CLINTON

COMPREHENSIVE PEDESTRIAN PLAN

MARCH 2012

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Division of Bicycle & Pedestrian Transportation


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NORTH CAROLINA

Acknowledgements

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Citizens of Clinton

Thank you to all of the many citizens of Clinton, young and old, who participated in community meetings and through the project website. Your input was extremely important; incorporated by the project team into the vision, goals, and recommendations of this plan.

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Executive Summary

A. Clinton Comprehensive Pedestrian Plan

The Clinton Comprehensive Pedestian Plan is intended to be a "roadmap" to improve the opportunities for walking as a safe and realistic form of transportation throughout the city. The plan sets forth a long range vision, along with goals and strategies that were built upon a firm foundation of data and extenisve public input from Clinton's leaders, future leaders, and residents. The City received a matching grant offered through the North Carolina Department of Transportation's Division of Bicycle and Pedestrian Transportation (DBPT) to prepare this comprehensive pedestrian plan.

B. The Plan Process

The city staff, project consultant, and NCDOT's project manager formed the project management team, whose primary task was to ensure that the plan stayed on task and met NCDOT's requirements for establishing the pedestrian plan. A steering committee of 17 community leaders was formed to oversee the planning process and garner participation from the community. The basic process involved a project kick-off, extensive background research, the development of a draft plan, and review of the draft plan by the steering committee and NCDOT, followed by the adoption process of the final plan. Citizen participation during this process was obtained through four steering committee meetings, two public meetings, and the project website where over 325 residents completed the online pedestrian plan survey.

Public Input Meeting

C. Vision and Goals

Input was gathered from the steering committee and the public to develop the plan's vision and goals. The primary goals to accomplish the Clinton Pedestrian Vision to the right are described below:

Pedestrian Plan Vision Statement

The City of Clinton's vision is to improve its pedestrian transportation network and become a walkable community that has a complete system for safe pedestrian travel and provides realistic alternative modes of transportation for residents to move from work, to school, to shopping areas and back to home.

Goal 1: Improve pedestrian safety and awareness throughout the City.

Objective 1.1 Establish educational activities, programs and advertising campaigns focused on pedestrian safety.

Objective 1.2 Repair, install and construct specified pedestrian safety improvements to existing and future sidewalk and crosswalk facilities, warning devices and overall pedestrian environment.

Goal 2: Improve pedestrian connectivity throughout the City.

Objective 2.1 Design and install the identified sidewalk improvements and intersection improvements in accordance with the priority ratings set forth in the plan.

Objective 2.2 Develop a system of greenway trails to provide additional connectivity and increase access to more isolated neighborhoods in the City.

Goal 3: Increase the utilization of pedestrian facilities as an alternative to motorized transportation.

Objective 3.1 Decrease the dependence on motorized transportation for conducting daily activities such as going to work, school or shopping.

Objective 3.2 Expand the ability of elderly residents, children, and others who may not have motorized transportation to access all areas of the City and participate fully in its civic and economic life.

D. The Plan's Importance

In the long-term, the City of Clinton will experience benefits by moving forward with the implementation of this plan, its vision, objectives and recommended actions. In general, becoming a pedestrian friendly city provides a realistic transportation alternative, promotes environmental stewardship, encourages good health and wellness through increased physical activity, builds the local economy, and improves the overall quality of life. In the short-term, many of the priority projects identified will have immediate positive impacts on the residents' ability to move around the city by foot. The short-term projects will be completed within the context of the comprehensive pedestrian transportation plan, ensuring that the long-term vision is steadily being achieved one action step at a time.

E. The Plan Context

The historic core of Clinton is a walkable community. In the early years of Clinton's development, businesses were established around the courthouse and neighborhoods were established surrounding that commercial core. Over time, the automobile became the dominant form of transportation and roadways were established connecting through and around the city, creating barriers to pedestrian connectivity and the ability for Clinton's residents to walk safely. As can be observed on the existing sidewalks map later in this plan, nearly all sidewalks within Clinton exist in the downtown and the adjacent neighborhoods. Sidewalks were not constructed as new neighborhoods were developed out NC 24 West and beyond US 701 Business. Today, the opportunity exists to extend existing pedestrian facilities in the older part of the city, while establishing key pedestrian links to the more recently developed areas as roadway facilities are improved, such as the inclusion of pedestrian facilities along the planned improvements for NC 24 West.

F. Recommendations

The recommendations were developed in three broad areas that included projects, programs and policies. Utilizing citizen input, steering committee guidance and an extensive background research process, recommendations were developed for each of these areas.

Pedestrian Projects

General recommendations were made for completing and extending the pedestrian network, primarily through the installation of new sidewalks and greenways, as well as the improvement of key intersections where pedestrians and vehicles encounter dangerous points of conflict. A total of 75 pedestrian network improvements were identified in the plan, including 36 recommendations for the construction of sidewalks and greenway trails and 39 recommendations for intersection improvements. While all of the recommendations are important to completing a safe pedestrian network in Clinton, a prioritization system was developed to identify top priorities as funding and appropriate city/private resources may become available.

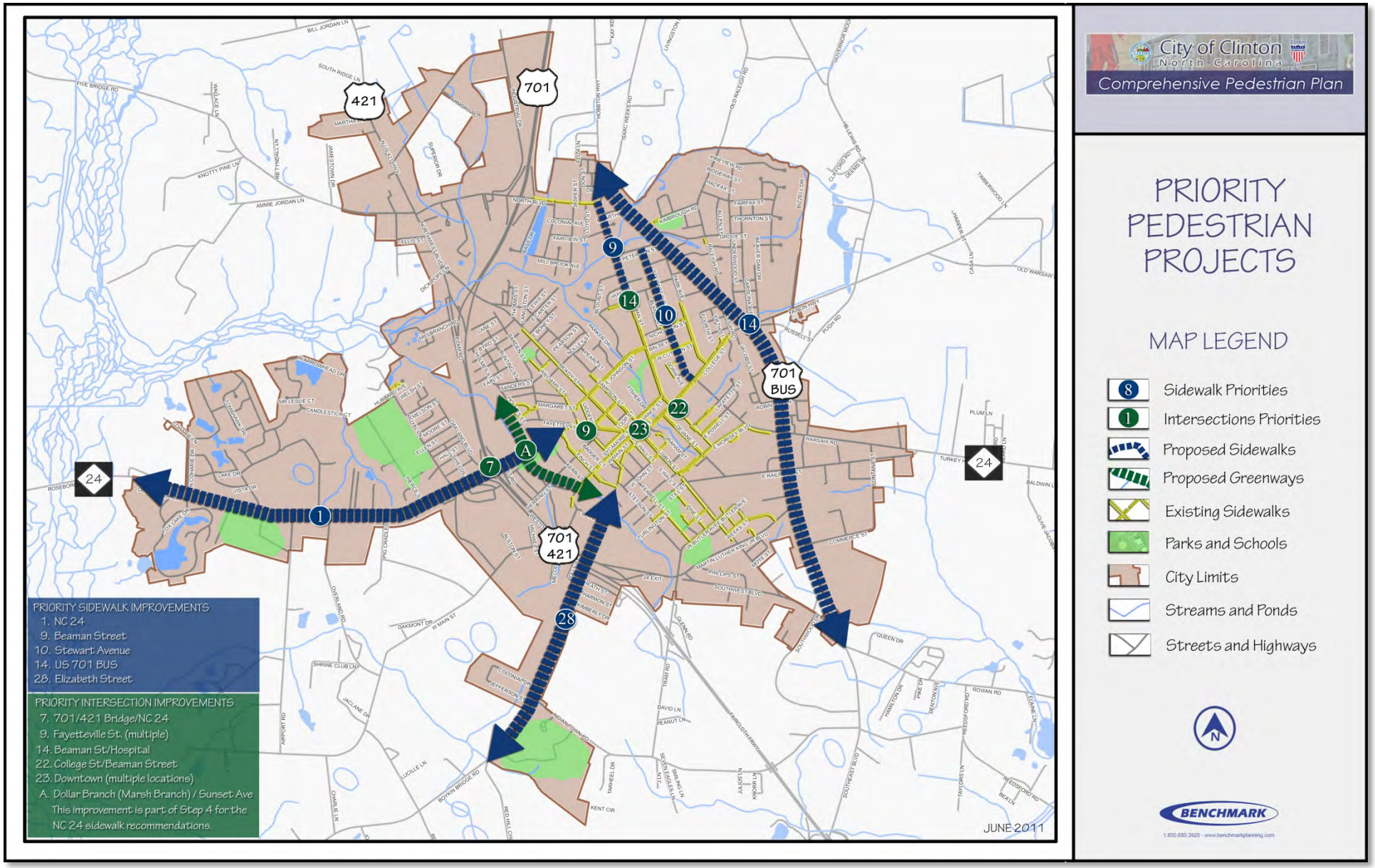
The top five pedestrian network / sidewalk projects are as follows with the number identifying its location on the Priority Pedestrian Projects map:

1. NC 24 West / Sunset Avenue
9. Beaman Street from the Hospital to North Boulevard
10. Stewart Avenue (the entire street)
14. US 701 BUS (the entire roadway)
28. Elizabeth Street extending out to the Middle and High School

The top five intersection improvement projects are as follows with the number identifying its location on the Priority Pedestrian Projects map:

7. 701/421 Bridge/NC 24 (creating pedestrian access to and under the Faircloth Freeway)
9. Fayetteville St. (multiple locations that need crosswalks)
14. Beaman St/Hospital (improvements to the existing pedestrian crossings)
22. College St/Beaman Street (restripe crosswalks)
23. Downtown (multiple locations that need crosswalks)

A. Dollar Branch (Marsh Branch) Greenway / Sunset Ave (part of Step 4 for the NC 24 sidewalk recommendations)



Priority Pedestrian Projects Map

Pedestrian Programs

In North Carolina and across the country, communities are investing their resources to create safer environments for pedestrians and increase the usage and usability of their pedestrian networks through projects and programs that are categorized as follows: 1) education; 2) encouragement; and 3) enforcement. All three activities need to take place concurrently as they all depend on each other to creating a safer walking environment. Key recommendations for each area include the following:

- The transitioning of the pedestrian plan steering committee into an advisory and oversight committee to help ensure the implementation of the plan. The advisory committee does not have to include the entire steering committee, but should include the core group of stakeholders and responsible departments to ensure that the key actors are involved going forward. This committee will help with coordinating educational events and keeping the plan recommendations moving forward.
- Perhaps the most important program recommendation is to apply for participation in the Safe Routes to School program, establish a pedestrian education program in the public schools and implement a pedestrian safety enforcement program in the Clinton Police Department. The Safe Routes to School program will allow the City to access additional NCDOT resources and brings the potential for funding priority projects to enhance connectivity and access to schools as well as the improvement of pedestrian safety in the immediate vicinity of schools.
- Residents should be encouraged to walk more and to become involved in an organized walking event, which will provide a real-world experience to support the educational components of the pedestrian program.

Pedestrian Policies

One of the top priorities for policy implementation include the establishment of a dedicated funding mechanism for capital investments in pedestrian facilities and the appropriation of adequate annual funding for sidewalk maintenance. Without the financial backing to achieve the connectivity and safety enhancement goals of the plan, the overall vision of a healthy pedestrian network cannot be achieved.

G. The Next Steps

The City of Clinton completed the development of this Comprehensive Pedestrian Plan to identify pedestrian improvements and the direction that needs to be taken to implement the various improvements. Strategies or action steps were developed as a guide for carrying out the plan over the next five to fifteen years. Many of the actions can and should be completed during the first year after the plan's adoption, while other improvements will require a much greater time period to make them a reality.

Following the adoption of the plan, the implementation process will officially begin. City Staff, the consultant team and NCDOT officials met during the planning process to discuss strategies and action steps for many of the improvements identified in this plan since the timing of some road improvement projects has necessitated the need to incorporate findings from this plan into final designs. City Staff will need to work closely with its Planning Board, other City departments, the community and an advisory committee to continue to build support for the plan as it moves forward.

Table of Contents

Table of Figures

Section 1. Introduction

A. Pedestrian Plan Overview

For many years, City leaders have recognized the potential for an interconnected pedestrian network in Clinton and the need for a comprehensive approach to guide future projects, programs and policies regarding pedestrian transportation improvements. The resources to accomplish the task of creating a comprehensive pedestrian transportation plan, however, were limited. City officials acknowledged that having a pedestrian plan to guide future growth in a way that complements and enhances the existing pedestrian network within the traditional urban core of the City would provide for a better quality of life in the future for the citizens of Clinton. In furtherance of this goal, the City became aware of, and applied for, a matching grant offered through the North Carolina Department of Transportation's Division of Bicycle and Pedestrian Transportation (DBPT) to prepare a comprehensive pedestrian plan.

Figure 1-1: Pedestrian Crosswalks Downtown

In 2010, the City of Clinton's grant application to develop this Comprehensive Pedestrian Transportation Plan was funded by DBPT and the NCDOT Transportation Planning Branch**.** NCDOT's Bicycle and Pedestrian Transportation program is the oldest program of its kind in the nation, established in 1973, and is one of the most recognized in the country. The program seeks to integrate bicycle and pedestrian safety, mobility and accessibility into the overall transportation program through engineering, planning, education and training. The annual matching grant program – the Bicycle and Pedestrian Planning Grant Initiative – was created by DBPT to encourage municipalities

to develop comprehensive bicycle and pedestrian plans administered through DBPT. As of 2011, the City of Clinton is one of 122 municipalities receiving this grant since its inception in 2004.

Working closely with a steering committee of stakeholders in the community, and with technical assistance provided by a consultant, the City planning department oversaw the preparation of this Comprehensive Pedestrian Plan. The document is based on sound research, public input and hours of review by steering committee members, City staff, NCDOT and others.

The plan's foundation includes an assessment of the existing pedestrian facilities and extensive findings from a survey completed by **well *over 325 residents*** and stakeholders of a variety of age groups, including a significant level of participation from Clinton's middle school and high school students.

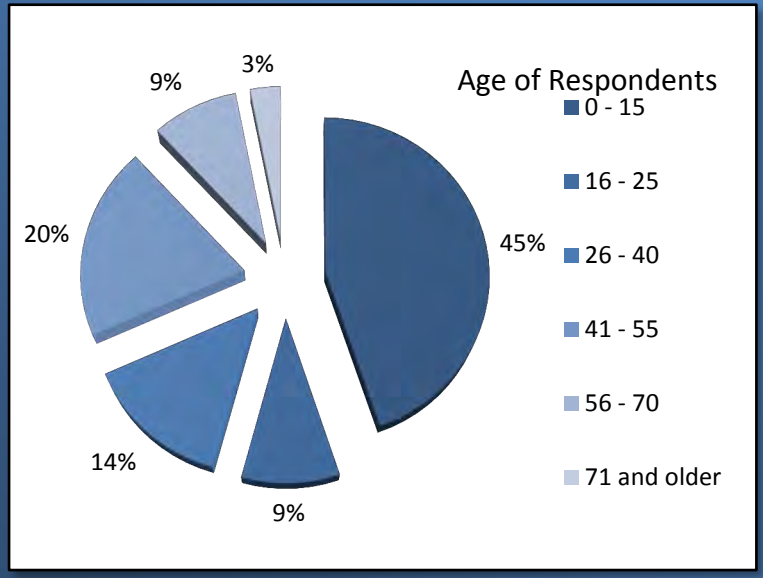


Figure 1-2: Age of Survey Respondents

B. Pedestrian Plan Vision

It is important to develop a sound, clearly articulated vision that is representative of a variety of interests, setting forth the direction of the plan. Without a vision for the plan, establishing priority projects, goals, and objectives can become less meaningful or may be viewed as arbitrary. The vision set forth in this Comprehensive Pedestrian Plan for the City of Clinton is an expression of the desired future pedestrian patterns, improving the existing pedestrian environment experienced by residents in Clinton today. The vision established in this plan is a reflection of the desired future based on input from the steering committee and the broader community through input at public meetings, steering committee meetings and the pedestrian plan surveys. Figure 1-3, shows the vision statement adopted for this plan.

City of Clinton's Pedestrian Transportation Network Vision

The City of Clinton's vision is to improve its pedestrian transportation network and become a walkable community that has a complete system for safe pedestrian travel and provides realistic alternative modes of transportation for residents to move from work, to school, to shopping areas and back to home.

Figure 1-3: Pedestrian Plan Vision Statement

C. Goals and Objectives

The goals and objectives were established within the framework set forth by the overall pedestrian connectivity vision. In order for the City of Clinton to achieve its vision of connecting citizens with places of recreation, business, and their homes, a realistic road map was established to make the vision a reality. The road map to reach the vision was based on Steering Committee feedback, broad input from the community, City Staff review, and guidance from NCDOT. Each goal consists of key objectives and actions necessary to achieve them, which are described in greater detail in Chapter 5 of the plan. The primary goals and their associated objectives are listed below:

Goal 1: Improve pedestrian safety and awareness throughout the City.

Objective 1.1 Establish educational activities, programs and advertising campaigns focused on pedestrian safety.

Objective 1.2 Repair, install and construct specified pedestrian safety improvements to existing and future sidewalk and crosswalk facilities, warning devices and overall pedestrian environment.

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Objective 3.2 Expand the ability of elderly residents, children, and others who may not have motorized transportation to access all areas of the City and participate fully in its civic and economic life.

D. The Planning Process

This comprehensive pedestrian plan was based on extensive field work, research, best practices, and diverse public input. The process began with the formation of a steering committee made up of individuals with a variety of backgrounds and positions within the community, including representatives from City departments, community health organizations, school officials and regional transportation officials. This committee was responsible for reviewing the information prepared by City staff and the planning consultant throughout the process, and recommending the final draft of the plan to NCDOT and City Council for their evaluation and final approval. The committee was also responsible for helping to raise awareness throughout the community and encouraging broad participation in the plan. Another important part of the process was the collection and analysis of background data and information, which provided a picture of the current pedestrian environment within the City. The broader community participated in the planning process through online surveys, public workshops where citizens were allowed to give direct input to the planning team and through comments at a public hearing held by the City Council. Figure 1-4, displays the overall steps taken during the comprehensive pedestrian planning process.

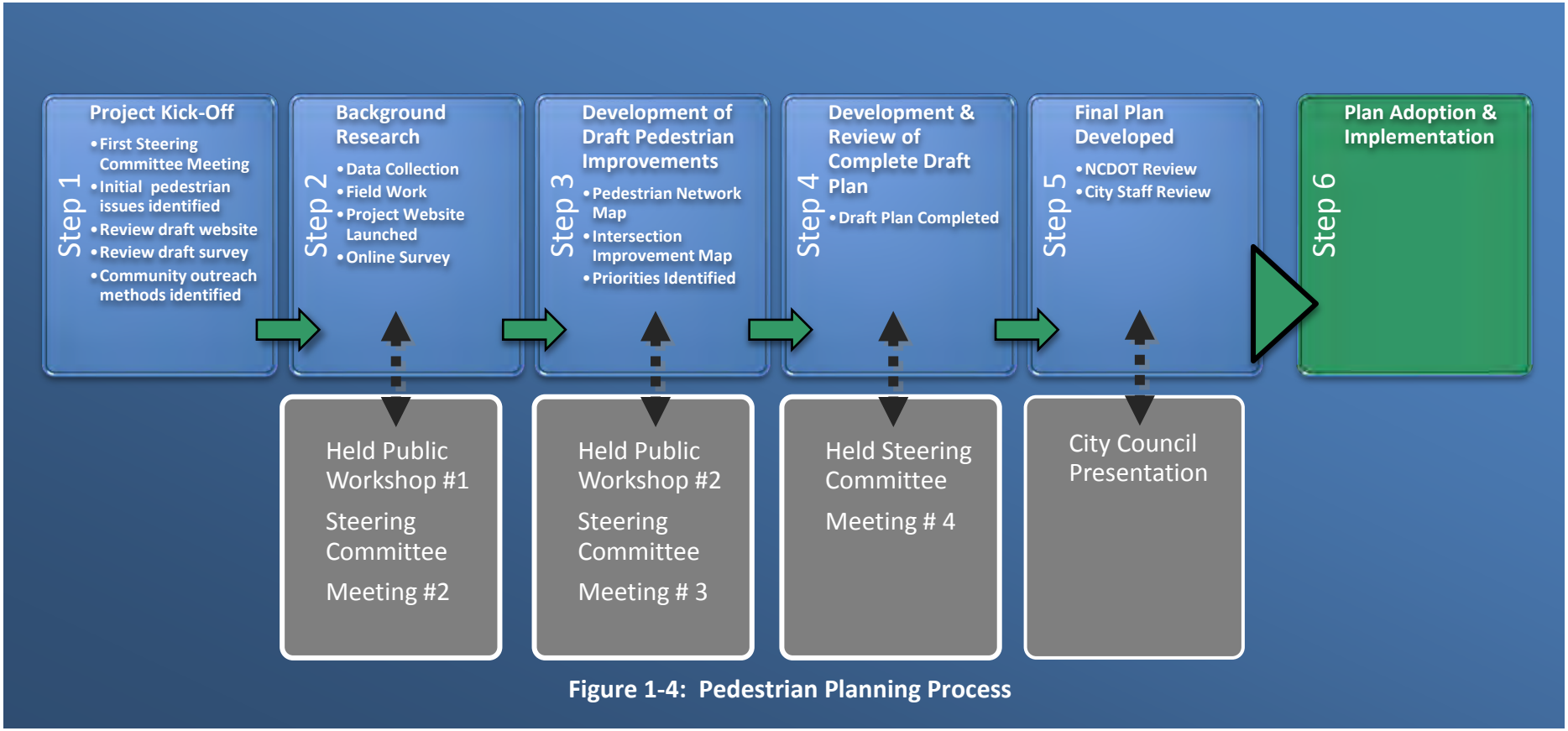


Figure 1-4: Pedestrian Planning Process

E. Benefits of Pedestrian Planning in Clinton

In the long-term, the City of Clinton will experience benefits by moving forward with the implementation of this plan, its vision, objectives and recommended actions. In general, becoming a pedestrian friendly city provides a realistic transportation alternative, promotes environmental stewardship, encourages good health and wellness through increased physical activity, builds the local economy, and improves the overall quality of life. In the short-term, many of the priority projects identified will have immediate positive impacts on the residents' ability to move around the city by foot. The short-term projects will be completed within the context of the comprehensive pedestrian transportation plan, ensuring the long-term vision is steadily being achieved one action step at a time.

Providing a Realistic Transportation Alternative

Many of Clinton's citizens are already out walking during their normal daily routines, with forty percent of survey participants indicating they walk every day. However, many barriers were identified that discourage more residents from enjoying the benefits of walking. Clinton was originally laid out on a basic grid street pattern with a system of sidewalks extending from the core central business area out into the original residential neighborhoods found in the central part of the City. Over time, highways were built to support the growing demands for automobiles, creating a "wall" around the traditional core of the city, separating the city into two distinct geographic areas. Crosswalks and other pedestrian crossings were not installed to provide safe pedestrian movement across these major roadways, effectively halting the expansion of the pedestrian network.

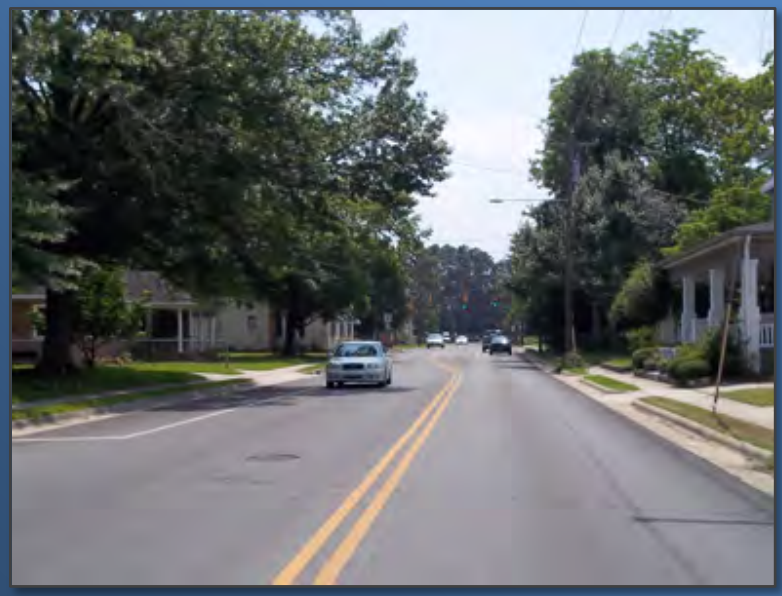


Figure 1-5: Sidewalks on both sides of College Street

This plan sets forth a guide to extend the original pedestrian system out from the downtown core to the developing commercial, entertainment and recreational facilities located on the other side of the ring of roadways. Connecting pedestrians safely across these major barriers will enable citizens of Clinton to once again make walking a realistic transportation alternative, help to lessen traffic congestion and expand the ability of residents to improve their health and wellbeing.

Promoting Environmental Stewardship

Residents of Clinton have long enjoyed the benefits of a self-supporting small town environment with a rich agricultural heritage, providing food not only for residents, but exporting agricultural products to other parts of the country and world. Clinton enjoys many waterways and natural wetland habitats for passive nature enthusiasts and sportsmen alike. Providing a better pedestrian transportation network in Clinton will, as mentioned above, lessen the City's reliance on vehicular traffic as the predominate mode or choice of travel. Although many of the City's residents walk on a daily basis, most of its residents drive their own car or ride with someone else, as regularly

scheduled public transportation is nonexistent in Clinton. Creating safe, connected walking opportunities to destinations that are important to the City's residents, will encourage people to walk more; thereby reducing emissions from the use vehicular forms of transportation. Less traffic on Clinton's roadways will help reduce noise levels in neighborhoods from vehicles, and the numerous pollutants that end up in the cherished natural areas of the City from various forms of run-off and discharge.

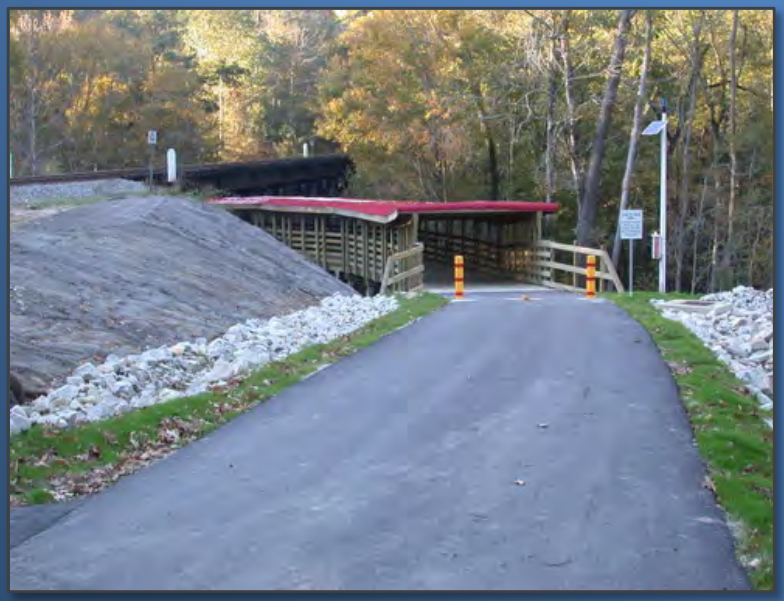


Figure 1-6: Cape Fear River Trail, Fayetteville, NC

An important recommendation for this study and the sustainability of Clinton's natural environment is the establishment of a system of greenways and trails that will provide important links in the pedestrian transportation network as well as important links to natural ecosystems that have been disconnected by the ring of roadways, much like the residents of Clinton. The preservation of these natural systems and environmental corridors will improve the survivability of endangered species, the natural filtration of harmful air pollution through lush vegetation and the filtration of hazardous materials and road runoff related to vehicles, residential development and chemicals used in the agricultural industries for crops.

Encouraging Good Health and Wellness

Most of the survey respondents who walk indicated that they primarily walk for fitness or recreational purposes. Providing a well-planned and maintained pedestrian system provides the opportunity for residents to walk for recreation and exercise. The nation as a whole is battling a looming health crisis caused by obesity, including an alarming rise in childhood obesity rates as noted in reports from the American Academy of Pediatrics' Trust for America's Health (http://healthyamericans.org/report/88/). In North Carolina, nearly two-thirds of adults are either overweight or obese, and the state has the 5th highest rate of childhood obesity in the United States (http://www.eatsmartmovemorenc.com/ObesityInNC/Texts/OBESITY_BURDEN_2009_WEB.pdf). Many researchers have concluded that children in this generation will likely have shorter life expectancies than their parent. Clinton has the opportunity to help combat this

disturbing trend by raising awareness within the community, educating its citizens on the benefits of walking and providing the needed facilities and safe places to walk. Walking and/or daily exercise and improved participation in other healthy activities will help reduce the rate of the various diseases related to inactivity and obesity. As noted earlier, the way the older neighborhoods in Clinton were designed and structured, allowed for children to walk to school relatively safely. In the more suburban or modern Clinton, the larger consolidated school campuses are located in areas that present many barriers and challenges for walking. This study has identified improvements to help connect the City to the new schools in a safe manner. Finally, with the physical improvements noted in the plan, all of Clinton's residents will feel much safer and be more willing to walk, helping Clinton raise its "D" score from North Carolina's Eat Smart, Move More program to an "A." The Eat Smart, Move More program is a statewide movement that "promotes increased opportunities for healthy eating and physical activity wherever people live, learn, earn, play and pray." The program is led by a multi-disciplinary team of partners from across the state that is charged with the mission of reversing the epidemic of obesity and chronic disease. More information on the program can be found at www.eatsmartmovemorenc.com.

Building the Local Economy

Removing long established barriers to pedestrian mobility will help encourage an environment where more residents are willing to walk when they go about their daily errands. This opportunity to walk will help reduce the number of vehicle trips residents make to nearby communities and to purchase goods and services. A walkable city will also encourage residents to seek recreational and entertainment opportunities within Clinton. As indicated in the survey, residents frequently identified downtown, parks, trails and greenways, friends and families homes, and restaurants as places they either walk now or would like to walk to in the future. Clinton enjoys the basic street layout and urban design needed to enable residents to patronize local businesses while traveling by foot, saving money by not driving, and helping the community prosper by spending local dollars "at home." Also of note, walking more may save residents the costs associated with vehicle maintenance and may even help residents make do with fewer vehicles per household. As noted by the Pedestrian and Bicycle Information Center's research, a typical household spends 18 percent of their income on motor vehicle ownership (http://www.pedbikeinfo.org/collateral/pbic_summary_report_2008-2009.pdf). With more opportunities to walk, Clinton's residents may find savings for their families as they reduce transportation costs, while also improving their health and wellbeing. The ability to walk to employment centers will also allow lower income residents to expand the range of options that they have for employment in the city,

giving them the opportunity to access jobs farther from their homes safely and efficiently. Local businesses may also derive a greater benefit from increased pedestrian traffic, given the slower pace of travel past their shops and offices, which increases the likelihood of unplanned stops by passers-by that may not have been considered by motorists.

Improving the Overall Quality of Life

Many of the primary benefits of establishing a pedestrian network that is safe and better connected, as described above, all lead to an improved quality of life. Creating an environment where motor vehicles aren't the only choice for transportation helps reduce traffic congestion, improves air and water quality, and increases health and wellness, all while providing opportunities for an enhanced local economy. Residents may be less likely to "jump in the car," bypassing shopping opportunities close to home, and traveling to a nearby city – exporting those potential dollars outside of the city in which they live. All of these factors relate to the livability of a community, the attitude of residents, local opportunities and the overall perception of pedestrian transportation in the city by its residents. As the City establishes more opportunities for pedestrians through improved facilities, greater awareness of the benefits of waking, and the introduction of greenways, its resident's will experience a better quality of life as the facilities are constructed and the recommended programs and policies are implemented.

Section 2. Existing Conditions

A. Introduction

The purpose of this section of the plan is to provide a summary of the characteristics present in the City of Clinton that influence the existing pedestrian environment. The data, along with the other information contained in this section of the plan, is intended to provide the reader with a greater understanding of the underlying pedestrian conditions, including spatial distribution patterns of land uses, population and existing facilities in Clinton. The study area is focused on the areas within the City of Clinton's primary corporate boundary, with the areas outside of the City's boundary line, in the extraterritorial jurisdiction area, receiving minor attention.

B. Demographic Data

The City of Clinton has a total population of 8,639 people, 3,392 households and 2,068 families according to the 2010 Census figures. There were approximately 1,115 people per square mile with approximately 480 housing units per square mile. Figure 2.1 displays the population density in Clinton as related to the existing sidewalk network. The racial makeup in Clinton in 2010 was 49 percent White, 41 percent African American or Black, with Native Americans and Asians accounting for approximately 1 percent each. Pacific Islanders, other races or two or more races made up the remaining 8 percent.

Within the 3,392 households, 25 percent had children under the age of 18 living with them, 36 percent were married couples living together, 21 percent had a female householder with no husband present, and 39 percent were non-family households. Almost 37 percent of households were made up of individual residents with 18 percent of the households where someone who was 65 years of age or older was living alone. The average household size in Clinton was 2.27.

The age distribution of Clinton's population was fairly balanced with 24 percent of the population under the age of 20 and the 20 to 39 age group respectively. The population group 40 – 64 years of age accounted for 32 percent of the population, with persons 65 years or older representing 22 percent of the total population. The median age in Clinton was 42 in 2010. Participation by residents in the online survey were found to be representative of the population of the City based on the ages that were self-reported by the respondents.

C. Vehicle Ownership and Commuting Data

In addition to the basic demographic characteristics of the community, it is important to understand other factors that affect the demand for pedestrian facilities, including income, vehicle ownership rates, distance to employment and usual method of transportation to work. In 2010, households in the City of Clinton had a median income of $30,500, which is well below the median household income for the State of North Carolina as a whole ($45,570) and the national median household income ($51,914). This lower level of household income corresponds directly to the degree of availability of vehicles in the community. In 2010, nearly 16% of households in the City of Clinton did not own at least one motor vehicle. This is nearly double the rate of 8.9% found at the national level, and more than double the rate of 6.5% found in North Carolina as a whole. The lower median income is also reflected in the data regarding the number of vehicles owned by households that have at least one motor vehicle available. In Clinton, households with only a single vehicle make up nearly 47% of the households with at least one vehicle available, compared to 34.2% at the state level and 36.5% at the national level.

Despite the lower than average rate of motor vehicle ownership in Clinton, travel by automobile is the predominant means of transportation to work for the 3,549 residents who are employed. Nearly 94% of Clinton's residents who are employed travel to work in a motor vehicle, which is a rate that is higher than the state rate of 92% and the national rate of 86.5%. Of those traveling to work by automobile, a larger share are also commuting alone, with only 10% of the employed residents carpooling, compared to 10.5% at the national level and 11.4% at the state level. Walking to work was the preferred means of travel for 1.9% of the city's employed residents, compared to 1.8% at the state level and 2.8% at the national level. Riding a bicycle to work was the preferred means of travel to work for 0.9% of the city's employed residents, compared to only 0.2% at the state level and 0.5% at the national level.

The distance that Clinton's employed residents travel to work, reflected in the time it takes for them to travel from home to work, is much lower than what is found at the state and national levels. Nearly 11% of employed residents in Clinton have a travel time of less than 5 minutes, compared to only 3.3% at the state level and 3.5% at the national level. Residents who travel fewer than 15 minutes to work accounted for nearly 68% of the total, compared to only 29% at the state level and 28.5% at the national level. Residents with a long (more than 30 minute commute) travel time to work account for only 16% of Clinton's employed residents, compared to 30% at the state level and 35% at the national level.

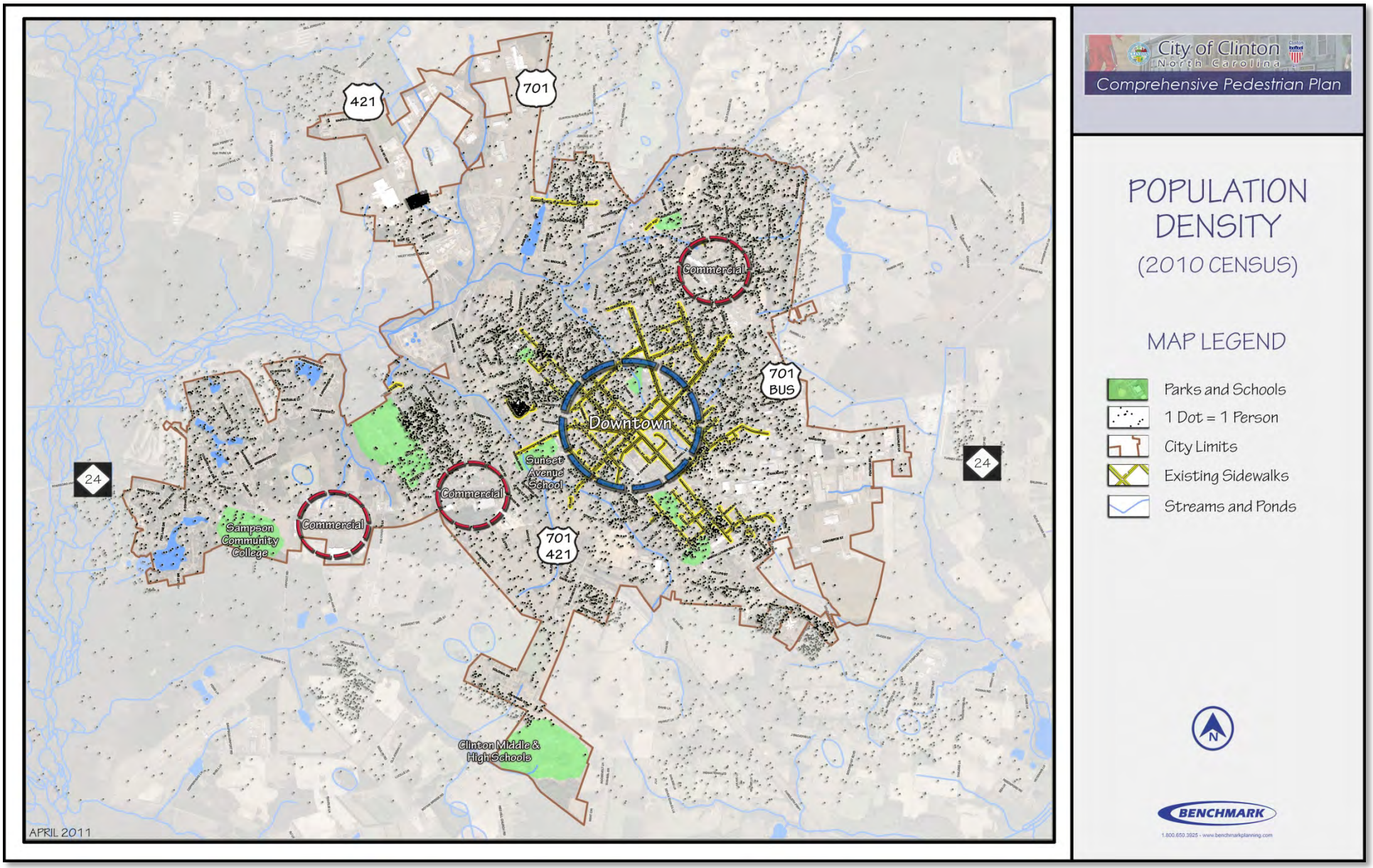


Figure 2-1: Population Density

D. Land Development Patterns

Clinton originally developed around the central courthouse for Sampson County with a traditional downtown core immediately adjacent to historic neighborhoods. Public schools in Clinton were woven into the fabric of the city, allowing for adequate accessibility to the schools for the neighborhood children. Residents were also able to walk downtown and to various "hubs" of retail, office and small scale industrial based employment. As automobiles became the predominant form of transportation, a trend that was observed across the country following World War II, pedestrian connections became secondary to the building of roads for automobiles as the city expanded. Clinton, however, was fortunate to maintain a relatively compact development pattern, even though the sidewalks were not extended outward. New neighborhoods and development were somewhat centralized in relation to the City's traditional core, allowing for the opportunity to make pedestrian connections in the areas where sidewalks were not established.

As shown in Figure 2-3, Pedestrian Connectivity Barriers, the central core of the City, downtown and its immediately adjacent neighborhoods, became encircled by an extensive highway system, cutting off pedestrian access from the older core in town to the newly developing areas, since pedestrian crosswalks and sidewalks were never constructed in these areas. Following this development pattern, new schools were also built on the outskirts of the City, without any facilities for pedestrians to walk safely. The new schools, although not centrally located, are in close proximity to many children and residents, particularly in the western and southern portions of the city, presenting opportunities for connectivity. Although much of the land is currently vacant immediately adjacent to the middle and high schools, it is most likely that residential development will eventually occur in this area. The opportunity exists now to set forth recommendations for these growth areas to ensure that adequate pedestrian accommodations are provided in concert with future growth.

Figure 2-2: Rural Scenery along Tram Road near Clinton Middle and High School

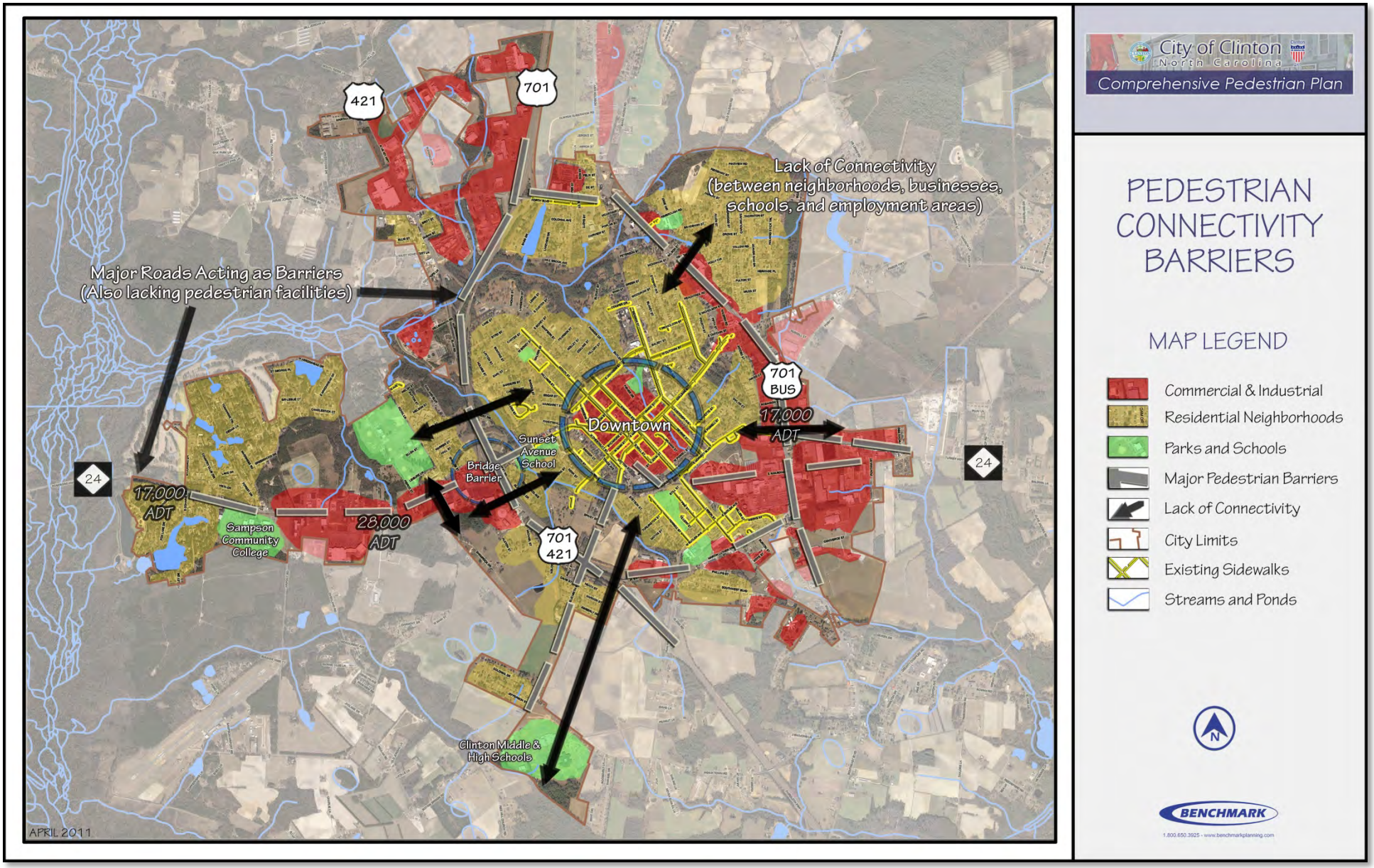


Figure 2-3: Pedestrian Connectivity Barriers

E. Destinations in Clinton

The table shown in Figure 2-4 below shows survey respondents' current and desired destinations that they either enjoy walking to now or would like to in the future. The most common destination chosen was friends / family's homes, followed by parks. Downtown and shopping downtown were frequently identified as well as restaurants. Although greenway trails do not exist in Clinton today, survey respondents indicated they would choose to walk to a trail or greenway if it were available. Only a small percentage of respondents selected work or school as places they walk to now or would choose to walk to in the future. A map of major destinations in Clinton is displayed in Figure 2-5.

Do you walk to these destinations now or would you like to walk to these destinations in the future? (Check all that apply)		
Answer Options	**Response Percent**	**Response Count**
Downtown	55%	163
Parks	60%	177
Place of work	23%	67
School	26%	76
Restaurants	42%	123
Shopping (downtown)	45%	134
Shopping (highway locations)	23%	67
Entertainment	31%	93
Trails and greenways	46%	135
Library	36%	105
Recreation Centers	39%	115
Friends/Family's Homes	68%	201
Other (please specify)		15

Figure 2-4: Survey Responses – Preferred Destinations

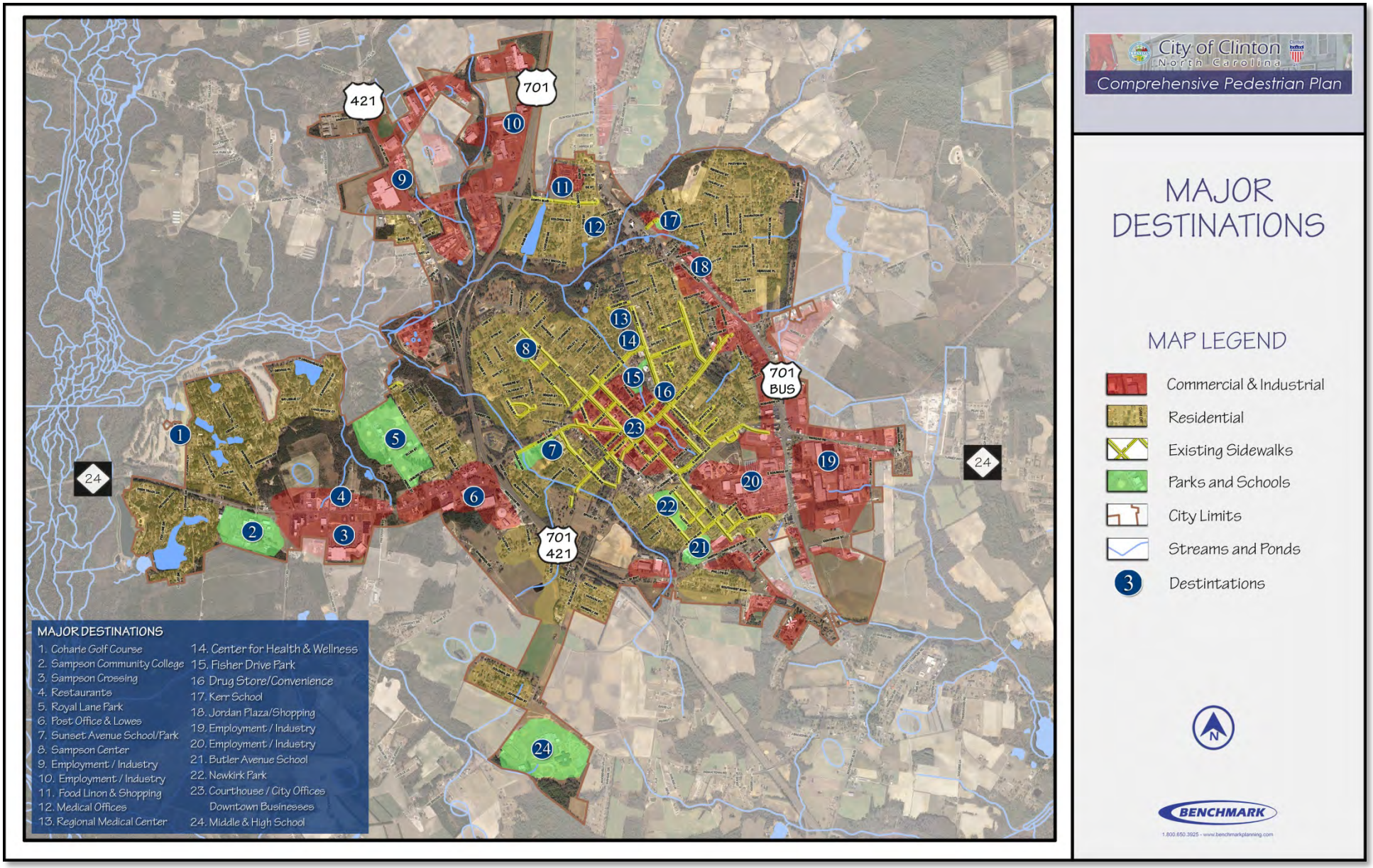


Figure 2-5: Major Destinations

F. Pedestrian Conditions and Barriers

In Clinton, the Downtown area has the highest rate of pedestrian facilities, in part because it was originally designed with pedestrians in mind, and also due to the recent award winning streetscape project, which incorporated many pedestrian elements into its design. Pedestrian connections extending out from the historic downtown into immediately adjacent neighborhoods, schools and highway commercial areas, however, are extremely limited as exhibited in Figure 2-8: Existing Sidewalks Map. Specifically, a lack of pedestrian facilities in the NC 24 and US 701/421 bypass vicinity on the western edge of the downtown is becoming a problem. The US 701/421 bypass intersection with NC Highway 24 is a hazardous barrier for City residents seeking entertainment, recreational and goods and services along the NC Highway 24 corridor. Residents are risking injury as they dart across the bypass and navigate cautiously underneath the bypass along busy NC 24. Also along the eastern edge in this general area, Sunset Avenue School children are at risk as they walk adjacent and near NC 24. Other areas in need of safe connectivity include the middle and high school area and connections to Clinton's primary municipal park.

Figure 2-6: Area on northern side NC 24 where Pedestrians cross US 701/421

Pedestrian improvements in the NC 24 area would also connect residents to one of the major shopping facilities in town and places of employment along the highway. Another major highway lacking adequate pedestrian facilities is Business 701 where dirt paths, or “desire lines”, made by pedestrians parallel the roadway, and as observed during field survey work, pedestrians often walk in the roadway itself. Also, many areas were identified throughout the city that are in need of crosswalks and pedestrian warning signage. Survey respondents indicated basic improvements to lighting were needed in areas where sidewalks were present, enabling older residents to navigate more safely in the early morning and evening hours. Survey respondents indicated better lighting in these areas would increase their

perception of safety, helping them to be more aware of their surroundings and the condition of the sidewalks. Many of the major barriers were noted previously in Figure 2-3 and images of pedestrians walking in various roadways in Clinton are displayed below in Figure 2-7. In Figure 2-7, pedestrians are walking against traffic, which is the correct way to walk when faced with traveling by foot when close to, or within, the roadway. The figure also reveals a program consideration for the recommendations section, educating younger children how to walk safely near travelways. The pedestrians observed below appear to be more experienced walkers, who most likely grew up walking in Clinton and were taught at an early age how to walk safely on city streets where sidewalks were not present. Children today need to be made aware of the safety precautions one should take when walking near vehicular traffic.

Figure 2-7: Pedestrians walking in roadway along US Business 701, Stewart Avenue and Warsaw Road

Existing Sidewalk Network

As described earlier and as can be seen in Figure 2-8, the majority of Clinton's sidewalks are in or immediately adjacent to the downtown core. After digitizing existing sidewalks from aerial photography and checking in the field for accuracy, just over 17.2 miles of sidewalks were determined to exist within the city. The sidewalks vary in condition; however, they form a solid network within the core of the city. Many opportunities exist to better connect the core with the surrounding areas if key connections can be made across the major highways that form the primary pedestrian barriers.

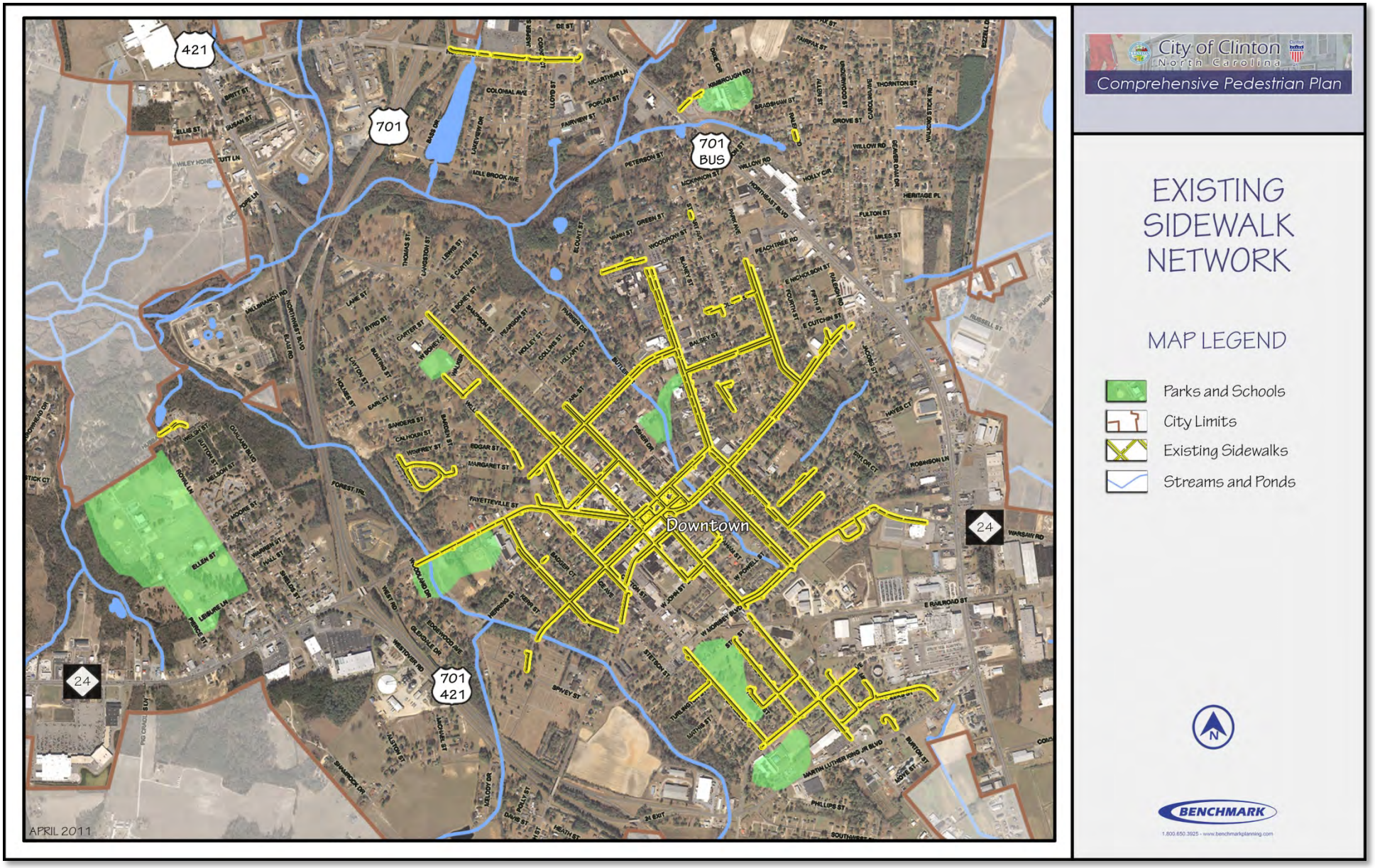


Figure 2-8: Existing Sidewalk Network Map

Pedestrian Crossings and Warning Signage

During the background research, areas were identified that had crosswalks or needed pedestrian crosswalks. Most notably, several main crossing areas were identified around the courthouse square that are in need of additional crosswalk markings and pedestrian warning signage. Although crosswalks are marked at several key intersections downtown, the internal traffic circulation pattern around the courthouse, where pedestrian activity and vehicular traffic volumes are both intense, should include additional safety measures to alert drivers and pedestrians to be aware of their surroundings.

Another pedestrian crossing that is critical is a highly traveled area along Beaman Street in front of the hospital. Two narrowly spaced pedestrian crossings currently exist in that location that have flashing pedestrian warning signs; however, the overall visual cues to alert drivers could use improvement, and consolidation of those individual crossings into a single crossing should be considered.

One of the most dangerous areas where pedestrians are currently crossing without appropriate facilities is the general area around the US 701/421 Bypass and its intersection with NC Highway 24. At the bridge underpass along NC 24, pedestrians risk injury crossing the on and off ramps to the bypass, then, they narrowly squeeze underneath the bridge between the guard rail and the bridge foundations. However, the most critical area that needs immediate attention is an illegal crossing area where pedestrians dart across the bypass just north of the bridge. Upon investigating the area, and examining the surroundings, this area appears to be used primarily by children from the east side of the bypass trying to reach the municipal park, which includes a swimming pool and ball fields. Studies have shown that children are at a greater risk than adults when crossing roadways, particularly, roadways of high speeds, due to their reduced ability to judge the closing speed and distance of vehicles and lack of experience in making those judgments.

Figure 2-9: Illegal crossing area

2009 Annual Average Daily Traffic Counts

The Traffic Survey Group with the Transportation Planning Branch of the North Carolina Department of Transportation maintains annual average daily traffic counts across the state. Traffic Volume (AADT) Maps are a product created by the Traffic Survey Group in cooperation with the Information & Mapping Unit. Information & Mapping supplies the county (and urban) maps, which serve as a foundation for Traffic Survey employees to identify locations known as "count stations". Traffic Survey then labels each count station on these maps with the Annual Average Daily Traffic (AADT) volume. Within Clinton, several major roadways exist with traffic volumes well over 10,000, with over 28,000 vehicles per day counted near the intersection of the US 701/421 Bypass and NC Highway 24, a slight decline from 30,000 in 2005. The most western point of traffic analysis along NC 24 at the near Sampson Community College is approximately 17,000 vehicles per day. Traffic on the eastern edge of the city at NC 24 and US 701 Business also reached 17,000 vehicles per day, a decrease of 2,000 trips from the 2005 AADT figures. Figure 2-10 displays the 2009 AADT for the City of Clinton.

Pedestrian Crashes 1990 - 2010

Over the past twenty years there have been 43 official police reports of pedestrian crashes of varying degree of injury, as shown in Figure 2-11. During this time period there was at least one pedestrian crash every year, with the exception of the last two years in the reporting period. The type of injuries resulting from these crashes include 10 that were disabling injuries, 13 crashes where an injury was evident, 18 where injury was possible and 2 where only property damage was recorded. In 2001, the most serious type of crash occurred where the accident resulted in the fatality of a pedestrian along North Boulevard. The roadways with the highest incident of pedestrian crashes were Southeast Boulevard and Sunset Avenue with 6 recorded crashes along each. Southeast Boulevard was mentioned multiple times during the pedestrian plan survey and it does not currently have any pedestrian facilities. Sunset Avenue was noted in the pedestrian surveys as the highest rated road needing pedestrian facilities. An agglomeration of retail and commercial development, and the City's primary municipal park are located along this roadway. This roadway also exhibited the highest number of traffic counts near the intersection with the US 701/421 Bypass, which was 28,000 vehicles per day. With popular destinations, high traffic volumes, nearby neighborhoods, the community college and no sidewalk facilities at all, this roadway will continue to be a dangerous place. Other roadways in Clinton where there were at least three reported pedestrian crashes included Barden, Fayetteville, and McKoy Streets. These three streets and the resulting pedestrian crashes were all within close proximity to each other.

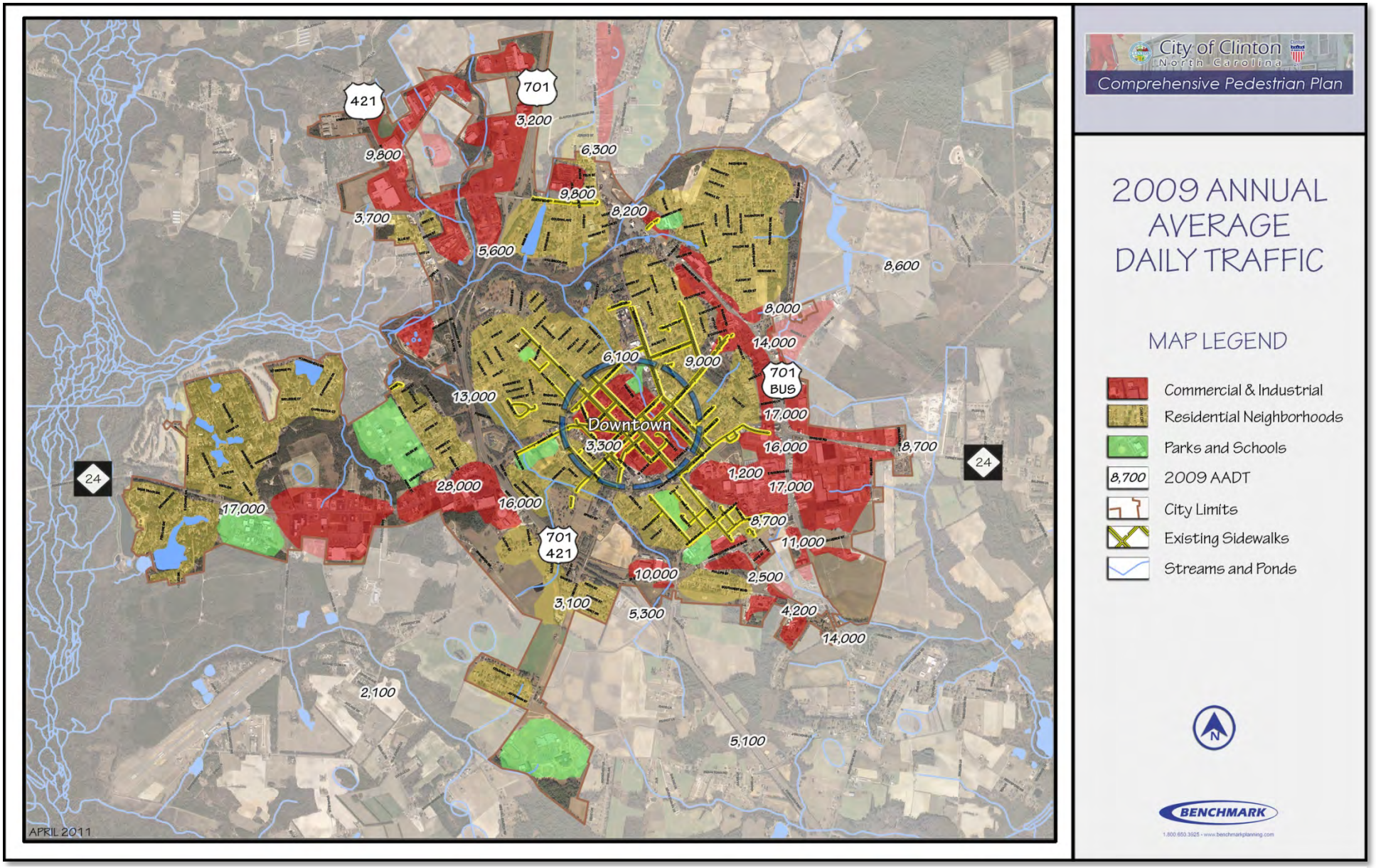


Figure 2-10: 2009 AADT Map

Figure 2-11: Pedestrian Crashes by Roadway from 1990 - 2010

On Road	Miles	Dir	From Road	Toward Road	Crash Severity	Date of the Crash	Time of the Crash
BARDEN ST	0.009	W	MARGARET ST	DOGWOOD CIR	B-Injury (Evident)	10/5/1991	6:30 PM
BARDEN ST	0.03	NW	WILLIAMS ST	CARTER ST	B-Injury (Evident)	9/7/2003	3:47 PM
BARDEN ST	0.009	W	WILLIAMS ST		C-Injury (Possible)	8/1/1994	5:49 PM
BUTLER AVE	0		BETTY ST	FERRELL ST	Property Damage Only	1/10/2003	3:07 PM
COLLEGE ST	0.009	E	BEAMAN ST	WARSAW RD	A-Injury (Disabling)	2/5/1991	1:14 PM
EAST BLVD	0.038	N	PUGH RD	ROBINSON ST	B-Injury (Evident)	8/14/1998	7:37 PM
FAYETEVILLE ST	2	N	SUNSET AVE	BARBEN ST	C-Injury (Possible)	9/7/2007	7:00 AM
FAYETTEVILLE ST	0.038	E	WILLIAMS ST	CHESTNUT ST	A-Injury (Disabling)	1/29/1991	3:17 PM
FAYETTEVILLE ST	0.05	W	SUNSET AVE	BARDEN ST	C-Injury (Possible)	11/5/2002	9:53 AM
LISBON ST	0		MAPLE ST	BUTLER AVE	A-Injury (Disabling)	5/6/1996	8:43 PM
LISBON ST	0.005	N	WEEKS ST	BUTLER AVE	B-Injury (Evident)	11/29/1994	3:38 PM
MAIN ST	0.019	W	WALL ST	CHESTNUT ST	A-Injury (Disabling)	6/18/1991	11:00 AM
MAIN ST	0.018	W	WALL ST	CHESTNUT ST	C-Injury (Possible)	5/29/1993	1:04 PM
MARGARET ST	1	W	WILLIAMS ST	BARDEN ST	B-Injury (Evident)	10/20/2006	11:15 PM
MCKOY ST	0.019	N	BONEY ST	LEE ST	A-Injury (Disabling)	10/17/1994	4:59 PM
MCKOY ST	0.047	S	BONEY ST	SAUNDERS ST	B-Injury (Evident)	2/21/1992	7:16 PM
MCKOY ST	0		LARKINS ST	WILLIAMS ST	C-Injury (Possible)	11/21/1996	12:19 PM
MLK BLVD	0		LISBON ST	BUTLER AVE	Property Damage Only	10/6/2000	7:51 PM
NORTH BLVD	0	E	JASPER ST	BEAMAN ST	Fatal (Killed)	3/20/2001	6:42 PM
PETERSON ST	0.019	E	STEWART AVE	NORTHEAST BLVD	C-Injury (Possible)	3/5/1991	5:34 PM
PIERCE ST	0.076	S	SUNSET AVE	ELLEN ST	B-Injury (Evident)	8/22/1994	7:02 PM
ROBINSON LN	0	S	US 701	PUGH RD	C-Injury (Possible)	1/7/2004	12:06 PM
ROYAL LANE	0.033	N	ELLEN STREET	MOORE STREET	C-Injury (Possible)	6/26/2000	5:36 PM
ROYAL LN	0.095	N	MELSON ST	WELCH ST	B-Injury (Evident)	6/7/1990	6:23 PM
SAMPSON ST	0		JOHNSON ST	LEE ST	C-Injury (Possible)	7/31/2005	3:55 PM
SANDERS ST	0.038	E	HOLMES ST	BUNTING ST	C-Injury (Possible)	1/13/1995	4:38 PM

Figure 2-11 (continued): Pedestrian Crashes by Roadway

On Road	Miles	Dir	From Road	Toward Road	Crash Severity	Date of the Crash	Time of the Crash
SOUTH EAST BLVD	0.014	N	MARTIN LUTHER KING B	RAILROAD ST	C-Injury (Possible)	3/23/1998	3:58 PM
SOUTHEAST BLVD	0.028	S	SOUTH BLVD	COMMERCE ST	A-Injury (Disabling)	3/25/1992	7:08 PM
SOUTHEAST BLVD	0.043	N	SOUTH BLVD	RAILROAD ST	A-Injury (Disabling)	11/5/1996	5:10 AM
SOUTHEAST BLVD	0		PUGH RD	WARSAW RD	A-Injury (Disabling)	8/19/2005	11:55 AM
SOUTHEAST BLVD	0.03	S	COLLEGE ST	PUGH RD	B-Injury (Evident)	11/15/1991	8:59 PM
SOUTHEAST BLVD	0.005	S	COLLEGE ST	ROBINSON LN	C-Injury (Possible)	12/20/2002	5:48 PM
SUNSET AVE	0		PIERCE ST	OVERLAND RD	A-Injury (Disabling)	3/19/1999	5:30 AM
SUNSET AVE	0.014		ROYAL LN	PIERCE ST	B-Injury (Evident)	12/3/2008	7:12 PM
SUNSET AVE	0.014	W	US 421	WESTOVER RD	C-Injury (Possible)	3/23/1997	12:31 AM
SUNSET AVE	0.25	W	FORREST TR	COHARIE DR	C-Injury (Possible)	2/20/1999	6:28 PM
SUNSET AVE	0		WOODLAND AVE		C-Injury (Possible)	12/17/2002	7:41 PM
SUNSET AVE	0		SHIELD ST	ROYAL LN	C-Injury (Possible)	2/3/2004	7:21 PM
VANCE ST	0		FAYETTEVILLE ST	SAMPSON ST	C-Injury (Possible)	10/2/2001	11:24 AM
WALKER ST	0.025	W	MCKOY ST	LARKINS ST	B-Injury (Evident)	6/8/2003	10:26 PM
WARSAW RD	0		FONTANA ST	SOUTHEAST BVD	A-Injury (Disabling)	7/28/2008	12:28 AM
WEEKS ST	0.1	E	LISBON ST	SOUTH BLVD	B-Injury (Evident)	5/5/1990	8:00 PM
WEST AVE	0.009	E	PHILIPS ST	LISBON ST	B-Injury (Evident)	9/26/1999	2:24 AM
WILLIAMS ST	0	N	FAYETTEVILLE ST	CHESTNUT ST	C-Injury (Possible)	9/14/1991	8:13 PM

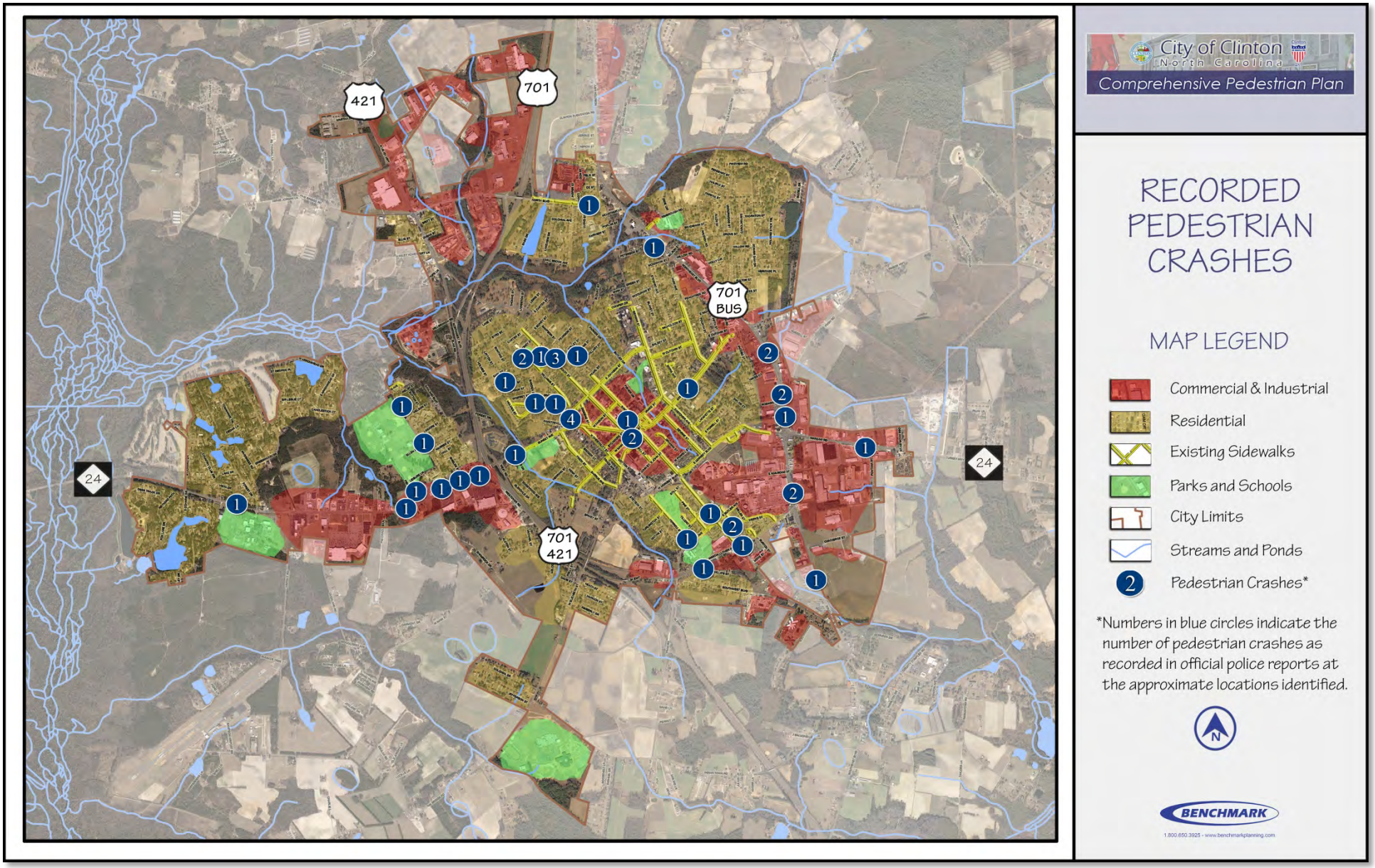


Figure 2-12: Pedestrian Crash Map (1990 -2010)

G. Pedestrian Use and Future Needs

As part of the development of the plan over 325 residents participated in a survey that inquired about their experiences and needs related to pedestrian activity and infrastructure in Clinton. In order to reach a broad cross section of the community, the survey was made available online, and was also available in hard copy at prominent locations in the community. The pedestrian planning survey was extensive and revealed information about the walking habits and future desires of Clinton's citizens, both young and old. In this section, the key findings from the survey are listed, while the detailed results of the survey are summarized in Appendix A.

Walking is important to most of Clinton's residents:

In Clinton, most people either drive or ride with a friend to move around the city. However, the survey revealed that nearly 30 percent walk and nearly 15 percent ride a bike as part of their transportation options. Some responded that they use a taxi or some other private form of transportation, since regularly scheduled public transportation is not available. Only 10 percent of those who responded indicated that walking was not important, and that they did not walk anywhere in the City. Of the 90 percent that thought it was important, 43 percent of those said it was very important to them. Approximately 40 percent of those surveyed said they walk several days a week. The survey results were confirmed by the Steering Committee and comments from individuals who participated in the public meetings. In addition, numerous pedestrians were observed throughout Clinton as field work was being conducted for the plan. Finally, 64 percent of the survey respondents think that walking should be a high priority in Clinton, with 23 percent not concerned about it at all.

Clinton's residents will walk more if improvements are made:

Very few people surveyed indicated that the walking conditions were good in Clinton. Fifty-six percent agreed that walking conditions were fair and some improvement was needed, while 28 percent indicated that walking conditions were poor, that they don't feel safe and improvements were needed. Seventy-eight percent of those surveyed said they would walk more frequently if there were safe pedestrian crossings, sidewalks, trails and adequate lighting near where they lived. The top issues discouraging residents from walking now include:

- Lack of sidewalks and trails in general
- Lack of crosswalks at traffic signals
- Lack of connectivity
- Too much vehicular traffic
- Aggressive driving behaviors

Clinton's residents primarily walk for recreational purposes:

One of the key points of the Pedestrian Plan vision is to create an environment where Clinton's residents will want to choose walking, not just for recreation, but for daily transportation needs to help reduce the number of vehicles on Clinton's roads. As indicated in the surveys, 79 percent of those responding walk for recreation or fitness, while 42 percent choose walking to interact with neighbors. Two encouraging responses were that over 30 percent indicated they walk as a form of transportation for daily activities, and also for short trips. Providing a safe pedestrian environment will help increase the number of residents choosing walking as a realistic alternative for their daily transportation needs in moving around Clinton.

Clinton's residents desire to walk to entertainment, dining, shopping and recreational opportunities:

Respondents answering the survey selected the following key destinations that they currently walk to or desire to walk to in the future:

- Downtown
- Parks
- Restaurants
- Shopping (downtown)
- Trails and/or Greenways
- Friends and/or Family Homes

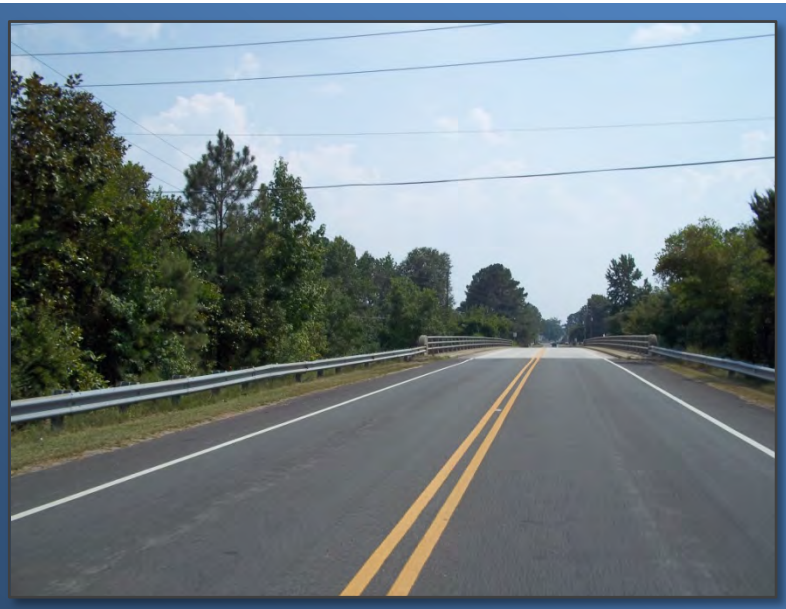


Figure 2-13: Elizabeth Street facing southwest over the US 701/421 Bypass

Roadways and Intersections needing sidewalks and improvements as identified by Clinton's residents:

When answering the open ended question on the survey regarding the survey respondent's top three roadways that needed sidewalks and pedestrian improvements, one roadway was the topic of discussion more than any other; Sunset Avenue / NC Highway 24 West. This roadway, as discussed earlier, leads to a large commercial area and the city's primary

recreational park. This area is tied for the most number of pedestrian crashes and does not currently have any pedestrian facilities. Residents also indicated that US 701 Business was an area that needed sidewalks. Pedestrians do not have any sidewalks or other pedestrian facilities in this area to walk to work or visit businesses along the corridor. Pedestrians are often observed walking in the roadway or on one of the many dirt paths that have been worn in the grass on the shoulder of this roadway. Three other roadways identified by residents included Beaman Street, Stewart Avenue and Elizabeth Street. Beaman Street extends out from downtown to the hospital area. Sidewalks are along Beaman to the hospital where they abruptly stop; leaving a gap in the pedestrian network leading to the North Boulevard shopping area and additional medical offices on the northern end of Beaman Street. Stewart Avenue is adjacent to one of Clinton's historic districts and connects residential areas to College Street. Stewart Avenue is a cut-through for vehicular traffic and pedestrians are currently walking in the roadway since no sidewalks are present. Elizabeth Street extends southwest from the center city to the new high school and middle school. Sidewalks are nonexistent along Elizabeth Street leading up to where it crosses over US 701/421 Bypass and from that point all the way to the schools. All of the roadways documented for this question in the survey are listed in Appendix A. In addition, nearly all of the roadways identified by the survey respondents were incorporated into the overall pedestrian network recommendations for pedestrian facilities.

Figure 2-14: US 701/421 Underpass along NC Highway 24/Sunset Avenue

In addition to the identification of the top three roadways, survey respondents were also asked to list the top three intersections they believed needed pedestrian improvements. The most frequently listed intersection was the Sunset Avenue/NC 24 West intersection with US 701/421 – Faircloth Freeway. This intersection and underpass is very dangerous for pedestrians to navigate. The on and off ramps before the bridge at this intersection have the highest traffic volume in the city. Pedestrians are faced with walking through a narrow space where they are separated from traffic only by a guard rail. Although the guard rail does

provide some buffer between the vehicles and pedestrians, the dirt path is somewhat troublesome, and unsafe to walk on. This intersection is just south of the area where illegal crossings are occurring across the bypass. A safe and more navigable pedestrian walkway at this intersection would provide a better alternative for those seeking to move from the eastern side of the roadway barrier, to the western side of US 701/421 where commercial uses and the park are appealing destinations.

Other intersections mentioned in the survey as needing improvement included the following:

- NC Highway 24 West at Sampson Crossing Shopping Center (Walmart)
- Beaman Street at College Street
- College Street at US 701 Business
- Downtown (in general)

H. Summary of Existing Plans and Policies

In recent years, the City has been able to complete pedestrian projects along Lisbon Street, Morrisey Boulevard, Railroad Street, the Downtown (Court House Square Projeccts) and Fayetteville Street. The City has not adopted any plans that comprehensively address pedestrian improvements, which is one of the primary reasons for pursuing this planning process. The City had previously adopted as a goal in its 2000-2020 Land Development Plan to prepare a plan for pedestrians, bicycle and greenways; however, progress has not been made, until now, due to the lack of funding opportunities.

Clinton is currently reviewing its Land Development Plan and intends to update the plan once the Comprehensive Pedestrian Plan is completed and adopted. The City will rely on the Comprehensive Pedestrain Plan for guidance on how the pedestrian network should connect residents throughout the City and how that will impact future land development. The City is also in the process of of developing a master plan for the downtown, which will also rely on recommendations from this plan.

In 2010, the City adopted a new Land Development Ordiance, which was scheculed for adoption prior to beginning this process. The City of Clinton Land Development Ordinance (LDO) combined the former zoning and subdivision regulations into a unified and cohesive format. Chapter 10 in the Land Development Ordinance deals with the provision of infrastructure for new development and pedestrian

facilities. Section 10.1.4 of the ordinance states one of the functions of a street right-of-way is to "provide a safe and convenient passageway for pedestrian traffic." The latest edition of the NCDOT Division of Highways *Traditional Neighborhood Development Guidelines* is referenced for developments that utilize a more traditional design. Sidewalks built to NCDOT and AASHTO standards are required on both sides of all new streets and along any existing public street directly accessed by proposed development. Furthermore, a 10-foot pedestrian access easement for greenway trails may be required where such facilities are planned. In the case of unsubdivided developments, such as apartment complexes, Section 10.1.9 requires sidewalk connections between dwelling units, adjoining public streets, and on-site amenities. Also, Section 7.2.4 lists "greenways" as one of the types of open space that can be utilized for required open space area in new residential developments.

Section 3. Pedestrian System Improvements

A. Introduction

Most cities developed around a traditional downtown with interconnected places to live, work, shop and play. It was not until the widespread use of the automobile and the expansion of our national highway systems following World War II that our cities began to become less connected and decentralized. The City of Clinton followed this general development pattern. In its early years, Clinton was well connected, with the courthouse and downtown in the center surrounded by residential neighborhoods, places of work, schools, and churches. Residents could easily walk as a form of transportation to accomplish almost all of their daily tasks. As Clinton grew, the farm fields that surrounded the city were developed and the city expanded outward from its core; however, the interconnected pattern that allowed for pedestrians to walk had evaporated. In observing the existing sidewalks map of Clinton today, it was determined that not one sidewalk has been built outside of the "ring" of major highways that have encircled the central core of the city.

This section highlights Clinton's plans for breaking through these pedestrian connectivity barriers and creating a better connected city and pedestrian system. During the pedestrian planning process, many barriers were identified which hindered connectivity between residential neighborhoods, parks, places of employment and commercial/retail development. The proposed improvements in this section set forth a clear path to establishing a safer and well-connected system for pedestrians throughout the city, not just its traditional center.

Although Clinton did not continue to expand sidewalks into its growth areas, the city is well positioned to add sidewalks and other pedestrian facilities now, creating a more walkable and connected Clinton. The backbone of the pedestrian network proposed to connect these outlying growth areas with the core of the City relies primarily on new sidewalks along major transportation corridors and the creation of a formalized system of greenways along existing sewer line easements where residents are already walking and riding bikes. Implementing this improved pedestrian network over the long-term will help make the entire city of Clinton safer for pedestrians.

B. Basis for Determining Pedestrian System Improvements

After months of research, including direct input from city residents, working with NCDOT and local City Staff, plans were established to improve the overall pedestrian system through a series of sidewalk and intersection improvements. The public input received from surveys and the extensive field work and research of the existing pedestrian conditions made it clear where the priorities existed in Clinton. The diagram in Figure 3-1 demonstrates the various sources of information and input that went into recommendations for the pedestrian network, intersection improvements and overall pedestrian system.

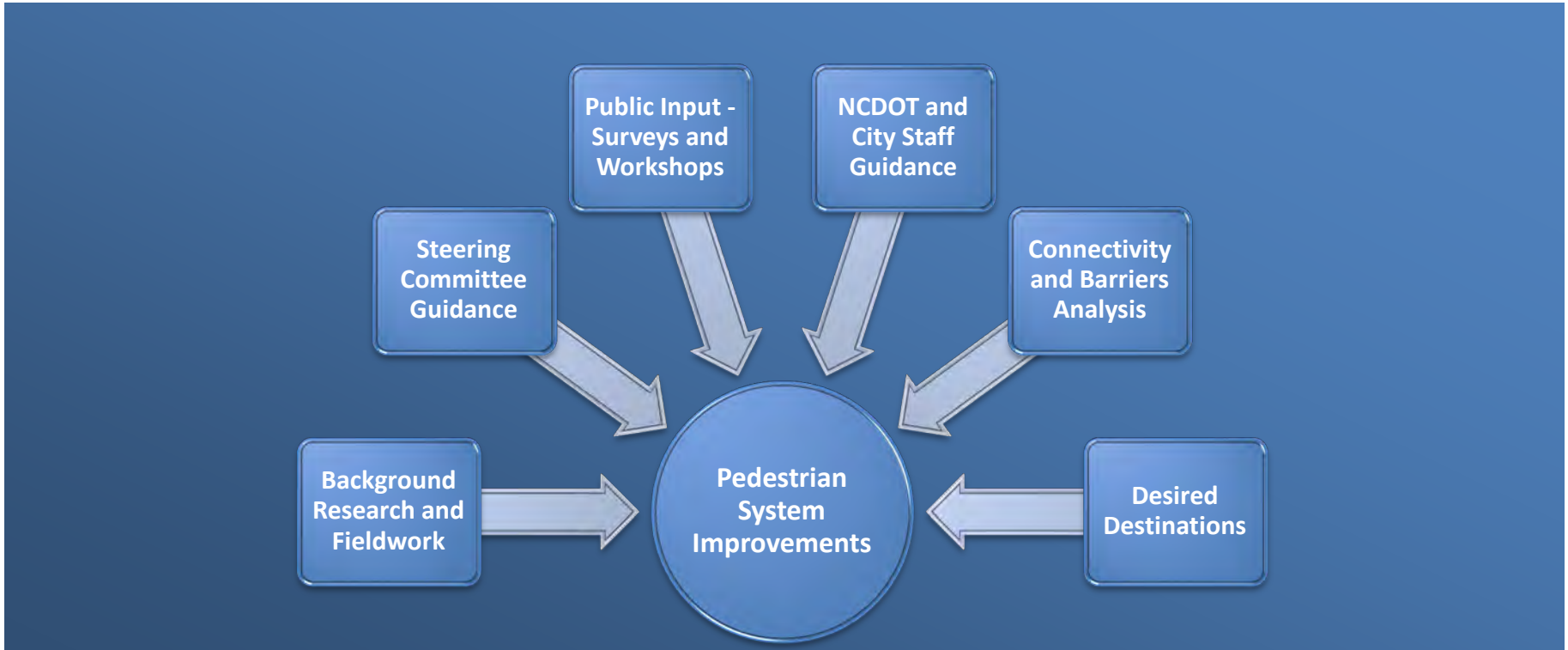


Figure 3-1: Pedestrian System Design Process

C. Pedestrian Network Recommendations

A series of recommendations were prepared that clearly establish a much safer and better connected pedestrian system for Clinton in the future. The improvements include sidewalks, crosswalks, greenways and improvements to pedestrian warning devices. The detailed phases for implementation are described in greater detail in Section 5 of the plan.

The proposed pedestrian network map in Figure 3-2, displays the pedestrian facilities improvements that will be needed over the long-term to improve pedestrian connectivity in Clinton. The table in Figure 3-3 displays the detailed recommendations and notes to accompany the pedestrian network map. Twenty-nine sidewalk/pedestrian facilities improvements were identified along with seven greenway trail segments. The proposed location of pedestrian facility improvements and greenways are as follows:

Proposed Pedestrian Facilities

1. NC 24
2. Royal Lane Park
3. Fayetteville St/Barden St
4. Williams Street
5. Calhoun Street
6. McKoy Street/Byrd St
7. Sampson Street
8. North Blvd/ US 421
9. Beaman Street
10. Stewart Avenue
11. Park Ave/Smith Street
12. Willow Road
13. Raleigh Rd/ Kimbrough Rd
14. US 701 BUS
15. College Street
16. Warsaw Road
17. Warsaw Road
18. Warsaw Road
19. Railroad Street
20. MLKJ Blvd
21. Southwest Blvd
22. Butler Avenue
23. Stetson Street
24. Morisey Blvd
25. Ferrell St
26. Tram Road
27. Indian Town Road
28. Elizabeth Street
29. New SR5/Westover Dr

Proposed Greenways

A. Western Loop Greenway
B. Northern Greenway
C. Williams Old Mill Branch Greenway
D. Cat Tail Branch Greenway
E. Northeastern Greenway
F. Dollar Branch Greenway
G. Southwestern Greenway

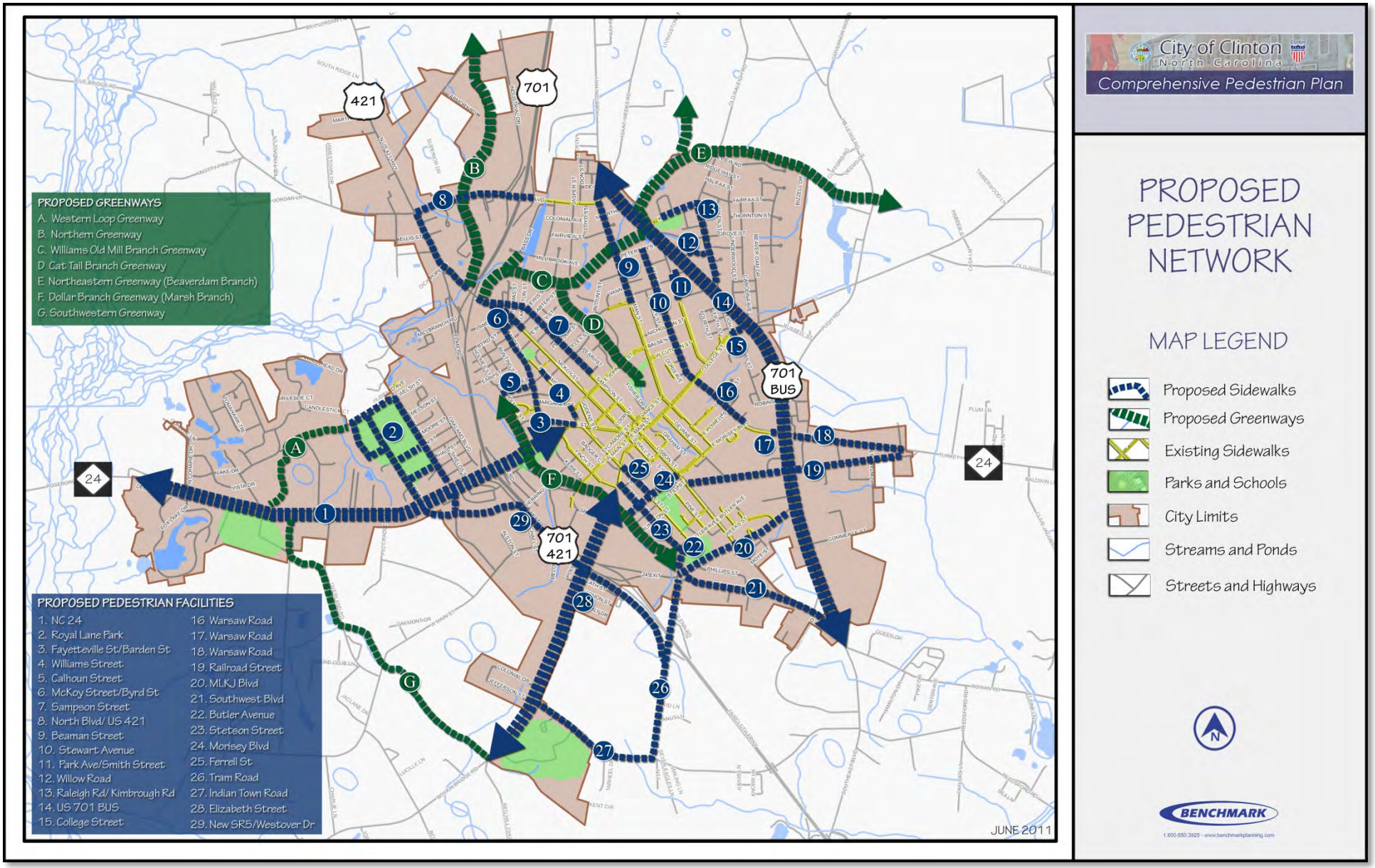


Figure 3-2: Proposed Pedestrian Network

Figure 3-3: Pedestrian Network Improvements Table

No.	Pedestrian Corridor	Location	Recommendations	Comments
1	NC 24 / Sunset Ave	Coharie Rd to Fayetteville Street	Sidewalks both sides of roadway, crosswalks	Coordinate with NCDOT on new 24 plans to integrate recommended pedestrian facilities. Special attention needed at intersection with US 701/421 bridge to allow safe crossing along NC 24/Sunset Avenue (Refer to Figure 3-10).
2	Royal Lane Park Area			
		A. Royal Lane	Sidewalk and crosswalks	Sidewalk is needed on west side of Royal Lane with painted/striped crosswalks at all intersections.
		B. Pierce Street	Sidewalk and crosswalks	Sidewalk is needed on east side of Pierce Street with painted/striped crosswalks at all intersections.
		C. Leisure Lane	Sidewalk or side path	This walkway on northern side of street is needed to integrate a walking system around park.
		D. Ellen Street	Sidewalk or side path	This walkway on northern side of street is needed to integrate a walking system around park.
		E. Northern end of park	Walking path/side path	This path will connect Royal Lane and Pierce Street, serving as a beginning point for the Western Loop Greenway
3	Fayetteville Street/Barden Street	Intersection with Sunset Avenue to Byrd Street	Sidewalk and crosswalks	Sidewalk needed on northern side of Fayetteville Street and as Fayetteville Street curves, then, along the east side of Barden Street past Community Center to Byrd Street. Sidewalk connection needed on southern side of Byrd to connect with McKoy Street.
4	Williams Street	Neat W. Johnston St. and W. Lee St.	Sidewalk	Two small gaps exist in the Williams Street Sidewalk at these identified locations and sidewalk should be constructed to complete the network on Williams Street.
5	Calhoun Street	Proposed Dollar Branch Greenway Trailhead to Barden Street	Sidewalk	Sidewalk needed along southern side of Calhoun Street to connect trailhead with Barden Street, completing the network.
6	McKoy Street	Community Center to US 701 underpass	Sidewalk and crosswalks	Construct sidewalk on west side of McKoy to vicinity of Sampson Street intersection for crossing to east side. Sidewalk will link with US 701 underpass and greenway trails.
7	Sampson Street	Pearl Street to McKoy Street	Sidewalk and crosswalks	Sidewalk is needed on west side with painted/striped crosswalks at all intersections.

Figure 3-3 (continued): Pedestrian Network Improvements Table

No.	Pedestrian Corridor	Location	Recommendations	Comments
8	North Blvd./US 421/McKoy Street	US 701 Bridge underpass on Sampson Street to North Blvd to existing sidewalk across US 701 Bridge on North Blvd	Sidewalks and crosswalks	This series of segments will complete a northern loop connecting to industrial areas of the City. Sidewalk will follow eastern side of Sampson and US 421 with a crosswalk at North Blvd. The sidewalk will then follow the northern side of North Blvd. across US 701 Bridge to existing sidewalk on North Blvd. Constraints include the potential lack space for the sidewalk across the bridge, low guardrail height across bridge and the guardrail approaching the bridge encroaching into sidewalk space.
9	Beaman Street	Cooper Drive (Hospital) to North Blvd.	Sidewalks and crosswalks on east side of the road	Coordinate with recommended pedestrian intersection improvements at hospital and proposed Williams Old Mill Branch Greenway and crossing at bridge.
10	Stewart Avenue	Beginning at intersection with College Street	Sidewalks on at least one side of roadway	This segment of roadway is highly trafficked as a cut-through. Pedestrians use this route as well. Speed limit reduction may be of consideration in this area.
11	Park Ave. / Smith St.	Peachtree Road to US 701 BUS	Sidewalk	Sidewalk along eastern side of Park to Smith Street. Then, sidewalk along southern side of Smith Street to US 701 BUS. Refer to Figure 3-5 for proposed intersection improvements at Smith Street and US 701 BUS.
12	Willow Rd	Raleigh Road to US 701 BUS	Sidewalk on southern side of Willow Road	This sidewalk will provide a connection from Raleigh Road to US 701 BUS, connecting the neighborhood with existing business along US 701 and the planned pedestrian link at Smith Street, crossing 701 BUS to downtown and other areas in Clinton. Drainage swale near Raleigh Road is a constraint.
13	Raleigh Rd/Kimbrough Rd	Existing Sidewalk on Kimbrough to Raleigh Road to US BUS 701	Sidewalk and crosswalks	Complete sidewalk along southern side of Kimbrough Road to Raleigh Road. Complete sidewalk along entire length of the western side of Raleigh Road to US 701 BUS.
14	US 701 BUS	Entire segment within city limits	Sidewalks and crosswalks along both sides of highway	Existing traffic patterns and number of travel lanes (road diet) should be examined considering the impacts of Interstate 40 and the US 701 Bypass on reducing traffic volumes on 701 BUS. The existing roadway accommodates up to eight lanes in some areas today. The lanes can be reduced and/or reconfigured to accommodate a more pedestrian friendly environment with street trees, crosswalks and sidewalks on both sides to improve pedestrian safety and overall revitalization efforts along the corridor (See Figure 3-5).

Figure 3-3 (continued): Pedestrian Network Improvements Table

No.	Pedestrian Corridor	Location	Recommendations	Comments
15	College Street	Raleigh Road/Jacobs Street to US 701 Business	Sidewalks and crosswalks along both sides	Construct sidewalks and painted crosswalks along this short stretch of College Street extending a main pedestrian network to US 701 Business from downtown Clinton.
16	Warsaw Road	College Street to E. Morisey Blvd.	Sidewalks and crosswalks	Sidewalk to be constructed along eastern edge where sufficient ROW width exists to complete the sidewalk connector between two main sidewalk networks.
17	Warsaw Road	E. Morisey Blvd. to US 701 BUS	Sidewalk and crosswalk	Extend sidewalk on both sides of road from E. Morisey Blvd. to US 701 BUS where not already in place.
18	Warsaw Road	US 701 BUS to City Limit	Sidewalk	Construct new sidewalk to allow safe pedestrian movements from 701 BUS to industries along Warsaw Road, connecting job locations with neighborhoods.
19	East Railroad Street	Lisbon Street to US 701 BUS to City Limit	Sidewalks and crosswalks	Construct new sidewalks and painted crosswalks to complete pedestrian network, allowing safe pedestrian movements from 701 BUS to industries along East Railroad Street, connecting places of employment with existing neighborhoods.
20	Martin Luther King Jr. Blvd.	US BUS 701 to W. Butler Ave./Tram Road	Sidewalk and crosswalks	Install sidewalk along northern side of MLKJ Blvd. as a southern connector for pedestrians.
21	Southwest Blvd.	MLKJ Blvd. to US 701 BUS	Sidewalk	Install sidewalk along northern side of roadway.
22	West Butler Avenue	Existing sidewalk to MLKJ Blvd.	Sidewalk	Construct sidewalk to connect with pedestrian network at MLKJ Blvd.
23	Stetson Street	Elizabeth Street to W. Butler Avenue	Sidewalk	Construct sidewalk along western side of Stetson Street.
24	West Morisey Blvd.	Lisbon Street to Elizabeth Street	Sidewalk and crosswalks	This segment will complete the Morisey Blvd. sidewalk linkage from US 701 BUS to Elizabeth Street.
25	Ferrell Street	W. Morisey Blvd. to Elizabeth Street	Sidewalk	This segment will complete the Ferrell sidewalk linkage from Butler Avenue Elementary School to Elizabeth Street.
26	Tram Road	MLKJ Blvd. to Indian Town Road	Sidewalk	A sidewalk along the western side will enable a connection to be made to the main road leading to the Middle and High School. Sidewalk segments may be constructed as development occurs in what is now primarily agricultural land.

Figure 3-3 (continued): Pedestrian Network Improvements Table

No.	Pedestrian Corridor	Location	Recommendations	Comments
27	Indian Town Road	Tram Road to Elizabeth Street	Sidewalk	Sidewalk will connect Elizabeth Street and Tram Road pedestrian facilities to Middle and High Schools. This segment may be completed as development occurs adjacent to the schools.
28	Elizabeth Street	Barrus Avenue to Middle and High School (Indian Town Road)	Sidewalk, sidepath and crosswalks	This will complete a primary linkage in the pedestrian network from densely populated neighborhoods to the Middle and High School. A sidepath for multi-use is recommended from the bridge to the schools see Figure 3-8.
29	Proposed SR5 (Sunset Ave Access Rd.) /Westover Dr.	NC 24/Sunset Ave to Tram Road	Sidewalk and crosswalks	This segment should be completed as the new SR5 is constructed, extending along Westover Dr to Tram Road, completing the network.
Greenway Corridors				
A	Western Loop Greenway	Royal Lane Park to NC 24/Sunset Ave.	Greenway / multi use path	Connect Royal Lane Park to NC 24 across from Sampson Community College and proposed trailhead for the Southwestern Greenway. Right-of-way can be preserved and greenway constructed as land develops.
B	Northern Greenway	US 701 Underpass to City Limit	Greenway / multi use path	Connect core of City to the northern edge where places of employment exist utilizing existing sewer easements/rights-of-way.
C	Williams Old Mill Branch Greenway	US 701 Underpass to US 701 BUS	Greenway / multi use path	Provides an east/west northern route for pedestrians. The western end of this proposed greenway is already established as a foot path for many residents connecting from the Sampson Street/McKoy Street area to the shopping plaza along North Blvd.
D	Cat Tail Branch Greenway	Intersection with Williams Old Mill Branch Greenway to Fisher Drive Park	Greenway / multi use path	Linkage through the heart of several residential neighborhoods to the Fisher Drive Park and downtown and proposed Williams Old Mill Branch Greenway.
E	Northeastern Greenway (Beaverdam Branch)	US 701 BUS to City Limit	Greenway / multi use path	This segment provides a connection for neighborhoods along the northeastern edge of the City and future development areas surrounding this side of the City.

Figure 3-3 (continued): Pedestrian Network Improvements Table

No.	Pedestrian Corridor	Location	Recommendations	Comments
Greenway Corridors				
F	Dollar Branch Greenway	Calhoun Street to MLKJ Blvd	Greenway / multi use path	Provides a western loop north/south pedestrian connection, eliminating unsafe pedestrian crossings of US 701 Bypass near Moore Street on the western side of the bypass to Forest Trail and adjacent neighborhoods on the eastern side. This is an existing City easement and dirt paths are already in use by pedestrians along this proposed route. In concert with formalizing this existing path as a greenway, more significant barriers should be erected at the identified illegal crossing areas adjacent to US 701 Bypass to discourage future movements across this high speed roadway. It will be important to coordinate this improvement with NC 24/Sunset Avenue pedestrian improvements to ensure safe pedestrian crossings are integrated into the design of the roadway improvements underneath the US 701 Bypass bridge.
G	Southwestern Greenway	NC 24/Sunset Ave to Elizabeth Street/Boykin Bridge Road (Middle and High School)	Greenway / multi use path	This segment provides a future pedestrian link between Sampson Community College and the Middle and High School. The land is primarily undeveloped at this time. Right of way can be preserved and the greenway can be constructed as the land is developed over time.

Priority Network Improvements

A total of five projects of the aforementioned pedestrian network improvements are considered to be high priorities for helping to complete the pedestrian network and improve connectivity. As indicated through survey responses, field work and review by the Steering Committee, NCDOT, and City Staff, the following five projects were recognized as priorities over the next five to ten years:

- NC Highway 24 West / Sunset Avenue
- US 701 Business (Entire length)
- Beaman Street
- Stewart Avenue
- Elizabeth Street

NC Highway 24

The top priority project is to construct sidewalks along NC Highway 24 from Woodland Drive to Coharie Road. The residents responding to the survey overwhelmingly indicated this roadway was either their top priority or in their top three. The proposed improvements, which are scheduled to begin in FY 2013, include sidewalks on both sides of the road, marked crosswalks at signalized intersections and pedestrian signals and signage at major intersections. Given the heavy traffic volume along the corridor, it may be necessary to install audible/countdown pedestrian signals and utilize the higher visibility ladder style crosswalk markings to increase the degree of safety provided to pedestrians and notice to drivers of the presence of pedestrians along the corridor.

US 701 Business Improvements

The second highest priority roadway identified was US 701 Business. Traffic volumes have decreased along US 701 Business in the most traveled areas by 2,000 to 3,000 AADT since 2005. The US 701 Business roadway is predominantly a five lane facility that expands to eight lanes in the vicinity of its intersection with NC 24. The massive expanse of this five lane facility is a barrier to pedestrian connectivity and the number of lanes present may not be needed to move the traffic generated along this roadway. Several recent trends have emerged in transportation planning that, when coupled together provide a more efficient transportation network that also enhances the visual environment and vitality of surrounding neighborhoods and businesses. The two primary trends are “Road Diets” and “Complete Streets.”

Transportation planners and engineers have discovered that a well-designed roadway with a smaller number of lanes can often move traffic as efficiently and safely as a larger cross section. Proven examples of the reduction or “road diet” for multi-lane facilities can be seen in North Carolina and across the country. Another strategy to improve roadway efficiency, helping revitalize and energize older commercial areas and neighborhoods, is the “complete streets” concept that incorporates pedestrian and bicycle facilities, parking, and aesthetic improvements into the overall fabric of the roadway system. Prior to any future improvement or resurfacing projects along US 701 Business, a detailed study of this corridor should be completed that analyzes traffic generators and volumes, as well as the physical parameters of the roadway to determine its potential for a road diet and a “complete street” plan similar to the concept shown in Figure 3-5. Completing this corridor study and analysis will help ensure a pedestrian-friendly and business-friendly environment along US 701 Business is implemented.

NC Highway 24 West / Sunset Avenue

The image above displays existing conditions along NC 24 west, demonstrating the lack of pedestrian facilities. The image to the right is a photo simulation of potential sidewalk and crosswalk improvements.

Figure 3-4: NC Highway 24 Pedestrian Facilities

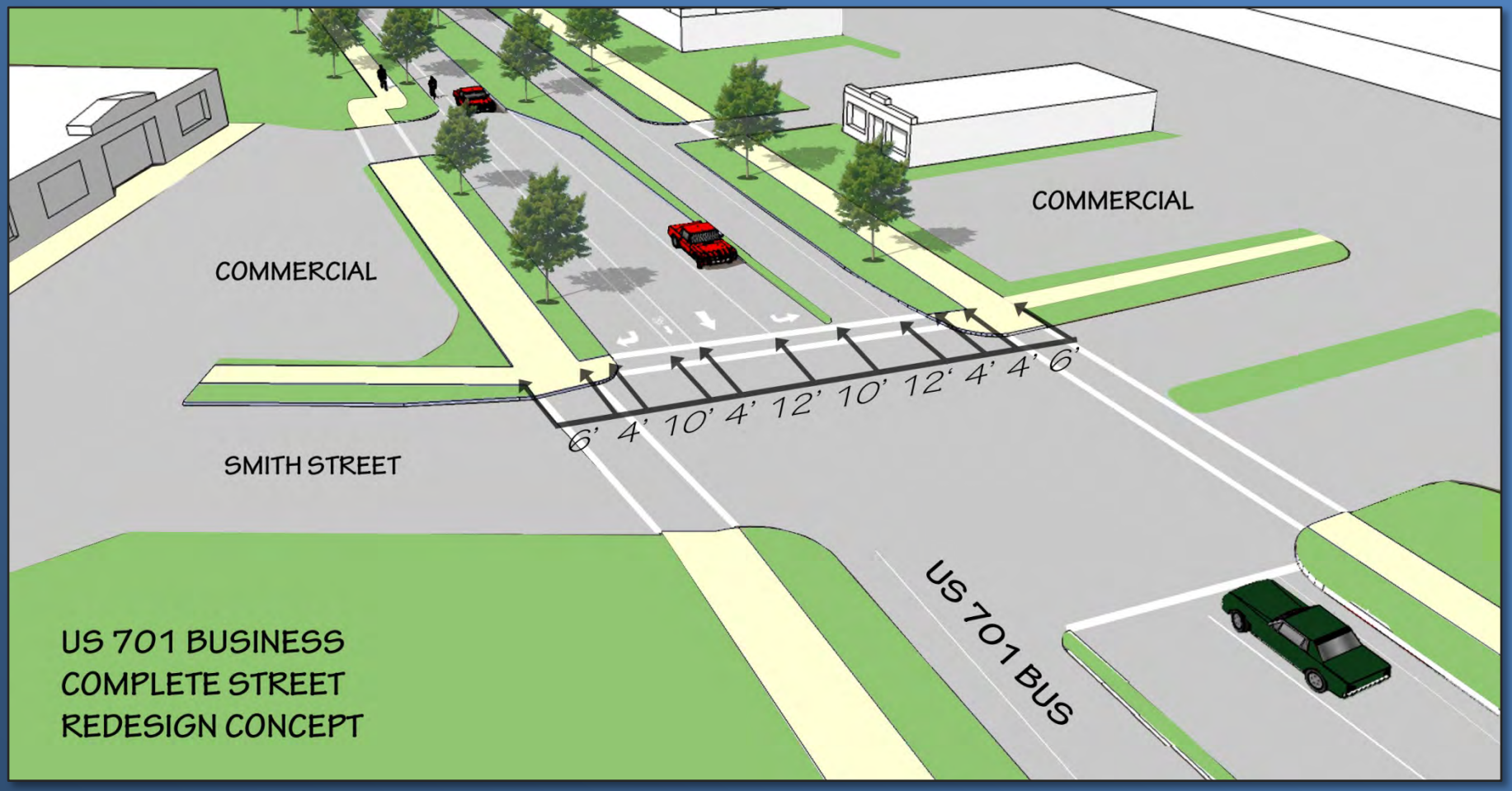


Figure 3-5: Smith Street at US 701 Business and Jordan Plaza - Complete Street/Road Diet Redesign Concept

Beaman Street

Another priority project identified is the extension of the Beaman Street sidewalk from the hospital northward, connecting to residential areas, medical offices and the existing sidewalk along North Boulevard. This segment of sidewalk will complete a northern network link from the downtown to the north end of the city. A sidewalk should be completed on the east side of Beaman Street. One major barrier to the completion of this network will be the crossing of Williams Old Mill Branch as the current bridge is much too narrow for pedestrians. The land along the eastern side of Beaman Street is owned by the City or the Hospital, presenting an excellent opportunity for installing a significant portion of the pedestrian facilities, including a shared use bridge as shown in Figure 3-7.

Stewart Avenue

Residents frequently utilize Stewart Avenue as a walking path during their daily routines. This segment of road, identified as number 10 on the Pedestrian Network Map, and shown in Figure 3-6, is an important link for the neighborhood to College Street and improvements planned for Warsaw Road, connecting out to US 701 Business. It is recommended that sidewalks be installed on at least one side of the street in this location.

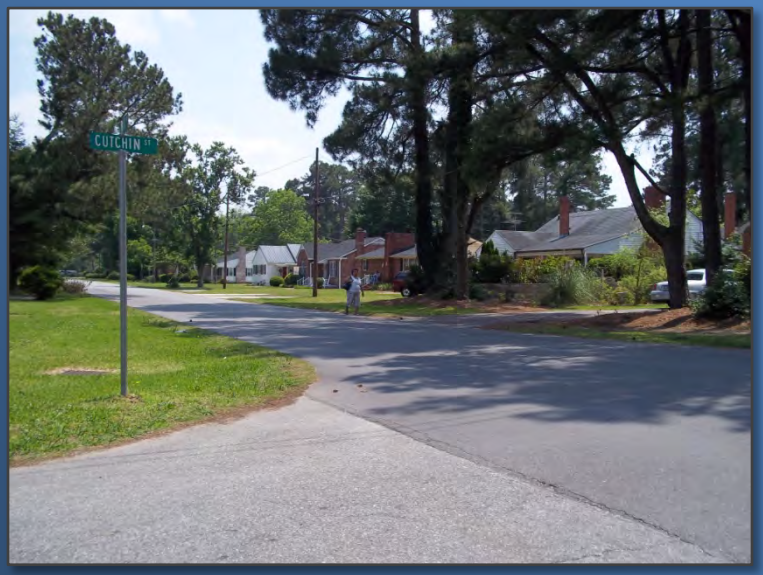
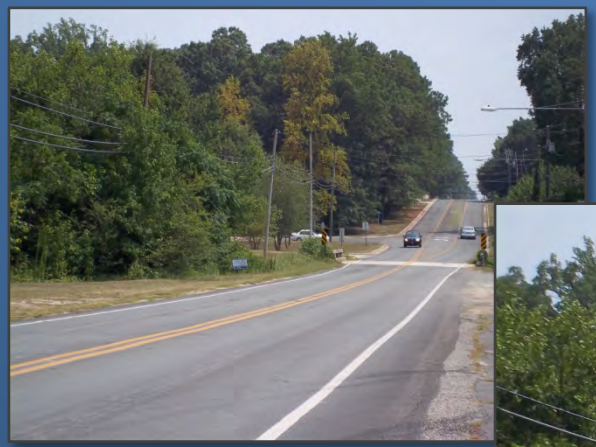


Figure 3-6: Stewart Avenue at the Intersection with Cutchin Street

Elizabeth Street

As described earlier, sidewalks do not exist along Elizabeth Street, which connects the core of the city with the new middle and high schools in the southwestern corner of the city. The primary barriers along this route are the approaches to the bridge crossing US 701, which have guardrails and steep drop-offs on either side of the road. Once beyond the bridge, the conditions are very favorable to complete the network using a shared use path as illustrated in Figure 3-8.

Beaman Street and Williams Old Mill Branch Greenway Pedestrian Improvements



Beaman Street pedestrian facilities end at the hospital and are needed along the northern segment to complete the network from downtown to North Boulevard. The image on the right demonstrates the needed pedestrian improvements for Beaman Street and the Williams Old Mill Branch Greenway crossing and bridge.

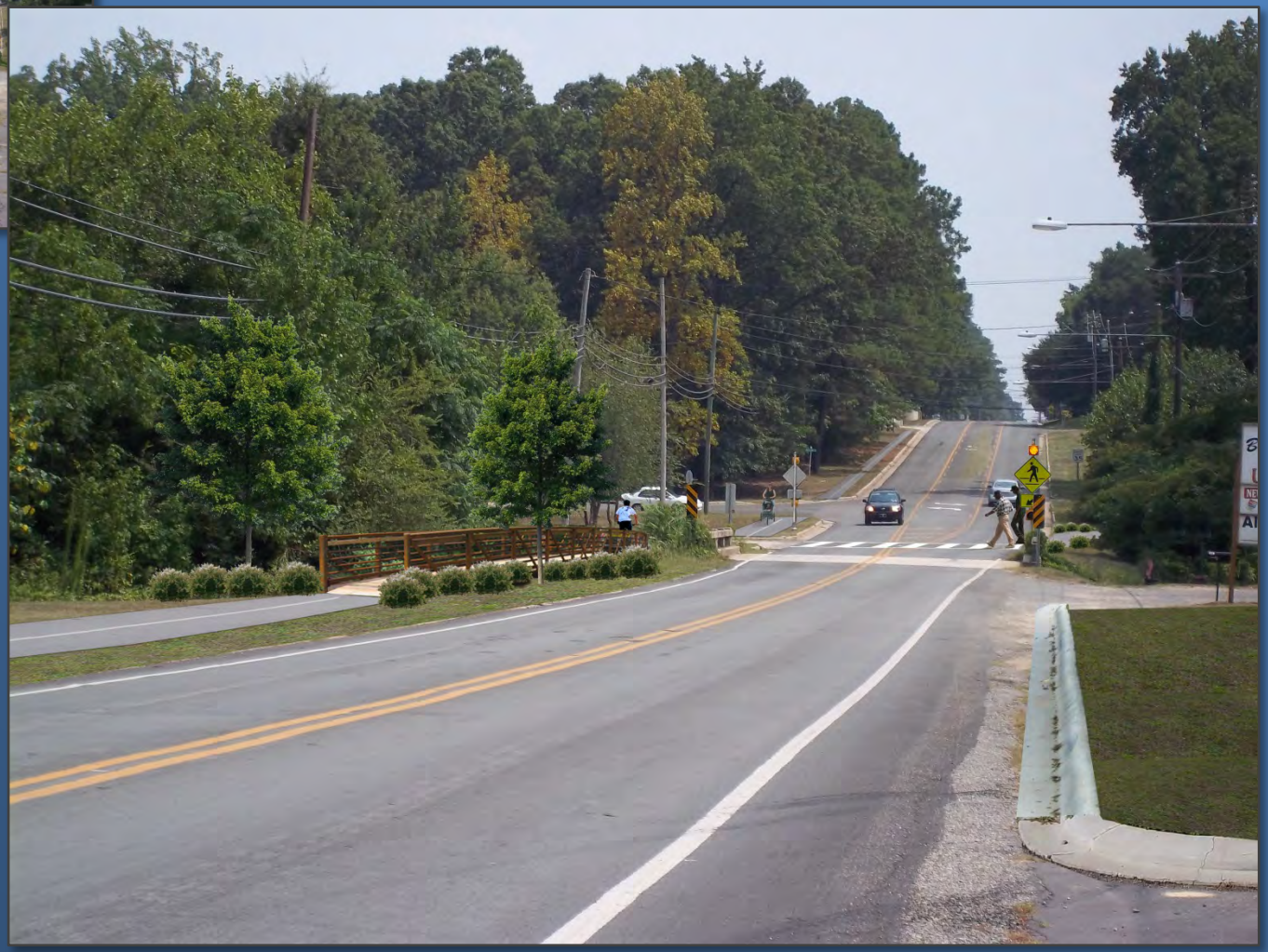


Figure 3-7: Beaman Street and Old Williams Mill Branch Pedestrian and Greenway Improvements

Elizabeth Street Shared Use Path

The image to the right displays a potential shared use sidepath connecting downtown with Clinton's middle and high schools. The path will provide safe walking options for school children and for residents seeking recreation and fitness opportunities. The roundabout terminating at the schools is already equipped with pedestrian facilities.

Figure 3-8: Elizabeth Street Shared Use Sidepath

D. Intersections

In order to further increase pedestrian connectivity safety, a large number of intersections have been identified throughout the proposed pedestrian network where improvements are needed to enhance the pedestrian system. As with the detailed input received concerning the sidewalk facilities and trails, residents, City Staff and NCDOT provided guidance on needed intersection improvements. The action steps and phasing to implement the improvements are discussed in Section 5. The proposed intersections improvement map in Figure 3-9 displays the location of intersection improvements that will be needed to provide a safer environment and connections for pedestrians in Clinton. Figure 3-10 displays the detailed recommendations and notes to accompany the intersection improvements map. Thirty intersection improvements were identified along with nine intersection improvements needed related to the proposed greenway trail segments. The proposed location of pedestrian facility improvements and greenways are as follows:

Proposed Intersection Improvements

1. Forest Dr/NC 24
2. Airport Rd/NC 24
3. Overland Rd/NC 24
4. Royal Lane Park/NC 24
5. Shamrock Dr/New SR5
6. Shield St/NC 24
7. 701/421 Bridge/NC 24
8. Finch St./ Sunset Ave
9. Fayetteville St. (multiple)
10. Mckoy St/Sampson St
11. Mckoy St/US 701 Bridge
12. North Blvd/US 701 Bridge
13. North Blvd/Beman St
14. Beaman St/Hospital
15. Beaman St/E. Johnson St
16. Smith St/701 BUS
17. Raleigh Rd/Willow Rd
18. College St/701 BUS
19. College St/Park Ave
20. College St/Warsaw Rd
21. Beaman St/Vance
22. Beaman St/College St/Eastover Ave
23. Downtown (multiple locations)
24. Warsaw Rd/701 BUS
25. E Railroad / 701 BUS
26. MLK Jr. Blvd/701 BUS
27. Butler Ave/MLK Jr. Blvd
28. Westover Rd/Tram Rd
29. Indian Town Road/Elizabeth St
30. Elizabeth St/Westover Rd

Greenway Intersection Improvements

A. Dollar Branch (Marsh Branch) / Sunset
B. Northern Greenway / North Blvd
C. Cat Tail Branch Greenway / E Johnson
D. Williams Old Mill Branch Greenway/Beaman
E. Williams Old Mill Branch Greenway / US 701 BUS
F. Dollar Branch (Marsh Branch)/ Elizabeth
G. Southwestern Greenway/ Boykin Bridge Rd
H. Southwestern Greenway / W. Main St
I. Southwestern Greenway / Overland Rd

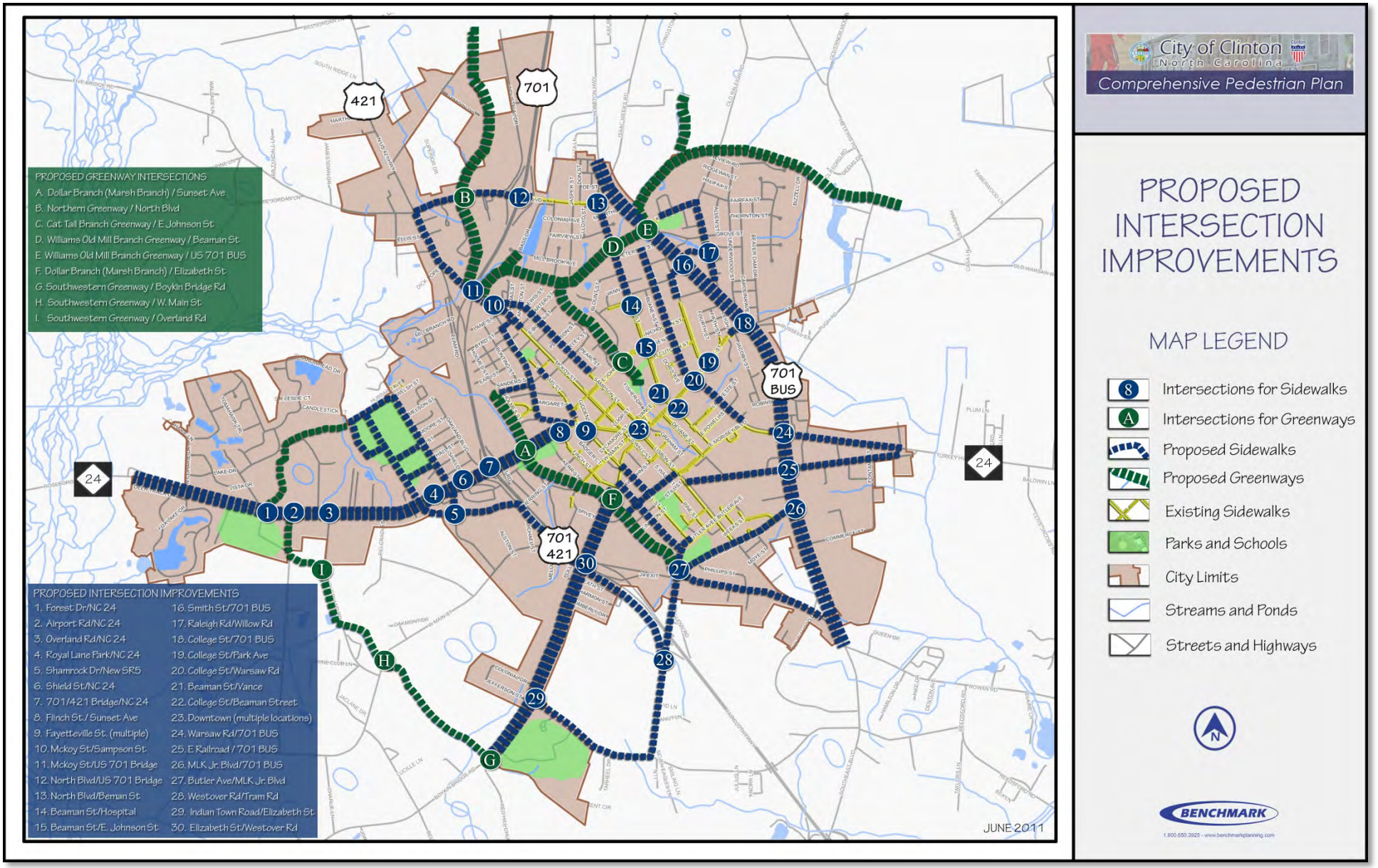


Figure 3-9: Proposed Intersection Improvements

Figure 3-10: Intersection Improvements Table

No.	Intersection Location	Recommendations	Comments
1	Forest Drive at NC 24	Four crosswalks and countdown signals	Main Entrance to Sampson Community College and secondary entrance to Coharie Country Club. This intersection needs pedestrian countdown signals as funding is available. Extensive pavement markings recommended here to designate pedestrian crossings. In addition, this crossing will serve as the major crossing of NC 24 for the Western Greenway connection to the Southwestern Greenway.
2	Airport Rd at NC 24	Crosswalk	Painted crosswalk needed on south side of NC 24 to connect across Airport Rd. Connection made here with Southwestern Greenway.
3	Overland Rd at NC 24	Three crosswalks, countdown signals, and warning signs	Signalized intersection with two crosswalks needed across NC 24 and one across Overland Drive. (No connection across NC 24) Install pedestrian warning signs.
4	Royal Lane Park Area at NC 24		
	A. Royal Lane at NC 24	Four crosswalks and audible countdown signals	Major intersection for vehicles and pedestrians utilizing Royal Lane Park. Children will be utilizing this intersection and audible countdown signals are recommended as resources are available.
	B. Pierce Street at NC 24	Four crosswalks and audible countdown signals	This is a proposed major intersection for vehicles and pedestrians utilizing Royal Lane Park. Children will be utilizing this intersection and audible countdown signals are recommended as resources are available.
	C. Leisure Lane at Pierce Street and Royal Lane	Crosswalks and warning signs	Simple painted crosswalks installed with standard pedestrian warning signage along. Low speeds already exist and pedestrian encounters should already be anticipated.
	D. Ellen Street at Pierce Street and Royal Lane	Crosswalks and warning signs	Simple painted crosswalks installed with standard pedestrian warning signage. Low speeds already exist and pedestrian encounters should already be anticipated.

Figure 3-10 (continued): Intersection Improvements Table

No.	Intersection Location	Recommendations	Comments
5	Shamrock Road with New SR5	Crosswalk	Only one painted crosswalk needed at this intersection crossing Shamrock Road connecting the new SR5 sidewalk.
6	Shield Street at NC 24/Sunset Ave	Crosswalks	Two striped crosswalks needed at this intersection; one crossing Shield Street and one crossing Sampson Properties entrance to Lowes. Crosswalks not needed across NC 24 as old intersection will be closed.
7	US 701/421 Bridge at NC 24/Sunset Ave	Crosswalks and warning signs	A diverging diamond interchange is proposed for this intersection. Pedestrian facilities should be included in the design providing safe access. All required pedestrian warning signage should be installed. Coordinate with scheduled NCDOT improvements for NC 24/Sunset Avenue.
8	Finch Street at Sunset Avenue	Crosswalk and curb ramps	Crosswalk and curb ramps needed at Finch Street near Sunset Avenue School.
9	Fayetteville St. (Multiple Locations)		
	A. Sunset Avenue / Fayetteville Street	Crosswalk, geometric changes, and warning signs	The alignment of Sunset with Fayetteville St. has created a lengthy distance for a pedestrian to cross. Mark with ladder style crosswalks, tighten curb radius on eastern approach and erect warning signs.
	B. N. Chestnut / Fayetteville Street	Crosswalk, refuge Island, and geometric changes	The alignment of N. Chestnut with Fayetteville St. has created an unusually lengthy walk for a pedestrian to cross three lanes. A ladder style crosswalk marking with a substantial refuge island, a tighter curb radius and warning signage are recommended.
	C. Williams St / Fayetteville Street	Crosswalk and geometric changes	Ladder style crosswalks across Williams Street, tighten curb radius, and erect warning signage.
	D. Giddens Street / Fayetteville Street	Crosswalks	Mark/Stripe crosswalks
	E. W. Faison Street / Fayetteville Street	Crosswalks	Mark/Stripe crosswalks
10	McKoy Street at Sampson Street	Crosswalks and warning signs	Crosswalk at Sampson Street. Pedestrian warning signs installed and crosswalks clearly marked.
11	US 701 Bridge Underpass and McKoy Street	Pedestrian warning signs and guide signs	Pedestrian warning signs and guide signs installed to direct pedestrians and to warn drivers. This intersection connects to the Northern Greenway and the North Blvd. area.

Figure 3-10 (continued): Intersection Improvements Table

No.	Intersection Location	Recommendations	Comments
12	North Blvd / US 701 Overpass Bridge	Crosswalks and warning signs	Crosswalks will connect the North Blvd. sidewalk extending across the bridge and the on and off ramps. Install pedestrian warning signs at off ramps and traffic lanes approaching bridge.
13	North Blvd. / Beaman Street	Crosswalks and warning signs	Painted crosswalks with standard pedestrian warning signage across Beaman Street (north side of intersection). Study need for full signalization.
14	Beaman Street at Hospital	Crosswalks and 2 additional warning signs so that both sides of each crosswalk have adequate signage	Relocate southern crosswalk to approximate location of existing signage. Add additional warning signage as recommended. Repaint with ladder style crosswalks. See Figure 3-16.
15	Beaman and E. Johnson	Restriped crosswalks and countdown signals	This is an existing signalized intersection with increased pedestrian activity due to the hospital, center for health and wellness, and local drug stores. Restripe crosswalks, countdown signals installed as funds allow. Pedestrians of all ages utilized this busy intersection.
16	Smith Street at US 701 Bus. / Jordan Plaza	Three crosswalks, countdown signals, and warning signs	One crosswalk connecting Smith Street across US 701 BUS and crosswalks running parallel with US 701 BUS. Install countdown signals and warning signage. This intersection is part of the US 701 BUS road diet/complete street concept in Figure 3-5.
17	Raleigh Road and Willow Road (southern side)	Crosswalk	Mark crosswalk across Willow Road as part of the Raleigh Road sidewalk project.
18	College Street at US 701 Bus.	Reconfigure intersection	This intersection should be addressed with the US 701 BUS concept in Figure 3-5.
19	College Street at Park Avenue	Crosswalk	Install crosswalk along College Street across Park Avenue.
20	College Street at Warsaw Road	Crosswalks and warning signs	One painted/striped crosswalk exists. Crosswalks needed across all roads at this signalized intersection.
21	Beaman Street at Vance	Crosswalks	Simple painted crosswalks installed across all quadrants with standard pedestrian warning signage. Study intersection for four-way stop (including commercial driveway).
22	College Street at Beaman Street	Improve crosswalks	Existing crosswalks are worn and faded, in need of restriping

Figure 3-10 (continued): Intersection Improvements Table

No.	Intersection Location	Recommendations	Comments
23	Downtown (multiple locations)		
	A. Courthouse Square	Additional crosswalks, restriping and warning signage	Courthouse square has numerous crosswalks; however, several areas do not have markings on the pavement for safe pedestrian crossing or need restriping. Along the primary traffic circulation route, flashing pedestrian signs or "State Law: Stop for Pedestrian in Crosswalk" signs should be considered.
	B. Mid-Block along Vance St (Courthouse square)	Crosswalks	This midblock area connects a parking area with courthouse. A safe pedestrian crossing is needed in this more dense pedestrian area.
	C. Intersection of W. Main St. and E. Main St at Wall Street	Crosswalks	Pedestrian islands and ramps exist; however, pavement should be striped and marked for safe pedestrian crossing.
	D. Elizabeth St. and Wall St.	Crosswalks	Signalized intersection in need of pedestrian crosswalks. Pavement to be striped and marked for safe pedestrian crossing.
	E. Crosswalks to Farmer's Market Parking (College and Lisbon Streets)	Crosswalks and warning signs	Pavement to be marked for safe pedestrian crossing at College and at Lisbon/Elizabeth. Active parking especially during Farmer's Market / events.
	F. Lisbon St. and Morisey Blvd.	Restripe crosswalks	Crosswalks are becoming faded and worn.
	G. McKoy and Sampson St. to Faison St.	Crosswalks	Painted crosswalks needed at intersections of these streets with Loop Street and Faison Street.
24	Warsaw Rd/US 701 Bus.	Reconfigure intersection	This intersection should be addressed with the US 701 BUS concept in Figure 3-5.
25	E Railroad St /US 701 Bus.	Reconfigure intersection	This intersection should be addressed with the US 701 BUS concept in Figure 3-5.
26	MLKJ Blvd/US 701 Bus.	Reconfigure intersection	This intersection should be addressed with the US 701 BUS concept in Figure 3-5.
27	Butler Avenue/MLKJ Blvd	Crosswalk	As Tram Road Improvements are made in the future, this intersection will need clearly marked crosswalks, recessed stop bars and tighter curb radii.
28	Tram Road / Westover Rd	Crosswalk	Will need crosswalks as sidewalks are completed in the future.
29	Indian Town Road / Elizabeth Street	Crosswalks	Tie in with existing roundabout pedestrian crossings.
30	Elizabeth Street/Bridge/Westover Rd	Crosswalks and Signage	This is a challenging crossing of the 701 Bypass. Sidewalks may need widening, warning signage added, 42" handrails are installed, speed limits examined as sidewalk is installed allowing for safer movements across bridge & Westover Rd.

Figure 3-10 (continued): Intersection Improvements Table

No.	Intersection Location	Recommendations	Comments
Greenway Corridors			
A	Dollar Branch Greenway / Sunset Ave (NC 24)	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. Crossing is highly visible from all directions.
B	Northern Greenway / North Blvd	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. A slight curve in roadway approaching site; however, crossing is visible from all directions.
C	Cat Tail Branch Greenway / E Johnson St	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. This is a high vehicular "cut-through" traffic area and pedestrian area. Crossing should be aligned with Butler Street and Fisher Drive when crossing E. Johnson St.
D	Williams Old Mill Branch Greenway / Beaman St	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. Crossing is highly visible from all directions.
E	Williams Old Mill Branch Greenway / US 701 BUS	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. Crossing is highly visible from all directions.
F	Dollar Branch Greenway / Elizabeth St	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. Crossing is highly visible from all directions.
G	Southwestern Greenway/Boykin Bridge Rd (Middle and High School)	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. Crossing is highly visible from all directions.
H	Southwestern Greenway/W. Main St	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. Crossing is highly visible from all directions.
I	Southwestern Greenway / Overland Rd	Crosswalk and warning signage	Clearly designated crossing area with flashing pedestrian warning signage. Crossing is highly visible from all directions.

General Intersection Improvements

In addition to the specific improvements noted in Table 3-10, each intersection should be evaluated for items such as the location of stop bar markings, curb ramps, and geometric configuration to ensure that the intersection meets the design guidelines in Section 6 and appropriate NCDOT policies regarding intersection design.

Priority Intersection Improvements

A total of five priority intersection improvements were identified during the process. Illustrations and additional descriptions of those improvements are described on the following pages. The key intersections improvements needed over the next five to ten years are as follows:

- NC Highway 24 West Intersection with US 701/421 (Faircloth Freeway)
- Beaman Street at College Street
- Beaman Street at the Hospital
- Fayetteville Street (Sunset to West Faison)
- Downtown

NC Highway 24 West Intersection with US 701/421 (Faircloth Freeway)

This proposed intersection improvement involves a comprehensive approach to resolve a series of immediate safety issues that were identified during the planning process. As discussed extensively in previous sections, this area is a barrier for pedestrian access to the western side of US 701/421 where there is a large commercial area and the City's primary park. Residents are illegally crossing the bypass near this intersection to access these attractors. The underpass itself is difficult to pass through for pedestrians as well due to space limitations and the absence of sidewalks. The overall concept in this area is to establish safe pedestrian connections to and through the underpass / intersection, and as a result eliminating the illegal crossing area to the north. After meeting with NCDOT officials, a series of recommendations and action steps have been prepared for this area.

Step 1. Barricade, repair fencing, and monitor the area where illegal crossings are occurring near Forest Trail and the sewer lift station off of Oakland Boulevard. This is an immediate action that needs to take place to prevent the risk of injury or loss of life from pedestrians crossing the bypass. Figure 3 -12 displays a series of photographs depicting the illegal crossing area.

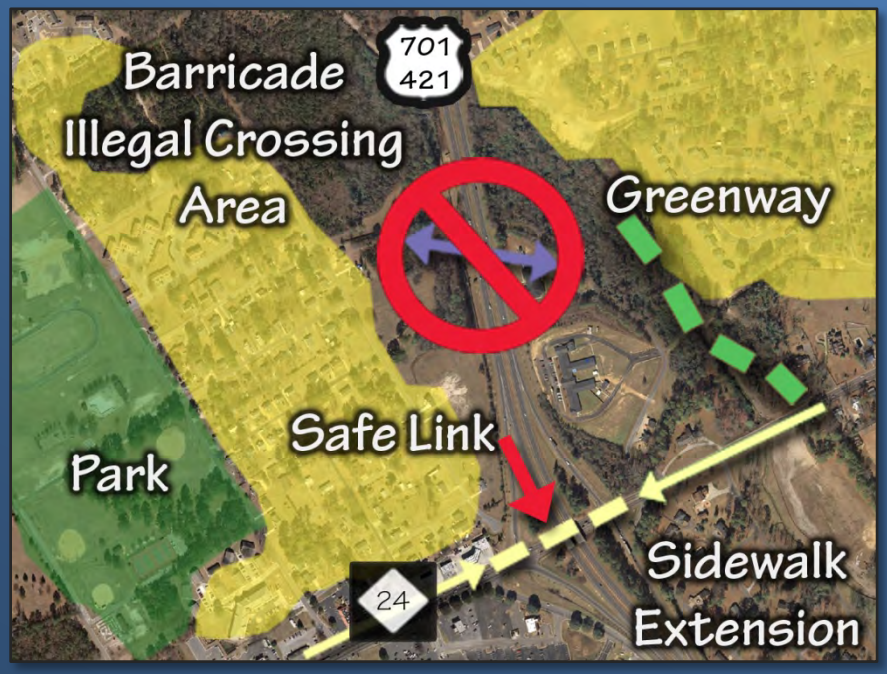
Step 2. Work closely with roadway designers on the intersection design to incorporate pedestrian facilities that will meet the objectives of moving the traffic efficiently, while providing for safe pedestrian access. The roadway improvements are entering the final phases and immediate action is needed to incorporate pedestrian access at this intersection prior to the

roadway construction proceeding. Upon meeting with NCDOT officials, in concept, the most feasible solution at this time would be a diverging diamond interchange as illustrated in Figure 3-13

Step 3. Finish the sidewalk extending from Woodland Drive along NC 24 to the bridge and proposed pedestrian facilities crossing under the bypass. Figure 3- 14 displays the area where the final segment of sidewalk needs to be completed.

Step 4. Develop the first phase of Dollar Branch Greenway from the residential area east of the bypass to NC 24/Sunset Avenue to complete the pedestrian link from the eastern side of the bypass to the western side of the bypass.

US 701/421 Intersection with NC 24 Comprehensive Concept



The image to the left demonstrates the overall series of recommendations in the comprehensive approach. The first step is to barricade the illegal crossing area to prevent any further crossings by pedestrians. Step two involves creating a safe link for pedestrians through the underpass, connect the eastern and western sides of the bypass as part of the NC 24 west roadway and sidewalk improvements. Step three is to extend the sidewalk from the Woodland Drive along NC 24. The final step is to complete the first phase of the Dollar Branch Greenway to connect residents to the new pedestrian network.

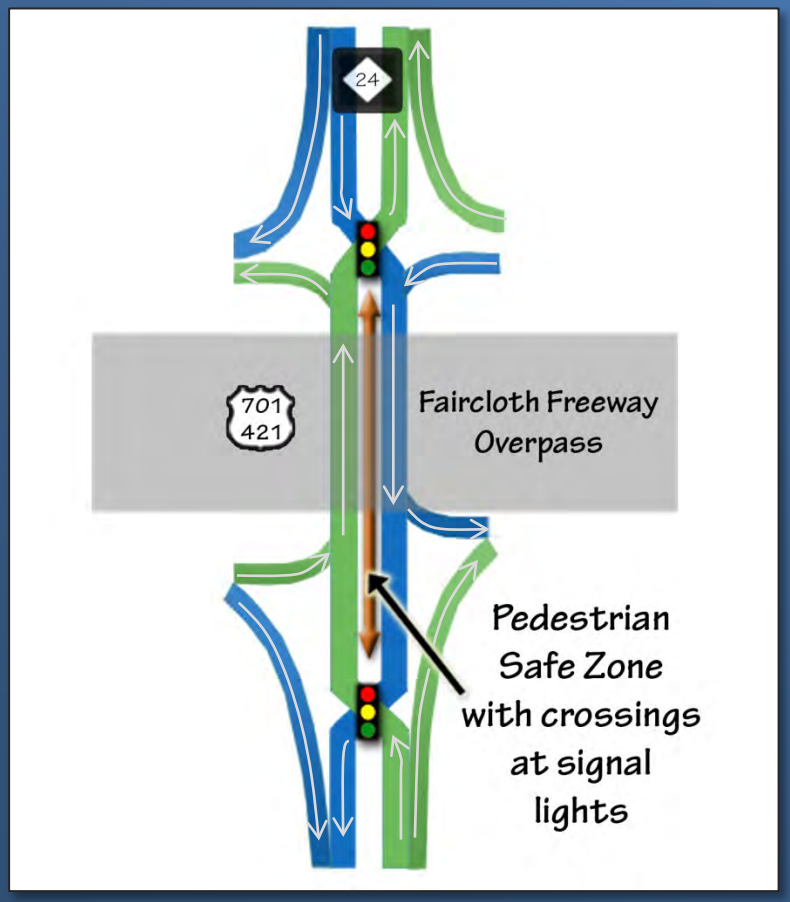
Figure 3-11: NC 24 West and Faircloth Freeway Comprehensive Concept

US 701/421 Intersection with NC 24
Step 1: Barricade, Repair Fencing, and Monitor

The photograph on the left displays the cut-through access point along the western side of the bypass. In the middle, field work revealed an accessible service roadway leading up to the illegal crossing area on the eastern side of the bypass. Existing Sewer easements are very clear and easily to walk along leading to this point, which has made it a rather safe way to travel by foot until the point of crossing. The final photograph on the right shows the fence that has been breached, allowing for the illegal crossings.

Figure 3-12: US 701/421 Intersection Improvements - Step One

US 701/421 Intersection with NC 24
Step 2: Pedestrian Connectivity through a Diverging Diamond Interchange



In the diverging diamond interchange, concrete barriers, extra signage and additional pavement markers help guide motorists through this new interchange pattern. Pedestrians cross safely at the signalized intersections and are protected by the concrete barriers through the middle of the roadway. Motorists entering the interchange are directed to the opposite side of the roadway after the first set of traffic lights. Highway bound traffic exits the roadway without the need to stop for additional signals, while drivers going straight proceed through the second set of traffic lights and return to the right side of the road after leaving the interchange.

Figure 3-13: US 701/421 Intersection Improvements - Step Two

US 701/421 Intersection with NC 24
Step 3: Extension of Sidewalk from Woodland Drive

The image above was taken facing west along NC 24 / Sunset Avenue, while the image to the right shows where the sidewalk ends at Woodland Drive. This will be a critical link to complete the pedestrian network to the western area. A pedestrian crossing will be needed at this location for the Dollar Branch Greenway.

Figure 3-14: US 701/421 Intersection Improvements - Step Three

US 701/421 Intersection with NC 24
Step 4: Construct Phase One of the Dollar Branch Greenway



The photographs in this figure display the current, well-traveled, sewer easements along Dollar Branch. The paths along this easement connect to residential areas and already provide an informal walkway for many residents. This area is currently utilized by residents to reach NC 24 by foot and is the primary link to Forest Trail, which connects to the illegal crossing area. Improving the pedestrian access underneath the underpass will enable people to safely cross over to the western side of the bypass. This greenway segment would most likely have immediate and heavy use.

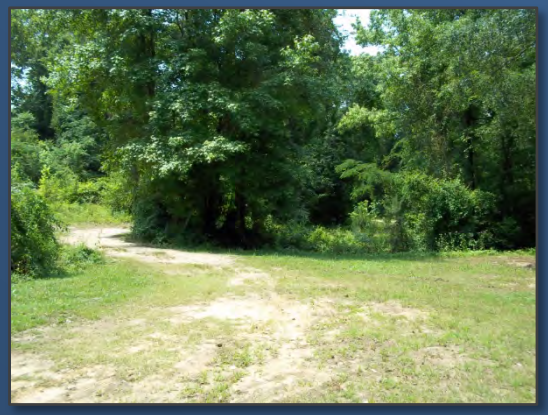
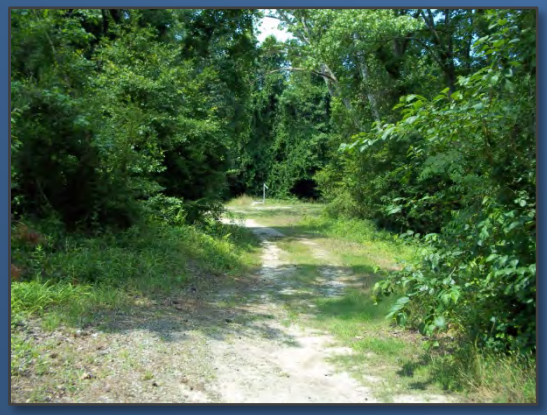
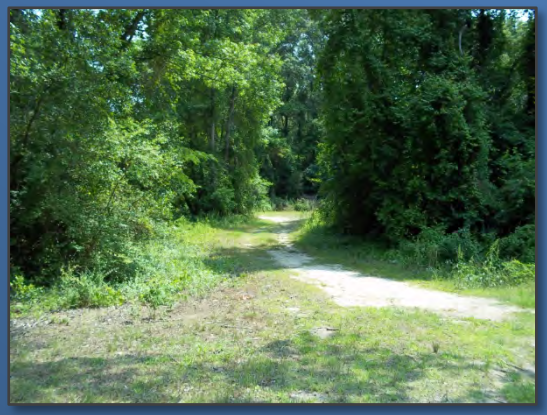




Figure 3-15: US 701/421 Intersection Improvements - Step Four

Beaman Street at College Street

Prior to a resurfacing project that was completed in 2011, College Street had marked crosswalks. This intersection is frequently utilized by pedestrians in Clinton as it is a major pedestrian route connecting downtown, neighborhoods, a local drug store, neighborhood retail, and the Health and Wellness Center. Crosswalks need to be remarked on the roadways at this intersection in order to restore the intersection to its prior configuration as it existed prior to the resurfacing project.

Beaman Street at the Hospital

Many pedestrian improvements have been made at the hospital to allow for safe pedestrian crossing across Beaman Street to offices and parking areas. However, the painted horizontal lines and flashing pedestrian signals need to be enhanced. Ladder style crosswalk pavement markings will enhance the visibility at these crossings. The southern crosswalk should be relocated to the approximate location of existing signage. Two additional warning signs are needed so that both sides of each crosswalk are clearly marked (see Figure 3-16).

Fayetteville Street (Sunset to West Faison)

Several intersections along Fayetteville Street were identified as priorities. The alignments of Sunset Avenue, Williams Street, and North Chestnut Street with Fayetteville Street have created lengthy distances for pedestrians to cross. At Sunset, Williams and North Chestnut, ladder style crosswalks, a tighter turning radius, and warning signage for this area is recommended with the addition of a refuge island at North Chestnut Street. West Faison and Giddens Streets have shorter crossing distances and will benefit from ladder style crosswalks.

Downtown

The downtown has several intersections where crosswalks need to be clearly marked and additional pedestrian warning signage needs to be installed as displayed in Figure 3-10, table displaying intersection improvements. The illustration in Figure 3-20 is a photo simulation demonstrating one of the areas immediately adjacent to the courthouse and its inner circulation pattern before and after improvements. In the downtown additional pedestrian warning signs at key locations will help heighten the pedestrian awareness downtown. Consideration should be given to the installation of crosswalks that maintain congruity with the architectural and decorative urban design details that are present in the downtown area. However, crosswalks in the ladder style will accomplish the task of increasing the visibility at pedestrian crossings in this area.

Beaman Street at the Hospital

The crosswalk area shown above along Beaman Street in front of the hospital already has crosswalks and a flashing pedestrian warning sign. Recommendations include enhancing the crosswalks with ladder style striping and adding warning signage on both sides of each crossing area. The southern crosswalk should be relocated to the south of its current location.

Figure 3-16: Beaman Street and Hospital Crosswalk Enhancement

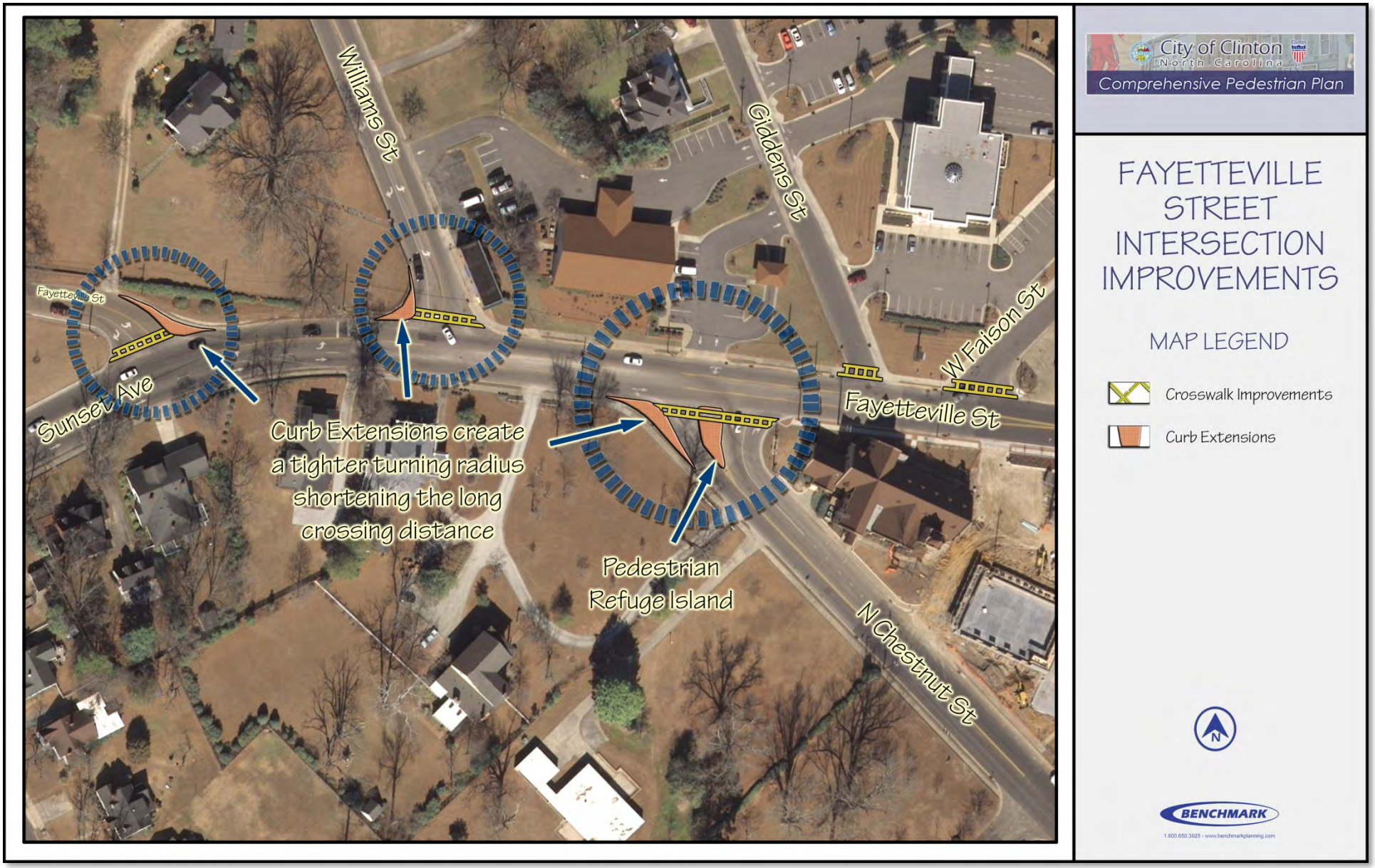


Figure 3-17: Fayetteville Street from Sunset Avenue to West Faison Street Intersection Improvements

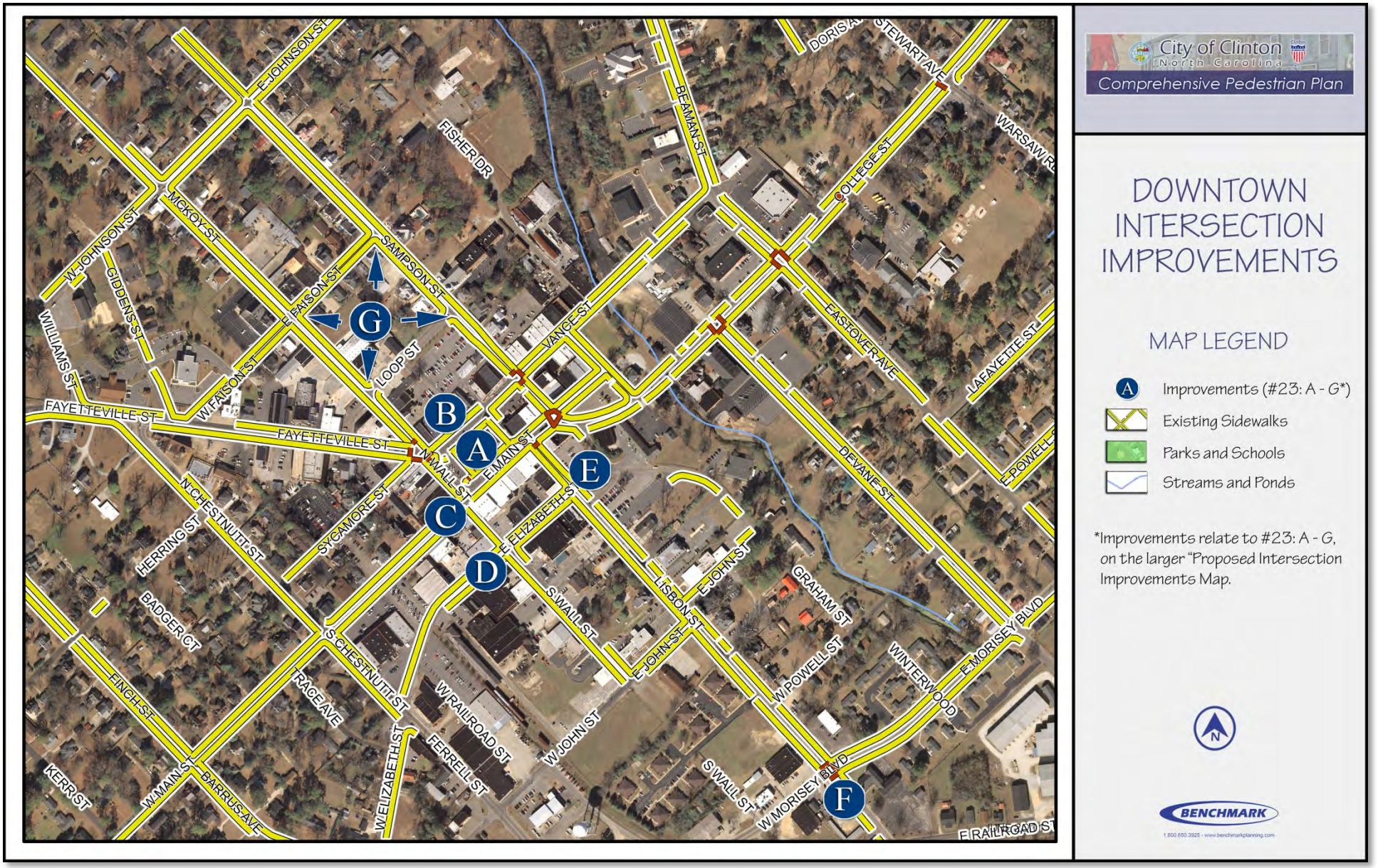


Figure 3-18: Downtown Intersection Improvements

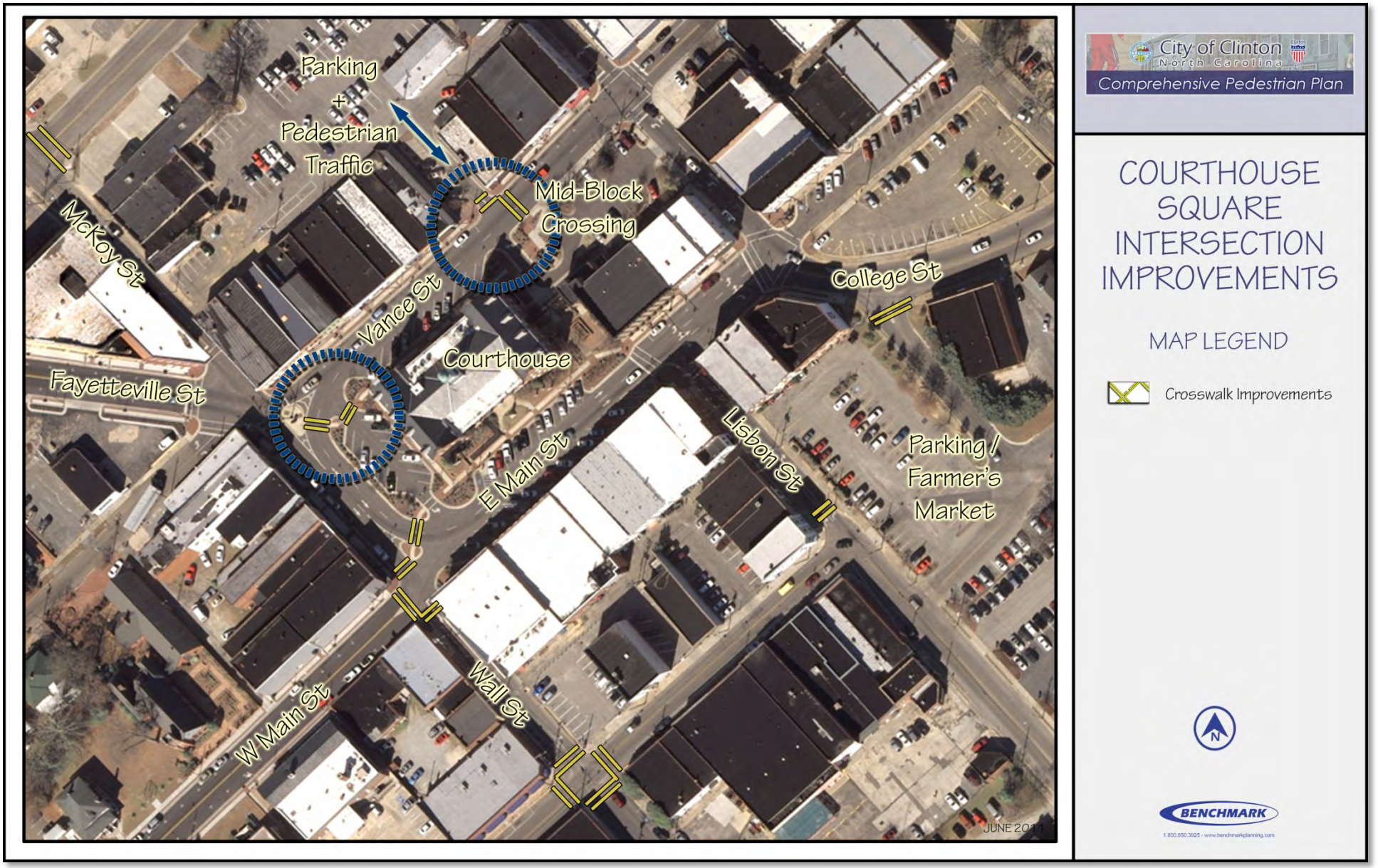


Figure 3-19: Courthouse Square Intersection Improvements

Downtown Crosswalk Improvements

The downtown is a busy pedestrian environment that has many conflict points with the motoring public around the courthouse square. Several areas exist in the downtown where additional pedestrian warning signage and crosswalks are needed as seen in the photo simulation on this page.

Figure 3-20: Downtown Crosswalk Improvements

Section 4. Programs and Policies

A. Introduction

In addition to planning for the installation or enhancement of physical infrastructure to improve the city's pedestrian system, it is also important to identify those programs that can be implemented and policies that can be adopted or modified that will support the physical planning efforts and enhance the effectiveness of the improved system. Without these supporting programs in place to raise community awareness of pedestrian opportunities and safety issues, encourage participation from residents as active users of the system and ensure that safety laws are being followed and enforced, or policies to direct the efforts of the city and its various departments as they implement the plan, the city and its funding partners in pedestrian facility construction will see a much lower return on their infrastructure investment. If implemented fully, these programs and policy recommendations will help the city more fully achieve the goals and objectives of the plan and derive a greater benefit from the expenditures that it makes on new or improved infrastructure.

B. Program Recommendations and Resources

In North Carolina and across the country, communities are investing their resources to create safer environments for pedestrians and increase the usage and usability of their pedestrian networks through projects and programs that are categorized as follows: 1) education; 2) encouragement; and 3) enforcement. All three activities need to take place concurrently as they all depend on each other to creating a safer walking environment.

The City and its department heads have established initial lines of communication during the study process while serving on the Steering Committee, creating the opportunity to build partnerships with the local schools, Sampson Community College, the Partnership for Children, Sampson County Parks and Recreation, downtown groups, the Center for Health and Wellness, and other organizations that were represented on the steering committee.

It is recommended that this group of stakeholders form an official advisory group for pedestrian improvements in Clinton. Through this advisory group, members can encourage residents to walk more, while helping to educate the broader community regarding pedestrian

safety. The advisory committee, with help from key city staff, can work together to further walking activities and raise awareness, especially during the first few years following the adoption of the plan. Additionally, the website established for this project, clintonwalks.org, can continue to serve as a vehicle for implementation of the recommended programs, activities, and overall vision of the pedestrian plan.

Public Education

One of the first steps for consideration by the advisory committee is public education with respect to the issues of pedestrian safety and the benefits of walking. Educational materials can be made available to local schools, health agencies and residents that focus on safe pedestrian behaviors, rules of safe walking, and the responsibilities of pedestrians and drivers. Many pedestrian advocacy groups have a web-based presence, offering up-to-date information on safe pedestrian travel, rules and regulations to be followed by pedestrians, and safe driving habits. Examples include the North Carolina Division of Bicycle and Pedestrian Transportation, the Pedestrian and Bicycle Information Center and America Walks. The advisory committee can make the information available through printed brochures, the Clinton Walks website, newspaper, newsletters, t-shirts, and other advertising and media outlets as determined by the group. The City can also utilize its ability to market to residents and business through the inclusion of literature and notices in its monthly utility bills.

In order to stay current with the most up to date practices regarding their responsibilities, the City Staff on the advisory committee should continue to receive education and training regarding pedestrian safety and walking by attending conferences and workshops held by planning and transportation organizations and agencies. The NCDOT has numerous experts on its staff that can provide training on particular topics and participate in brainstorming sessions with the advisory group on implementation ideas. In addition, many training programs are available through the internet on pedestrian planning and safety topics. City staff through these resources, will have the opportunity to share new ideas with this committee at its regularly scheduled meetings.

Web based educational resources can be found at: America Walks (http://americawalks.org), the National Highway Traffic Safety Administration (http://www.nhtsa.gov/Pedestrians), the Federal Highway Administration (http://www.fhwa.dot.gov), the North Carolina Division of Bicycle and Pedestrian Transportation (http://www.ncdot.gov/bikeped), the Centers for Disease Control and Prevention (http://www.cdc.gov), Eat Smart-Move More (http://www.eatsmartmovemorenc.com), and many others. Each one of these resources

has a variety of program recommendations for pedestrians of all ages and a wealth of materials that can be duplicated for public educational purposes at no cost. The Clinton Walks website is an ideal place to provide links to these organization's websites, programs and materials.

With the creation of new greenway trails throughout the city, opportunities will exist to educate the public concerning wildlife and natural resources as well as historical sites along the way. Local organizations can develop outreach efforts, such as nature walks and other outdoor learning events, to raise awareness of the local resources, while accomplishing the task of getting residents out and walking around the city. The 23 mile long All American Trail along the souther perimeter of Fort Bragg in Hoke County, connecting Cumberland and Moore counties, crosses a variety of terrian, including a 1,000 foot long specially engineered "floating" boardwalk. As shown below, interpretive signage is in place to allow trail users to learn about the long-leaf pine ecosystem and its natural habitat. Given the potential for similar programmatic opportunities in Clinton, the All American Trail should be utilized as a regional example for Clinton to emulate as it moves forward with its unique system of greenways.

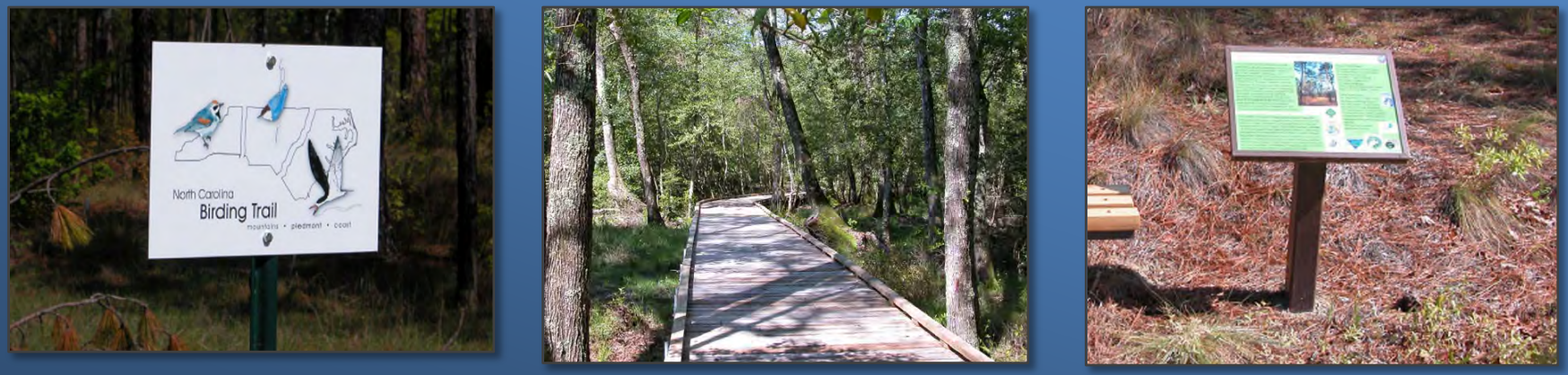


Figure 4-1: All American Trail Interpretive Signage and Rock Fish Creek Boardwalk

Clinton also has the opportunity to create guided walking tours of its local historic districts and other culturally significant locations. The walking tours can highlight historical figures that were instrumental in Clinton's growth, architectural features of the district's structures, significant landmarks and other important historical features. The new art installation on the northern edge of downtown can be incorporated into a tour that ties together the College Street historical area and downtown. The colorful millstone-themed design on a freestanding glass centerpiece will be located at the College Street parking lot, on the edge of downtown, serving as a gateway enhancement from College Street. This location helps fill a void in the physical streetscape, linking major destinations within downtown such as the City Market, Library, City Offices to the College Street District.

Encouragement

One of the many ways to encourage people to walk more is to involve them in an organized walking event, providing a real-world experience to support the educational components of the pedestrian program. Programs that my help to encourage people to walk more frequently include walking clubs, walking events for social groups, walking "school buses" where groups of neighborhood children walk together to school with adult supervision, and walking events associated with annual festivals, holidays or community celebrations. The advisory group can work with the partner organizations that they represent to create opportunities that encourage active participation. It is important for the residents of Clinton, young and old, to experience the benefits of walking first hand.

During the first public meeting, several residents discussed the idea of establishing a regular walking event that coincides with an existing City festival. Those discussing this idea had military roots or military friends, and were familiar with the community walks that take place in Germany called *Volksmarches*. *Volksmarches* are festive occasions in a family atmosphere where long walks are held through villages and the country side. During these *Volksmarches*, participants typically purchase a start card for a very small fee, and a little extra if they want to win a prize or "medallion" at the end. The *Volksmarches* are a form of non-competitive fitness walking that typically extend 10 kilometers or 6.2 miles. The events include food, entertainment and other activities and vendors. Points are established along the way called "*Kontrol*" points where the tickets or pass cards are stamped. At the end of the march, participants are usually given a meal, which can be accompanied by other festivities or community events. This type of event could take place in conjunction with Clinton's annual Barbecue Festival. The *Volksmarch* could start in the center city and venture out along a safe walking route to locations where participants could have their cards stamped. Locations could include local businesses, points of interest, the Center for Health and

Wellness and similar community facilities. The walk, or "march", is an opportunity for residents to experience walking in Clinton and learn about various sites and businesses in Clinton as well.

As residents related at the public meetings and through the online surveys, many people are interested in walking who typically walk alone, but who expressed interest in a walking club or group. Such a club would provide higher visibility for pedestrians who walk for fitness, increasing their safety simply though the act of walking as a group. While it was also revealed through the public meetings and survey that there are a number of residents who get together to walk on an informal basis, more formal groups could provide an opportunity for larger numbers of residents to get involved since the groups would allow people who are not acquainted with each other to connect and form relationships with others who share similar walking habits or routes. Such clubs or groups can be organized by either government organizations, community service groups, churches or similar organizations, but all should receive support from the city's advisory group in order to encourage their missions and provide a higher level of coordination between groups to prevent duplication of activities.

Special events that occur on a national basis that can be incorporated locally are Earth Day (http://www.earthday.org), National Trails Day (http://www.americanhiking.org/NTD.aspx), National Walk Our Children to School Day (http://www.walktoschool.org). These events present excellent opportunities for organized walking activities. In addition, as mentioned earlier, many local events already exist for piggybacking as well as other national holidays and events, including the Fourth of July. Other events include can include races and triathlons, which Clinton has taken advantage of with the mini-triathlon. These events can help generate revenues for programs throughout the community.

One of the more effective programs that has been established in North Carolina for the development and sustainment of pedestrian activity is the Safe Routes to School program (http://www.saferoutesinfo.org), which seeks to support the creation and enhancement of safe pedestrian connections for children to walk and cycle to school. The City and the local schools should partner to join the program in order to leverage the resources that are available for participating communities, including infrastructure grants, educational programming for children and training for parents, school officials and city employees on how to enhance pedestrian safety and connectivity. Additional information on this program can be found by contacting:

Ed Johnson, ASLA, RLA
SRTS Coordinator
NCDOT, Division of Transportation Mobility and Safety Traffic Management Unit
1552 Mail Service Center
Raleigh, NC 27699-1552
Email: erjohnson2@ncdot.gov
Phone: 919.707.2604

Figure 4-2: Safe Routes to School

Enforcement

As pedestrian activity is encouraged, facilities are enhanced and new connections are made, it will be crucial for the city to establish effective enforcement activities to ensure the safety of pedestrians. If adequate enforcement mechanisms are not in place pedestrians and motorists may be discourage due to actual or perceived "bad behaviors" that are observed or experienced with respect to traffic laws and their respective rights and responsibilities. Of particular note, aggressive driving was cited frequently as a response to question #11 in the community survey, which inquired about conditions that discourage Clinton's residents from walking. Since both pedestrians and motorists have the responsibility to observe safety laws, there should be activities instituted by local law enforcement agencies to target violations by both groups in order to help educate the public and correct behaviors that may lead to accidents. Local law enforcement agencies should also take it upon themselves to provide additional education to their officers in order to ensure that they are familiar with all of the respective laws and regulations, enabling them to be more effective in their enforcement of the law and education of the public. Resources for inclusion in law enforcement training programs include the general NCDOT law resources found online at http://www.ncdot.gov/bikeped/lawspolicies/laws/default.html and, specifically, the pedestrian section of the NCDOT Laws Guidebook found at http://www.ncdot.gov/bikeped/download/bikeped_laws_Guidebook-Part-2.pdf.

Local law enforcement agencies can utilize the pedestrian crash data and observed behaviors outlined in the plan to target enforcement activities in areas with high levels of pedestrian activity or high risk factors to pedestrian safety. Officers can organize awareness

campaigns where activities such as motorists speeding, not yielding to pedestrians in crosswalks, parking on sidewalks, and similar violations are observed to help educate the motoring public regarding pedestrian safety and access issues. Pedestrians should also be targeted when crossing roadways in a dangerous manner, or as they walk facing the wrong direction. Property owners often obstruct sidewalks with garbage cans and piles of yard debris, forcing pedestrians into the street and thereby creating safety hazards. Often, many these seem like minor issues; however, consistent enforcement and awareness will create a safer pedestrian environment and in the long run it will help to save lives and reduce the risk of injury from pedestrian crashes.

As greenways are developed in Clinton, local law enforcement officers will need to receive training for trail enforcement and the proper equipment to access the trails. In addition, civilian volunteer patrols may be organized to help augment the local law enforcement patrols of the greenway trail facilities. The volunteer groups can also be responsible for alerting local law enforcement agencies of vandalism or improper use of trail facilities as well as any other activities that appear to be suspicious in nature. Call boxes can be established along the longer segments of the greenways in between road intersections for reporting emergencies to the authorities, helping to pinpoint where incidents occur and allowing officers to respond more quickly.

C. Policy Recommendations

In addition to the programs that are recommended for the city to pursue in furtherance of achieving the goals and objectives of the plan, there are a number of policies that are recommended for the city to adopt and follow that will help to ensure a consistent framework within which the plan will be implemented. These policies include some minor modifications to the city's land use and development regulations as well as the formalization of policies, many of which are already in place in an informal capacity, to ensure that pedestrian facilities are budgeted for, constructed and maintained to the same standards as comparable vehicular transportation facilities.

Given the recent adoption of the City's Land Development Ordinance in August of 2010 and the extensive provisions for the construction of pedestrian facilities, very few changes in land development policies are recommended. In Section 10.1.4, requirements for sidewalks along the street frontage for new or expanding individual commercial developments can be clarified to enhance the effectiveness of the regulations. In Section 7.2.4, the greenway open space option can become a requirement if the property proposed for development is located along one of the identified greenway routes in the plan.

In order to ensure that steady progress is made toward achieving the infrastructure goals outlined in the plan, it is recommended that the city establish and make regular appropriations to a separate capital account that is dedicated to pedestrian infrastructure funding. In addition to other potential sources for appropriations, it is recommended that a portion of the funding of this account come from the City's annual Powell Bill distribution. While no specific annual funding level is recommended, it is suggested that the amount of funding be set to a level that is sufficient to make steady progress toward completing the highest priority pedestrian infrastructure and safety improvements outlined in the plan. It is also recommended that a dedicated annual funding stream for sidewalk maintenance be established that is separate from general street maintenance funding in order to ensure that there are annual appropriations and expenditures to support the maintenance of existing pedestrian infrastructure. The City should also review its current sidewalk maintenance policies to ensure that a regular program of evaluation, prioritization and maintenance is carried out on an annual basis.

In order to enhance the City's greenway trail network, the City should update its policies regarding the acquisition of sewer easements to ensure that when the City acquires new cross country sewer easements it also acquires a right to construct public greenway trails upon the easement. The City's policy regarding the acquisition of these easements should also be modified to ensure that pedestrian trail design is taken into account when engineering the location of future sewer lines so that sufficient land is acquired to accommodate greenway trails, problematic topography is avoided and improvements identified in the plan are considered and aligned with new sewer lines where possible.

To address the need of providing pedestrian access to all public facilities, the City should adopt a policy that requires all new city parks, civic buildings and other public facilities to be connected to the City's pedestrian network. If a City funded public facility is sited away from the pedestrian network due to unavoidable circumstances, the City's policy should be to prioritize the funding and construction of a pedestrian linkage to that facility as soon as practical. The City should also encourage the County to follow similar guidelines when establishing sites for new facilities and work with the County to fund needed connections when necessary.

Section 5. Implementation

A. Introduction

The City of Clinton completed the development of this Comprehensive Pedestrian Plan to identify pedestrian improvements and the direction that needs to be taken to implement the various improvements. Strategies or action steps were developed as a guide for carrying out the plan over the next five to fifteen years. Many of the actions can and should be completed during the first year after the plan's adoption, while other improvements will require a much greater time period to make them a reality.

Following the adoption of the plan, the implementation process will officially begin. City Staff, the consultant team and NCDOT officials met during the planning process to discuss strategies and action steps for many of the improvements identified in this plan since the timing of some road improvement projects has necessitated the need to incorporate findings from this plan into final designs. City Staff will need to work closely with its Planning Board, other City departments, the community and an advisory committee to continue to build support for the plan as it moves forward.

B. Action Steps

Plan Adoption

Although it may seem obvious, the Comprehensive Pedestrian Plan will need to be adopted by the City once it has been reviewed and approved by NCDOT. The Comprehensive Pedestrian Plan is a result of a partnership between the City, its Citizens and NCDOT in planning for future pedestrian improvements. The plan will serve as a guide for constructing the priority projects and implementing the programs and policies that have been recommended. The Plan will play a key role in obtaining funding for pedestrian network enhancements from NCDOT and communicating the pedestrian needs of the City to NCDOT Officials as roadway improvements are being planned throughout the City, ensuring opportunities to construct identified segments of the pedestrian system are not overlooked.

Priority Pedestrian Projects

A total of 36 projects that included pedestrian network and connectivity projects, such as sidewalks and greenways, and 39 key intersection improvements were identified through this process. While each individual project is of importance to achieving the City's vision, it was determined through the research, public comments, City staff and NCDOT review that ten key projects were the highest priorities for the success of the plan. Although these projects were identified as the top priorities, as funding and resources become available, other projects within the overall list may be programmed for construction. For example, the City may receive funding to install pedestrian warning signage in specific areas that were not part of the priority projects, moving that component of the recommended improvements ahead of some of the other priorities.

The highest priority projects for funding involve the series of projects recommended around the NC 24 and Faircloth Freeway interchange. A multi-phased approach will provide the much needed connection under the overpass, helping eliminate the illegal crossings by providing safe access at the interchange. The illegal crossing points need to be blocked and monitored immediately, prior to moving forward with any other improvements.

The second most important priority at this time is to ensure that the construction of the improvements planned for NC 24 West include pedestrian facilities to connect the area to the east side of the Faircloth Freeway. Preliminary meetings have already been held with NCDOT Officials as this project has neared the construction phase. Since the City is preparing to expend significant financial resources as it participates in the construction of sidewalks along NC 24 West, it is imperative that the City and NCDOT construct a pedestrian access to connect these areas. Otherwise, the investment in pedestrian facilities along NC 24 will not be as successful as it could be, and may actually lead to more unsafe conditions in the vicinity of the bypass as more pedestrians are drawn through the currently dangerous area to the newly constructed pedestrian facilities along NC 24 west of the freeway interchange.

The third priority in this phased approach is to complete the sidewalk along NC 24 / Sunset Avenue beginning at Woodland Drive and extending to the US Business 701/421/Faircloth Freeway underpass. This segment will complete the network extending out from downtown to the new commercial areas along NC 24 west.

The fourth priority involves the construction of the first phase of Dollar Branch Greenway, which would become Clinton's first greenway trail and serve as a safe alternative for pedestrians to connect to NC 24. This sewer easement owned by the City is already experiencing foot traffic and portions of it provide access to Forest Trail where the illegal crossing area is located. Formalizing this trail and providing a safer connection to NC 24 will provide a much safer link to the Royal Lane Park and commercial areas on NC 24 West.

The fifth priority, not associated with the larger phased NC 24 improvements, is the completion of improvements to Beaman Street. Beaman Street is a central route connecting the downtown with the north end of the City and many popular destinations along the way. Pedestrians already heavily utilize sidewalks along Beaman Street to access the Center for Health and Wellness, neighborhood drug stores and retail businesses, the hospital and medical offices. Beaman Street also connects to College Street and East Johnson Street which are both key arteries for both vehicular and pedestrian traffic. Along Beaman Street, improvements are needed at the intersection of Beaman and College, the hospital, and the northern end of the street where sidewalk facilities are currently not present. Beginning with the intersection of Beaman Street and College Street, simple crosswalk markings are needed to clearly identify where pedestrians should cross in this area as this is a heavily traveled and busy intersection. Moving north towards the hospital, the sidewalk is in average condition, with the exception of the new sidewalk recently installed in front of the Health and Wellness Center. Crosswalk markings would also be helpful in this vicinity where Beaman intersects with East Johnson Street. Continuing north along Beaman, the hospital crosswalks should be restriped in more visible ladder style pavement markings to enhance the existing safety measures with the southern crosswalk moved to the location of the existing flashing warning sign. Also, two additional warning signs are needed at each crosswalk to clearly mark each individual crosswalk from both sides. From the hospital to North Boulevard, pedestrian facilities are nonexistent. This segment of the roadway connects to residential areas, medical offices and businesses along North Boulevard. One key barrier will be the crossing of Williams Old Mill Branch; however, the City and the hospital own the land on both sides of the existing bridge, making the installation of a dedicated bridge for bicycle and pedestrians feasible as the existing bridge is not wide enough to accommodate both vehicles and pedestrians. The pedestrian bridge will also serve as a connector for the future greenway along Williams Old Mill Branch as it is constructed over the long-term.

Priority number six involves designating US 701 Business as a priority roadway for additional study. Initial communication has begun concerning the potential for implementing a road diet and working toward a complete streets concept with additional bicycle and

pedestrian facilities. NCDOT Officials have recommended placing this roadway on the corridor study list to ensure funds for projects such as resurfacing are not allocated until the most efficient future use of the roadway is determined. Incorporating the high priority and desired pedestrian improvements will be much more difficult to implement if the road is resurfaced in the interim, prior to a detailed corridor analysis and plan. The RPO coordinator should be engaged in this project as well to ensure that it receives priority consideration for any potential funding that may be available for transportation in the region.

While the remaining projects in the top ten priority list are important, the aforementioned projects carry a much more significant urgency for implementation since their completion will have the greatest influence on the overall pedestrian network. The remaining projects are the improvement of several intersections along Fayetteville Street from Sunset to West Faison, the improvement of downtown street intersections, the installation of pedestrian facilities on Stewart Avenue and the extension of pedestrian facilities along Elizabeth Street to the school campus south of the City. Some of these lower priority projects are perhaps more achievable than the higher priority projects, and so, as funding becomes available, these should be considered for completion, though they should not supplant the higher priority improvements without further consideration of the impact of delaying the completion of any of those projects.

C. Establishing the Advisory Committee and Staffing Priorities

Following the adoption of the plan, the City should continue with the good work and precedent for cooperation that has been established through the planning process by transitioning the steering committee into an advisory and oversight committee to help ensure the implementation of the plan. The advisory committee does not have to include the entire steering committee, but should include the core group of stakeholders and responsible departments to ensure that the key actors are involved going forward. The committee would most likely need to meet only quarterly or perhaps biannually to review the status of projects, make recommendations and monitor progress toward the implementation of the plan. One of the key roles of the advisory committee should be to make recommendations on funding sidewalk projects and the allocation of resources for the regular maintenance of existing sidewalks. This could be done as a formal recommendation to the City Manager prior to the preparation of his annual budget recommendation to the City Council. As part of its responsibilities, the committee should also publish an annual report outlining the City's progress toward implementation of the plan and present it to the City Council each spring prior to the consideration of the annual budget. The City should also designate a staff member in

the Planning Department as the manager of the implementation of the plan and give that person the responsibility for coordinating department level communication regarding plan implementation and the duty of serving as staff to the oversight committee.

D. Program and Policy Priorities

Of the programs that are recommended in Section 4, the most important are applying for participation in the Safe Routes to School program, the establishment of a pedestrian education program in the public schools and the implementation of a pedestrian safety enforcement program by the Clinton Police Department. The Safe Routes to School program will allow the City to access additional NCDOT resources and brings the potential for funding priority projects to enhance connectivity and access to schools as well as the improvement of pedestrian safety in the immediate vicinity of schools. Enhancing knowledge regarding safe pedestrian activity for school children will help to ensure that these young people, who are perhaps the most vulnerable to pedestrian crashes and are likely the least informed due to the paucity of opportunities for walking at the present time, grow up with the knowledge to be safe pedestrians. As is often demonstrated through other school based programs, children can have the ability to influence their parents and other family members by transmitting important information to them regarding safe pedestrian activity, and thereby having a positive multiplier effect throughout the community. And finally, in order to demonstrate the City's commitment to pedestrian safety, the Police Department's targeted enforcement of pedestrian laws in high risk areas and enhanced officer training and awareness will ensure that the planned increase in pedestrian activity advocated by this plan occurs in an environment that is as safe as practically achievable. Following the successful implementation of these programs, the advisory committee should begin working with the appropriate City Departments and outside stakeholders to follow through with the implementation of the remaining program recommendations.

The top priorities for policy implementation include the establishment of a dedicated funding mechanism for capital investments in pedestrian facilities and the appropriation of adequate annual funding for sidewalk maintenance. By establishing these as part of the regular budgeting process the City will ensure that it has "put its money where its mouth is", so to speak, and thereby demonstrate its commitment to the vision of the plan. While the issue of financial support for this program will entail making difficult choices with respect to other funding priorities, the importance of the provision of financial support for the implementation of the plan cannot be understated. Without the financial backing to achieve the connectivity and safety enhancement goals of the plan, the overall vision of a healthy pedestrian network cannot be achieved. This is not meant to diminish the importance of the remaining policy recommendations, which

should all be implemented, but rather to emphasize how crucial the establishment of a standing policy to commit funds to achieve the plan's goals is.

E. Performance Measures

As part of the preparation of its annual report to the City Council, the advisory committee needs a set of performance measures by which it can review progress towards plan implementation. It is recommended that the committee measure performance and progress toward plan implementation by several means since there are no uniform ways by which all of the plan recommendations can be measured. Simple measures of performance toward implementation include reviewing the number of linear feet of sidewalk constructed, the number of safety improvements completed, and the level of funding dedicated to pedestrian capital projects and maintenance in relation to other transportation funding. This will provide the committee with raw data that it can review annually and compare year to year as the plan is in its implementation stage, providing it with a clear measure of how much progress is being made toward completing and maintaining the City's pedestrian network. During the initial years of implementation, the committee should utilize this data from past years which can be provided by the City's Finance and Public Works departments. With regard to the performance of the programming recommendations, the committee should set targets for participation and measure those targets versus the actual results of the programs in terms of how many people are reached through the program efforts or participate in the activities. For example, annual goals for providing pedestrian safety education in public schools can be made, and the resulting number of children reached by those programs would be reported each year and measured against the outreach goal. To measure safety, the committee should review annual statistics for pedestrian involved accidents involving vehicles, set targets for reducing the instances of those accidents and measure the annual report versus the target. Goals for the enforcement of pedestrian safety laws can also be established, within reason to ensure that officers are not given ticket quotas, perhaps relying on reports from the Police Department on the number of tickets or incidents occurring in high risk areas for pedestrians or the number of hours that officers conduct targeted enforcement activities in high risk pedestrian areas, such as around schools, each month. Taken together, these simple performance measures will provide the committee with a large amount of measurable data that can be utilized to prepare their annual reports and monitor progress toward the full implementation of the plan.

F. Implementation Matrices

The Comprehensive Pedestrian Plan reviews existing conditions and considers community values and goals to determine how the pedestrian systems, programs and policies move forward. The goals and strategies are an integral part of guiding the future development of these policies, programs and projects, but the City must take steps to achieve those goals if the Plan is to be successful. Without implementation, the goals will never be more than written statements and result in a plan sitting on the proverbial "dusty shelf." The implementation strategies set forth a path towards achievement of the Vision Statement and the plan recommendations. The recommended strategies can and should be reviewed annually as part of the budgeting process.

The goals and implementation strategies were compiled into a separate implementation matrix for policy, programs and projects to be used as a quick and easy reference for city officials, residents, business owners, and others. The matrix goes a step further by assigning priorities, resources, timeframes, and responsible parties to each implementation strategy, to help the City determine the most effective approach to implementing the strategies.

The following are descriptions of each of the categories:

Implementation Action – The implementation actions in the matrix are the specific recommendations for each major area of policy, programs and projects. They are meant to provide action steps to achieve the vision and goals of the plan.

Summary – The summary provides general guidance on issues related to the implementation action, not a full detailed listing of the strategies. Some actions may have several specific notes, all of which will contribute to reaching the established goals.

Responsible Parties – This category identifies parties associated with the City of Clinton that should be responsible for the completion of each strategy. As the City has limited staff, the inclusion of a consultant or other outside party may be necessary to help implement and achieve certain objectives.

Timeframe – This category represents the timeframe in which the implementation strategy should be addressed. Generally, shorter timeframes infer a higher priority. Timeframes are indicated in the matrix as either short term, intermediate, or long term. Recommendations described as short-term should be achieved in less than two years. Recommendations described as intermediate

should be achieved in two to five years and with recommendations described as long-term being achieved more than five years. As the City begins to implement the actions in the following tables, when the tables are updated by City staff and the Advisory Committee, some of the strategies may receive a new designation of "ongoing" due to need for constant efforts toward achieving the goal.

Resources – Resources are primarily related to monetary cost to complete the implementation strategies. The tables display an "$" symbol to represent monetary ranges. The ranges are as follows:

- $ - Less than $1,000
- $$ - $1,000-$10,000
- $$$ - More than $10,000.
- Policy – Dollar values are generally not applicable to policy issues

Resources could cost more or less depending on the assistance or consultant selected. For the Projects Implementation Actions, the actual cost estimate for the project is utilized in place of the general values displayed above.

Figure 5-1: Policy Implementation Actions

POLICY Implementation Actions	Summary	Responsible Parties	Timeframe	Resources
Plan Adoption	City Council to hold a public hearing and consider the plan. NCDOT to issue official letter of approval.	City Council with assistance from Staff, NCDOT and Consultant	Short-term	Policy
Establish Advisory Committee	Interested Pedestrian Plan Steering Committee to form an initial core group to oversee implementation activities of this plan. Council to formally designate.	Steering Committee, Planning Staff formal recommendation to City Council	Short-term	Policy
Planning Staff Priorities	Designate a City staff member to serve as the manager of the implementation and staff to oversight committee.	City Staff	Short-term	Policy
Land Development Ordinance Updates	Section 10.1.4, requirements for sidewalks along the street frontage for new or expanding individual commercial developments clarification.	City Staff, Planning Board	Short-term	Policy
	Section 7.2.4, the greenway open space option can become a requirement if the property proposed for development is located along one of the identified greenway routes in the plan.	City Staff, Planning Board	Short-term	Policy
Dedicated Pedestrian Infrastructure Funding	Establish a dedicated fund for pedestrian improvements.	City Staff, City Council	Short-term	$$$
Update Pedestrian Maintenance Policies	Develop a regular program of evaluation, prioritization and maintenance that is carried out on an annual basis.	Public Works Staff	Short-term	Policy
Sewer Easement Acquisitions	When the City acquires new cross country sewer easements it also acquires a right to construct public greenway trails upon the easement.	City Staff	Mid-term	Policy
Public Facility Policy	Place priority on the need of providing pedestrian access to all public facilities, the City should adopt a policy that requires all new city parks, civic buildings and other public facilities to be connected to the City's pedestrian network.	City Council, City Staff	Long-term	Policy

Figure 5-2: Program Implementation Actions

PROGRAM Implementation Actions	Summary	Responsible Parties	Timeframe	Resources
Develop and distribute public education materials	Audience: local schools, health agencies and residents that focus on safe pedestrian behaviors, rules of safe walking, and the responsibilities of pedestrians and drivers. Printed brochures, the Clinton Walks website, newspaper, newsletters, t-shirts, and other advertising and media outlets as determined.	Advisory Committee, City Staff	Short-term	$
City Staff & Advisory Committee Continuing Education	Continue to receive education and training regarding pedestrian safety and walking by attending conferences and workshops. Experts invited to speak.	Advisory Committee, City Staff	Mid-term	$
Organize Walking Events to encourage walking	Advisory Committee with local organizations to provide opportunities to gather for walks. Ideas include, nature walks, historical tours, volksmarches, walking school buses, walking clubs and many other encouragement activities.	Advisory Committee, City Staff, Local Organizations	Short-term	$
Apply for Safe Routes to School	NCDOT resources for funding priority projects to enhance connectivity and access to schools and pedestrian safety in the immediate vicinity.	Advisory Committee, City Staff	Short-term	Policy
Pedestrian Safety Enforcement Program	Police Department to consider targeted enforcement of pedestrian laws in high risk areas along with enhanced officer training awareness.	Police Department Officers	Mid-term	Policy
Pedestrian Education Program in the Public Schools	Design and implement a series of programs to enhance the knowledge regarding safe pedestrian activity for school children.	Advisory Committee, Clinton City Schools, City Staff	Mid-term	$$

Figure 5-3: Sidewalk Projects Implementation Actions

SIDEWALK PROJECTS Implementation Actions	Summary	Responsible Parties	Timeframe	Resources
NC 24 / Sunset Ave	Coharie Rd to Fayetteville Street, sidewalks both sides of roadway, crosswalks Coordinate with NCDOT on new 24 plans to integrate recommended pedestrian facilities. City has budgeted $53,000 or 20 percent of NCDOT estimates. 6,625 feet funded – Coharie to Faircloth Freeway, with 2,875 feet unfunded TBD per NCDOT plans.	City Staff, NCDOT	Short-term for initial phase Mid-term For unfunded portion	$265,000 (6,625' only)
Elizabeth Street	Barrus Avenue to Middle and High School (Indian Town Road). Sidewalk, sidepath and crosswalks for multi-use is recommended from the bridge to the schools (approximately 4,000')	City Staff, NCDOT, City Council	Mid-term	$400,000
Beaman Street	Cooper Drive (Hospital) to North Blvd. Sidewalks and crosswalks on east side of the road. Coordinate with recommended pedestrian intersection improvements at hospital and proposed Williams Old Mill Branch Greenway and crossing at bridge.	City Staff, NCDOT, City Council	Mid-term	$116,000
US 701 BUS	Entire segment within city limits. Sidewalks and crosswalks along both sides of highway. Consider complete streets/ road diet project for entire length of corridor. This will require a detailed corridor study to determine feasibility and costs.	City Staff, NCDOT, Advisory Committee	Mid-term	$75,000 (Corridor Study)
Stewart Avenue	Beginning at intersection with College Street. Sidewalks on at least one side of roadway. This segment of roadway is highly trafficked as a cut-through. Pedestrians use this route as well. Speed limit reduction may be of consideration in this area.	Public Works Staff	Mid-term	$164,000

Figure 5-4: Intersection Projects Implementation Actions

INTERSECTION PROJECTS Implementation Actions	Summary	Responsible Parties	Timeframe	Resources
Fayetteville St. (Multiple Locations)				
A. Sunset Avenue / Fayetteville Street	The alignment of Sunset with Fayetteville St. has created a lengthy distance for a pedestrian to cross. Mark with ladder style crosswalks, tighten curb radius on eastern approach and erect warning signs. 375 Sq. Ft. Curb Extension ($20 per), 1 ladder crosswalk (55')	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$9,500
B. N. Chestnut / Fayetteville Street	The alignment of N. Chestnut with Fayetteville St. has created an unusually lengthy walk for a pedestrian to cross three lanes. A ladder style crosswalk marking with a substantial refuge island, a tighter curb radius and warning signage are recommended. 800 Sq. Ft. Curb Extension ($20 per), 850 Sq. Ft. Refuge Island ($20 per), 1 ladder crosswalk (77')	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$35,000
C. Williams St / Fayetteville Street	Ladder style crosswalks across Williams Street, tighten curb radius, and erect warning signage. 230 Sq. Ft. Curb Extension ($20 per), 1 ladder crosswalk (55')	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$6,600
D. Giddens Street / Fayetteville Street	Mark/Stripe crosswalks, 1 ladder crosswalk (30')	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$2,000
E. W. Faison Street / Fayetteville Street	Mark/Stripe crosswalks, 1 ladder crosswalk (55')	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$2,000

Figure 5-4: Intersection Projects Implementation Actions (continued)

INTERSECTION PROJECTS Implementation Actions	Summary	Responsible Parties	Timeframe	Resources
Downtown (Multiple Locations)				
A. Courthouse Square	Courthouse square has numerous crosswalks; however, several areas do not have markings on the pavement for safe pedestrian crossing or need restriping. Along the primary traffic circulation route, flashing pedestrian signs or "State Law: Stop for Pedestrian in Crosswalk" signs should be considered. 4 standard crosswalks (72'), Costs increase if decorative materials are selected.	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$4,000
B. Mid-Block along Vance St (Courthouse square)	This midblock area connects a parking area with the courthouse. A safe pedestrian crossing is needed in this more dense pedestrian area. 1 ladder crosswalk (30'). Costs increase if decorative materials are selected.	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$2,000
C. Intersection of W. Main St. and E. Main St at Wall Street	Pedestrian islands and ramps exist; however, pavement should be striped and marked for safe pedestrian crossing. 2 standard crosswalks (58')	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$2,000
D. Elizabeth St. and Wall St.	Signalized intersection in need of pedestrian crosswalks. Pavement to be striped and marked for safe pedestrian crossing. 4 standard rosswalks (130')	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$4,000
E. Crosswalks to Farmer's Market Parking (College and Lisbon Streets)	Pavement to be marked for safe pedestrian crossing at College and at Lisbon/Elizabeth. Active parking especially during Farmer's Market / events. 2 standard crosswalks (60')	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$2,000
F. Lisbon St. and Morisey Blvd.	Crosswalks are becoming faded and worn (standard pattern). 4 standard crosswalks (195')	Public Works, City Council, NCDOT, Advisory Committee	Mid-term	$6,000
G. McKoy and Sampson St. to Faison St.	Standard marked crosswalks needed at intersections of these streets with Loop Street and Faison Street. 4 standard crosswalks (130')	Public Works, City Council, NCDOT, Advisory Committee	Mid-term	$4,000

Figure 5-4: Intersection Projects Implementation Actions (continued)

INTERSECTION PROJECTS Implementation Actions	Summary	Responsible Parties	Timeframe	Resources
College Street at Beaman Street	Existing crosswalks are worn and faded, in need of restriping. 4 standard crosswalks	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$4,000
US 701/421 Bridge at NC 24/Sunset Ave	A diverging diamond interchange is proposed for this intersection. Pedestrian facilities should be included in the design providing safe access. All required pedestrian warning signage should be installed. Coordinate with scheduled NCDOT improvements for NC 24/Sunset Avenue. Costs have been included as part of larger NC 24 Project, which totaled $265,000 of which the City is contributing $53,000.	Public Works, City Council, NCDOT, Advisory Committee	Short-term	Part of NC 24 Project
Step 1	Re-enforce Fencing	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$200
Step 2	NCDOT engineers will examine the diverging diamond as part of the design phase for the overpass bridge replacement. In the interim NCDOT is moving forward with a temporary pedestrian walkway along the southern side of NC 24 behind the guard rail. Design Fees and Interim Walkway	Public Works, City Council, NCDOT, Advisory Committee	Short-term (interim walkway) Long-term (design)	TBD
Step 3	This segment will complete pedestrian network to Faircloth Freeway Costs have been included as part of larger NC 24 Project, which totaled $265,000 of which the City is contributing $53,000.	Public Works, City Council, NCDOT, Advisory Committee	Short-term	Part of NC 24 Project
Step 4	Proposed trail surface is an existing and maintained sewer easement, reducing construction costs. Three roadway crossings. 3,000 Linear Ft. ($110/linear ft), 3 Crossings ($5,000 ea.). Sunset Avenue Crossing may cost upward $40,000 depending on final roadway design.	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$345,000 to $380,000
Beaman Street at Hospital	Relocate southern crosswalk to approximate location of existing signage. 2 additional warning signs are needed at each crosswalk to clearly mark each individual crosswalk from both sides. 2 ladder crosswalks.	Public Works, City Council, NCDOT, Advisory Committee	Short-term	$4,500

Section 6. Design Guidelines

A. Introduction

When constructing the recommended improvements, pedestrian facilities should adhere to national design standards for said facilities as determined and defined by the American Association of State Highway Transportation Officials (AASHTO), the Federal Highway Administration (FHWA) Pedestrian Facilities User Guide, the Americans with Disabilities Act (ADA), the Manual on Uniform Traffic Control Devices (MUTCD), and the North Carolina Department of Transportation (NCDOT). The Pedestrian and Bicycle Information Center (http://www.pedbikeinfo.org) is an additional source of information that can be reviewed on the internet. As with any standards that are referenced, the most current standards should always be utilized as changes may be made to national and state standards in the future. The City should consult with a licensed design professional, such as an engineer, on any future projects to ensure that the standards are up-to-date.

The guidelines presented in this section are intended to be a guide and represent the best practices for pedestrian facilities and design; however, they do not substitute for the review of a licensed design professional during the design and construction of recommended facilities. The NCDOT may have specific standards and guidelines as well, depending on the context and parameters of any given project. The design guidelines apply to seven broad areas that include:

- Linear Pedestrian Facility Design
- Pedestrian Crosswalk Facility Design
- Signal Design
- Pedestrian Signage
- Pedestrian Environment
- Traffic Calming
- Additional Considerations

B. Linear Pedestrian Facility Design

Sidewalks

The development of sidewalks in the United States was a high priority in the original development of most cities. Prior to the automobile boom and the expansion of the Federal Highway System, sidewalks were common in almost all neighborhoods and commercial areas across the nation. Sidewalks led to local businesses, a neighbor's house, places of worship, work and the everyday activities associated with life. Children would often play along sidewalks and adults enjoyed socializing along these useful public spaces. Sidewalk facilities are constructed in a variety of ways, some with a grass barrier separating the roadway from the pedestrian, while some may have trees in a planting strip separating vehicles and pedestrians. In other areas, sidewalks are constructed immediately adjacent to the curb, with the

Figure 6-1: Existing Sidewalk Design in Clinton

curb serving as the frame when the concrete is poured. All of these methods of sidewalk placement and construction have a varying degree of success depending on the location and context in which it is located. Almost all pedestrians, when surveyed, prefer to have some separation between their walking area and the roadway. In the City of Clinton, most sidewalks were constructed with a grass planted strip of approximately 18 to 36 inches separating the sidewalk from the edge of the roadway or curb. This type of sidewalk pattern provides some safety for pedestrians and a mild since of enclosure and a separate space for the pedestrian from the roadway. Very few streets observed in Clinton have a more significant buffer. The other type of sidewalk that is fairly common in Clinton is the

sidewalk that adjoins the curb. This type of sidewalk is most common in the downtown area where the sidewalks are much wider and other streetscape elements such as benches, trash receptacles, parked cars and light posts serve as a buffer, providing some enclosure for the pedestrian walking in these areas.

Typical Guidelines and Considerations for Standard Sidewalk Facilities

- The most commonly preferred surface treatment is concrete, which is known for its durability and low maintenance costs. In downtown Clinton, a decorative sidewalk pattern has been established and should be replicated as repairs are made or new sidewalk facilities are constructed within this unique area. Most of the existing sidewalks in Clinton outside of downtown are standard concrete. New materials for sidewalks and walkways are being pioneered including permeable sidewalks and sidewalks made of rubberized, recycled materials.
- It is important to maintain a flat running grade of five percent or less with a two percent maximum cross-slope, to provide a safe, level walking surface for pedestrians of all ages and abilities.
- If physical constraints of the roadway and adjacent right-of-way allow, a natural buffer zone of two to four feet is ideal for minor collector streets in most neighborhood settings, while five to six feet is more appropriate in areas where major arterials serve higher traffic volumes at higher speeds. In settings such as downtown, sufficient area needs to be allowed to accommodate hardscape elements such as street signs, light poles, pedestrian furniture and landscaping features. Although not recommended, as seen in Figure 6-2, the sidewalk must often adjoin the curb.

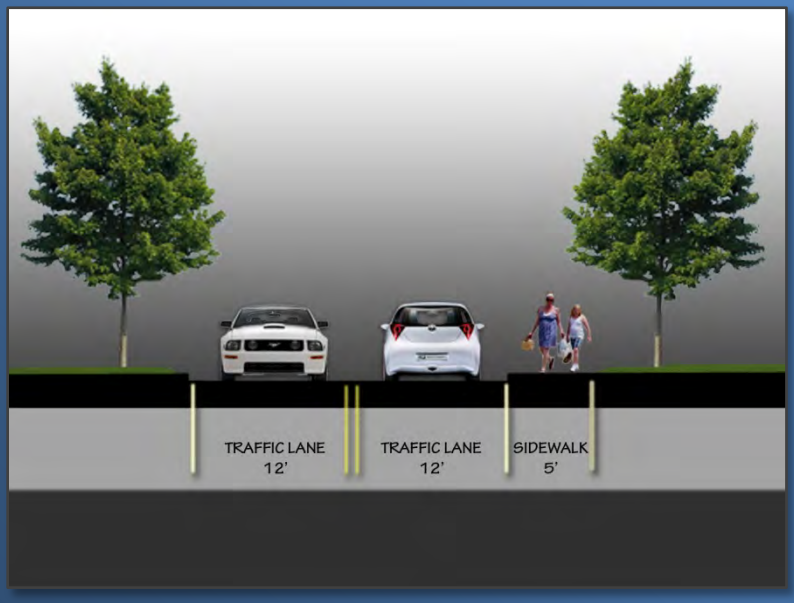


Figure 6-2: Typical Cross Section for Roadways with physical constraints

- Sidewalks made of concrete materials should be at least four inches in depth with increased depths of six inches for driveways and greater thicknesses for more high intensity uses as determined by an engineer.
- It is recommended that sidewalks should be at least five feet wide to allow at least two adults to pass comfortably. In downtown Clinton and other commercial areas sidewalk depths ranging from 8 to 12 feet should be considered depending on the building entryway designs and the presence of recessed entry ways.
- Driveway and curb cuts can be barriers to safe pedestrian crossing. The width and number of these ingress and egress points should not exceed thirty-feet. During the field research several areas were noted where continuous driveways disrupted the pedestrian connectivity, particularly on the west side of downtown Clinton.

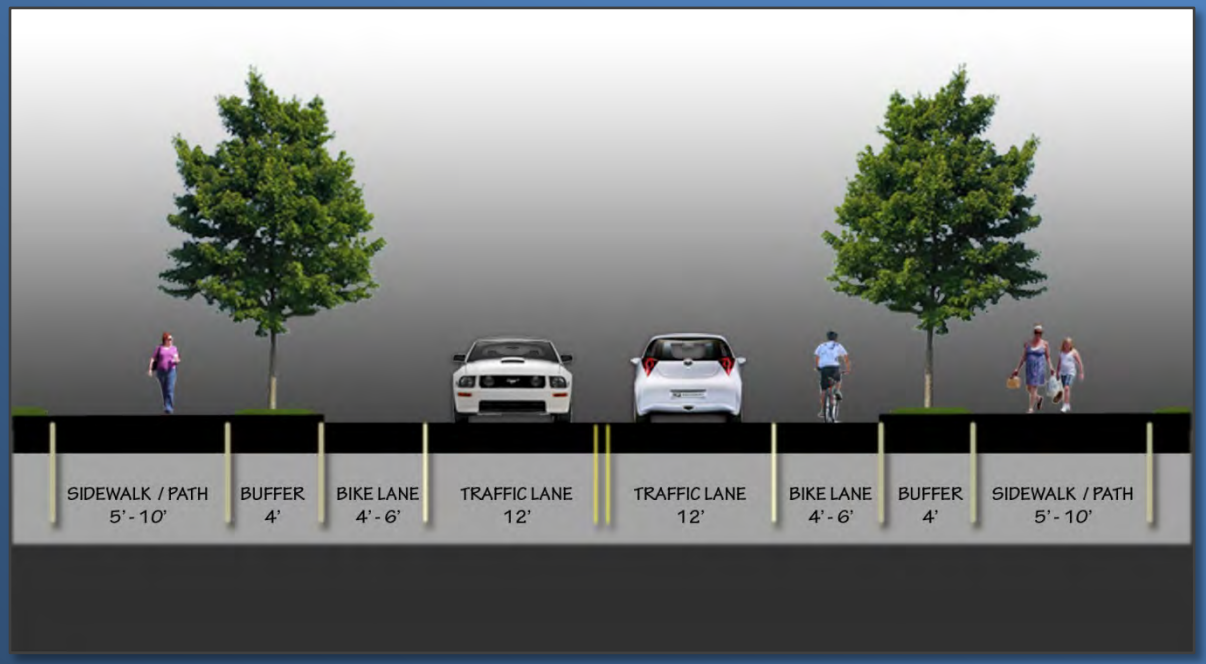


Figure 6-3: Typical roadway cross section for a "complete street" with sidewalks, bike lanes and landscaping.

- These points are meant to be guidelines, recognizing that not all future sidewalks will conform to these suggestions due to the physical constraints, such as topography, existing structures and rights-of-way.

Greenway Trail Facilities

Greenway trails can be developed in a variety of ways. These facilities are often next to bodies of water, abandoned or underutilized railways, utility corridors, and other trails or path ways. Greenway trails are typically utilized by walkers, runners, and bikers; however, some facilities are designed to accommodate persons with disabilities, skaters, horseback riders and others. Most trails are at least 10 feet wide with some as wide as 15 feet depending upon the intensity of use. The surface of greenway trails vary greatly from dirt (unpaved) to asphalt (paved), including some greenway trails in urban areas that have a rubberized surface.

A regional example for the City of Clinton is the Cape Fear River trail in Fayetteville, NC. This trail is one of the most undulating greenways in North Carolina with very steep grades winding along the Cape Fear River banks. The Cape Fear River Trail is a 10 foot wide asphalt path with many unique bridges, including a covered boardwalk bridge that passes under the CSX railway trestle, and 700 foot long board walk through marshy areas at Clark Park. As the City considers establishing its greenway system, the key staff involved with the construction and maintenance of this facility would be excellent resources. Another nearby trail is the All American Trail along the perimeter of Fort Bragg. This 23 mile long trail is mostly a compacted sand based surface that is comparable to many of the existing sewer easement maintenance pathways in Clinton. With some minor grading and additional maintenance, and appropriate trail signage, these sewer easements could easily become an unpaved greenway system until such time funds may become available to upgrade the trails with hard surfaces.

Most trail facilities are open from daybreak to dusk, and, depending on its connection with a park, may open and close with its operating hours. Restrooms are an important consideration at trailheads and should be considered at other points if the trail segments are a great

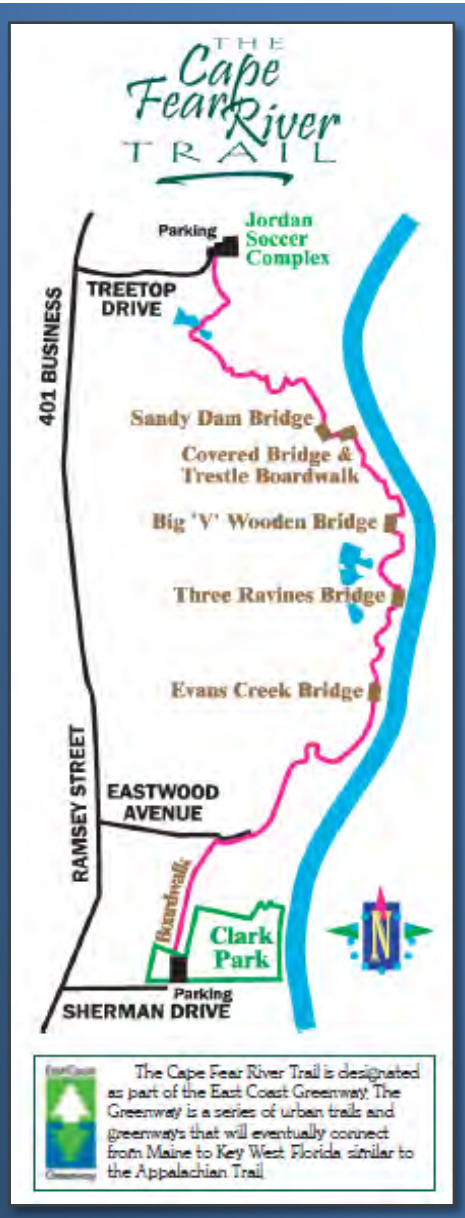


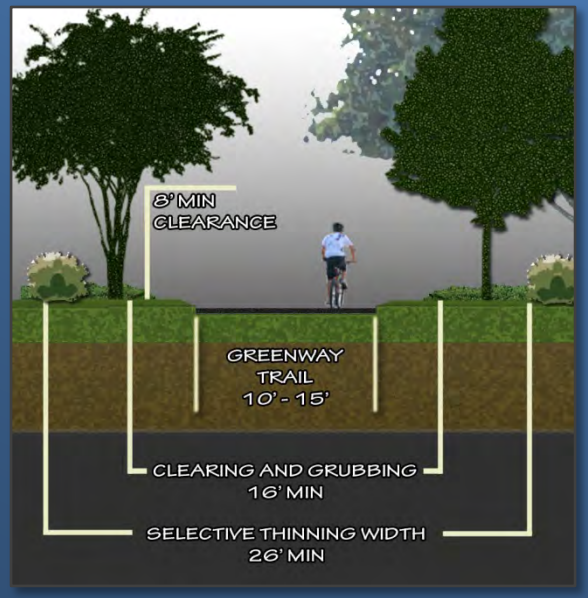
Figure 6-4: Cape Fear River Greenway

distance by using portalets or similar facilities. Water fill-up points can be important if the trail is long as well. Other considerations include picnic facilities and resting points with benches. Security call boxes and active patrols can help protect trail users from criminal activity and help trail users in emergency situations. Appropriate signage should always be maintained, clearly posting trail rules, warnings, and highlight wildlife and other unique things for a trail user to observe along the way.

As displayed in Figure 6-5, and previously described, greenways / multi use paths are separated from motorized vehicular traffic and are constructed are most often constructed in natural settings. Although many surfaces can be utilized, concrete is the recommended surface treatment, while paved asphalt or permeable paving can be used as alternatives (see Figure 6-6). Concrete is used for its incredible durability and low maintenance requirements—especially in areas where frequent flooding occurs. A recommended concrete alternative is a paved asphalt trails which offers durability for the cost of installation and maintenance. Asphalt is also much easier to manipulate and install for trails with steep slopes, such as the nearby Cape Fear River Trail.

Trails need a proper foundation to increase the longevity of the facility with at least two inches surfacing material over a minimum four inches base gravel course with geotextile fabric (Figure 6-6). Often times, soil borings are needed to determine adequate material depths; it should be designed to withstand the loading requirements of occasional maintenance and emergency vehicles. Typically 10’ wide, 2% cross slope, with two-foot wide graded shoulders; the shoulders help prevent edges from crumbling and provide an alternate walking and jogging surface. Centerline stripes should be considered for trails that generate substantial amounts of traffic, and are particularly useful along curving sections of trail.

Trail landscaping and maintenance should enhance conditions for wildlife by planting only native species in the trail corridor, removing invasive species when possible, and avoiding harmful pesticides and herbicides. The overall shape of protected natural landscapes along trail corridors also influences wildlife: single, large, contiguous natural areas are more beneficial to wildlife than the same acreage split into smaller segments.



Vegetative Clearing Practices
For Greenway Trails

Typical Asphalt Surface Greenway

Typical Natural Surface Greenway

Figure 6-5: Greenway Trail Design Considerations

Since Clinton has many flood-prone areas where trails are planned, careful attention should be given to the layout and design of those segments of the greenway facilities. The trail, where possible, should be positioned outside the floodway, within the floodplain; significant vegetative buffer between the stream and trail should be left intact. During the design and layout, utilize existing cleared corridors for trail routing whenever possible, to avoid unnecessary vegetative clearing. As recommended on many of the trails in Clinton, the sewer easements already form a well cleared and solid soil foundation for establishing a successful greenway / multi-use trail. Concrete is the preferred surface as budget allows.

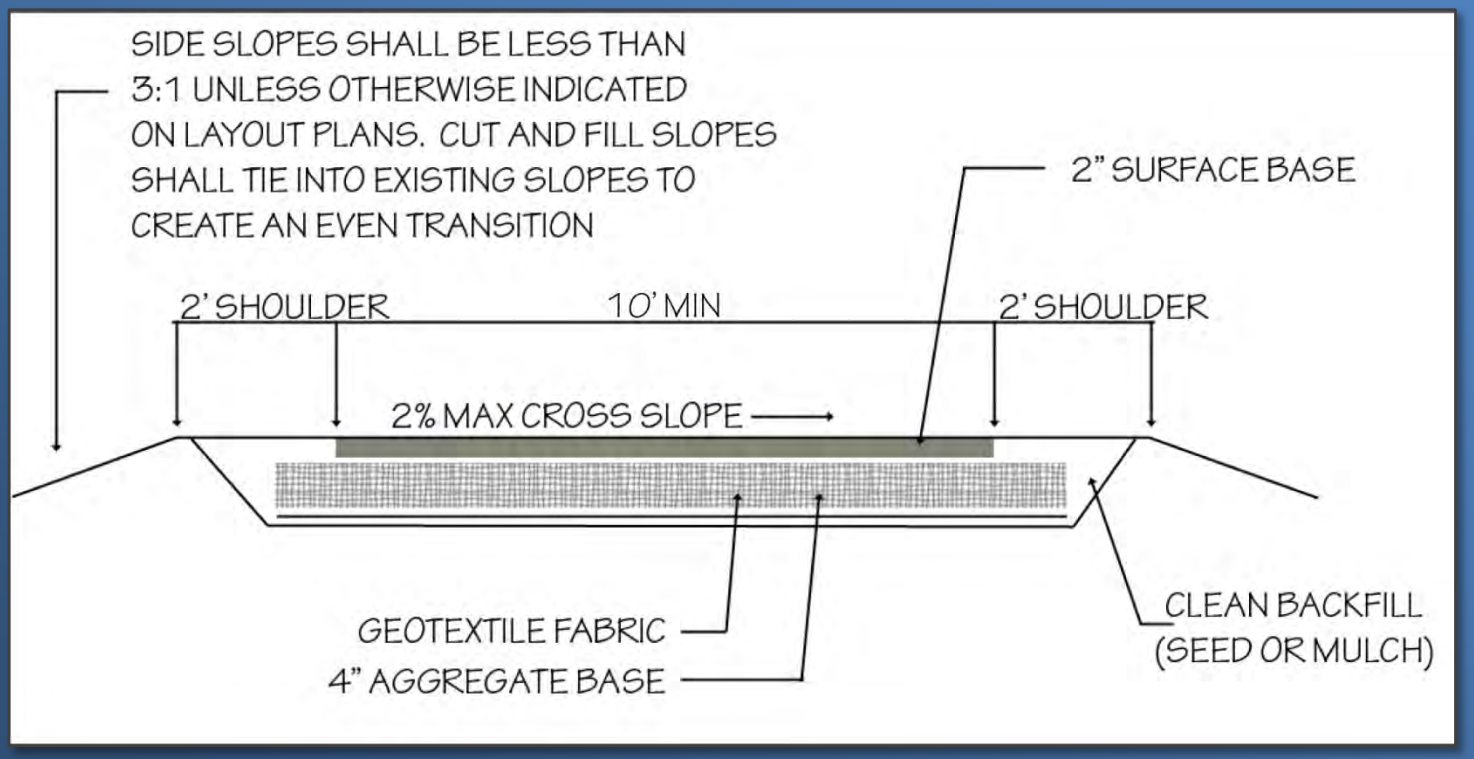


Figure 6-6: Typical Trail Construction Detail for Asphalt

Sidepaths

A sidepath is recommended for the stretch of Elizabeth Street extending to the Middle and High School. A sidepath is located within the roadway corridor right-of-way, or adjacent to roads, hence the name 'Sidepath'. These sidepaths provide a safe walking space for pedestrians and enables a variety of users / modes to stay out of a busy street. Sidepaths are best utilized along roadways that have limited driveway curb-cuts and are located mostly on one side of the roadway as with the Elizabeth Street project where it is alongside a

farm field with only a few curb-cuts and is separated from the roadway by a drainage ditch. It is recommended that sidepaths be at least 10' in width to allow for safe passing of trail users. As mentioned, a buffer that is planted, a drainage ditch or some other buffer should be incorporated into the design.

Trail Intersections with Roadways

All trail and roadway intersections should incorporate a crossing site that is highly visible with a safe distance from nearby intersections to not interfere (or be interfered) with traffic flow. Where possible the crossing with a roadway should occur where it is relatively flat to provide increased visibility to motorist, along with a perpendicular designated crossing area. Proper warning signage should alert trail users and motorists alike of the upcoming intersection. Additional treatments in high traffic areas could include pavement textures, flashing signals, trail stop signs, raised crossings and other such high-visibility treatments discussed for crosswalks in general. Vegetation should be well trimmed and maintain to allow unobstructed viewing near the intersection. The grade of the intersection for the trail users should also be relatively flat to avoid sliding stops and accidents that may propel a trail user into on-coming traffic. Where crossing distances are greater than 75 feet, a center median with a refuge point is recommended to allow additional time for all age groups and abilities to cross safely. Nearby signalized intersections may be used where appropriate and recommended by more detailed engineering analysis and considerations.

C. Pedestrian Crossing Facility Design

In addition to the actual sidewalk or trail facility standards and construction, additional facilities are needed to ensure safe crossings and a safe environment for pedestrians. These facilities include crosswalks, mid-block crossings, signage and design details throughout the pedestrian system. The sections that follow cover these facilities.

Crosswalk Facilities

An important ingredient in creating a walkable community is the installation and maintenance of crosswalks that are well placed and designed, helping to reduce pedestrian crashes. Marked crosswalks designate a pedestrian right-of-way at the point of street crossing. Crosswalks can be designed multiple ways, and may be made of various materials. The basic crosswalk patterns are displayed to the right. This plan has recommended the installation of a ladder style crosswalk across Beaman Street at the hospital, providing greater visibility than the standard parallel line pavement markings. Marked pedestrian crosswalks are primarily utilized at locations with traffic signals or stop signs, at non-signalized street crossing locations in designated school zones, and at non-signalized locations where engineering judgment dictates that the use of specifically designated crosswalks are desirable. The primary style of pavement marking is the standard parallel crosswalk stripping.

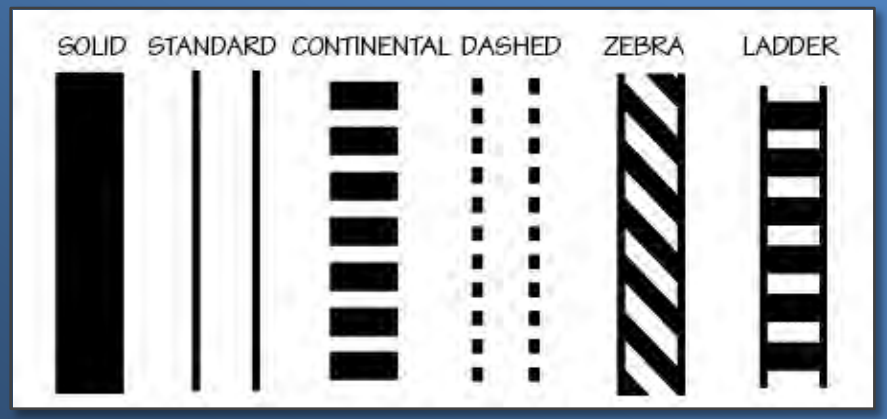


Figure 6-7: Typical Crosswalk Markings

Source: Federal Highway Administration

Other crosswalk possibilities include crosswalks made of decorative paving materials as seen in downtown. These types of crosswalks require additional maintenance and can be expensive to install; however, they are effective in providing key visuals cues to pedestrians and the motoring public. Crosswalks can be slightly raised in elevation as part of a speed hump or speed table and texture or decorative paint can be added as well. Recent trends include thermoplastic inlays that provide texture, color and custom designs. The most important factor to consider with pavements materials is the installation of non-skid, smooth and visible materials. More recent advances in crosswalk include in pavement safety lighting; however, these types of facilities are not recommended for Clinton at this time as the conflicts between pedestrians and motorists are not as high at night in Clinton. Most crosswalks are at least six feet in width, and in downtown Clinton they may need to be slightly wider based on engineering study and analysis.

Typical Guidelines and Considerations for Crosswalk Improvements

- Crosswalks are not encouraged in uncontrolled/signalized environments where speeds exceed 40 mph.
- In addition to crosswalks, it may be necessary to include other pedestrian safety crossing measures, especially on streets with annual average daily traffic (AADT) above 10,000, which are primarily located along NC 24 and US 701 Business.
- Crosswalks need to be at least six feet in width, or larger, based on the width of adjacent sidewalks, pedestrian crossing volumes and intersection design.
- Sidewalk curb ramps and any sloped areas should be included within the crosswalk markings.
- The pavement markings for crosswalks should extend the entire length of the intersection that it crosses.
- MUTCD guidelines should be followed for the crosswalk pavement markings.
- NCDOT requires pedestrian facilities on both sides of the roadway when painted crosswalks are installed.

Stop Bar Markings

Other measures to improve pedestrian safety, while improving crosswalk markings, is to restripe the vehicle stop bars 15–30 feet back from the new pedestrian crosswalks at signalized crossings and mid-block crossings. Moving the stop bar back will increases vehicle and pedestrian visibility. Advance stop bars should be 1 to 2 feet wide and extend across all approach lanes at intersections. Moving the stop bar back allows motorists and pedestrians alike adequate time to determine safe movements. Also, numerous studies have shown that increased distance reduces pedestrian crashes, and when combined with signage, such as “Stop Here for Pedestrians”, vehicular incidents with pedestrians are further reduced.

Curb Ramps

Curb ramps provide access for persons with permanent and temporary disabilities, as well as persons with decreased mobility due to advanced age or other non-disabling factors. The sloped transition provides access between the sidewalk and roadway for wheelchair users, people using walkers, crutches, or handcarts, people pushing bicycles or strollers, and pedestrians with mobility or other physical impairments. Curb ramps must be installed at all intersections and mid-block crossing locations where pedestrian crossings exist as required by the 1973 Federal Rehabilitation Act and the 1990 Federal ADA requirements. Curb ramps should abide by the maximum slope guidelines, striving for less steep slopes as conditions allow. All new construction or altered pedestrian crossing areas along roadways must now include curb ramps.

As the conditions and physical environment allow, two separate curb ramps should be provided at each intersection in place of a single, large curb ramp that provides access to two crosswalks. The single curb ramp, while it may be less expensive to construct, can misdirect pedestrians as they enter into the crosswalk and roadway, potentially directing them into the path of a vehicle. Single ramps should be carefully studied prior to installing versus the dual ramp method.

Detailed information concerning curb ramps can be reviewed in the Accessible Rights-of-Way: A Design Guide, by the U.S. Access Board and the Federal Highway Administration, and Designing Sidewalks and Trails for Access, by the Federal Highway Administration.

Figure 6-8: Curb Ramp and Decorative Crosswalk

Typical Curb Ramp Guidelines

- Carefully review the installation of single curb ramps for safety issues, evaluating traffic volumes and misdirection potential.
- Consider the installation of two separate curb ramps as the typical method, one for each crosswalk, at each corner of the intersection.
- Curb ramp slopes should be no greater than 8 percent with side flares not exceeding 10 percent.

Mid-Block Crossings

Mid-block pedestrian crossings can be installed in locations where there is a great enough distance between intersections and sufficient pedestrian traffic to create a potential safety concern. Typically, such crossings should be at least 300 feet from a signalized crossing or intersection. The installation of warning signs in these situations is required to ensure that the facility is highly visible to motorists. Further information regarding mid-block crossings can be found at http://www.ncdot.org/doh/PRECONSTRUCT/traffic/teppl/Topics/C-36/C-36_pr.pdf.

Medians

Medians provide a barrier in the center of streets and roads to separate lanes of vehicular traffic. Medians provide the opportunity to create pedestrian refuge areas. Medians can protect pedestrians if they are unable to make it all the way across the intersection, or if they need to pause and wait for oncoming traffic. Medians can also be landscaped to provide a sense of enclosure for vehicles as landscaping can help to calm traffic.

For US 701 Business, a median will be appropriate for the traffic-volume, higher-speeds, providing much needed cues for motorist and pedestrians to easily identify the boundary between the crossing island and the street.

Figure 6-9: Landscaped Median, Crosswalk and Curb Ramp

Median Guidelines

- Utilize medians to create pedestrian refuge islands for crossing busy or wide roadways at either mid-block locations or intersections, especially along high speed and high volume roadways.
- If the space allows, medians should include trees and landscape plantings to enhance the visual character of the street, while having a traffic calming effect as well. Landscaping should not impede visibility of the motoring public or pedestrians.
- In designing medians, crossings should incorporate ramps or cut-through pathways increased accessibility and ease of use.
- All median crossings should be at least 6 feet in width to accommodate more than one pedestrian; although a more generous 8 foot width will provide enough space for wheelchairs, larger groups of pedestrians and bicycles.
- Primarily for wheelchair users, median crossings should include a level landing that is at least four feet square, providing a balanced resting point.
- Where streets are in excess of 60 feet, push-buttons for signalized crossings should be installed to operate the signals.
- Crossings in excess of 60 feet in width should be provided with medians or crossing islands and curb extensions.

Curb Extensions

Curb extensions provide increased viewing distance for pedestrians and drivers, while narrowing the distance a pedestrian has to cross. For example, on a 40 foot wide roadway with two traffic lanes and on street parking, through using extensions, also known as bulb-outs, a pedestrian can reduce their travel distance across the roadway by 10 to 14 feet with curb extensions. These pedestrian facilities work best at intersections or mid-block crossings where on street parking is present, and should not impede traffic flow by extending into the travel way.

Figure 6-10: Curb Extension or Bulb-outs

Typical Curb Extension Guidelines

- Curb extension or bulb-outs are most effective to use where parking may limit drivers' view of crossing pedestrians.
- Utilize curb extensions with mid-block crossings as feasible.
- In areas where large truck traffic makes right hand turns, curb extensions should be studied carefully to avoid the frequent destruction of the curb extension facilities.

D. Signal Design

Traffic Signals

It is important that traffic signals in highly traveled pedestrian areas are designed to allow for safe crossing times. In areas where older persons and young children will be walking, signal timings may need be adjusted to increase the length of time allowed for crossing. For example, the Manual on Uniform Traffic Control Devices (MUTCD) suggests 4 feet per second timing in traffic signals for safe pedestrian crossings. The City of Clinton should work closely with NCDOT to determine if traffic signals planned for NC 24 should have longer signal times to allow for older and younger persons to cross safely. A possible solution for these age groups would be to lower the timing speed to 3.5 feet per second.

Pedestrian Signals

Many different tools exist to communicate with pedestrians when it is safe to cross roadways. Some of the methods identified by the Pedestrian and Bicycle Information Center include the international symbols for Walk or Don't Walk, large traffic signals, traffic signals positioned so that those waiting at a red-light cannot see the opposing traffic signal and anticipate their own green-light, installing countdown signals to provide pedestrians information on how long they have remaining in the crossing interval, automatic pedestrian sensors, and selecting the proper signal timing intervals.

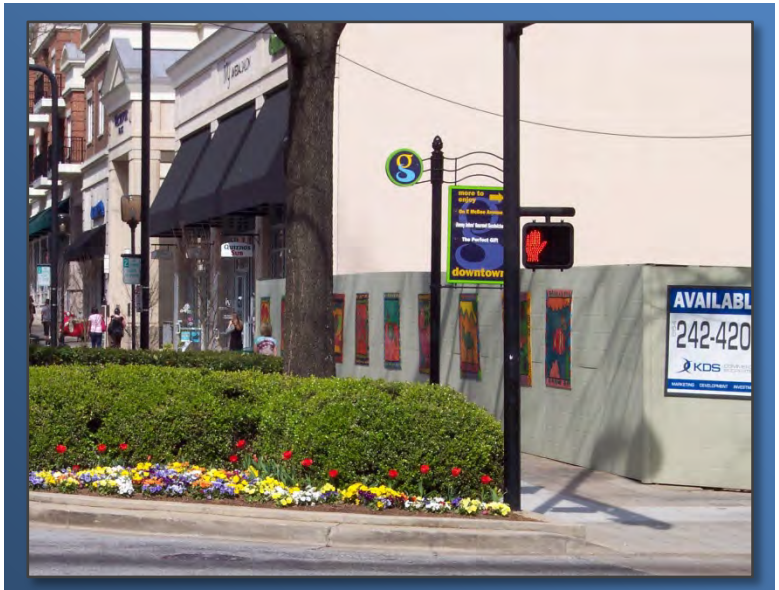


Figure 6-11: International "Hand" Symbol for "Don't Walk" and a "Walker" for "Walk"

According to the MUTCD, international pedestrian signal indication should be used at traffic signals whenever warranted. Instead of earlier signalization that featured "WALK" and "DON'T WALK", international pedestrian symbols should be used on all new traffic signal installations as illustrated at right. In order to ensure this transition, existing "WALK" and "DON'T WALK" signals should be replaced with international symbols when they reach the end of their useful life or construction projects take place that affect the intersection.

A new type of pedestrian signal called a HAWK, or High Intensity Active Crosswalk, has been developed to provide an additional level of control at unsignalized intersections to assist pedestrian crossings that would otherwise be dangerous given the level of traffic or design of the roadway. These signals integrate a pedestrian activated traffic signal and pedestrian crossing signal to stop traffic from entering the intersection. Additional information on HAWK signals can be found at http://mutcd.fhwa.dot.gov/htm/2009/part4/part4f.htm.

Audible signals may be used to supplement the lighted pedestrian signals in areas with higher traffic volumes. These signals are important for providing a secondary means of warning to pedestrians who may be distracted as they cross an intersection, or who may have a sight impairment handicap. Countdown timers should be added, in accordance with NCDOT policy, to provide even greater safety to an

intersection by giving additional visual clues to pedestrians about the amount of time remaining before the walk signal is changing. Given the greater expense of adding these features, they should be employed only in areas that have a level of pedestrian traffic that justifies the increased expenditure or in areas that have identified safety issues that could be mitigated with the additional level of signalization.

Going hand in hand with the timing of traffic signals is the timing of pedestrian signals. Signals should be timed and coordinated with the traffic signals in a manner that ensures the greatest amount of safety is provided to both motorists and pedestrians. In establishing timing and signalization patterns at intersection it is important to consider the volume of turning traffic that may conflict with pedestrians, and ensure that pedestrians are given adequate time to cross intersections while limiting the chance of conflict with turning traffic. Various signal timing methods can be employed depending on each particular intersection's needs and traffic volume/pattern, including having signals that allow only pedestrian traffic while holding vehicular traffic, or even giving pedestrians a lead time ahead of parallel vehicular traffic in order to make them more visible in the intersection. The wait time between clear signals for pedestrians also has to be considered since long intervals between signals can lead to an increased chance for illegal crossing against the signal, which actually reduces the safety of an intersection. In high volume locations it is recommended that pedestrians be given a clear signal during each light cycle without needing to activate a signal manually. At lower volume intersections pedestrian activated push-button type signals are a good alternative, while eliminating delays associated with pedestrian signals during times when they aren't needed due to low volumes.

Typical Pedestrian Signal Guidelines

- Pedestrian signals should be sized appropriately for the context that they are placed in.
- Where traffic volumes warrant, clear pedestrian signals should be provided during each light cycle.
- Pedestrian signals should be designed to ensure maximum visibility for both pedestrians and motorists.
- Where pedestrian signals must be manually activated, the push buttons should be adequately signed.
- Countdown timers should be included with all pedestrian signals and should be supplemented with audible signals where needed.

E. Pedestrian Signage

Warning and Regulatory Signs

Signs are utilized along sidewalks and roadways to inform pedestrians and motorists of the location of pedestrian crossings, restrictions on crossing or certain turning movements for vehicles as well as general regulations about yielding to pedestrians. The primary purpose of these signs are to ensure that motorists are aware of the potential presence of pedestrians in certain locations in the hope that they will drive more carefully and be more alert to the presence of pedestrians. These signs are also used to direct pedestrians to locations where it is legal for them to cross the street, or where pedestrian dangers, such as hidden driveways or changes in plane along the sidewalk, are located. The MUTCD is the primary document that regulates the placement, color, height and design of both pedestrian and vehicular signage, and should be followed strictly in an effort to ensure that all such signage is designed and located in the most appropriate and nationally acceptable manner. One of the primary concerns about signage is over-signing, or the installation of too many signs in a particular location. This type of situation can lead to confusion or may "hide" important regulatory or warning signs due to visual clutter. This is an issue that can be caused by both public and commercial signage, particularly when commercial signs are illegally placed in the right-of-way, or public signs are lost amongst the clutter of a heavily signed roadway. In addition to warning signage, flashing warning signals may operate in conjunction as with the crossing across Beaman Street at the hospital. New LED technology has led to the creation

Figure 6-12: Example of Pedestrian Warning Signage

http://mutcd.fhwa.dot.gov

of a new generation of flashing warning signals called rectangular rapid flash beacons (RRFB). The RRFBs require state and federal approval for use, and are currently not recommended for use in Clinton's signal system. Rectangular Rapid Flash Beacons (RRFB) can enhance safety by reducing crashes between vehicles and pedestrians at unsignalized intersections and mid-block pedestrian crossings by increasing driver awareness of potential pedestrian conflicts. RRFBs are user-actuated amber LEDs that supplement warning signs at unsignalized intersections or mid-block crosswalks. They can be activated by pedestrians manually by a push button or passively by a pedestrian detection system. RRFBs use an irregular flash pattern that is similar to emergency flashers on police vehicles. The RRFBs require state and federal approval for use, and are currently not recommended for use in Clinton's signal system.

Warning and Regulatory Signage Guidelines

- Warning and regulatory signs should be placed in all locations that have high volume or dedicated pedestrian crossings.
- While adequate signing should be provided, the overuse of signs should be avoided.
- All regulatory and warning signs should be installed in conformance with the MUTCD.

Figure 6-13: Example of Rectangular Rapid Flashing Beacons

http://safetv.fhwa.dot.gov/intersection/resources/techsum/fhwasa0909/

Wayfinding Signage

While it may not seem on the surface to be a safety measure, to pedestrians, knowing the location of their destination may help them to stay more focused on safe walking habits. Particularly in downtown situations where multiple ways may exist to arrive at a destination, pedestrian wayfinding signage can help pedestrians find important civic and entertainment destinations. In the City of Clinton, downtown destinations may include government offices, the library, city offices, the park, historic neighborhoods and the planned art installation.

Figure 6-14: Example of Pedestrian Wayfinding Signage

Wayfinding Sign Guidelines

- Wayfinding signage should be scaled appropriately for pedestrians, including both the size of the signs and the size of the lettering.
- Signage should be placed in locations that do not interfere with safety or warning signs.
- Signs should be mounted at heights that are appropriate for pedestrians to read comfortably.

F. Pedestrian Environment

Street Furnishings

Street furnishings help to "complete" the pedestrian environment by identifying and setting aside areas for rest and relaxation, convenience, and the utility of the pedestrian environment. Examples of street furnishings include benches, trash cans, water fountains, bike racks and similar features. Many of these types of features currently exist in downtown Clinton, but are not generally found in other areas of the City that are served by pedestrian infrastructure. When siting and designing street furnishings the most important consideration is the maintenance of clear paths for pedestrians along the sidewalks and trails that the furnishings serve. Other safety

considerations should also play a role in placing street furniture, such as maintaining sight distances at intersections and ensuring that parking spaces are not obstructed.

Street Furnishing Guidelines

- Avoid blocking pedestrian paths with street furniture by maintaining at least 3 feet of clear distance between objects.
- Provide rest areas with benches at convenient intervals, approximately ¼ mile, along primary pedestrian routes.
- Ensure that street furniture does not obstruct site triangles or encroach into areas where it could obstruct parking.

Landscaping

Landscaping is an important component of pedestrian facility design. The installation of trees and shrubberies help to both soften the otherwise "hard" environment that generally exists along the roadside and provide a visual and physical separation between pedestrians and vehicular traffic when installed in planting strips between the curb and the sidewalk. Landscaping installations can also help to delineate the location of pedestrian crossings by providing focal points on the edges or boundaries of the crossings. When designing landscaping installations, attention should be given to the presence of overhead power lines, which are typically installed in close proximity to sidewalks in the right-of-way, to ensure that proposed trees will not present maintenance issues as they mature. Tree selection and location should also be considered with regard for the potential for tree roots to interfere with sidewalks. While there are devices such as guards that can be used to divert roots away from sidewalks, large trees will always have the potential for creating maintenance issues as they grow and mature. Plantings should be designed and placed in locations that do not

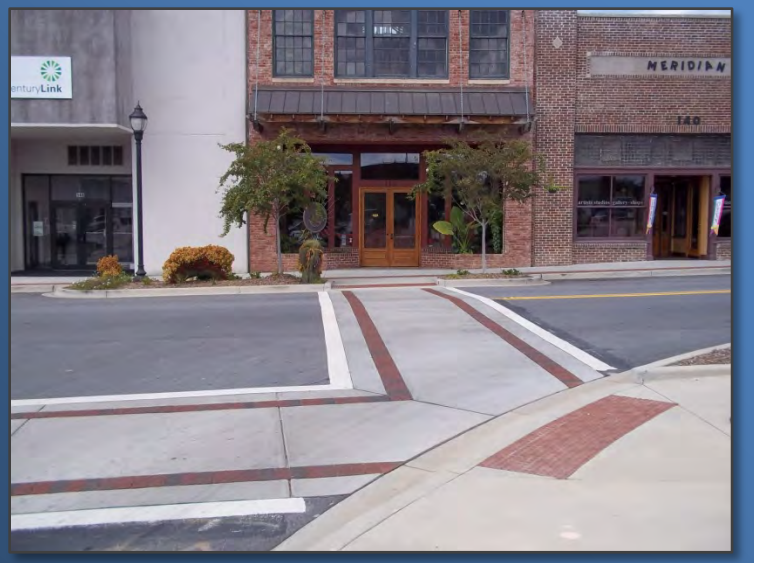


Figure 6-15: Example of Landscaping Installation Identifying a Crosswalk Location

obstruct the view of either pedestrians or motorists or create safety hazards with branches growing into the pedestrian path.

Landscaping Guidelines

- Landscaping installations should be located so that they do not interfere with clear site distances for pedestrians or motorists.
- Landscaping installations should be used to provide visual and physical separation between the street and sidewalk.
- Plantings should be designed to ensure that they are appropriately sized for the context in which they are installed.
- Native species and plants that are adapted to the situations in which they are installed should be utilized to the maximum extent that it is practical.

Lighting Improvements

The provision of adequate lighting along pedestrian facilities is crucial to ensuring the safety and security of those who travel along the City's sidewalks and greenway trails. Along sidewalks, it is important to place lighting fixtures in sufficient quantity that pedestrians are able to safely navigate in low light conditions, with sufficient illumination to observe potential trip hazards or obstructions. While general street lighting does often provide illumination for pedestrians, it may need to be supplemented to ensure that areas where sidewalks encounter unique situations, such as sudden changes in direction or steps, are identifiable from a sufficient distance. Supplemental lighting is also recommended for pedestrian crossing areas in order to ensure that pedestrians within the crosswalk are easily identified in low light conditions. Along trails, where no street lighting is present, consideration should be given to the provision of lighting to facilitate travel in low light conditions. While this certainly encourages the use of greenway trails at night, when some cities desire for them to be closed due to safety concerns, the provision of lighting will ensure that the trails are usable year round, which can be troublesome for people who depend on walking on trails to get to or from work in winter when no lighting is provided, yet darkness comes early. Lighting trails in the evening/early morning also allows authorities to more easily observe traffic on the trails at times when their use could indicate suspicious behavior. In addition to pole mounted lighting, low level lighting may also be provided as a supplement in areas where specific low level hazards need to be identified, or where pole mounted lighting would not be congruent with the surrounding area due to light pollution concerns.

Lighting Guidelines

- Pole mounted pedestrian lighting should be installed at heights of 10-15 feet.
- Supplemental pedestrian lighting should be installed at all designated pedestrian crossings.
- All potential trip hazards or locations that have unique configurations should be illuminated.
- Pedestrian lighting should be designed with a spacing pattern that provides a uniform level of lighting along the routes.

G. Traffic Calming

Traffic calming is the purposeful use of design strategies to slow down automobiles and increase the visibility of pedestrians and bicyclists to the motoring public. Many tools are available that have been proven to reduce traffic speeds and, consequently, reduce the number of pedestrian deaths. Particularly, methods of calming traffic complement areas that already have well-designed pedestrian facilities. In the absence of a complete pedestrian network, pedestrians can be forced into the street, causing potential problems for pedestrians, especially people with any disabilities. For example, speed tables and speed humps can force pedestrians to negotiate an elevation change if safe sidewalk connections are not in place. Also, methods such as neighborhood traffic circles and roundabouts in areas without good sidewalks can create an unprotected and uncomfortable environment for pedestrians trying to navigate across. Any installation of traffic calming measures should always include pedestrian facilities that allow for safe crossings and connections.

The primary goals of traffic calming according to the Federal Highway Administration are to:

- Apply physical, engineered measures to compel drivers to slow down and to decrease traffic volumes;
- Implement self-enforcing rather than regulatory measures;
- Reduce cut-through traffic;
- Increase the safety of children, pedestrians, bicyclists, and motorists;
- Maximize street life and pedestrian activity;
- Prevent crime; and
- Enhance urban redevelopment

Roundabouts

Roundabouts have been utilized at intersections for many years, especially in European countries. The use of roundabouts in the United States has become more wide spread over the last twenty years and they now receive heavy consideration when new roadway intersections are built or redesigned. For example, a roundabout was installed in Clinton at Elizabeth Street and Indian Town Road adjacent to Clinton Middle School when improvements were recently made. Roundabouts are safer than typical junctions having 40 percent fewer vehicle collisions, 80 percent fewer injuries and 90 percent fewer serious injuries and fatalities. Specifically, roundabouts reduce the points of conflict between motor vehicles and pedestrians, creating a safer walking environment. Once the sidepath recommended in this plan is implemented along Elizabeth Street, pedestrians will be safe at this intersection with adequate crossings and warning signs are already in place at this key intersection, see Figure 6-16.

Figure 6-16: Existing roundabout in Clinton with adequate pedestrian enhancements.

Speed Humps / Speed Tables

When properly designed, speed humps and tables can provide reduced traffic speeds and allow for a safer environment for pedestrians when crossing the street. Speed humps are usually formed from asphalt, concrete or rubber and have longer slopes to avoid the creation of a speed bump. One common criticism of the speed hump is potential for reducing response time for emergency vehicles. Speed humps should be installed in critical areas only to avoid creating barriers for emergency services vehicles. Speed tables or raised intersections have a wider flat surface on top and can serve as an elevated or raised platform for pedestrians to cross safely. At this time, speed humps and tables are not recommended at any particular location within Clinton.

Chicanes and Chokers

Chicanes help reduce traffic speed by creating a horizontal deflection through the use of staggered buildouts, much like curb extensions to form a bend or curve in what normally would be a straight roadway. This bend in the road causes drives to slow the speed of their vehicles. Pedestrian crossing can be incorporated if designed properly. Chokers work similarly to Chicanes; however, instead of creating a bend, the chokers narrow the roadway to one lane causing vehicles to allow approaching vehicles to pass through first. Chicanes and chokers are currently not recommended for any location in Clinton at this time. Although these methods may be important in the future if any specific concerns arise that may warrant the use of a chicane or choker design.

Road Diets

The implementation of "road diets," or reductions in the width and number of vehicular travel lanes on a multi-lane facility, can be an effective tool to calm traffic as well as provide additional accommodation for non-motorized transportation, such as sidewalks and dedicated bicycle lanes. The implementation of a road diet will typically reduce a four or five lane facility to a three lane facility; with one travel lane in each direction and either a center turn lane or a median, depending on the development pattern along the corridor and safety considerations. Of particular benefit to pedestrians is the reduction in the number of lanes of traffic that must be navigated in order to cross an intersection. The narrower roadway also provides opportunities for the installation of pedestrian refuges at intersections and mid-block crossing locations. The reduction in the number of travel lanes also provides an opportunity to add more separation between pedestrian facilities and vehicular travel lanes since on-street parking, landscaping strips, bike lanes and similar features can be incorporated in the new roadway design by utilizing the surplus right-of-way that was gained as a result in the lane reductions.

Curb Radii

When streets intersect at an obtuse angle or have a large curb radius, motorists can make turns at relatively high speeds. By contrast, 90-degree intersections and corners with tight curb radii tend to slow motorists down. The problem with obtuse angles is particularly bad when a vehicle on an arterial street turns onto a residential street. Pedestrians crossing the residential street adjacent to the arterial may not expect high-speed turning traffic, or they may have their backs facing the turning cars, creating a potentially dangerous situation. To

counteract this potentially hazardous situation, it is recommended that intersections in areas where pedestrian activity is likely, and in all cases where pedestrian facilities are present, be designed with 90-degree radii to slow the rate of speed of turning vehicular traffic.

H. Additional Considerations

Bridges

The City of Clinton has several bridges that will be in need of improvement or replacement in the years ahead. As noted in the existing conditions, several bridges were identified that create barriers to pedestrian connectivity because they were not designed to allow for safe pedestrian crossings. In particular, the bridge crossing Elizabeth Street will require many improvements before it will be safe for pedestrians to safely cross, including sidewalks that are a minimum of 5.5 feet wide and a hand rail with a minimum height of 42 inches along the edges of the bridge. These improvements may be expensive and will potentially slow the implementation of a shared use path to the schools. Building the shared use path at this time is an important priority; however, the bridge crossing should be addressed concurrently.

Although current bridge policies address pedestrian access, the City should continue to work closely with NCDOT as new bridges are built in the future and as older bridge facilities are replaced or repaired. Pedestrian use should be an important consideration in the design of the bridge facilities, whether or not the bridge is located along an identified pedestrian route. Providing adequate pedestrian facilities now, or at least the space for them on new and improved bridge facilities, will ensure the bridge can accommodate future pedestrian improvements as the need may arise.

Appendix A. Public Input Summary

A. Public Input Summary

Introduction

Throughout the planning process, the steering committee made a number of successful efforts to gather public input, employing a variety of tactics to garner as much input as possible. Among the methods that were utilized, the most fruitful were the establishment of an online presence through the use of an interactive project website, including social media, and the holding of public input workshops in conjunction with two of the steering committee meetings These forums for input were advertised through the print media, the City's website as well as word of mouth advertising by steering committee members and City Staff. As part of the outreach efforts, a conscious decision was made to engage as broad a cross section of the community as possible, and to that end, special efforts were made to reach out to school aged children and older residents, who are often left out of planning activities such as this. Throughout the process, the consulting team was pleasantly surprised at the level of input that was given through each sources that was made available, and in summary, the level of citizen input that was received is more than sufficient to validate the direction and priorities established by the steering committee and City Staff.

"Clinton Walks" Project Website

An important communication tool utilized throughout the process was the www.clintonwalks.org project website. This website was specifically dedicated to the planning process and receiving feedback from the City's residents. The website included information regarding the project background, purpose, upcoming events, presentations and important contact information. The website received over 679 visits from 377 unique visitors and a total of 2,290 page views during the process. Peak activity on the site was in March and May when a significant effort was made to receive input on the survey and to share information prior to the scheduled public meetings that were held in April and June. The population density map, pedestrian connectivity barriers map, pedestrian network map and intersections

improvement map, were all made available to the public for review on the website along the way. The website and domain name are being turned over to the City to help it maintain a dedicated internet presence for the implementation stage of the plan.

Pedestrian Plan Survey

Residents of all ages were invited to complete the pedestrian planning survey to provide input into helping make Clinton a more connected city and safer to place to walk. And participate they did! Over 350 people started the survey, with just over 325 completing the entire survey. The survey was designed and intended for all residents - people who walked often or not at all. The survey covered the following major topics:

- Walking habits
- Barriers to walking in Clinton
- Desired walking opportunities
- Priorities for walking improvements
- General thoughts and ideas

The survey responses were utilized throughout the development of the existing conditions and the plan recommendations. The detailed responses to each question are listed below.

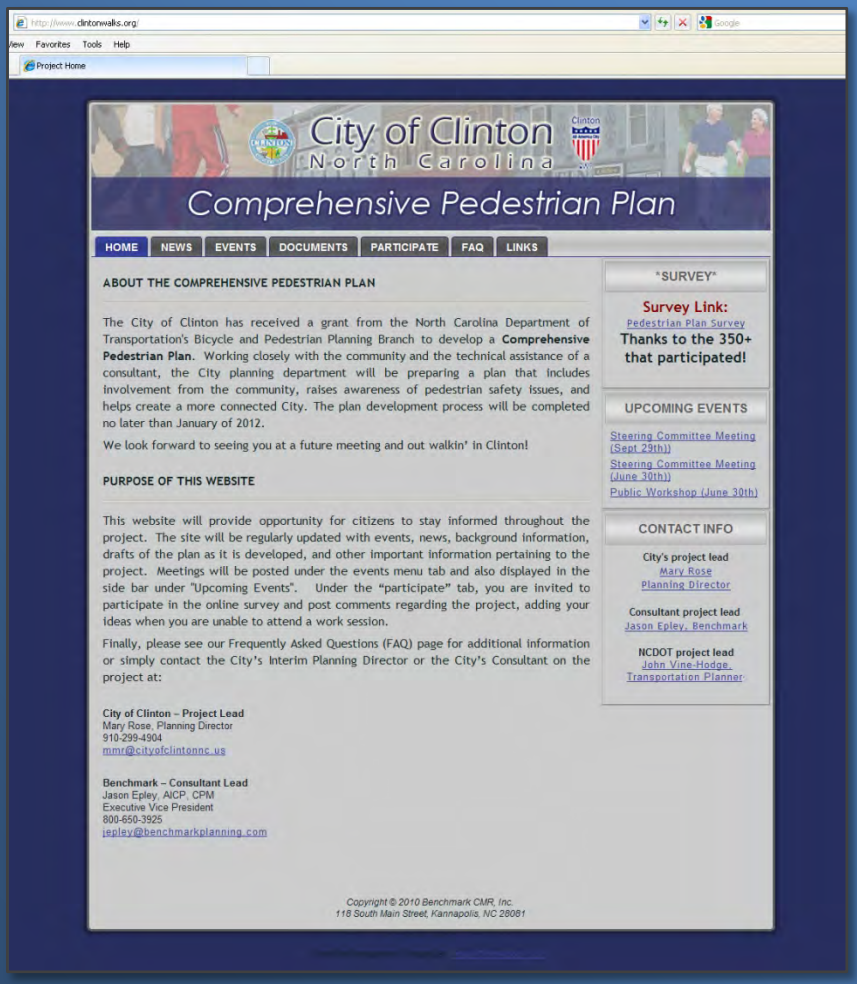


Figure A-1: www.clintonwalks.org website

1. How do you move around the City of Clinton? (Check all that apply)		
Answer Options	**Response Percent**	**Response Count**
I walk	29.3%	94
I ride a bike	15.0%	48
I drive a car (truck, van, motorcycle, etc.)	62.6%	201
Ride in a car or other vehicle with a friend	45.2%	145
Taxi / other private transportation	1.9%	6
	answered question	**321**
	skipped question	**5**

2. How important is walking as a part of your daily routine?		
Answer Options	**Response Percent**	**Response Count**
Very Important	42.8%	139
Somewhat Important	46.5%	151
Not Important - I don't walk anywhere	10.8%	35
	answered question	**325**
	skipped question	**1**

3. How often do you walk now?		
Answer Options	**Response Percent**	**Response Count**
Every day	40.5%	132
Several days a week	29.1%	95
Several days a month	17.2%	56
Not at all	13.2%	43
answered question		**326**
skipped question		**0**

4. How would you rate the conditions for walking in Clinton?		
Answer Options	**Response Percent**	**Response Count**
Good - Little improvement needed (I feel safe)	16.1%	52
Fair - Some improvements needed	56.0%	181
Poor - Many improvements needed (I feel Unsafe)	27.9%	90
answered question		**323**
skipped question		**3**

5. If there were safe pedestrian crossings, sidewalks, trails and adequate lighting near where you live, would you walk more frequently?		
Answer Options	**Response Percent**	**Response Count**
Yes	77.5%	251
No	22.5%	73
	answered question	**324**
	skipped question	**2**

6. Should walking as a form of transportation be a priority in Clinton?		
Answer Options	**Response Percent**	**Response Count**
Yes	63.9%	205
No	13.4%	43
Not concerned about it	22.7%	73
	answered question	**321**
	skipped question	**5**

7. Should the City utilize public funds (local, state and federal) to improve walking conditions in Clinton?		
Answer Options	**Response Percent**	**Response Count**
Yes	59.9%	193
No	15.2%	49
Not sure	24.8%	80
	answered question	**322**
	skipped question	**4**

8. What type of funding should be used to improve facilities? (Check all that apply)		
Answer Options	**Response Percent**	**Response Count**
State and Federal Grants	72.3%	214
Existing Local Taxes	40.9%	121
New Local Taxes	20.6%	61
Local Bonds	25.7%	76
I don't want improvements	13.5%	40
Other (please specify)		32
	answered question	**296**
	skipped question	**30**

9. Why do you walk now or why would you choose to walk in the future? (Check all that apply)		
Answer Options	**Response Percent**	**Response Count**
Transportation for daily activities (work, shopping, etc)	31.5%	98
Recreation / Fitness	78.8%	245
Interaction with neighbors / Social	41.5%	129
Short trips	30.5%	95
Other (please specify)		20
answered question		**311**
skipped question		**15**

10. Do you walk to these destinations now or would you like to walk to these destinations in the future? (Check all that apply)		
Answer Options	**Response Percent**	**Response Count**
Downtown	55.1%	163
Parks	59.8%	177
Place of work	22.6%	67
School	25.7%	76
Restaurants	41.6%	123
Shopping (downtown)	45.3%	134
Shopping (highway locations)	22.6%	67
Entertainment	31.4%	93
Trails and greenways	45.6%	135
Library	35.5%	105
Recreation Centers	38.9%	115
Friends/Family's Homes	67.9%	201
Other (please specify)		15
	answered question	**296**
	skipped question	**30**

11. What discourages you from walking? (Check all that apply)		
Answer Options	**Response Percent**	**Response Count**
Lack of crosswalks at traffic signals	39.1%	119
Lack of pedestrian signals at intersections	33.2%	101
Lack of sidewalks and trails in general	51.0%	155
Lack of connectivity - sidewalks missing in places	40.5%	123
Not interested in walking	11.2%	34
I don't have time to walk every day	19.4%	59
Aggressive people driving	42.8%	130
Too much vehicular traffic	32.2%	98
Sidewalks need repairs	28.0%	85
Nowhere to walk to	25.0%	76
Potential of crime	37.8%	115
Poor street lighting	26.3%	80
I don't feel safe walking on sidewalks right beside the road	28.0%	85
Other (please specify)		29
	answered question	**304**
	skipped question	**22**

12. What are the top three roadways needing sidewalks? (Write in your top three)	
Response	**Response Count**
NC 24/Sunset Avenue (Entire length/and or specific locations)	100
US Business 701 (Entire length/and or specific locations)	44
Beaman Street	17
Elizabeth Street	15
Stewart Avenue	15
US 421	10
Indian Town Road	9
College Street	6
NC 403/Faison Highway	6
Downtown	5
Warsaw Road	5

Responses Counted 2 – 4 times

- Fayetteville Street
- Tram Road
- Butler Avenue
- SE Blvd
- Sampson Street
- McKoy Street
- Raleigh Road
- Bass Lake Road
- Fisher Drive
- Williams Street
- Cutchin Street
- Johnson Street
- Royal Lane
- North Blvd.
- Park Avenue
- Rowan Road
- Boykin Bridge Road
- Country Club areas

***27 other roadways mentioned at least once**

13. What are the top three intersections needing improvements? (Write in your top three)	
Response	**Response Count**
NC 24/Sunset Avenue intersection with US 701/421 Faircloth Freeway Overpass	12
NC 24 intersection at Sampson Crossing (Walmart)	10
Beaman Street at College Street	10
College Street at US 701 BUS	8
Downtown (various locations around courthouse)	5
NC 24 at Sampson County Community College entrance	5
Sunset Avenue at Post Office	5
College Street at Warsaw Road/Stewart	2
College Street at Park Avenue	2
Beaman Street at E Johnson Street	2
Fayetteville Street at Sunset Avenue/Fayetteville Street	2
Beaman Street at Hospital	2
Fayetteville Street at Williams Street	2

***25 other intersections mentioned at least once**

14. What is your gender?		
Answer Options	**Response Percent**	**Response Count**
Female	64.7%	205
Male	35.3%	112
	answered question	**317**
	skipped question	**9**

15. What is your age?		
Answer Options	**Response Percent**	**Response Count**
Age		
0 - 15	44.8%	143
16 - 25	9.4%	30
26 - 40	14.1%	45
41 - 55	19.7%	63
56 - 70	8.8%	28
71 and older	3.1%	10
	answered question	**319**
	skipped question	**7**

16. Where do you live?		
Answer Options	**Response Percent**	**Response Count**
City of Clinton	59.0%	183
Sampson County	41.0%	127
Other (please specify)		16
	answered question	**310**
	skipped question	**16**

Public Workshops

Public workshops were held during the process to allow citizens one-on-one time with the consultant team and City staff in discussing the plan and recommendations. The first workshop was held during an extended lunch hour between 12:00 and 2:00 at the Center for Health and Wellness to reach out to a variety of people who regularly utilize this facility, particularly older residents. At the first workshop residents were asked to provide input on existing conditions, barriers to walking, places where they walk now and general feedback and discussion. The opportunity was given for residents to provide input on the overall vision for the plan development as well. The second workshop was held in the City Hall Auditorium and was focused on the recommendations and projects identified from the existing conditions analysis, pedestrian plan surveys, steering committee feedback, and initial thoughts from the City Staff and consulting team. Each meeting provided citizens the opportunity to draw lines on the map and discuss ideas with fellow residents, city staff and the consulting team.

Figure A-2: Residents giving input at the first public meeting.

Appendix B. Prioritization and Cost Estimates

A. Introduction

As the pedestrian plan was developed, the public input regarding desired improvements was very important as the steering committee evaluated projects and their prioritization level. The steering committee evaluated the background research, consultant recommendations and the public input to develop a unique ranking system for future pedestrian projects from the list of recommended network and intersection improvements. Specific criteria were developed along with corresponding weights for the recommended network and intersection improvements respectively. Cost estimates were prepared for the top five pedestrian network improvements and the top five intersection improvements.

B. Pedestrian Network Priorities

Pedestrian Network Improvement Project Criteria

A. US/NC Highway (20 points)
B. Serves high traffic residential street (15 points)
C. Connects existing pedestrian network routes (15 points)
D. Connects to parks/recreational facilities (10 points)
E. Completes or extends an existing pedestrian route (10 points)
F. Provides direct access to a school (10 points)
G. Connects residential neighborhoods with Downtown (5 points)
H. Connects residential neighborhood to commercial / employment centers (5 points)
I. Route within ¼ mile of a school (5 points)
J. Connects planned pedestrian network routes (5 points)
K. Citizen Priority from Surveys (50 points)

Figure B-1. Pedestrian Network Improvement Prioritization Table

No.	Pedestrian Corridor	Location	A	B	C	D	E	F	G	H	I	J	K	Total
1	NC 24 / Sunset Ave	Coharie Rd to Fayetteville Street	20	0	0	10	10	10	5	5	5	5	50	120
2	Royal Lane Park Area	A. Royal Lane	0	15	0	10	0	0	0	5	0	5	0	35
		B. Pierce Street	0	0	0	10	0	0	0	0	0	5	0	15
		C. Leisure Lane	0	0	0	10	0	0	0	0	0	5	0	15
		D. Ellen Street	0	0	0	10	0	0	0	0	0	5	0	15
		E. Northern end of park	0	0	0	10	0	0	0	0	0	5	0	15
3	Fayetteville Street/Barden Street	Intersection with Sunset Avenue to Byrd Street	0	15	15	10	10	0	5	0	5	5	0	65
4	Williams Street	Neat W. Johnston St. and W. Lee St.	0	15	15	0	10	0	5	0	5	0	0	50
5	Calhoun Street	Proposed Dollar Branch Greenway Trailhead to Barden Street	0	0	0	0	0	0	0	0	0	5	0	5
6	McKoy Street	Community Center to US 701 underpass	0	15	0	0	10	0	5	5	0	5	0	40
7	Sampson Street	Pearl Street to McKoy Street	0	15	0	0	10	0	5	5	0	5	0	40
8	North Blvd./US 421/McKoy Street	US 701 Bridge underpass on Sampson Street to North Blvd to existing sidewalk across US 701 Bridge on North Blvd	20	0	0	0	10	0	0	5	0	5	0	40
9	Beaman Street	Cooper Drive (Hospital) to North Blvd.	0	15	15	0	10	0	5	5	0	5	50	105
10	Stewart Avenue	Beginning at intersection with College Street	0	15	15	0	0	0	0	0	0	5	50	85
11	Park Ave. / Smith St.	Peachtree Road to US 701 BUS	0	15	0	0	10	0	0	5	0	5	0	35
12	Willow Rd	Raleigh Road to US 701 BUS	0	15	0	0	0	0	0	5	0	5	0	25
13	Raleigh Rd/Kimbrough Rd	Existing Sidewalk on Kimbrough to Raleigh Road to US BUS 701	0	15	0	0	10	10	0	5	5	5	0	50
14	US 701 BUS	Entire segment within city limits	20	0	15	0	0	0	0	5	5	5	50	100
15	College Street	Raleigh Road/Jacobs Street to US 701 Business	0	0	0	0	10	0	0	5	0	5	0	20
16	Warsaw Road	College Street to E. Morisey Blvd.	0	15	15	0	10	0	0	0	5	5	0	50

Figure B-1. Pedestrian Network Improvement Prioritization Table (continued)

No.	Pedestrian Corridor	Location	A	B	C	D	E	F	G	H	I	J		Total
17	Warsaw Road	E. Morisey Blvd. to US 701 BUS	0	0	0	0	10	0	0	5	0	5	0	20
18	Warsaw Road	US 701 BUS to City Limit	20	0	0	0	0	0	0	5	0	5	0	30
19	East Railroad Street	Lisbon Street to US 701 BUS to City Limit	0	0	0	0	0	0	0	5	0	5	0	10
20	Martin Luther King Jr. Blvd.	US BUS 701 to W. Butler Ave./Tram Road	20	0	15	0	0	10	0	5	5	5	0	60
21	Southwest Blvd.	MLKJ Blvd. to US 701 BUS	0	15	0	0	0	0	0	5	5	5	0	30
22	West Butler Avenue	Existing sidewalk to MLKJ Blvd.	0	15	0	0	10	10	0	5	5	5	0	50
23	Stetson Street	Elizabeth Street to W. Butler Avenue	0	15	15	0	10	0	5	0	5	5	0	55
24	West Morisey Blvd.	Lisbon Street to Elizabeth Street	0	0	15	0	10	0	0	0	0	5	0	30
25	Ferrell Street	W. Morisey Blvd. to Elizabeth Street	0	0	15	10	10	0	5	5	0	5	0	50
26	Tram Road	MLKJ Blvd. to Indian Town Road	0	0	0	0	0	10	0	0	5	5	0	20
27	Indian Town Road	Tram Road to Elizabeth Street	0	0	0	10	0	10	0	0	5	5	0	30
28	Elizabeth Street	Barrus Avenue to Middle and High School (Indian Town Road)	0	15	0	10	10	10	5	0	5	5	50	110
29	Proposed SR5 (Sunset Ave Access Rd.) /Westover Dr.	NC 24/Sunset Ave to Tram Road	0	0	0	10	0	0	0	5	0	5	0	20
Greenway Segments														
A	Western Loop Greenway	Royal Lane Park to NC 24/Sunset Ave.	0	0	0	10	0	0	0	5	0	5	0	20
B	Northern Greenway	US 701 Underpass to City Limit	0	0	0	0	0	0	0	5	0	5	0	10
C	Williams Old Mill Branch Greenway	US 701 Underpass to US 701 BUS	0	0	0	0	10	0	0	5	5	5	0	25
D	Cat Tail Branch Greenway	Intersection with Williams Old Mill Branch Greenway to Fisher Drive Park	0	0	15	10	0	0	5	0	0	5	0	35
E	Northeastern Greenway (Beaverdam Branch)	US 701 BUS to City Limit	0	0	0	0	0	10	0	5	5	5	0	25
F	Dollar Branch Greenway	Calhoun Street to MLK Jr Blvd	0	0	15	0	0	10	0	5	5	5	0	40
G	Southwestern Greenway	NC 24 / Sunset Ave to Elizabeth Street / Boykin Bridge Road	0	0	0	0	10	10	0	5	5	5	0	35

Figure B-2. Priority Network Improvements and Estimated Costs

No.	Pedestrian Corridor	Location		Comments and Barriers	Approximate Length	Other	Estimated Cost
1	NC 24 / Sunset Ave	Coharie Rd to Fayetteville Street	Sidewalks both sides of roadway, crosswalks	Coordinate with NCDOT on new 24 plans to integrate recommended pedestrian facilities. City has budgeted $53,000 or 20 percent of NCDOT estimates.	6,625 feet (funded – Coharie to Faircloth Freeway) 2,875 feet (unfunded TBD per NCDOT plans)	N/A	$265,000 (6,625' only)
28	Elizabeth Street	Barrus Avenue to Middle and High School (Indian Town Road)	Sidewalk, sidepath and crosswalks	A sidepath for multi-use is recommended from the bridge to the schools.	4,000 feet	N/A	$440,000
9	Beaman Street	Cooper Drive (Hospital) to North Blvd.	Sidewalks and crosswalks on east side of the road	Coordinate with recommended pedestrian intersection improvements at hospital and proposed Williams Old Mill Branch Greenway and crossing at bridge.	2,900 feet	Bridge $45,000	$116,000
14	US 701 BUS	Entire segment within city limits	Sidewalks and crosswalks along both sides of highway	Consider complete streets/ road diet project for entire length of corridor. This will require a detailed corridor study to determine feasibility and costs.	TBD Per NCDOT/Clinton Corridor Study	Corridor Study $75,000	TBD
10	Stewart Avenue	Beginning at intersection with College Street	Sidewalks on at least one side of roadway	This segment of roadway is highly trafficked as a cut-through. Pedestrians use this route as well. Speed limit reduction may be of consideration in this area.	4,100 feet	N/A	$164,000

Pedestrian Intersection Improvements Criteria

A. On US or NC Route – (20 points)
B. Proximity to pedestrian crashes – (15 points)
C. On Existing Pedestrian Route – (15 points)
D. Proximity to School – (10 points)
E. Commercial Intersection – (10 points)
F. Proximity to Major Employer – (10 points)
G. Proximity to Park/Rec Facility – (10 points)
H. Current Signalized Intersection – (10 points)
I. Citizen Input – (50 points)

Figure B-3. Priority Intersection Improvement Prioritization Table

No.	Intersection Location	A	B	C	D	E	F	G	H	I	Total
1	Forest Drive at NC 24	20	15	0	10	0	10	0	10	0	65
2	Airport Rd at NC 24	20	0	0	10	10	10	0	0	0	50
3	Overland Rd at NC 24	20	0	0	0	10	10	0	0	0	40
4	Royal Lane Park Area at NC 24										
	A. Royal Lane at NC 24	20	15	0	0	10	10	10	0	0	65
	B. Pierce Street at NC 24	20	15	0	0	0	0	10	0	0	45
	C. Leisure Lane at Pierce Street and Royal Lane	0	15	0	0	0	0	10	0	0	25
	D. Ellen Street at Pierce Street and Royal Lane	0	15	0	0	0	0	10	0	0	25
5	Shamrock Road with New SR5	0	0	0	0	10	10	0	0	0	20
6	Shield Street at NC 24/Sunset Ave	20	15	0	0	10	10	10	10	0	75
7	US 701/421 Bridge at NC 24/Sunset Ave	20	15	0	0	0	10	0	10	50	105
8	Finch Street at Sunset Avenue	0	15	15	10	0	0	0	0	0	40

Figure B-3. Priority Intersection Improvement Prioritization Table (continued)

No.	Intersection Location	A	B	C	D	E	F	G	H	I	Total
9	Fayetteville Street (Multiple Locations)										
	A. N. Chestnut / Fayetteville Street	0	15	15	10	10	10	0	0	50	110
	B. Williams St / Fayetteville Street	0	15	15	10	0	10	0	0	50	100
	C. W. Faison Street / Fayetteville Street	0	15	15	10	10	10	0	0	50	110
10	McKoy Street at Sampson Street	0	0	0	0	10	0	0	0	0	10
11	US 701 Bridge Underpass and McKoy Street	20	0	0	0	0	10	0	0	0	30
12	North Blvd / US 701 Overpass Bridge	20	0	15	0	0	10	0	0	0	45
13	North Blvd. / Beaman Street	0	15	15	0	10	10	0	0	0	50
14	Beaman Street at Hospital	0	0	15	0	10	10	10	0	50	95
15	Beaman and E. Johnson	0	0	15	0	10	10	10	10	0	55
16	Smith Street at US 701 Bus. / Jordan Plaza	20	15	0	0	10	10	0	10	0	65
17	Raleigh Road and Willow Road (southern leg)	0	0	0	0	0	10	0	0	0	10
18	College Street at US 701 Bus.	20	0	0	0	10	10	0	10	0	50
19	College Street at Park Avenue	0	15	15	0	0	0	0	0	0	30
20	College Street at Warsaw Road	0	15	15	0	0	0	0	10	0	40
21	Beaman Street at Vance	0	0	15	0	10	10	0	0	0	35
22	College Street at Beaman Street	0	15	15	0	10	10	0	10	50	110
23	Downtown (multiple locations)										
	A. Courthouse Square	0	15	15	0	10	10	0	10	50	110
	B. Mid-Block along Vance St (Courthouse square)	0	15	15	0	10	10	0	0	50	100
	C. Intersection of W. Main St. and E. Main St at Wall Street	0	15	15	0	10	10	0	0	50	100

Figure B-3. Priority Intersection Improvement Prioritization Table (continued)

No.	Intersection Location	A	B	C	D	E	F	G	H	I	Total
23	Downtown (multiple locations – continued)										
	D. Elizabeth St. and Wall St.	0	15	15	0	10	10	0	10	50	110
	E. Elizabeth St. and Lisbon St.	0	15	15	0	10	10	0	0	50	100
	F. Lisbon St. and Morisey Blvd.	0	0	15	0	10	10	0	10	50	95
	G. McKoy and Sampson St to Johnson	0	15	15	0	10	10	0	0	50	100
24	Warsaw Rd/US 701 Bus.	20	15	0	0	10	10	0	10	0	65
25	E Railroad St /US 701 Bus.	20	15	0	0	10	10	0	10	0	65
26	MLKJ Blvd/US 701 Bus.	20	15	0	0	10	10	0	10	0	65
27	Butler Avenue/MLKJ Blvd	20	15	0	10	10	10	0	0	0	65
28	Tram Road / Westover Rd	0	0	0	0	0	0	0	0	0	0
29	Indian Town Road / Elizabeth Street	0	0	0	10	0	0	10	0	0	20
30	Elizabeth Street/Bridge/Westover Rd	0	0	0	0	0	0	0	0	0	0
Greenway Corridors											
A	Dollar Branch Greenway / Sunset Ave (NC 24)	0	15	15	10	0	0	0	0	0	40
B	Northern Greenway / North Blvd	0	0	0	0	0	10	0	0	0	10
C	Cat Tail Branch Greenway / E Johnson St	0	0	15	0	0	10	10	0	0	35
D	Williams Old Mill Branch Greenway / Beaman St	0	0	0	0	0	10	0	0	0	10
E	Williams Old Mill Branch Greenway / US 701 BUS	20	15	0	10	0	10	0	0	0	55
F	Dollar Branch Greenway / Elizabeth St	0	0	0	0	0	0	0	0	0	0
G	Southwestern Greenway/Boykin Bridge Rd (Middle and High School)	0	0	0	10	0	0	10	0	0	20
H	Southwestern Greenway/W. Main St	0	0	0	0	0	0	0	0	0	0
I	Southwestern Greenway / Overland Rd	0	0	0	0	0	10	0	0	0	10

Figure B-4. Priority Intersection Improvement Cost Estimates

No.	Location		Comments and Barriers	Project Components	Estimated Cost
9	Fayetteville St. (Multiple Locations)				
	A. Sunset Avenue / Fayetteville Street	Crosswalk, geometric changes, and warning signs	The alignment of Sunset with Fayetteville St. has created a lengthy distance for a pedestrian to cross. Mark with ladder style crosswalks, tighten curb radius on eastern approach and erect warning signs.	375 Sq. Ft. Curb Extension ($20 per) 1 ladder crosswalk (55')	$9,500
	B. N. Chestnut / Fayetteville Street	Crosswalk, refuge Island, and geometric changes	The alignment of N. Chestnut with Fayetteville St. has created an unusually lengthy walk for a pedestrian to cross three lanes. A ladder style crosswalk marking with a substantial refuge island, a tighter curb radius and warning signage are recommended.	800 Sq. Ft. Curb Extension ($20 per) 850 Sq. Ft. Refuge Island ($20 per) 1 ladder crosswalk (77')	$35,000
	C. Williams St / Fayetteville Street	Crosswalk and geometric changes	Ladder style crosswalks across Williams Street, tighten curb radius, and erect warning signage.	230 Sq. Ft. Curb Extension ($20 per) 1 ladder crosswalk (55')	$6,600
	D. Giddens Street / Fayetteville Street	Crosswalks	Mark/Stripe crosswalks	1 ladder crosswalk (30')	$2,000
	E. W. Faison Street / Fayetteville Street	Crosswalks	Mark/Stripe crosswalks	1 ladder crosswalk (55')	$2,000

Figure B-4. Priority Intersection Improvement Cost Estimates (continued)

No.	Location		Comments and Barriers	Project Components	Estimated Cost
23	Downtown (multiple locations)				
	A. Courthouse Square	Additional crosswalks, restriping and warning signage	Courthouse square has numerous crosswalks; however, several areas do not have markings on the pavement for safe pedestrian crossing or need restriping. Along the primary traffic circulation route, flashing pedestrian signs or "State Law: Stop for Pedestrian in Crosswalk" signs should be considered.	4 standard crosswalks (72') Costs increase if decorative materials are selected.	$4,000
	B. Mid-Block along Vance St (Courthouse square)	Crosswalks	This mid-block area connects a parking area with courthouse. A safe pedestrian crossing is needed in this more dense pedestrian area.	1 ladder crosswalk (30') Costs increase if decorative materials are selected.	$2,000
	C. Intersection of W. Main St. and E. Main St at Wall Street	Crosswalks	Pedestrian islands and ramps exist; however, pavement should be striped and marked for safe pedestrian crossing.	2 standard crosswalks (58')	$2,000
	D. Elizabeth St. and Wall St.	Crosswalks	Signalized intersection in need of pedestrian crosswalks. Pavement to be striped and marked for safe pedestrian crossing.	4 standard rosswalks (130')	$4,000
	E. Crosswalks to Farmer's Market Parking (College and Lisbon Streets)	Crosswalks and warning signs	Pavement to be marked for safe pedestrian crossing at College and at Lisbon/Elizabeth. Active parking especially during Farmer's Market / events.	2 standard crosswalks (60')	$2,000
	F. Lisbon St. and Morisey Blvd.	Restripe crosswalks	Crosswalks are becoming faded and worn (standard pattern).	4 standard crosswalks (195')	$6,000
	G. McKoy and Sampson St. to Faison St.	Crosswalks	Standard marked crosswalks needed at intersections of these streets with Loop Street and Faison Street.	4 standard crosswalks (130')	$4,000

Figure B-4. Priority Intersection Improvement Cost Estimates (continued)

No.	Location		Comments and Barriers	Project Components	Estimated Cost
22	College Street at Beaman St.	Improve crosswalks	Existing crosswalks are in need of restriping	4 standard crosswalks	$4,000
7	US 701/421 Bridge at NC 24/Sunset Ave	Crosswalks and warning signs	A diverging diamond interchange is proposed for this intersection. Pedestrian facilities should be included in the design providing safe access. All required pedestrian warning signage should be installed. Coordinate with scheduled NCDOT improvements for NC 24/Sunset Avenue.	Costs have been included as part of larger NC 24 Project, which totaled $265,000 of which the City is contributing $53,000.	Part of NC 24 Project
	Step 1	Barricade Fencing Area		Re-enforce Fencing	$200
	Step 2	Alternative Design for future bridge replacement	NCDOT engineers will examine the diverging diamond as part of the design phase for the overpass bridge replacement. In the interim NCDOT is moving forward with a temporary pedestrian walkway along the southern side of NC 24 behind the guard rail.	Design Fees Interim Walkway	TBD
	Step 3	Woodland Drive to Fiarcloth Freeway	This segment will complete pedestrian network to Faircloth Freeway	Costs have been included as part of larger NC 24 Project, which totaled $265,000 of which the City is contributing $53,000.	Part of NC 24 Project
	Step 4	Greenway (Phase I)	Proposed trail surface is an existing and maintained sewer easement, reducing construction costs. Three roadway crossings.	3,000 Linear Ft. ($110/linear ft) 3 Crossings ($5,000 ea.) Sunset Avenue Crossing may cost upward $40,000 depending on final roadway design.	$345,000 to $380,000
14	Beaman Street at Hospital	Crosswalks and 2 additional warning signs.	Relocate southern crosswalk to approximate location of existing signage. 2 additional warning signs to clearly mark each individual crosswalk from both sides. 2 ladder crosswalks.	2 ladder crosswalks	$4,500

General Cost Estimates

It is important to note that cost estimates are somewhat difficult to pinpoint under the current economic conditions where prices for raw materials continue to fluctuate and contractor bidding remains more competitive, lowering actual construction costs significantly on almost any project. However, based as closely on recent trends as possible, the cost estimates above are to be considered guides and need to be supported by engineering drawings and more accurate cost figures. Cost estimates will also become dated the further out these projects are actually implemented.

Relevant to the recommendations in this plan, the following general cost estimates were utilized:

- Sidewalk Construction $40 / Linear Foot
- Standard Crosswalk $1,000 per intersection
- Ladder Style Crosswalks $2,000 per intersection
- Curb Extensions $20 / Square Foot
- Greenway Trail & Sidepath (Asphalt) $110 / Linear Foot (cleared, compact subsurface pre-existing)
- Refuge Islands $10,000 - $40,0000
- Crosswalks with Countdown Signals $5,000 to $15,000 per intersection
- Pedestrian Traffic Signals & HAWK Signals $40,000 to $75,000
- Mid-Block Flashing Crosswalk: $40,000

Appendix C. NCDOT Funding Source Research

A. NCDOT Funding Research

Over the history of the Pedestrian Planning Program, NCDOT has put together an extensive collection of funding resources in the collection of Pedestrian Plans that have been produced by consultants under the direction of NCDOTs Division of Bicycle and Pedestrian Planning Branch. Below, as gathered directly from NCDOTs pedestrian plan resources and examples, is a list of those resources for possible funding for Clinton's projects. The Advisory Committee along with assistance from City staff will need to evaluate these resources to see if any of the City's projects can be funded, whether in full or partially, by these grants.

B. State and Federal Resources

In North Carolina, most Federal funding is typically directed through State agencies to local governments either in the form of grants or direct appropriations. These projects do not qualify for the recently passed federal stimulus funding (2009 American Recovery and Reinvestment Act) since they are not "shovel ready." Also, State budget shortfalls may make it extremely difficult to accurately forecast available funding for future project development. The following is a list of possible Federal and State funding sources that could be used to support construction of the many pedestrian projects. Federal funding requires a 20% local match, however the recent stimulus money does not require a match. Since these funding categories are difficult to forecast, it is recommended that the Town continue to work with the Triangle-Area RPO on getting pedestrian projects listed in the TIP (Transportation Improvement Program), as discussed below.

Department of Energy (DOE)

The Department of Energy's Energy Efficiency and Conservation Block Grants (EECBG) grants may be used to reduce energy use and fossil fuel emissions and for improvements in energy efficiency. Section 7 of the funding announcement states that these grants provide opportunities for the development and implementation of transportation programs to conserve energy used in transportation including development of infrastructure such as bike lanes and pathways and pedestrian walkways.

Although, this grant period has passed, more opportunities may arise. More information can be found at http://www.eecbg.energy.gov/

NC Department of Transportation and SAFETEA-LU

The most likely source of funding for the pedestrian projects would come from the North Carolina Department of Transportation and the federal funding program SAFETEA-LU. Some of the sub-programs within SAFETEA-LU and within NCDOT are listed below:

- State Transportation Improvement Program (STIP): NCDOT annually sets aside $6 million for the construction of bicycle and pedestrian improvements that are independent of scheduled highway projects in communities throughout the state. Types of projects include shared-use paths, wide-paved shoulders, bike lanes, and sidewalks. These independent projects are funded through the Strategic Prioritization/State Transportation Improvement Program (STIP) process. The strategic prioritization process serves as the primary input source for the STIP. Metropolitan Planning Organizations, (MPOs), Rural Planning Organizations (RPOs), NCDOT Divisions, and the Division of Bicycle and Pedestrian Transportation (DBPT) as well as other units at NCDOT may submit projects through the prioritization process. For bike and pedestrian projects, the DBPT utilizes a project prioritization methodology with defined criteria to rank all bike/pedestrian projects. This process occurs every two years. Priority projects are included in the developmental STIP (years 6 to 10) and the 10-year Program & Resource Plan.

- NCDOT Discretionary Funds: The Statewide Discretionary Fund consists of $10 million and is administered by the Secretary of the Department of Transportation. This fund can be used on any project at any location within the State. Primary, urban, secondary, industrial access, and spot safety projects are eligible for this funding. The Town would have to make a direct appeal to the Secretary of NCDOT to access these funds.

- NCDOT Contingency Fund: The Statewide Contingency Fund is a $10 million fund administered by the Secretary of Transportation. Again, the Town would have to appeal directly to the Secretary.

- NCDOT Enhancement Funding: Federal Transportation Enhancement funding is administered by NCDOT and serves to strengthen the cultural, aesthetic, and environmental aspects of the State's intermodal transportation system. Transportation Enhancement (TE) funding is awarded through NCDOT. The State typically will make a Call for Projects, and each project must benefit the traveling public and help communities increase transportation choices and access, enhance the built or natural environment and create a sense of place.

- NCDOT Bicycle and Pedestrian Project: Funds for bicycle and pedestrian projects come from several different sources. Allocation of funds depends on the type of project/program and other criteria. Projects can include independent and incidental projects. Bicycle and pedestrian accommodations such as bike lanes, widened paved shoulders, sidewalks and bicycle-safe bridge design are frequently funded as incidental features of highway projects. Most pedestrian safety accommodations built by NCDOT are included as part of scheduled highway improvement projects funded with a combination of federal and state roadway construction funds or with a local fund match.

- NCDOT's Sidewalk Program – Each year, a total of $1.4 million in STP-Enhancement funding is set aside for sidewalk construction, maintenance and repair. Each of the 14 highway divisions across the state receives $100,000 annually for this purpose. Funding decisions are made by the district engineer. Prospective applicants are encouraged to contact their district engineer for information on how to apply for funding.

NC Department Of Environment – Recreational Trails and Adopt-A-Trail Grants

The State Trails Program is a section of the N.C. Division of Parks and Recreation. The program originated in 1973 with the North Carolina Trails System Act and is dedicated to helping citizens, organizations and agencies plan, develop and manage all types of trails ranging from greenways and trails for hiking, biking and horseback riding to river trails and off-highway vehicle trails. The Recreation Trails Program awards grants up to $75,000 per project. The Adopt-A-Trail Program awards grants up to $5,000 per project.

Powell Bill Funds

Annually, State street-aid (Powell Bill) allocations are made to incorporated municipalities which establish their eligibility and qualify as provided by G.S. 136-41.1 through 136-41.4. Powell Bill funds shall be expended only for the purposes of maintaining, repairing, constructing, reconstructing or widening of local streets that are the responsibility of the municipalities or for planning, construction, and maintenance of bikeways or sidewalks along public streets and highways.

Community Development Block Grant Funds

Community Development Block Grant (CDBG) funds are available to local municipal or county governments for projects that enhance the viability of communities by providing decent housing and suitable living environments and by expanding economic opportunities, principally for persons of low- and moderate-income. State CDBG funds are provided by the U.S. Department of Housing and Urban Development (HUD) to the state of North Carolina. Some urban counties and cities in North Carolina receive CDBG funding directly from HUD. Each year, CDBG provides funding to local governments for hundreds of critically-needed community improvement projects throughout the state. These community improvement projects are administered by the Division of Community Assistance and the Commerce Finance Center under eight grant categories. Two categories might be of support to the City of Clinton's Pedestrian Projects: infrastructure and community revitalization.

Land and Water Conservation Trust Fund

The Land and Water Conservation Fund (LWCF) has historically been a primary funding source of the US Department of the Interior for outdoor recreation development and land acquisition by local governments and state agencies. In North Carolina, the program is administered by the Department of Environment and Natural Resources.

N.C. Parks and Recreation Trust Fund (PARTF)

The Parks and Recreation Trust Fund (PARTF) provide dollar-for-dollar matching grants to local governments for parks and recreational projects to serve the general public. Counties, incorporated municipalities and public authorities, as defined by G.S. 159-7, are eligible applicants.

A local government can request a maximum of $500,000 with each application. An applicant must match the grant dollar-for-dollar, 50% of the total cost of the project, and may contribute more than 50%. The appraised value of land to be donated to the applicant can be used as part of the match. The value of in-kind services, such as volunteer work, cannot be used as part of the match. http://www.ncparks.gov/About/grants/partf_main.php

Safe Routes to School Program

(MANAGED BY NCDOT, DBPT)

The NCDOT Safe Routes to School Program is a federally funded program that was initiated by the passing of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005, which establishes a national SRTS program to distribute funding and institutional support to implement SRTS programs in states and communities across the country. SRTS programs facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools. The Division of Bicycle and Pedestrian Transportation at NCDOT is charged with disseminating SRTS funding.

The state of North Carolina was allocated $15 million in Safe Routes to School funding for fiscal years 2005 through 2009 for infrastructure or non-infrastructure projects. In 2009, more than $3.6 million went to 22 municipalities and local agencies for infrastructure and non-infrastructure projects. All proposed projects must relate to increasing walking or biking to and from an elementary or middle school. An example of a non-infrastructure project is an education or encouragement program to improve rates of walking and biking to school. An example of an infrastructure project is construction of sidewalks around a school. Infrastructure improvements under this program must be made within 2 miles of an elementary or middle school. The state requires the completion of a competitive application to apply for funding. For more information, visit www.ncdot.org/programs/safeRoutes/ or contact DBPT/NCDOT, (919) 807-0774.

C. Local Government Resources

Local funding sources that would support sidewalk and pedestrian project construction will most likely be limited but should be explored.

Local Area Rural Planning Organization

The Triangle Area Rural Planning Organization (RPO) manages the transportation planning process required by Federal law. The RPO plans for the area's surface transportation needs, including highways, transit, bicycle, and pedestrian facilities. There are two subcommittees of the RPO: the Technical Advisory Committee and the Technical Coordinating Committee. An important part of the transportation planning process is to identify transportation needs and to explore feasible alternatives to meet those needs. Plans and programs are often conducted in partnership with the NC Department of Transportation to identify needs and projects to enhance Clinton's transportation infrastructure.

It is suggested that the Town work closely with the RPO on getting these projects listed on the TIP since this may be the primary source of funding for the project. Typically, projects on this list require a 20% local match.

City Of Clinton Capital Improvement Programming and Reserve Funds

The City of Clinton may have funding available to support some elements of construction or repair. It will be important to meet with City Council representatives and the City Manager to judge the availability of this funding.

Other Local Funding Options

- Bonds/Loans
- Taxes
- Impact fees
- Exactions
- Tax increment financing
- Partnerships

D. Private Sector Resources

Many communities have solicited greenway funding assistance from private foundations and other conservation-minded benefactors. Below are several examples of private funding opportunities available.

Land for Tomorrow Campaign

Land for Tomorrow is a diverse partnership of businesses, conservationists, farmers, environmental groups, health professionals and community groups committed to securing support from the public and General Assembly for protecting land, water and historic places. The campaign is asking the North Carolina General Assembly to support issuance of a bond for $200 million a year for five years to preserve and protect its special land and water resources. Land for Tomorrow will enable North Carolina to reach a goal of ensuring that working farms and forests; sanctuaries for wildlife; land bordering streams, parks and greenways; land that helps strengthen communities and promotes job growth; historic downtowns and neighborhoods; and more, will be there to enhance the quality of life for generations to come. Website: http://www.landfortomorrow.org/

The Robert Wood Johnson Foundation

The Robert Wood Johnson Foundation was established as a national philanthropy in 1972 and today it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas:

- To assure that all Americans have access to basic health care at a reasonable cost
- To improve care and support for people with chronic health conditions
- To promote healthy communities and lifestyles
- To reduce the personal, social and economic harm caused by substance abuse: tobacco, alcohol, and illicit drugs

For more specific information about what types of projects are funded and how to apply, visit http://www.rwjf.org/applications/.

North Carolina Community Foundation

The North Carolina Community Foundation, established in 1988, is a statewide foundation seeking gifts from individuals, corporations, and other foundations to build endowments and ensure financial security for nonprofit organizations and institutions throughout the state. Based in Raleigh, North Carolina, the foundation also manages a number of community affiliates throughout North Carolina, that make grants in the areas of human services, education, health, arts, religion, civic affairs, and the conservation and preservation of historical,

cultural, and environmental resources. The foundation also manages various scholarship programs statewide. Web site: http://nccommunityfoundation.org/

Z. Smith Reynolds Foundation

This Winston-Salem-based Foundation has been assisting the environmental projects of local governments and non-profits in North Carolina for many years. They have two grant cycles per year and generally do not fund land acquisition. However, they may be able to offer support in other areas of open space and greenways development. More information is available at www.zsr.org.

Bank of America Charitable Foundation, Inc.

The Bank of America Charitable Foundation is one of the largest in the nation. The primary grants program is called Neighborhood Excellence, which seeks to identify critical issues in local communities. Another program that applies to greenways is the Community Development Programs, and specifically the Program Related Investments. This program targets low and moderate income communities and serves to encourage entrepreneurial business development. Visit the web site for more information: www.bankofamerica.com/foundation.

Duke Energy Foundation

Funded by Duke Energy shareholders, this non-profit organization makes charitable grants to selected non-profits or governmental subdivisions. Each annual grant must have:

- An internal Duke Energy business "sponsor"
- A clear business reason for making the contribution

The grant program has three focus areas: Environment and Energy Efficiency, Economic Development, and Community Vitality. Related to this project, the Foundation would support programs that support conservation, training and research around environmental and energy efficiency initiatives. Web site: http://www.duke-energy.com/community/foundation.asp.

American Greenways Eastman Kodak Awards

The Conservation Fund's American Greenways Program has teamed with the Eastman Kodak Corporation and the National Geographic Society to award small grants ($250 to $2,000) to stimulate the planning, design and development of greenways. These grants can be used for activities such as mapping, conducting ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, and building trails. Grants cannot be used for academic research, institutional support, lobbying or political activities. For more information visit The Conservation Fund's website at: www.conservationfund.org.

National Trails Fund

American Hiking Society created the National Trails Fund in 1998, the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America. 73 million people enjoy foot trails annually, yet many of our favorite trails need major repairs due to a $200 million backlog of badly needed maintenance. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools and materials to protect America's cherished public trails. To date, American Hiking has granted more than $240,000 to 56 different trail projects across the U.S. for land acquisition, constituency building campaigns, and traditional trail work projects. Awards range from $500 to $10,000 per project.

Projects the American Hiking Society will consider include:

- Securing trail lands, including acquisition of trails and trail corridors, and the costs associated with acquiring conservation easements.
- Building and maintaining trails which will result in visible and substantial ease of access, improved hiker safety, and/or avoidance of environmental damage.
- Constituency building surrounding specific trail projects - including volunteer recruitment and support.

Web site: www.americanhiking.org/alliance/fund.html.

The Conservation Alliance

The Conservation Alliance is a non-profit organization of outdoor businesses whose collective annual membership dues support grassroots citizen-action groups and their efforts to protect wild and natural areas. One hundred percent of its member companies' dues go directly to diverse, local community groups across the nation - groups like Southern Utah Wilderness Alliance, Alliance for the Wild Rockies, The Greater Yellowstone Coalition, the South Yuba River Citizens' League, RESTORE: The North Woods and the Sinkyone Wilderness Council (a Native American-owned/operated wilderness park). For these groups, who seek to protect the last great wild lands and waterways from resource extraction and commercial development, the Alliance's grants are substantial in size (about $35,000 each), and have often made the difference between success and defeat. Since its inception in 1989, The Conservation Alliance has contributed $4,775,059 to grassroots environmental groups across the nation, and its member companies are proud of the results: To date the groups funded have saved over 34 million acres of wild lands and 14 dams have been either prevented or removed-all through grassroots community efforts.

The Conservation Alliance is a unique funding source for grassroots environmental groups. It is the only environmental grant maker whose funds come from a potent yet largely untapped constituency for protection of ecosystems - the non-motorized outdoor recreation industry and its customers. This industry has great incentive to protect the places in which people use the clothing, hiking boots, tents and backpacks it sells. The industry is also uniquely positioned to educate outdoor enthusiasts about threats to wild places, and engage them to take action. Finally, when it comes to decision-makers - especially those in the Forest Service, National Park Service, and Bureau of Land Management, this industry has clout - an important tool that small advocacy groups can wield.

The Conservation Alliance Funding Criteria: The Project should be focused primarily on direct citizen action to protect and enhance our natural resources for recreation. We're not looking for mainstream education or scientific research projects, but rather for active campaigns. All projects should be quantifiable, with specific goals, objectives and action plans and should include a measure for evaluating success. The project should have a good chance for closure or significant measurable results over a fairly short term (one to two years). Funding emphasis may not be on general operating expenses or staff payroll.

Web site: www.conservationalliance.com/index.m. E-mail: john@conservationalliance.com.

National Fish and Wildlife Foundation (NFWF)

The National Fish and Wildlife Foundation (NFWF) is a private, nonprofit, tax-exempt organization chartered by Congress in 1984. The National Fish and Wildlife Foundation sustains, restores, and enhances the Nation's fish, wildlife, plants and habitats. Through leadership conservation investments with public and private partners, the Foundation is dedicated to achieving maximum conservation impact by developing and applying best practices and innovative methods for measurable outcomes.

The Foundation awards matching grants under its Keystone Initiatives to achieve measurable outcomes in the conservation of fish, wildlife, plants and the habitats on which they depend. Awards are made on a competitive basis to eligible grant recipients, including federal, tribal, state, and local governments, educational institutions, and non-profit conservation organizations. Project proposals are received on a year-round, revolving basis with two decision cycles per year. Grants generally range from $50,000-$300,000 and typically require a minimum 2:1 non-federal match.

Funding priorities include bird, fish, marine/coastal, and wildlife and habitat conservation. Other projects that are considered include controlling invasive species, enhancing delivery of ecosystem services in agricultural systems, minimizing the impact on wildlife of emerging energy sources, and developing future conservation leaders and professionals. Website: http://www.nfwf.org/AM/Template.cfm?Section=Grants where additional grant programs are described.

The Trust for Public Land

Land conservation is central to the mission of the Trust for Public Land (TPL). Founded in 1972, the Trust for Public Land is the only national nonprofit working exclusively to protect land for human enjoyment and well being. TPL helps conserve land for recreation and spiritual nourishment and to improve the health and quality of life of American communities. TPL's legal and real estate specialists work with landowners, government agencies, and community groups to:

- Create urban parks, gardens, greenways, and riverways
- Build livable communities by setting aside open space in the path of growth

- Conserve land for watershed protection, scenic beauty, and close-to home recreation safeguard the character of communities by preserving historic landmarks and landscapes.

The following are TPL's Conservation Services:

- Conservation Vision: TPL helps agencies and communities define conservation priorities, identify lands to be protected, and plan networks of conserved land that meet public need.
- Conservation Finance: TPL helps agencies and communities identify and raise funds for conservation from federal, state, local, and philanthropic sources.
- Conservation Transactions: TPL helps structure, negotiate, and complete land transactions that create parks, playgrounds, and protected natural areas.
- Research and Education: TPL acquires and shares knowledge of conservation issues and techniques to improve the practice of conservation and promote its public benefits.

Since 1972, TPL has worked with willing landowners, community groups, and national, state, and local agencies to complete more than 3,000 land conservation projects in 46 states, protecting more than 2 million acres. Since 1994, TPL has helped states and communities craft and pass over 330 ballot measures, generating almost $25 billion in new conservation-related funding. For more information, visit http://www.tpl.org/.

Bluecross Blueshield of North Carolina Foundation (BCBS)

Blue Cross Blue Shield (BCBS) focuses on programs that use an outcome approach to improve the health and well-being of residents. The Health of Vulnerable Populations grants program focuses on improving health outcomes for at-risk populations. The Healthy Active Communities grant concentrates on increased physical activity and healthy eating habits. Eligible grant applicants must be located in North Carolina, be able to provide recent tax forms and, depending on the size of the nonprofit, provide an audit.

BlueCross BlueShield of NC Foundation
P.O Box 2291
Durham, NC 27702
919-765-7347
http://www.bcbsncfoundation.org/

Local Trail Sponsors

A sponsorship program for trail amenities allows smaller donations to be received from both individuals and businesses. Cash donations could be placed into a trust fund to be accessed for certain construction or acquisition projects associated with the greenways and open space system. Some recognition of the donors is appropriate and can be accomplished through the placement of a plaque, the naming of a trail segment, and/or special recognition at an opening ceremony. Types of gifts other than cash could include donations of services, equipment, labor, or reduced costs for supplies.

Volunteer Work

It is expected that many citizens will be excited about the development of a greenway corridor. Individual volunteers from the community can be brought together with groups of volunteers form church groups, civic groups, scout troops and environmental groups to work on greenway development on special community workdays. Volunteers can also be used for fund-raising, maintenance, and programming needs.

E. Additional State and Federal Resources

Below is a list describing where additional State and Federal Resources are located.

- NCDOT Pedestrian Policy Guidelines
  http://www.ncdot.gov/_templates/download/external.html?pdf=http%3A//www.ncdot.gov/doh/preconstruct/altern//value/manuals/ppm/ppm28/ppm28-1.pdf

- NCDOT Greenway Policy http://www.ncdot.gov/_templates/download/external.html?pdf=http%3A//www.ncdot.gov/bikeped/download/bikeped_laws_Greenway_Admin_Action.pdf
- NCDOT Board of Transportation Resolution for Bicycling and Walking - http://www.ncdot.org/transit/bicycle/laws/laws_resolution.html
- United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations (March 2010) - http://www.fhwa.dot.gov/environment/bikeped/policy_accom.htm
- FHWA Policy for Mainstreaming Nonmotorized Transportation (FHWA Guidance – Bicycling and Pedestrian Provision of Federal Transportation Legislation) - http://www.fhwa.dot.gov/environment/bikeped/bp-guid.htm
- TND Guidelines - http://www.ncdot.org/doh/preconstruct/altern/value/manuals/tnd.pdf
- NCDOT Complete Streets Policy (http://www.bytrain.org/fra/general/ncdot_streets_policy.pdf)