage four-wheelers from accessing this area.

This photo (*left*) has been manipulated to show how landscaping, bollards and a wooden walkway would improve the appearance of this area and make it more accessible.

The area between Haynsworth Street and Swan Lake is exceptionally beautiful and natural. It is also very wet and, at a certain point, impassable. Construction of a boardwalk will be necessary for providing access through to Swan Lake from here. This picture (*below right*) portrays what that boardwalk might look like.

Swan Lake is a beautiful old park that surrounds the natural wetlands on this area of Liberty Street. The northern section of the park has boardwalks that weave through the swamp and give spectacular views of the trees and water (*above*). The proposed path would cross Liberty Street to continue through the southern portion of Swan Lake. A crosswalk (*below right*) would make this crossing much safer.

Providing connectivity for Swan Lake is more than just a matter of a safe crossing between one side of the park and the other. The two nearest major streets that connect to Liberty Street on either side of Swan Lake are Alice Drive (*below left*) and Guignard Drive (*below right*). At this time, neither have intersections that provide a safe, easy crossing for pedestrians. In order to connect Swan Lake to the many residential areas on either side, these connections must also be made safer and more pedestrian friendly. There are many other streets in the city that would also benefit greatly from having pedestrian friendly crossings, not just because of access to parks and greenspaces but also for employment and many other opportunities.

Swan Lake's main entrance and parking area are located on the south side of Liberty Street (*above left*). At this time, bicycles are not permitted within the gated area at Swan lake. There is another path, however, (*center*) which leads to the back area and could be designated for bicycles.

Leaving Swan Lake, the path continues along Garden Street (*left center*) and is currently gated where it reaches Oakland Avenue (*above right*).

Second Mill Pond is located on Liberty Street between the Bi-Lo shopping center and Alice Drive. The north side of the pond is gorgeous, with graceful cypresses and spanish moss. The southern portion of the pond, however, has a very industrial character to it at present. This is unfortunate because the portion of the creek that continues after the dam is pretty as well, and is also a very popular fishing area. This area could easily be tied in to the larger greenway system, whereby it would provide access to the greenway for many residential areas, and would also link the larger greenway system to a popular fishing hole. This link is therefore important to the overall success of the greenway system, because every amenity that is added to the total equation will increase the use of the greenway. Slight modifications to the entrance area would make this a much more attractive space, which would also increase its visibility and use.

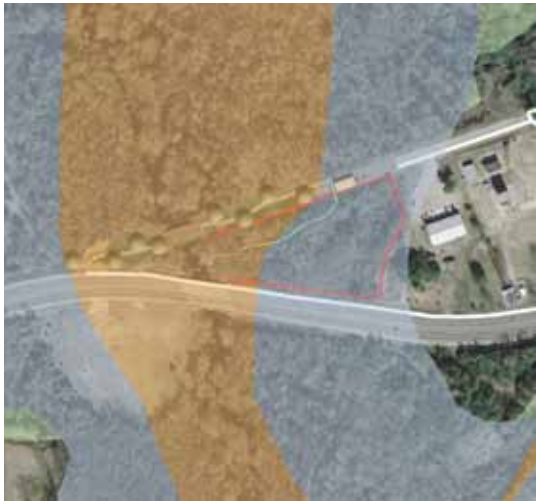
(*Above*) **Closeup of Master Plan showing the Proposed linkage between Second Mill Pond and Swan Lake. There is a dirt trail that goes into the woods behind the dam at Second Mill. This path could continue along the edge of the creek until it intersects with Swan Lake. There is also a potential connection between the greenway and the Harrell Street neighborhood (***marked by the red dot, above***) The photos to the right portray how removing underbrush and clearing underneath the trees would provide good visibility of the connection path and greenway.**

Before and after views of the bridge at Second Mill Pond (Old West Liberty Street) illustrating how a few aesthetic improvements can create an attractive "fishing hole" destination for this area. The path would connect to the larger greenway network near Swan Lake.

The southern section of the proposed greenway is between Swan Lake and Greenswamp Road. The path passes by the historic cemetery on Oakland Street (*center left, above*) and then past the Fire Training Facility before arriving at this underutilized natural area (*below*). An amenity such as a kayaking and canoe center is suggested as a recreational attraction at this end of the greenway. This would complete the "bookend" approach of having amenities located at either end of the greenway, as well as creating several nodes in between. A transit stop on nearby McCray's Mill Road is recommended as well.

As with the rest of the proposed greenway system, the area around Greenswamp Road is a combination of floodplain (*blue*), floodway (*orange*) and wetlands (*green*). This fragile ecosystem is not suitable for traditional development, but is perfect for providing access to greenspace for Sumter's residents. The red area has potential for being developed into a kayaking and canoeing center, providing an amenity at this end of the greenway and a small source of revenue for the city.

(*Right*) A diagram of the proposed canoeing and kayaking center at the Greenswamp Road landing. The existing road would be replaced with a greenspace that would link to McCray's Mill Road. A fence would be constructed around the perimeter of the boating area, and a small office and parking area located just past the Fire Training Facility.



(*Left*) Greenswamp Road currently ends abruptly after the bridge and before meeting McCray's Mill Road. This area is in the floodway (*orange*) so removing some of the existing road to create added greenspace would be beneficial for environmental reasons. It would also create a small fishing spot and park at this location, which is near many residential neighborhoods.

(Below) A view of Greenswamp Road looking towards the bridge from the east; McCray's Mill Road is in the distance. The picture below right shows how removing the asphalt, restoring a green area and adding trees and a kayaking and canoeing center might look. The bridge is covered with a lattice to provide shade, and would become a fishing area for surrounding residents.

The following guidelines are based on accepted national standards for greenways. Individual situations along the proposed greenway will present unique obstacles that may require altering these guidelines to address specific needs. The core principles of accessibility, safety and environmental sensitivity should be upheld despite any modifications that may be required. Recycled materials should be used whenever possible in the materials for this project.

<u>Signage</u>

Wayfinding strategies for the greenway include a unified logo and branding strategy, milemarkers and maps wherever possible, and protocol signs to instruct users about safety and path-sharing rules (i.e. "Bicyclists please pass to the left"). Historic or environmental interpretive signage is also a great way to provide users with interesting stopping points along the greenway. Sponsors of the greenway can "adopt" certain sections and post advertisements within these areas. Setting parameters for the size and type of advertising is also important to consider.

Paths

Three types of paths will be required to complete the connectivity system proposed for this greenway.

Path Type I: Permeable Asphalt Surface

This surface will allow water to penetrate, thereby reducing the environmental impact that traditional impervious surfaces can have. This surface is best for areas that are in floodplain or wetland conditions, but are not wet most of the time. The width of these paths is 8 feet, for multimodal use. The Greenville greenway (*right*) also uses a soft surface running path to the right of the asphalt.

Path Type II: Wooden Boardwalk

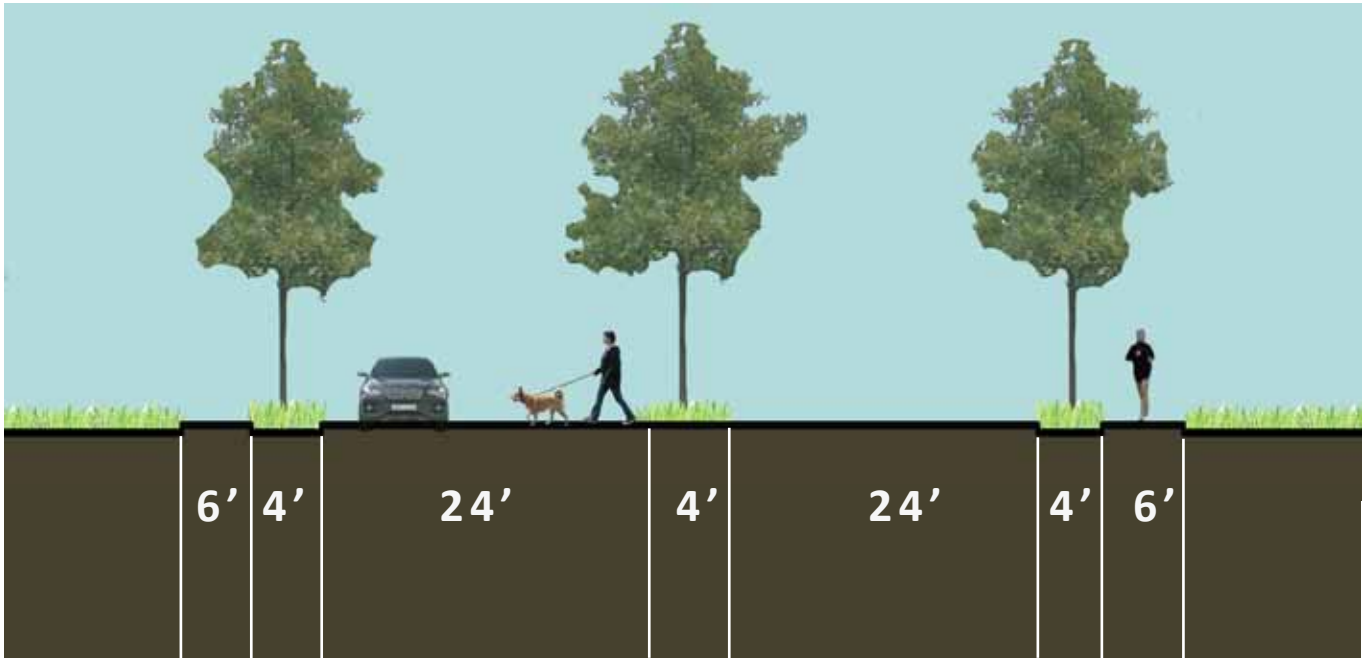
This surface will allow water to penetrate as well, but is best for areas that are wet much of the time, or floodway areas. Wooden boardwalks can be constructed either at grade or on pilings. An advantage is that they can be constructed off-site and carried in by sections, to minimize the impact of construction in wetland environments. The width of the boardwalks should be at least 8 feet, to accommodate both a cyclist and a pedestrian.

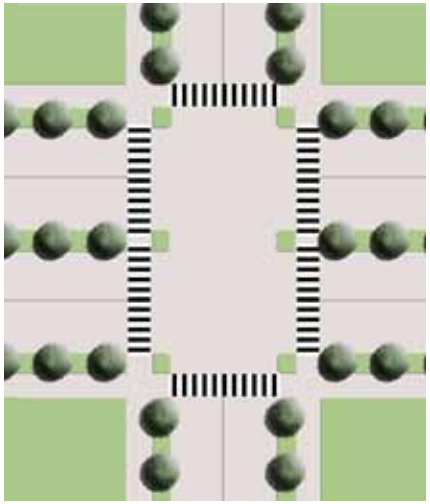
Path Type III: Sidewalk

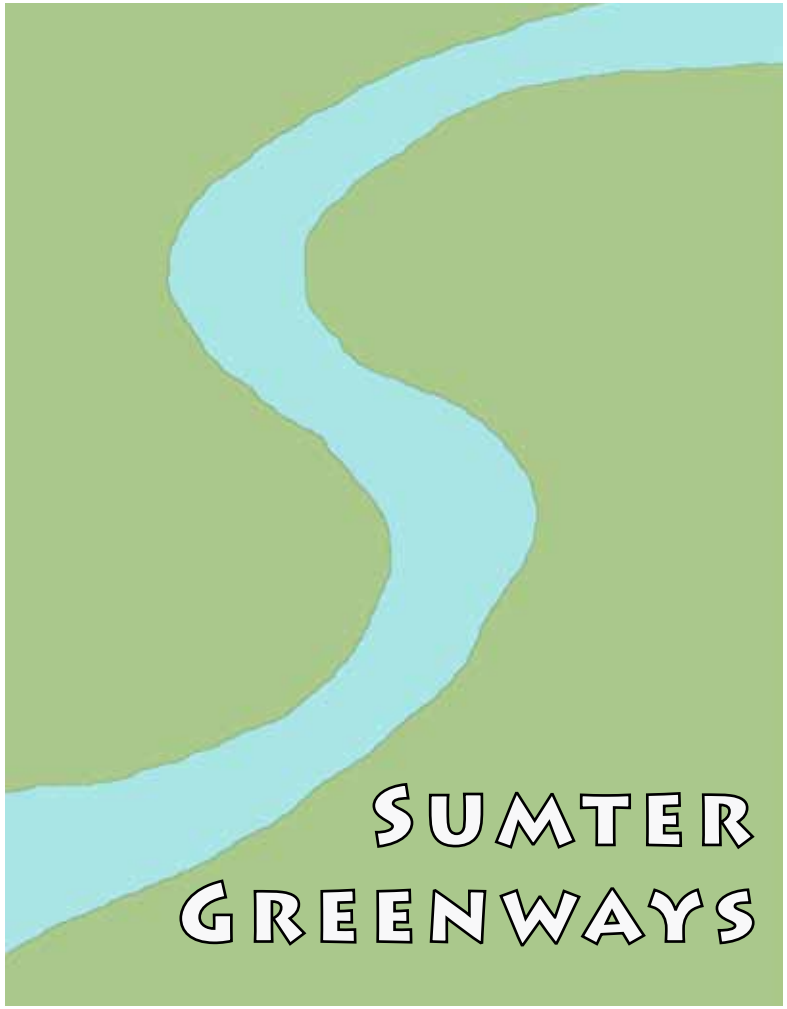
Asphalt or concrete sidewalks are constructed along streets to tie into existing pedestrian networks. The recommended sidewalk width is 6 feet, with a minimum of 4.5 feet.

Intersections

A section (*below left*) shows the dimensions of lanes, refuges and sidewalks at a crossing area. The diagram to the right portrays how an intersection can safely address pedestrian crossings: the turning radius at the corners has been significantly reduced, the crossing areas are bright and very visible, and where the road is four lanes wide, there is a refuge. Trees are planted in the center and along the edges, both to calm traffic and to help protect pedestrians on sidewalks and at the refuges.







Marketing is an extremely important component of a greenway system. Branding the system with an easily identifiable logo will help with navigability, as well as recognition of different areas being part of the larger system. Signs displaying the logo should be clearly visible from roads, transit stops and any areas where people gather, such as shopping centers and parks. Sumter can promote and market the greenway through t-shirts and other advertising means, as well.

Having a greenway system with a recognizable logo will aid in the larger marketing of Sumter as a progressive city. This will in turn attract young professionals and businesses that desire to offer quality of life for their employees. A well-designed, well-connected greenway system can have a positive effect on the entire community, as is evidenced by the beautiful and well-connected green spaces in Greenville, SC.

Materials and furnishings for this project should be unified in concept and appearance in order to provide continuity across the entire greenway. A few examples of site furnishings and lighting are shown above. Because the greenway is primarily located in riparian floodplain areas, it is very important that the plant material selected for this project be only native plants. Stream corridors will disperse seeds downstream, so the use of any potentially invasive species is definitely inappropriate. Trees such as River Birch, Live Oak, Red Maple and other natives are the best choice for these environments. Smaller shrubs and ornamental plants such as Virginia Sweetspire, ferns and native grasses will also be suitable landscaping plants for the greenway.

Sumter's downtown currently suffers from a lack of connectivity to surrounding neighborhoods, greenspaces and other amenities. Large vacant or underutilized parcels, numerous curb cuts and a lack of both landscaping and safe street crossings are the primary causes of the disconnection. A downtown master plan would address these issues, as well as provide options and ideas for filling these "dead spaces" that kill pedestrian connectivity in the downtown.

Sumter is blessed with a wide variety of neighborhoods and communities, each with their own unique characteristics. However, many of these neighborhoods lack definition and a sense of identity at this time. A neighborhood plan would strive to identify the boundaries of each neighborhood in the eyes of those who live there, and find common visions for their residents. Having an identity gives a neighborhood power, and control over addressing the needs and challenges unique to that area. It gives residents a sense of place and belonging. A neighborhood plan is a great way to empower the citizens of Sumter and help them take control of their own community. An urban gardening program would be an important component of neighborhood planning that ties in with the greenway concept nicely.

FUTURE LINKAGES: Turkey Creek Greenway

Turkey Creek is a channelized creek that runs through both neighborhoods and industrial areas on the east side of downtown Sumter, before meeting up with the Pocataligo River on the south side of town. This creek presents many challenges in terms of engineering and design, because of the fact that many homes and businesses are impacted by its proximity. There are also brownfield industrial sites to consider in any redesign of this area. However, there is also great potential for connecting the people in these neighborhoods to each other, to green spaces and to commercial areas via a greenway. As with the Shotpouch area, Turkey Creek is environmentally in need of restoration. If this restoration is accompanied by better connectivity and access to nature and recreation for residents in that area, it would be a great bonus. Changing the dimensions of the channel, planting native plants along the banks for stabilization, and providing a path network are the first steps towards improving the entire Turkey Creek area.

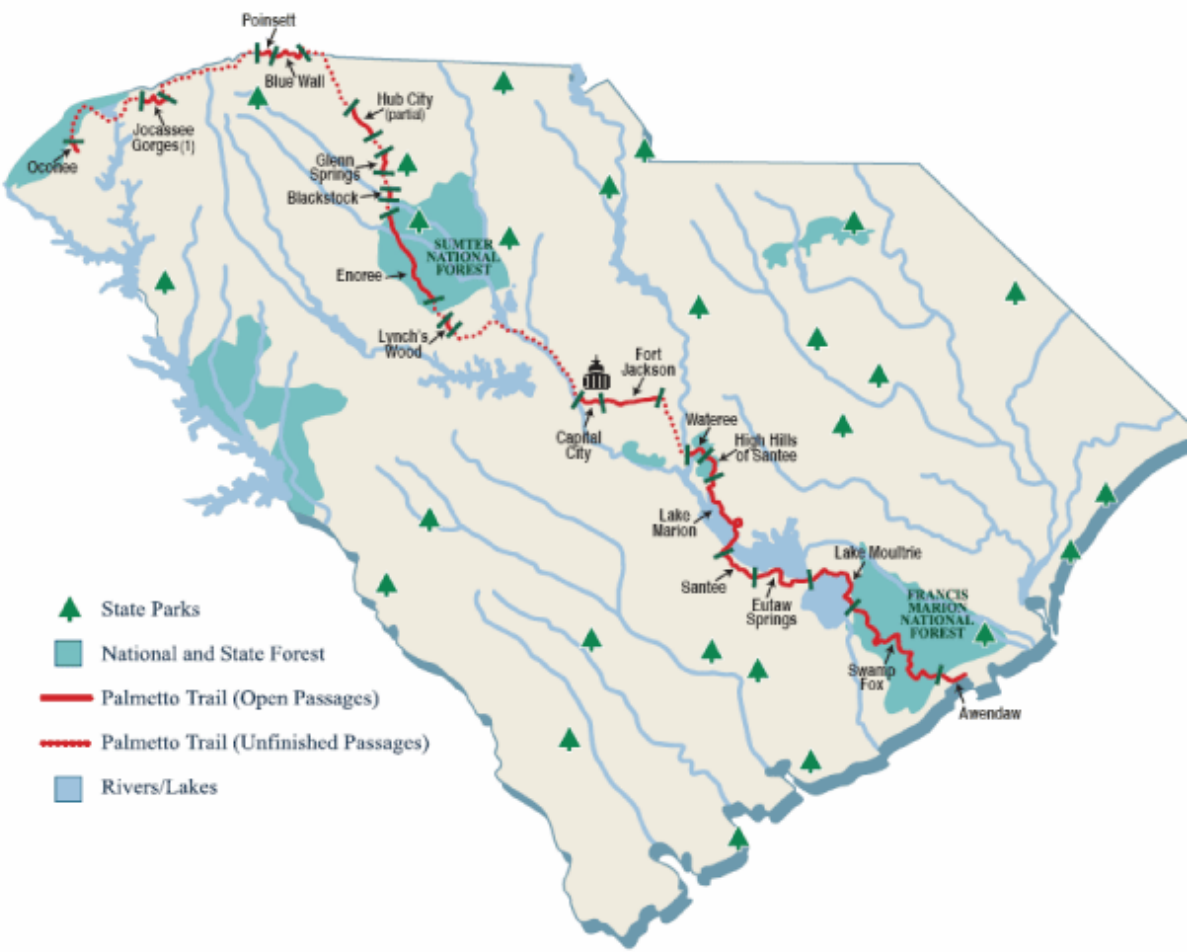
FUTURE LINKAGES: Shaw AFB / Broad Street Connection

Shaw Air Force Base is a military installation to the west of Sumter. At this time, the only connections to the base are via major road networks. However, base representatives have shown an interest in providing a greenway extension that would link the City of Sumter to the base for cyclists and runners. This connection would also cross Broad Street, an important commercial corridor. The connection point could be made into a commercial node much like the proposed nodes at Guignard Drive and Broad Street in the city. This would benefit the entire Sumter community greatly and make the area very attractive to prospective military families looking at Sumter to relocate.

REGIONAL CONNECTIONS

Regional connections to be examined for cycling routes include the Wateree River, Woods Bay State Park, Florence, Camden, Columbia, and Santee / Lake Marion. The Palmetto Trail passes through the Lake Marion area, where it could connect to a Sumter route. Providing good facilities and attractions for long-distance cyclists would help in establishing Sumter as a regional destination. This idea could tie into a larger marketing scheme for the city and county. The more types of recreational uses Sumter encourages, the more layers of use will be gained. This will have many positive impacts on the community and on others' perceptions of what Sumter has to offer.

(*Right*) A map of the Palmetto Trail.



BUDGET & FUNDING

Estimates for the cost of implementing a greenway vary greatly. Many sources of funding are available for this type of project, such as Transportation Enhancement Grants, Hospitality Taxes, Bonds, Marketing through major corporations with advertising rights, and so on. A phasing plan is recommended, to prioritize implementation of the design components.

A preliminary project budget estimates the total cost of this project between $1.5 million and $2 million.

A critical component of budgetary considerations is that of maintenance. Good maintenance of the greenway after installation will guarantee its success and enjoyment by everyone. Likewise, a lack of maintenance will discourage use and make the project a wasteful venture.

CONCLUSION

Sumter is blessed with some truly beautiful natural environments, right in the middle of the city. Providing access to these areas, and simultaneously providing a connected network of paths for people to use for both their recreation and employment needs, will benefit the community in countless and unforeseeable ways. Many cities are now offering such amenities as a way of attracting new businesses and technology to their area. Sumter has the potential to provide such an amenity. In fact, many components of this already exist and simply need to be connected to each other. This project strives to do just that. If you build it, they will come.

ACKNOWLEDGEMENTS

Sumter 2030 Comprehensive Plan

Sumter County Watershed Report 2010

Page 19 - Photo depicting homelessness
www.mma1.org/Homeless%20Program.htm

Page 20 - Photo of milemarker
http://2.bp.blogspot.com/_-PRXBiLpy8o/S3XOikf8-EI/AAAAAAAACeU/hg_cjFH-_x0/s320/IMG_3643.JPG

Page 26 - Historic Map of Sumter
Source: Robert Mills, Atlas of South Carolina, Hurlburt and Lloyd, Charleston, 1825

Page 27 - Map of Atlantic Flyway
tpwd.state.tx.us/huntwild/wild/birding/migration/flyways/atlantic/

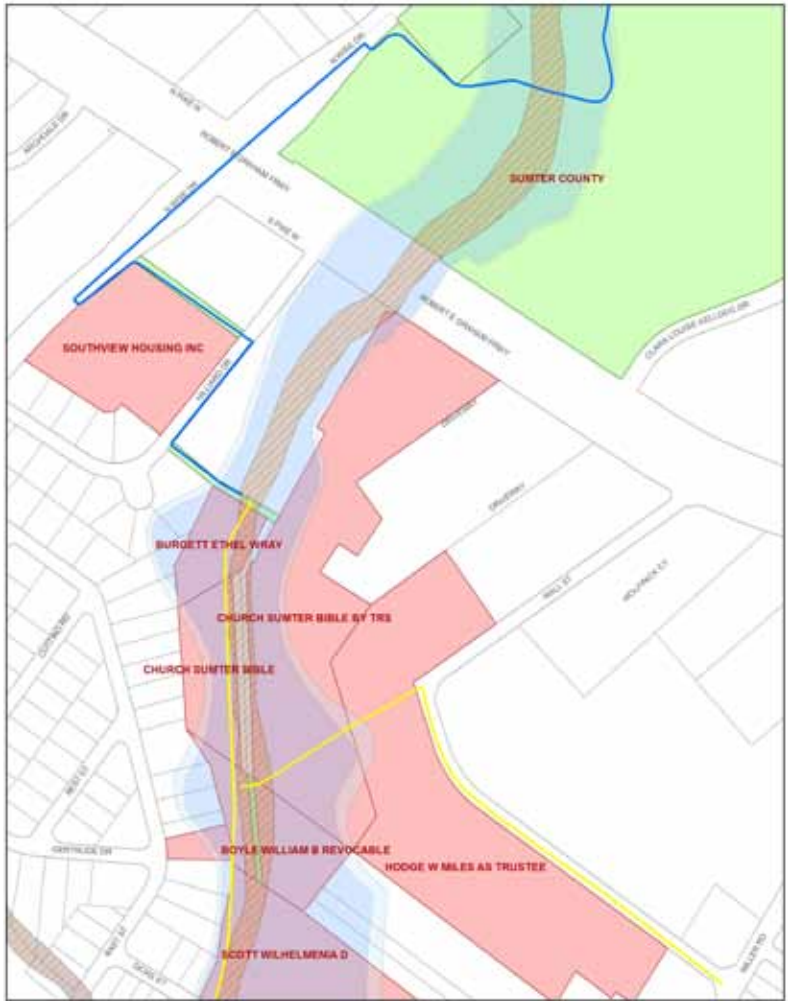
Page28 - Information taken from 2000 US Census

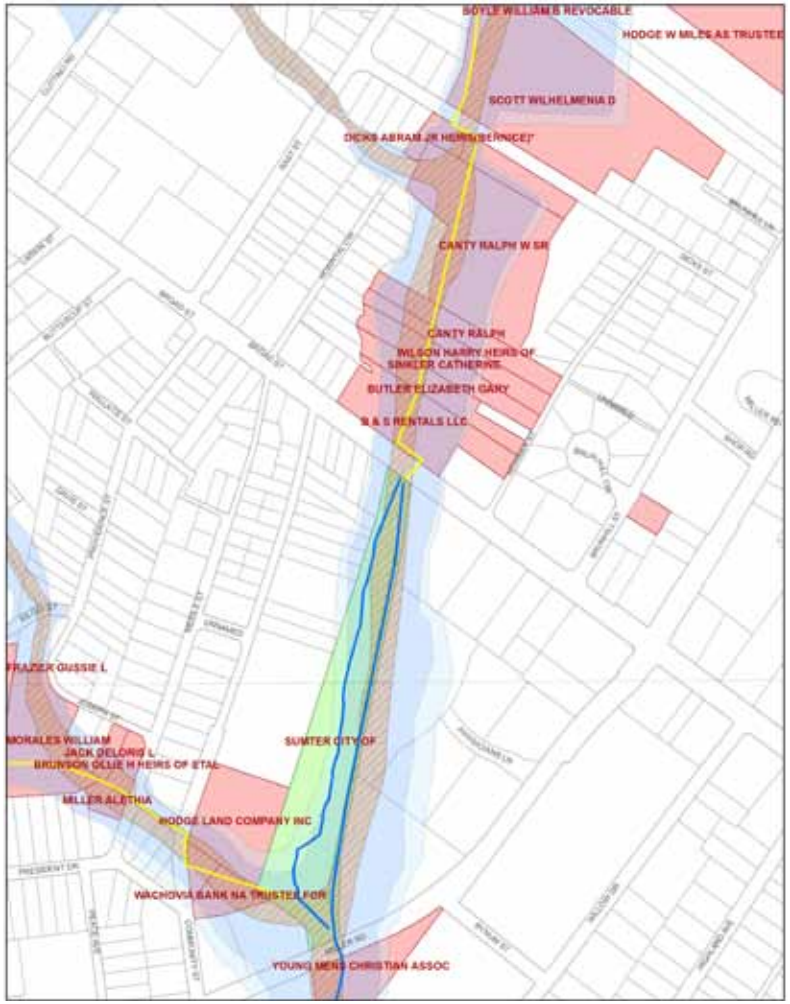
Page36 - Photo of bus with bicycle
http://bicyclemechanic.blogspot.com

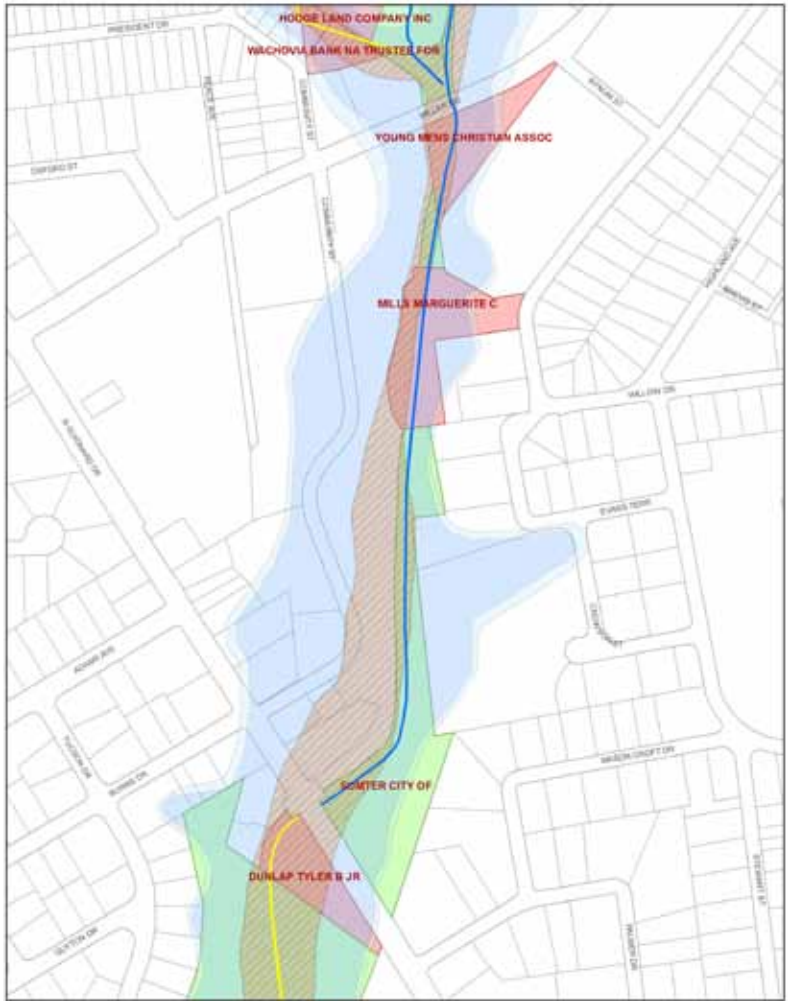
All other photos taken by Claudia Rainey, Sumter City-County Planning Dept.

Maps on pages 29 through 33 created by Michael Herr, Sumter City-County Planning Dept. using ArcGIS

APPENDIX A: Property Ownership



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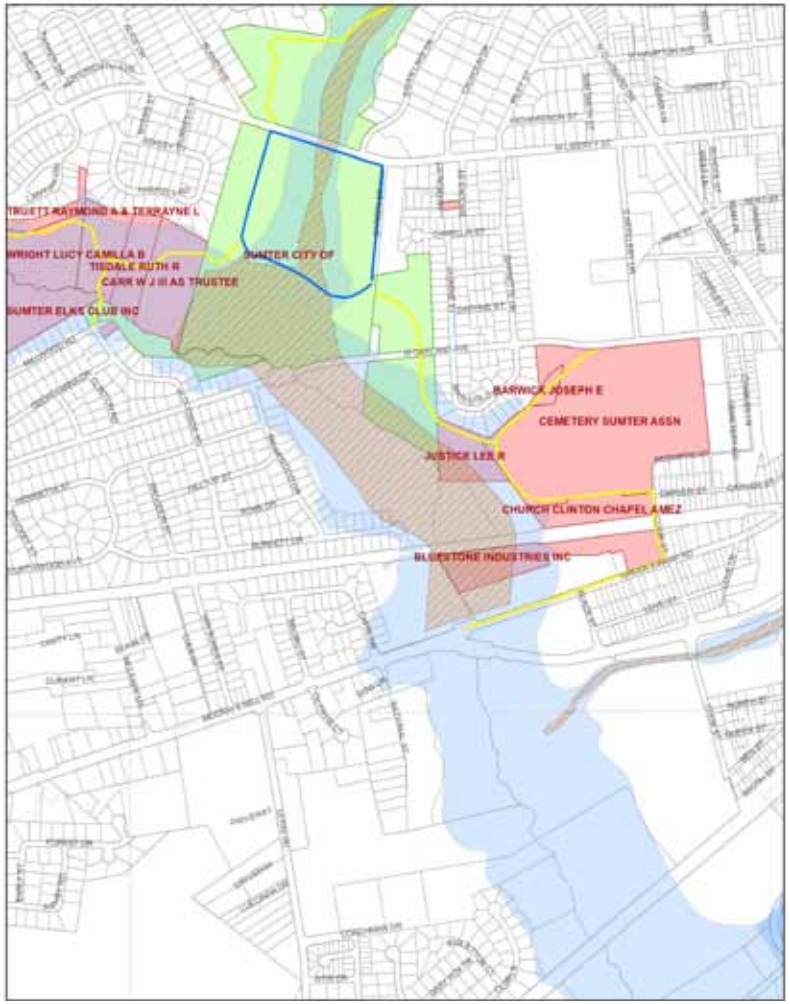
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