August 2010

Comprehensive pedestrian Plan

City of Sanford

NORTH CAROLINA

McGill ASSOCIATES

ENGINEERING·PLANNING·FINANCE

SECTION ONE INTRODUCTION

1.1 Vision Statement

The City of Sanford has made a commitment to provide a livable community for their citizens. Part of this vision is to provide for pedestrian friendly transportation corridors throughout the City. To begin planning for this pedestrian network, the City of Sanford hired McGill Associates to develop a Comprehensive Pedestrian Plan. A portion of the funding for the plan has come through a grant from the North Carolina Department of Transportation, Division of Bicycle and Pedestrian Transportation.

In March, 2009, McGill Associates met with members of the Pedestrian Plan Steering Committee to define their vision for the Sanford Pedestrian Network. After a brief introduction, the Steering Committee participated in an exercise designed to elicit their perceptions of the needs and desires for a pedestrian system in Sanford. The above vision statement was derived from that exercise and submitted to the committee for approval.

> ***To promote a high quality of life through a well-connected, safe, and aesthetically pleasing pedestrian system that is available to and usable by all of the citizens of the City of Sanford.***

1.2 Overall Goals

The purpose of the Comprehensive Pedestrian Plan is essentially to create a document to guide the City of Sanford in the (1) planning, (2) design, (3) financing, (4) implementation and (5) maintenance of the City's pedestrian system. The plan is designed to enhance and prioritize capital improvements and maintenance projects for the City with special consideration for addressing critical pedestrian transportation and safety and addressing Americans with Disabilities Act compliance issues.

The goals of the Sanford Comprehensive Pedestrian Plan developed by the Steering Committee are:

Goals and Objectives

- Increase Walkability in the City of Sanford
  - Increase and improve the pedestrian infrastructure
  - Provide landscaping and resting places
  - Connect the pedestrian network to destination points
- Create a pedestrian network that is an important part of the urban structure
  - Encourage walking in the downtown areas of the City
  - Provide attractive, safe connections from the downtowns to outlying areas
  - Provide safe, attractive pedestrian facilities in the downtowns

  - Encourage alternative uses of sidewalk space, such as sidewalk sales or outdoor cafes that promote a healthy, vibrant downtown
- Promote walking as a healthy exercise
  - Develop healthy walking programs such as "Eat Smart, Move More North Carolina"
  - Partner with health and recreation providers to create walking programs and events
- Create a pedestrian environment that is friendly to all users including seniors, the disabled and children
  - Provide ADA compliant sidewalks and curb ramps
  - Increase pedestrian safety with regards to traffic
  - Provide opportunities for sitting and resting
- Improve connections between disparate parts of the City
  - Provide pedestrian connections between downtown Sanford and downtown Jonesboro
  - Connect neighborhoods through a system of connecting pedestrian facilities
  - Provide equitable access to the pedestrian network
  - Provide pedestrian access to schools, shopping and work places
- Promote pedestrian safety
  - Promote pedestrian safety through educational programs and the schools
  - Design a pedestrian network that can be safely traversed by all

1.3 History

Benefits of Walking

Walking is the oldest form of transportation known to mankind. For centuries the pedestrian has been a constant presence in the human environment. Each day, most individuals walk to some destination. The environment which facilitates walking is different for every pedestrian; it is as varied as urban settings within center cities to linear parks running along creeks. Pedestrian environments are created either by being deliberately planned or they can develop as a result of landscape characteristics, with no particular thought towards the pedestrian. To better understand what makes a pedestrian-friendly environment, it is necessary to study and analyze places where people travel comfortably as pedestrians. The addition of a sidewalk alone may not encourage people to walk; unless it connects pedestrians to places they want to go, they will see no need to use it. These connecting pedestrian corridors need to be conveniently located in proximity to homes, schools, entertainment, shopping and places of employment. A "walkable" community is defined by its ability to enhance the lives of all its citizens through a variety of measures including:

- Community Health
- Transportation Alternatives
- Environmental Benefits
- Safety

- Community Identity

Community Health

There are numerous benefits to be gained by walking, the most prevalent being the acquisition of healthier lifestyles. Unhealthy eating habits, primarily due to the increased consumption of fast food, continue to contribute to rising obesity rates in Americans of all ages. Walking can also help prevent heart disease, cancer, diabetes and mental health diseases. 'Walkable communities' encourage people to walk, increasing physical activity and decreasing television or computer time, which promulgate sedentary lifestyles.

By providing accessible, inviting pedestrian facilities, the City can provide equal opportunities for everyone to improve health and prevent disease through exercise. This in turn, saves governments and local employers in health care costs and lost productivity due to sick days.

Walking Increases….

- Energy, stamina and metabolism
- Wellness, fitness and psychological well-being
- The prevention of risk factors such as Coronary Artery Disease, some cancers and other diseases
- HDL – the 'good' cholesterol
- Muscle development and bone density

Transportation Alternatives

Walking also creates an alternative to vehicular transportation. Nationally, traffic congestion in urban areas is getting worse and the cost is rising. Pedestrian facilities are necessary to provide a means whereby people may choose to walk instead of drive, reducing the number of cars on the road.

Walking is a cost-effective means of transportation. There are no fees, taxes or licenses required as compared to the average annual cost of operating a car, which can exceed $5,000 per year. Economically speaking, walking is by far, the most affordable mode of transportation available to anyone.

Sometimes walking is the only means of transportation for some segments of the population. Examples are people with low incomes who do not have the financial capabilities to purchase a vehicle or the elderly who no longer are able to drive. These members of our communities rely upon walking in order to go to work, shop, and exercise or experience other social activities.

Environmental Benefits

Not only is walking the most affordable mode of transportation, it also has the least impact upon the environment. Choosing to walk to destinations as an alternative to using a vehicle will reduce air pollution. Improving air quality is a major concern across the United States. During the 1996 Olympics in Atlanta, some roadways in the area were closed to vehicular traffic in order to relieve congestion. During this period of time, air quality monitoring was conducted and the results indicated a significant decrease in air pollutants as compared to the normal periods of normal traffic patterns. Air pollutants will increase in direct proportion to the increase in the number of vehicular miles that are traveled each year in this country. Walking, as opposed to driving vehicles, will also positively impact the availability of our natural resources. Reducing the consumption of petroleum (specifically in cars and asphalt) will be increasingly beneficial in the years to come. While sensitive populations should avoid walking during ozone action days, increasing the amount of walking by everyone on a regular basis could reduce mobile emissions and decrease ozone.

Furthermore, facilities such as greenways are often developed along rivers and streams. These facilities create buffers between drainage ways and development that help to improve the water quality for watersheds. In addition, greenways help provide connectivity for wildlife habitats and natural ecosystems.

Safety

The walking community needs to be safe and comfortable. Any area which seems dangerous or has obstacles discourages people from walking and they resort to other methods of transportation. Pedestrian routes need to be designed to minimize vehicular conflict by providing pathways which are safe and free of hazards. This is the essential purpose of this Comprehensive Pedestrian Plan.

Community Identity

Pedestrian facilities offer an important public realm for maintaining and enhancing the public and social interaction of a community. The pedestrian environment should provide pleasant places through which to walk. Open spaces, parks, the downtown area, convenient retail and other destinations all enhance the pedestrian environment. In addition, the ideal pedestrian environment should possess amenities such as landscaping, benches, specialty paving, safety and other elements that create an environment that pedestrians enjoy. Sidewalks provide space for walking, outdoor dining, window shopping, bench areas for social interaction, engagement with businesses and tourism.

Planning Studies

The Lee County and City of Sanford 2020 Land Use Development Plan

Lee County and the City of Sanford combined efforts to update their land use plans and create the 2020 Land Use Plan. The Plan is meant to guide physical development within the City and County, provide for flexibility and provide for a high quality of life for area residents.

The study notes that there are currently few options for pedestrians and bicyclists in the County and City, and that the widening of streets in older neighborhoods has created a loss of character and urban scale. Other issues note that current patterns of development encourage more vehicular trips and congestion and a lack of community identity because of disconnected developments.

General Goals for the 2020 Plan include:

- Balanced Growth
- Compact Land Use Pattern
- Livable Community Design Standards

Specific goals that could affect the development of a solid pedestrian network include:

- Stabilize and strengthen older in-town commercial centers and residential neighborhoods
- Use existing infrastructure efficiently and attract compact neighborhoods to the center of Sanford
- Improve the overall appearance of the Community
- Promote the community as a major activity center for retail, recreation and cultural activities
- Provide adequate and accessible park and recreation facilities to meet the needs and interests of the Community
- Develop a comprehensive pedestrian system for the Community
- Maintain the library in downtown Sanford
- Build multi-jurisdictional consensus on and implement a decision-making mechanism to coordinate land use, transportation, utility and environmental planning and service delivery on a regional scale
- Preserve stream valleys for open space corridors and passive recreation
- Create buffering along all creeks, rivers and floodplains in the community
- Maintain the historic character of the Community
- Develop and maintain viable neighborhoods as the primary element of the residential system
- Provide amenities convenient to residential areas such as shopping facilities, community facilities and services, parks and open space, natural areas and mass transit
- Promote in-fill development in the community's existing neighborhoods

- The City and the County, along with private property owners and developers, shall endeavor to jointly improve the appearance and design of major street corridors through improved landscaping and sign control
- The identification and appropriate recreational development of a system of open space greenways within the planning area should be encouraged. The use of natural corridors, such as stream flood plains and secondarily, man-made corridors, such as utility and transportation right-of-way and easements, should be emphasized
- The Community should promote neighborhood designs which limit access to adjacent arterials and utilize street patterns which promote slower internal traffic speeds and interesting focal points
- Pedestrian, bikeway and other similar facilities should be encouraged as energy-efficient and environmentally sound transportation alternatives

The Plan proposes an aggressive approach to greenway development over twenty years. Greenways are seen as a way in which to tie together residential and employment areas, along with schools, parks and other community destinations with alternative pedestrian and bicycle routes.

The Plan also calls for improvements to the streetscape. Such plans would include improvements to sidewalks and pedestrian crossings, street lighting, street tree planting, a reduction of curb cuts and parking lots adjacent to the right-of-way and building façade improvements. Such improvements will increase pedestrian safety and comfort.

The Crossroads at Depot Park Redevelopment Plan

The Crossroads at Depot Park focuses upon redeveloping the original urban core of downtown Sanford, located where two railroad lines cross. This encompasses Depot Park and the blocks immediately to the north and east, where the original town center developed. The goal of the Redevelopment Commission is as stated:

> *The main goal of this Redevelopment Plan is to remove urban blight and to provide economic opportunities through private/public development supportive of the major public investment, which is currently taking place in the nearby Depot Park. Improvement of this area will also support efforts to stabilize residential neighborhoods to the east and support new residential development in upper floors of downtown buildings.*

Past and Current Municipal Efforts

The Crossroads at Depot Park Redevelopment Effort

The City has undertaken the redevelopment of Chatham Street and Charlotte Avenue. Improvements have included the rehabilitation of historic buildings along these streets

and the installment of new, wide concrete and brick sidewalks. Street trees line the curb and will eventually provide a comfortable, shady walkway for pedestrians.

Endor Iron Furnace Greenway Trail

The City of Sanford has been working with Lee County to design and build two greenways, the Endor Iron Furnace Greenway and the Little Buffalo Creek Greenway. A small section of the greenway has been in existence at Kiwanis Family Park for some time; the Endor Iron Furnace Greenway will connect to that existing greenway and run north along Big Buffalo Creek. Eventually, the greenway will join the Deep River Trail at the Endor Iron Furnace Historic Site.

The Little Buffalo Creek Greenway Trail

The City has also been working to acquire land for the Little Buffalo Creek Greenway. This trail is proposed to begin at Depot Park in downtown Sanford and run north along the Little Buffalo Creek. It will eventually meet the Deep River Trail. The Deep River Trail will connect the Little Buffalo Creek Greenway Trail to the Endor Iron Furnace Greenway Trail, giving Sanford and Lee County approximately a 28 mile trail loop from the City to the Deep River and back again.

1.4 Scope and Purpose of Plan

McGill Associates, P.A., was contracted by the City of Sanford to prepare a city-wide pedestrian plan as a guide for identifying and prioritizing safe pedestrian linkages which create a viable pedestrian network. Many areas within the City limits lack sufficient pedestrian facilities and the City recognizes the need to plan for the future and develop a pedestrian network that provides connectivity for the users. Using this proactive approach will establish priorities for future pedestrian facilities, reduce construction costs and implement facilities in a logical manner.

The study area spans the City of Sanford City limits and the immediate, surrounding ETJ. Although the research will be focused primarily within the City limits, it is important to understand the existing pedestrian patterns into and out of Sanford and its destination points.

In order to better understand the existing conditions, identify user needs and make recommendations for the pedestrian plan, the following steps were followed:

1. ***Inventory of the existing pedestrian system:*** A sidewalk, greenway and crosswalk inventory was conducted of the City's pedestrian facilities, identifying existing safety issues.

2. ***Assessment of the needs of the pedestrian:*** Pedestrian needs and lack of connectivity to destination points were identified and evaluated.

3. ***Formulation of objectives and recommendations:*** Guidelines for future development existing facilities repair and maintenance were created, along with probable costs for all recommendations.

4. ***Action-oriented method for the implementation of improvements:*** Key pedestrian linkages and sidewalk needs were identified and prioritized. Key funding sources were identified for the City to pursue.

5. ***Addressed:*** Guidelines of current policies and existing pedestrian programs were identified and addressed.

These components provide justification for the proposed improvements. Also, priorities for improvements must be established. Implementing all of the proposed improvements over a small period of time would be overwhelming; it is important that the most immediate needs be recognized as capital improvements begin.

Identifying the critical facility needs of the City of Sanford means identifying improvements such as sidewalks and safety conditions. The safety of pedestrians is the most important component of the pedestrian facilities. Damaged sidewalks, unmarked crosswalks and inappropriate signage are important areas that need to be addressed in the near future. In addition to facility needs, an implementation plan is an important short-term goal in establishing long-term objectives. The improvements recommended in this Pedestrian Plan are intended to be implemented over a period of time and will require creative funding mechanisms. Therefore, another significant short-term goal will be to identify improvement costs and funding opportunities, as well as prioritizing the improvements and projects.

Pedestrian facilities are the primary focus of this plan, in particular, sidewalks (located on City streets and state roads) and pedestrian safety. In addition, off-street pedestrian facilities such as greenways and multi-purpose trails are examined. The Sanford Pedestrian Plan delineates the location, implementation and maintenance of the proposed facility improvements, thereby creating a pedestrian network that allows for connectivity within the City as well as with neighboring communities.

- END OF SECTION -

SECTION TWO EVALUATING CURRENT CONDITIONS

2.1 OVERVIEW

This chapter examines the existing pedestrian conditions in the City of Sanford. Information was gathered from a variety of sources including interviews, on-site surveys, a public questionnaire, community meetings and available documents. The information gleaned from this research is used to inform the development of the City of Sanford Pedestrian Master Plan.

In general, pedestrian-friendly environments indicate that the sense of community is strong and active. Improving the walkable routes between destinations within Sanford supports walking and provides a safe and healthy alternative to driving. In Sanford, it is estimated that 10.5% of the households do not own a personal vehicle.[1] This makes a good pedestrian transportation system important to the economic and social welfare of the community. The trends consist of, but are not limited to:

(1) Healthy lifestyles
(2) Alternative transportation
(3) Reduction of environmental impacts
(4) Safety
(5) Community identity

The History of the City of Sanford

The City of Sanford developed at the conjunction of two railway lines beginning in 1871. The City is named for Charles O. Sanford, an engineer who played a vital role in the building of rail lines through Lee County. For years, the business district was centered around the conjunction of the railroad lines. Industrial development spread north and south of the City along the converging railroad lines. Early residential development tended to the north along Chatham and Hawkins Streets. The industrial development in the southern portion of Sanford, encouraged residential development to the south and east along what is now 3rd Street. Sanford's African American community established neighborhoods in the southern portion of the City.

Sanford's location at the confluence of two rail lines provided the City with a ready access to state and national markets. In 1889, the first of several quarries was opened to mine brownstone for buildings throughout North Carolina and the northeastern United States. In 1899, the Sanford Cotton Mill was incorporated with a mill erected along the railroad tracks, north of the City. The mill was fed raw cotton from nearby farms. Today, Sanford continues as a major producer of textiles.

By 1914, commercial and retail businesses started to expand away from the rail lines, towards the west. With a few exceptions, African-American enterprises clustered to the south of Wicker Street. Spurring this west-expanding development was the routing of US Highway 1 through Sanford in the 1920s. The City played host to travelers on their way to and from Florida, and hotels and tourist homes sprung up during the decade. Two new residential neighborhoods were developed between 1910 and 1929, Rosemont-McIver Park and McCracken Heights on the north side of the City.

In 1947, the Town of Jonesboro located to the south of Sanford, merged with Sanford to become one municipality. Centered around Main Street and Lee Avenue, the area retains the designation of Jonesboro or Jonesboro Heights.

After World War I, brick manufacturing became a Sanford industry. By the 1950s, Sanford plants were producing 10% of the bricks manufactured in the United States. Brick manufacturing continues to have a major industrial role in the local economy.

During the 1970s, the downtown area suffered as the large department stores relocated out to the suburbs. Pedestrian traffic in the downtown area was drastically reduced and small businesses struggled to stay afloat downtown. As the downtown deteriorated, the surrounding neighborhoods began to suffer. Families moved out and absentee landlords bought up the homes in once thriving neighborhoods.

Within the past 10 years, the downtown area has begun to turn around. Through the efforts of the City and Downtown Sanford, Inc., an urban park was created at the site of the conjunction of the original rail lines. Depot Park has become the center of activity in the downtown area, generating business for store and restaurant owners in the downtown area. New sidewalks have been installed on two of the streets surrounding the park and more improvements are being planned for the entire downtown area. The City is committed to creating a walkable downtown as the centerpiece of a new pedestrian network.

User Demographics/Current Usage

According to the United States Census bureau, the estimated population for the City of Sanford in 2005-2007 was 26,336 people. The North Carolina State Demographics Department estimated the 2007 population of Sanford at 27,271 people. This gives the City of Sanford a population density of approximately 1063.6 people per square mile and a growth rate between 2000 and 2007 of 17.45%.

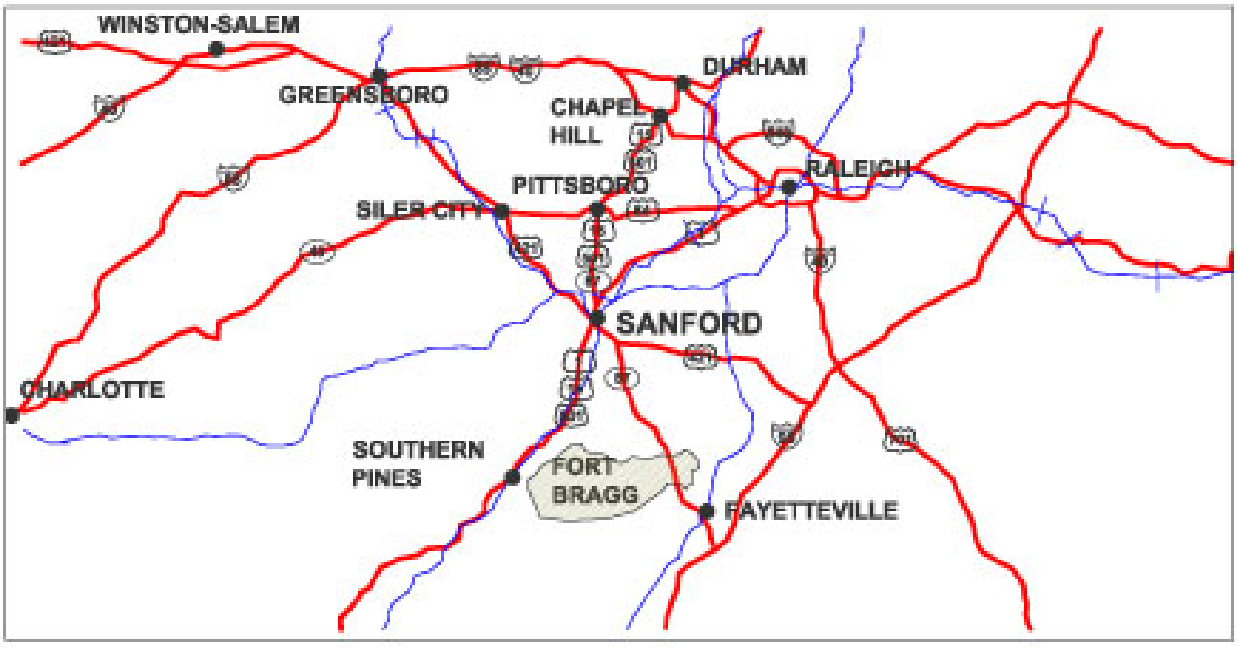
The 2005-2007 Federal Census Estimate gives a breakdown of the population of Sanford according to the following age groups.

Age Distribution – City of Sanford

Age	Sanford	Percentage
Under 5 years	2,287	8.7
5 to 14	3694	14.0
15 to 24	3363	12.8
25 to 34	3353	13.5
35 to 44	4138	15.7
45 to 54	3126	11.9
55 to 64	2659	10.1
65 and over	3516	13.3

The age breakdown of the City of Sanford's population reflects the averages for the State of North Carolina with the largest discrepancies being children under the age of 5 (-1.9%) and adults between the ages of 45 and 54 (-2.5%). The adult population is the largest demographic for the City, with adults between the ages of 25 and 64 supplying 51.2% of the population. There is also a healthy population of children and young adults in the City (35.5%). The senior population is slightly higher than the state average. Both the senior and youth populations often require alternate forms of transportation other than a personal motor vehicle.

Physical Characteristics



Sanford is the county seat for Lee County, located near the geographical center of North Carolina. Sanford is approximately 40 miles southwest of Raleigh, the state capitol and 30 miles north of Ft. Bragg. The divide between the North Carolina Piedmont and the Coastal Plain runs through Lee County, giving

Sanford gentle rolling hills and flat plains. The northern boundary of Lee County is the Deep River and two of Sanford's major streams, the Big Buffalo Creek and the Little Buffalo Creek drain northwards to the river. The Cape Fear River, east of Sanford forms the eastern boundary of Lee County.

2.2 LOCAL TRANSPORTATION NETWORK ASSESSMENT

Existing Transportation Network

Though Sanford sits at the conjunction of two railroads, the CSX and the A&W, neither of these lines provides passenger service to and from Sanford. The Atlantic & Western Railway operates freight and switching services in Sanford and Jonesboro, where the CSX railway offers only freight from Sanford. The Sanford-Lee County Airport is approximately 7 miles northeast of Sanford and provides recreation and corporate services.

The major form of vehicular transportation in Sanford and Lee County is the private automobile. Four US highways, including US Highway 1, pass through Sanford, as do four state highways.

The City and Lee County are building a greenway trail from Kiwanis Park to the Endor Furnace site on the Deep River. Another greenway trail is planned along the Little Buffalo Creek from the Depot Park, north to the Deep River. The two trails will be connected by the Deep River Trail, under development by the State.

The County of Lee Transit System (COLTS)

COLTS is based out of the Lee County Senior Services Department. Their primary focus is to serve the clients of human service agencies on an as-needed basis. They also provide transportation services for the general public for a small fee. There is no set, daily route that the buses follow, as the client list can change every day. Clients are requested to phone in their need for a ride at least two days in advance, so that a route can be worked out. In 2007, COLTS buses made approximately 222 trips per day. COLTS is available Monday to Friday from 6:00 a.m. to 6:00 p.m. Because of the way in which COLTS operates, there are no set bus stops or locations for picking up public passengers. Appointments are made two days prior to trip for home pick-up and drop off to required destination.

Community Concerns, Needs and Priorities

In order to ensure a successful study, it is vital that the public user of pedestrian facilities be able to share their issues, needs, and desires. The methodology used in establishing a Pedestrian Plan for municipalities should always include citizen input.

To better understand the needs of facility users, three different methods were used to identify specific concerns/demands of City residents. The different methods offer options to local citizens and present additional information that cannot be assessed from just one method. These methods consisted of steering committee discussions, conducting a pedestrian survey and conducting Community Workshops.

Steering Committee Discussions

To establish a group to act as a *guide* for the development of the Pedestrian Planning, a steering committee was formed during the initial planning process. The steering committee was composed of members from the City staff, representatives from other local government agencies, NCDOT Representative(s), and local citizens. The names of Steering Committee members can be found in the Acknowledgments section at the beginning of this document. The steering committee acted as the principle advisory body to the pedestrian plan project, establishing a vision and identifying the needs and priorities of pedestrians. In addition, meetings were held to evaluate the planning process at various stages.

In addition to the Visioning Exercise, the Steering Committee members were divided up for small group discussions. Maps of the City were given to each group along with colored dots and markers. The members were asked to check the maps for inaccuracies, mark pedestrian destinations, areas of heavy pedestrian traffic, problem intersections and gaps in the pedestrian network. They were also asked to draw where they would like to see new sidewalks and greenways. The results of this exercise were combined with the results from the Community Workshop and are recorded in the following paragraphs and on Maps 5 and 6 at the end of Section Two.

Community Workshops

Community workshops were held in the Old Railroad Depot in Depot Park over the weekend of April 25 and 26, 2009 in conjunction with the opening day of the Farmers Market and the Sanford Criterium and 5K run. This assured a good crowd from which to attract participants for the workshops. Over 70 people participated in the pedestrian workshops.

People were invited into the depot to fill out a pedestrian survey and to participate in a mapping exercise. The survey can be found in the Appendix A, and is the same survey that was made available on the City's website. The map exercise was used to initiate discussions about existing pedestrian corridors, needed pedestrian facilities and dangerous conditions for pedestrians in Sanford. Map results are found at the end of Section Two.

Thirteen areas were delineated as having heavy pedestrian traffic:

- Vance St. from Wicker St. to Carthage St.
- Carthage St. from Carbonton Rd. to Fields Dr.
- Fields Dr. along the hospital grounds
- Charlotte Avenue from Depot Park to 3rd St. (especially at night)
- 3rd St. from Charlotte Avenue to Horner Blvd.
- Horner Blvd. between Wicker and Wall St.
- Horner Blvd. south of Washington Ave.
- Tramway Road from US 1 to Sanford Middle School and Southern Lee Senior High School
- Harkey St.
- Bragg St. near Lee County High School and O.T. Sloan Park
- Main St. in Jonesboro
- Park Ave. to Kiwanis Children's Park

Dangerous Intersections were identified as

- Horner Blvd. and Carthage St.
- Horner Blvd. and Wicker St.
- Horner Blvd. and Pearl St.
- Horner Blvd. and Washington St.
- Horner Blvd. and Rose St.
- Horner Blvd. and Lee Ave/3rd St.
- Horner Blvd. and Fields Dr.
- Hawkins Ave. and Charlotte Ave.
- Lee Ave. and Williams St
- Charlotte Ave and 3rd St.
- McIver Ave and 7th St.

Consensus opinion was that any corner that intersected with Horner Blvd/US 421 was a dangerous intersection due to the speed and volume of vehicular traffic. There are traffic lights at some of these intersections, but no pedestrian signals or crosswalks.

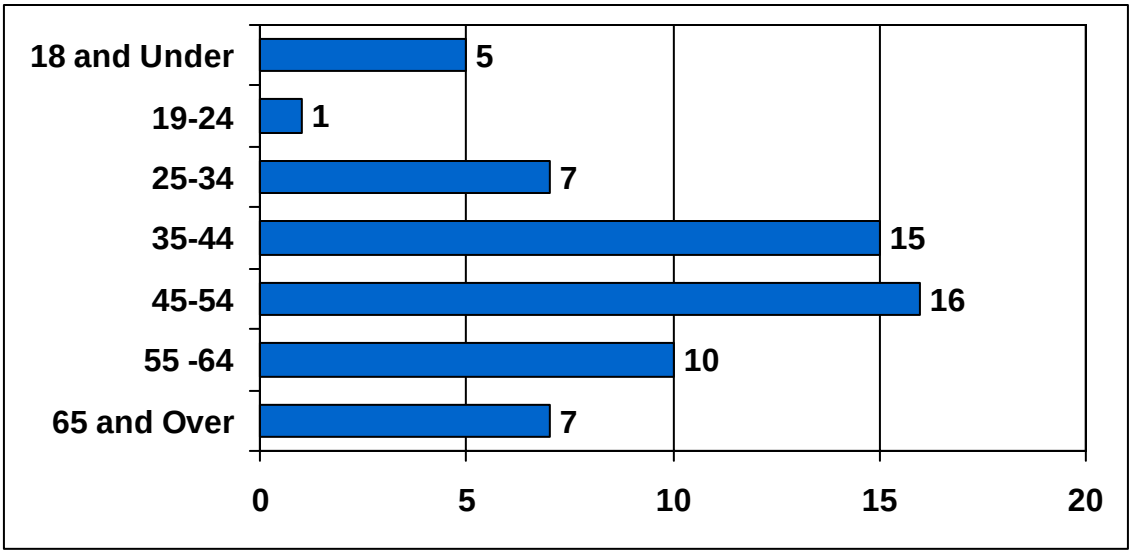
Other concerns expressed included the pedestrian pathways that cross over the two active railroad lines in the downtown area. Sidewalks along Wicker/McIver streets are not clearly marked and disappear halfway across the lines. Though the sidewalk along Charlotte Ave is brand new, where the path intersects the railroad lines, asphalt was used. The asphalt is very rough and presents a tripping hazard. There is also a three inch gap between the asphalt and each rail, presenting problems for baby strollers, bicycles and wheelchairs. Concern was also expressed that there were no sidewalks serving any of the public schools in Sanford.

Pedestrian Survey

To further solicit input from the public about the pedestrian system in Sanford, a public survey was distributed. The survey (Appendix A) was designed to solicit opinions upon both general and specific pedestrian concerns in the City of Sanford. Sixty-two people filled out the Sanford Pedestrian Survey.

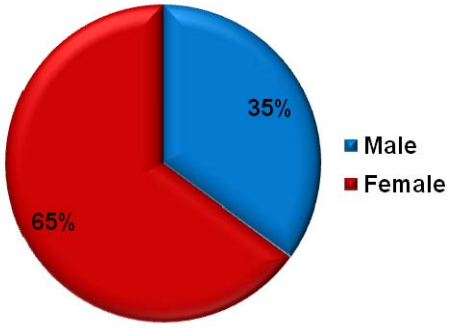
1. Age of participants:

The majority of respondents were between the ages of 35 and 54.



2. Gender:

The majority of respondents were female.

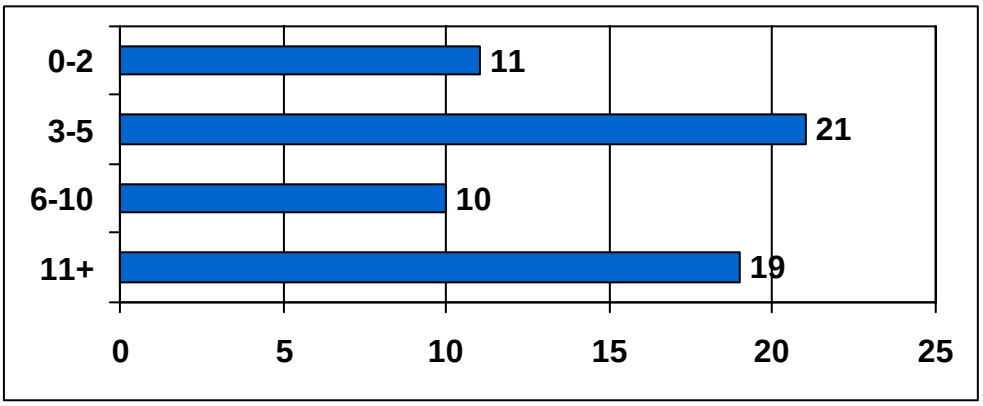


The next set of questions was designed to discover how the respondents used the existing pedestrian network in Sanford. Most of the respondents use the network for recreational or leisure walking and running, with 31% using the network 11 or more times per month.

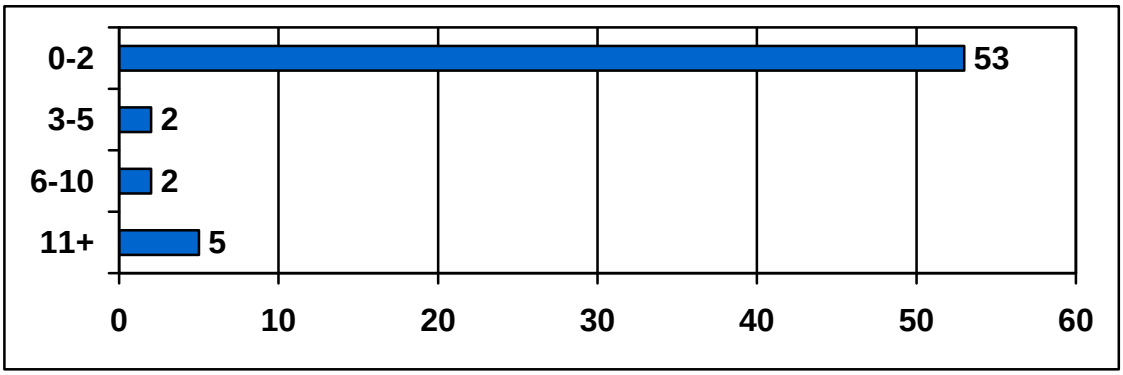
Very few of the respondents use the existing pedestrian network to access jobs or school. This is not a surprising find, as the existing network does not access the public school system, and there are few sidewalks between neighborhoods and concentrations of job opportunities.

The respondents are more likely to walk to a social event or shopping, than to work or school. These are often activities that take place within neighborhoods, making walking a convenient option.

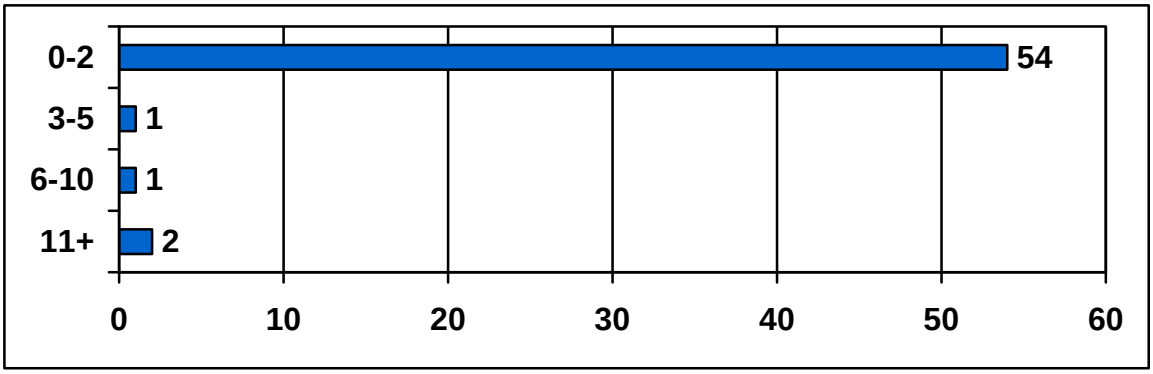
3. How many times per month do you walk/run for recreation or leisure?



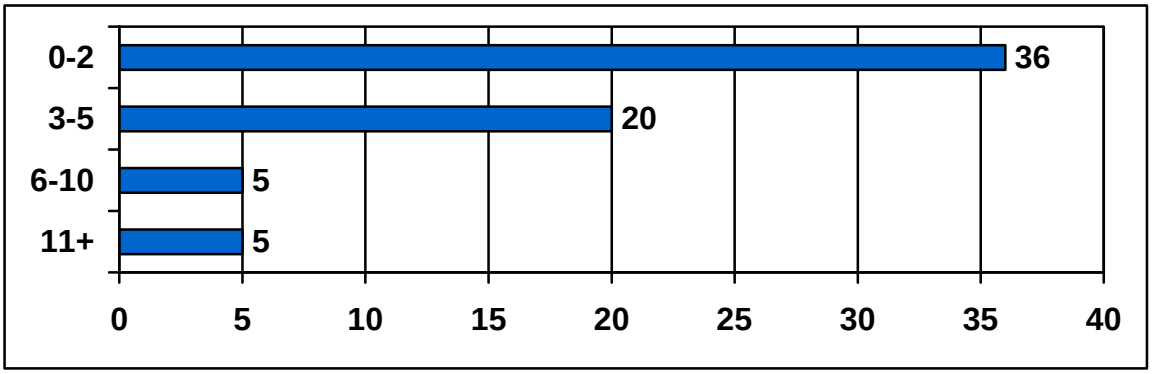
4. How many times per month do you walk to work?



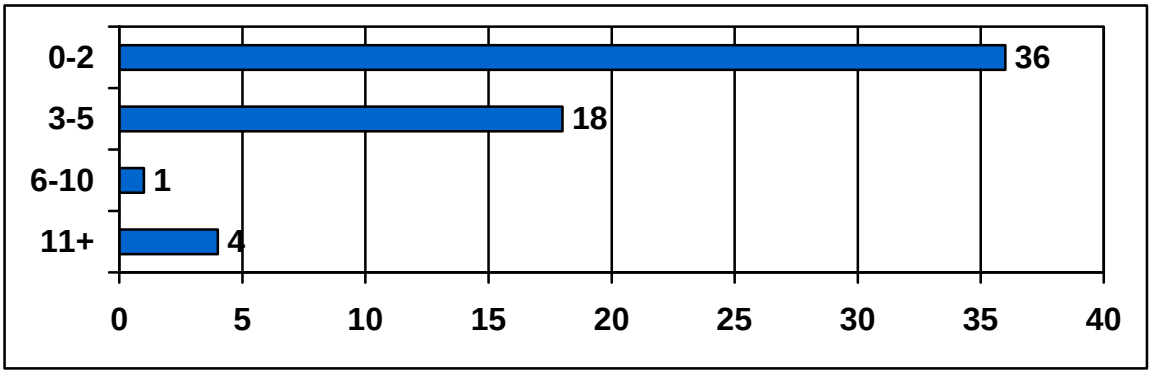
5. How many times per month do you or your children walk to school?



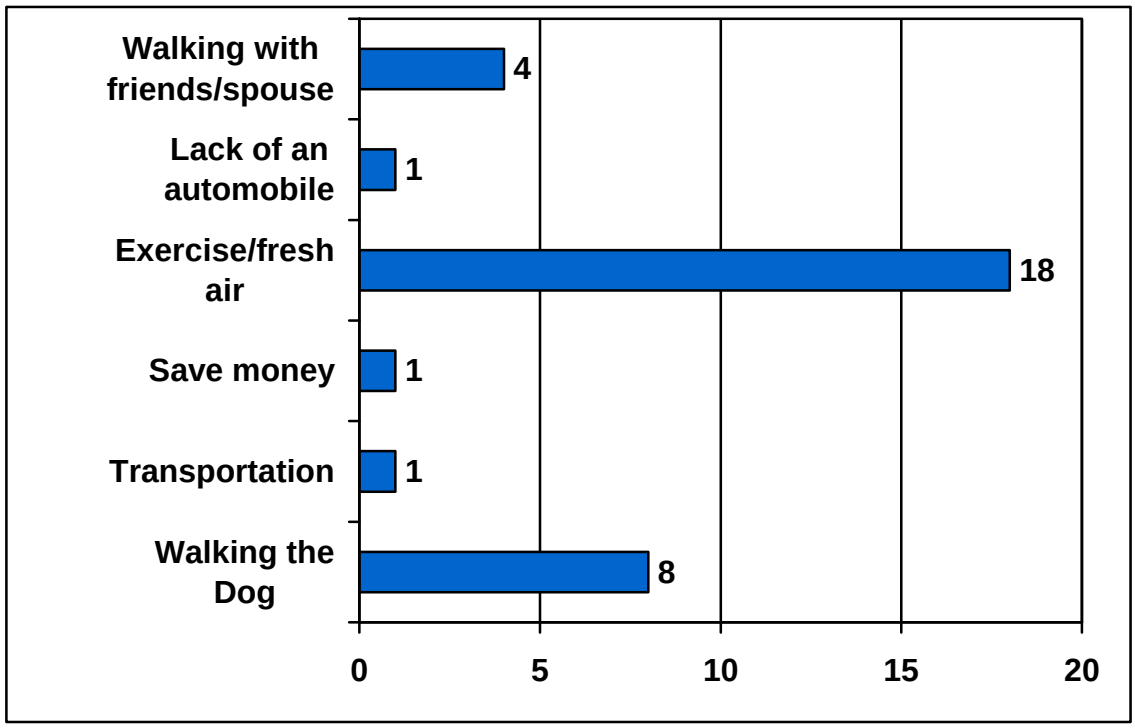
6. How many times per month do you walk to attend an event or social gathering?



7. How many times per month do you walk to go shopping or run an errand?

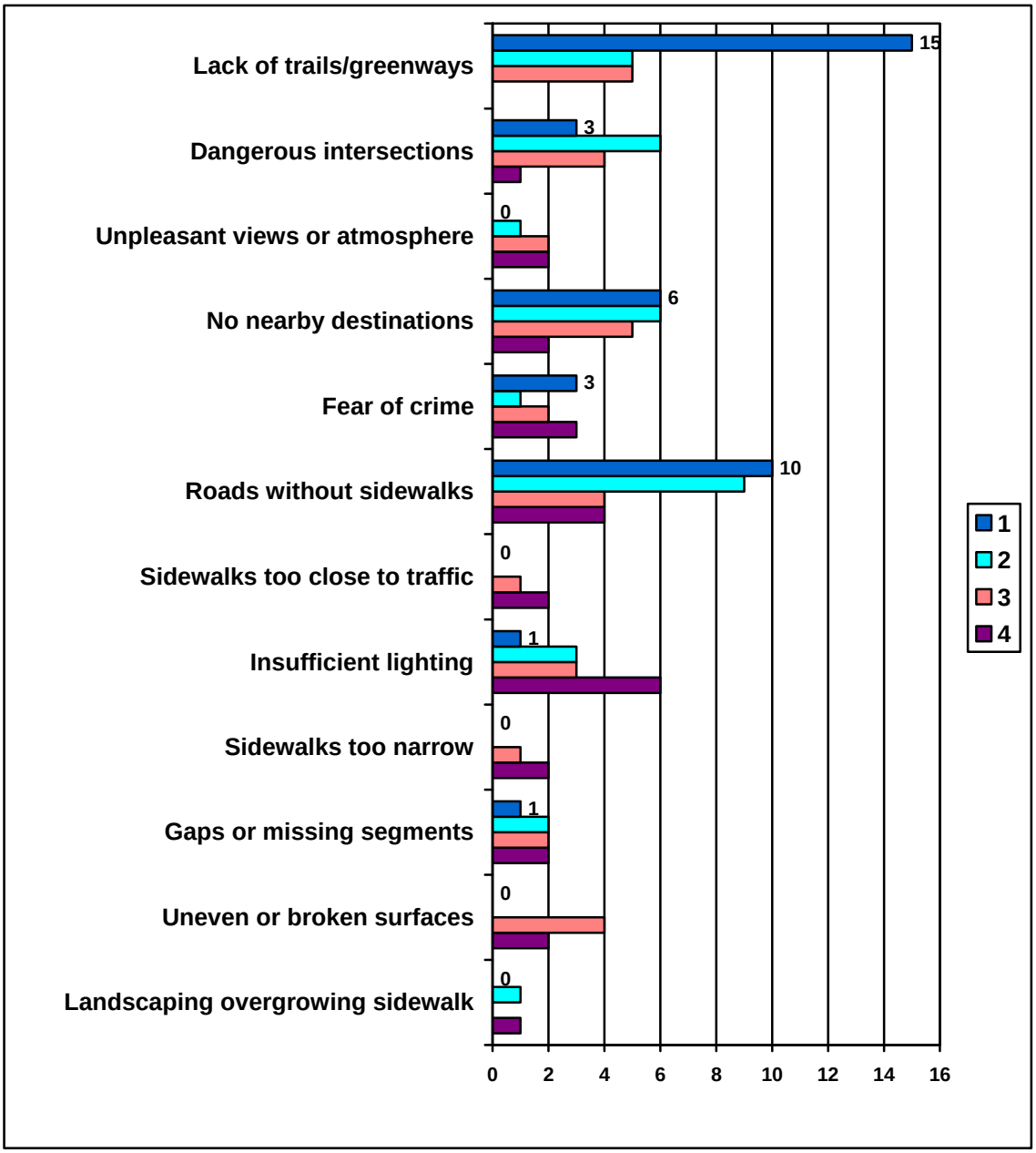


8. Rank the following reasons you walk/run now, with 1 being the most important:



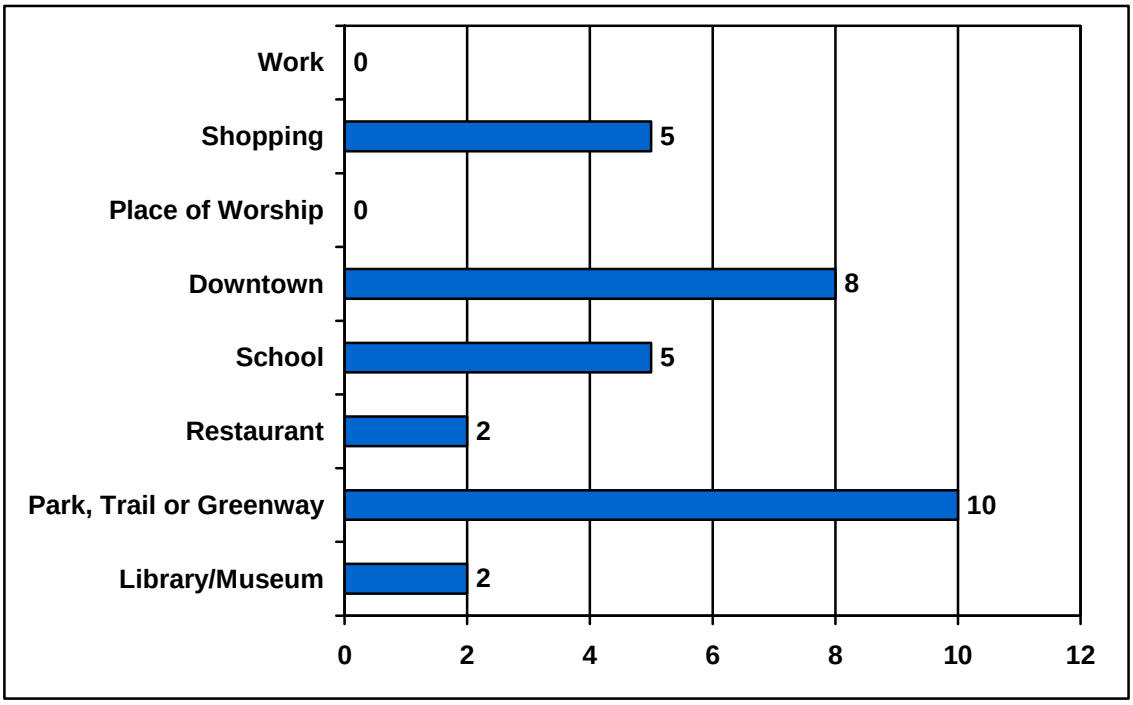
Most respondents walk for exercise or to get out doors (fresh air). This directly corresponds to the answer to question 3, where most respondents said they walked at least 3 times per month for recreation or leisure.

9. Rank the following reasons you don't walk or don't walk as often as you would like to, with 1 being the most important.



The main reasons for not walking are the lack of walking facilities in Sanford, both sidewalks and trails. Many people checked off reasons without ranking them. Among those responses, roads without sidewalks and a lack of trails received the highest response count. Dangerous intersections and unpleasant views or atmosphere also received many responses.

10. Rank the destinations which you currently walk to or would walk to, if given the right opportunity, with 1 being the most important.

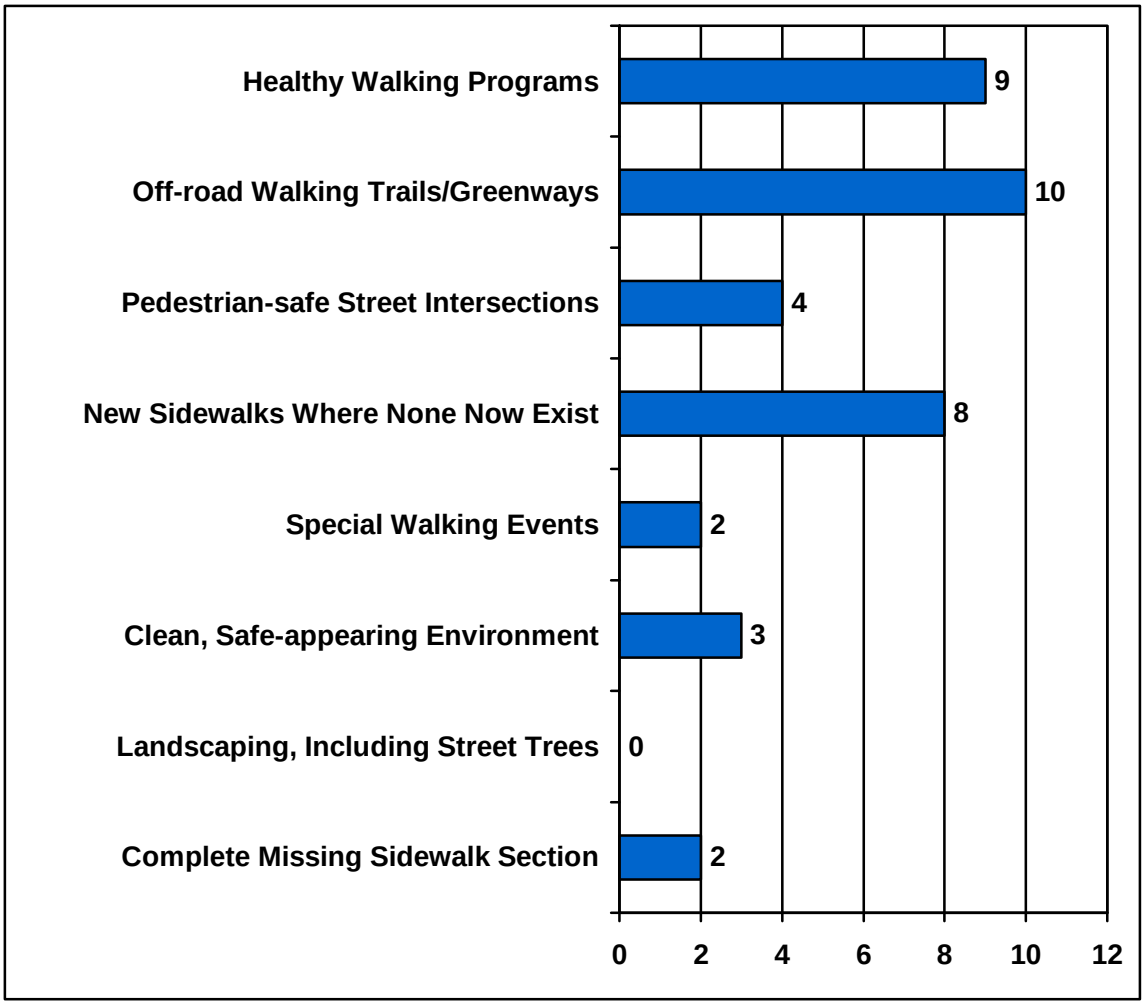


Parks, trails and greenways received the highest response count, followed by the downtown. Again, many people checked off answers without ranking them. These responses included many votes for the downtown, parks, trails and greenways, shopping and library/museum as popular walking destinations.

List specific destinations that you walk to or would walk to, if given the right opportunity (such as Depot Park):

The most commonly listed destinations were in Sanford's downtown. Individual destinations included Depot Park, the Library, shops and restaurants. Park and Recreation venues also received a high number of mentions, including Depot and Kiwanis Parks and greenway trails. Other popular destination included cultural sites and shopping site.

Rank the reasons below which would encourage you to walk more, with 1 being the most important: (the number shown here are for those ranked number one, for all results, see Appendix A.)



The three highest ranked reasons that would encourage walking are: off-road walking trails/greenways, healthy walking programs and additional sidewalks. The largest number of unranked responses was for healthy walking programs, followed by a clean, safe environment.

Which specific roads are most in need of sidewalks where there are gaps between existing sidewalks?

The most mentioned streets were: Hawkins Avenue, Horner Blvd., Wicker Street and Carthage Street. These four streets are among the major connectors to Sanford's downtown, with Horner being the only through connector between the downtown and Jonesboro. These streets also connect to residential neighborhoods surrounding the downtown and should serve as major pedestrian

corridors between the neighborhoods and the downtown. Moore Street and Cross Street were specifically mentioned as needing sidewalk connections to the downtown and mention was made of all streets adjacent to the downtown.

Which specific roads are most in need of new sidewalks where none exist?

Again, Hawkins, Horner and Wicker Street were among the most often mentioned streets in need of sidewalks. Other streets receiving multiple mentions were Carbonton Road, Spring Lane and Tramway Road. Areas near schools and parks also received multiple mentions. Other suggestions included connecting neighborhoods to shopping and business districts.

What specific locations need marked/improved crosswalks?

Several locations were noted as needing marked or improved crosswalks. The most often mentioned street was Horner Blvd. Horner Blvd. itself was a common listing, but 7 different intersections along the road were also noted as needing pedestrian crossing amenities.

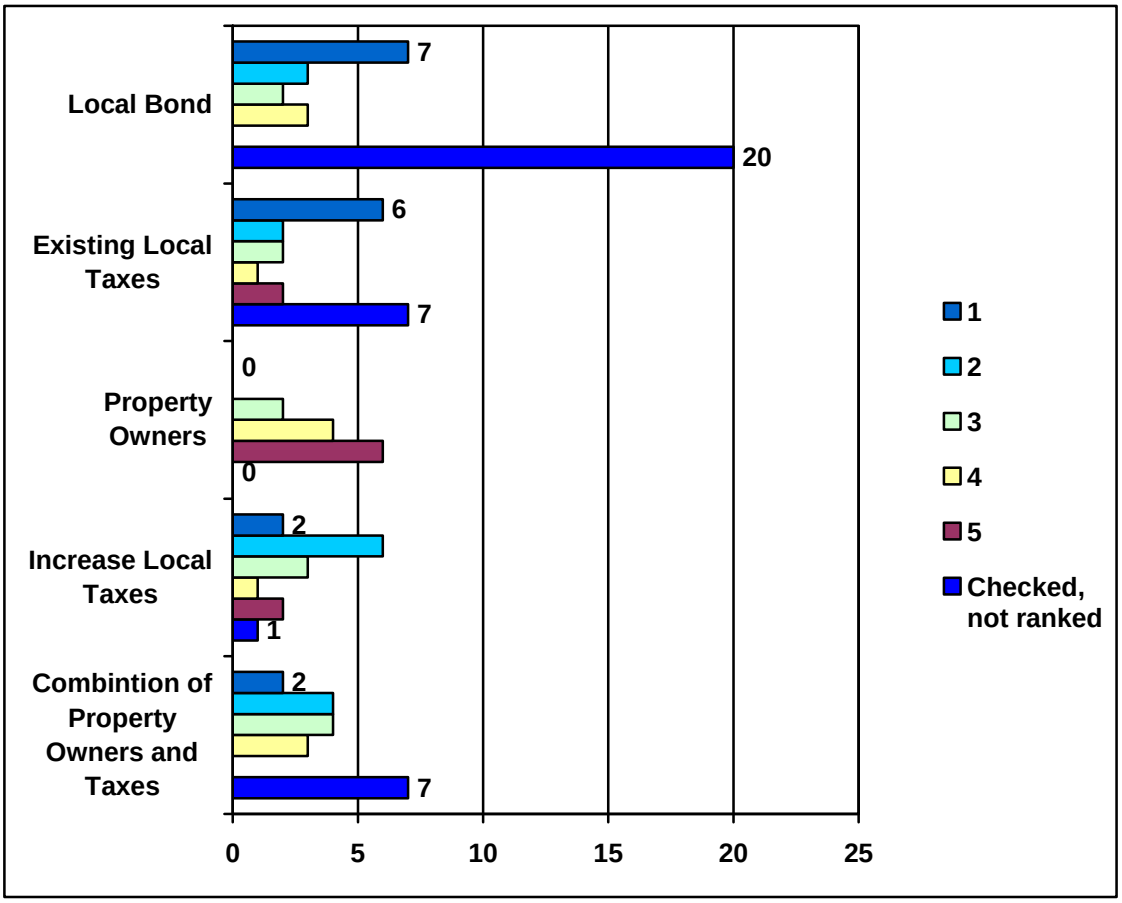
Hawkins Avenue, especially at Charlotte Avenue was also listed multiple times. Downtown Sanford, Gulf Street, Carthage Street, the downtown railroad tracks and Lee Avenue were also listed.

What pedestrian related programming or policies would you like to see enacted? (i.e., sidewalks in all new developments, “Eat Smart Move More NC” program, etc.)

This question was divided into two categories; programming and policies. The programs included the statewide Eat Smart, Move More North Carolina, exercise programs, community events/activities, recreational event/activities and activities for young people.

The policies the respondents would like to see call for the development of sidewalks in existing developments, sidewalks leading into the downtown and walking/biking trails.

Rank the sources of funding that should be used to build or improve pedestrian facilities in Sanford?



Using local bonds or existing local taxes split the vote for the number one choice on how to pay for new or improved pedestrian facilities. In addition, 20 people checked off local bonds without ranking it. Having property owners pay for sidewalks in front of their houses received the least support among the respondents. Respondents were also invited to suggest other funding sources. Some nontraditional responses included involving citizens in donating labor for tax incentives and holding fund raisers.

Pedestrian Crash Data

When pedestrian paths cross vehicular pathways there is always the possibility of collision, injury and death. Though the number of pedestrian fatalities in the United States has fallen in the last 10 years, in 2007, 4654 pedestrians were killed in collisions with motor vehicles and 70,000 were injured. The most likely pedestrians to be killed are senior citizens. Most pedestrian vehicle injuries/fatalities occur away from intersections, at night, in good weather and in urban areas.

Between January 1, 1990 and September 30, 2008, the state has recorded 141 pedestrian/vehicle accidents in Sanford with 13 fatalities. (See Appendix B.) One hundred and eight of these accidents took place between noon and midnight, with 79 occurring after 5 p.m. Nearly all of the accidents took place at or near intersections, including some with traffic signals, but not with pedestrian signals. At corners with pedestrian signals (Steele/ Carthage and Steele/ Wicker) only two accidents (1999 and 2000) were recorded. The largest pedestrian group involved in these accidents was between the ages of 15 and 25. Another large cluster occurs for ages 40-50.

In addition, between January 1, 2000 and April 30, 2009, the City of Sanford Police Department recorded an additional 110 pedestrian accidents within the City limits. The majority of these accidents took place at or near intersections. Many of the accidents took place on Horner Blvd., Wicker St., McIver St., Fields Dr. and Main St.

Horner Blvd/US 421 is by far the most dangerous road for pedestrians in Sanford. This busy, multi-lane highway is the main north/south thoroughfare through Sanford. For much of its length it is lined with strip malls, restaurants and other retail businesses. Intersections with multiple accidents include Carthage, Wicker and Wall Streets in downtown Sanford; Washington Avenue, Makepeace, Lee, Bragg and Dalrymple Streets along S. Horner Blvd.

2.3 ASSESSMENT OF THE PEDESTRIAN COMPATIBILITY OF THE LOCAL TRANSPORTATION SYSTEM

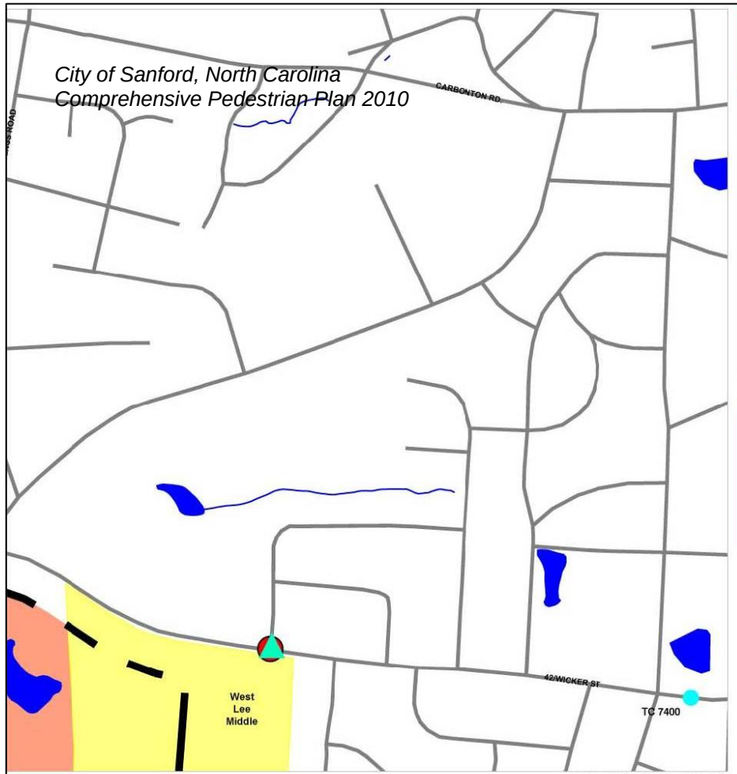
Pedestrian System Access

The pedestrian system in the City of Sanford consists of a wide variety of sidewalks built over the last 70-80 years. Mostly the sidewalks are in fair to good condition with short stretches that require replacement. There is no coherent, City-wide system of sidewalks. Instead there are a number of small neighborhood systems that do not connect to each other in any clear, systematic way. Many gaps occur within the neighborhood systems and often a sidewalk will end in mid-block.

There are few existing safe pedestrian corridors within the City of Sanford. The historic downtown areas have the best pedestrian system within the City. Unfortunately, pedestrian connections to the downtown are spotty. Gulf St. and Hawkins Ave. have the best sidewalks leading into the downtown from the northern residential areas. McIver St. and Charlotte Ave. have sidewalks leading from the eastern residential areas to the downtown, but once again, there are gaps in the system and sidewalks along both streets end well before the residential neighborhoods do.

Access to downtown from the south is available along Horner Blvd and Vance St., but both sidewalks have problems with continuity. In addition, traffic is very dangerous along Horner Blvd and a curve in the road has had several tractor-trailers miss the turn and end up on the sidewalk.

Many pedestrian destinations in Sanford are not served by sidewalks at all. None of the schools in the City can be accessed by sidewalks (See Map 9). The majority of parks, including Kiwanis Children's Park, Kiwanis Family Park, O.T. Sloan Park, Dalrymple Park and Horton Park cannot be accessed by sidewalks. Other than Sanford's downtown there are almost no pedestrian paths from residential neighborhoods into shopping districts. The only sidewalk in Jonesboro that leads to the sidewalks along Main Street are on North Lee Avenue. Very few sidewalks lead to the commercial strip that is South Horner Blvd. This very busy, four-lane highway is lined with restaurants, businesses and stores, but pedestrian facilities are few and incomplete. There are no sidewalks leading to the River Birch shopping area in the northwest residential area of the City.



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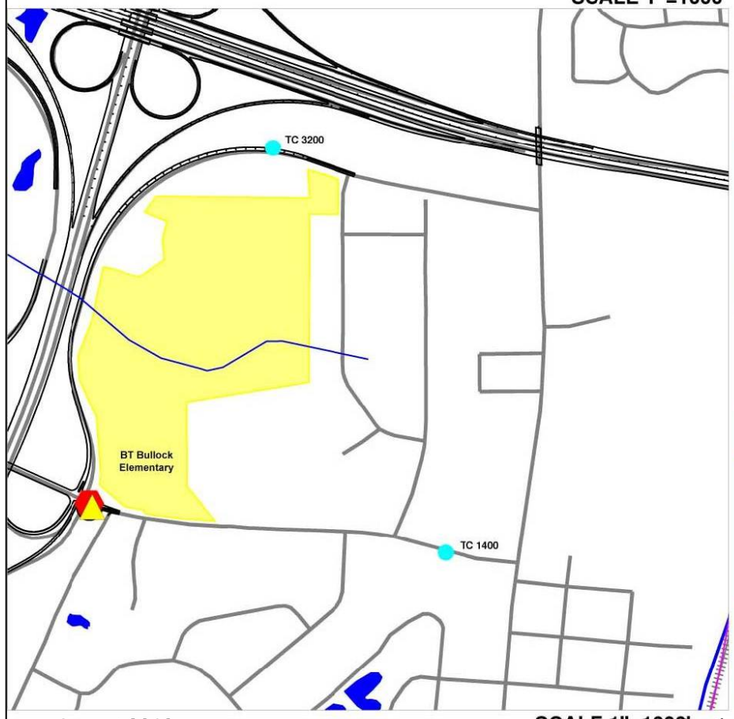

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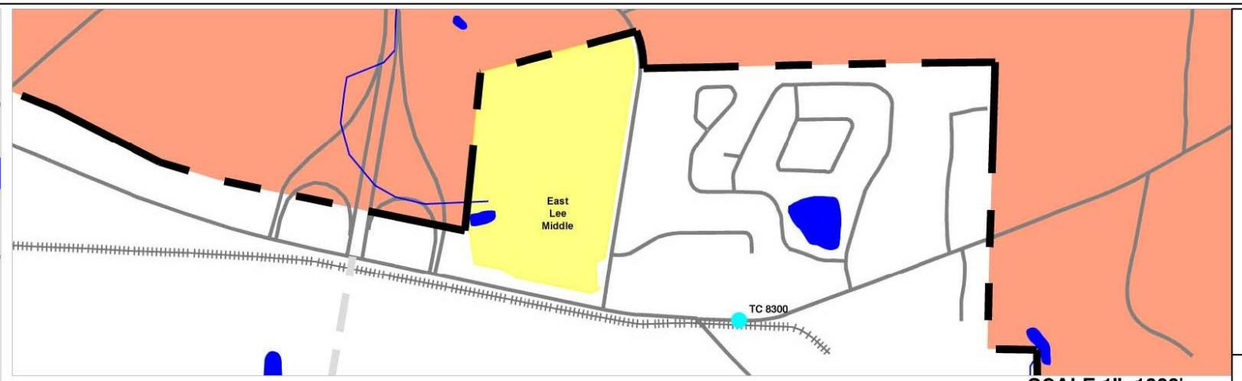

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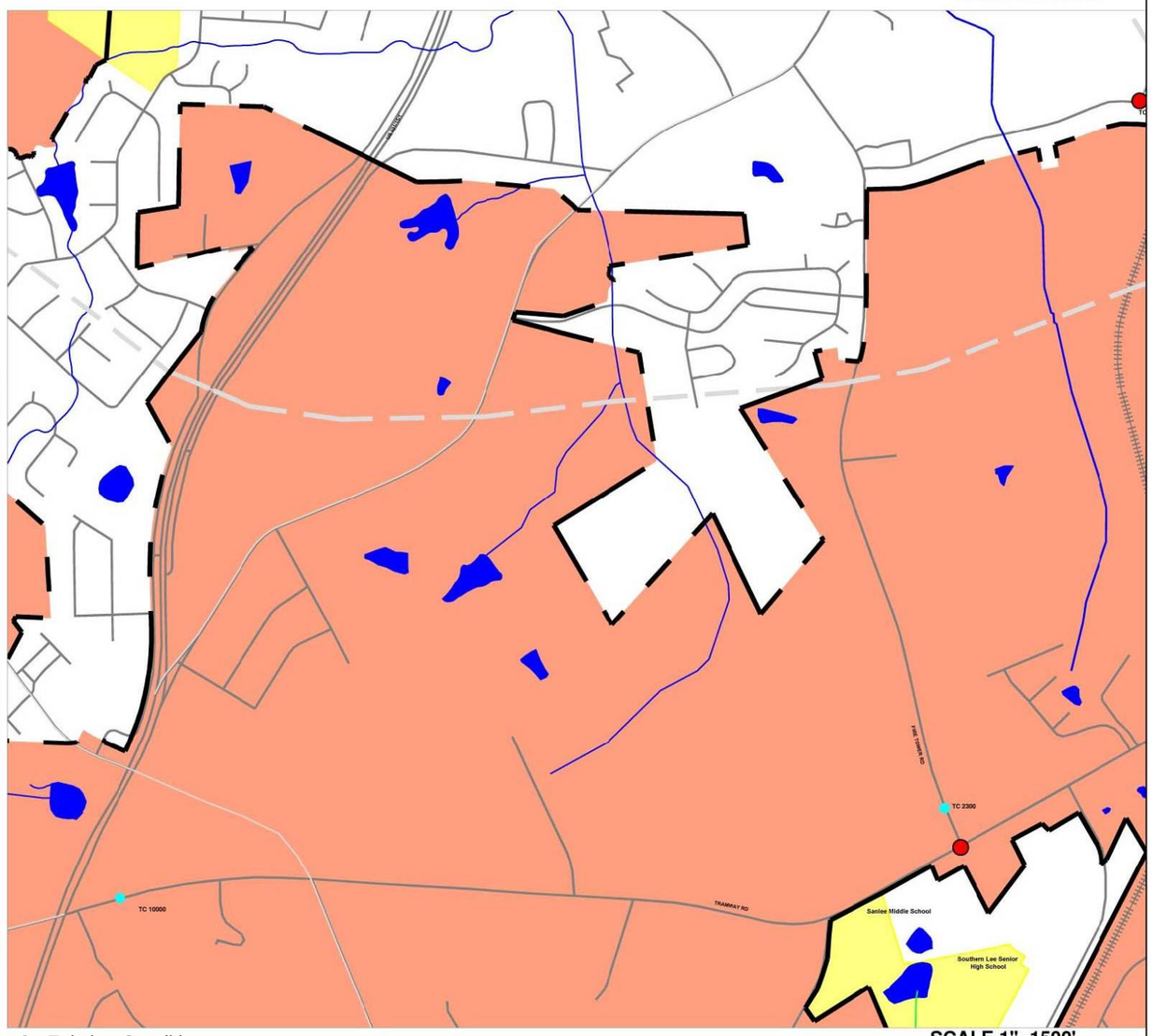

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City of Sanford 2009 Comprehensive Pedestrian Plan

Map 9
Existing Conditions
Public Schools

Existing Sidewalks
- Good Condition
- Fair Condition
- Poor Condition

- Existing Parks/Recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination
- Outside City Limits
- City Limits
- Planned Thoroughfare
- Existing Traffic Signals
- Problem Spot
- Needed Curb Cut
- Busy Intersection - No Crosswalk
- Gap or Sidewalk ends short of street.
- Traffic Count TC 12000

Walking Trip Characteristics

Walking trips are typically broken down into two main categories: walking for recreation and walking to reach a destination. The Kiwanis Family Park offers the only dedicated recreational trails in the City at this time. The park has two miles of trails including a one mile fitness trail and a half mile greenway trail. The City is working to extend the greenway trail to reach all the way to the Endor Furnace Historic Site on the Deep River. The next section is to be completed north of the Kiwanis Family Park to Highway 421 by fall, 2010. There are also walking trails located in Lee County Parks at both SanLee Park and Tramway Park.

Traffic generators in Sanford include shopping areas, job sites, schools, parks and the hospital and doctors' offices. Recreational sites generating traffic include:

- **Kiwanis Family Park** – there are no sidewalks leading to the park
- **Kiwanis Children's Park** – there are no sidewalks leading to the park
- **Depot Park** – this park is located in the downtown central business district and is well served by sidewalks. The main problem consists of the railroad tracks that run on the east and west side of the park. The tracks disrupt the existing pedestrian network and safety measures are absent.
- **McIver Park** – sidewalks run to McIver Park and then stop short, forcing pedestrian traffic into the street to access the park itself.
- **Temple Park** – Temple Park takes up a full City Block between Charlotte Ave and McIver Street. Sidewalks lead from downtown along Charlotte Ave. to the park, where they stop. No other sidewalks access the park along McIver St., 7th St, 8th St or further east along Charlotte Ave.
- **Horton Park** – located between two residential neighborhoods at the corner of Washington Street and Garden Street, there are no sidewalks leading up to the park. Existing sidewalks along Washington Ave. stop short of the park.
- **Dalrymple Park** – there are no sidewalks leading to this park.
- **Buchanan Park** – there are no sidewalks leading to this park.

Shopping destinations are scattered throughout the City, but the main retail areas that generate pedestrian traffic are:

- **Downtown Sanford** – downtown Sanford has a mix of sidewalks, with the best and most complete system being in the historic district. There are varying degrees of sidewalk conditions accessing the downtown from the surrounding neighborhoods, from good to non-existent.
- **The US 421/South Horner Blvd. corridor** – there are sidewalks along much of this corridor, but significant gaps occur. Numerous driveways and curb cuts break up the continuous flow of sidewalk along this corridor. Where the driveways/curb cuts exist, there are seldom any marked pedestrian lanes. There are few sidewalks accessing the corridor from the residential, business and governmental districts along the corridor.

- **The River Birch Shopping Center and adjacent areas** – there are no sidewalks accessing this shopping area. The right-or-way along Spring Road is wide enough to accommodate bicycle and pedestrian paths.
- **Main Street and East Trade Street in Jonesboro** – sidewalks access most of the businesses and churches along these two streets. But there are gaps in the system and they end short of popular pedestrian destinations.
- **Kendale Shopping Center** - occupies three blocks along South Lee Avenue in Jonesboro. There is limited sidewalk access from nearby residential neighborhoods along Main Street and West Raleigh St.

There are several intersections in the City that have been deemed dangerous because of the volume and speed of vehicular traffic. The most often cited intersections are:

- **Bragg St. and Nash St.**
- **Horner Blvd. and Carthage St.**
- **Horner Blvd. and Wicker St.**
- **Hawkins Ave. and Charlotte Ave.**
- **Charlotte Ave. and 3rd St.**
- **McIver St. and 3rd St.**
- **Charlotte Ave. and 7th St.**
- **Any intersection with Horner Blvd.**
- **Main St. and Lee Ave.**

None of these intersections have pedestrian signals or crosswalks. Horner Blvd. effectively divides Downtown Sanford in half, and people are hesitant to cross it because of the vehicular traffic.

The main corridors of sidewalk connectivity are Horner Blvd. (north/south), Hawkins Ave. (north/south) 3rd St. (north/south), Carthage St./Charlotte Ave (east/west), Wicker St./McIver St. (east/west), Gulf St. (north/south), Vance St. (north/south) Main St. (east/west) and Lee Ave. (north/south). All of these corridors are characterized by gaps in the system created by missing segments of sidewalk or sidewalks in poor condition.

There are also major barriers created by high volumes of vehicular traffic. Streets with the highest volumes are:

- **South Horner Blvd** – 28,000 to 34,000 vehicles per day
- **Horner Blvd. through the downtown** – 20,000 to 25,000 vehicles per day
- **W. Main St.** – 16,000 vehicles per day
- **Bragg St.** – 14,000 vehicles per day

- **Nash St.** (Lee County High School and Central Carolina Community College) – 11,000 vehicles per day
- **Spring Lane** (shopping centers) – 11,000 vehicles per day
- **S. Lee Ave.** – 10,000 vehicles per day
- **Tramway Road** (Sanlee Middle School and Southern Lee Senior High School) – 10,000 vehicles per day
- **Carthage St.** – 9,900 vehicles per day
- **7th St.** – 9,300 vehicles per day

To create a pedestrian friendly transportation system in the City of Sanford, existing pedestrian corridors will have to be strengthened by filling in gaps, repairing existing facilities and providing safe and efficient paths across major vehicular corridors. Additional pedestrian corridors need to be provided to connect major portions of the City (east to west and north to south) and to serve as neighborhood connectors. New connectors need to be provided to important destinations, especially the public schools and parks.

2.4 INVENTORY AND ASSESSMENT OF EXISTING PEDESTRIAN FACILITIES

The City of Sanford is committed to improving the opportunities for pedestrian transportation. The City of Sanford Steering Committee and McGill Associates underwent a process of creating a pedestrian facility inventory. This inventory delineates not only the location of existing sidewalks but also the condition of the facilities, as shown on *Map 1 (North) and Map 2 (South): Existing Pedestrian Facilities* found at the end of this section. This inventory includes the condition of sidewalks, crosswalk needs, existing barriers and intersections that require curb ramps. The inventory was developed to identify needed linkages that would improve connectivity and to assess both the condition of facilities and whether they are ADA compliant.

In addition to the Visual Survey, interviews were conducted with appropriate staff and agencies within the City government. These interviews were designed to solicit information from knowledgeable staff about departmental issues and concerns with the existing pedestrian network and how it currently serves the needs of the citizens of Sanford.

Visual Survey Results

Overview

For the visual survey, Sanford was divided into eight different districts, as shown on the map below. Evaluations were made of the existing pedestrian network in each area, specifically looking at sidewalks, crosswalks, curb ramps and barriers.

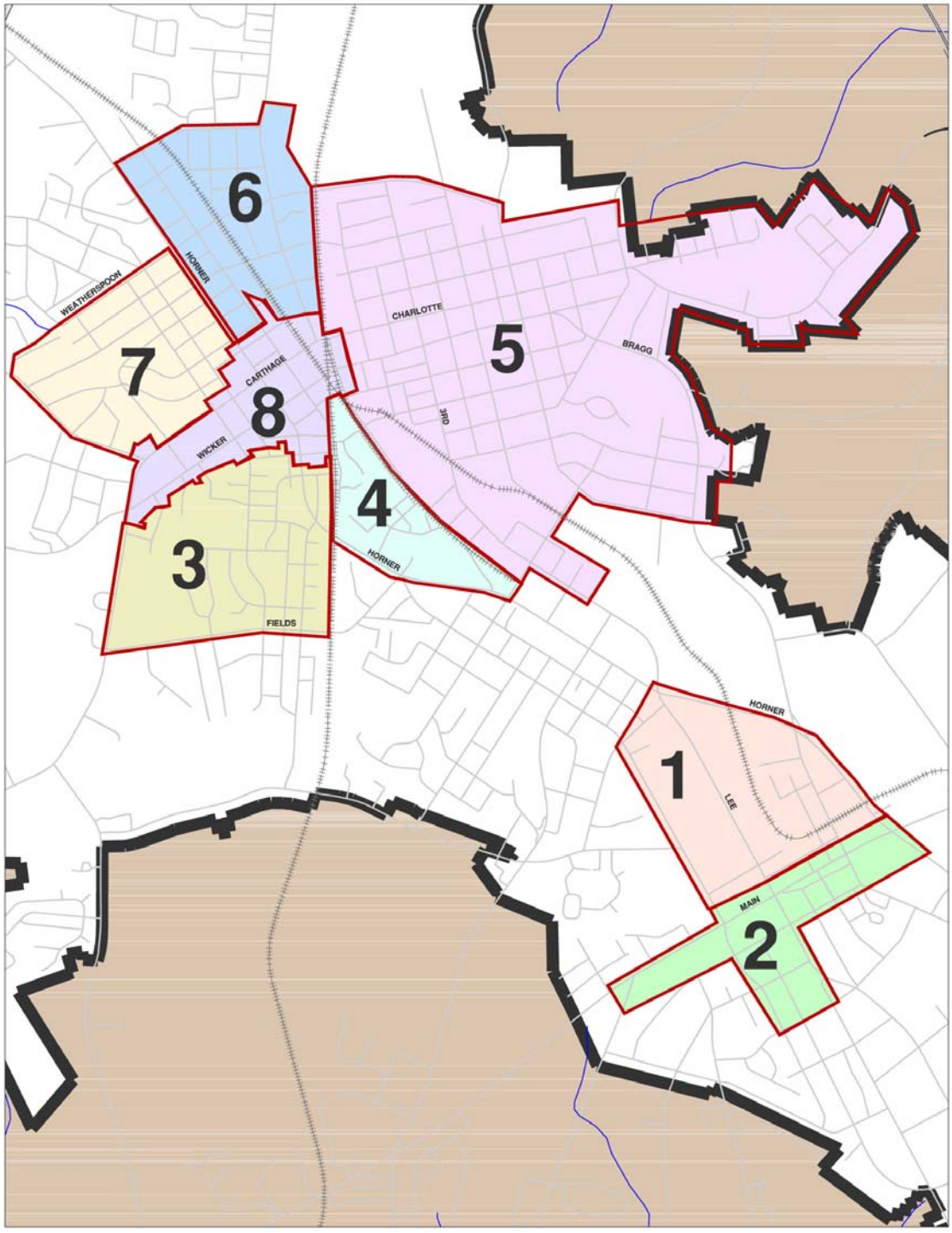
Sidewalks

The locations and condition of existing sidewalk are shown on Maps 1 and 2 at the end of this Section. Existing sidewalks in the pedestrian network were rated as good, fair or poor.

- Good – overall good, usable condition. Sidewalks must be at least four feet wide. A few minor cracks, small amount of spalling and discoloration is acceptable.

- Fair – usable condition. Any sidewalk less than four feet in width, moderate number of cracks, minor settling or uplifting, spalling and intrusive vegetation.

- Poor – dangerous or unusable sidewalks. Major cracks and breakage, major uplifting or settling, crushed concrete, missing segments, excessive vegetation intrusion.



Sanford was divided into eight different districts for this study.

Overall, the existing sidewalks in Sanford are in good condition. The major issues for the overall sidewalk system are:

- Age. Many of the sidewalks in Sanford are of an advanced age. These require constant monitoring to repair problems as they occur.
- Gaps. All of the district sidewalk systems are incomplete. In many instances the sidewalk just ends, often in the middle of the block. In other instances, the sidewalk will run the length of the street, stop for a block and then pick up again.

- Lack of sidewalks. All of the districts have streets that have no sidewalks at all.
- Lack of Connectors. There are often few if any connectors between districts and destinations such as parks, business centers, shopping and other districts.
- Width. Several of the sidewalks in the residential neighborhoods are less than four feet wide. Public sidewalks should be a minimum of four feet wide (five foot is preferable) to allow for two pedestrians to walk side by side and to allow free passage for a wheelchair.
- Intrusive vegetation. In many instances, grass and weeds are growing in the sidewalk joints, creating tripping hazards and providing obstacles to wheelchairs, strollers and children roller skating. Grass and weeds are also growing over the sidewalk from the edges, narrowing the usable walking surface.
- Debris. Every district had sidewalks that were obstructed by debris. The debris included washed out soil, leaves and pine needles, trash and piles of leaves left on the sidewalk by residents.
- Discoloration. Though only an aesthetic consideration, the dark and discolored concrete of many of the sidewalks detracts from the attractiveness of the neighborhoods.

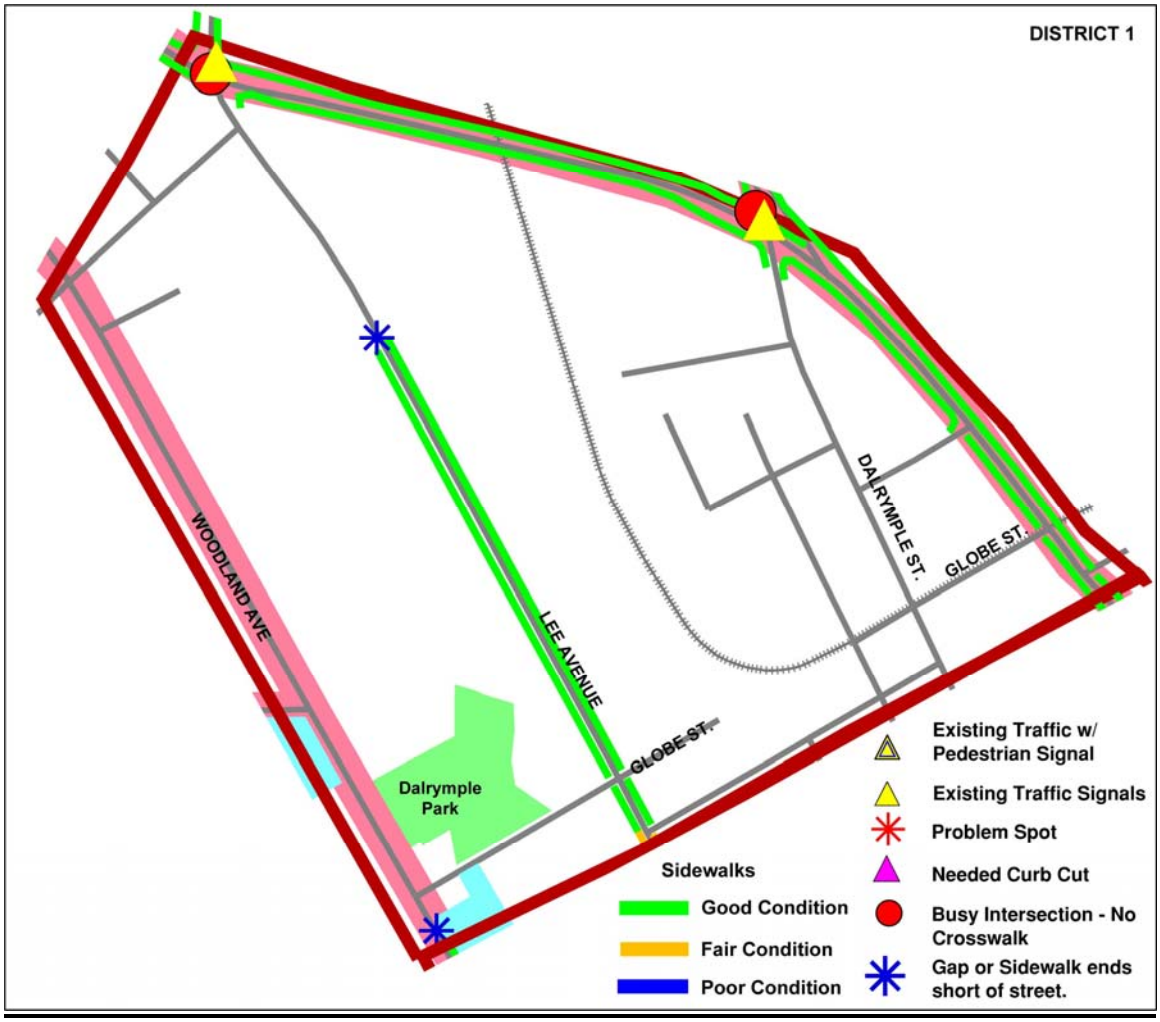
Pedestrian Intersections

Crosswalk and signal needs are also shown on Maps 1 and 2. There are many intersections that require pedestrian signals, crosswalks, areas of refuge, or a combination of these needs in order to protect pedestrians as they navigate across traffic.

Barriers

In addition to the sidewalks and curb ramps, the inventory delineates noncompliant sidewalks and sidewalk obstacles. Barriers consist of objects located on sidewalks which prevent a safe lateral clearance. Typical barriers consist of utility poles, traffic signs, fire hydrants and intrusive vegetation.

District One – Jonesboro Neighborhood



District One is centered upon the neighborhoods surrounding Lee Avenue in Jonesboro. The district is a mix of commercial and residential uses. Dalrymple Park is located on the corner of Woodland Avenue and Globe Street and is a major destination point.

Sidewalks

Sidewalks consist of ½ mile of sidewalk down both sides of Lee Avenue and 300 feet of sidewalk along the Jonesboro Heights Baptist Church on Woodland Avenue.

The Lee Avenue sidewalk runs from Main Street in Jonesboro to within 1,100 feet of the Lee Ave./S. Horner Blvd. intersection. The sidewalk stops at the commercial district, a major destination point for residents in this district. For most of its length, there is a two foot vegetated strip between the sidewalk and the curb. Though mostly in good condition, there are problem spots along its length with cracks, intrusive vegetation and debris. The one block stretch adjacent to Main Street is quite old and rough. Though usable, there are small sections of the sidewalk that should be repaired.

Globe Street and Humber Street have no sidewalks; Woodland Avenue has a short segment of sidewalk that runs along Jonesboro Heights Baptist Church and ends mid block. There are no sidewalks leading to Dalrymple Park (Globe St. and Woodland Ave.).

Pedestrian Intersections

There are marked pedestrian crossings at Lee Avenue/Main Street and Woodland Avenue/Main Street. There are no pedestrian signals at either intersection.

Needed Pedestrian Crossings

- If Lee Avenue is extended to Horner Blvd, a marked pedestrian crossing and pedestrian signal will be needed.

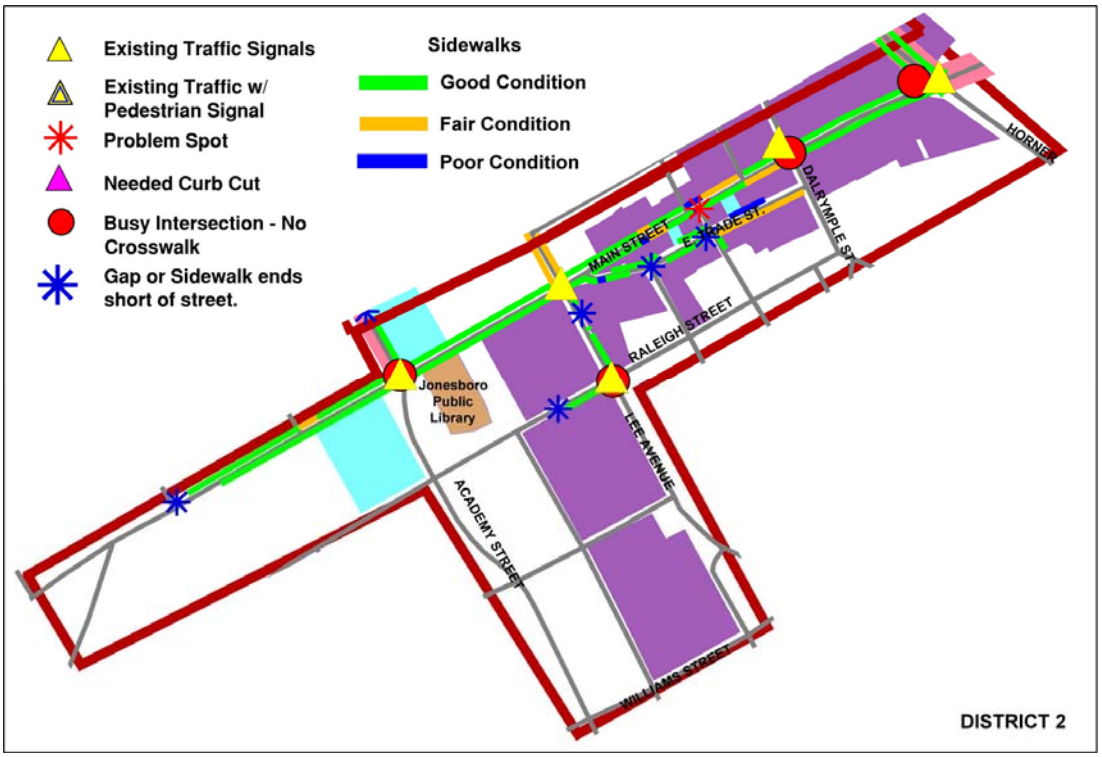
Barriers

Barriers in this district exist in the form of lack of sidewalks, or damaged sidewalks.

Needed Connectors

- Woodland Avenue to Fields Drive
- Lee Avenue to 3rd Street

District Two – Jonesboro Business District



District Two includes Main Street between Dalrymple Street and Lemon Springs Road, E. Trade Street and approximately 2000 feet of South Lee Avenue along the three shopping centers. This district is highly urban and contains the older shopping and business centers for Jonesboro as well as the Jonesboro Branch of the County Library. Main Street is a heavily traveled road with a daily average of 14,000 vehicles.[2]

Sidewalks

The majority of sidewalks along Main Street are considered to be in good condition. Several sections have been replaced as needed, leaving a tapestry of old and new sidewalk sections along its length. Though this is not aesthetically appealing, it does provide an acceptable walking surface.

A few sections of the sidewalk were deemed to be in fair condition due to excessive debris and enough cracking, pitting or spalling to indicate deterioration of the slab.

Four sections of the sidewalk were considered to be in poor condition. These sections had tripping hazards due to large cracks, uplifting and subsidence. Some sections of the sidewalk have been overlaid with asphalt driveways. Though asphalt can be a walkable surface, when used for vehicular access across a pedestrian pathway, the pedestrian pathway should be clearly marked. At East Main Street and Watson Avenue, the sidewalk is several inches below the curb, requiring one step up and one step over the curb to attain street level. This is an obstacle for people in wheelchairs and walkers and is not ADA compliant.

To the west, the sidewalk ends in a gravel parking lot at Maybee Hill Drive on one side of Main Street and at a residential driveway on the opposite side of the street, further east. The sidewalk continues to South Horner Blvd. on the eastern side.

East Trade Street is approximately 2000 feet long. It is unusual in that along one block; it is fronted by the rear of buildings facing Main Street. This results in the sidewalk being used to store trash cans and other maintenance equipment, creating a series of obstacles along the pathway.

There are several gaps in the sidewalk system along Trade Street; sometimes at driveways or parking areas and sometimes the sidewalk just ends well short of the corner.

The South Lee Avenue corridor accesses the Kendale Shopping Center and a variety of businesses. Sidewalks are scattered with huge gaps in between. There is no sidewalk along South Lee Avenue on the side where the strip malls are located. There is a sidewalk running

down one side of West Raleigh Street between two of the shopping centers that is in good condition. The section of Main Street sidewalk beside the shopping center has several new sections within it. There is a short segment along the east side of Lee Avenue that is in good condition, but is interrupted by several feet of asphalt parking and driveways with no pedestrian path marking.

Pedestrian Intersections

There is one marked crosswalk across Trade Street at the intersection with Main Street. Currently, crosswalks across Main Street are fading. As it is close to Lee Avenue, pedestrians can cross at the marked crosswalks at Lee and Main Streets. Because of the low amount of traffic, crossing Trade Street does not appear to be a safety concern for pedestrians.

There are no marked crosswalks across South Lee Avenue to the Kendale Shopping Center. There is a traffic signal at the corner of Lee Avenue and Raleigh Street that could support a pedestrian crossing.

Needed Pedestrian Crossings

- Raleigh Street and South Lee Avenue

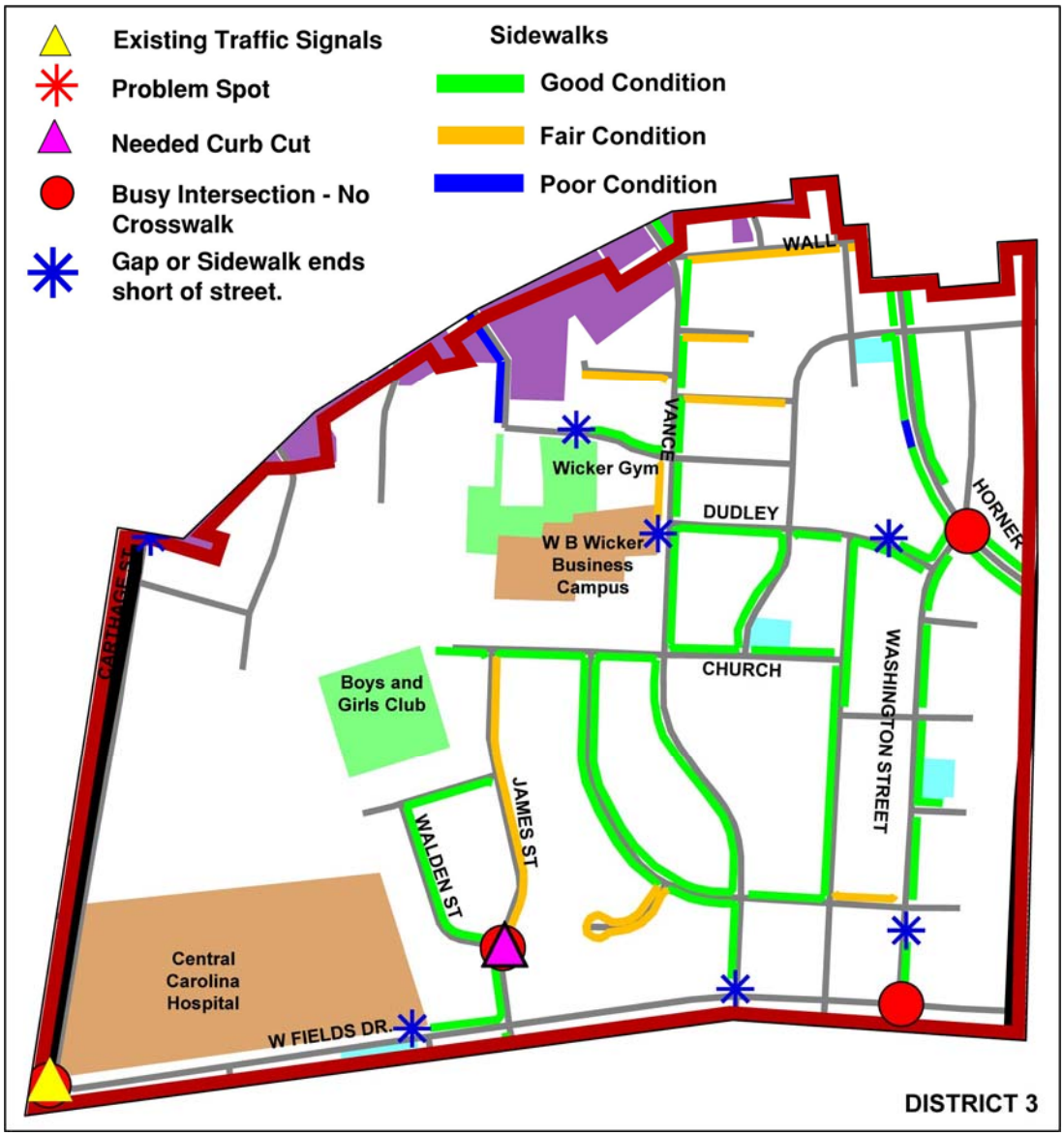
Barriers

The sidewalk on the north side of Trade Street is used by the businesses for storage of cleaning equipment, boxes and trash cans. In extreme cases, pedestrians are forced off of the sidewalk and into the street to pass the obstacles. The other noted barriers in District Two are long lengths of parking lots and the absence of sidewalks.

Needed Connectors

The only pedestrian connector between Jonesboro and Downtown Sanford is the sidewalk along South Horner Blvd/US 421. This very busy highway generates 29,000 vehicular trips on a daily average.[iii] Other pedestrian connectors along less highly traveled vehicle routes, such as Lee Avenue and Woodland Avenue, would be beneficial.

District Three – W. B. Wicker



District Three is a mix of residential and commercial neighborhoods, south of Downtown Sanford. The district is roughly bounded on the west by Carthage Street, on the south by Fields Drive and on the east by Horner Blvd. The district includes several churches, Central Carolina Hospital, the Boys and Girls Club, Wicker Gym and the W.B. Wicker Business Campus.

Narrow sidewalk on Bland Circle.

Sidewalks

Generally the sidewalks in this district are in good condition. Some of the sidewalks listed as fair are in

good physical condition but are less than four feet wide. These sidewalks are on Price Street, Pearson Circle and Bland Circle. Only two small sections of sidewalk are listed as poor.

District Three has a fairly good system of sidewalks, though many of the sidewalks are only on one side of the street. Where the sidewalks switch sides of the street, often there are no crosswalks or curb ramps provided, limiting both safety and accessibility.

Lack of sidewalks along Oddfellow Street

The major gaps in this pedestrian system are on Oddfellow Street, Fields Drive, and the northern-most block of Washington Street, Ramseur Street, King Street and Robbins Street. Whereas most of these streets have a low volume of traffic, sidewalks are still important for safety reasons and for building a positive community identity.

Fields Drive is a key vehicular corridor for Sanford, with a daily average of 8,200 vehicles. Central Carolina Hospital is a major destination, located on this route. There is also a church across Fields Drive from the hospital. The road is a major connector between Horner Blvd. and Carthage Street, south of downtown. The only pedestrian facility along this road is a very small section of sidewalk that comes off of James Street and goes west for less than 300 feet. Because of the presence of pedestrian generators and the high volume of traffic, this road should be a key pedestrian corridor.

Lack of sidewalks leading to the hospital.

Pedestrian Intersections

Another major destination in this District is the W. B. Wicker Business Center and the Wicker Gymnasium, located on Vance Street. Though there are sidewalks along Vance Street, they are on the opposite side of the street from the Center and Gymnasium. There are no marked crosswalks from the sidewalk to the Center and Gym complex.

There is a sidewalk running south from Fields Drive down Hooker Street. This street is a continuation of James Street which also has a sidewalk. There is no marked crosswalk across this busy road at this intersection.

Other dangerous intersections for pedestrians existing along Horner Blvd. as it crosses this district are at: Cole Street, Pearl Street, Wall Street, Oddfellow Street and Washington Street. Only the intersection at Horner and Wall Street has a traffic light. None of the intersections have marked crosswalks.

Needed Pedestrian Crossings

- Vance Street at Dudley Street (W. B. Wicker Business Center)
- Vance Street at Pershing Street (Wicker Gymnasium)
- Across Fields Drive from James Street to Hooker Street
- Intersection of Washington Street and Fields Drive
- Intersection of Fields Drive and Carthage Street
- Intersection of Wall Street and Horner Blvd.
- Intersection of Washington Street and Horner Blvd.

Needed Curb Ramps

- Crestview Street at Bland Circle

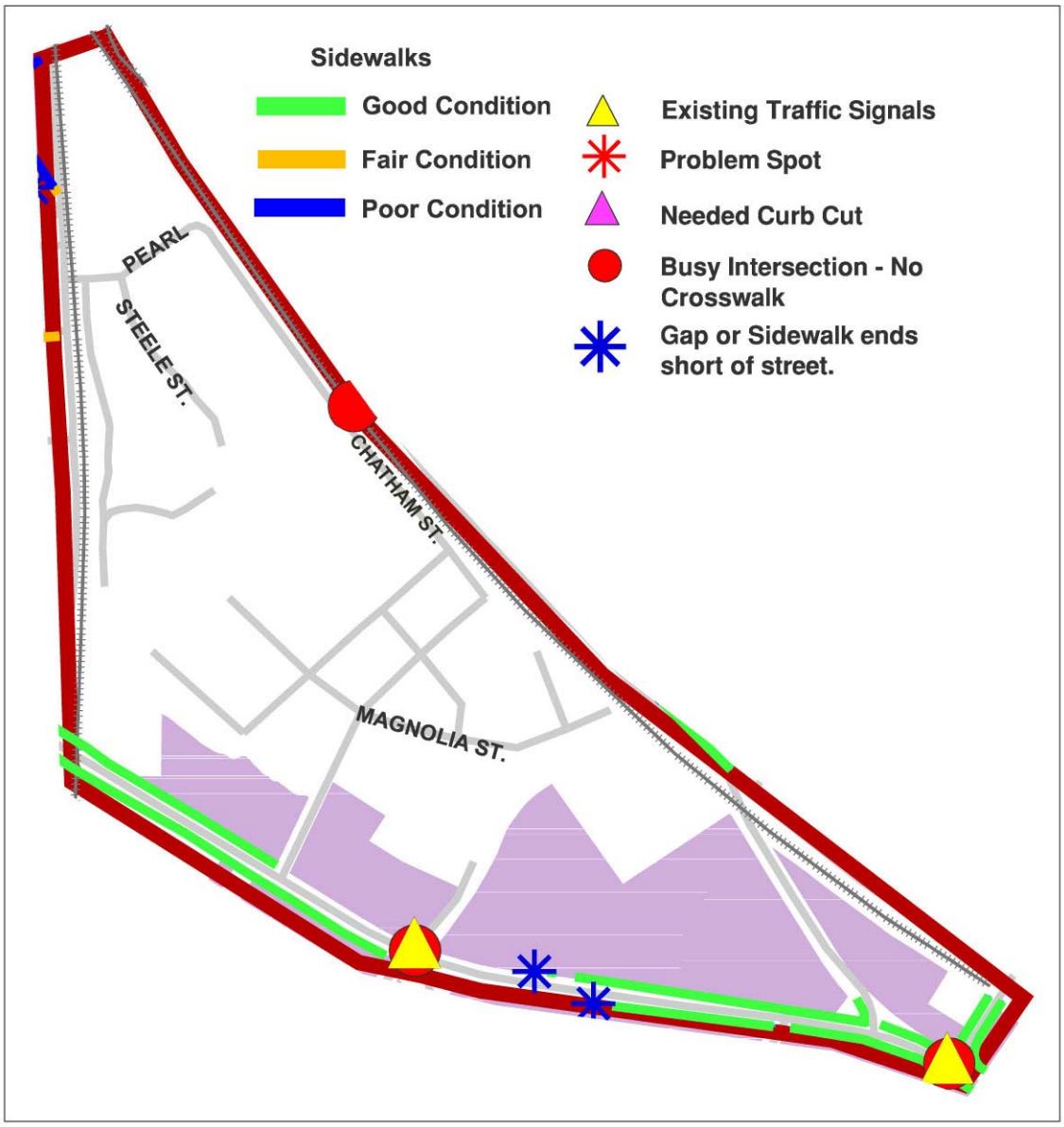
Barriers

The major barriers for District Three consist of a lack of connectors to other districts and destination points. District Three is bounded on three sides by major roads (Horner Blvd., Fields Drive and Carthage Street) that carry between 8,000 to 28,000 vehicles daily.[iv] There are no marked crosswalks for pedestrians to cross these streets and only two intersections have traffic signals.

Needed Connectors

- From District Three to Kiwanis Family Park
- From District Three to Horton Park
- To downtown along Pershing Street

District Four – Magnolia Street District



District Four is a mix of residential and commercial areas, southeast of downtown Sanford. The district is roughly bounded on the west by Horner Boulevard and Railroad Street and on the east by Chatham Street. The Magnolia Street District is approximately one third residential property with the remainder made up of commercial and industrial properties situated along Horner Blvd. and Chatham St. Active railroad lines border the eastern edge and parallel the western edge of the district along Moore St.

Sidewalks

The only sidewalks in this district are found along a portion of Horner Boulevard on the west southwest border. These are NCDOT sidewalks and are in good condition, though there are large gaps and the sidewalks that do exist butt up against the curb, leaving no separation between pedestrians and vehicles. Traffic volumes along this section of Horner Blvd. average 28,000 vehicles per day.

The busiest pedestrian areas include the Horner Boulevard corridor on the west of the district and the north portion of the district connecting to downtown. Horner Boulevard has sidewalks adjacent to many of the restaurants and other businesses that support pedestrian travel. There are no pedestrian connections from within the district to the edges and thence to other districts.

Pedestrian Intersections

No pedestrian crossings exist within or adjacent to this district.

Needed Pedestrian Crossings

- Across Horner Boulevard to Woodland Avenue
- Across Horner Boulevard at Wall Street
- Across Horner Boulevard at Short Street
- Across Chatham Street at Short Street
- Across Chatham Street at Weller Street

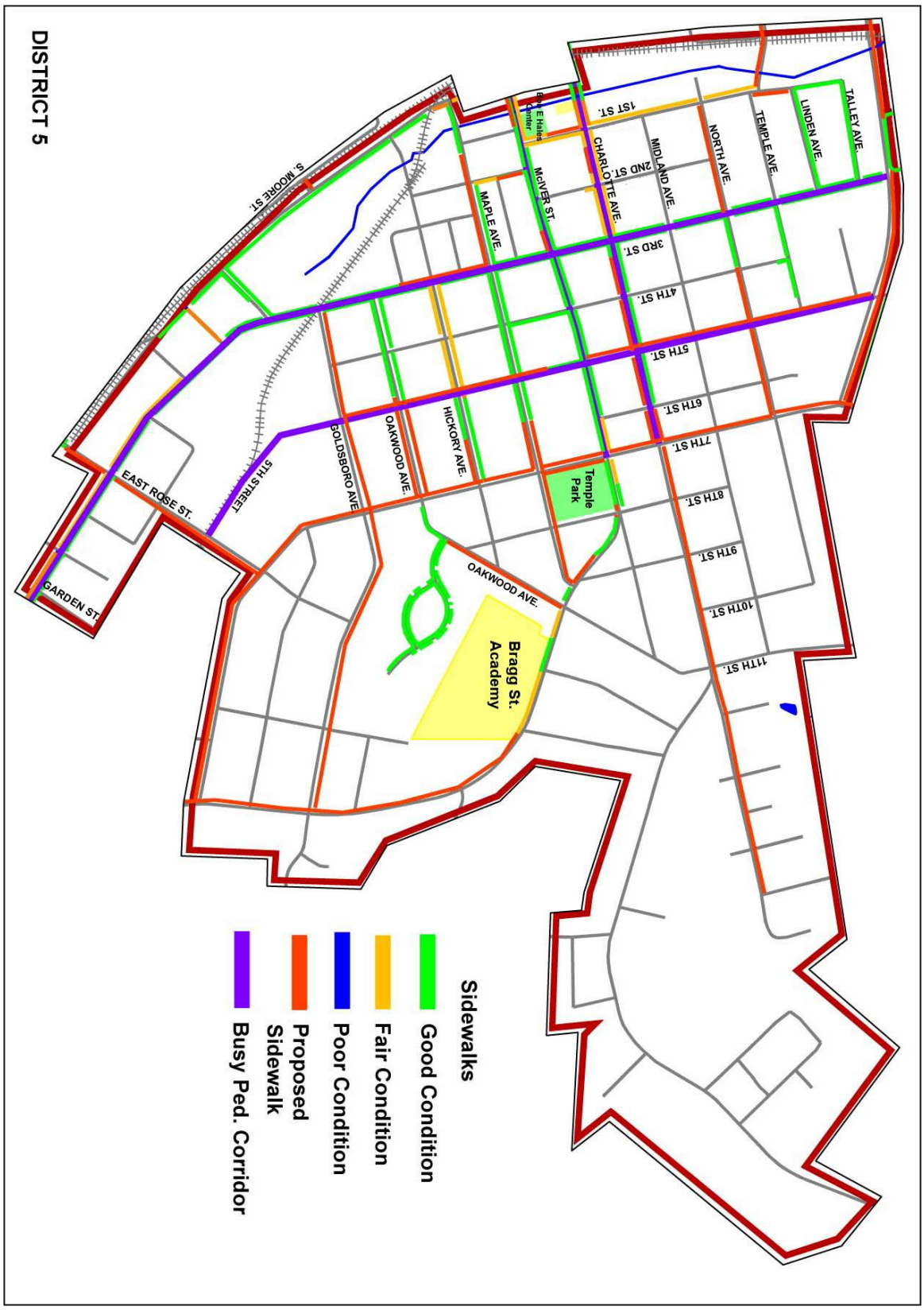
Barriers

The railroad lines on either side of this district create a visual, cultural and pedestrian barrier for this neighborhood. The only paved crossing for the line on the eastern edge is Weller St. There are no special pedestrian accommodations at this crossing. The only crossing on the west is Pearl St. Again there are no special pedestrian accommodations. Where the railroad crosses Horner Blvd. it is located on an overpass.

Needed Connectors

- East Pearl St. to West Pearl Street across S. Steele St.
- Across railroad crossings along Weller St., from S Moore St. to Chatham St.

District Five – East Sanford



The East Sanford District is a mix of residential, commercial and some industrial properties. Low income residential housing makes up the majority of this district. The district is roughly bounded on the west by Chatham Street. Weatherspoon Street forms the northern edge of the district. The eastern boundary is formed by the City Limits and the south by the commercial district around Rose St. This district includes numerous pedestrian generating destinations including: churches, Temple Park, Bob E. Hales Center and the Bragg Street Academy. A future park and greenway is proposed for the north western edge of this district.

Sidewalks

Generally the sidewalks in this district are in good condition. Some of the sidewalks listed as fair are in need of basic maintenance or curb ramps. These sidewalks are on North 1st Street, Charlotte Avenue, Hickory Avenue, McIver Street, and Bragg Street. One portion of existing sidewalk is listed in poor condition and requires replacement. This sidewalk is at Hickory Avenue and 5th Street.

The East Sanford District has a concentrated core of sidewalks, but there are many gaps in the system. Many streets are without sidewalks, others have partial coverage. In several cases, the sidewalk ends in midblock, often with a steep drop. There are many streets that do not have a curb and gutter system, but have swales instead. Sidewalks do not cross the swales, but stop short of the street, leaving the pedestrians to "jump the ditch." In these cases, the sidewalk is usually at least 12" above the level of the street and even higher above the bottom of the swale. Along several streets where no sidewalk exists, deep ditches line the street. Where sidewalks do exist, they are often 15' to 20' back from the edge of the street, with large street trees growing in the space. This distance creates a safe, inviting pedestrian environment.

3rd St. and 7th St. are main thoroughfares for traffic in Sanford and therefore dangerous for pedestrians without access to pedestrian facilities. 7th St. is especially poor - as it has no sidewalks and a daily average traffic rate of 9,300 vehicles. There are traffic signals along 7th St. at both the McIver and Maple St. intersections. There was a recent pedestrian fatality at the 7th St. and McIver intersection and four other recorded accidents since 1990.

Pedestrian Intersections

As noted above, the intersection at 7th St. and McIver St. is a dangerous intersection due to the speed and volume of traffic and the adjacent pedestrian

destination of Temple Park. Other intersections that are potential dangers to pedestrians are along 3rd St. which is especially busy with pedestrians in the evenings. Two pedestrian/vehicular accidents have been recorded at 3rd and McIver St. The City Hall is located where 3rd St. meets Weatherspoon St. to the north of this district. This prime destination has sidewalks but no pedestrian crossing or traffic signal. There are no marked pedestrian crosswalks or pedestrian signals anywhere in this district.

This neighborhood has the highest number of recorded pedestrian/vehicular accidents of any neighborhood in the City, surpassed only by intersections located along US 421/Horner Blvd.

Needed Pedestrian Crossings

- 7th St. and Charlotte Ave.
- 7th St. and McIver St.
- 7th St. and Maple St.
- 7th St. and Oakwood St.
- 3rd St. Charlotte Ave.
- 3rd St. and McIver St.
- 3rd St. and Maple St.
- 3rd St. and Weatherspoon

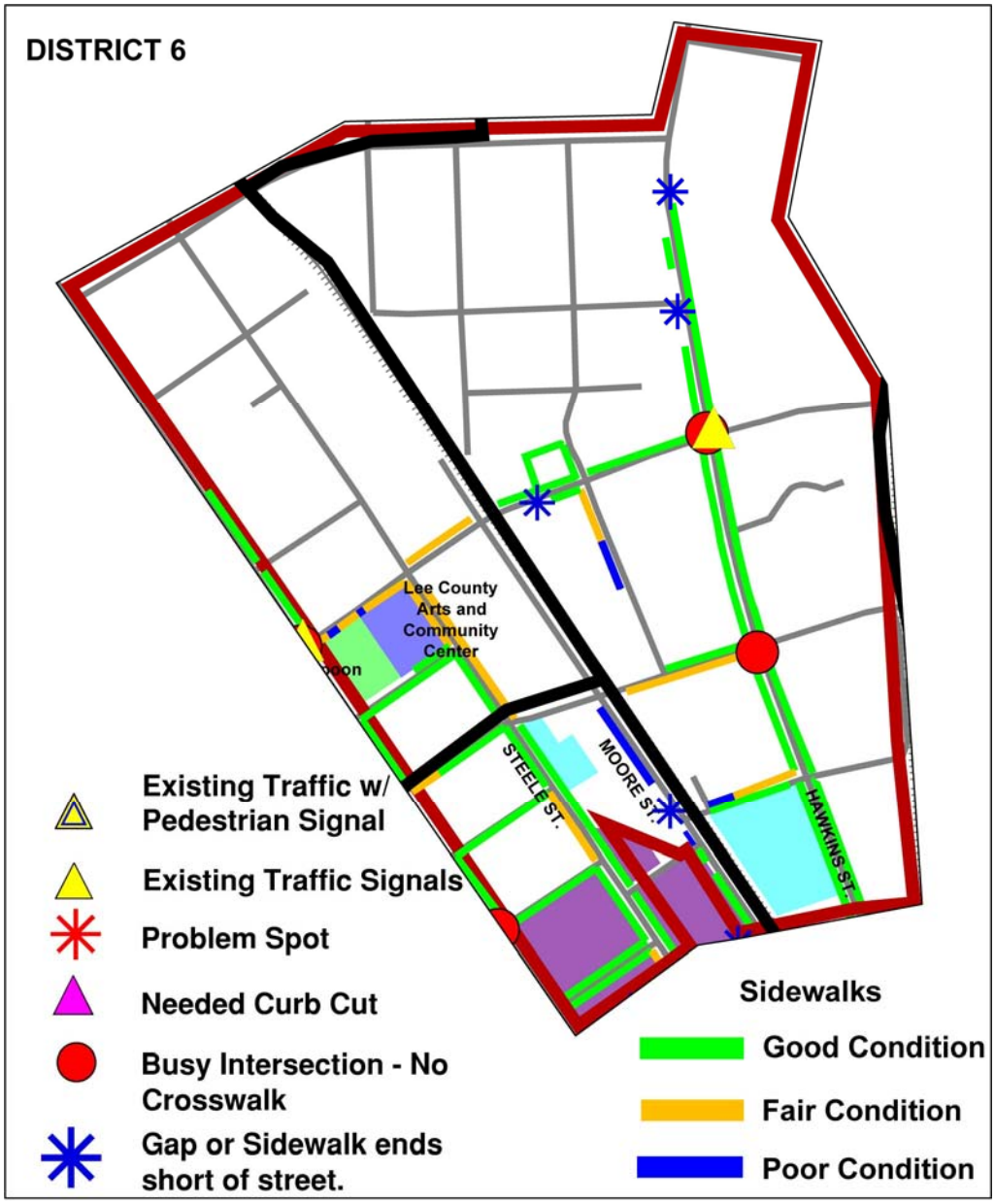
Barriers

The greatest barriers in this district are two north/south roads, 7th and 3rd streets. As major travel lanes through the neighborhood, both streets see a large volume of traffic; 9,300 vehicles per day for 7th St. and 4,100 vehicles per day for 3rd St. Other pedestrian barriers consist of sidewalks that end in the middle of a block or in a drainage swale. Deep ditches along the length of some of the streets also create barriers, forcing pedestrians out into the streets to walk.

Needed Connectors

- Along Charlotte Ave. to the downtown – fill in gaps and extend east to Sanlee Dr.
- Bragg St. to O.T. Sloan Park and Lee Senior High School.
- West side of 3rd St. to Horner Blvd/US 421

District Six – Hawkins Avenue District



The Hawkins Avenue District is a mix of residential and commercial properties, on the north side of downtown Sanford. The district is roughly bounded on the west by Horner Boulevard, on the south by Carthage Street and on the east by Hawkins Avenue. The district includes several churches, banks, homes and businesses. A future park and greenway are planned for the eastern border of this district.

Sidewalks

Other than Hawkins Ave and Horner Blvd., the majority of sidewalks in this district are confined to the area near the Central Business District. Hawkins Ave. has sidewalks from Charlotte Ave., to just north of Hill Ave. Steele St. has sidewalks from the downtown to Chisholm St, but there are gaps. Horner Blvd has sidewalks from the downtown, north to Weatherspoon, but there are many gaps on both sides of the Boulevard. The overall condition of sidewalks in this district is good, but there are some with condition problems that need to be monitored and replaced if they deteriorate further. This district has more sidewalks rated poor than any other district. Most of these occur along N. Moore St. One section between Buffalo St. and Chisholm St. disappears completely under soil and plant materials.

In many places, the sidewalks are only on one side of the street. Where the sidewalks switch sides of the street, often there are no crosswalks or curb ramps provided, limiting both safety and accessibility.

Streets with gaps in the pedestrian path include: Horner Blvd., Greensboro Avenue, North Hawkins Avenue, Weatherspoon Street, Chisholm Street, Steele Street, and Moore Street. Whereas most of these streets have a low volume of traffic, sidewalks are still important for safety reasons and for building and maintaining a positive community identity. There are no sidewalks in the northern portion of this district connecting into the residential areas other than Hawkins Ave. which stops short of the northern most neighborhoods.

The Hawkins Ave. district includes several churches, Weatherspoon Courts and the Lee County Arts and Community Center. All of these entities are potential pedestrian destinations, yet there are few complete pedestrian corridors accessing any of them.

Pedestrian Intersections

There are two highly traveled roads in this district, Hawkins Ave./US 1 and Horner Blvd. /US 421. This section of Horner Blvd. sees an average of 20,000 vehicles per day, while Hawkins Ave. has an average of 14,000 vehicles per day. Both of these streets are difficult for pedestrians to cross safely and pedestrian accidents have occurred on both streets. There are traffic lights at Hawkins Ave./Weatherspoon St. and Horner Blvd./Weatherspoon St. only.

<u>Needed Pedestrian Crossings</u>

- Horner Blvd and Weatherspoon St.
- Horner Blvd and Chisholm St.
- Horner Blvd. and Summit Dr.
- Summit Dr. and Steele St.

- Hawkins Ave. and Weatherspoon

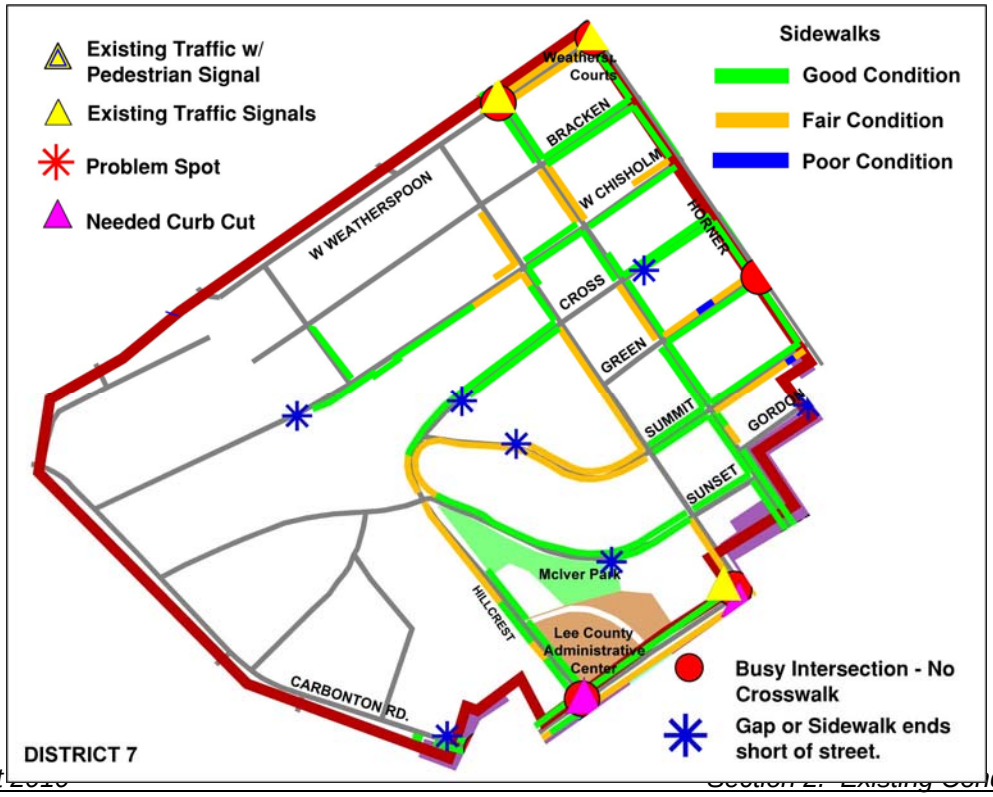
Barriers

There are three major barriers to pedestrian traffic in the Hawkins Ave. District: two sets of railroad tracks, Hawkins Ave. and Horner Blvd. One set of railroad tracks effectively separates the district into two entities. There are three paved roadway crossings across this track, but only one, Weatherspoon St. has any sidewalks. The other set of tracks forms the eastern border of the district. There are two places to cross these tracks into the East Sanford District, but again pedestrian amenities are lacking. There are no pedestrian signs or warnings at any of the crossings and the ground is often rough and poses tripping hazards.

Needed Connectors

- Along Chisholm St., from the proposed Cotton Mill Park across Horner Blvd. to the Rosemont/McIver Park District.
- Along Weatherspoon St. from the City of Sanford Government Center to the Weatherspoon Courts
- Up Hawkins Ave. to Burns Dr.

District Seven – Rosemont/McIver Park



District Seven contains the historic residential neighborhood of Rosemont/McIver Park. The District is located northwest of Downtown Sanford and is contiguous to it. McIver Park is located in the southwest portion of the neighborhood. Kiwanis Children's Park and Kiwanis Family Park are located just outside of the district. Horner Blvd. which borders District Seven on the east has a daily traffic volume of 20,000 vehicles. Weatherspoon Street on the north has a daily traffic volume of 11,000 vehicles.

Sidewalks

The sidewalks in District Seven are in generally good or fair condition with spot problems that need to be repaired or replaced. The system has many gaps in it, with sidewalks either ending in midblock or missing completely from a block. Many of the sidewalks are quite old and have both physical and aesthetic problems. Some of the older sidewalks are less than four feet in width; others are stained dark or have very rough, pitted surfaces. Much vegetative debris was in evidence along many of the sidewalks in this district.


Vance Street

Gulf Street and Vance Street run through the heart of District Seven and connect directly into the downtown area. Sidewalks of mostly good condition run the length of Gulf Street. There is a gap in this corridor along one side of the street between Cross Street and Chisholm Street. The sidewalks are separated from the street by a narrow strip of grass about two feet wide.

Vance Street runs parallel to Gulf Street through the district. There are several gaps in the sidewalks along Vance Street, including the block that connects to downtown. The existing sidewalks are separated from the street by a narrow strip of grass, about two feet in width. Most of the sidewalks along Vance Street are in fair condition with cracking and intrusive vegetation being the major problems.

Another connector to Carthage St. and the downtown district is Hillcrest Drive. A continuation of Cross Street, Hillcrest Drive runs along the western border of District Seven. There is a continuous sidewalk along one side of the street from Vance Street to Carthage Street. It is in fair to good condition with some of the older sections of concrete being less than four feet in width. There is also a large section of discolored and rough concrete south of Claremont Green. There are sidewalks in good condition on the other side of Hillcrest Drive where it meets


Gap in sidewalk on Hillcrest Drive.

Carthage Street. One section is missing where the sidewalk crosses a gravel driveway. The sidewalk on this side of the street ends because of a very steep slope down to McIver Park.

Sunset Drive is a curving street in the historic McIver Park area. McIver Park runs along the southern side of the street for about two-thirds of its length. A sidewalk in good condition runs the entire length of Sunset Drive on the north side of the street from Gulf Street to Hillcrest. There is no sidewalk on the western portion of Sunset Drive, from Hillcrest Drive to Carbont on Rd. The sidewalk on the south side of the street, though in good condition, stops at the border of McIver Park, a passive, neighborhood park. Pedestrians must either walk in the street, or push their way through shrubbery and trees to access the park. There are no paths in the park.

Summit Drive parallels Sunset Drive to the north. There is sidewalk along the entire length of the south side of the street that is in fair condition. A few sections of the sidewalk need to be replaced because of excessive cracking. The sidewalk along the north side of the street stops about halfway along the block. It too is in fair condition.

Many of the cross streets in District Seven have no sidewalks, or only partial sidewalks. With a small amount of local traffic, it is possible to walk in the street on these blocks, but as they are through streets, dangerous vehicular behavior can occur, endangering pedestrians. The western portion of this district, where the streets connect to Carbonton Road, has no sidewalks. This area of the neighborhood is closest to the Kiwanis Parks, yet there are no pedestrian connects from the neighborhood to the parks.

Pedestrian Intersections

There are four intersections in District Seven that have marked crosswalks. The crosswalk at Summit and Hillcrest is very faded and needs repainting. Because District Seven is a residential area, traffic is not a major problem for pedestrians needing to cross the street. The problem areas are where District Seven connectors to other districts cross busy roads: Horner Blvd and Carthage Street. Crossing either of these streets safely will require as a minimum, a traffic signal.

Needed Pedestrian Crossings

- Summit and Horner Blvd.
- Chisholm and Horner Blvd.

Barriers

Steep terrain along the southern portions of Vance Street and Hillcrest Drive limit the ability to place sidewalks in some places. Retaining walls might be required in order to overcome some of these difficulties.

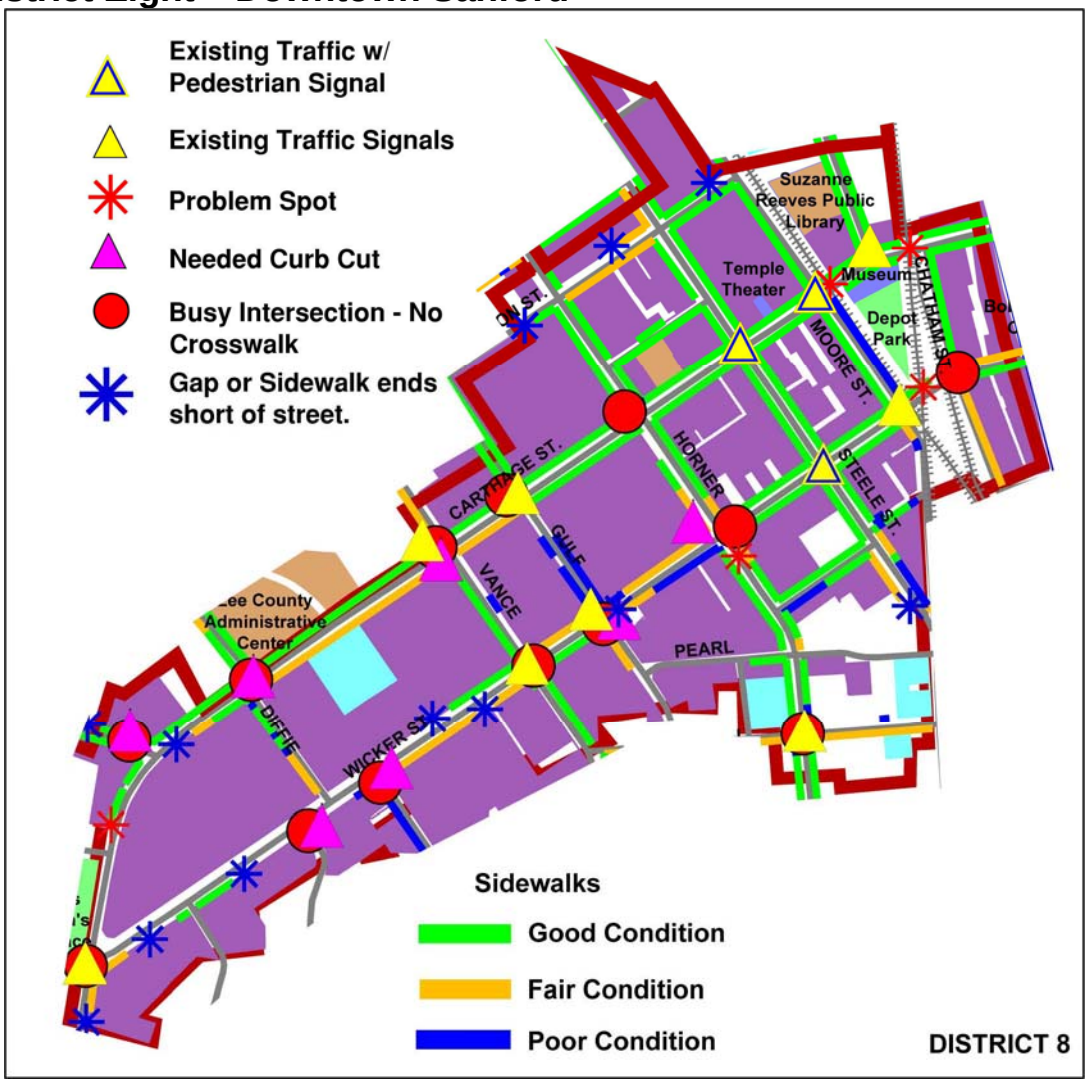
Steep terrain along Vance Street

The other major barrier in this district, aside from gaps in the sidewalk system, is debris and discarded household items on the sidewalks. Efforts need to be made to keep the sidewalks clear for pedestrians, either placing items to be picked up as trash in the grass strip, or the street, at the curb.

Needed Connectors

- Improved sidewalk along Vance Street, connecting to Carthage Street
- Connection to Kiwanis Children's Park
- Connection to Kiwanis Family Park

District Eight – Downtown Sanford



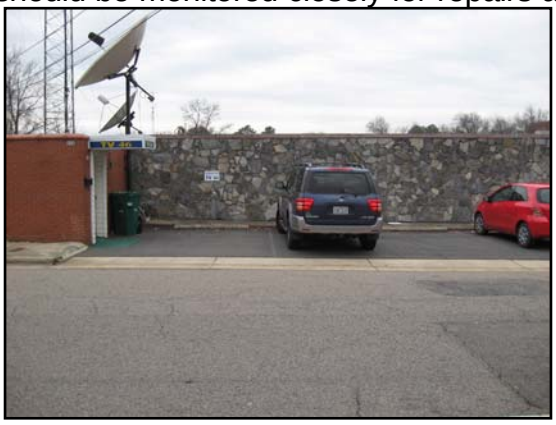
District Eight consists of Downtown Sanford which includes both the central business district and the Downtown Sanford Local Historic District. District Eight consists of Depot Park and the Temple Theater, a National Historic site. Adjacent to the downtown are McIver Park, Kiwanis Children's Park and the Kiwanis Family Park. District Eight is positioned geographically in the center of Districts Three through Seven.

Major roads through this district include Horner Blvd (US 421/NC 87), Carthage Street (US 501/15/1), Wicker Street (NC 42) and Hawkins Avenue (US 501/15/1). Traffic volumes on these roads range from a daily average of 6,800 (Hawkins Avenue) to 25,000 vehicles (Horner Blvd.).

Central Business District

The Central Business District has a good system of sidewalks, including newly installed walks on Charlotte Street and one block of Chatham Street. Other than the east side of Moore St. the sidewalks in the CBD are at least five feet wide and in most places, 10' to 12' wide. The majority of the sidewalks in the CBD are in good condition. There are areas where the sidewalks are cracked or have other safety issues such as empty post holes or obstacles. These holes, though small can create safety hazards for people using canes or walkers. Other problems such as raised edges around tree wells can cause tripping hazards. The narrow sidewalk along the east side of Moore St. overlooking the railroad tracks is very narrow and in very poor conditions with uneven surfaces and poor patch jobs.

The sidewalks along Charlotte Avenue, from Moore St. to the bridge across the Little Buffalo Creek, are in excellent condition. Between the bridge and 1st St. the sidewalks are in fair condition and should be monitored closely for repairs and/or replacement. The railroad crossings along this street are in poor condition and pose a hazard to anyone in a wheelchair or baby stroller. Furthermore, there are no tactile warnings for the visually impaired about the presence of the railroad tracks. The same condition applies along McIver Street between Moore Street and Chatham Street.



There are a few areas in the Central Business District that do not have sidewalks. Most of these are parking areas that are covered in asphalt, but do not have a pedestrian path marked off, such as along St. Clair Ct. The lack of a marked pedestrian path can lead to the intrusion of vehicles into the presumed pedestrian path. On Gordon Street,

between Steele and Moore, the sidewalk ends well before the corner on the north side of the street. On Moore Street between Gordon and Buffalo, the sidewalk is not only interrupted by unmarked parking lot driveways, but the sidewalk stops and starts several times, leaving stretches of grass to be navigated by pedestrians.

Pedestrian Intersections

There are several vehicle intersections in the downtown that must be traversed by pedestrians. Most of the intersections in the CBD have either painted crosswalks or partial, painted crosswalks; Moore Street does not have crosswalks at each corner because of the rail lines. Steele Street has painted crosswalks and pedestrian signals at the intersections with Carthage Street and Wicker Street. There are no crosswalks at Horner and Carthage Streets, a very busy vehicular intersection (20,000 average daily traffic count), or at Horner and Wicker (25,000 average daily traffic count.)[v]

Hawkins Avenue has been designated as a Downtown Gateway. Its location directly across from the Depot Park and the Railroad House, make it a potential pedestrian connector from neighborhoods to the north. There are no crosswalks, pedestrian signals or traffic signals at this intersection to increase safety of pedestrians. There is a crosswalk across Chatham Street at the intersection with Charlotte, but no crosswalk across Charlotte Street at that location. Since there is a large municipal parking lot behind Chatham Street, a crosswalk across Charlotte would be beneficial.

<u>Needed Crosswalks</u>

- Horner Blvd. and Carthage Street
- Horner Blvd. and Wicker Street
- Charlotte and Chatham
- Charlotte and Hawkins
- Either end of St. Claire Court
- McIver and Chatham

Needed Curb Ramps

- McIver and Chatham

Barriers

The biggest barrier within the pedestrian system in the Central Business District is the presence of two active railroad lines. The pedestrian system crosses these lines in four locations in the CBD: twice on Charlotte and twice on McIver. At some of these locations, the sidewalk is terminated and asphalt is used around the tracks. This material has left ridges before the tracks and large gaps around the tracks that are a hazard for any narrow wheeled conveyance such as a wheelchair or baby stroller. The gaps are also a hazard for walkers and canes. In addition, there are no tactile warning devices for visually challenged pedestrians. It should be noted that the City has recently completed railroad improvements at the Charlotte/Moore crossing, which will improve accessibility.

Other potential barriers to pedestrians in the Central Business District include utility poles, trash containers, benches, planters and traffic signs, poles and boxes. In Sanford, most of these objects have been placed either up against a building or by the curb, which keeps them out of the pedestrian pathway on all but the narrower sidewalks. Exceptions include the corner of Horner Blvd and Carthage Street, where the sidewalk narrows - the signal pole and box create an obstacle for pedestrians.

Downtown West

Lack of sidewalks down Wicker St.

West of the Central Business District, across Horner Blvd., sidewalks deteriorate in both quantity and quality. None of the cross streets between Carthage and Wicker (Gulf, Vance and Diffie) have sidewalks down both sides of the street. The only continuous stretch of good sidewalk is down the west side of Vance Street. Other stretches are interrupted by paved or unpaved parking lots and driveways without marked pedestrian paths.

The sidewalks on Wicker Street between Horner and Vance are in mostly fair to poor condition. Many of the driveways are badly cracked and broken, or missing altogether. At Gulf Street, the sidewalk along the south side of Wicker ends approximately eight feet short of the corner. In addition there are no curb ramps or pedestrian crosswalks on any of the four corners there. The existing sidewalks have a variety of problems including asphalt intrusion, badly cracked and missing surfaces, and gaps and below Vance Street, an absence of sidewalks.

Several potential residential connectors enter Wicker Street from District Three neighborhoods: Vance, Gulf, Circle, Pershing and King. Yet other than Vance Street, none of these streets have good or even acceptable pedestrian facilities connecting them to the downtown.

Carthage Street, west of Horner Blvd has the potential to serve as a connection between Rosemont/McIver Park and the downtown. Several streets in District Seven connect to Carthage Street: Hillcrest Drive, Vance Street and Gulf Street. Carthage Street has sidewalks on both sides of the street through this area. The intersection at Carthage and Hillcrest has no traffic signal, no pedestrian signal and no crosswalk, though Diffie Street, a few feet further west, does have a crosswalk across Carthage Street. Gulf Street and Vance Street both have traffic lights, but no pedestrian signals. Gulf Street has one crosswalk traversing Carthage. Vance Street has no crosswalks.

The sidewalks along Carthage Street end just beyond Carbonton Road, short of the Kiwanis Children's Park and Kiwanis Family Park. The sidewalk ends on the top of a retaining wall at the Big Lots store, which is a safety hazard. The intersection at Carthage and Wicker is a gateway into the downtown area and is adjacent to the Kiwanis Children's Park. There are no crosswalks at this location and only a short section of sidewalk on the southeast corner.

Needed Crosswalks

- Carthage and Horner
- Carthage and Gulf
- Carthage and Vance
- Carthage and Hillcrest
- Carthage and Carbonton
- Carthage and Park
- Carthage and Wicker
- Wicker and Gulf
- Wicker and Vance
- Wicker and Diffie
- Across Pershing at Wicker
- Across Circle at Wicker

- Across King at Wicker

Needed Curb Ramps

- Carthage and Vance
- Carthage and Diffie
- Carbonton Road (including the median island)
- Carthage and Wicker
- Wicker and Gulf
- Wicker and Vance
- Diffie at Wicker
- Pershing at Wicker
- Circle at Wicker

Barriers

Outside of the Central Business District, most of the common barriers (utility poles, fire hydrants and sign poles) are placed in narrow grass strips between the sidewalk and the curbs along Wicker and Carthage Streets.

Along Wicker Street, between Diffie Street and Vance Street, there is a chain link fence that is placed close to the curb, narrowing the walkable, unpaved space to four or five feet. Further narrowing the pedestrian pathway are a series of utility poles that are placed in a line running down the center of the available space.

A brick planter wall that has been constructed at the corner of Wicker and Vance Streets narrows the sidewalk at the corner down to an unacceptable width, making it difficult if not impossible for a wheelchair to navigate the sidewalk.

City of Sanford
2009 Comprehensive Pedestrian Plan

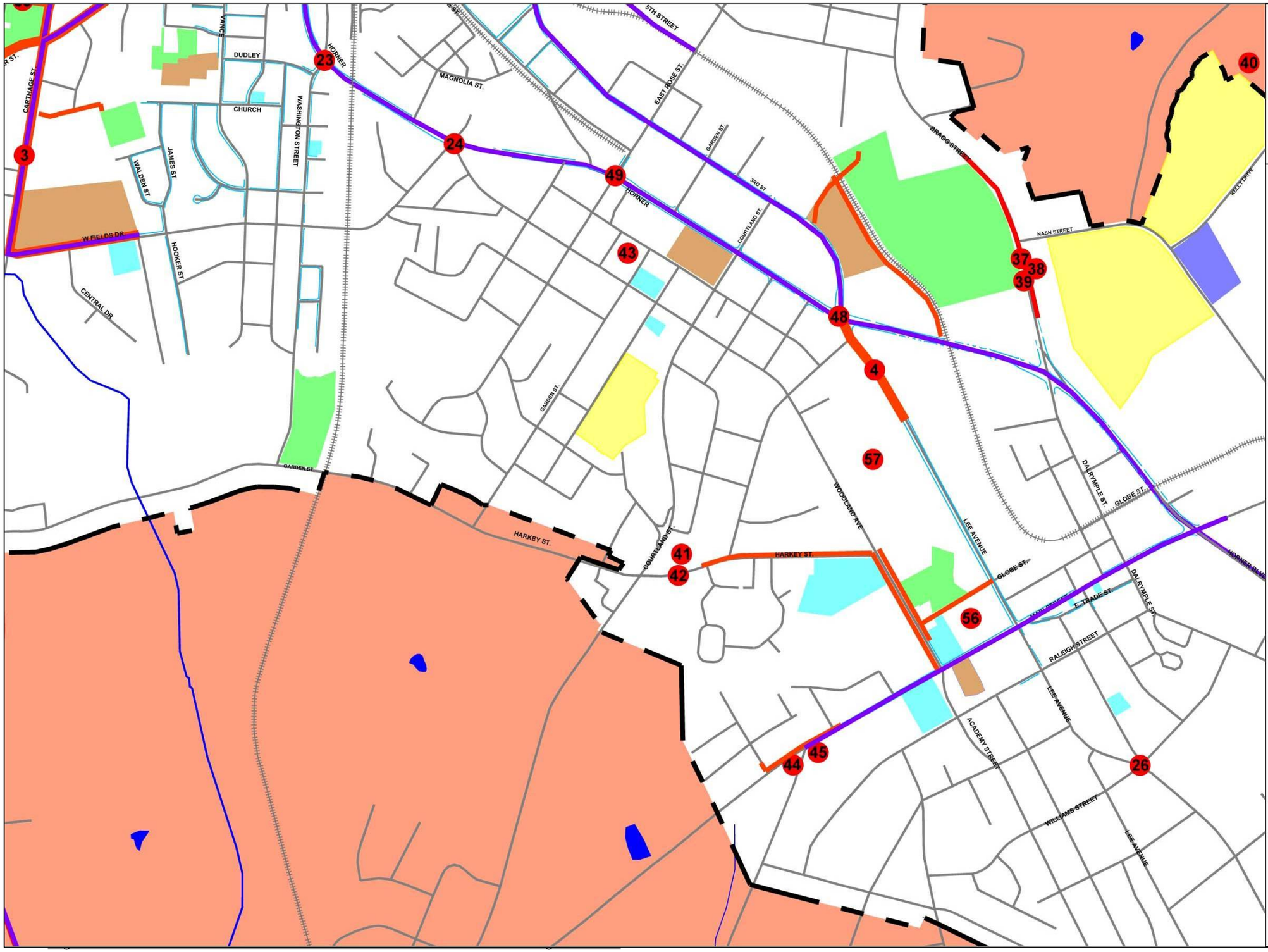
Map 5
Workshop Results
North Sanford

- Workshop Comment - See Comment Key Sheet
- Workshop Proposed Path - one comment
- Workshop Proposed Path - multiple comments
- Existing Sidewalks
- Heavy Pedestrian Use
- Existing Parks/Recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination
- Outside City Limits
- City Limits
- Planned Thoroughfare
- Buffalo Creek Greenway

BAR SCALE 1" = 1000'
0 500' 1000' 2000'

City of Sanford
2009 Comprehensive Pedestrian Plan

Map 6
Workshop Results
South Sanford



- Workshop Comment - See Comment Key Sheet
- Workshop Proposed Path - one comment
- Workshop Proposed Path - multiple comments
- Existing Sidewalks
- Existing Traffic Signals
- Existing Parks/Recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination
- Outside City Limits
- City Limits
- Planned Thoroughfare

BAR SCALE 1" = 1000'
0 500' 1000' 2000'

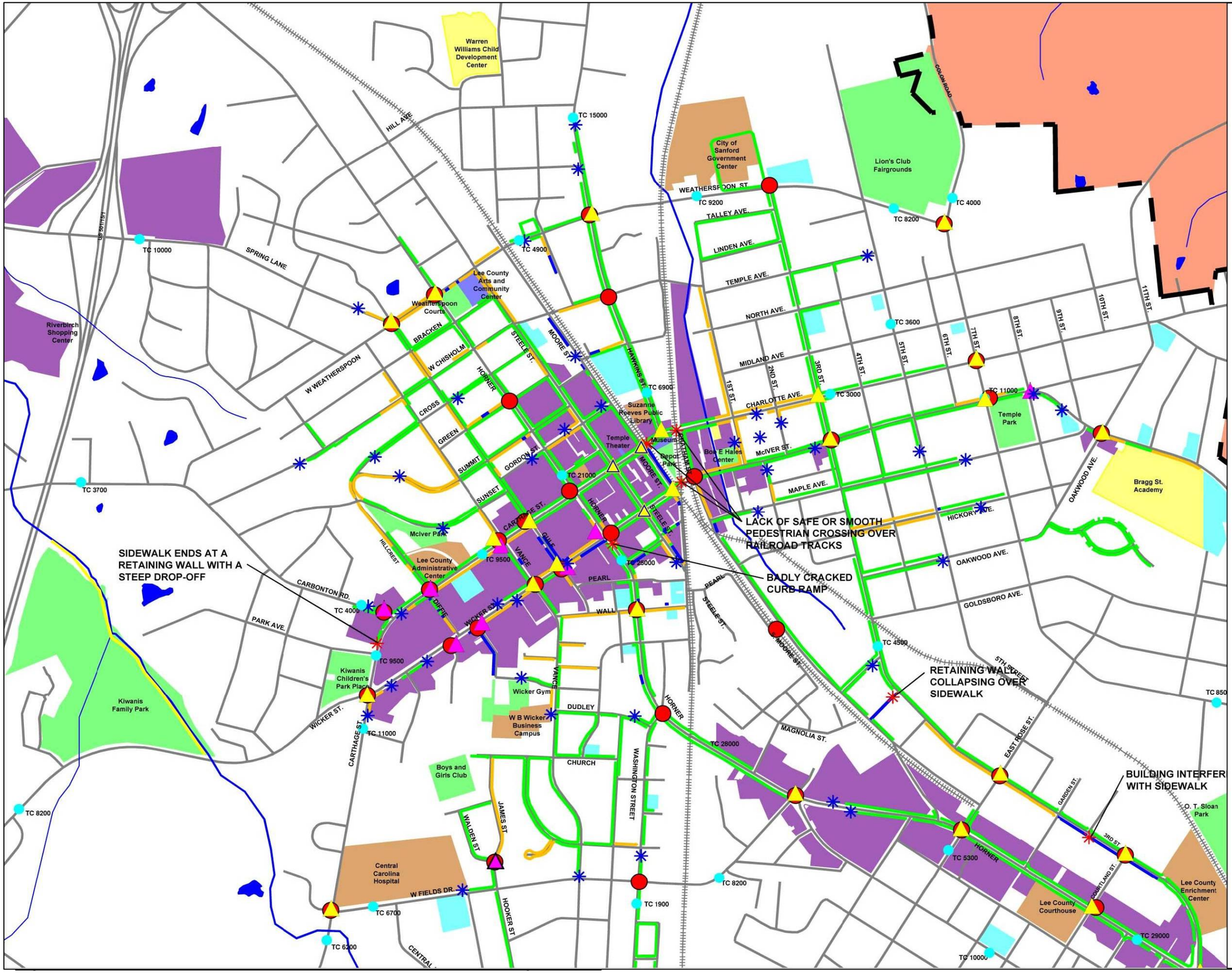
Pedestrian Plan Workshop - Map Exercise Results (comments)

1. Dangerous intersection
2. Poorly lit at night
3. Heavy pedestrian traffic with no sidewalk, lots of cars
4. More economical to extend sidewalks on Lee Avenue to US 421, before
5. installing more sidewalks on US 421
6. Hard rain causes flooding along street. Better to replace sewers first and then to install new sidewalks, so that new sidewalks are torn up to replace/repair sewers.
7. Dangerous intersection
8. Lack of parking causes people to have to park at a distance and then walk where there is no sidewalk.
9. Complete sidewalk along Horner Blvd. to the Arts Center
10. Continue sidewalks north along Moore Street
11. Need traffic signal and pedestrian crosswalks at intersection of Hawkins Ave. and Charlotte Ave.
12. Railroad tracks are a tripping hazard to pedestrians.
13. Railroad tracks are hard to maneuver strollers through.
14. Neighborhood needs street lights to increase safety of pedestrians.
15. Neighborhood needs overall improvements to increase safety.
16. A large hole exists in Moore St. sidewalk
17. Non-light polluting street/pedestrian lights are needed along Hawkins and Chisholm St.
18. Railroad tracks difficult to navigate
19. No clearly defined path over railroad tracks
20. Railroad Tracks are tripping hazard
21. Lights and sidewalks needed along Chisholm Street leading to proposed City Park
22. Sidewalk along Hawkins needs to be extended to neighborhoods in northern section of City. Would like to see a connection to the planned greenway.
23. Traffic cuts through neighborhood making walking dangerous, as there are no sidewalks. Would like to see sidewalks throughout neighborhood.
24. Would like a connection to the planned greenway from the neighborhood.
25. Heavy pedestrian traffic with kids walking to and from Middle School and High School. Traffic travels at very high speed.
26. Really needs crosswalks and traffic light for elderly pedestrians crossing Horner from senior housing.
27. No provision for heavy pedestrian traffic that now exists at intersection
28. Needs crosswalks
29. Bad intersection needs to be consolidated.
30. Vehicles travel at too high a rate of speed which has resulted in trailer truck turning over and smashing into buildings at the curve.

31. There are a lot of people walking to a popular neighborhood restaurant and no crosswalks or traffic lights.
32. Very poorly lit at night and there is a lot of night time pedestrian traffic along Charlotte Ave. and 3rd Street.
33. There are no sidewalks in this neighborhood. Spring Lane Road has a lot of traffic driving at unsafe speeds and no sidewalk for pedestrians. Would like a connection to the planned greenway.
34. Dangerous pedestrian intersection
35. No clearly defined path over railroad tracks.
36. Railroad tracks are difficult to navigate.
37. Seniors have trouble getting to Temple Theater, once parked.
38. Dangerous intersection. Needs crosswalks.
39. Need more ADA parking in downtown.
40. Dangerous intersection. 7th street needs sidewalks
41. Kids cross road from makeshift parking lot to High School without going to corner.
42. Needed crosswalk
43. Dangerous area for pedestrians
44. Future Urban Village planned in this area. It will attract people that will want a walkable neighborhood and community
45. Retirement Community – destination
46. High pedestrian activity
47. Future Urban Village – destination
48. Store – destination
49. High pedestrian activity
50. High pedestrian activity
51. Problem intersection
52. Dangerous intersection
53. Problem intersection
54. Problem intersection
55. Problem intersection
56. High pedestrian activity
57. High pedestrian activity
58. High pedestrian activity area with limited sidewalk availability
59. Need crosswalks where pedestrian corridors enter the downtown area
60. Need sidewalks in the older residential areas of Jonesboro
61. Need pedestrian corridors between Jonesboro Heights and downtown
62. Sanford to strengthen the connection

City of Sanford 2009 Comprehensive Pedestrian Plan

Map 1
Existing Conditions
North Sanford

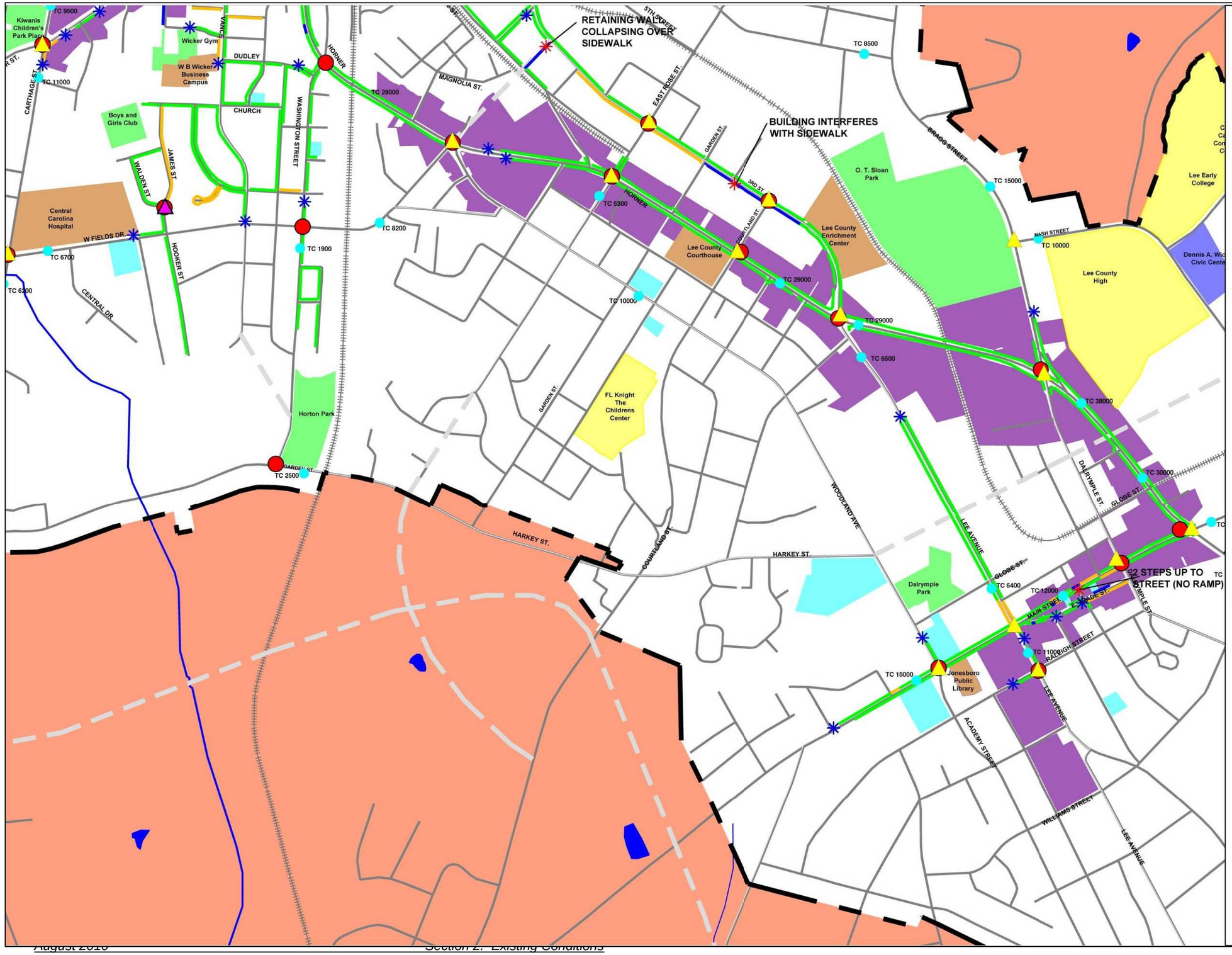


Good Condition
Fair Condition
Poor Condition

Existing Parks/Recreation
Civic/Services
Schools/Education
Religious Institutions
Cultural Institution/Site
Body of Water/Streams
Major Shopping/Dining Destination
Outside City Limits
City Limits

Existing Traffic Signal
Existing Traffic w/ Pedestrian Signal
Problem Spot
No ADA Curb Ramp
Busy Intersection - No Crosswalk
Gap or Sidewalk ends short of street.
Traffic Count
TC 12000

BAR SCALE 1" = 1000'
0 500' 1000' 2000'



City of Sanford 2009 Comprehensive Pedestrian Plan

Map 2
Existing Conditions
Jonesboro and South Sanford

- Good Condition
- Fair Condition
- Poor Condition

- Existing Parks/Recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination
- Outside City Limits
- City Limits
- Planned Thoroughfare
- Existing Traffic Signal
- Existing Traffic w/ Pedestrian Signal
- Problem Spot
- Needed Curb Cut
- Busy Intersection - No Crosswalk
- Gap or Sidewalk ends short of street.
- Traffic Count (TC 12000)

BAR SCALE 1" = 1000'
0 500' 1000' 2000'

[1]2005-2007 American Community Survey 3-Year Estimates, selected Housing Characteristics, Sanford, North Carolina. http://www.Factfinder.Census.gov
[2] 2007 Annual Average Daily Traffic Map, Lee County, North Carolina, Traffic Survey Group, North Carolina Department of Transportation
[iii] 2007 Annual Average Daily Traffic Map, ibid.
[iv] 2007 Annual Average Daily Traffic Map, ibid.
[5]2007 Annual Average Daily Traffic Map, ibid.

- END OF SECTION –

SECTION THREE EXISTING PLANS, PROGRAMS AND POLICIES

Numerous planning documents and recommendations have previously been prepared which noted current and future pedestrian facilities for the City of Sanford. Such reports and documents are important efforts and need to be addressed and incorporated into this pedestrian plan. Many of these planning documents, which address greenways, transportation, public transportation, capital improvements and land use planning, provide valuable insight and background toward future decisions made for the City. The following are key documents and studies, which have been reviewed in their entirety.

3.1 LOCAL, REGIONAL AND STATE PLANS AND GUIDELINES

Transportation Plans

The Bicycle and Pedestrian Planning Grant Initiative

The Division of Bicycle and Pedestrian Transportation has coordinated its planning efforts with the Transportation Improvement Program in the integrating of bicycle and pedestrian improvements. DBPT developed *The Bicycle and Pedestrian Planning Grant Initiative* in 2004 as a means of providing financial assistance to local municipalities in developing comprehensive bicycle and pedestrian transportation. In 2008, the City of Sanford was awarded a grant by NCDOT to develop a Comprehensive Pedestrian Plan. This grant program was developed by the DBPT and the Statewide Planning Branch (SWP) as a means of encouraging the development of comprehensive pedestrian plans.

Nearly $2.3 million has been awarded through this program to 91 municipalities, which together account for a total of 32% of the state's population. These comprehensive plans promote livability/sustainability by helping communities to create bicycle and pedestrian friendly environments that encourage safe walking and bicycling.
DBPT has recently selected the 2010 cycle of planning grant recipients, and the listing will be brought to the Board of Transportation for adoption in early May of this year.

Earlier this year, the division contacted prior recipients of the planning grants to obtain information on facilities that they had constructed following completion of their plans. A survey was distributed electronically to the 64 communities awarded grant funds from 2004 to 2007 resulting in responses from 41 communities.

Survey results indicate the following: 63 percent allocated local funds for bicycle/pedestrian facilities, 54 percent created a bicycle/pedestrian committee, 51 percent developed an education, encouragement or enforcement program, 54 percent developed bicycle/pedestrian-friendly policies, 46 percent updated design/engineering standards, and 49 percent have programmed or constructed multi-use paths. Among the pedestrian plans (27 responses of 45 adopted plans), 89 percent have programmed or constructed sidewalk.

Among the bicycle plans (14 responses of 19 adopted plans), the following types of facilities were programmed or constructed: bicycle lane (57 percent), paved shoulder (14 percent), wide outside lane (36 percent), bicycle route (21 percent), and bicycle parking (50 percent).

Comprehensive Transportation Plan

Comprehensive Transportation Plans (CTP) are created by the NCDOT Transportation Planning Branch. The 2007/2008 Sanford/Lee County CTP includes a few of the State Transportation Improvement Program (STIP) projects listed in Section 3.2. The plan advocated the addition of the following projects:

1. Carthage Street (US Bus.1/SR 1237) from Horner Blvd to Tramway Rd. Recommendations include widening the road and adding a dividing median. Bicycle lanes and pedestrian walkways should also be added. The latter two items will require additional R.O.W. Carthage Street has been identified as a gateway corridor into Downtown Sanford.

2. Charlotte Avenue (SR 1002) from 1st Street to 8th Street. This road will be a major gateway into downtown Sanford once the 421 Bypass is opened. Recommendations are to add a dividing median within the existing R.O.W. Wide travel lanes would allow the street to be used as a bicycle route. Sidewalks and landscaping should be installed down the length of the street.

3. Hawkins Avenue (US Bus 1) from US 1 south to Burns Drive (SR1406). Recommendations include the widening of Hawkins Avenue to a four-lane divided boulevard and the addition of bicycle lanes, pedestrian facilities and landscaping. Hawkins Avenue is a gateway corridor into the downtown district.

4. Horner Boulevard (US 421) from US 1 to the Harnett County Line. The portion of this project with the City Limits of Sanford, runs from US 1 to Mt. Pisgah Church Road. Recommendations call for the roadway to be widened to a four-lane median divided boulevard. Pedestrian facilities are recommended along portions of the road.

5. Kelly Drive (SR 1521). Recommendations that impact within the City Limits include the rerouting of the road south of the Civic Center. The old roadway would then become two-lane, divided, local road with bicycle and pedestrian facilities and landscaping.

6. Main Street/Tramway Rd (NC78) from US 1 to Horner Blvd. Where Tramway Road crosses the city limits and becomes Main Street, to Woodland Avenue, it has been recommended the road be widened to a four-lane, divided boulevard with a planted median. Bicycle Lanes and pedestrian facilities would be added to each side of the boulevard. From Woodland Blvd. to Horner Blvd, it has been recommended to add bicycle lanes as the only improvement.

7. Wicker Street in the downtown area. The recommendation is to designate the street as a bicycle route. As Wicker Street is considered a gateway into the downtown, aesthetic improvements through streetscape and landscape improvements have been recommended.

8. Wicker Street (NC 42) and Cool Springs Road (SR 1325). The recommendation is that the intersection of Wicker St. and Cool Springs Rd. be reconfigured to allow the joined roads to become the major through route. It has been proposed that this become a three-lane roadway with a continuous center turn lane. The route should also accommodate bicycles and pedestrians.

Complete Streets Policy

NCDOT has adopted a Complete Streets Policy in early July of 2009. This policy represents an increased commitment to providing bicycle and pedestrian facilities with new NCDOT construction projects, including road repavings, widenings, and bridge replacements. While NCDOT had previously adopted several policies to support the provision of bicycle and pedestrian facilities, the new policy goes further in its recommendations to routinely provide for all users of the roads - bicyclists and pedestrians, public transportation users, and drivers of all abilities and ages. The new Complete Streets Policy:

- provides that "all transportation facilities within a growth area of a town or city funded by or through NCDOT, and planned, designed, or constructed on state maintained facilities, must adhere to this policy");
- asserts the Department's role as a partner to local communities in transportation projects;
- addresses the need for context-sensitivity;
- sets exceptions (where specific travelers are prohibited and where there is a lack of current or future need) and a clear process for granting them (approval by the Chief Deputy Secretary); and
- establishes a stakeholders group, including transportation professionals and interest groups, tasked to create comprehensive planning and design guidelines in support of the policy.

A member of the NCDOT Board of Transportation, Nina Szlosberg, introduced the policy, and Tom Norman, Manager of the Bicycle and Pedestrian Division guided the policy through a staff development process. The National Complete Streets Coalition has applauded NCDOT for this important step. The policy is available at: https://apps.dot.state.nc.us/pio/releases/details.aspx?r=2777

Greenway Plans

The Endor Iron Furnace Greenway/Little Buffalo Creek Greenway

The City of Sanford and Lee County are joining together to develop a 28 mile greenway trail loop. The greenway will have two separate components, one along the Big Buffalo Creek and the other along the Little Buffalo Creek. The two will be joined in the north by merging into the planned North Carolina State Deep River Trail.

The Big Buffalo Creek segment (approximately 7 miles) will begin at the Kiwanis Family Park in Sanford. NCDOT has begun work on the first 1.5 mile segment of the trail. The trail will eventually lead to the historic Endor Iron Furnace, located on the Deep River. The State of North Carolina is working with the Triangle Land Conservancy to develop the Deep River Trail through the property.

The City of Sanford has begun purchasing needed property along the Little Buffalo Creek within the city limits. This section of the trail through the City is seen as a pedestrian/bicycle connection between the City Government Center and Sanford's downtown.

Community Development Plans

The Crossroads at Depot Park Redevelopment Plan

The Crossroads at Depot Park Redevelopment Plan is directed on the commercial blocks immediately to the east and north of Depot Park. As a part of the redevelopment, two projects affect the pedestrian system of Sanford: streetscape improvements and the Little Buffalo Creek Greenway. The plans call for new sidewalks to be installed along Chatham Street and Charlotte Street from Moore Street to Little Buffalo Creek, improving both the appearance and safety of pedestrians in the area. In addition, ADA compliant RR track crossings and decorative street lighting are to be installed. Much of this work has been done.

The Redevelopment Plan also focuses upon the acquisition of property along Little Buffalo Creek for a proposed greenway connecting downtown to the City Government Center and eventually northern Lee County, to the Deep River.

2020 Land Use Plan

The 2020 Land Use Plan (adopted in 1999) examines the challenges facing Sanford and Lee County in the early part of the 21st Century. The plan promotes many ideas that will impact pedestrians, from residential and commercial neighborhoods to transportation and recreation. The Plan calls for a Comprehensive Pedestrian Plan to be developed.

Ideas which will affect pedestrian planning include:

> Compact Development: compact development promotes pedestrian travel versus vehicular travel within a neighborhood. When commercial areas are nearby, pedestrian pathways can help to reduce the use of the automobile for shopping, especially as mass transit becomes available.
>
> Urban Development: the plan promotes the development of residential spaces above existing shops in the downtown area. This will allow people to live near work, shopping and restaurants, reducing the need to use personal automobiles and encouraging walking. The plan also calls for improvements to the streetscape in the downtown area and along gateways into Sanford. Among the goals listed are sidewalk and crossing improvements, a reduction in curb cuts and driveways, street lighting, street tree planting and the creation of linear green space. In addition to improving the look of the downtown, these elements will increase pedestrian safety and comfort.
>
> Recreation: the Plan calls for an "aggressive approach" to the identification and development of greenways with pedestrian and bike paths within the planning area. Greenways should connect schools, residential neighborhoods, employment areas and recreational facilities together.

The main themes of the 2020 Land Use Plan are:

- the need to preserve existing, sound neighborhoods
- the need to revitalize deteriorating neighborhoods
- and the need to revitalize existing business corridors

These steps are seen as vital steps in promoting good community growth and development.

1996 Sanford Downtown Redevelopment Report

The 1996 Sanford Downtown Redevelopment Report was the outcome of a North Carolina Main Street resource team visit. The report is broken down into four sections: economic restructuring, design, promotion and organization.

The two sections that most directly address pedestrian concerns are the economic restructuring and design sections. The economic restructuring section recommends that retail establishments be clustered together, mainly along Steele Street. By clustering like-type businesses, pedestrians have a greater selection without having to walk large distances. This encourages more pedestrian activity in the downtown.

The design sections points out the importance of image in attracting people into the downtown, where they will become pedestrians. It points out that shopping is a pedestrian experience and that to attract shoppers; the walk from the car to the shops must be an enjoyable experience.

Design Guidelines

ADA Design Guidelines

The Americans Disability Act (ADA) states that cities and municipalities must construct, modify or adapt pedestrian facilities to accommodate individuals with disabilities and accessibility limitations. The following are some basic topics that must be addressed for sidewalks to comply with ADA requirements.

- Overgrown, broken, root laden, or otherwise rough conditions are not suitable
- Curb ramps provide entry and exit to sidewalks
- Ramps also provide alternate routes around staircases
- Cuts in medians at crosswalks allow travel across divided roadways
- Slopes must be realistic for traveling
- Ramps provide access to buildings that are not ground level
- Adequate width provides sufficient passing
- Historic district exemptions should be taken it account
- Adjusted crossing times allow for safe travel across wide intersections
- Cuts in medians at crosswalks allow travel across divided roadways

Second Century Project

Essentially a marketing project and branding campaign for Lee County, the City of Sanford and the Town of Broadway, the 2nd Century Project grew out of the celebration of Lee County's Centennial Celebration in 2007. The Project has created a branding logo and slogan for marketing the County, Town and City in the new century and provides a focus for efforts to attract new residents and visitors. A solid pedestrian network will help to enhance this effort by providing residents and visitors with ease of pedestrian access to venues and shopping. Many people today when deciding which community to relocate to, consider pedestrian facilities, both as transportation and as recreation, to be of major importance.

3.2 PROGRAMS AND INITIATIVES CURRENTLY UNDERWAY OR PLANNED

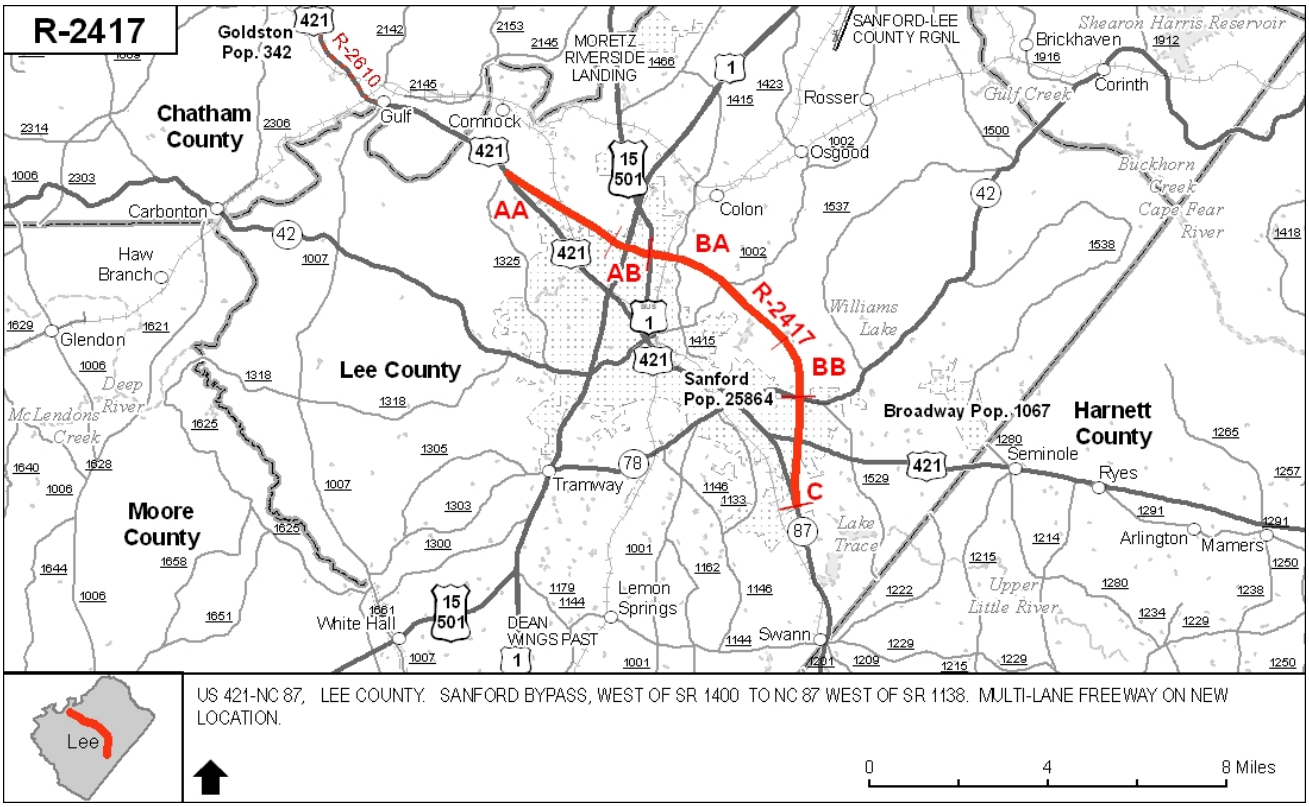
Transportation Plans

Transportation Improvement Program (TIP)

It is important to evaluate other existing initiatives in order to appropriately incorporate current proposed improvements into the pedestrian plan. NCDOT has established priorities, which are addressed in the 2009-2015 Traffic Improvements Program (TIP). The Transportation Improvement Program (TIP) is a statewide program used as a guide for NCDOT in establishing long range goals for improving pedestrian transportation. Numerous transportation, bridge, and enhancement projects are being partially funded by TIP. The following projects (with location, stage, and schedule) are currently being planned and, although long-range, should be taken into consideration in the formulation of the master pedestrian plan.

TIP #: R-2417
Route: US 421-NC 87
Status: Planning/Design in Progress
Description: Sanford Bypass, west of SR 1400 to NC 87, west of SR 1138, multi-lane freeway on new location.

This project is currently under construction. It is hoped that much of the commercial traffic on Horner Blvd. will be rerouted to the new by-pass, reducing the high volume and speed of traffic along this main route through Sanford. Horner Blvd effectively bisects the downtown of Sanford and creates a pedestrian and visual barrier between the two sections. By eliminating the high volume of tractor trailers and other traffic, it will be possible to reconnect the two sections of Sanford both visually and for safe pedestrian access.



TIP #: R-3830
Route: NC 42
Status: Preliminary
Description: Widen NC 42 to 3 lanes with turn lanes from US 421 (Horner Blvd) in Sanford, to SR1538 (Buckhorn Ave) in Broadway.

This project will affect East Lee Middle School which is located on this section of NC 42. There are currently no sidewalks along this roadway. Installation of sidewalks should be a primary consideration, especially in the immediate area of the Middle School. The lanes should also be widened enough to allow for installation of a multi-use pathway.

TIP #: U-2565
Route: SR 1515 (3rd St.)
Status: Preliminary
Description: Multi-lanes on new location, from SR 1560 (Weatherspoon St.) to US 1 Business (Hawkins Ave.)

This extension of 3rd Street will increase its utility as a major north/south corridor through Sanford. Installation of new sidewalks down both sides of the street should be a prime consideration when the road is extended.

TIP #: U-2566
Route: Sanford Southern Loop
Status: Preliminary
Description: Addition of two lanes on multi-lane right of way from NC 42 to SR 1122 (Courtland Dr.)

This road cuts through several residential neighborhoods. The addition of sidewalks to the plans would help to provide connections between neighborhoods and between neighborhoods and pedestrian destinations such as shopping and schools.

TIP #: U-3461
Route: SR 1107 (Fields Drive) and SR 1237(Carthage Street)
Status: Preliminary
Description: Widen and realign Fields Drive to multi-lanes between Carthage Street and Woodland Avenue, Widen and realign Carthage Street between Fields Drive and NC 42.

The Central Carolina Hospital and several medical offices are located where Carthage St. and Fields Dr. meet. This area has been defined as a high pedestrian activity area in the community workshop. The addition of sidewalks along both Carthage St. and Fields Drive are important to the development of a strong pedestrian system within Sanford.

TIP #: U-5004
Route: US 1 Business/US 15-501 (Hawkins Avenue)
Status: Preliminary
Description: Widen Hawkins Avenue from Winfield Street to SR 1462 (Brown Road.)

While much of this project is outside the City Limits, from Winfield St. to US 1, is within the City Limits. There are no sidewalks along this street which serves several small residential neighborhoods. The construction of sidewalks along Hawkins Ave. would expand the pedestrian network into the northern portion of the Hawkins Ave. District.

TIP #: EB-4981
Project: Endor Iron Furnace Greenway (Big Buffalo Creek Greenway)
Status: In Progress
Description: 1.5 miles of multi-use trail, from Kiwanis Family Park on Carbonton Road, to Boone Drive.

This project will help to expand the existing 0.5 miles of greenway already existing. Future planned expansion of the greenway will help to provide Sanford with a solid start to the development of a greenway system with both local and regional ties.

TIP #: E-4946
Project: Streetscape Enhancements
Status: Preliminary
Description: Streetscape Enhancements along the north side of Charlotte Avenue, Moore Street and US 15-501 (Hawkins Avenue.)

This project will take place in the historic downtown district of Sanford. Streetscape enhancements will help to increase the safety, comfort and attraction of the district for pedestrians.

Safety and Education Programs and Resources

Lee County Health Department

County Employees – Employees of Lee County are given two, fifteen minute work breaks during the work day to use the walking path that encircles the County Government Center in Sanford.

Downtown Pedestrian Walkway – A collaborative effort between the Lee County and the City of Sanford Health Departments, physical activity initiative is the early planning stages and details are not yet available.

LeeCAN, A Healthy Carolinians Partnership – LeeCAN's mission is to increase awareness and resources to effectively address health and safety issues in Lee County through a collaborative community effort. Currently the organization is working to reduce the teen pregnancy rate, promote mental health and reduce

obesity among County residents. The Obesity Subcommittee is developing programs and activities to encourage walking as exercise.

Lee County Senior Services

The Enrichment Center has a ¼ mile trail that is used by some of the senior citizens who utilize the center. The fitness center at the Enrichment Center also has incentives to encourage walking for health and seniors can earn prizes for achieving set distances.

3.3 STATUTES AND ORDINANCES

Local Ordinances

City of Sanford Ordinances

The Unified Development Ordinance was adopted by Sanford in 2007, in order to conform to the goals of the Sanford/Lee County 2020 Land Use Plan, adopted in 1999. The UDO was developed in order to

- To lessen congestion in the streets;
- To secure safety from fire, panic, and other dangers;
- To promote health and the general welfare;
- To provide adequate light and air;
- To prevent the overcrowding of land;
- To avoid undue concentration of population;
- To facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements;
- To protect and/or to enhance the character of each zoning district and its peculiar suitability for particular uses;
- To conserve the value of buildings; and
- To encourage the most appropriate use of land throughout the planning areas.[1]

The UDO is divided into different types of development including Planned Unit Development (PUD), Traditional Neighborhood Development, Manufactured Home Overlay District, Historic Preservation Overlay District and Airport Overlay District. Of these, the section on Traditional Neighborhood Development has specific design elements for the construction of streets. The following table shows the street types and requirements within a TND.

[1] Unified Development Code, City of Sanford, North Carolina, Ordinance No. 2007-70, enacted Nov.20, 2007. Section 1.1.3 Zoning Regulations.

Section 6 concerns the design guidelines for residential subdivisions. The ordinances concern both major and minor residential subdivisions and include design standards for open space, lot design and streets. Other design guidelines are contained in Section 10 of the ordinance and concern pedestrian facilities for shopping center design and multi-family developments,

Street Type	Trail	Alley	Lane	Local Street	Avenue with Parking	Avenue without Parking	Main Street	Boulevard	Parkway
Pavement Width	10-20'	12'	27'	33'	52'	52'	66'	112'	118'
Max. Travel Lanes	--	--	--	--	2	2	2	4	4
Median	--	--	--	--	18'	18'	--	20'	20'
Sidewalk Width	4'	4'	4'	4'	4'	4'	4'		
Bike Lanes	--	--	--	--	6'	6'	6'	6'	--
Planting Strips	--	--	6'	6'	6'	6'	6'	6'-10'	7'-20'

Residential subdivisions with lots of less than 20,000 square feet are required to provide sidewalks down one side of all new public streets in the subdivision. Curbs and gutters are also required.

Shopping Centers and Superstores are required to provide both vehicular and pedestrian amenities both within the site and providing access to the site. Sidewalks are required to link pedestrian destinations within the site, such as buildings, parking and adjoining sidewalks and developments. Sidewalks are required along all public streets that provide access to the shopping center.

Multi-family residential developments require sidewalks that link pedestrian destinations within the development and link to sidewalks and greenway trails adjacent to the development. All public streets that provide access to the development must have sidewalks.

3.4 POLICIES AND INSTITUTIONAL FRAMEWORK

Interagency Partnerships

Triangle Area Rural Planning Organization (TARPO)

The City of Sanford is a member of the Triangle Area Rural Planning Organization (TARPO). TARPO assists counties and municipalities with planning and coordinating the development of transportation plans for Chatham, Lee, Moore and Orange counties. One TARPO project is a series of transportation need maps developed to show various factors including households without cars, transit dependent households, poverty, disabled

persons and minority households. These maps (Appendix D) show the extent of need for additional transportation services, including a strong pedestrian network.

Lee County and the City of Sanford Governments

The governments of Lee County and the City of Sanford work closely together. The City of Sanford Planning Department also serves as a planning department for the County and the County Recreation Department provides recreational programming and facilities within the City.

The City and the County has worked together on several of the projects reported on in Section 3.1, including the 2007/2008 Sanford/Lee County Comprehensive Transportation Plan, the Big Buffalo Greenway, the Little Buffalo Creek Greenway and the 2020 Land Use Plan.

Capital Improvement Plans

The City of Sanford's Capital Improvement Plan is broken into four sections: Water Capital Projects, Sewer Capital Improvements, Street Capital Improvements and General Service Capital Improvements. In the current CIP, funding for one project is relevant to the pedestrian system. Under the General Service Capital Improvements, $350,000 is planned each year for the next four years for Streetscape Improvements. These improvements should include upgrades to the pedestrian system.

3.5 RELEVANT PEDESTRIAN STATUTES AND ORDINANCES

The State of North Carolina follows a standard set of basic pedestrian laws, outlined in a guidebook published by the North Carolina Department of Transportation. A summary of these laws is below.

1. *Pedestrians need to obey traffic control signals.*
2. *Pedestrians have the right-of-way in crosswalks where there are no traffic control signals.*
3. *Pedestrians have the right-of-way at intersections without marked crosswalks.*
4. *Pedestrians have the right-of-way in walkways at alleys, driveways, private roads and building entrances.*
5. *Between adjacent intersections with traffic control signals, pedestrians may cross only in a marked crosswalk.*
6. *Pedestrians must yield right-of-way to vehicles if they are in the roadway but not at a marked or unmarked crosswalk (intersection).*
7. *It is unlawful to walk in the roadway if a sidewalk has been provided.*
8. *If no sidewalk is provided, pedestrians should walk on the extreme left of the road, or the left shoulder, facing on-coming traffic.*
9. *Standing, sitting or lying upon highways or streets is prohibited.*

10. *At any street, highway or road crossing or intersection that is not regulated by traffic control signals or officers, a blind or partially-blind pedestrian with a white cane or guide dog shall receive the right-of-way.*
11. *At intersections with traffic control signals, if a blind or partially-blind pedestrian with a white cane or guide dog is partially across the street when the signal changes, that pedestrian shall have the right-of-way to finishing crossing the street.*
12. *A person with a mobility impairment that is using a motorized wheelchair or similar conveyance shall be given all the rights and responsibilities of a pedestrian.*
13. *Electric personal assistive mobility devices may be operated on public highways with speeds of less than 25 mph, sidewalks and bicycle paths. They are required to yield right-of-way to pedestrians and other human-powered devices.*

These laws are available to the public in the NCDOT booklet, A Guide to North Carolina Bicycle and Pedestrian Laws.

- END OF SECTION -

SECTION FOUR STRATEGIC PEDESTRIAN SYSTEM PLAN

Based on the objectives established in Section 1, the evaluation of the existing conditions and community input in Section 2 and the review of existing plans and documents in Section 3, McGill Associates have prepared recommendations for a Pedestrian Plan for the City of Sanford. Section 4 describes these recommendations and proposals to expand and create a cohesive, safe and usable pedestrian network.

This section is separated into individual components including types of recommended facilities, specific recommendations, and users of the pedestrian facilities. The methodology used to develop the recommendations is described in Section 1.4.

Section 4 and the following sections will include recommendations, the establishment of priorities and implementation guidelines for the proposed pedestrian facilities. Section 4 outlines the proposed pedestrian network and identifies areas of need and areas of opportunity. Section 5 demonstrates guidelines for specific areas of concern in regards to pedestrian facilities while Section 6 outlines programs and policy proposals. Section 7 delineates priorities for development, timelines for the implementation of proposals and recommendations.

4.1 SYSTEM OVERVIEW

Overall Network

The City of Sanford currently has an aging and incomplete pedestrian system. In some neighborhoods the sidewalks are very narrow; others are badly spawled or stained. In other neighborhoods the sidewalks end midblock, or well short of the street pavement, sometimes with a height well above street or ground level.

Gaps in System

There is little connectivity in the existing pedestrian network. There are few connections to the downtown from the surrounding neighborhoods, and the few existing connections often have block-long gaps in the system. Intersections along main corridors are usually missing marked pedestrian crosswalks and signals. There is no pedestrian connection between Downtown Sanford and Jonesboro. None of the parks in the City are accessed by pedestrian facilities. None of the public schools in the City are accessed by pedestrian facilities.

Barriers and Safety Hazards

The biggest barriers to pedestrian travel are the railroads and Horner Blvd. /US 421. Both systems unfortunately sever the pedestrian system in Sanford by creating safety

hazards. Horner Blvd. has no marked pedestrian crossings and a large number of vehicles, traveling at high rates of speed. It traverses the Downtown, visually and physically cutting the Downtown in half. The southern portion of the road is a major destination for shopping, business and dining, but there are no safe places to cross the road. The existing intersections, even with traffic lights, are the location of most recorded pedestrian accidents in Sanford.

The two railroad tracks that traverse the downtown add character to the historic district but are a safety hazard. The crossings are uneven and pose a hazard to those with walkers, wheelchairs, strollers and bicycles. There are no warnings posted for pedestrians and no ADA tactile warnings for the visually impaired. At-grade railroad tracks can be hazardous for pedestrians to cross. Improvements to the crossing can be made to help alert pedestrians that they are crossing tracks and that there is an oncoming train. A more complete explanation is provided later in this Plan. However, simply installing truncated domes may be used to help alert pedestrians as they are walking to cross the tracks with some caution. There are also other improvements that can help warn pedestrians of railroad crossings, such as signage. Railroad crossing warning signs can be placed near the sidewalk/railroad crossing. The pedestrian path should be at a 90 degree angle to the tracks. The crossing surface should be smooth and flat to prevent wheelchair casters from dropping into the flangeway gap.

4.2 CORRIDOR IDENTIFICATION

Existing Pedestrian Corridors

Horner Blvd. /US 421

There is one existing, albeit incomplete, pedestrian corridor between Downtown Sanford and Jonesboro – Horner Blvd/US 421. This major north/south highway through the City carries a high volume of traffic and is a major destination with restaurants, shops and businesses spread out along its length. It is also a major corridor into the downtown from the neighborhoods to the north.

Hawkins Avenue

Hawkins Avenue is another major vehicular corridor that connects Downtown Sanford to residential neighborhoods north of the downtown. The street is a direct connection to Depot Park from the north, a major event venue for the City. Hawkins Avenue is also considered a gateway into the City. Sidewalks are currently available from Weatherspoon Street to Charlotte Avenue.

Lee Avenue

Lee Avenue leads north from downtown Jonesboro to the Horner Blvd. corridor. The existing pedestrian system stops shy of Horner Blvd. Opposite the intersection of Horner and Lee, is 3rd Street, a major corridor connecting East Sanford to Horner Blvd. Completion of this pedestrian corridor will link Jonesboro to downtown Sanford via Horner Blvd and to East Sanford via 3rd Street.

3rd Street

3rd Street is an existing pedestrian and vehicular corridor leading from East Sanford, south to Horner Blvd. The corridor has a mix of low-income housing and commercial properties along its length. It is the primary connection between East Sanford and Horner Blvd.

Carthage Street/Charlotte Avenue

A main east/west corridor runs along Carthage Street and Charlotte Avenue. This corridor begins in a lower income residential neighborhood in East Sanford, leading to several primary destinations as it traverses the downtown area and continues on to the major medical district surrounding Central Carolina Hospital. It then travels southwest to more residential neighborhoods. There are sidewalks along most of this route in through the downtown district and a small portion of East Sanford. The sidewalk conditions range from fair to good. This corridor intersects with four other major corridors in Sanford: Wicker Street, Horner Blvd., Hawkins Avenue and 3rd Street.

Wicker Street/McIver Street

The other major east/west corridor traversing the downtown is Wicker Street/McIver Street. This corridor accesses five recreational sites including the two Kiwanis Parks and Depot Park. Where sidewalks exist along this corridor they range from poor to good condition. There are major gaps in this pedestrian system in the downtown area west of Horner Blvd. This corridor intersects with three other major corridors: Carthage Street, Horner Blvd. and 3rd Street.

Extension of this corridor could reach West Lee Middle School and Ingram Elementary School in the West and connect to Bragg Street in the east.

Proposed Pedestrian Corridors

Woodland Avenue

Woodland Avenue has the potential to serve as a major north/south pedestrian corridor, connecting Jonesboro to the downtown area of Sanford. This corridor is residential in nature and has a far lower volume of traffic than Horner Blvd and Lee Avenue. It will allow for good east/west connectors to several parks and houses of worship, as well as access to shopping, dining, governmental offices and areas of employment.

Fields Drive

This road has the potential to become a major east/west pedestrian corridor, connecting Woodland Avenue and Central Carolina Hospital. Sidewalks would provide access to the hospital and medical offices for residents of the surrounding neighborhoods. When the planned thoroughfare is built, the pedestrian facilities could be extended over to 3rd Street, providing a connection into East Sanford.

Vance Street

Vance Street has sidewalks along portions of the route, but has serious gaps within the system. Beginning at Weatherspoon Street in the historic Rosemont/McIver Park Neighborhood, this corridor traverses the downtown of Sanford and then enters the Wicker neighborhood to the south of downtown. The corridor intersects Weatherspoon Street, Carthage Street, Wicker Street and Fields Drive. If a planned roadway extension is built, the corridor would end at Horton Park on Washington Avenue.

Carbonton Road

This corridor would provide a connection from the Rosemont/McIver Park Neighborhood, the Kiwanis Children's Park neighborhood and other connecting neighborhoods to the Endor Iron Furnace Greenway Trail. It would also serve to connect residential neighborhoods to shopping and serve as an entrance into the downtown via Carthage Street. A planned extension of the roadway, would allow for sidewalks to be extended to Wicker Street.

Spring Lane

This corridor would serve to connect the downtown and surrounding neighborhoods to the major shopping centers along US 1, including the Riverbirch Shopping Center.

Weatherspoon Street

This corridor would provide a major east/west pedestrian corridor north of the downtown. The corridor would run from Carbonton Road (if the extension is built) to the Lions Fairgrounds, passing the City of Sanford Government Center. The corridor would intersect with the Carbonton Road (if the extension is built), Spring Lane, Vance Street, Horner Blvd., Hawkins Street, 3rd Street and 7th Street corridors.

7th Street

The 7th Street corridor will serve to connect Bragg Street in the south of East Sanford, to Weatherspoon in the north. Temple Park is situated along this potential pedestrian corridor.

Bragg Street

A pedestrian corridor along Bragg Street would serve to provide a connection between the residential neighborhoods of east Sanford with O. T. Sloan Park, Lee County Senior High School and Central Carolina Community College.

Rose Street

This short corridor would connect the Woodland Avenue corridor with the Horner Blvd., 3rd Street and 7th Street corridors.

Fire Tower Road

This potential corridor would connect new residential neighborhoods to SanLee Middle School and the Southern Lee Senior High School in the south, and the downtown via Carthage Street.

Avents Ferry Road

This corridor would provide pedestrian facilities to connect East Lee Middle School to surrounding neighborhoods and connect these neighborhoods to the shopping and business opportunities along Horner Blvd.

Pedestrian Generators/Attractors

Pedestrian generators and attractors can be seen on Maps 1 and 2 at the end of section 2. Many of these are not currently served by pedestrian facilities and may not be attracting many pedestrians because of this factor.

Parks/Recreation

Kiwanis Children's Park
Kiwanis Family Park
Temple Park
Depot Park
Horton Park
Dalrymple Park
Weatherspoon Courts
O. T. Sloan Park
Lion's Club Fairgrounds
Wicker Gymnasium
Big Buffalo Greenway Trail
Bob E. Hales Recreation Center

Shopping

Riverbirch Shopping Center
Downtown Shopping District
Horner Blvd. Strip Malls
Lee Avenue Shopping Centers

Dining

Downtown Restaurants
Horner Blvd. Strip Malls
Downtown Jonesboro

Schools

B. T. Bullock Elementary School
J. R. Ingram, Jr. Elementary School
SanLee Middle School
West Lee Middle School
East Lee Middle School
Lee County High School
Southern Lee County Senior High School
Central Carolina Community College
Bragg Street Academy
Montessori School of Sanford

Civic/Service

Lee County Administrative Center
Lee County Courthouse
City of Sanford Government Center
Suzanne Reeves Public Library
Jonesboro Public Library
Lee County Enrichment Center

Boys and Girls Club
Central Carolina Hospital
Lee County Arts Center

Cultural

Historic Railroad House Museum
Temple Theater
Lee County Arts and Community Center
Downtown Sanford Historic District
Downtown Jonesboro Historic District
Residential Historic Districts
Religious Institutions

4.3 High Pedestrian Use Areas

Corridors with high pedestrian usage in the City of Sanford are:

- Horner Blvd – throughout the City, this highway is a cause for concern. A high number of pedestrian accidents have occurred at several intersections along this road (see Maps 11 and 12). Areas of special concern are
    - The intersection with Carthage and Wicker Streets. These major entrances into the downtown area needs traffic calming techniques to help slow the vehicular traffic and increase safety for pedestrians.
    - The stretch of road between Cole St. and Wall St. attracts many neighborhood residents. Trucks traveling at too high a speed along this stretch have overturned where the road curves while others have ended up on the sidewalk.
    - The intersection with Washington Avenue. A senior housing facility is located adjacent to this intersection. Seniors walking to nearby shopping need to cross Horner Blvd. at this point.
    - The intersection with Bragg Street/Dalrymple Street. There have been several pedestrian accidents at this location in spite of the presence of traffic signals.
- Carthage Street – the section of Carthage St. south of Wicker passes through an area with several medical/health facilities and doctor's offices. It is a high pedestrian traffic area.
- 7th Street – This street serves as a main north/south artery through East Sanford. Though this is a major residential neighborhood, traffic along this street travels at a high rate of speed.
- Lee Avenue – Lee Avenue is a major north/south artery for Jonesboro. The street runs through a residential neighborhood, with commercial businesses at either end, making it appealing to both vehicles and pedestrians.

- Main Street – Main Street is the main east/west artery and the main business district for Jonesboro. This dual role results in high volumes of both vehicular and pedestrian traffic.
- Tramway Road – a westward continuation of Main Street, this road is used by students walking to the middle school and high school. Long, unbroken straight ways and gentle curves encourage drivers to travel at high speeds. The posted speed limit is 55 mph to 45 mph.
- Hawkins Avenue – Hawkins Avenue/US 1 is a major entrance into the City from the north. Hawkins Avenue sees 12,000 to 14,000 vehicles per day.
- Wicker Street – Wicker is one of two major east/west roads through the downtown. It is a major gateway into the City from the west. Three important public parks are located along the road – Kiwanis Family Park, Kiwanis Children's Park and Depot Park.
- Public Schools – none of the public schools within the City of Sanford are accessible by sidewalk from the surrounding neighborhoods. Therefore children must either dodge vehicles on their way to and from school, or be delivered to school via bus or family vehicle.

4.3 POTENTIAL PROJECTS AND INFRASTRUCTURE IMPROVEMENTS

Pedestrian Network Methodology

As mentioned in previous sections of the Pedestrian Plan, the City of Sanford has pedestrian facilities in some areas, but also has many areas that need improvements. Section 4 identifies both *general* and *specific* areas that need to be addressed. 'Connectivity' is a recurring theme within this portion of the comprehensive plan. Connecting pedestrian facilities to form a network of sidewalks and multi-use trails is a long-range project that requires extensive time and funding.

To create and develop a practical and feasible pedestrian transportation system for the City of Sanford, a network of pedestrian-friendly facilities should be implemented. The system should be part of the urban fabric of the City, with the essential element being 'connectivity' that will allow pedestrians to reach their destinations. The pedestrian system must also be safe for users. **If pedestrians have to risk their lives in order to walk to a destination, they will choose to travel by a different mode of transportation.** The pedestrian network needs to be safe and accessible for all users.

In addition to connectivity, *repairing* existing dangerous pedestrian areas is also a major concern with the system. Hazardous areas are priorities that need to be addressed immediately. The safety of pedestrians is one of the main concerns of the City of

Sanford. As new projects are developed, connectivity and safety should be among the primary goals and objectives.

A number of factors were used to develop the pedestrian recommendations. The previous sections describe topics such as community input and planning documents that were used as information sources. In addition, the Steering Committee, City staff input, and field work were also in integral part of the plan development.

Sanford Pedestrian Plan Input

- *Input from community workshop*
- *Input and recommendations from Steering Committee*
- *Site visits*
- *Review of existing planning documents*
- *Evaluations of existing pedestrian facilities and gaps*
- *Evaluation of pedestrian trip generators (destination areas)*

Based on Community input, Steering Committee input and existing conditions, several goals and objectives were established as a guide for recommendations. The following are the predominate themes that guided the development of the proposals:

- *Increase connectivity from residential neighborhoods to destination areas*
- *Improve existing conditions and expansion of the pedestrian system in the Downtown areas*
- *Improve and repair existing non-compliant ADA pedestrian facilities*
- *Implement safe conditions for pedestrians where dangerous conditions exist*
- *Future development should be taken into consideration in regards to pedestrian facilities*
- *Improved connectivity of pedestrian facilities where gaps and barriers exist*
- *Educate the public on opportunities to exercise and the benefits of walking*

Recommended Pedestrian Facilities

Numerous methods are involved in developing recommendations and proposals for the Sanford Pedestrian Plan. The process can be broken down into basic tasks, as follows:

- Demographics and Population Trends
- Existing Facilities
- Needs Inventory
- Goals and Recommendations
- Implementation

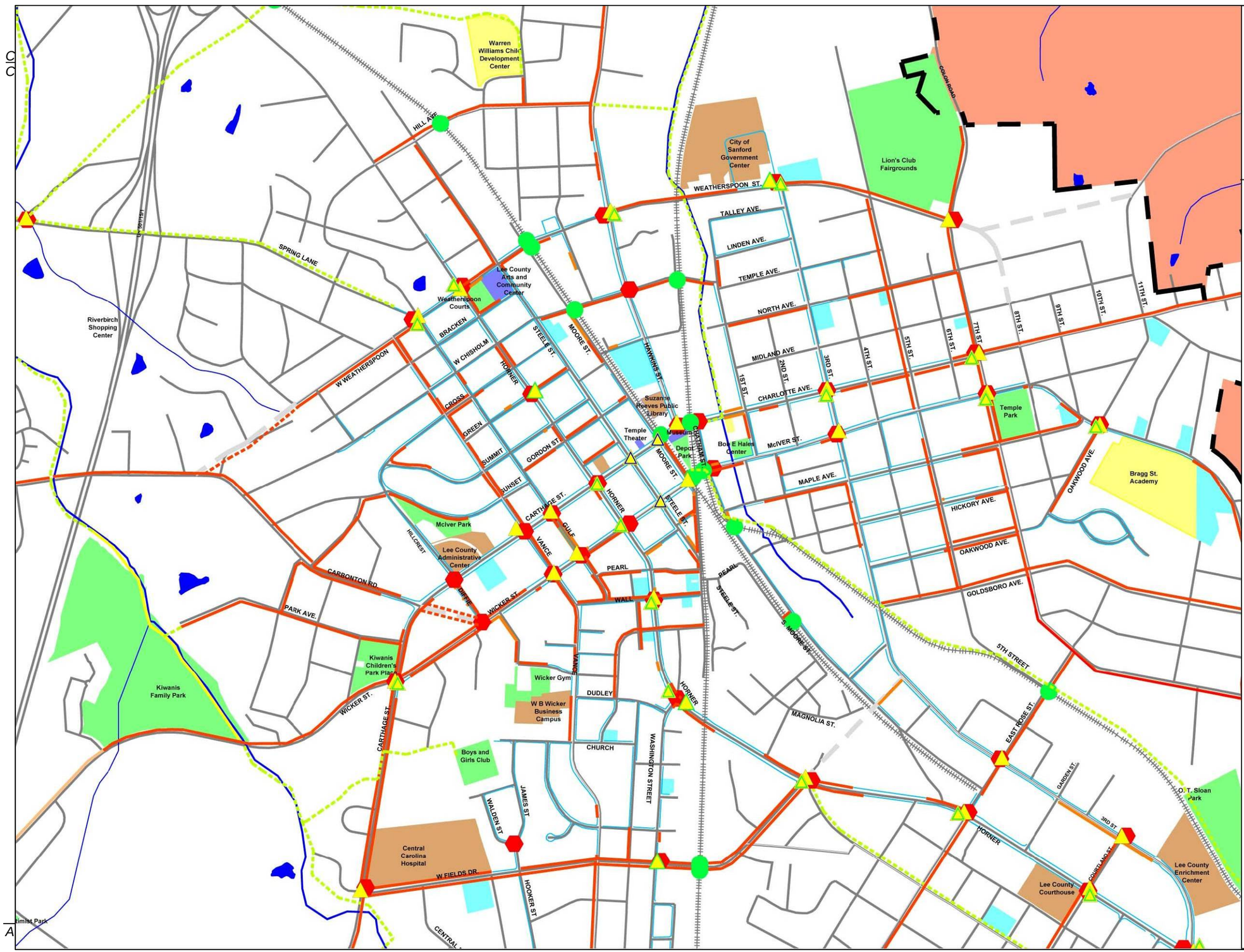
Contained in each of these tasks is detailed information used to help develop and justify the proposals within the total document. Meetings and site visits were conducted to better understand the needs and issues regarding pedestrian improvements. The proposals for ADA compliance and safety concerns are typical of most pedestrian plans. In addition to these *general* recommendations, the document identifies and makes proposals regarding issues that are *specific* to the City of Sanford.

Many of the general proposals recommend connectivity, repair of existing facilities and enhancement of future improvements; however, many of the future projects may not be facilities such as sidewalks or multi-use trails. Rather, the proposals may be goal-oriented: establishing creative partnerships, instituting safety programs and coordinating special events. Proposed programs such as these will promote pedestrian use within the City, but are not project based recommendations.

The Pedestrian Plan proposes a basic network of non-vehicular corridors. These corridors will allow users the opportunity to alternative transportation methods. The network will consist of both existing corridors and new corridors. Many of the existing pedestrian facilities within the City are in need of repair or improvement. The City has made improvements over the years, but there are still areas in need of improvements. Map 1 North and Map 2 South – Existing Pedestrian Facilities, which delineate the existing conditions, can be found at the end of Section 2.

City of Sanford
2009 Comprehensive Pedestrian Plan

Map 7
Proposed Pedestrian Network
North Sanford



- Existing Sidewalks
- Existing Greenway
- Proposed Sidewalks
- Repair/replace Sidewalks
- Proposed Greenways
- Planned Thoroughfare

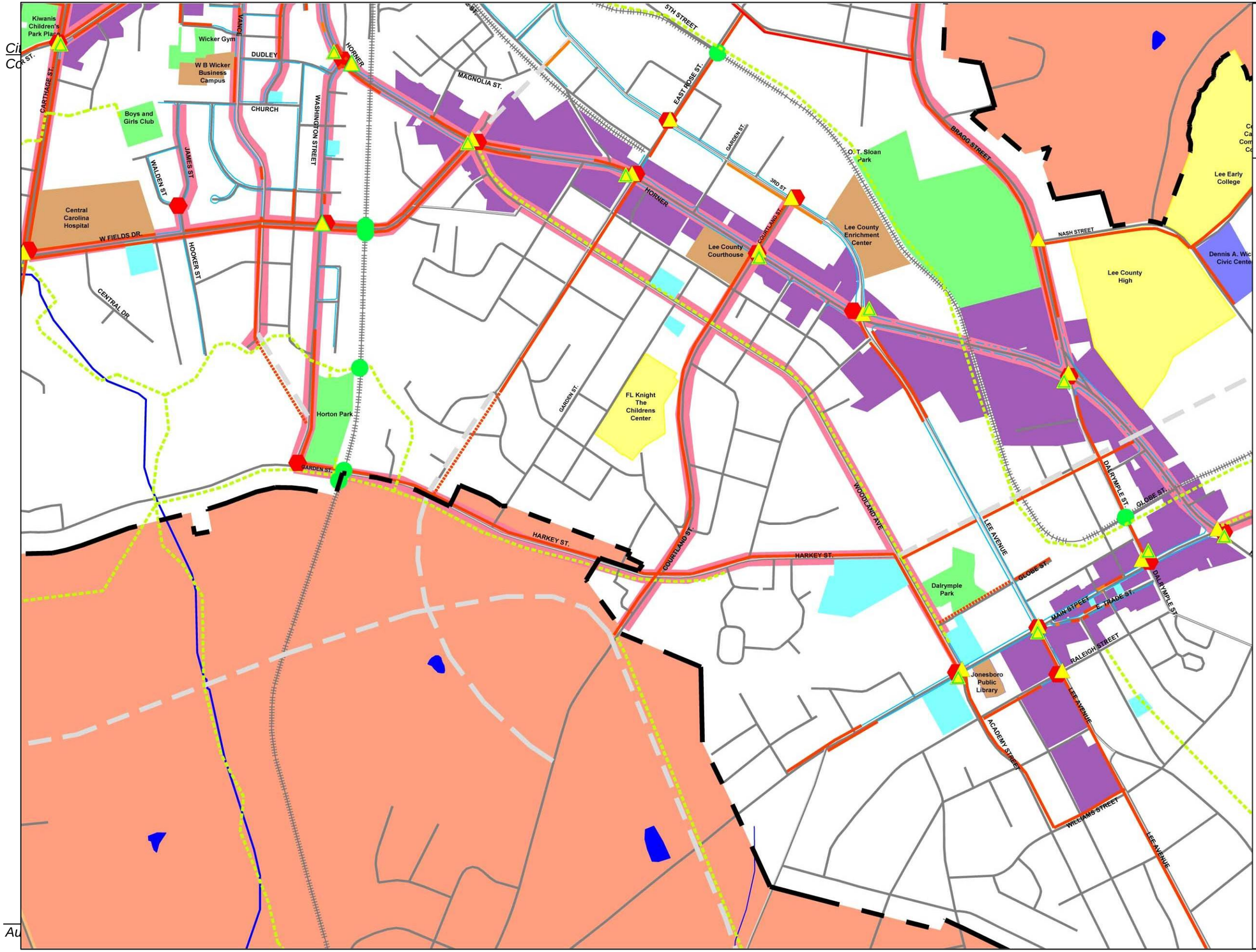
- Existing parks/recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination
- Existing Traffic Signal
- Existing Traffic w/ Pedestrian Signal
- Proposed Pedestrian Signal
- Proposed Traffic Signal
- Proposed Crosswalk
- Proposed Pedestrian Railroad Crossing

BAR SCALE 1" = 1000'
0 500' 1000' 2000'

N W E S

City of Sanford 2009 Comprehensive Pedestrian Plan

Map 8
Proposed Pedestrian Network
Jonesboro and South Sanford



- Existing Sidewalks
- Existing Greenway
- Proposed Sidewalks
- Proposed Greenways
- Planned Thoroughfare

- Existing parks/recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination

- Existing Traffic Signal
- Existing Traffic w/ Pedestrian Signal
- Proposed Pedestrian Signal
- Proposed Traffic Signal
- Proposed Crosswalk
- Proposed Pedestrian Railroad Crossing

BAR SCALE 1" = 1000'
0 500' 1000' 2000'

Pedestrian Crossing Projects

There are numerous unsuitable pedestrian crossings that have been identified in Sanford. Steps to improve these conditions range from striping crosswalks at traffic intersections to the installation of traffic and/or pedestrian signals at high volume traffic intersections. Correcting dangerous intersections will not only encourage pedestrians to use the facilities but also reduce potential injuries. Intersections were chosen for improvements through field observation, public input and steering committee input. The following list is of intersections in need of improvements. (See Maps 1 and 2 at the end of Section 2.)

Need Marked Crosswalk

The following intersections currently have traffic lights. A few of the intersections have crosswalks on one or two sections of the intersection, but not on every section. All of these intersections are on existing or proposed pedestrian corridors except for the one on Burns Drive. This crosswalk is located near Bullock Elementary School and will allow school children in the neighborhoods south of Burns Drive safe access to the school.

- Carthage Street and Vance Street
- Carthage Street and Gulf Street (existing partial crosswalk)
- Carthage Street and Diffie/Hillcrest Streets (existing partial crosswalk)
- Carthage Street and Wicker Street
- Carthage Street and Fields Drive
- Carbonton Road at Carthage Street (across Carbonton Road only)
- Weatherspoon Street and Spring Lane/Gulf Street
- Weatherspoon Street and Horner Blvd.
- Weatherspoon Street and Hawkins Avenue
- Wicker Street and Gulf Street
- Wicker Street and Vance Street
- Wicker Street and Diffie Street
- Charlotte Avenue and Chatham Street
- Charlotte Avenue and 3rd Street
- Charlotte Avenue and 7th Street
- McIver Street and Chatham Street (existing partial crosswalk)
- McIver Street and 3rd Street (existing partial crosswalk)
- McIver Street and Bragg Street
- 7th Street and Weatherspoon Street
- Oakwood Street and Bragg Street
- 3rd Street and Rose Street
- 3rd Street and Courtland Street

- Lee Avenue and Raleigh Street
- Burns Drive and Charleston Drive
- Woodland Drive and Harkey Street
- Spring Lane and Plaza Blvd.

Need Traffic Light and Marked Pedestrian Crossing

These intersections either have a high volume of vehicular traffic and pedestrian traffic or the potential to become a high traffic area due to proposed improvements such as new roadways or greenway trails. All of these intersections are located on existing or proposed pedestrian corridors.

- Hawkins Avenue and Chisholm Street
- Washington Avenue and Fields Drive
- Washington Avenue and Garden Street
- Tramway Road and Fire Tower Road
- Wicker Street and McLeod Drive
- Wicker Street and Chippendale Trail
- Horner Blvd. and Green Street
- 3rd Street and Weatherspoon Street

Need Pedestrian Signal and Marked Pedestrian Crossing

Proposed locations for pedestrian signals have been restricted to areas where the danger from vehicles is marked. Horner Blvd. is a very dangerous road for pedestrian to traverse or cross. In the last 19 years, 90 accidents involving pedestrians have been reported along Horner Blvd. in Sanford. All of the intersections listed below have had multiple pedestrian accidents at or near the intersection.

- Horner Blvd. and Carthage Street
- Horner Blvd. and Wicker Street
- Horner Blvd. and Wall Street
- Horner Blvd. and Lee/3rd Street
- Horner Blvd. and Main Street
- Horner Blvd. and Bragg/Dalrymple Street
- Horner Blvd. and Courtland Drive
- Horner Blvd. and Rose Street
- Horner Blvd. and Fields/Woodland Drive
- McIver and 7th Street
- Main Street and Lee Avenue
- Main Street and Dalrymple Street
- Main Street and Academy

- Bragg Street and Nash Street

Need Traffic Light, Pedestrian Signal and Marked Pedestrian Crossing

- Horner Blvd. and Washington
- Hawkins Avenue and Charlotte Avenue

ADA Curb Ramps

Curb Ramps that meet the Americans with Disabilities Act standards are a vital part of a good pedestrian system, ensuring equal access to the system for all mobile people. Several existing intersections in Sanford do not currently have curb ramps to allow access to the sidewalk system for those in wheelchairs or strollers. It is proposed that these intersections be brought into compliance with the ADA.

- James Street and Walden Street
- Carbonton Road where it meets Carthage Street
- Diffie Street and Carthage Street
- Vance Street and Carthage Street
- Wicker Street and Horner Boulevard
- Wicker Street and Gulf Street
- Wicker Street and Pershing Street
- Wicker Street and Circle Avenue
- McIver Street and 8th Street
- Main Street and Watson Avenue

All new sidewalks that are installed must have ADA compliant curb ramps at intersections and driveways. (See Section 5)

Sidewalk Projects

Sidewalk projects primarily range from replacement of unsuitable facilities to implementation of new sidewalks for connectivity to destinations or existing sidewalks. By implementing these recommendations, the City of Sanford can provide a more safe, accessible, and usable pedestrian network. Improvements are intended to connect to areas of high pedestrian volumes such as parks, commercial/retail centers, government/service centers, cultural amenities and the existing sidewalk network. *All sidewalks, whether existing or proposed should have marked crosswalks and curb ramps at intersections and driveways as a minimum requirement*. Intersections where there is a high volume of vehicular traffic should possess pedestrian traffic signals. These facility improvements should also be evaluated as future widening and roadways projects are constructed.

Sidewalk Projects should include the following pedestrian facilities:

- *Minimum of 5' in width*
- *ADA compliant curb cuts and ramps at all driveways and intersections*
- *Marked crosswalks at all intersections*
- *Pedestrian crossing signals at high volume traffic intersections*
- *Sidewalks on at least one side of street*

The current pedestrian corridors in Sanford cover a limited area of the City. The proposed corridors connect these existing corridors and extend into new areas to help create a cohesive pedestrian network for the City. The plan calls for both the expansion of the existing network and the renovation of the portions needing repair and upgrades. A detailed outline describing the location, priority and construction cost can be found in Appendix E.

District One – Jonesboro

District One is centered upon Lee Avenue in Jonesboro. It extends from Woodland Avenue on the west to Dalrymple Street on the east, from E. Humber Street in the south to Horner Blvd. in the north. The district is a mix of commercial and residential neighborhoods. Dalrymple Park is located on the corner of Woodland Avenue and Globe Street and is a major destination point.

New sidewalks for this district are proposed for:

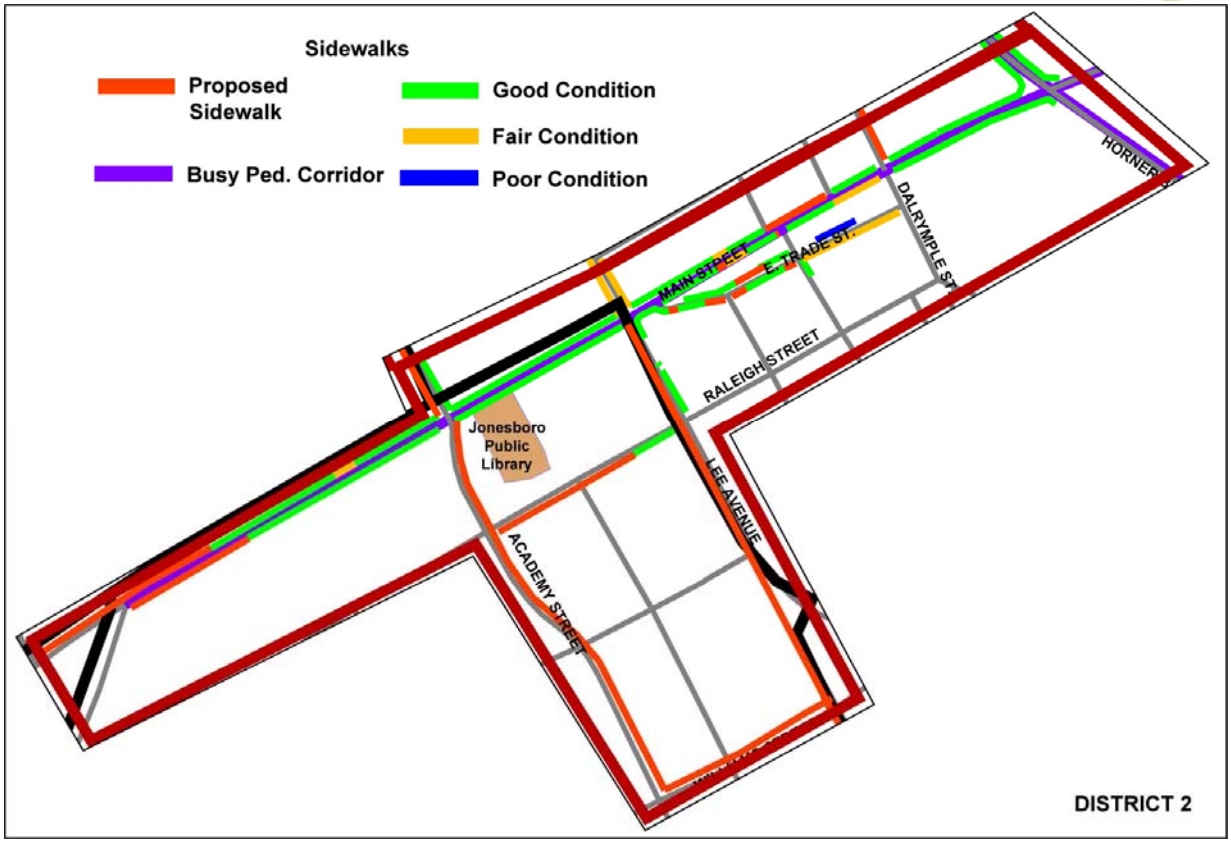
Woodland Avenue – this proposed multi-used path will become a new pedestrian corridor, connecting Jonesboro with downtown Sanford, via Fields Drive and Washington Avenue. Woodland Avenue will also connect into the greenway system via a sidewalk down Harkey Street.

Lee Avenue – Lee Avenue has sidewalks down both sides of the street for approximately two thirds of its length. New sidewalks will traverse the remaining third of the distance, connecting the Lee Avenue pedestrian corridor to the Horner Blvd. corridor and the 3rd Street corridor.

Dalrymple Street – Dalrymple Street is the third major north/south road through this district. It has a mix of residential and commercial properties. A sidewalk down at least one side of this street will give another connector from Jonesboro to the Horner Blvd. corridor and the Bragg Street corridor. The Bragg Street corridor leads to Lee County High School, the community college, the civic center and O. T. Sloan Park.

Harkey Street Extension – The Sanford thoroughfare plan calls for the eventual extension of Harkey Street from Woodland Avenue to beyond Horner Blvd. Sidewalks along this corridor will allow for a connection from Horner Blvd. to Washington Avenue and the Horton Park. It will also increase access to a proposed greenway.

Globe Street – a sidewalk down one side of Globe Street will provide pedestrian access to Dalrymple Park from the residential sections along Lee Avenue.



District Two – Jonesboro Business District

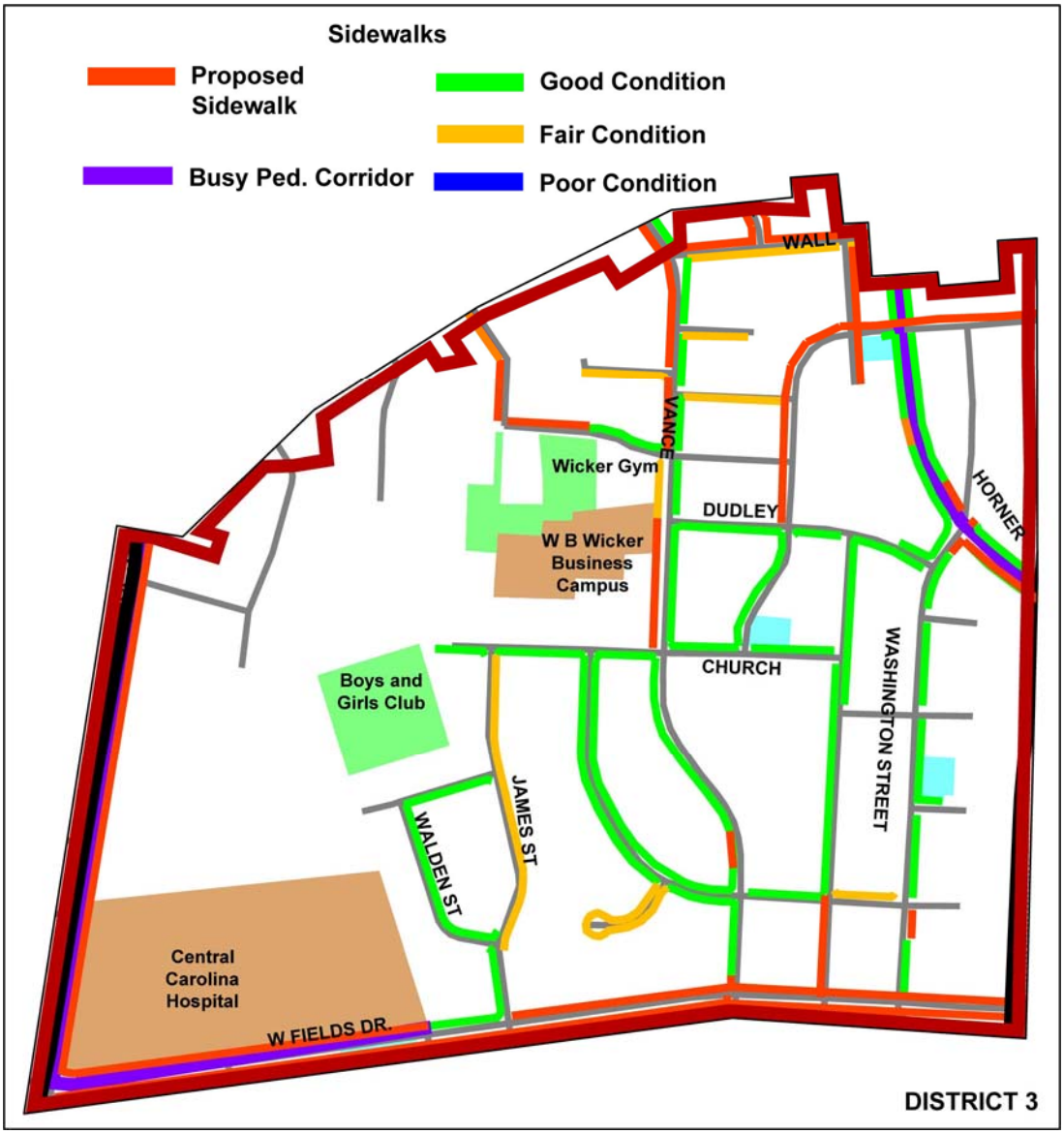
District Two includes Main Street between Horner Blvd. and Lemon Springs Road, E. Trade Street and approximately 2000 feet of South Lee Avenue along the three shopping centers. This district is highly urban and contains the older shopping and business centers for Jonesboro as well as the Jonesboro Branch of the County Library. Main Street is a heavily traveled road with a daily average of 14,000 vehicles.[i] A number of pedestrian accidents have occurred within this district.

Lee Avenue – By extending sidewalks down the portion of Lee Avenue south of Main Street, the pedestrian system will be expanded to include the Kendale Shopping Center. Sidewalks down Lee Avenue will also serve as a major corridor for the residential neighborhoods in this district, allowing pedestrian's access to Main Street, Horner Blvd and north into District 1.

Academy Street – This street serves as a connector road for the surrounding residential neighborhood. The public library and several large churches are situated near the corner of Academy Street and Main Street. This intersection is just west of the intersection of Main Street and Woodland Avenue, a proposed pedestrian corridor.

Main Street – Most of Main Street through this district has sidewalks, but not along the western section. It is proposed that the sidewalk be extended down both sides of Main Street to Caroline Street on the north side and Lemon Springs Road on the south. This will provide access to residents who live along and just off of Main Street to both the downtown business district and the main shopping area. This will also provide access to a very popular, local destination at the corner of Lemon Springs Road and Main Street.

Other projects include the installation of sidewalks in the existing network gaps along both Main Street and Trade Street, and repairing damaged areas within the existing network.



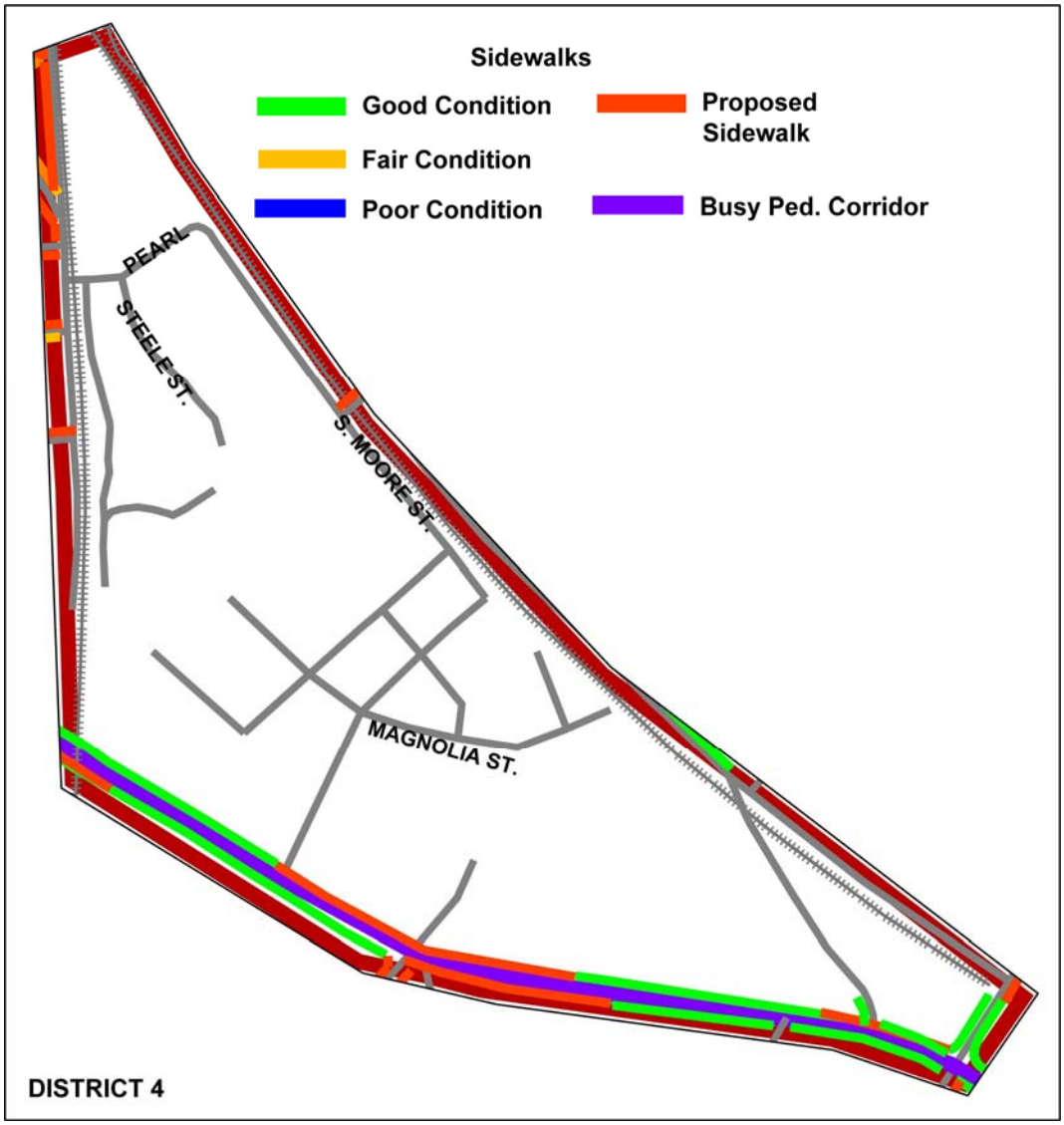
District Three – W. B. Wicker

District Three is a mix of residential and commercial neighborhoods, south of downtown Sanford. The district is roughly bounded on the west by Carthage Street, on the south by Fields Drive and on the east by Horner Blvd. The district includes several churches, the Central Carolina Hospital, the Boys and Girls Club, Wicker Gym and the W.B. Wicker Business Campus.

Fields Drive – Fields Drive serves as the southern border of District Three. This road is proposed to become a major pedestrian corridor, providing access to the Central Carolina Hospital and medical offices to the residents of District Three. Sidewalks along Fields Drive will also allow neighborhood residents to access the existing and proposed pedestrian corridors of Carthage Street, Washington Avenue, Vance Street and Horner Blvd. NCDOT plans to widen this road.

Carthage Street – The section of Carthage Street that passes through District Three is lined with medical service providers. Pedestrians trying to access these services, currently have to travel in the roadway or along the verge. Sidewalks should be extended from the downtown, down both sides of the road, to Fields Drive.

The remainder of sidewalks recommended for this district are to create or complete connections to the downtown and existing and proposed pedestrian corridors. There are also sidewalks that need to be replaced because of deterioration of the existing material.

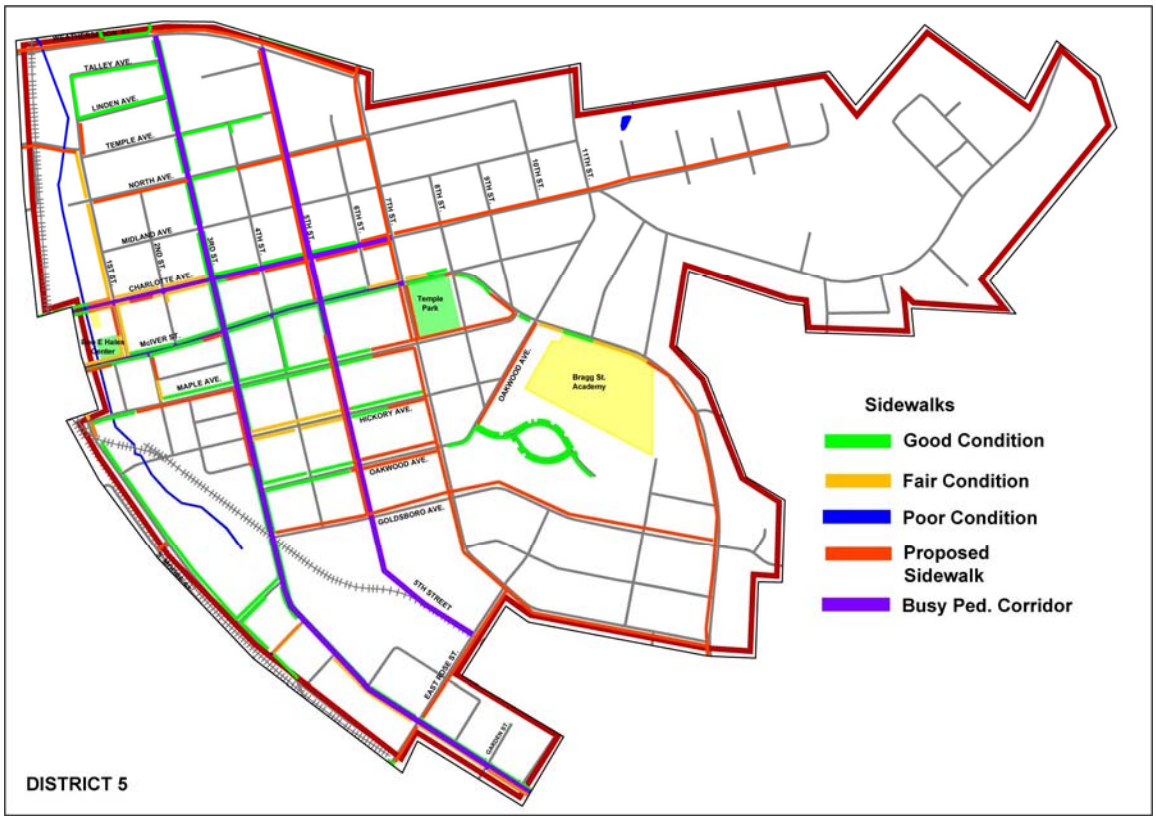


District Four – Magnolia Street District

District Four is a mix of residential and commercial areas, southeast of downtown Sanford. The district is roughly bounded on the west by Horner Boulevard and Railroad Street and on the east by Chatham Street. The Magnolia Street District is approximately one third residential property with the remainder made up of commercial and industrial properties situated along Horner Blvd. and Chatham St. Active railroad lines border the eastern and parallel the western edge of the district along Moore St. Several pedestrian accidents have been reported along the edges of this district. Pedestrian accidents have occurred at several intersections within this district.

Since most of this district is residential, with a low volume vehicular traffic and slower moving traffic, all of the sidewalks recommended for this district are along the edges, where traffic is much faster and in higher volumes.

Horner Boulevard – There are four sections along Horner Blvd. where no sidewalk exists for this district. It is recommended that all four sections be provided with a minimum of 5' wide concrete sidewalk, separated from the busy highway by a minimum 5' wide section of landscaping.



District Five – East Sanford

The East Sanford District is a mix of residential, commercial and some industrial properties. Low income residential housing makes up the majority of this district. The district is roughly bounded on the west by Chatham Street. Weatherspoon Street forms the northern edge of the district. The eastern boundary is formed by the City Limits and the south by the commercial district around Rose St. The roads in this neighborhood form a distinctive grid pattern that should be reflected in the pedestrian network. This district includes numerous pedestrian generating destinations including: churches, Temple Park, Bob E. Hales Center and the Bragg Street Academy. A future park and greenway is proposed for the northwestern edge of this district. Pedestrian accidents are scattered across this district, but two major clusters occur along McIver Street.

Sidewalk projects for Section Five are:

Charlotte Avenue – Charlotte Avenue is a main corridor into the downtown district. It is recommended that sidewalks be constructed down both sides of the street from 7th Street to the downtown. There are existing sections of sidewalk that can be incorporated into this corridor. East of 7th Street, it is recommended that sidewalks be built down at least one side of the street to 16th Street.

Maple Avenue – Maple Avenue is a supplementary east/west corridor that accesses Temple Park. The existing sidewalk system should be extended to down both sides of the street to 7th Street. Beyond 7th Street, the sidewalk should be extended down at least one side of the street to Bragg Street.

Bragg Street – Bragg Street is a major corridor leading from east Sanford down to the Lee County High School and O. T. Sloan Park. Sidewalks should be constructed down at least one side of the road from McIver Street, past the park and the high school, to Horner Blvd. Sidewalks should be extended off of Bragg Street along Nash Street and Kelly Drive to provide access to the high school, the civic center and Central Carolina College.

3rd Street – 3rd Street has an almost complete system of sidewalks running down both sides of the street from Weatherspoon Street in the north to Horner Blvd in the south. One section, on south 3rd Street, runs along a long block where commercial warehouses have recently been removed. The sidewalk along this section is narrow and broken in places. The sidewalks that are broken and crumbled need to be replaced.

Sidewalks need to be installed along the west side of 3rd Street between Maple Avenue and Oakwood Avenue.

7th Street – 7th Street is a major north/south vehicular corridor through east Sanford. Vehicles travel at fairly high rates of speed through the neighborhood on this roadway. There have been several pedestrian accidents along this corridor. There are currently no sidewalks available for pedestrians. Sidewalks need to be built down at least one side of the road from Bragg Street in the south, to the Lion's Club Fairgrounds in the north.

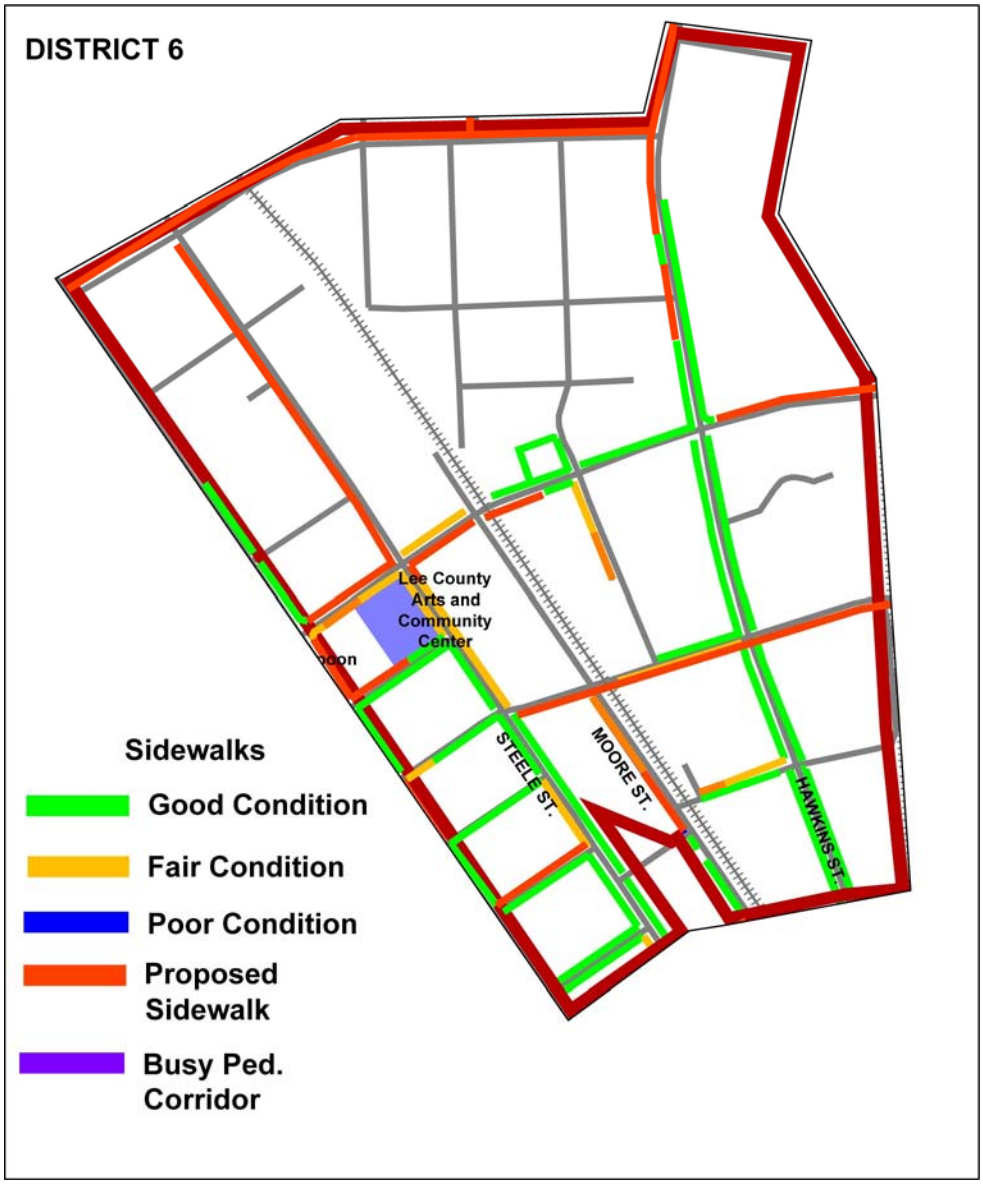
Weatherspoon Street – Sidewalks need to be built from 7th Street to 3rd Street along at least one side of Weatherspoon. This will create pedestrian access to the City Government Center and the fairgrounds from 7th Street, 5th Street and 3th Street.

5th Street – Providing sidewalks down at least one side of 5th Street will help to create a pedestrian grid in east Sanford, providing alternative and convenient access to pedestrians throughout the neighborhood.

Goldsboro Avenue – Sidewalks should be constructed along at least one side of this street, from 3rd Street to Bragg Street, providing pedestrian access from the neighborhood to O. T. Sloan Park, Lee County High School, the Civic Center and Community College.

Miscellaneous Improvements – Several sidewalks in this neighborhood stop in midblock, or short of the street. Other corridors are missing sidewalks for one block, with sidewalks on the surrounding blocks. This sidewalk system needs to be extended to provide for a complete pedestrian sidewalk network.

Some of the sidewalks end 12 or more inches above the street, or a ditch is present between the end of sidewalk and the street. (See Maps 1 and 2, at the end of Section Two.) These sidewalks need to be made safe and accessible for all users.



District Six – Hawkins Avenue District

The Hawkins Avenue District is a mix of residential and commercial properties, on the north side of downtown Sanford. The district is roughly bounded on the west by Horner Boulevard, on the south by Carthage Street and on the east by Hawkins Street. Horner Blvd. has a daily traffic volume of 20,000 vehicles. The district includes several churches, banks, homes and businesses. A future park and greenway are planned along the districts eastern border.

Hawkins Avenue – Hawkins Avenue is a main vehicular corridor in Sanford and should be a main pedestrian corridor too. Several residents of neighborhoods along Hawkins, north of Weatherspoon requested sidewalks along their portions of Hawkins Avenue. It is recommended that the sidewalk be extended north along both sides of Hawkins Avenue to Burns Drive. This will allow pedestrian access from the downtown, north to Bullock Elementary School.

Steele Street – Steele Street contains a major shopping/dining district for the downtown. Pedestrian connections to this district are very important to the success of this area and surrounding communities. The existing sidewalk along Steele Street should be extended to Hill Avenue in the north, connecting this historic residential district to the downtown.

Weatherspoon Street – There are no strong east/west pedestrian connections through this district. Installing sidewalks down one, or preferably both sides of the street will provide strong connections from the neighborhood to the City Government Center and the planned park and greenway along Little Buffalo Creek. This connection will also allow for greater access to the Lee County Arts and Community Center.

Chisholm Street – Providing sidewalks along one or both sides of Chisholm Street will create a second strong pedestrian connection from this neighborhood to the planned greenway, park and east Sanford.

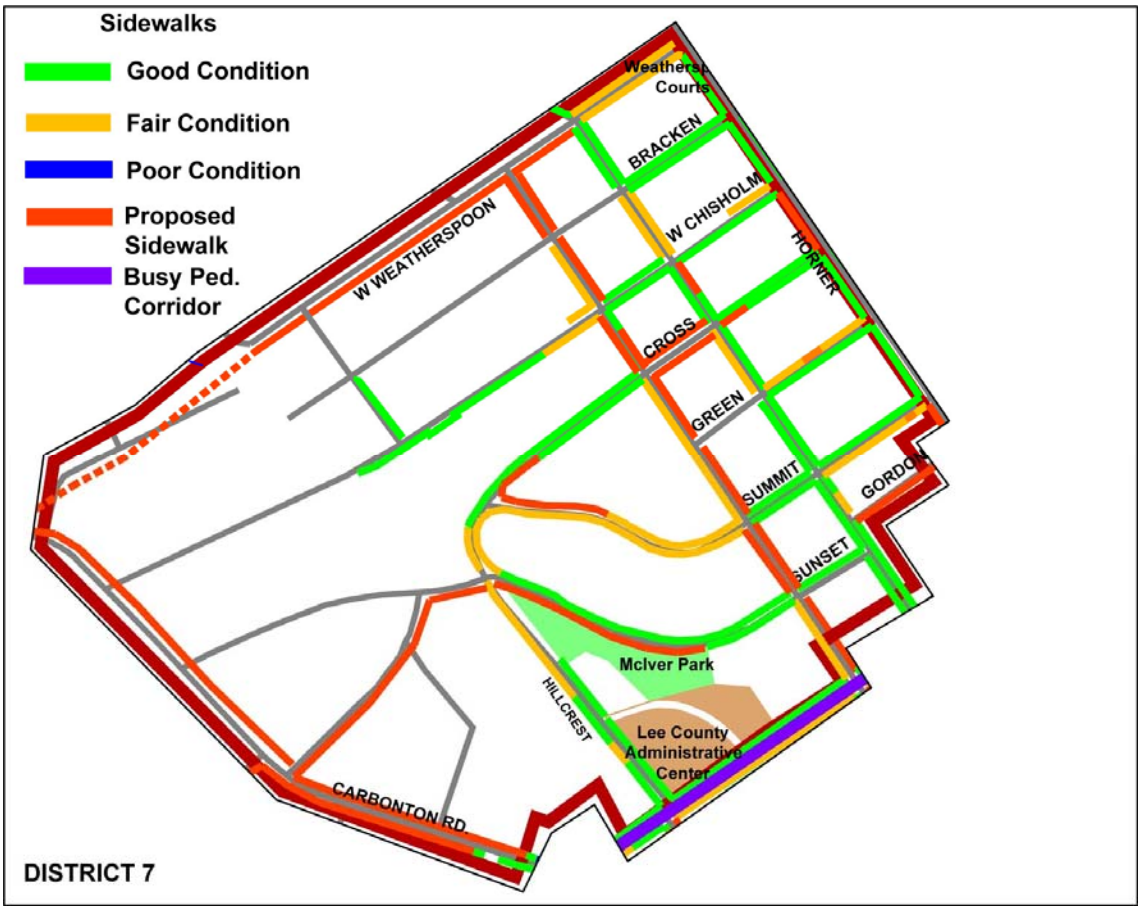
Bracken Street – a quiet residential street, Bracken does not require additional sidewalks along its length. However, there is a missing segment along the block between Steele St. and Horner Blvd. This block contains the Weatherspoon Courts and the Lee County Arts and Community Center. Sidewalk should be installed along this section.

Burns Drive – Sidewalks should be provided down at least one side of Burns Drive. This, along with sidewalks down Charleston Drive, would create a connection from Hawkins Avenue to Bullock Elementary School, providing a safe pedestrian route for the students living in surrounding neighborhoods.

Charleston Drive – This road runs along the western edge of the Bullock Elementary School property and provides the major access to the school from the south and west. A sidewalk should extend down the east side of the road from Burns Drive to the school entrance. Intersection improvements will be necessary where Burns Drive and Charleston Drive meet.

McNeil Drive – this roadway is the major access to Bullock Elementary School from the north, east and the immediately adjacent neighborhood east of the school. A sidewalk should be constructed along the south side of the roadway from where Longwood Road would meet McNeil if it were extended.

Hill Avenue – Hill Avenue provides major access to the Warren Williams Child Development Center. It also provides a connector route from Horner Blvd. to Hawkins Avenue. A sidewalk should be provided down at least one side of the street, and up Lawrence Street to the center's entrance.



District Seven – Rosemont/McIver Park

District Seven contains the historic residential neighborhood of Rosemont/McIver Park. The District is located northwest of the Sanford downtown and is contiguous to it. McIver Park is located in the southwest portion of the neighborhood. Kiwanis Children's Park and Kiwanis Family Park are located just outside of the district, within walking distance. Horner Blvd. which borders District Seven on the east has a daily traffic volume of 20,000

vehicles. Weatherspoon Street on the north, has a daily traffic volume of 11,000 vehicles. All pedestrian accidents reported in this district have taken place along Horner Blvd. or Gulf Street.

The Rosemont/McIver Park District has a partial pedestrian network with many gaps throughout the neighborhood. Many of the side streets in this neighborhood are quiet enough to allow pedestrians to walk in the street, but on several others, vehicles are a major obstacle. Emphasis for this neighborhood is to fill in the missing sidewalks and repair to sidewalks in poor condition.

Vance Street – Vance Street is a major pedestrian corridor from this neighborhood to the downtown. Sidewalks need to be installed along ten blocks of Vance Street. This will provide sidewalks down both sides of the street from Weatherspoon in the north to Carthage in the south.

Gulf Street – Gulf Street is a major north/south pedestrian and vehicular corridor through the Rosemont/McIver Park District. Only one block does not have complete sidewalk coverage: a sidewalk needs to be installed along approximately 2/3 of the east side of the block between Cross Street and W. Chisholm St.

Horner Blvd. – Four blocks will need sidewalks installation to provide a continuous sidewalk from Weatherspoon to Carthage. Pedestrian crossings are needed for at least one crossing between the Weatherspoon and Carthage intersections.

Sunset Drive – the major feature along Sunset Drive is McIver Park, a passive park for the neighborhood. The sidewalk existing along the south side of Sunset Drive should be extended either through the park, or along the northern edge, adjacent to the street until it connects with Carr Street.

Gordon Street – Sidewalk should also be installed along the north side of the block between Gulf Street and Horner Blvd.

Summit Drive – the incomplete sidewalk along the north side of Summit Drive should be extended down around the corner to meet the existing sidewalk on Cross Street. A small damaged segment of sidewalk on the south side of the block between Gulf St. and Horner Blvd. needs to be replaced.

Cross Street – In addition to the small section adjacent to Summit Drive, sidewalks are needed between Vance Street and Gulf Street, and along a small section between Gulf and Horner. A crosswalk and traffic light should be installed at Horner and Cross. This will encourage pedestrians to cross at a marked intersection, rather than taking their chances crossing a heavily traveled vehicular corridor.

Chisholm Street - A small section of sidewalk on the north side of the street between Gulf and Horner needs to be installed. In addition, a sidewalk should be extended down the south side of the road, creating a connection to Carbonton Rd., Kiwanis Family Park, and the Endor Iron Furnace Greenway.

Green Street – A small section of sidewalk on the north side of the street between Gulf and Horner needs to be replaced. Since there are alternate routes available, it should not be necessary to install sidewalks along the length of this lightly traveled road.

Weatherspoon Street – Weatherspoon Street is a major east/west corridor for the City. It serves to connect this neighborhood to east Sanford and to the City Government Center. Sidewalks need to be installed along the length of the road; on at least one side west of Gulf Street and down both sides east of Gulf Street.

Weatherspoon Street Extension – The City of Sanford Thoroughfare Plan calls for the extension of West Weatherspoon Street west to Carbonton Road. When this construction takes place, a sidewalk should be installed down at least one side of the new road, creating a connection to Carbonton and the Endor Iron Furnace Greenway.

Carr Street - Sidewalks need to be installed along one side of Carr Street to Carbonton Rd. This will provide a neighborhood corridor to the Kiwanis Children's Park

Carbonton Road –From Fitts Street to Carthage, sidewalks should be installed down both sides of the road, linking the neighborhood to a grocery store and small shopping center. From Fitts Street west to Halifax Street, sidewalk should be installed down at least one side of the road. This will serve to link the neighborhood to the Endor Iron Furnace Greenway.

District Eight – Downtown Sanford

District Eight consists of downtown Sanford including both the central business district and the Downtown Sanford Local Historic District. District Eight includes Depot Park and the Temple Theater, a National Historic site. Adjacent to the downtown are McIver Park, Kiwanis Children's Park and the Kiwanis Family Park. District Eight is positioned geographically in the center of Districts Three through Seven. The majority of pedestrian accidents that have occurred in this district have been in two clusters, one at the intersection of Horner Blvd. and Carthage Street and the second at the intersection of

Horner Blvd. and Wicker Street. Several more accidents have occurred along the length of Wicker Street in the downtown.

Downtown Sanford should have a comprehensive network of paved sidewalks and improved intersections to enhance the appearance of the district, to provide a safe and efficient pedestrian corridor for residents and visitors alike and to encourage pedestrian use of downtown businesses and facilities.

Carthage Street – one of the two east/west corridors, Carthage Street is a major vehicular and pedestrian access corridor to the Central Business District. Carthage runs along one side of the Kiwanis Children's Park in the west and ends at Depot Park in the east, making this a potential major pedestrian corridor for residents living to the west and north of the downtown. Sidewalks are needed along both sides of the street from just before Carbonton Road to the intersection with Wicker Street to adequately provide for this pedestrian corridor. The remainder of the street has existing sidewalks that need to be monitored on a regular basis for needed repairs and maintenance. The intersection with Horner Blvd needs pedestrian crosswalks and pedestrian signals. All of the curb ramps need to be revamped to meet ADA and NCDOT specifications. Several other intersections are in need of upgrades (see Pedestrian Crossing Projects, pages 10-12.)

Planted, raised median islands down the length of the street would create a more pleasant walking environment by reducing the scale of the 60' wide roadway. Raised medians help to reduce traffic speed and provide pedestrians with a safety haven while crossing the road. Planting shade trees along the sidewalks will also increase the pleasantness of the walking environment and encourage walking.

Charlotte Avenue – Charlotte Avenue has new, wide sidewalks from the intersection with Moore Street down to the bridge crossing the Little Buffalo Creek. However, these new sidewalks do not include ADA compliant, pedestrian railroad crossings. These crossings need to be improved with appropriate paving (see Section 5, Pedestrian Railroad Crossings) and pedestrian visible, railroad crossing warning signs. If rail traffic increases, serious consideration should be given to the installation of pedestrian crossing gates. The sidewalks between the bridge and 1st Street, should be upgraded to match the existing, new sidewalks.

Wicker Street – Wicker Street is the second major east/west corridor that serves the downtown. Sidewalks are needed for the entire length from Carthage to Moore Street, down both sides of the street, as this is a heavily traveled pedestrian corridor. Some of the existing sidewalks are in acceptable condition (see Map 1) but will have to be monitored on a regular basis for maintenance purposes. Every intersection needs upgraded pedestrian facilities, especially the intersection with Horner Blvd.

Constructing a raised and planted median island down the length of Wicker would have several benefits for pedestrians including increased shade and aesthetics, reduced

vehicular speeds, and increased safety in crossing the street. Bump outs at the intersections would decrease the crossing distances for pedestrians and provide locations for pedestrian amenities such as landscaping, seating and wayfinding signage.

McIver Street – McIver Street, between Moore Street and 1st Street has many problems. The railroad lines are a major barrier for pedestrians, especially those in wheelchairs or baby strollers. The sidewalks along this two block stretch need to be upgraded, pedestrian-safe railroad crossing pavement (with ADA tactile warning devices) needs to be installed and pedestrian visible, railroad warning signage needs to be installed. If rail traffic increases, serious consideration should be given to the installation of pedestrian crossing gates.

Moore Street – Moore Street has pavement through the downtown on the west side of the street, fronting the businesses there. Across the street, sidewalk exists only between Wicker St. and Carthage St. This sidewalk is very narrow and in poor condition and needs to be replaced. Consideration should be given to removing the parallel parking along this block and increasing the width of the sidewalk. Pedestrian amenities such as benches, landscaping and pergolas would provide an attractive resting place with views overlooking Depot Park.

The sidewalk south of Wicker Street should be extended down to Steele Street. A small section of existing sidewalk along this block needs to be replaced.

Steele Street – Steele Street is the major core of the downtown shopping district. This street has sidewalks down both sides of the street through the downtown. A small section of sidewalk needs to be replaced at the southern end of the street, where it meets with Moore Street. Bump outs at the intersections would increase the safety of pedestrians and enhance the visual appeal of the district.

Horner Boulevard – Horner Blvd. is a wide, heavily traveled highway that effectively cuts the downtown district in two. Most pedestrian accidents in the downtown have occurred at the intersections of Horner with Wicker and Carthage. Vehicular accidents involving large tractor trailers have occurred along this road near Pearl Street.

Sidewalks along Horner Blvd. through the downtown should be removed as far from the street as right-of-ways and existing buildings will allow. The resulting space (at least five feet) should be landscaped with trees and low shrubs to help increase the feeling of safety from traffic for pedestrians.

The intersections at Carthage, Wicker and Wall Streets should have clearly marked 8' wide minimum, crosswalks and pedestrian signals to increase the ease and safety of crossing pedestrians. Pedestrians should be encouraged to cross at these intersections rather than at nearby, unmarked intersections through the use of landscaping and

signage. When the US-421 By-Pass is completed, strong consideration should be given to installing raised and planted traffic islands down Horner Blvd through the downtown. Such islands will help to ease the disconnect between the two sections of downtown, help to slow motor vehicles and provide safety islands for street-crossing pedestrians.

Gulf Street – Gulf Street serves as a link from two distinct neighborhoods to the downtown. Gulf Street has sidewalks along much of its length, but some are part of an asphalt parking lot, or are in poor condition and need to be replaced. New sidewalks should be installed down both sides of Gulf Street from Carthage to Wall Street. The intersections at Carthage St. and Wicker St. need clearly marked crosswalks and ADA/NCDOT compliant curb ramps.

Vance Street – Vance Street serves as a link from two distinct neighborhoods to the downtown. Sidewalks are present down one side of the street or the other for the length of Vance through the downtown, but are not continuous down either side of the street. New sidewalks should be installed along the blocks where none exist to create a viable connection between the downtown and these two neighborhoods.

Diffie Street – Diffie street provides a connection between Wicker Street and its adjacent neighborhood to the Lee County Administrative Center and to the grocery store and small shopping center on Carbonton Rd. There are disjointed sections of adequate sidewalk along the west side of the street. Poor sections of this sidewalk need to be replaced and a sidewalk constructed along the east side of the block. Crosswalks and traffic signals are needed to provide safe crossings for pedestrians.

Carbonton Road Extension – The City of Sanford Thoroughfare Plan calls for the extension of Carbonton Road to Wicker Street. When this is constructed, sidewalks should be installed down both sides of the new block.

Gordon Street - Missing segments of sidewalk down both sides of the street need to be installed.

St. Clair Court – Though paved for most of the block, there is no dedicated sidewalk for pedestrians along the north side of this street. A sidewalk should be installed the length of the block on the north side. Crossing Steele St. and Horner Blvd. at St. Clair Ct. should be discouraged by the use of landscaping and signage.

Cole Street – Sidewalks cover most of the two blocks of Cole Street, but some are in poor condition and need to be replaced. A new section needs to be constructed along the paved, empty lot adjacent to Moore Street.

Pearl Street – Pearl Street needs sidewalks down at least one side to connect with Horner Blvd. Many residents of the nearby residential neighborhood walk to a popular restaurant located near the corner of Pearl St. and Horner Blvd.

Projects Outside of the Districts

Pedestrian Corridor Connections

Woodland Avenue – Woodland Avenue has the potential to become a major north/south pedestrian connector for Sanford. The road runs parallel to Horner Blvd. for most of its length, but has approximately 1/3 of the vehicular traffic of Horner, making it a much safer alternative for pedestrians. The City should consider taking steps to provide a wider pathway to allow for a multi-use path.

Fields Drive – Currently, Fields Drive is used by vehicles as an east/west corridor. Running between two low income neighborhoods, Fields has the potential to become a major pedestrian corridor, leading to medical facilities in the west, and a commercial district (Horner Blvd.) in the east. Sidewalks should be constructed down both sides of Fields Drive between Carthage Street and Horner Blvd. Fields Drive is a NCDOT TIP project.

Horner Boulevard – Horner Boulevard (US 421) is the major north/south connector in Sanford and is the busiest vehicular corridor in the City. All of the major intersections along this corridor need pedestrian-centered improvements, including pedestrian signals and highly visible crosswalks. When the US 421 By-pass is completed, non-local traffic will be diverted away from this street, reducing the amount of vehicular traffic. When this happens, other changes can help to make the corridor more pedestrian friendly. A raised, planted island down the middle of the roadway will help to keep traffic speed down to the posted 35 mph and provide a protected area for pedestrians crossing the wide intersections along the corridor. In the downtown area, raised traffic islands will help to soften the disconnect between the core downtown and the area west of Horner Blvd.

Bump-outs on the intersecting roads would decrease the distance and time pedestrians spend in the traffic lanes, increasing safety. Bump-outs also provide areas for landscaping, signage and resting places for pedestrians.

Hawkins Avenue North of Burns Drive – NCDOT is considering a project to widen Hawkins Street from Winfield Street to SR 1462. It is proposed that when this project is implemented that sidewalks be built down both sides of the highway, between Burns Drive and Dixie Highway. It is also suggested that the roadway be widened enough to allow for the construction of a multi-use pathway down both sides of the highway.

Parks

Fitts Street – Providing sidewalks down at least one side of Fitts Street would connect the historic Rosemont/McIver Park neighborhood to the Kiwanis' parks via Park Avenue.

Park Avenue – Providing a sidewalk down at least one side of this street will provide direct access to Kiwanis Children's Park. A paved trail from the west end of Park Avenue will provide direct access to the Kiwanis Family Park and the Endor Iron Furnace Greenway.

Washington Avenue – extension of the sidewalks down Washington Avenue, south of Fields Drive, will provide pedestrian access from two neighborhoods to Horton Park and the Big Buffalo Creek Greenway South.

Wicker Street – A multi-use trail should be installed along the north side of Wicker Street to provide pedestrian access from the downtown to Kiwanis Family Park.

Schools

None of the public schools in Sanford are served by sidewalks at this time. It is important to provide pedestrian amenities to the schools for safety and health reasons. Childhood obesity has reached unprecedented proportions in our country and is a major health concern for our nation. It would be unconscionable to encourage children to walk to school for health reasons, and then not provide them with a safe means for doing so. Two middle schools and one high school in Sanford are located on major highways, Tramway Road and Avents Ferry Road, yet there are no pedestrian facilities on either road. The following roads need to have pedestrian facilities down at least one side of the roadway, leading up to the schools. In addition, safe crossing amenities such as crosswalks and traffic signals need to be installed at marked intersections (see Map 9.)

Sidewalks needed:

- Wicker Street – sidewalks are needed down both sides of the road, plus a traffic signal and crosswalk at the intersection with Chippendale.
- Currie Drive – sidewalk down one side of the road
- Chippendale Trail – sidewalk down one side of the road
- McLeod Drive – sidewalk down one side of the road
- Radius Circle – sidewalk down one side of the road
- Arlington Circle – sidewalk down one side of the road
- Abbot Drive – sidewalk down one side of the road
- Rice Road – sidewalk down one side of the road with a crosswalk to the school entrance
- Avent Ferry Road – a multi-purpose pathway needs to be established down both sides of the road. Avent Ferry Road is a NCDOT TIP project.
- Tramway Road – a multi-purpose pathway needs to be established down at least one side of the road. A crosswalk is needed at the intersection with Fire Tower Road
- Fire Tower Road – a multi-purpose pathway needs to be established down at least one side of the road
- Hill Street – sidewalks are needed down at least one side of the road
- Burns Drive – a sidewalk is needed down at least the south side of Burns Drive, from Hawkins Avenue to Charleston Drive to provide pedestrian access to the school

from neighborhoods south of Burns. A high visibility crosswalk should be installed at the traffic light at Charleston Drive.

- Charleston Drive – a sidewalk is needed down the east side of the road from Burns Drive to the school entrance.

Sanford Thoroughfare Plan

Map 13 (which follows) shows future proposed thoroughfares for the City of Sanford and Lee County. As each roadway comes under consideration, pedestrian needs should be evaluated and facilities such as sidewalks curb ramps and crosswalk should be incorporated into the project. Four such projects are:

- Sanford Southern Loop – this project is undergoing preliminary study and consideration by NCDOT.
- Courtland Extension to Sanford Southern Loop
- Carbonton Extension to Wicker Street
- Weatherspoon Extension to Carbonton
- 3rd Street Extension from Weatherspoon Street to Hawkins Avenue

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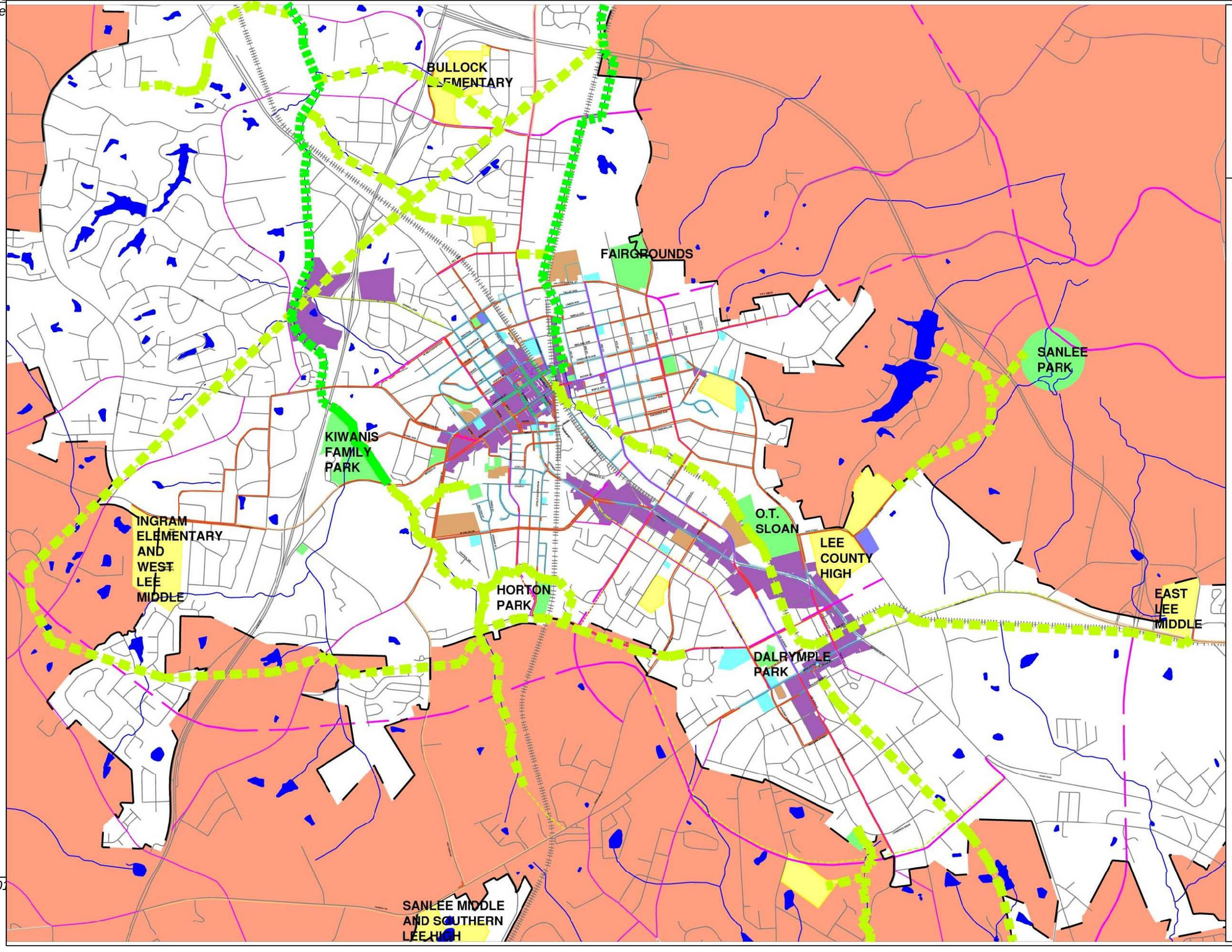


City of Sanford 2009 Comprehensive Pedestrian Plan

Map 13
Major Pedestrian Corridors
North Sanford

- Existing Sidewalks
- Proposed Sidewalks
- Proposed Multi-Purpose
- Existing Greenways
- Planned Greenways
- Proposed Greenway Corridors
- Planned Thoroughfare
- Existing parks/recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination

Greenway Corridor Projects

Greenway corridor projects include off-road pedestrian facilities, typically taking advantage of linear stream corridors, easements and other open space areas. Trails and greenways are very popular among residents and visitors. Visitors appreciate and often return to communities that provide places for bicycling and walking, safely removed from busy roads and streets. Trails offer scenic recreation opportunities suitable for a wide range of ages and abilities. These trails can have a tremendous impact on the economy, potentially providing additional tourist dollars. Where popular trails exist, lodging providers can encourage extended stays among their guests, thereby increasing occupancy. For residents, investment in trails and greenways can increase property values and improve the overall livability of a community.

The greenway routes proposed here are based on a number of different factors including public input and guidance from the project Steering Committee and City staff. These routes are extensive and include locations where barriers must be traversed. One such barrier includes Strategic Highway Corridors (SHC). It is not permissible or advisable to cross any SHC at grade level with the highway. Therefore, greenway project planning personnel should research and negotiate for culvert and bridge crossing locations. The planning staff should work very closely with NCDOT engineers to identify possible easements below or above any SHC. Such sub/super pedestrian easements are best when designed for ahead of the time when the bridge or culvert is constructed. However, precedents do exist where pedestrian crossings have been retrofitted into existing bridges and suitable box culverts. It is recommended that the greenway route be flexible in design in order to take advantage of suitable crossing locations. Strategic Highway Corridors that may conflict with proposed greenway crossings include: US Highway 421, US Highway 15/501, US Highway 1, and the Sanford Bypass. The following describes the benefits of greenways:

Benefits of Greenways

- *Encourage people to enjoy the area from an outdoor perspective*
- *Provide opportunities for families to safely enjoy a healthy activity together*
- *Encourage walking or bicycling to locations within a reasonable distance, such as school, work and recreational areas.*
- *Enhance the safety and convenience of travel to many residential and commercial areas, recreational access sites and other points of interest.*
- *Provide benefits to all road users by reducing congestion and enhancing motorists' safety.*
- *Reduce parking congestion at popular destinations.*
- *Increase safe and affordable options for recreation and exercise, helping to improve the health of visitors and residents alike.*
- *Increase economic benefits such as increased tourism, higher property values, additional residential and business growth, and job growth*

The City of Sanford has two existing and planned greenways serving the northern portions of the City. It is recommended that these plans be extended to create a greenway/trail network throughout the City. By continuing to work with Lee County, this network can be expanded to access County parks and connect into regional greenway trail systems. Future branches of the greenway network that are recommended by this plan are:

Big Buffalo Creek Greenway - South

It is recommended that the existing and planned Endor Iron Furnace Greenway be extended south of the Kiwanis Family Park to Tramway Road. The greenway/trail could follow existing sewer line easements. If easements can be acquired, the line should extend to the proposed Jonesboro Greenway. Several connectors to local neighborhoods and destinations are proposed from this greenway.

Church Street Connector

This trail will branch off of the Big Buffalo Creek Greenway – South and connect to the Girls and Boys Club on Church Street. This connection will allow pedestrian access to the trail, the Kiwanis Family Park and Horton Park to residents of this neighborhood.

Horton Park Connector

This trail will follow sewer easements from the Big Buffalo Creek Greenway – South along the north and east perimeters of Horton Park and connect to the Garden Street Connector.

Garden Street Greenway

The Garden Street Greenway will connect the residential areas of central Sanford with Horton Park and the Big Buffalo Creek Greenway - South.

Jonesboro Greenway

The Jonesboro Greenway follows a sewer easement from Buchanan Park south. The vast majority of this proposed greenway is in the County's jurisdiction, but it would provide a direct link into the City for residents of the area. By extending the Big Buffalo Creek Greenway - South down to meet the Jonesboro Greenway, a network of trails would be possible for this area.

Jonesboro Connector

By connecting the Jonesboro Greenway to the J. Glenn Edwards Elementary School, pedestrian access to the school is increased for nearby residential areas. Trail users

driving to the trailhead, would also have an additional place to park on weekends and in the summer.

Sanford Loop Greenway

The Sanford Loop Greenway travels along utility easements west from the Big Buffalo Creek Greenway - South and then northeast where it connects with the Endor Iron Furnace Greenway and the River Birch Shopping Center. If the sidewalks recommended along Wicker Street were to be extended further west, they could provide a pedestrian connection to the greenway from the surrounding neighborhoods.

Sanford Greenway

The Sanford Greenway continues the Sanford Loop Greenway from the River Birch Shopping Center, northeast to the planned Little Buffalo Creek Greenway. It will intersect with two planned neighborhood greenways, Bullock and McCracken Heights.

McCracken Heights Greenway

The McCracken Heights Greenway will connect the McCracken Heights neighborhood with both the Sanford Greenway and the Big Buffalo Creek Greenway North.

Bullock Greenway

The Bullock Greenway will provide neighborhood connections to the Endor Iron Furnace Greenway, Bullock Elementary School and the Sanford Greenway.

Highland Connector

The Highland Connector will provide a local neighborhood greenway and access from residential developments in the northwest of Sanford, to the Endor Iron Furnace Greenway.

Sanlee Park Greenway

The Sanlee Park Greenway provides a trail connection from the Central Carolina Community College Campus to Sanlee Park. An extension of this greenway through Lee County would allow for linkages to any future trails planned along the Cape Fear River.

Sanlee Connector

The Sanlee Connector uses a utility easement to provide a pedestrian connection from a residential neighborhood to the Sanlee Park Greenway and Sanlee Park.

Atlantic and Western Rail and Trail

Because of the difficulty with finding suitable utility easements to the east of Horner Blvd., it is suggested that the City investigate the possibility of sharing the Atlantic and Western ROW for a Rail and Trail facility. A growing trend in the United States, this arrangement allows trails to be constructed along active rail lines. As the Atlantic and Western Railroad has an active short line that travels from east of the City to the downtown, this would provide a major trail for this section of the City. By ending the trail at Depot Park, it allows for thematic connections to transportation heritage and a physical connection to the planned Little Buffalo Creek Greenway.

Certain issues to consider when initiating a shared pedestrian/active rail line facility include: Trail widths and clearances, grades, and setbacks. Pedestrian safety is the main issue and should be considered carefully when planning such a shared transportation corridor. Ensuring a safe distance from the rail line may depend on the available rail-way right-of-way width.

Design dimensions for shared use paths can vary greatly by the type of facility, levels of use they receive, and the setting in which they are located. Typically, a shared path should be 10 to 14 feet in width but a minimum of 8 feet can apply where necessary. Planners of future greenway projects should identify the rail-way right-of-way widths to ensure that room for the pedestrian path exists. Also, make sure that proposed path grades are within safe percentages.

Most original rail lines were surveyed for ease of transport and gentle (often less than 2%) grades. Therefore, the rail trails that later followed them are often fairly straight and ideally suited to overcome steep or awkward terrain such as hills, escarpments, rivers, swamps, etc.

Rail/trail paths often share space with a number of linear utilities such as pipelines, electrical transmission wires, telephone lines, and fiber optic lines. It is therefore recommended that cooperation with utility providers be addressed in the planning stages of any future greenway project.

An alternative technique for locating a rail/trail that may apply to under-utilized rail lines includes railbanking. Railbanking is a strategy that preserves railroad rights-of-way for possible future use while allowing for pedestrian trail use. Railbanking leaves the tracks, bridges, and other infrastructure intact; thereby, relieving the railroad operating company from responsibility of maintenance and taxation. Often the tracks are put in custody of a state transportation agency, who then seeks a new operator for possible rehab or reactivation. This helps ensure the possibility of future restored rail service when new economic conditions may warrant resuming operation.

South SanLee Greenway

The South SanLee Greenway will run for approximately six miles along an abandoned rail line from downtown Jonesboro through Lee County to the Harnett County Line. This greenway presents an opportunity for Sanford and Lee County to work with Harnett and Moore Counties in developing a regional greenway system.

Future Planning Efforts

Existing and future utility easements should be assessed to determine if they can be used for possible pedestrian connections. City utility lines can create a network of connectivity to neighborhoods. The associated public easements should include recreation and alternative transportation as uses for the public right-of-way, allowing trails to be constructed in the future.

4.4 SPECIAL FOCUS AREAS

Many different users groups will make use of Sanford's increased pedestrian facilities. A segment of this population will be visitors while the vast majority will be residents, many with special needs. It will be imperative that new and existing facilities provide safe, pedestrian-friendly corridors for all users to navigate within the City, particularly for senior adults and children.

ADA requirements will increase with senior populations

Senior Citizens

Senior adults are special populations that need particular consideration in pedestrian projects. There are currently, several independent living and assisted living residences for seniors in the City of Sanford. The neighborhood between Wicker Street and Garden Street has a high number of seniors in residence. The US Census records that about 33% of the population was over the age of 60 in the year 2000. In the 2005-2007 US Census Estimates, adults aged 55 and over make up 23% of the total population of the City. As a general trend, seniors have the time and desire to participate in pedestrian activities. Seniors also tend to rely on alternate means of transportation rather than personal vehicles.

With the promotion of healthy lifestyles and a need for alternate transportation, this population will need safe pedestrian facilities to be offered by the City. Special attention is needed to ensure a community where this segment of the population can safely traverse the streets.

Children

Children also require special safety procedures with regards to public safety. An equally important component in this equation is *safety education*. Many children are injured every year due to their lack of understanding of the utilization of a pedestrian system. Education programs such as *Safe Routes to School* should be promoted to assist children in learning how to cross a street and to walk in safe areas. Promoting healthy lifestyles for children will encourage physical activity and the use of sidewalks for exercise. The encouragement of walking is very important; but at the same time, the pedestrian facilities must exist (sidewalks to schools) and be user-friendly.

Disadvantaged Neighborhoods

As in every city, there are neighborhoods in Sanford where the residents are at an economic disadvantage. In Sanford, the residents of the neighborhood with the lowest average income also have the lowest rate of motor vehicle ownership and one of the highest concentrations of persons over the age of 60. (See Appendix F) Since privately-owned automobiles are the primary means of transportation in Sanford, lack of ownership can lead to real difficulties in accessing jobs, medical facilities, schools and other destinations. It is important to provide safe, equitable pedestrian opportunities for residents of these neighborhoods. A strong pedestrian network will allow them to access needed services, cultural and recreational amenities, jobs and retail centers. Increased pedestrian activity will help to build a strong sense of community and identity for these neighborhoods.

[i] 2007 Annual Average Daily Traffic Map, Lee County, North Carolina, Traffic Survey Group, North Carolina Department of Transportation

- END OF SECTION -

SECTION 5 FACILITY STANDARDS AND GUIDELINES

5.1 PEDESTRIAN DESIGN CONSIDERATIONS AND GUIDELINES

The guidelines in the Pedestrian Plan were developed through assessment and documentation of existing practices that were observed or informed through site observation, community input or steering committee comments. National and state design standards as defined by the NCDOT, the Manual of Uniform Traffic Control Devices (MUTCD), the American Association of State Highway Transportation Officials (AASHTO), the Americans with Disabilities Act (ADA) and the Federal Highway Administration directly influenced the formation of these guidelines. If any discrepancies occur between the design guidelines and national and state standards, the national and state standards take precedence. Furthermore, cost estimates provided for proposed improvements are relevant only for the date in which this document was prepared. The City of Sanford should seek a current cost estimate for any proposed work from a qualified landscape architect and/or engineer before submitting the work for bid..

The following descriptions and typical details are intended to be used as design standards and alternative treatments for pedestrian facilities. The treatments are important and should be designed and constructed to meet the minimum standards for implementing a safe pedestrian and vehicular facility. Being that many of the local streets are NCDOT roadways, the City should obtain the proper approvals and permits from NCDOT prior to implementing projects on subject roads.

Pedestrian Facility Elements

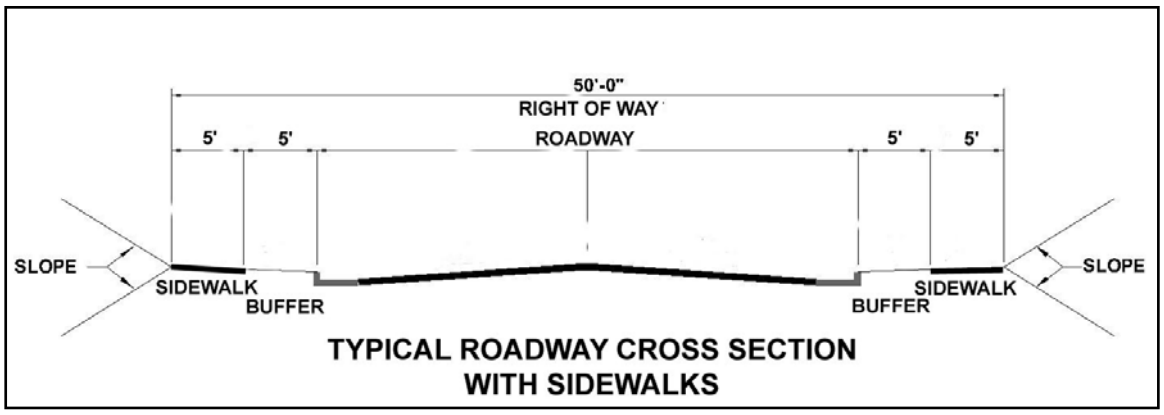
Sidewalks and Walkways

Sidewalks make up the majority of pedestrian facilities and are the most important component of a pedestrian network. The number of pedestrians using a particular facility will determine which type of sidewalk should be implemented. Sidewalks are the primary connectors for residential areas, shopping centers and businesses. They create opportunities for people to meet and socialize. They provide places for children to play and adults to exercise. They provide an alternate means for people to access commercial and business areas.

Most of the sidewalks located in Sanford will be five feet in width, providing an ample pathway for pedestrians to walk to their destinations. Where adequate right-of-way is available, a buffer can be utilized in order to separate the sidewalk from the roadway. Sidewalk areas within and leading to Sanford's Central Business Districts should be wider to allow for a denser population, street furniture, and other amenities.

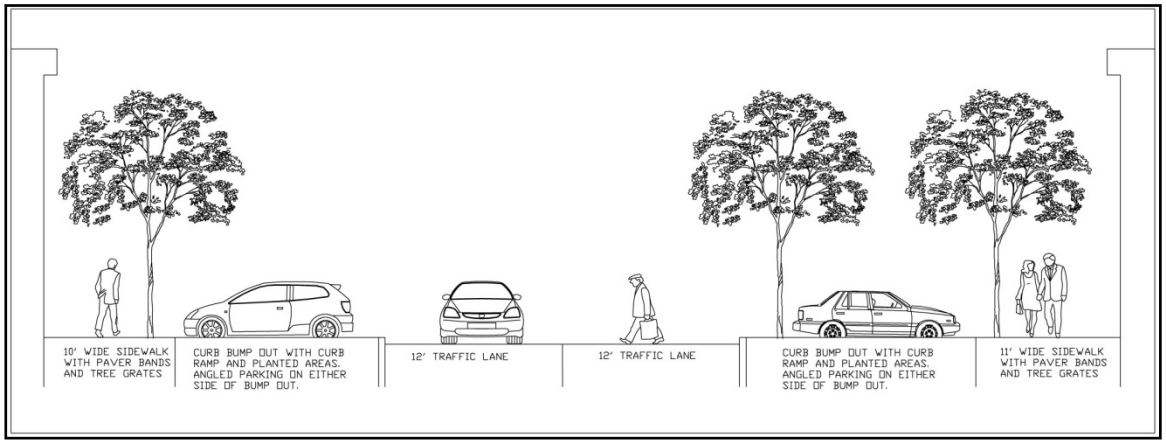
Sidewalks shall be constructed within the street right-of-way in accordance with City Standards. Any location in which a sidewalk is not within the dedicated street right-of-way must have a sidewalk easement dedicated to the City of Sanford. Sidewalks shall be installed at the time of roadway construction or widening unless otherwise approved by the City. The City may allow the developer a fee (in lieu of) constructing the sidewalk in appropriate locations. In addition, sidewalks shall be provided along streets within new developments as well as existing development expansion that are non-residential, multi-family or single family residences as required in the Subdivision Ordinance.

The following cross-sections exemplify the different standards that should be applied for the various applications.



TYPICAL ROADWAY CROSS SECTION WITH SIDEWALKS

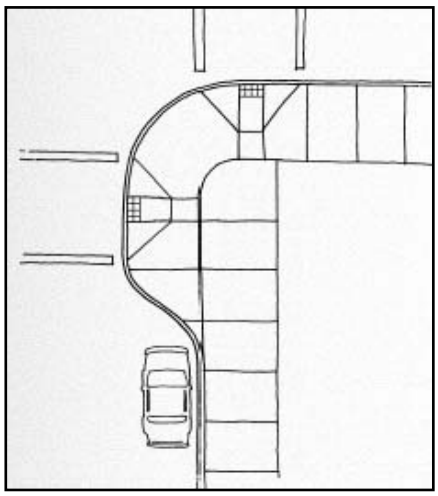
It should be noted that The North Carolina Department of Transportation (NCDOT) only requires a three (3) foot buffer.



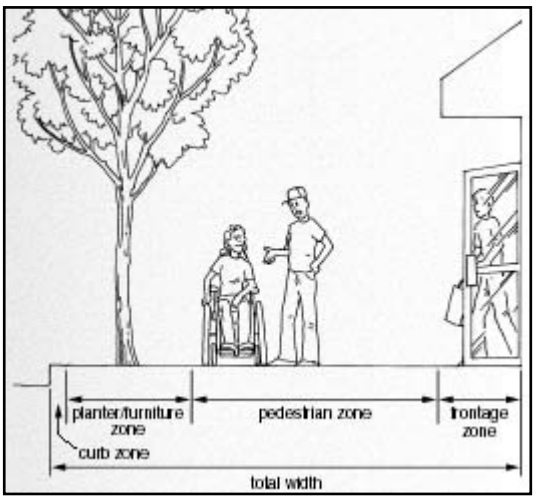
Crosswalks should consist of two 12" white lines with 6' separation.

Pedestrian zones should have a width of at least 5'-8'.

Sidewalks should be a Minimum of 5' in width.



Planting strips should be a minimum of 5' in width.



All sidewalks shall be constructed in accordance with the standard detail found in the NCDOT Construction Manual. The following design guidelines for sidewalk construction are contained therein.

Guidelines for Sidewalk Design/Construction:

- The minimum thickness of a sidewalk shall be 4 inches. At locations where a driveway crosses a sidewalk, a 6-inch depth is required.

- All sidewalks shall be constructed of concrete unless otherwise approved by the City. Sidewalks shall typically be a minimum distance of five (5) feet off the back of curb with a minimum width of five (5) feet. This requirement may vary upon the approval of the City depending on site constraints.

  The design of the sidewalk shall be such that pedestrian safety is provided and the usability of the sidewalk is not affected.

- Sidewalks shall have a uniform slope toward the roadway of ¼ inch per foot.

- If a 5-foot wide buffer or planting strip is provided between the sidewalk and back of curb, the slope shall not be less that ¼ inch per foot nor greater than 18 inches toward the roadway unless approved by the City. In some cases there may not be sufficient width to provide the planting strip.

- Where no curb and gutter exists on a road that requires sidewalks, the City may require curb and gutter installation in addition to the installation of the sidewalk.

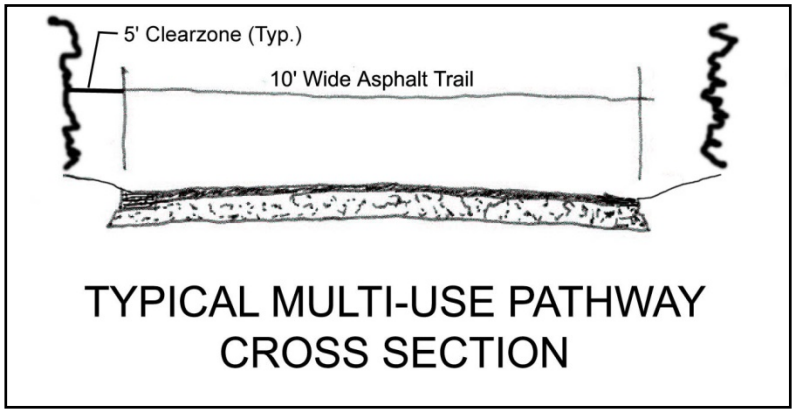
- Where sidewalks and/or greenways intersect any section of curb and gutter or street section, a wheelchair ramp shall be installed per City standards.
- The design and construction shall conform to ADA standards.
- Pipes, drains, or other concentrated stormwater devices shall not discharge across a sidewalk, but be piped or flumed under the sidewalk.
- All marked pedestrian traffic crossings must be approved by the City or NCDOT Traffic Engineer prior to installation.
- All mid-block pedestrian traffic crossings shall be designated as a crosswalk with pavement markings and signage in accordance with MUTCD and must be approved by the City or NCDOT Traffic Engineer prior to installation.

Sidewalks/Walkways Costs:

The cost of a 5-foot wide concrete sidewalk is approximately $25/linear foot. The cost of curb and gutter is approximately $22/linear foot. Asphalt walkways are much less expensive in terms or construction cost but more difficult to traverse and more expensive to maintain.

Greenway Trail

As sidewalks have different standards for various applications, greenways vary due to such factors as space, existing conditions and usage. The pedestrian facilities which have been proposed, are different in variety and purpose. A greenway can be a multi-use facility, that is located off-street, and offers multiple opportunities for different users, such as walking, in-line skating and biking. Special considerations of safety should be made when these facilities are located near a roadway. Adequate separation or barriers should be implemented between the roadway and the multi-use path. The following cross-section identifies standards that should be implemented for each application.



TYPICAL MULTI-USE PATHWAY CROSS SECTION

A greenway is defined simply as a trail corridor on primarily undeveloped land, as along a river or between urban centers, that is reserved for recreational use or environmental preservation. As the greenway movement has experienced tremendous popularity these facilities have been developed on abandoned

railroad beds, utility corridors and through residential communities. Most multi-use trails are wider than sidewalks for a variety of reasons. The minimum width for two-directional trails is 10', however 12'-14' widths are preferred where heavy traffic is anticipated. Due to many of the facilities being off-road, the larger width provides access for maintenance and emergency vehicles. A majority of greenways are constructed using asphalt as the surface. This application is used primarily due to the lower cost compared to concrete.

To create an aesthetically pleasing greenway, design techniques should be considered. Clearing of vegetation should be limited to clearing for construction, clearing underbrush to increase sight lines and for safety of the trail user. Meandering the greenway helps create opportunities for landscaping and sightlines, particularly along extended, straight corridors.

Greenway/Multi-Use Trails Costs:

The cost of a 10-foot wide asphalt trail is approximately $700,000/mile. This consists of a 6" stone base and 2" of asphalt.

Typical pavement design for a paved, off-road, multi-use trail should be based upon the specific loading and soil conditions for each project. These asphalt or concrete trails should be designed to meet loading requirements including maintenance and emergency vehicles.

Concrete: In flood prone areas, concrete should be used due to its durability versus asphalt which can wash away or heave. In addition, concrete trails will withstand sub-grade failure and root intrusion better that asphalt surfacing.

Asphalt: Asphalt is predominately used on greenways primarily due to cost. It requires more maintenance than concrete due to its flexibility which can cause movement of the trail. It is also important to construct a 2' stone shoulder on both sides of the asphalt edge to help prevent the edges from failure and erosion.

Marked Crosswalks

Pedestrians need to be able to traverse the local transportation system as easily and safely as those in vehicles. Providing marked crosswalks is one of many ways to facilitate the safe crossing of streets and parking lots. A marked crosswalk is any crosswalk, which is delineated by white painted markings placed on the pavement. *Crosswalks consisting of textured, colored or otherwise contrasting materials are 'unmarked' crosswalks unless white paint is also present.* A crosswalk may be marked with special paint, thermoplastic materials, plastic tape or other approved materials.

NCDOT follows the national guidelines outlined in the federal Manual of Uniform Traffic Control Devices (MUTCD), the Traffic Control Devices Handbook and other references. These references cover all aspects of the placement, construction and maintenance of all approved traffic control devices.

A change of materials is not always sufficient to clearly mark a crosswalk

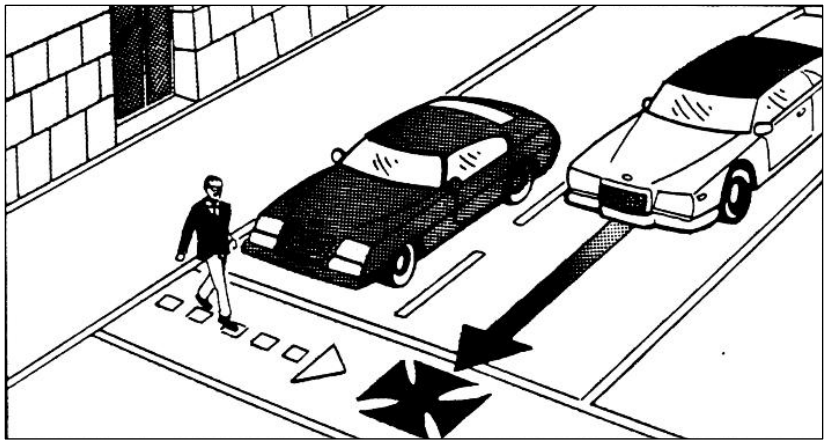
In order to ensure the public understanding of the meaning of all traffic control devices, they need to be consistent. All traffic devices, including crosswalk markings and signs must conform to all state and federal standards and regulations for dimensions, color, working and graphics. Legal crosswalks usually exist at all public street intersections whether marked or unmarked. However, the only way a crosswalk can exist at a mid-block location is if it is marked. It should be noted that NCDOT requires that mid-block crossings be at least 200 feet from an adjacent signalized intersection, and no less.

The white border makes this crosswalk much more visible to drivers

Crosswalks are not a guarantee of pedestrian safety. While state laws require a motorist to yield to pedestrians in a marked crosswalk, on roads with moderate to higher speeds and traffic volumes, drivers seldom comply. More vehicle/pedestrian collisions occur at marked crosswalks on multi-lane streets with a high volume of vehicular traffic than at unmarked crosswalks. This may be explained in part by the observation that older adults tend to cross at marked crosswalks, rather than at unmarked. As this age group is the most vulnerable pedestrian group, this may explain the accident numbers. The addition of warning signs and lights for drivers, decreases the risk to pedestrians.

Another safety concern on multi-lane roads, is when the driver nearest the curb stops for a pedestrian, but the driver in the next lane cannot see them and continues through the crosswalk, striking the pedestrian. Crosswalks should be

considered primarily as a means to assist and direct pedestrians along the safest route, rather than as a way to stop traffic.



Crosswalks should be marked at intersections where there is substantial conflict between vehicle and pedestrian movements, where significant pedestrian concentrations occur, where pedestrians could not otherwise recognize the proper place to cross, and where traffic movements are controlled. Examples of such locations are:

- Approved school crossings
- Signalized intersections
- Four-way stop intersections

Regulatory Signs and Warning Signs for Crosswalks

Regulatory signs give notice of traffic laws or regulations that pedestrians, cyclists and motorists are required by law to follow. Warning signs call attention to unexpected conditions on, or adjacent to, a roadway, bike or pedestrian facility that can be potentially hazardous to users.

Pedestrian-related signage serves primarily to notify motorists and others of the presence of pedestrians. The intended effect is to cause motorists to drive more cautiously and reduce their speeds, thereby improving the safety for pedestrians in the given area.

Signs can be used in a variety of places, including at crosswalks, at intersections, in-street, and near schools. National standards for sign placement and use can be found in the **Manual for Uniform Traffic Control Devices (MUTCD)**. The MUTCD provides guidance for warning signs which can be used at both crosswalks, or along the roadway:

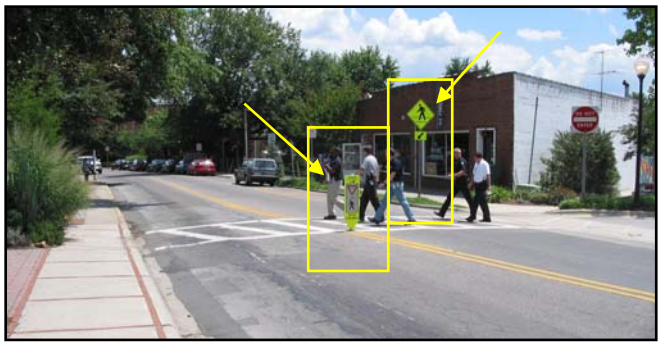


Figure 6-1. An example of two types of signs used to notify motorists of a pedestrian crossing.

The following are some recommended signs which municipalities should consider installing. For more signs and more detailed guidelines for sign installation and use, the municipality should consult the MUTCD. The S4-3/R1-6 as well as the W11-2 signs are regulatory, while the sign furthest to the right is a wayfinding sign. The remaining signs directly below are warning signs.

The first sign is usually installed within the street to warn motorists to yield to pedestrians in a crosswalk. The "school" sign (MUTCD S4-3) is added to the in-street sign for placement near a school. The second and third signs are commonly used pedestrian warning signs, while the fourth and fifth signs notify motorists of specific instances to watch for pedestrians. The fourth sign, "Turning Traffic", is usually placed at intersections to warn motorists that are turning right or left to yield to pedestrians in crosswalks. The sign at the far right is an example of typical wayfinding signage to help direct cyclists at major decision points along a route. For the fifth sign, the top sign can either be combined with the smaller "ahead" sign or the arrow symbol to indicate the presence of a crosswalk to motorists in a school zone.

Sign	MUTCD Code	MUTCD Section	Conventional Road	
Yield here to Peds	R1-5	2B.11	450x450 (18x18)	Regulatory
Yield here to Peds	R1-5a	2B.11	450x600 (18x24)	
In-Street Ped Crossing	R1-6, R1-6a	2B.12	300x900 (12x36)	
Peds and Bikes Prohibited	R5-10b	2B.36	750x450 (30x18)	
Peds Prohibited	R5-10c	2B.36	600x300 (24x12)	
Walk on Left Facing Traffic	R9-1	2B.43	450x600 (18x24)	
Cross only at Crosswalks	R9-2	2B.44	300x450 (12x18)	
No Ped Crossing	R9-3a	2B.44	450x450 (18x18)	
No Hitch Hiking	R9-4	2B.43	450x600 (18x24)	
No Hitch Hiking (symbol)	R9-4a	2B.43	450x450 (18x18)	
Bikes Yield to Peds	R9-6	9B.10	300x450 (12x18)	
Ped Traffic Symbol	R10-4b	2B.45	225x300 (9x12)	
School Advance Warning	S1-1	7B.08	900x900 (36x36)	School, Warning, Informational
School Bus Stop Ahead	S3-1	7B.10	750x750 (30x30)	
Pedestrian Traffic	W11-2	2C.41	750x750 (30x30)	
Playground	W15-1	2C.42	750x750 (30x30)	
Hiking Trail	I-4	--	600x600 (24x24)	

1. Larger signs may be used when appropriate.
2. Dimensions are shown in millimeters followed by inches in parentheses and are shown as width x height.
3. First dimension in millimeters; dimensions in parentheses are in inches.
4. All information in table taken directly from MUTCD.

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Guidelines for Crosswalks:

The following guidelines are taken from the USDOT Federal Highway Administration's *Pedestrian Facilities Users Guide – Providing Safety and Mobility* (2002), and the Association of State Highway and Transportation Officials' *Guide for the Planning, Design and Operation of Pedestrian Facilities* (2004).

- Crosswalks should not be installed where speeds exceed 40 mile per hour.

- As noted above, in some areas, crosswalks should be used together with other traffic control devices to increase pedestrian safety. This is

especially important on roads where the average daily traffic exceeds 10,000 vehicles.

- The MUTCD requires that the width of crosswalks be at least six feet wide. In areas of high vehicle and pedestrian traffic, the crosswalks should be at least ten feet wide. The NCDOT recommends widths of 10' or greater.

- Pedestrian access to the crosswalks via curb ramps and other sloped areas should be fully contained within the crosswalk markings.

- Markings for the crosswalk should extend across the entire width of the roadway.

- The MUTCD recommends all crosswalk markings be white.

- The continental and ladder patterns for crosswalk markings are more easily seen and comprehended by motorists. Therefore it is recommended that one of these patterns be chosen for crosswalks in the City of Sanford. Lines should be 12 inches to 24 inches wide and spaced one foot to five feet apart, depending upon the location and width of the roadway.

Ladder pattern crosswalk markings

- Additional devices such as traffic signals and beacons should be added where vehicle speeds and traffic are higher.

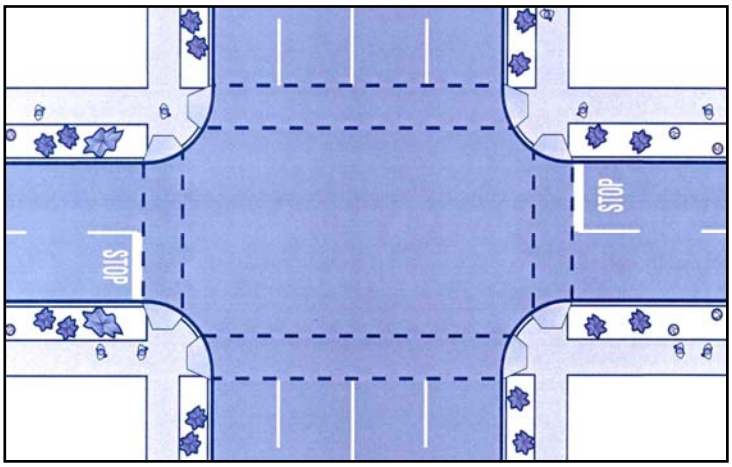
Many factors must be analyzed before deciding on the location and type of crosswalk to be installed. Some of the issues to be examined are:

- The number of pedestrians that will be served
- The function of the highway
- The volume and speed of vehicles
- The width of the road
- Both current and future predicted conditions
- The typical abilities of the pedestrians that would use the crosswalk
- Who will pay for and then maintain the crosswalk

Typical Crosswalks Costs:

Regular striped:	$150
Ladder or continental crosswalks:	$350
Pattern Concrete:	$3,500

Maintenance costs vary according to the region and the pattern of striping used.



School Crosswalks

With the elevated concern for the safety of children walking to school, criteria for placing marked crosswalks along the route are a bit different from the general criteria. Crosswalks should be marked at all intersections along the suggested route to school where the volume of children reaches about 40 in a two hour period.

School Zone Treatments and School Route Plan Map

Section 7 of the MUTCD is entirely devoted to "Traffic Controls for School Areas" and is the dominant guidance available to municipalities for installing signs and markings in school zones. The section provides valuable additional guidance for school crossing treatments that can be utilized for the planning and design of schools that should be considered when making safety improvements

School crossing signs should clearly mark all school crosswalks on the suggested route, as well as be placed at crosswalks within the school zone. Busy intersections crossed by children should include traffic control devices such as signals and signs.

Advance Stop Bars

In order to increase vehicle and pedestrian visibility, the vehicle stop bar should be applied to the street 15 to 30 feet back from the pedestrian crosswalk at signalized crossings and mid-block crossings. Stop bars are one to two feet wide and extend across all approach lanes at intersections. By moving the bar further away from the crossing, motorists are influenced to stop further back from the crosswalk when yielding right of way to pedestrians. This helps to reduce conflicts (near collisions) between motor vehicles and pedestrians.

Advance Stop Bar Cost:

Signage: $50-$150 plus installation

No additional cost if new line is installed in new paving

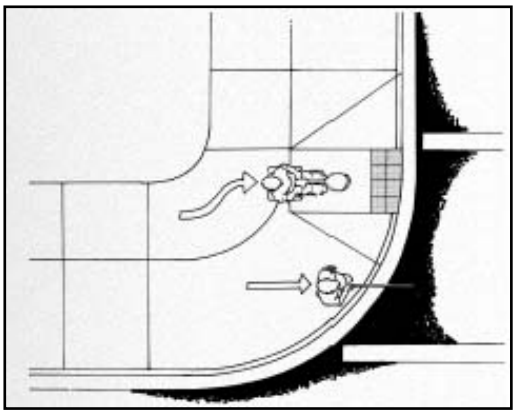
Curb Ramps

Curb ramps are vital in providing access between the sidewalk and the street for people who use wheelchairs and other motorized mobility devices. Curb ramps are most commonly found at intersections, but they may also be used at other locations such as on-street parking, loading zones, bus stops and midblock crossings. The implementation regulations under Title II of the ADA, specifically identify curb ramps as requirements for existing facilities and all new construction. Curb ramps for existing facilities must be included in Transition Plans. According to the Title II implementation regulations, priorities for the installation of curb ramps in existing facilities should include access to government facilities, transportation, public accommodations and for employees to their place of employment (U.S. Department of Justice, 1991a).

For many people with mobility impairments, curb ramps actually make it more difficult to navigate the pedestrian corridor. Crutches and canes are sized to fit the individual user so that the energy required for walking is minimized on a hard, level surface. Use of these types of walking aids is more difficult on sloped surfaces such as curb ramps. Widening the crosswalk to allow people to use

either the curb or the curb ramp will ease access for cane and crutch users who are not comfortable traveling on a sloped surface.

The curb is the most reliable cue that people with vision impairments use to identify the transition between the sidewalk and the street. The installation of curb ramps removes this cue and replaces it with a ramp which is much more difficult to detect. Therefore, it is important that as curb ramps are installed to create access for people who use wheelchairs, they are installed in such a way as to maximize detectability for people with vision impairments. The ADA requires the addition of a detectable warning on all curb ramps. This consists of truncated domes extending across the entire width of the ramp and must be in a contrasting color to the surrounding paving, either dark to light or light to dark.



Guidelines for Curb Ramps:

- Provide a level maneuvering area or landing at the top of the curb ramp.
- Clearly identify the boundary between the bottom of the curb ramp and the street with a detectable warning.
- Design ramp grades that are perpendicular to the curb.
- Place the curb ramp completely within the marked crosswalk area.
- Avoid changes of grade that exceed 11 percent over a 610 mm (24 in) interval.
- Design the ramp that doesn't require maneuvering on the ramp surface.
- Provide a curb ramp grade that can be easily distinguished from surrounding terrain; otherwise, use detectable warnings.
- Design the ramp with grades of 7.1 ± 1.2%. [Do not exceed 8.33 percent (1:12).
- Design the ramp and gutter with a cross slope of 2.0 percent.
- Provide adequate drainage to prevent the accumulation of water or debris on or at the bottom of the ramp.
- Transitions from ramps to gutter and streets should be flush and free of level changes.

- Align the curb ramp with the crosswalk, so there is a straight path of travel from the top of the ramp to the center of the road to the curb ramp on the other side.

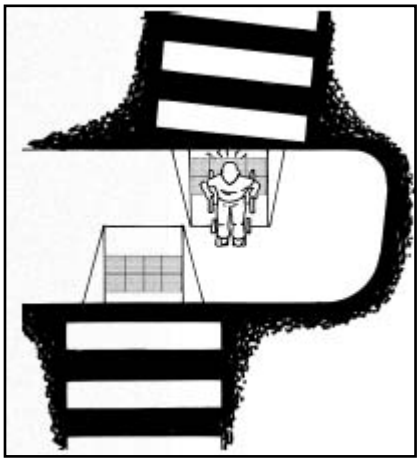
- Provide clearly defined and easily identified edges or transitions on both sides of the ramp to contrast with sidewalk.

Curb Ramps Costs:

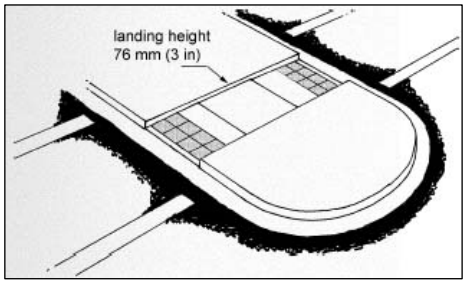
The cost is approximately $1,500 to $2,000 per curb ramp (new or retrofitted).

Raised Medians

Medians (also known as refuge islands) are the portion of a divided roadway that separates traffic flows heading in opposite directions. At roundabouts, these are called splitter islands. Medians help pedestrians cross intersections by reducing the crossing distance from the curb to a protected area. This allows pedestrians to cross during smaller gaps in traffic. For this reason, medians are especially helpful for pedestrians who are unable to judge distances accurately. In addition, medians also help people with slow walking speeds to cross wide intersections during a short signal cycle. Medians are also useful at irregularly-shaped intersections, such as sites where two roads converge into one.



In commercial districts, medians provide pedestrians with valuable protection from oncoming traffic. In residential areas, they serve as traffic calming devices and green space.



Whenever possible, medians should be raised to separate pedestrians and motorists. Raised medians make the pedestrian more visible to motorists and they are easier for people with vision impairments to detect. Raised medians should be designed with a cut-through at street level or a ramp. This provides pedestrian access to individuals who cannot travel over a curb. Detectable warning surfaces should be placed at the edge of both ends of

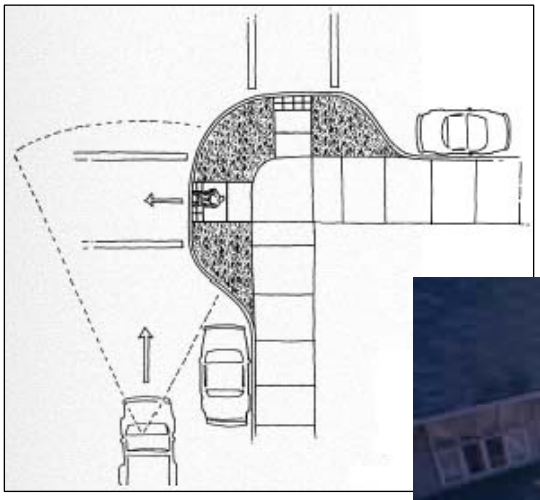
the median in order for the streets to be recognized by pedestrians who are visually impaired. If the corner includes a pedestrian actuated control device, one should also be located at the median.

Raised Median Costs:

The cost is approximately $15,000 to $30,000 per 100 feet

Curb Extensions

Curb extensions improve visibility between pedestrians and motorists and make it easier to install perpendicular curb ramps with level landings. They also reduce the crossing distance for pedestrians.



Low landscaping or grass can be added to the curb extension to clarify the appropriate path of travel for individuals with vision impairments. In addition, the following steps should be considered:

- Trim vegetation, relocate signs and utilities, and eliminate visual clutter
- Prohibit parking near the intersection corner
- Provide raised medians and crosswalks
- Provide an advance stop line before a marked crosswalk on a multi-lane road.

Curb Extensions/Bulb-outs Costs:

The cost is approximately $2,000 to $20,000
Cost can increase depending on the amount of infrastructure relocated

Pedestrian Railroad Crossings

Railroad crossings pose unique hazards for pedestrians. The rails, ties and bedding surface are potential tripping hazards and inadequate lines of sight and poor night lighting can hide the approach of trains from pedestrians. If the material used to pave the crossing is subject to buckling, expanding or heaving (such as asphalt), tripping hazards can be created. These hazards are magnified if the pedestrian has special needs such as visual or mobility challenges.

One solution has been to fill the area between the track with walking grade material. But in order for a train to pass, there must be at least a 2" gap between the material and the track or flange. This gap poses a hazard for wheelchairs and mobility scooters; when the small, narrow front wheels hit the unevenness of the gap, they will often turn sideways and can become lodged in the flangeway gap. The gaps are also large enough for a small child's foot or the tip of a cane or walker to become stuck in the flangeway. Where pedestrian must cross Light Rail Train tracks or track of slowly, moving trains, there is a rubber insert that can fill the flangeway gap and not interfere with the operation of the train.

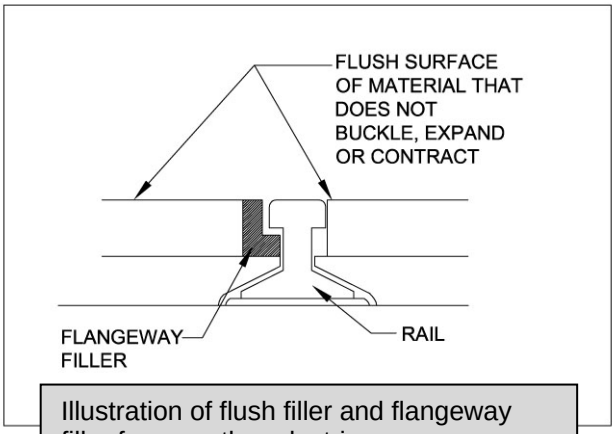


Illustration of flush filler and flangeway filler for smooth pedestrian access.

Guidelines for Pedestrian Railroad Crossings:

- Raise the approach to the track to meet the top level of the rail. The approach should be flat for five feet on either side of the track.
- Use flangeway fillers wherever railroad traffic will allow.
- Use surface material that will not buckle, expand or contract adjacent to the tracks to prevent tripping hazards.
- Pedestrian paths should always approach the tracks at a 90 degree angle.
- Install detectable warning domes in the sidewalk to warn pedestrians.
- Install railroad crossing warnings along sidewalk: signs, flashing lights and audible sounds.
- Signals and or gates should be considered to prevent the passage of pedestrians when a train is approaching.

Pedestrian Railroad Crossing Costs:

Level Paving at Track: $400 a linear foot (lengthwise along track)

Pedestrian/Countdown Signals

Pedestrian signal heads should be used at all traffic signals where pedestrians are permitted to cross, unless pedestrian volumes are extremely low. The use of WALK/DON'T WALK pedestrian signal indicators at signal locations are important in many cases including: when vehicle signals are not visible to pedestrians; when signal timing is complex, e.g., there is a dedicated left turn signal for motorists; at established school zone crossings; when an exclusive pedestrian interval is provided; and for wide streets where pedestrian clearance information is considered helpful. In addition, countdown signals offer an additional safety measure by informing the pedestrian the amount of time remaining to safely cross at a pedestrian crossing.

The international symbol, pedestrian signal head is preferable and is recommended in the MUTCD; the "WALK" and "DON'T WALK" word message is an allowable alternate. Pedestrian signal heads should be clearly visible to the pedestrian at all times when in the crosswalk or waiting on the far side of the street. Larger pedestrian signal heads can be beneficial in some circumstances. Signals may be supplemented with audible messages to assist trained visually impaired pedestrians. These should be used judiciously, because they can become a noise problem.

Guidelines for Pedestrian and Countdown Signals:

- Pedestrian signals should be placed in locations that are clearly visible to all pedestrians.
- Larger pedestrian signals should be utilized on wider roadways, to ensure readability.
- Pedestrian signal pushbuttons should be well-signed and visible.
- Pedestrian signal pushbuttons should clearly indicate which crossing direction they control.

- Pedestrian signal pushbuttons should be reached from a float surface, at a maximum height of 3.5 feet and be located on a level landing to ensure ease of operation by pedestrians in wheelchairs.

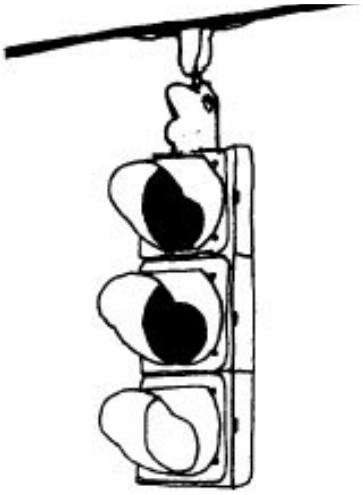
- Walk intervals should be provided during every cycle, especially in high pedestrian traffic areas.

Pedestrian Countdown Signal Costs:

Cost is $500 to $800 per signal head.

Pedestrian Audible Cue Costs:

The cost is roughly $300 per signal.



Traffic Signals

Traffic signals create gaps in traffic flow allowing pedestrians to cross the street. They should allow adequate crossing time for pedestrians and an adequate clearance interval based upon a maximum walking speed of four feet per second. A lower speed of less than four ft/sec should be used in determining pedestrian clearance time for areas where there is a heavy concentration of elderly or children. Signals are particularly important at high use, mid-block crossings on higher-speed roads, multi-lane roads or at highly congested intersections. National warrants from the "Manual on Uniform Traffic Control Devices" based on the numbers of pedestrians and vehicles crossing an intersection are usually used in the selection of traffic signal sites. However, judgment must also be used on a case-by-case basis. For example: a requirement for installing a traffic signal is that there are a certain number of pedestrians present. If a new facility is being built, a park or recreational path for example, there will be a new demand and the signal should be installed in conjunction with the new facility, based on projected crossing demand. There may also be latent demand if a destination is not currently accessible but could become so with new facilities or redesign.

In downtown areas signals are often closely spaced, sometimes every block. They are usually spaced further apart in suburban or outlying areas. When high pedestrian traffic exists during a majority of the day, fixed-time signals should be used to consistently allow crossing opportunities. Pedestrian actuation should only be used when pedestrian crossings are intermittent.

Traffic Signal Guidelines:

- Traffic signals should be used where pedestrian traffic is regular and frequent. The signal should be timed to a consistent interval. Pedestrian actuation should only be used when pedestrian crossings are intermittent.

- Signal cycles should be kept short (ideally 90 seconds maximum) to reduce pedestrian delay. Pedestrians are very sensitive to delays and a 30 second maximum wait time is ideal.

- Marked crosswalks at signals can encourage pedestrians to cross at the signal and help dissuade motorists from encroaching into the crossing area.

Traffic Signal Cost:

The cost ranges from $20,000 to $140,000.

Pedestrian Signal Costs:

The cost ranges from $5,000

Landscaping/Enhancement

A network of safe, comfortable, aesthetically pleasing pedestrian corridors with connectivity to desirable destinations creates and promotes a livable community. Without each of these elements present, the walking community is incomplete. Safety, beauty and connectivity all play important roles in a comprehensive pedestrian plan and each basic fundamental should be considered throughout the entire planning process.

Landscaping can provide aesthetic improvement into a place that is otherwise hardened by buildings, concrete and streets. It can also be used to provide a buffer and separation from pedestrians and motorists, reduce the width of the roadway, calm traffic and help to develop a desired aesthetic appearance.

Street trees can make an immediate impact to a street by breaking up the visual hardscape often found in an urban downtown environment. In addition, trees and plantings can improve the environment by shading the street and providing cleaner air quality.

Tree islands, if designed correctly, can help collect and filter vegetative swales from nearby streets and buildings. These areas, called bioretention ponds, act as a sponge collecting oils, fertilizers and detergents and then releasing the stormwater. These practices are encouraged not only to improve water quality, but also to reduce storm flows during rain events.

The landscaping requirements typically fall on the local municipality, though there are some instances were community groups assist with installation and funding for landscaping and maintenance. Native plants are often preferable as they more easily adapt to the local environment. Growth characteristics of the plant material should be carefully considered when choosing plants for a particular location. For example, when choosing street trees, height, spread and root systems should all be considered to avoid overhead wires and the buckling of sidewalks and streets.

Guidelines for Landscaping:

- Buffer zone plantings should be maintained at no higher than three feet to allow sight distance for motorists and pedestrians.
- Trees with large canopies planted between the sidewalk and street should generally be trimmed to keep branches at least seven feet above the sidewalk.
- Plants and trees should be chosen to match the character of the area.
- Landscape irrigation should be planned for and should be installed in the early phases of the construction process.

Landscaping Costs:

Landscaping costs can vary greatly. They may be supplemented by funds from community organizations or homeowners associations.

Roadway Lighting Improvements

Proper lighting quality, placement and sufficiency can greatly enhance a nighttime urban experience as well as create a safe pedestrian facility. Two-thirds of all pedestrian fatalities occur during low-light conditions. Particular

attention should be addressed at crosswalk locations so there is adequate lighting for motorists to see pedestrians.

In many cases, street lighting can be implemented along roadways to light the roadway and the sidewalk allowing for adequate lighting for the motorist and pedestrian. In urban areas such as downtown areas, low level lighting can be implemented through decorative streetlights which offer pedestrian-scale lighting. This type of lighting should be placed where there is high pedestrian volumes to offer improved aesthetics. A variety of streetlight choices include mercury vapor, incandescent or high pressure sodium. High pressure sodium is more cost effective but does not have the best light quality. Roadway streetlights can range from 20-40 feet in height while pedestrian-scale lighting is typically 10-15 feet.

When planning for lighting, it will be important to have sufficient lighting but also prevent light pollution and glare. A qualified lighting expert should be consulted in order to property plan for the placement and wattage for area lighting.

Guidelines for Lighting Improvements:

- Ensure pedestrian walkways and crosswalks are sufficiently lit.
- Consider adding pedestrian level lighting in areas of higher pedestrian volumes, downtown and at key intersections.
- Install lighting on both sides of the street in commercial areas.
- Use uniform lighting levels.

Roadway Lighting Improvements Costs:

The cost varies depending upon the type of fixtures and the service agreement with the local utility company. The cost can range from $10,000-$20,000 per pole.

Street Furniture and the Walking Environment

Sidewalks should be continuous and be part of a system that provides access to goods, services, transit and homes. Well designed

walking environments are enhanced by urban design elements and street furniture such as benches, bus shelters, trash receptacles and drinking fountains. Carefully designed streetscapes enliven commercial districts and foster community life.

Sidewalks and walkways should be kept clear of poles, sign posts, newspaper racks and other obstacles that could block the path of pedestrians or become tripping hazards. Benches, water fountains, bicycle parking racks and other street furniture should be carefully placed to create an unobstructed path for pedestrians. Such areas must also be properly maintained and kept clear of debris, overgrown landscaping, tripping hazards or areas in which water accumulates and causes problems for pedestrians.

Walking areas should also be interesting for pedestrians and provide a secure environment. Storefronts should exist at street levels and walking areas should be well lit and have good sight lines.

Street Furniture Guidelines:

- Good quality street furniture will show that the community values its public spaces and is more cost effective in the long run.

- Ensure proper placement of furniture and fixtures. Do not block pedestrian walkways or curb ramps.

Street Furniture Costs:

Benches $600 - $1200
Trash Receptacles $500 - $1000
Drinking Fountains $1,000 – $4,000
Bollards $300 - $1000

Transit Stop Treatments

Good public transportation is as important to the quality of a community as good roads. Well–designed transit routes and stops are essential to a usable system. Bus stops should be located at intervals that are convenient for passengers. The stops should be designed to provide safe and convenient access and should be comfortable places for people to wait. Adequate bus stop signing, lighting and a bus shelter with seating and trash receptacles are also desirable features. Bus stops should be placed in highly visible locations where people can reach them easily on foot. Convenient crossings are also important.

Proper placement of bus stops is a key to user safety. For example, placing the bus stops on the near side of intersections or crosswalks may block pedestrians' views of approaching traffic and the approaching drivers' view of pedestrians.

Approaching motorists may be unable to stop in time when a pedestrian steps out into traffic from behind the front of the bus.

Relocating the bus stop to the far side of the intersection can improve pedestrian safety since it eliminates the sight distance restriction caused by the bus. Placing bus stops at the far side of intersections can improve motor vehicle operation but should always be placed where pedestrians can cross the roadway safely.

The bus stop location should be fully accessible to pedestrians in wheel-chairs and should have paved connections to sidewalks where landscape buffers exist. Adequate room should exist to operate wheelchair lifts.

Guidelines for Transit Stop Facilities:

- Ensure access to and from stops is provided for when transit stops are created.
- Ensure adequate room to load wheelchairs.
- Ensure a clear and comfortable walking path for passing pedestrians when placing transit shelters.
- Locate transit stops on the far side of marked crosswalks

Transit Stop Facilities Costs:

The cost ranges from $1,000 to $10,000, depending on the type of facility or facility improvement.

Signs and Wayfinding

Signage is governed by the *Manual on Uniform Traffic Control Devices (MUTCD)*, which provides specifications on the design and placement of traffic and pedestrian signs installed within public right-of-ways. Signs are designed to provide important information that improves pedestrian and vehicular safety. By letting people know what to expect, there is a greater chance that they will react

and behave appropriately. For example, giving motorists advanced warnings of upcoming pedestrian crossings or that they are entering a traffic calming area will enable them to modify their speeds. The amount and types of signage should be carefully considered as the overuse of signs can result in noncompliance, confusion and disrespect.

Municipalities should develop clear guidelines for the use of vehicle and pedestrian signs. Care should be taken to avoid an overreliance on signs and paint to control motorist behavior. This may mean altering and/or relocating existing signs and markings that have proven to be ineffective for pedestrian safety.

The MUTCD has developed guidelines for signs and pavement markings that leave sufficient room for creative regulatory design. As a result there is leeway in adapting guidelines to specific signing and marking policy needs. Colors for signs and markings should conform to the color schedule recommended by the MUTCD. This uniformity allows for recognition and understanding across jurisdictions. The recommended background colors for signs are as follows:

- YELLOW - General warning and school signs.
- RED - Stop or prohibition.
- BLUE - Service guidance, route markings.
- GREEN – Destination guidance, directional guidance, recreation, information.
- BROWN - Public recreation and scenic guidance.
- ORANGE - Construction and maintenance warning
- BLACK - Regulation.
- WHITE – Regulation and route markings

A new fluorescent yellow-green color is now approved for use on school signs and warning signs. This bright color attracts the attention of drivers because it is unique.

For pavement markings, use:

- YELLOW - Centerline stripes.
- WHITE - All other pavement stripes and markings, including edge stripes, lane markings, and crosswalks.

Pedestrian Signs

Pedestrian signs are designed to give information and direction in order to improve safety and relieve conflict between motorists and pedestrians. Signs are used to direct pedestrians to crosswalks or to limit pedestrian crossings to specific locations. Signs can also warn pedestrians of unexpected driver maneuvers. All signs should be periodically checked to make sure they are in good condition, free from graffiti and continue to serve a purpose.

Other signs may be used for pedestrians at traffic signals to define the meaning of the WALK, DON'T WALK, and flashing DON'T WALK signal indications. The decision to use these signs (or alternatively, stickers mounted directly on the signal pole) is strictly a judgment call and is primarily for educational purposes. As such, their use may be more helpful near schools and areas with concentrations of elderly pedestrians, two high-risk areas. This information may also be effectively converted into brochures for distribution and ongoing educational purposes.

<u>Guidelines for Pedestrian Signs</u>:

- Pedestrian signs must be in compliance with the Manual on Uniform Traffic Control Devices (MUTCD).
- Signs can be used direct pedestrian traffic to desirable crossing locations and to prohibit pedestrian crossings at undesirable locations.
- Installing too many signs at a location should be avoided to prevent confusion and disregard.

Aside from signs designed to impart information or explanation to pedestrians, there are additional types of signs, directed at both pedestrians and motorists. These signs are intended to increase the safety of pedestrians and bicyclists.

Regulatory Signs

Regulatory signs are designed to warn motorists and pedestrians of a legal requirement such as STOP or YIELD. These signs require certain actions and are enforceable by law. Many motorist signs, including stop signs, yield signs, turn restrictions and speed limits, have a direct or indirect impact on pedestrians. Some examples of signs which affect pedestrians include pedestrian warning signs, motorists warning signs, NO TURN ON RED signs and guide signs.

The NO TURN ON RED sign may be used in some instances to facilitate pedestrian movements. *The Manual on Uniform Traffic Control Devices* lists six conditions when "no turn on red" may be considered, three of which are directly related to pedestrians or signal timing for pedestrians.

The use of NO TURN ON RED signs at an intersection should be evaluated on a case-by-case basis. Less restrictive alternatives should be considered in lieu of NO TURN ON RED. Also, supplementary signs, such as WHEN PEDESTRIANS ARE PRESENT or WHEN CHILDREN ARE PRESENT may be placed below the NO TURN ON RED sign.

There are occasions when no-turn-on-red restrictions are beneficial and specific recommendations relating to pedestrians include:

- Part-time restrictions should be discouraged; however, they are preferable to full-time prohibitions when the need only occurs for a short period of time.

- Universal prohibitions at school crossings should not be made, but rather restrictions should be sensitive to special problems of pedestrian conflicts, such as the unpredictable behavior of children and problems of the elderly and persons with disabilities. Pedestrian volume should not be the only criterion for prohibiting right turns on red.

There are a number of regulatory signs aimed directly at pedestrians, which include:

- PEDESTRIANS PROHIBITIED signs to prohibit pedestrian entry at freeway ramps.

- Pedestrian crossing signs are used to restrict crossings at less safe locations and to divert them to optimal crossing locations. Various alternatives include the USE CROSSWALK (with supplemental arrow) sign, which may be used at intersections with traffic signals that have high

conflicting turning movements or at mid-block locations directing pedestrians to use an adjacent signal or crosswalk. The signs have most applicability in front of schools or other buildings that generate significant pedestrian volumes.

- Traffic signal signs include the pedestrian push-button signs or other signs at signals directing pedestrians to cross only on the green light or WALK signal. Pedestrian push-button signs should be used at all pedestrian-actuated signals. It is helpful to provide guidance to indicate which street the button is for (either with arrows or street names). The signs should be located adjacent to the push button and the push buttons should be accessible to pedestrians with disabilities.

Warning Signs

Warning signs are used to inform unfamiliar motorists/ pedestrians of unusual or unexpected conditions. Warning signs predominantly fall under the permissive category ("may" condition) and when used, should be placed to provide adequate response times. Warning signs are generally diamond-shaped with black letters or drawings on a yellow background and should be of reflective material or illuminated. Overuse of warning signs breeds disrespect and should be avoided.

The warning sign predominantly used to warn motorists of possible pedestrian conflicts is the Advance Pedestrian Crossing sign. This sign should be installed in advance of mid-block crosswalks or other locations where pedestrians may not be expected to cross. This significantly minimizes their use at most urban intersections since pedestrian crossings are an expected occurrence. This sign may also be selectively used in advance of -volume pedestrian crossing locations to add emphasis to the crosswalk.

Where there are multiple crossing locations, a supplemental distance plate may be used. The advance pedestrian crossing signs should not be mounted with another warning sign (except for a supplemental distance sign or an advisory speed plate) or regulatory sign (except for NO PARKING signs) to avoid information overload and to allow for an improved driver response. Care should be taken in sign placement in relation to other signs to avoid sign clutter and to allow adequate motorist response.

The Pedestrian Crossing Sign is similar to the Advance Pedestrian Crossing sign, but has the crosswalk lines shown on it. This sign is intended to be used at the crosswalk. When used, it should be preceded by the advance warning sign and should be located immediately adjacent to the crossing point. To help alleviate motorist confusion, a black-and-yellow diagonally downward pointing arrow sign may be used to supplement the pedestrian crossing sign.

The Playground sign may be used in advance of a designated children's play area to warn motorists of a potentially high concentration of young children. This sign should generally not be needed on local or residential streets where children are expected. Furthermore, play areas should not be located adjacent to high-speed major or arterial streets, or if so, should be fenced off to prevent children from darting into the street.

According to the *Traffic Control Devices Handbook*, CAUTION-CHILDREN AT PLAY or SLOW CHILDREN signs should not be used since they may encourage children to play in the street and may encourage parents to be less vigilant. Such signs also provide no guidance to motorists in terms of a safe speed, and the sign has no legal basis for determining what a motorist should do. Furthermore, motorists should expect children to be "at play" in all residential areas, and the lack of signage on some streets may indicate otherwise. The signs are unenforceable and act as another roadside obstacle to pedestrians and errant motorists. Use of these non-standard signs may also imply that the involved jurisdiction approves of streets as playgrounds, which may result in the jurisdiction being vulnerable to tort liability.

Flashing lights, school crossing signs, and a 20-mph speed limit give motorists plenty of advance warning of the crossing area up ahead.

School Warning signs include the advance school crossing signs, the school crossing sign, SCHOOL BUS STOP AHEAD sign, and others. School-related traffic control devices are discussed in detail in Part VII (Traffic Controls for School Areas) of the MUTCD. A reduced speed limit sign with flashing lights can be installed ahead of the actual crossing. The lights are set to flash during school hours, alerting drivers that a lower speed limit is in effect when the flashers are operating. Another sign and light combination is SCHOOL SPEED LIMIT XX, where the speed limit is illuminated during school hours.

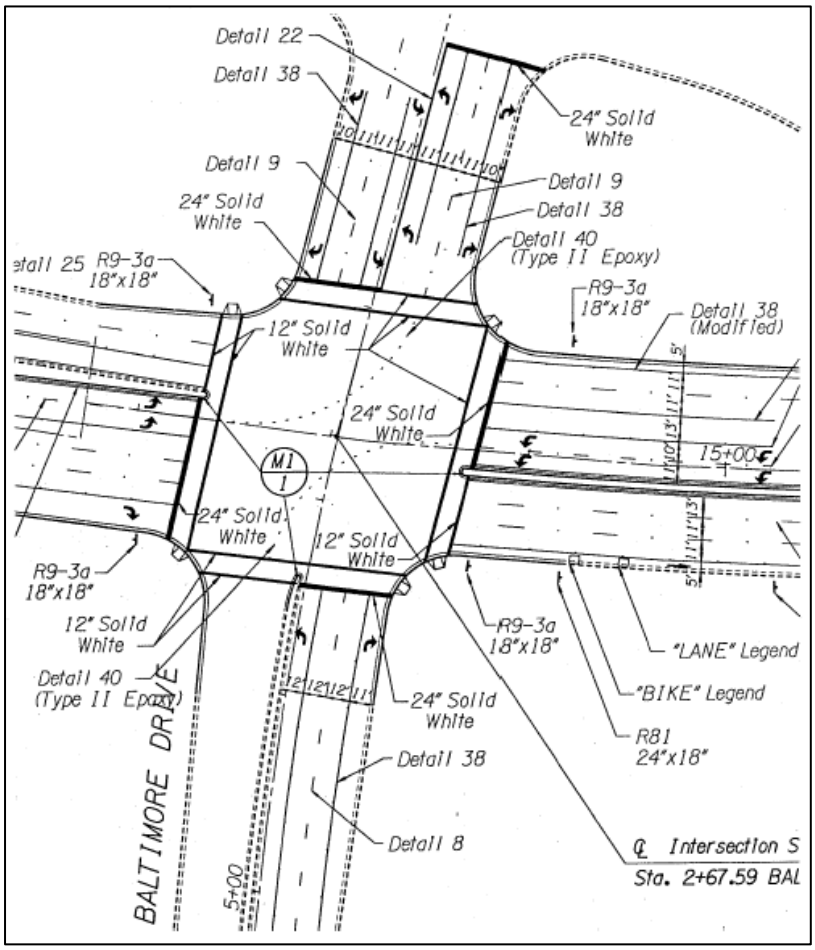
The MUTCD allows for the development of other specialty warning signs based on engineering judgment for unique conditions. These signs can be designed to alert unfamiliar motorists or pedestrians of unexpected conditions and should follow the general criteria for the design of warning signs. Their use should be minimized to retain effectiveness and should be based on informed judgment.

Directional Signs

Directional signs for pedestrians are intended to assist people who are new to the area or to assist residents who may not know the most direct route to a destination by foot. Use distances meaningful to pedestrians, such as the number of blocks or average walking time.

Pavement Word and Symbol Markings

The MUTCD allows for the use of pavement word and symbol markings such as SCHOOL XING or PED XING, as motorist warning devices. These may be helpful on high-volume or high speed streets with unusual geometrics (such as vertical or horizontal curves) in advance of a pedestrian crossing area. Markings should be white and placed to provide an adequate motorist response. Their use should be kept to a minimum to retain effectiveness.



- END OF SECTION -

SECTION SIX Program and Policy Recommendations

This section outlines a variety of programs and facilities designed to increase walking and promote pedestrian safety in the City of Sanford. It recommends policies for the City to help with the development and maintenance of the pedestrian network outlined in Section 4.

The following sections describe policies, programs and action steps. These elements were developed using and evaluating existing planning documents mentioned in Section 3. The Steering Committee also assisted in developing the overall goals which include the following:

- Increase walkability in the City of Sanford
- Create a pedestrian network that is an important part of the urban structure
- Promote walking as a healthy exercise
- Create a pedestrian environment that is friendly to all users including seniors, the disabled, and children
- Improve connections between disparate parts of the City
- Promote pedestrian safety

6.1 ANCILLARY FACILITIES AND PROGRAMS

Maintenance

Safety consideration should be a high priority with existing and new facilities. Continual maintenance will be required to have a functional pedestrian network. Pedestrians typically aspire to use a facility that is in a good and safe condition; otherwise it will not be used effectively. In addition to sidewalks, crosswalks at traffic intersections and mid-block crossings need to conform to the Manual of Uniform Traffic Control Devices (MUTCD). As crosswalks are installed, it will be important to place crosswalk warning signs to caution motorists. Currently, there are numerous areas within the City that have no crosswalk signage; therefore, they are not ADA compliant. With an aging population, it is imperative that accessibility and user needs be addressed in these areas. In order to effectively address these issues, it is recommended that the City staff conduct an inspection of existing pedestrian facilities within the City on a quarterly basis to not only address previously identified maintenance issues, but also to inventory any additional areas where issues have occurred recently.

Signage

Maps of existing facilities in the City of Sanford can be found at the end of Section 2. The maps are divided into the northern and southern sections of the City. Not only do the maps delineate the conditions of existing pedestrian facilities, they also address barriers, crosswalk needs, and the lack of curb ramps. Major destination areas such as business districts, schools, and parks are featured in order to better understand the relationship of existing pedestrian facilities to their uses.

Proper signage is an important part of any transportation system - whether it is pedestrian or vehicular in nature. Signs in schools zones, parking lots, and other areas alert drivers to the presence of pedestrians in the area. Signage for *pedestrian* facilities is equally as important as signage for *roadways*. Often, pedestrian facilities lack signage directing pedestrians along a designated route. It is hard to imagine having to walk to a specific destination without knowing the exact route to use; but this is often the case with pedestrians, especially visitors to the area.

Pedestrian facilities should have a clear and concise system of signage to direct users to various destinations such as Depot Park, the library, and the Downtown Historic District. This will assist pedestrians in walking to particular destinations and encourage and promote walking in the community. A signage system has been developed for Sanford and needs to implemented; thereby, forming a comprehensive wayfinding system for both drivers and pedestrians. Various types of wayfinding signage are illustrated below.

Spot Improvement Programs

The City of Sanford will be responsible for most of the spot improvements within the City. Spot improvements are small projects such as the maintenance of curb ramps, the repair of damaged sidewalks, and the removal of debris. *NCDOT's Spot Safety Improvement Program* has funds available for spot improvements that cost less than $250,000. These improvements should be performed on a case by case basis with special consideration given to hazardous areas. The City should inventory and inspect areas requiring spot improvements annually, prioritize these locations, and proceed with the proper implementations.

One potential, specific project for such funding is the upgrade of existing curb ramps. Many of the curb ramps in the downtown area do not have ADA approved, tactile, detectable warning devices.

Traffic Calming Initiatives

There are many areas within the City where traffic speed is a problem. These areas may meet standard roadway criteria; however, they are dangerous locations from the perspective of the pedestrian, creating unsafe situations. High pedestrian traffic areas need safe traffic speeds in order to reduce the possibility of vehicle/pedestrian accidents. Pedestrians want to be in *secure* areas where they feel comfortable and vehicular traffic is controlled.

There are many simple and effective methods used to achieve traffic calming. These techniques can be as simple as lane striping or on-street parking. Subconsciously, a driver feels the need to travel slower in areas where the traffic lane is *visually* narrower. Methods such as street trees, bulb-outs and crossing islands may not narrow the actual traffic lane but will create a constricted visual corridor of the roadway, causing most drivers to slow their speed. Other techniques such as speed tables, raised crosswalks and specialty pavement all attract the driver's attention, causing an immediate slow down. Although many speed tables and similar measures have been used successfully throughout the state, it is imperative that proper planning, evaluation, and engineering occur before these devices are implemented. (Photographs and diagrams of traffic calming devices were illustrated in Section 5.)

The City of Sanford has initiated a Downtown Enhancement Plan. Part of this program includes the improvement of pedestrian facilities in the downtown areas of Sanford and Jonesboro. Designs specify curb extensions at six (6) major intersections. The curb extensions will help to slow traffic in the downtown area and decrease the distance that pedestrians will spend in traffic lanes while crossing the street. Other curb extensions will be placed at mid-blocks, helping to reduce traffic speed along the block. Major intersections earmarked for pedestrian improvements are:

- Horner Boulevard and Carthage Street
- Horner Boulevard and Wicker Street
- Steele Street and Carthage Street
- Steele Street and Wicker Street
- Dalrymaple Street and Main Street
- Lee Avenue and Main Street

Transit Interface

The County of Lee Transit System (COLTS) provides transportation for clients of human service agencies on an as-needed basis. For a small fee, they will also provide transportation for the general public on an as-needed basis. The system does not run regular routes with transit stops.

If, in the future, the transit system is expanded to include regular routes, then the City of Sanford will need to include facilities for the riders. These should include bus stop shelters, benches, and other street furniture to reduce the discomfort of standing by a busy street waiting for a bus. It will be important to place these stops where they can be easily accessed by pedestrians. It will be important to provide crosswalks and signals for safely crossing the street, sidewalks or paving (which is wide enough to accommodate a group of people), and clearly-marked routes leading to identifiable bus stops.

Identify Countermeasures

National statistics indicate that nearly one-third of all pedestrian-related vehicular accidents occurred within 50 feet of a street intersection. Even though crosswalks at intersections may be properly marked with appropriate signage, accidents still occur. Many times the pedestrian does not take the proper precautions when crossing intersections. Sometimes the driver is at fault by failing to yield to pedestrians. Drivers and pedestrians should both take a defensive attitude toward pedestrian/vehicular safety when approaching intersections. NCDOT has published the handbook, *A Guide to North Carolina Bicycle and Pedestrian Laws: Guidebook on General Statues, Ordinances, and Resources.* This document serves as an educational tool for pedestrians, drivers, and the general public.

Statistically, less than ten percent (10%) of fatalities in the nation involved a pedestrian walking along a road and not on a sidewalk. Most of these incidents involved the pedestrian walking "with" the traffic and being struck from behind. Safety guidelines suggest that pedestrians "face" the traffic when walking. Over one-fourth ($1/4^{th}$) of pedestrian accidents occurred at mid-blocks. This type of accident is typically associated with a pedestrian *darting* across the road. Prior to establishing a marked mid-block crossing, proper evaluation should be done to ensure the safety of the public.

The two (2) noted types of pedestrian accidents represent over 65% of pedestrian fatalities in the nation. Over the past several years, countermeasures have been developed to mitigate pedestrian accidents. Countermeasures are generally "site-specific" improvements, which hopefully provide immediate solutions. The most effective countermeasures include roadway design, intersection design, traffic calming, traffic management, signals, signage, and pedestrian facility design. These planning and engineering methods are instrumental in reducing pedestrian accidents. Education and enforcement are also countermeasures that must be implemented in the prevention of pedestrian accidents. The following are examples of countermeasures that are related to pedestrian safety in Sanford.

Roadway Design
- *Roadway Narrowing*
- *Lane Reduction*
- *Driveway Improvements*
- *Raised Medians*
- *Curb Radius Reduction*
- *Improved Right-Turn Slip-Lane Design*

Intersection Design
- *Modified T-Intersections*
- *Intersection Median Barriers*

Traffic Calming
- *Curb Extensions*
- *Chokers*
- *Crossing Islands*
- *Chicanes*
- *Mini-Circles*
- *Speed Tables*
- *Raised Intersections*
- *Raised Pedestrian Crossings*
- *Gateways*
- *Landscaping*
- *Specific Paving Treatments*
- *Serpentine Design*

Traffic Management
- *Diverters*
- *Partial Street Closure*
- *Pedestrian Street/Malls*

Signals and Signage
- *Traffic Signals*
- *Pedestrian Signals*
- *Pedestrian Signal Timing*
- *Traffic Signal Enhancements*
- *Right-Turn-on-Red Restrictions*
- *Advanced Stop Lines*
- *Signing*

Pedestrian Facility Design
- *Sidewalks and Walkways*
- *Curb Ramps*
- *Marked Crosswalks and Enhancements*
- *Roadway Lighting Improvements*
- *Street Furniture/Walking Environment*
- *Pedestrian Railroad Crossings*

Education and Enforcement
- *Neighborhood Identity*
- *Speed-Monitoring Trailer*
- *On-Street Parking Enhancements*
- *Pedestrian/Driver Education*
- *Police Enforcement*

6.2 POLICY RECOMMENDATIONS

The design and planning of pedestrian facilities are important components of roadway design. Fundamentally, both modes of transportation (pedestrian and vehicular) should acknowledge each other in matters of safety, accommodation, and relationship. Pedestrian movement has become an important focus for the City of Sanford. The public needs connectivity, safer routes, and more walking opportunities. Although public meetings do not capture a *complete* synopsis of the City's pedestrian needs, they do identify concerns and issues. Based on information from the general public, there is a perceived need for an expanded pedestrian network in the City of Sanford.

City staff and the Steering Committee also recognize other important issues. Connectivity and safety are of utmost importance to the City of Sanford. Many areas within the City were acknowledged as safety concerns that need to be addressed with regard to reducing potential pedestrian accidents. Increasing public safety (with devices such as pedestrian signals, signage, and the removal of existing barriers) will create a user-friendly pedestrian network and thereby, increase the number of pedestrians. The Steering Committee also recognizes the importance of providing equal pedestrian system access to those that are physically or economically disadvantaged. Special attention is needed to bring the network up to ADA standards for physical access. Developing the network into economically challenged areas will assure equitable access for all citizens.

Land Use

Land-use policies and regulations have a strong influence on promoting walkable communities. The absence of requiring pedestrian facilities will only discourage development from incorporating these facilities for the future. The City of Sanford should study its zoning and subdivision ordinances regularly – to ensure that

developers adhere to policies and regulations, which create more pedestrian-friendly environments

As part of the Sanford Pedestrian Plan, the City should continue to promote pedestrian facilities, particularly within new developments, both residential and commercial. Sidewalks should always be required for new streets, improved streets, or street extensions. Although developers may argue that this requirement increases development costs, this requirement will continually enhance and promote the pedestrian network established by the City.

This pedestrian plan also recommends regulations that require sidewalk facilities for any renovations and additions to existing structures. As urban commercial infill properties re-develop, sidewalks should be constructed with these projects. In some instances, these sidewalks may still be disconnected, but over time, as these developmental projects continue, they will enhance pedestrian connectivity and reduce costs for the City.

Alternatives may be offered to developers by the City due to anticipated future thoroughfare improvements. The City of Sanford can offer the developer the opportunity of paying a “fee in lieu” of the actual construction of pedestrian facilities. This allows the City to have control over current and future construction and maintenance of the pedestrian facilities. It also allows the City to develop facilities in a continuous and efficient way, preventing the pedestrian facilities from being removed by the developer. The requirement of sidewalk construction “fee in lieu of construction” should be included in development regulations and the subdivision code.

Although the City should be flexible with development opportunities, it must require the developer to provide right-of-ways or easements for pedestrian facilities, including proposed greenway trails. All development approved by the City must include the accommodation of pedestrians by the developer(s).

POLICY RECOMMENDATIONS AND ACTION ITEMS

Recommendation #1 – *The Public Works Department should install and/or replace all damaged and noncompliant pedestrian facilities as noted in the network recommendations of the Pedestrian Plan within the next three years.*

Recommendation #2 – *Maintain and repair existing sidewalks by following accepted City standards and ensuring that facilities are safe and free of obstacles and debris. When repairing sidewalk, all unused or non-conforming driveway cuts shall be removed unless there is an existing driveway agreement. All non conforming curbs should be corrected to an appropriate level to every extent possible.*

Recommendation #3 - *Amend regulations which would require public sidewalk facilities in the right-of-way of all new commercial and office/ institutional development.*

Recommendation #4 *– Amend regulations which would require public sidewalk facilities in the right-of-way for any extensive renovations and additions to existing structures for commercial and office/ institutional development.. As urban commercial infill properties re-develop, sidewalks should be constructed with these projects. In some instances, these sidewalks may still be disconnected, but over time, as these projects continue, they will enhance pedestrian connectivity and reduce costs for the City.*

Recommendation #5 - *Amend regulations so that new commercial and multi-family residential development should be oriented to the pedestrian and include internal pedestrian walkways connecting the development to the external sidewalk network in the public right-of-way as well as future development. If the commercial and multi-family residential development is located on a planned pedestrian project, a public easement must be dedicated for the future shared-use.*

Recommendation #6 – *Amend regulations so that developers in all residential zoning classifications within the City Limits and ETJ, must provide right-of-ways or easements for appropriate pedestrian facilities and construct sidewalks or multi-use trails on the main thoroughfare leading to the subdivision and/or greenways within the subdivision as identified in the official Pedestrian Plan Map. The developer may pay a "fee in lieu" for the construction of said public facilities. This allows the City to have control over current and future construction and maintenance of the pedestrian facilities. It also allows the City to develop facilities in a continuous and efficient way, preventing the pedestrian facilities from being removed by the developer.*

Recommendation #7 – *Create annual budget for new sidewalk installation which fills in the gaps and expansions for the high priority corridors identified in the plan.*

Recommendation #8 - *Create annual budget to construct the four (4) new pedestrian facilities as identified on the Proposed Pedestrian Facilities Map within five years.*

Recommendation #9 – *For those gaps in corridors identified as a medium to low priority, the City should adopt the same policy for sidewalk installation as the driveway policy, with property owner cost participation. Where curb and gutter already exists, the property owner would pay the cost of the materials and the City would pay for the labor costs. Where curb and gutter does not exist, the property owner would need to pay the full cost of materials and labor for the curb and gutter and sidewalk in that area. All the property owners within the block must agree to the sidewalk installation before work would commence.*

Recommendation #10 - *Provide a 5' planting strip between sidewalks and streets where possible.*

Recommendation #11 – *Work with NCDOT to install pedestrian signals and safety measures as identified on the Pedestrian Plan Map.*

Recommendation #12 *– Develop placement standards for the placement of utilities (power poles, telephone poles, sewer inlets, et cetera) so that they do not impede pedestrian traffic. This should become a part of the City's Code of Ordinances and UDO.*

Recommendation #13 - *Develop a system of way-finding signage for pedestrian facilities and greenways that is consistent with the City standards.*

Recommendation #14 - *Implement the recommended streetscape improvements in the Downtown Enhancement Plan, which include design elements such as decorative paving, street trees and furniture.*

Recommendation #15 *– Amend the UDO to create a Downtown Overlay District. This special District will allow the City to promote pedestrian friendly facilities, encourage economic development, regulate the character and appearance of the Downtown and preserve and protect the adjoining neighborhoods*

Recommendation #16 - *The City should work with the County School System to ensure that future schools in the City have a strong emphasis on non-vehicular transportation – walking, bicycling, skating, etc. Locations for future schools should consider orienting the main entrance towards residential neighborhoods rather than major thoroughfares School programs should promote non-motorized means for transportation for students, when applicable.*

Recommendation #17 - *Partnerships should be formed with the local school system to initiate and implement school safety programs for school children.*

Encourage schools to develop walking programs to promote healthy exercise amongst their pupils. (See resources in Section 6.4)

***Recommendation #18** – Partner with local organizations such as LeeCAN and the Lee County Enrichment Center to educate and encourage citizens to include walking as a part of a healthy living plan. (See resources in Section 6.4)*

***Recommendation #19 –** The City of Sanford Police Department has a bicycle patrol unit. Police officers on bicycles should be a major factor in ensuring safe pedestrian practices, on the streets of downtown, during community and school events and on the greenway system.*

6.3 PROGRAM RECOMMENDATIONS

Education, encouragement, and enforcement programs should be in place to teach and promote safety and ensure the success of Sanford's pedestrian network for the future. The recommended programs will be successful in serving the City's need to support pedestrian activity.

Safety Education Programs

School-based programs that stress safety should be implemented regularly, particularly for young children. The promotion of 'walking to school initiatives' will raise public awareness of child safety and instruct children in the proper usage of sidewalk and other pedestrian facilities, whether walking to school or to the school bus stop. The local police departments typically provide such programs as this. Police officials go to the schools and educate children on the proper use of sidewalks and street crossings. In particular, young pedestrians need instruction on how to cross streets safely and how to interact properly with vehicle traffic.

Traffic Safety

The National Highway Traffic Safety Administration has a web resource for promoting traffic safety, including pedestrian safety. The site provides research and information on preventing pedestrian crashes, a walkability checklist, child safety, walking to school and several other topics that are of use in developing a safety education program.
http://www.nhtsa.gov/portal/site/nhtsa/menuitem.dfedd570f698cabbbf30811060008a0c/

Pedestrian Safety Action Plan

The Pedestrian and Bicycle Information Center has materials to help communities and organizations develop Pedestrian Safety Action Plans. There are several safety training courses available on their website. These courses

are designed to help communities develop and implement safe pedestrian networks.
http://www.walkinginfo.org/training/pdps/

Safe Routes to School

Safe Routes to School is a program meant to encourage students to safely walk or bike to school. Information can be found at NCDOT's website and at the National Center for Safe Routes to School website. The program is designed to "improve safety and reduce traffic, fuel consumption and air pollution in the vicinity of schools."[1] The North Carolina DOT grant program provides Federal funds for the construction of infrastructure, such as sidewalks and bike lanes, within two miles of a school. The program also provides for the education and encouragement of communities in the planning and construction of pedestrian facilities for their neighborhoods.
http://www.ncdot.org/transit/bicycle/saferoutes/NCDOT_SRTS/NCDOT_SRTS_Intro.html
http://www.saferoutesinfo.org/

Safe Kids Walk this Way

A program of Safe Kids, USA, this program aims to teach safe behavior to both motorists and children, and to promote safe, walkable communities. The program promotes safe walking events for children, provides research, participates in the International Walk to School Day (October) and promotes school-based pedestrian safety committees.
http://www.usa.safekids.org/wtw/

Other Education Resources:

- Turner-Fairbank Highway Research Center – Pedestrian and Bicycle Safety. Articles, facts, issues, publications, research, resources and links to other sites.
  http://www.tfhrc.gov/safety/pedbike/index.htm
- FHWA Pedestrian and Bicycle Safety. This website of the Federal Highway Administration provides materials, research, facts, and information on a variety of topics dealing with pedestrian safety.
  http://safety.fhwa.dot.gov/ped_bike/
- PedNet is a pedestrian advocacy group in Missouri. Their website is a useful tool for creating a local pedestrian advocacy group.
  http://www.pednet.org/
- The National Center for Bicycling and Walking website has publications promoting walking as a healthy lifestyle.
  http://www.bikewalk.org/
- Active Living Resource Center has a website to encourage the development of active neighborhoods by increasing the walkability of the

community. The website has information on community involvement in developing active, pedestrian facilities. http://www.activelivingresources.org/index.php

Encouragement and Promotion

There are many initiatives that can be implemented by the City of Sanford to promote pedestrian activity. Likewise, health-based organizations, employers and civic organizations should offer incentive programs to encourage walking and physical fitness in general. Programs such as 'walk to school days' and 'visiting area walking facilities' can not only encourage walking, but also allow residents to use areas they may not know are available.

Other means to encourage and promote Sanford as a walkable community include:

- Publish and distribute a Sanford walking guide brochure that covers the area's highlights, safety tips, suggested walking routes and pedestrian rights and responsibilities
- Promote neighborhood walks, and nature walks
- Promote walk-for-health programs with local churches, businesses and recreation centers.
- Organize walk-to-work days and weeks.
- Develop walking tours of the various historic districts in Sanford, with maps giving the history of the area and of the historic buildings and sites.

Eat Smart Move More North Carolina

The Eat Smart Move More North Carolina program is a statewide promotion to encourage healthier lifestyles for North Carolinians. Encouraging residents to walk more is just one part of this multi-disciplinary program. Healthy walking programs such as this can be put in place by a wide variety of organizations, including the health department, local hospitals, senior centers, local businesses, schools, churches and recreation departments.

Walk to School Initiative

The National Center for Safe Routes to School and the NCDOT Safe Routes to School encourage Walk to School events every October. These events are seen as a preliminary step in changing the attitude of people towards increased pedestrian activity. The International I Walk to School in the USA website) has suggestions for events and classroom lesson plans for promoting the walk to school initiative. (http://www.walktoschool.org/eventideas/index.cfm

Mature Adults: Be Healthy, Walk Safely

A resource for mature adults by the National Highway Traffic Safety Administration, this web brochure provides tips for developing a personal walking exercise program and safety guidelines for dealing with traffic. http://www.nhtsa.dot.gov/people/injury/olddrive/steppingout/index.html

Enforcement Programs

One of the more prominent issues that the City of Sanford has with *vehicular* verses *pedestrian* traffic is with enforcement of the laws. For many decades, the law has stated that pedestrians have the right-of-way; but many drivers ignore this law. To ensure safety, this law must to be enforced. The enforcement of speed limits is another important issue related to pedestrian safety. Studies have proven that motorists' speeds are directly proportional to the number of pedestrian deaths that occur. Reduced speeds provide more opportunity for pedestrians to see and react in a timely manner. Pedestrians will feel unsafe and will be reluctant to use sidewalks in areas where traffic laws are not enforced.

Police officers on bicycles should be a major factor in ensuring safe pedestrian practices, on the streets of downtown, during community and school events, and on the greenway system.

As the pedestrian network expands to include the schools within the City, it will be necessary to ensure safety oversight as school crossings and within the school zones. Crossing guards should be present at all official school crossings, along with approved school crossing signage and signals. The crossing guards should be trained using NCDOT's Crossing Guard Training Program. The police department needs to provide a regular schedule of oversight of traffic during school hours in school zones. Any infractions within the school zone must be penalized to discourage future infractions and help to ensure the safety of the children.

[1] Safe Routes to School website, http://www.saferoutesinfo.org/.

- END OF SECTION -

SECTION SEVEN PROJECT DEVELOPMENT

Section 4 of the Sanford Pedestrian Plan provided a vision for a comprehensive pedestrian system for the City of Sanford. Section 7 of the Plan provides a blueprint for the City of Sanford to assist them in implementing that vision. Section 7 identifies opportunities and strategies and provides a series of action steps to guide the City as it begins to execute the Plan. The projects proposed in Section 4 are prioritized in this section in order to present the City with a project schedule that is manageable. This section closes with ideas and sources for funding the projects.

7.1 OPPORTUNITIES AND STRATEGIES

An opportunity is a situation or condition that is favorable for the attainment of a goal. The most obvious of the opportunities for the City of Sanford in attaining the goals set out in this Plan, is the already existing network of pedestrian facilities. The existing facilities consist of a small network of sidewalks and destination points which are already attracting pedestrian traffic. The fact that people are already using these limited facilities makes it easier to promote the expansion of the network into a comprehensive, connected and safe pedestrian system.

A strongly committed group of individuals interested in the development of a pedestrian network for the City of Sanford provides another opportunity or favorable condition for attaining the stated goals of this plan. Members of the steering committee, City employees and users of the existing pedestrian network provide Sanford with a core group of advocates who can promote the plan and recruit needed volunteers and supporters.

Regional initiatives such as the Deep River Small Area Plan and the Deep River Trail are providing the City of Sanford with additional opportunities to tie their pedestrian network into a regional network connecting open space, natural areas and historic sites into a region-wide greenway system. By embracing these initiatives and working with regional organizations, the City can find alternate funding sources, connect to regional pedestrian and greenway systems and increase community support.

7.2 ACTION STEPS

In order to implement the Sanford Comprehensive Pedestrian Plan, the following steps need to be taken.

- Adoption of the Plan. The first step in implementing the Pedestrian Plan is the adoption of the plan by the City Council. Adoption of the plan will allow the City of Sanford to effectively influence regional decisions so that

they coincide with the goals set forth in the plan. Adopting the plan will also provide the City with greater authority to shape local land use decisions.

- Create an Oversight Committee. An Oversight Committee consisting of City Staff, interested citizens and representatives from interested organizations (such as Lee County, Downtown Sanford, Inc., and the Parks and Recreation Commission) will oversee the implementation of the plan.

- Develop a funding strategy. In order to undertake the proposed projects and secure adequate funding it will be necessary to develop a funding strategy. The strategy should allow the community to incrementally complete each of the suggested pedestrian facility improvements over a 10 year period. Opportunities are listed below:

    1. *The capital improvement program needs to include yearly appropriations for sidewalk, crosswalk and greenway development.*

    2. *The annual operating budget needs to include monies for minor construction and maintenance of pedestrian facilities.*

        - *Consider issuing a local municipal bond with monies allocated towards the pedestrian system.*

    3. *Actively pursue the addition of roads within the City to NCDOT's TIP program for sidewalk and greenway development and improvement.*

    4. *Community Development Block Grants (CDBG) can provide money for capital improvements such as sidewalks and greenways in low-income neighborhoods.*

        - *Pursue funding from the sources listed in Section 7.7 Funding Opportunities.*

- Begin work on the projects listed as High Priority in Section 7.6

- Develop education and awareness programs. These programs will help to inform the public about and increase support for the proposed projects.

- Develop a plan for acquiring the land and easements necessary for the Sanford Greenway System.

- Work with other government agencies such as Lee County, TARPO, Triangle J Council of Governments and the State of North Carolina to

integrate Sanford's Pedestrian Plan with other transportation, land use, economic development, parks and recreation, environmental and community planning efforts.

- Modify the City of Sanford's Zoning Ordinances to contain strong, well thought out policies and goals that will promote the development of pedestrian facilities as part of any new development or redevelopment.

- Scheduled road or utility work should include improvements and additions to the adjacent pedestrian network where possible.

- Identify supporting policies and guidelines. The NCDOT Division of Bicycle and Pedestrian Transportation have published a guidebook on General Statues, Ordinance and Resources towards bicycle and pedestrian laws. This is a great resource pertaining not only to responsibilities for bicyclists and pedestrians, but also for motorists. This guide should be incorporated into the standards for the City of Sanford. It is particularly valuable for educating school children on public safety.

  As mentioned in previous sections of this document, the street design guidelines need to conform to NCDOT standards. In addition to NCDOT standards, the Manual on Uniform Traffic Control Devices (MUTCD) should also be a reference for projects, particularly existing roadways that have not conformed to these standards. Areas such as traffic intersections will need to incorporate these guidelines for future improvements.

  The American Association of State Highway and Transportation Officials (AASHTO) have published the 'Guide for the Planning, Design and Operation of Pedestrian Facilities'. The purpose of this guide is to provide assistance with the planning, design and operation of pedestrian facilities along streets and highways. Specifically, the guide focuses on identifying effective measures for accommodating pedestrians on public right-of-ways. This useful tool can be used to provide user-friendly pedestrian facilities along roadways.

- Develop an evaluation/monitoring process. Each year the City should evaluate the progress made in implementing proposed improvements suggested in this Pedestrian Plan. This evaluation should not only include new facilities but also repair to existing facilities. At the beginning of budget process for the next fiscal year, the City should determine the projects to be implemented for that year. In some cases there may be large projects that will limit the number of tasks the City can feasibly commit to implementing.

7.3 PRIORITIZATION OF THE PROPOSED PEDESTRIAN NETWORK

The Proposed Facility Priority Maps and Project List can be found in the Appendix G. The maps suggest priorities for the construction of pedestrian facilities located within the City limits. In addition to prioritization, the list delineates the location, length, cost and potential funding means for each project. As mentioned earlier in this section, sidewalk improvements make up the majority of project costs for the proposed improvements. The priorities established are based primarily on need, safety and connectivity.

The City of Sanford and NCDOT are the primary agencies that will be involved with these pedestrian improvements. Many of these facilities are located on NCDOT public right-of-ways and are eligible to receive funding for NCDOT improvements. As new development or redevelopment occurs, it will be important for the City of Sanford to require the owners to implement the appropriate pedestrian facilities, as necessary.

Prioritization of Projects

The priorities of the pedestrian plan are divided into three different categories of priorities: high, medium and low. A priority calculator was used to help determine the priority ranking of each project.

The priority calculator was based on three factors, Safety, Connectivity and Socioeconomic factors. Each factor was broken down into categories. The categories were given different numeric values depending upon their determined value. Value was derived from conversations with City staff and members of the Steering Committee.

Pedestrian corridors were then given a numeric value in each category. The total value of points ranked each corridor. The total number of corridors was roughly grouped by thirds to determine high, medium and low ranking. A detailed description of how the numeric values were determined is located in the Appendix.

Priority Calculator Results

High Priority Projects (See Maps 14-16 below)

Some of the issues that resulted in a high priority ranking were:

- A lack of sidewalks that force pedestrians out onto roads with medium to high volumes of traffic.
- A lack of crosswalks and/or pedestrian signals at busy intersections that are commonly traversed by pedestrians.
- A history of high pedestrian accident incidents.
- Sidewalks in poor condition that creates hazards for pedestrians
- Lack of intersection safety and accessibility amenities
- Connectivity to high priority destinations such as medical facilities and schools
- Need due to low percentage of households with vehicles or high percentage of households with school-age children.

Moderate Priorities

Moderate priority projects are designed to create a cohesive pedestrian network from the existing system. Some of the projects fill in missing gaps in the network, while others address additional safety issues that arise from the expansion of the network.

Low Priorities

The final category contains the low priority corridors. These areas are important to the City but due to economic factors, it is not feasible to implement the facilities within a 10-year time period. These facilities are located primarily in residential neighborhoods and connect to other existing/proposed sidewalks that are of high or moderate priority. A long-range time period will be allowed for the implementation of pedestrian facilities in the low priority areas. As different areas in and around the City of Sanford develop, priorities may change in the coming years.

The proposed improvements incorporate planning initiatives from other agencies that affect the City of Sanford. NCDOT, the Triangle Area RPO and the Triangle J MPO planning initiatives are discussed in this Pedestrian Plan. It will be essential to continue cooperation with these and other entities that can enhance the pedestrian network within the City of Sanford and the surrounding communities. As additional needs are identified in the future, communication with these agencies will help with the coordination of future projects.

The Sanford Pedestrian Plan proposes numerous pedestrian projects composed mainly of sidewalks, multi-purpose trails and intersection improvements. In order

to develop an action plan that is manageable, the recommendations have to be separated into projects that will be implemented on an annual basis. Each fiscal year, the City should identify specific projects and allocate funding for them. There are numerous funding mechanisms to assist with costs. This will be an important component in the completion of the identified projects.

City of Sanford
2009 Comprehensive Pedestrian Plan

Map 14
Priority Rankings for Pedestrian Corridors
Jonesboro and South Sanford

- Priority 1 Corridor
- Priority 2 Corridor
- Priority 3 Corridor
- Existing parks/recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination

BAR SCALE 1" = 1000'
0 500' 1000' 2000'

N W E S

City of Sanford
2009 Comprehensive Pedestrian Plan

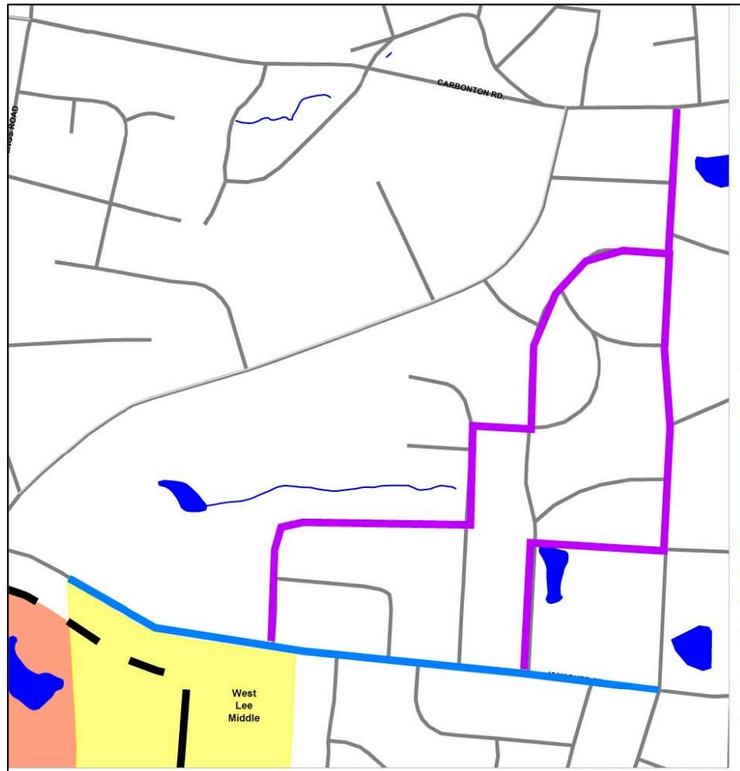
Map 15
Priority Rankings for Pedestrian Corridors
North Sanford

- Priority 1 Corridor
- Priority 2 Corridor
- Priority 3 Corridor
- Existing parks/recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination

BAR SCALE 1" = 1000'
0 500' 1000' 2000'

City of Sanford
2009 Comprehensive Pedestrian Plan

Map 16
Priority Rankings for Pedestrian Corridors
Public School



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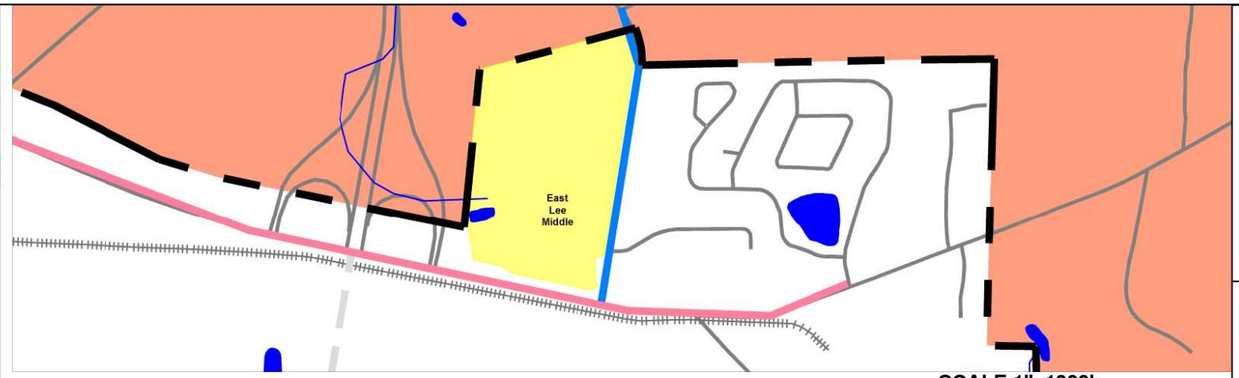

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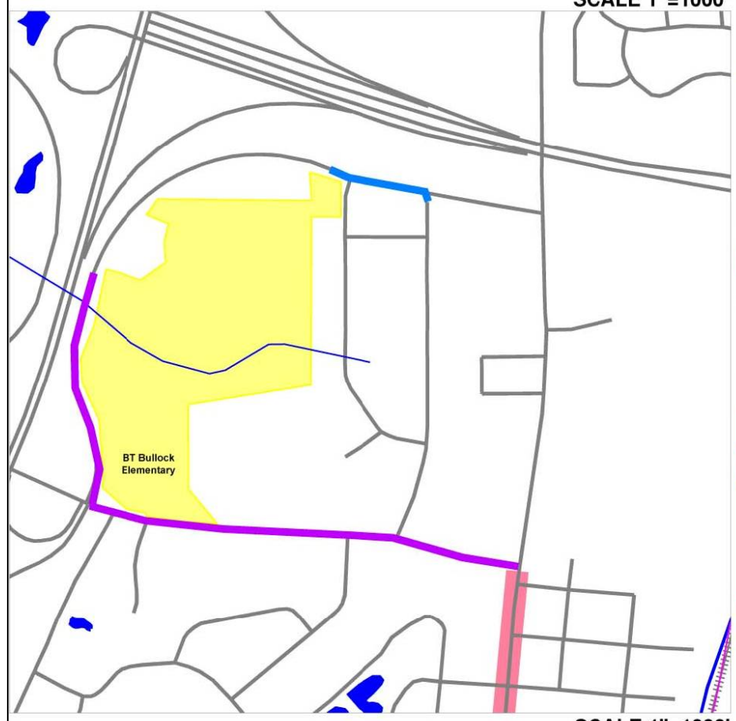

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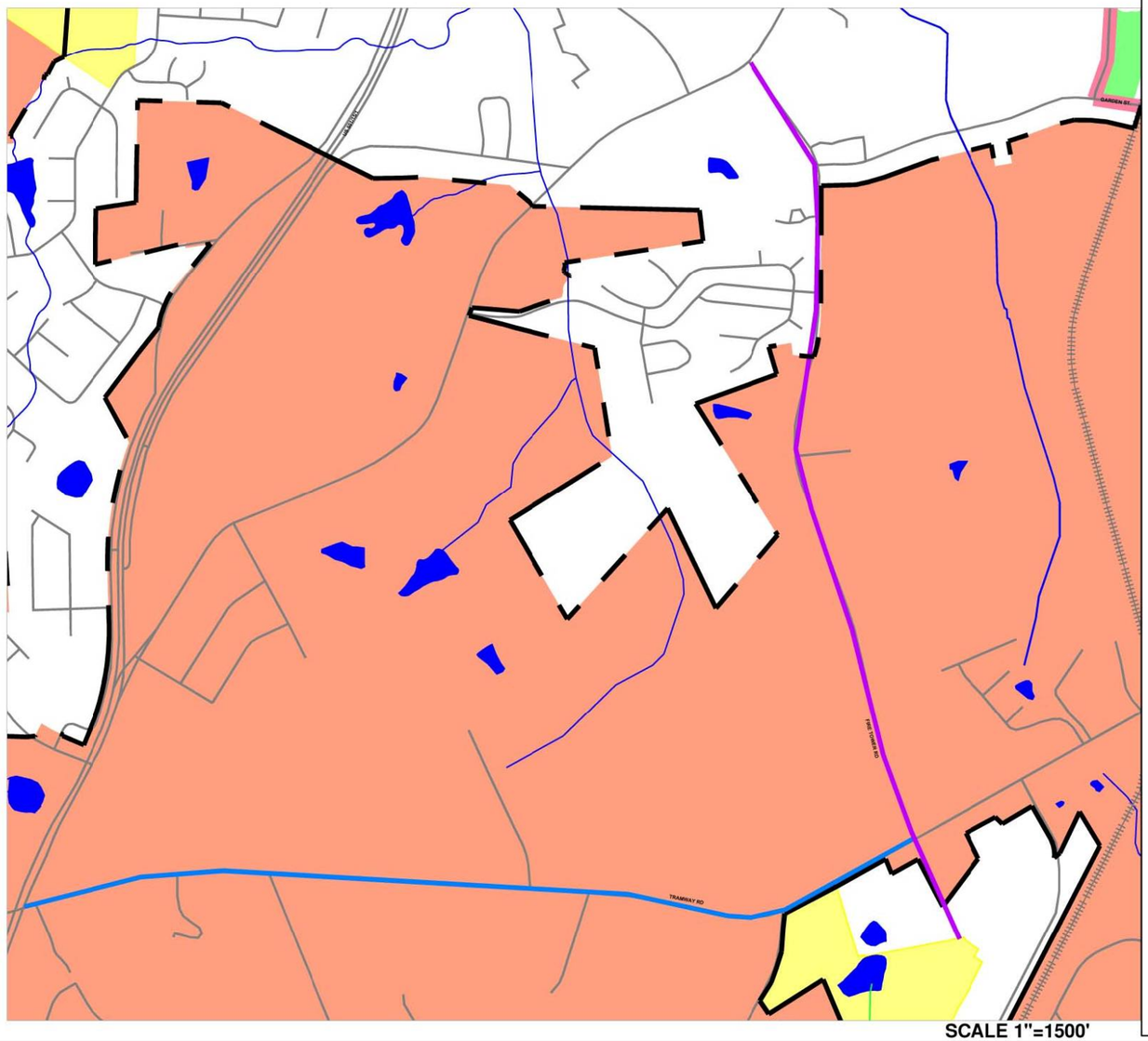

SCALE 1"=1500'

- Priority 1 Corridor
- Priority 2 Corridor
- Priority 3 Corridor
- Existing parks/recreation
- Civic/Services
- Schools/Education
- Religious Institutions
- Cultural Institution/Site
- Body of Water/Streams
- Major Shopping/Dining Destination

Sidewalk Projects

The majority of the proposed improvements for the Sanford Pedestrian Plan consist of the repair or construction of concrete sidewalks. These are considered to be *on-road construction projects*. A priority list identifying sidewalks can be found above. Standards for the construction of the sidewalk projects can be found in Section 5 Design Guidelines. As many of the proposed facilities are located on NCDOT roadways, the City of Sanford will need to receive an approval for all permitting and construction documents for this work *prior* to construction.

The Sanford Greenway Network

Multi-purpose trails such as the proposed Sanford Greenway Network are designated as *off-road construction projects.* These trails are typically 8 to 10 feet wide and allow for biking, which is not permitted on sidewalks. This pedestrian plan proposes several new greenway corridors creating a network that can connect into efforts made by Lee County and regional projects.

7.4 ANCILLARY FACILITIES AND PROGRAMS

There are many ancillary facilities and programs that Sanford can initiate or participate in. Many of these initiatives are relatively inexpensive. Signing/mapping projects and safety/enforcement programs can be performed through in-house services. Partnering with other organizations such as the Lee County Public Health Department, the County of Lee Transit System, the Lee County School System, TARPO, civic groups and health-based companies will allow promotional programming and transit interface programs.

Expanded Transportation Options

The City of Sanford needs to work with the County of Lee Transit System to expand the existing transportation service to increase needed services for the citizens of the City. An increase in the transit system would help to relieve pedestrian pressure at some of the most dangerous areas such as the intersection of Washington Street and US-421. The 2009 TARPO Human Service Transportation Coordination Plan calls for the creation of a fixed "circulator" bus route that would serve those most in need of transportation assistance. Such a fixed route should take into consideration the neighborhoods with residents exhibiting the most need, senior adults, low income and low vehicle ownership rates.

Education Programs

Several state and national program guidelines are available for educating the public about pedestrian safety (see Section 6.4). These programs are aimed at law enforcement, pedestrians and drivers. The City of Sanford should work with the Lee County School System and the Sanford Police Department to provide safety programs related to walking for the children and adults of Sanford. Some of the resources available for use are:

National Center for Safe Routes to School – The Center offers a number of resources and information on how to start a Safe Routes to School program.

Walking School Bus – A program under the auspices of the National Center for Safe Routes to School, the program combines safety, community building,

healthy exercise and fun to help educate children and adults on pedestrian safety.

A Guide to the North Carolina Bicycle and Pedestrian Laws – The guide is intended for use by law enforcement officials, educators, planners and citizens for education about and enforcement of North Carolina pedestrian laws.

Healthy Communities Program

The City of Sanford, the Lee County Public Health Department and the Carolina Community Hospital should join together in promoting and furthering the Health Department's LeeCAN program. A Healthy Communities portion of this program would encourage walking as healthy exercise. This program would recruit churches, civic organizations and neighborhood associations to organize and promote walking for better health. The program should also include pedestrian education.

Wayfinding

As pedestrian facilities are completed they need to be incorporated into a Wayfinding System for Sanford. Maps of primary pedestrian corridors can be made available at local government and retail centers. A uniform system of signage should be installed to direct pedestrians to destination points. Traffic signs should be installed that alert motorists to the pedestrian network (see Section 5 Design Guidelines.)

Spot Improvement and Maintenance Program

The Spot Improvement and Maintenance Program are most likely to be the responsibility of the City of Sanford Public Works Department. The Department should continue a regular schedule of inspection and repair to the various elements of the pedestrian network, including sidewalks, crosswalks, signage and street furniture. The City should also consider appointing an Oversight Committee to observe and inform the Public Works Department of needed repairs. In addition, the Department can make several of the spot improvements from the list that can be undertaken using City forces. Some of the tasks that can be undertaken by the Maintenance Department include:

Repairing/installing small areas of sidewalk or multi-purpose trail
Repair of retaining walls
Install, repair or replace signage
Remove or supervise removal of litter
Maintain landscaping
Inspect and repair pedestrian amenities such as benches, trash receptacles and other street furniture

7.5 STAFFING

The City Administrator and Planning Department staff will serve as the major leaders for the development of Sanford's pedestrian system. These departments will guide the City in the planning, design, construction and funding of pedestrian facilities. They will also facilitate cooperation between the various agencies as mentioned in Section 7.4

The City Public Works Department will be a vital component in the implementation of projects and in the maintenance of those facilities that are the City's responsibility. The Planning Board and City Council will need to be advocates of pedestrian planning. Each fiscal year the City should implement pedestrian improvements as part of the City's general budget.

The Pedestrian Steering Committee was an integral component in developing recommendations for the Pedestrian Plan. It is recommended that an ongoing Oversight Committee be created to evaluate the pedestrian facilities and programs on an annual basis. An evaluation program is too comprehensive for just one individual to perform; such a program will require a group working together to conduct the evaluation. The Oversight Committee could also be responsible for recruiting volunteers and civic groups to assist with programming, publicity and simple maintenance tasks such as litter removal. Maintenance issues and problems can often be addressed through this committee and it can assist the City with complaints from local residents and visitors.

The Sanford Police Department will assume tasks concerned with pedestrian safety. This includes education, enforcement of traffic and pedestrian laws and crime prevention. The Department should also maintain a record of all incidents involving pedestrians in order to address necessary improvements to the pedestrian network that might develop after the adoption of this plan.

7.6 FUNDING OPPORTUNITIES

Funding for the implementation of proposed projects can be overwhelming with rising construction costs. Therefore, prioritization will aid in the completion of the proposed tasks. The projected construction cost estimates for all the proposed projects is shown in the table below.

Priority	Sidewalks	Intersections	Greenways
High	$934,800.00	$40,000.00	$9,831,360.00
Medium	$3,553,800.00	$121,400.00	$7,386,022.00
Low	$2,281,600.00	$11,000.00	$9,057,034.00
Total	$6,770,200.00	$172,400.00	$26,274,416.00

A listing of the projects, their priority status and probable costs are listed in Probable Cost Estimates, found below.

City of Sanford												
Comprehensive Pedestrian Plan 2009												
Preliminary Cost Estimates												
		High Priority Corridors - GAPS										
	Type of Facility	Primary Pedestrian Corridor	From	To	Length of 5' Sidewalk ($50 per lf)	Curb Ramps ($1,000 ea.)	Pedestrian RR Crossings ($2,000 ea.?	Crosswalks ($200 ea.)	Traffic Signals ($40,000 ea.)	Pedestrian Signals ($2,400 ea.)	Probable Cost Estimate	NCDOT TIP Project
		Horner Boulevard										
1	Sidewalk	Horner Blvd.			283						$14,150	
2	Sidewalk	Horner Blvd.			293						$14,650	
3	Sidewalk	Horner Blvd.			277						$13,850	
4	Sidewalk	Horner Blvd.			196						$9,800	
5	Sidewalk	Horner Blvd.			30						$1,500	
6	Sidewalk	Horner Blvd.			125						$6,250	
7	Sidewalk	Horner Blvd.			120						$6,000	
8	Sidewalk	Horner Blvd.			507						$25,350	
9	Sidewalk	Horner Blvd.			686						$34,300	
10	Sidewalk	Horner Blvd.			495						$24,750	
11	Sidewalk	Horner Blvd.			466						$23,300	
12	Sidewalk	Horner Blvd.			435						$21,750	
6	Intersection	Horner Blvd. and Carthage St.				2			0	8	$20,000	
7	Intersection	Horner Blvd. and Wicker St.				0		4	0	8	$20,000	
	Subtotal Sidewalk Improvements				3,913						$195,650	
		Vance Street										
1	Sidewalk	Vance Street			488						$24,400	
2	Sidewalk	Vance Street			767						$38,350	
3	Sidewalk	Vance Street			282						$14,100	
4	Sidewalk	Vance Street			488						$24,400	
5	Sidewalk	Vance Street			140						$7,000	
6	Sidewalk	Vance Street			60						$3,000	
	Subtotal Sidewalk Improvements				2,225						$111,250	
		Carthage Street										
1	Sidewalk	Carthage Street			560						$28,000	
2	Sidewalk	Carthage Street			968						$48,400	
	Subtotal Sidewalk Improvements				1,528						$76,400	
		Charlotte Avenue										
1	Sidewalk	Charlotte Ave.			212						$10,600	
2	Sidewalk	Charlotte Ave.			304						$15,200	
3	Sidewalk	Charlotte Ave.			424						$21,200	
4	Sidewalk	Charlotte Ave.			394						$19,700	
5	Sidewalk	Charlotte Ave.			270						$13,500	
6	Sidewalk	Charlotte Ave.			275						$13,750	
	Subtotal Sidewalk Improvements				1,879						$93,950	
		Wicker Street										
1	Sidewalk	Wicker St.			580						$29,000	
2	Sidewalk	Wicker St.			80						$4,000	
3	Sidewalk	Wicker St.			497						$24,850	
4	Sidewalk	Wicker St.			238						$11,900	
5	Sidewalk	Wicker St.			378						$18,900	
5	Sidewalk	Wicker St.			172						$8,600	
	Subtotal Sidewalk Improvements				1,945						$97,250	
		Bragg Street										
1	Sidewalk	Bragg St.			54						$2,700	
2	Sidewalk	Bragg St.			281						$14,050	
3	Sidewalk	Bragg St.			238						$11,900	
	Subtotal Sidewalk Improvements				573						$28,650	
		Weatherspoon Street										
1	Sidewalk	Weatherspoon St.			252						$12,600	
	Subtotal Sidewalk Improvements				252						$12,600	
		Cole Street										
1	Sidewalk	Cole St.			265						$13,250	
	Subtotal Sidewalk Improvements				265						$13,250	
		Pearl Street										
1	Sidewalk	Pearl St.			470						$23,500	
2	Sidewalk	Pearl St.			507						$25,350	
	Subtotal Sidewalk Improvements				977						$48,850	
		Wall Street										
1	Sidewalk	Wall St.			307						$15,350	
2	Sidewalk	Wall St.			454						$22,700	
3	Sidewalk	Wall St.			500						$25,000	
	Subtotal Sidewalk Improvements				1,261						$63,050	
		Oddfellow Street										
1	Sidewalk	Oddfellow St.			479						$23,950	
2	Sidewalk	Oddfellow St.			165						$8,250	
3	Sidewalk	Oddfellow St.			883						$44,150	
	Subtotal Sidewalk Improvements				1,527						$76,350	
		Washington Street										
1	Sidewalk	Washington St.			108						$5,400	
	Subtotal Sidewalk Improvements				108						$5,400	
		Lee Avenue										
1	Sidewalk	Lee Ave.			1,113						$55,650	
2	Sidewalk	Oddfellow St.			1,237						$61,850	
	Subtotal Sidewalk Improvements				2,350						$117,500	
		Main Street										
1	Sidewalk	Lee Ave.			314						$15,700	
	Subtotal Sidewalk Improvements				314						$15,700	
		Trade Street										
1	Sidewalk	Trade Street			55						$2,750	
2	Sidewalk	Trade Street			157						$7,850	
3	Sidewalk	Trade Street			72						$3,600	
4	Sidewalk	Trade Street			95						$4,750	
	Subtotal Sidewalk Improvements				379						$18,950	
	Total Sidewalk Improvements for Priority 1 Gaps				**19,496**						**$974,800**	

Appendix E

Medium Priority Corridors												
			From	To	LF of New or Repaired Sidewalks	# of Curb Ramps along Corridor	Pedestrian RR Crossings	Crosswalks	Traffic Signals	Pedestrian Signals	Probable Cost Estimate	NCDOT TIP Project
1	Sidewalk	Courtland Dr.			5,022	12	0				$212,880	
2	Intersection	Courtland Dr. and 3rd St.				4		4	0	0	$4,800	
3	Sidewalk	1st St.			565	3	0				$25,600	
4	Sidewalk	Hill Ave.			2,810	8	1				$122,400	
5	Sidewalk	Spring Lane	Weatherspoon St.	River Birch Shopping Center	4,544	10	0				$191,760	
6	Intersection	Spring Lane and Plaza Blvd.				3		2	0	0	$3,400	
7	Sidewalk	3rd St.	McIver St.	Rose St.	706	6	0				$34,240	
8	Intersection	3rd St. and Rose St.				2		4	0	0	$2,800	
9	Sidewalk	Gulf St.	Carthage St.	Wall St.	1,545	6	0				$67,800	
10	Sidewalk	Tramway Rd. and Fire Tower Rd	Cheshire	Hart	13,476	13	0				$552,040	
11	Intersection	Tramway Rd. and Fire Tower Rd				3		2	1	0	$43,400	
12	Sidewalk	Vance St. south of Fields Dr.	Vance St.	south of Fields Dr.	1,242	3	0				$52,680	
13	Sidewalk	7th St.	Goldsboro Ave.	Bragg St.	2,934	5	0				$122,360	
14	Sidewalk	3rd St.	E. Rose St.	Horner Blvd.	1,210	1	0				$49,400	
15	Sidewalk	Maple Ave.	Chatham St.	Bragg St.	2,673	11	0				$117,920	
16	Sidewalk	Wicker St.	Kiwanis Family Park	School Entrances	9,426	19	0				$396,040	
17	Intersection	Wicker St. and Chippendale Tr.				2		1	1	0	$42,200	
18	Sidewalk	Lee Ave.	Williams St.	Wilson Rd.	4,099	8	0				$171,960	
19	Sidewalk	Oakwood Ave.	3rd St.	Bragg St.	2,575	7	0				$110,000	
20	Intersection	Oakwood Ave. and Bragg St.									$0	
21	Sidewalk	Moore St.	Weatherspoon St.	Gordon St.	623	5	0				$29,920	
22	Sidewalk	Rose St			4,077	10	1				$175,080	
23	Sidewalk	Pershing St			920	3	0				$39,800	
24	Sidewalk	Weatherspoon St.	Brinn Dr.	Moore St.	2,579	6	0				$109,160	
25	Intersection	Weatherspoon St. and Gulf St./Spring Rds				1		2	0	0	$1,400	
26	Sidewalk	3rd St.	Weatherspoon St.	McIver St.	0	0	0				$0	
27	Intersection	3rd St. and Charlotte Ave.								8	$19,200	
28	Sidewalk	Steele St.	Weatherspoon St.	Gordon St.	88	1	0				$4,520	
29	Sidewalk	Dalrymple St.	Horner Blvd.	Main St.	1,948	2	1				$81,920	
30	Intersection	Dalrymple St. and Main St.									$0	
31	Sidewalk	Carbonton Rd.	Carthage St.	Currie Dr.	6,632	22	0				$287,280	
32	Intersection	Carbonton Rd. and Carthage St.				4		1	0	0	$4,200	
33	Sidewalk	Trade St.			422	3	0				$19,880	
34	Sidewalk	Gulf St.	Weatherspoon St.	Carthage St.	152	1	0				$7,080	
35	Intersection	Gulf St./Spring Ln. and Weatherspoon St.									$0	
36	Sidewalk	Goldsboro Ave.	3rd St.	Bragg St.	4,128	9	0				$174,120	
37	Intersection	Dalrymple St. and Horner Blvd.									$0	
38	Sidewalk	Academy St.	Main St.	Williams St.	1,977	6	0				$85,080	
39	Intersection	AcademySt./Woodland Ave. and Main St.									$0	
40	Sidewalk	Main St.	Lee Ave.	Caroline Dr.	1,567	4	0				$66,680	
41	Intersection	Main St. and Lee Ave.									$0	
42	Intersection	Main St. and Woodland Ave. /Academy									$0	
43	Sidewalk	St. Clair			414	2	0				$18,560	
44	Sidewalk	McNeil Rd.	Fairview Ln.	School Entrances	712	4	0				$32,480	
45	Sidewalk	Park Ave.			2,658	7	0				$113,320	
46	Sidewalk	5th St.	McIver St.	Goldsboro Ave.	1,663	7	0				$73,520	
47	Sidewalk	Chatham St.	Charlotte Ave.	Hickory Ave.	133	1	1				$8,320	
	Subtotal Sidewalk Improvements										$3,675,200	

Appendix E

Low Priority Corridors												
			From	To	LF of New or Repaired Sidewalks	# of Curb Ramps along Corridor	Pedestrian RR Crossings	Crosswalks	Traffic Signals	Pedestrian Signals	Probable Cost Estimate	NCDOT TIP Project
1	Sidewalk	Hawkins Ave.	Burns Dr	Dixie Hi-way	16,384	26	0				$681,360	Yes
2	Sidewalk	Globe St.			1,336	4	0				$57,440	
3	Intersection	Globe St. and Dalrymple			0	0	1				$2,000	
4	Sidewalk	Nash St.	Bragg St.	Kelly Dr.	2,504	6	0				$106,160	
5	Sidewalk	Rice Rd			364	1	0	1			$15,760	
6	Sidewalk	Vance St.	Carthage St.	Weatherspoon St.	2,976	18	0				$137,040	
7	Sidewalk	Hickory Ave.	3rd St.	Oakwood Ave.	371	2	0				$16,840	
8	Sidewalk	Charleston Dr	Burns Dr	School Entrances	1,605	2	0				$66,200	
9	Intersection	Charleston Dr. and Burns Dr.				2		1	0	0	$2,200	
10	Sidewalk	5th St.	Weatherspoon St.	McIver St.	2,348	12	0				$105,920	
11	Intersection	5th St. and Rose St.					1				$2,000	
12	Sidewalk	Weller St			100	2	2				$10,000	
13	Sidewalk	Market St			209	1	0				$9,360	
14	Sidewalk	Sunset Dr.	Carbonton Rd.	Gulf St.	2,145	6	0				$91,800	
15	Sidewalk	Austin St.			376	2	0				$17,040	
16	Sidewalk	Chippendale Tr			2,066	4	0				$86,640	
17	Sidewalk	Ramseur St			523	4	0				$24,920	
18	Sidewalk	Burns Dr.	Charleston Dr.	Hawkins Ave.	2,903	8	0				$124,120	
19	Intersection	Burns Dr. and Charleston Dr.									$0	
20	Sidewalk	North Ave			2,105	10	0				$94,200	
21	Sidewalk	Green St			528	2	0				$23,120	
22	Sidewalk	W. Chisholm St.			342	2					$15,680	
23	Sidewalk	Cross St.	Summit Dr.	Steele St.	257	6	0				$16,280	
24	Sidewalk	East Chisholm St.			1,633	4	2				$73,320	
25	Intersection	E. Chisholm St. and Hawkins Ave.				4		4			$4,800	
26	Sidewalk	Gordon St.			929	4	0				$41,160	
27	Sidewalk	Greensboro Ave			205	0	0				$8,200	
28	Sidewalk	Arlington Circle			624	2	0				$26,960	
29	Sidewalk	Currie Dr.			2,962	6	0				$124,480	
30	Sidewalk	McLeod Dr			2,704	6	0				$114,160	
31	Intersection	McLeod Dr. and Wicker St.									$0	
32	Sidewalk	Kelly Dr.	Nash St.	Oldham Lake Rd	1,887	4	0				$79,480	
33	Sidewalk	Fitts St.	Park Ave.	Carbonton Rd.	585	2	0				$25,400	
34	Sidewalk	Summit Dr.	Cross St.	Gulf St.	506	1	0				$21,240	
35	Sidewalk	Bracken St			293	1	0				$12,720	
36	Sidewalk	Radius Cir			408	2	0				$18,320	
37	Sidewalk	Edgewood Dr			857	2	0				$36,280	
	Subtotal Sidewalk Improvements										$2,292,600	

Appendix E

Greenways			
Description	**Comments**	**Length (LF)**	**Probable Estimated Cost**
High Priority			
Endor Iron Furnace Greenway - North	Under Construction	36,960	$4,915,680.00
Little Buffalo Creek Greenway	Planned	36,960	$4,915,680.00
Medium Priority			
Big Buffalo Creek Greenway - South	Kiwanis Family Park south to Tramway Road	12,869	$1,711,577.00
Church Street Connector	Connects Boys and Girls Club to Kiwanis Family Park	2,199	$292,467.00
Horton Park Connector	Connects neighborhood to Kiwanis Family Park and to Horton Park	4,240	$563,920.00
Garden Street Greenway	Connects Central Sanford to the Greenway System	6,428	$854,924.00
Atlantic and Western Rail and Trail	Rail and Trail Greenway	23,536	$3,130,288.00
Jonesboro Greenway	S. Jonesboro	5,080	$675,640.00
Jonesboro Connector	S. Jonesboro	1,182	$157,206.00
Low Priority			
Sanford Loop Greenway	Uses utility easements to loop west, connecting to Buffalo Creek Greenway at both ends	27,310	$3,632,230.00
Sanford Greenway	Connects Buffalo Creek Greenway to Little Buffalo Creek Greenway via utility easements	12,329	$1,639,757.00
McCracken Heights Connector	Connects from the Williams Child Development Center to the Plaza Blvd Connector and the Buffalo Creek Greenway	7,837	$1,042,321.00

Bullock Connector	Connects Buffalo Creek Greenway to Plaza Blvd Connector	6,117	$813,561.00
South SanLee Greenway	Rails to Trails Greenway from downtown Jonesboro to County Line	32,315	$4,297,895.00
Highland Connector	Connects northwest residential neighborhoods to Buffalo Creek Greenway	6,208	$825,664.00
Sanlee Park Greenway	Connects Sanlee Park with Central Carolina Community College Campus	6,000	$798,000.00
Sanlee Connector	Connects residential neighborhood to the Sanlee Park Greenway	2,297	$305,501.00

With a very talented and capable City Staff, Sanford has the ability to accomplish many of the proposed improvements itself. Spot improvements such as ADA compliant curb ramps, repair to damaged sidewalks and small sidewalk projects can be accomplished by City Staff, which will dramatically decrease the costs of these projects.

The cost of the sidewalk applications will vary depending upon the choice of contractor, the scope of the project and the cost of materials. The probable costs associated for implementing this work is $8,557,847 for all sidewalk improvements with an additional $1,049,095 for intersection improvements.

Funding will be a large component in the process of developing Sanford's pedestrian facilities. The City will need to be aggressive in applying for funding every year for individual projects. This can be a combination of grants, contributions, bonds and other methods. The cost of curbs, ramps, crosswalks, pedestrian signals and traffic signals can be shared with NCDOT. In addition, proposed improvements that are a part of a larger NCDOT project can be funded as an "incidental" project by NCDOT. Several of the proposed project corridors are on NCDOT's TIP list for Sanford/Lee County (see Section 3.2). The City can work with NCDOT to have them install the proposed sidewalks and intersection improvements as approved by the City.

Grants in particular, will be an important mechanism for funding. The projects, which are to be submitted for grants need to reflect the objectives specified with each individual grant. Grants are typically oriented toward connectivity to a particular objective such as schools, education, recreation or safety.

A variety of funding opportunities are available to Sanford as the City prepares for future improvement/development of its pedestrian system. Following is a list of funding

sources that have been utilized by other communities for pedestrian projects. Each of these will be addressed in this section.

- Taxation
- Bonds
- Grants
- User Fees
- Contributions
- Foundations
- Homeowner Assessment

Taxation

Traditionally, *ad valorem tax revenue* has been the primary source of funding for the pedestrian facilities of properties/facilities owned by municipalities and counties. 'Pedestrian opportunities' are considered a public service and often are standard line items on general fund budgets. Creative financial opportunities are possible; however, ad valorem taxes will continue to be the major revenue source to support the system. As such, communities often vote to raise their local tax rate temporarily in support of their pedestrian systems. Some possible tax funding strategies are:

Sales Tax – local county governments are authorized to implement a local sales tax. These taxes are typically used for a variety of projects within the county. The increase in local sales tax must be approved by the state government. The sales tax may be implemented for a fixed period of time and then expire.

Property Tax - because of concern by local home owners, increases in property taxes should be addressed with care. Support for such an increase must have wide public support for the resulting project. Such funds are often used to pay debt service on general obligation bonds that were issued to purchase land acquisitions.

Excise Taxes - excise taxes are levied on specific goods and services and are to be used for specified purposes. In general, these taxes are levied to achieve funds for the promotion of tourism or transportation, including pedestrian facilities.

Occupancy Tax – occupancy taxes are levied by local governments on hotel and motel rooms. The funds are typically used for the promotion of tourism and related activities.

The North Carolina Conservation Tax Credit

This program provides an incentive (in the form of an income tax credit) for landowners that donate interests in real property for conservation purposes. Property donations can be fee simple or in the form of conservation easements or bargain sale. The goal of this program is to manage stormwater, protect water supply watersheds, preserve working farms and forests and set-aside greenways for ecological communities, public trails and wildlife corridors.

http://ncctc.enr.state.nc.us/

Bonds

Many communities issue *bonds*, which are typically approved by the shareholders, to finance site development and land acquisition costs. The State of North Carolina grants municipal governments the authority to borrow funds through the issuance of bonds, the amount of which is not to exceed the cost of acquisition or the cost for improvement of pedestrian facilities. Total bond capacities for local governments (for pedestrian facilities) are limited to a maximum percentage of assessed property valuation. Since the issuance of bonds relies on the support of the voting population, the implementation of awareness programs is absolutely essential *prior* to a referendum vote. This method can be used for specific projects such as the creation multi-purpose trails within a greenway.

Revenue Bonds – revenue bonds are issued by government agencies or funds that generate operating revenues and expenses, much like a business. Repayment of the bond is limited strictly to revenues generated by the agency associated with the purpose of the bonds. Only the revenues specified in the contract between the bond holder and bond issuer are subject to use for repayment of the bond principal and interest.

General Obligation Bonds - General Obligation bonds are the preferred financing approach by the North Carolina Local Government Commission and the general securities market, because these instruments are backed by the full faith and credit of the issuer. That simply means that the bonds represent an encumbrance against the property tax base of the issuing jurisdiction and therefore offer the best available security to the bond holder. The State of North Carolina gives the issuance of bonds that are not to exceed the total cost of improvements, including land acquisition. In view of the recommended capital improvements suggested in this plan, the borrowing of funds to develop new facilities may be necessary. Total bonding capacities for local governments is limited for parks and recreation to a maximum percentage of assessed property valuation.

The following are key factors to consider when evaluating the use of this financing instrument:

- In North Carolina, the issuance of General Obligation bonds requires a referendum of the voters within the issuing jurisdiction.
- The term of the debt may be extended to 20-30 years.
- The debt is publicly sold. Therefore, there are costs associated with the sale that generally total 3% to 5% of the total bond principal. The issuance costs offset the lower interest rate so this instrument becomes more attractive as the size of the issuance increases and the issuance costs are spread over the larger debt. It has been found that this financing option becomes financially superior as the debt principal exceeds $10-$12 million.
- Prepayment of the debt can generally not be accomplished until reaching a call date, which is generally around 75% of debt retirement.
- Failure of the General Obligation Bond to be ratified by referendum could mean that the County could not go forward with an alternative approach to financing without substantially changing the scope of the project.

Special Assessment Bonds – special assessment bonds are municipal bonds used to fund a project that benefits a specific neighborhood or community. The neighborhood or community then repays the bond through the levy of additional taxes or fees on the property owners who have benefited from the improvements.

Grants

State and federal agencies offer funding opportunities to assist municipalities in the financing of their pedestrian projects including greenway trails. These sources of funding should definitely be investigated and pursued by the City of Sanford for present and future improvements.

State Agencies

North Carolina Department of Transportation Grants

Bicycle and Pedestrian Independent Projects Funded Through the Transportation Improvement Program (TIP)

NCDOT has established priorities that are addressed in the 2009-2015 Transportation Improvements Program (TIP). The projects are identified within Division 8 thoroughfare plan, which includes Lee County (as published in 2009). The program identifies long-range projects of varied scopes, small to multi-million dollar facility improvements. The projects identify location, phase and schedule.

Pedestrian facility projects are divided into two categories within the TIP, independent projects and incidental projects. Independent projects are those which are not related to a 'scheduled' highway project. Incidental projects are those related to a 'scheduled' highway project.

NCDOT Transportation Improvement Program (TIP) - Independent projects:

$6 million is appropriated annually for the construction of pedestrian and bicycle improvements that are independent of scheduled highway projects in communities throughout the state. 80% of these funds are derived from the Surface Transportation Program (STP) - Enhancement Funds, while state funds make up the remaining 20%. Currently, $1.4 million is appropriated annually for pedestrian hazard elimination projects in the NCDOT highway divisions. $200,000 is allocated for the Division of Bicycle and Pedestrian Transportation for projects such as training workshops, pedestrian safety and research projects, and other pedestrian needs statewide.

NCDOT Transportation Improvement Program (TIP) - Incidental projects:

Bicycle accommodations, such as bike lanes, widened shoulders and safety-designed bridges are frequently included as incidental features of highway construction projects. In addition, bicycle-safe drainage grates are a standard feature of all highway construction. Most pedestrian safety accommodations built by NCDOT are included as part of scheduled highway improvement projects and funded with a combination of federal and state roadway construction funds.

http://www.ncdot.org/transit/bicycle/funding/funding_categories.html

NCDOT Enhancement Program

The NCDOT Enhancement Program is a federally funded program designed to improve the aesthetic, cultural and environmental transportation experience in communities throughout North Carolina. Monies are allocated within the various programs of the NCDOT. The Enhancement Unit distributes their portion through the Call for Projects process. The goals of the program are to encourage diverse modes of travel, increase benefits to communities and encourage citizen involvement.

The following activities are funded under this program:

- Bicycle and Pedestrian Facilities
- Bicycle and Pedestrian Safety
- Acquisition of Scenic Easements, Scenic or Historic Sites
- Scenic or Historic Highway Programs (including tourist or welcome centers)
- Landscaping and other Scenic Beautification
- Historic Preservation
- Rehabilitation of Historic Transportation Facilities
- Preservation of Abandoned Rail Corridors
- Control of Outdoor Advertising
- Archaeological Planning and Research
- Environmental Mitigation
- Transportation Museums

Allowable pedestrian projects include:

- The construction of new sidewalks and walking trails/paths
- Pedestrian safety training and related training materials
- Acquisition of land with a significant aesthetic, natural, visual or open space value to preserve a scenic viewshed
- Acquisition of land around a historic site
- Planning and transaction costs that lead to the purchase/protection of easements/properties
- Linear highway landscaping
- The reintroduction of native or endangered plants or trees
- Streetscape projects

http://www.ncdot.gov/programs/Enhancement/

Governor's Highway Safety Program (GHSP)

GHSP funding is provided through an annual program, upon approval of specific project requests, to undertake a variety of pedestrian and bicycle safety initiatives. Amounts of GHSP funds vary from year to year, according to the specific amounts requested. The GHSP plans and supports several highway safety programs annually. 'Click It or Ticket' began in 1993 and has become the national model for an enforcement and education campaign (bearing the same name), which is operated by the National Highway Traffic Safety Administration. All funding from the GHSP is allocated for highway safety purposes only. The funding provided from this program has been described as 'seed money', which is money that is needed to get programs started. The grantee is expected to provide a

portion of the project cost to continue the program after GHSP funding expires.

http://www.ncdot.gov/programs/GHSP/

Safe Routes to School Program (managed by NCDOT, DBPT)

A national and international movement, Safe Routes to School is designed to encourage children to walk or bike to school. Funded by the Federal Government, the North Carolina programs strives to facilitate the planning, development and implementation of projects and activities that improve safety, reduce traffic, reduce fuel consumption and reduce air pollution in the vicinity of schools.

Funding through the NCDOT is on a grant reimbursement basis. A total of 3.9 million dollars was made available in 2009 for both infrastructure and non-infrastructure programs. A third category, NCDOT Highway Division Funds, is available for infrastructure projects on state-maintained roads. These projects must be within 2 miles of a school serving grades K-8 and are intended for safety improvements to walking/biking facilities.

http://www.ncdot.org/transit/bicycle/saferoutes/funding/funding_intro.html

Powell Bill Program

The Powell Bill or the North Carolina Street-Aid Allocations to Municipalities is a program of the North Carolina Department of Transportation. Allocations are made annually to municipalities that establish their eligibility and qualify as provided by G.S. 136-41.1. through 136-41.3. These funds can be used for planning, construction and maintenance of sidewalks along public streets and highways.

http://www.ncdot.org/programs/Powell_Bill/.

North Carolina Department of Environment and Natural Resources

Land and Water Conservation Fund – North Carolina (LWCF)

A federally-funded program, LWCF, was established for local and state governments in 1965 as a funding source for outdoor recreation development and land acquisition. LWCF monies are derived from the sale or lease of nonrenewable resources, primarily offshore oil/gas leases and surplus federal land sales. Acquisition and development grants may be used for a wide variety of outdoor projects such as city parks, tennis courts, bike

trails, outdoor swimming pools and support facilities (roads, water supply, et cetera). Facility design must be basic in nature (as opposed to elaborate) and must remain accessible to the general public. No more than 50% of the project cost may be federally funded by LWCF, although all or part of the project sponsor's matching share may be obtained from certain other federal assistance programs.

http://ils.unc.edu/parkproject/lwcf/home1.html

North Carolina Ecosystem Enhancement Program

The N.C. Ecosystem Enhancement Program (EEP) combines a wetlands-restoration initiative by the N.C. Debt. of Environment and Natural Resources with ongoing environmental efforts by the Debt. of Transportation to restore, enhance, and protect its wetlands and waterways. EEP provides:

- High-quality, cost-effective projects for watershed improvement and protection
- Compensation for unavoidable environmental impacts associated with transportation, infrastructure, and economic development
- Detailed watershed-planning and project-implementation efforts within North Carolina's threatened or degraded watersheds

http://www.enr.state.nc.us/html/tax_credits.html

North Carolina Division of State Parks

NC Adopt-A-Trail Grant Program

The North Carolina Division of State Parks awards $108,000 each year to government agencies, nonprofit organizations and private trail groups for trail projects, through the Adopt-a-Trail program. Funds may be used for building trails, signage and facilities, brochures and maps.

http://www.ncparks.gov/About/grants/trails_grant.php

Recreational Trails Program (RTP)

The Recreation Trails Program (RTP) is an assistance program of the Department of Transportation's Federal Highway Administration (FHWA). RTP makes recreation funds available for state allocation, to develop and maintain recreation trails and trail-related facilities for both non-motorized and motorized recreation trail users. RTP funds are distributed to states by a

legislative formula: half of the funds are distributed equally among all states and half are distributed in proportion to the estimated amount of non-highway recreational fuel used in each state. (Non-highway recreational fuel is the type that is typically used by snowmobiles, all-terrain vehicles, off-road motorcycles and off-road light trucks.)

http://www.ils.unc.edu/parkproject/trails/home.html

North Carolina Parks and Recreation Trust Fund (PARTF)

PARTF was established for local governments and the North Carolina Division of Parks and Recreation in 1994 as a funding source for the development and/or improvement of parks and recreation facilities, as well as for the purpose of land acquisition. A state-funded program, PARTF matches monies spent by municipalities on parks and recreation, with each sharing 50% of the cost. In 2004, the fund request was elevated from a maximum of $500,000 to $1,000,000. The Recreational Resources Service should be contacted for additional information at (919) 515-7118.

www.ncparks.gov/About/grants/partf_main.php

North Carolina Division of Forest Resources

Urban and Community Forestry Grant Program

This program is designed to assist local governments in preserving existing tree cover in communities and to effectively and efficiently manage urban and community forests. Tree planting projects need to be part of a larger project aimed at promoting and enhancing the existing tree cover in a community.

Projects with pedestrian network elements include:

- Development of a pocket park
- Greenway development
- Tree planting in low-income neighborhoods
- Master Tree Plans
- Neighborwoods

http://www.dfr.state.nc.us/Urban/urban_grant_overview.htm

North Carolina Division of Water Resources

Water Resources Development Grant Program

This grant is designed to provide cost-share grants and technical assistance on projects related to water resources. There are seven different project categories. The establishment of a greenway in close proximity to a body of water is eligible for the Land Acquisition and Facility Development for Water-Based Recreation grant.

http://www.ncwater.org/Financial_Assistance/

North Carolina Division of Commerce

Community Revitalization Grants

Project purpose is to revitalize, through improvements, preservation or development, a low or moderate income residential area. Eligible activities include housing, street improvements, public water, public sewer community centers and recreation facilities. Other activities may be eligible with pre-approval. Maximum grants are one million dollars.

http://www.nccommerce.com/en/CommunityServices/CommunityDevelopmentGrants/CommunityDevelopmentBlockGrants/

Miscellaneous State Funding Organizations

North Carolina's Clean Water Management Trust Fund (CWMTF)

Created in 1996 by the North Carolina General Assembly, the Clean Water Management Trust Fund (CWMTF) grants monies to local governments, state agencies and not-for-profit conservation groups to help finance projects that specifically address water pollution issues. CWMTF will fund projects that contribute toward a network of riparian buffers and greenways for environmental, educational and recreational benefits. There is no match required from local municipalities for CWMTF funds; however, the "suggestion" of a match is highly recommended.

http://www.cwmtf.net/

North Carolina Natural Heritage Trust Fund

Monies from the Trust Fund must be accessed through state agencies such as DENR, the Wildlife Resources Commission, the Department of Cultural Resources and the Department of Agriculture and Consumer Services.

Funds are meant for the acquisition and protection of land with significant habitat value and/or cultural heritage value.

http://www.ncnhtf.org/

North Carolina Health and Wellness Trust Fund (HWTF)

The NC Health and Wellness Trust Fund was created by the General Assembly as one of 3 entities to invest North Carolina's portion of the Tobacco Master Settlement Agreement. HWTF receives one-fourth of the state's tobacco settlement funds, which are paid in annual installments over a 25-year period.

The Fit Community Program was designed to address the growing obesity problem in North Carolina. In 2004, HWTF partnered with blue Cross and Blue Shield of North Carolina to launch a statewide campaign designed to raise awareness around the dangers of unhealthy weight and provide communities and individuals with the information and tools they need to address this problem.

Fit Community Grants are funded for two years, for a maximum of $60,000. Applicants must first submit a Fit Community designation application and then apply for a Fit Community grant. Funding is for policy changes that will influence the public by promoting physical activity and changes to the physical environment that encourages more physical activity (trails/greenways).

http://www.healthwellnc.com/

Federal Agencies

Community Block Development Grant Program (HUD-CBDG)

The CDBG is an extremely flexible grant program that provides communities with funding resources to address a wide range of unique community development needs. The program is administered through the United States Department of Housing and Urban Development (HUD). Formed in 1974, the CDBG program is one of the oldest continuing HUD programs in existence. The CDBG program provides annual grants for facility and infrastructure improvements to assist in revitalization and job retention within communities.

http://www.hud.gov/offices/cpd/communitydevelopment/programs/

Rivers Trails and Conservation Assistance Program (RTCA)

The National Park Service (NPS) provides this program of advisory services and counseling. The NPS works with community groups and local and state governments to conserve rivers, preserve open space and develop trails/greenways. No fixed amount is established for these services. Cooperators must demonstrate a commitment for cost-sharing, which may include donations of time, cash and services. NPS Rivers and Trails have played a major role in community conservation/recreation through citizen-led, partnership approaches to river protection, trail development and land conservation.

www.nps.gov/ncrc/programs/rtca/

Public Works and Economic Development Program

This program is administered by the Economic Development Administration for the US Department of Commerce. Public Works and Economic Development investments help support the construction or rehabilitation of essential public infrastructure and facilities necessary to generate or retain private sector jobs and investments, attract private sector capital and promote regional competitiveness. This includes investments that expand and upgrade infrastructure to attract new industry, support technology-led development, redevelop brownfield sites and provide Eco-industrial development.

http://www.eda.gov/AboutEDA/Programs.xml

Contributions

The solicitation of *contributions* is an acceptable method of fund-raising for pedestrian improvements. These donations, typically in the form of land, cash, labor or materials, can be solicited to assist the City of Sanford with the enhancement of its pedestrian system. Corporations, civic organizations, individuals and other groups generally donate to a specific pedestrian project; however, donations may also be solicited for multiple project improvements or additions. Private, nonprofit, tax-exempt foundations such as the North Carolina Community Foundation are often used as a means of accepting and administering private gifts to a public entity.

Foundations

Foundations are another source of financing that allows direct contributions to be made within communities, states or the nation. These types of funds are usually described as special program foundations, general-purpose foundations or corporate foundations.

Foundations generally have very few restrictions or limitations and are typically received from local entities. One example of such a foundation is the Cannon Foundation, Inc.

Partnerships

To implement the recommendations contained in the comprehensive pedestrian plan, Sanford will most certainly have to expand their partnership agreements with other public agencies and private-sector organizations. There are many different types of partnerships that can be formed to achieve the goals established by the City. In fact, many local governments throughout the nation are utilizing partnerships with public and private-sector interests to accomplish community goals.

Listed below are the various types of partnerships that the City should consider in its efforts for the improvement of pedestrian facilities:

- Programming partnerships to co-sponsor events and facilities or to allow qualified outside agencies to conduct activities on properties, which are municipally-owned.

- Operational partnerships to share the responsibility for providing public access and use of facilities.

- Development partnerships to purchase land and/or build facilities.

- Management partnerships to maintain properties and/or facilities.

- Elected officials should become advocates for pedestrian facilities and promote the development of future improvements.

The City of Sanford is currently “partnered” with several entities in other City-related endeavors/functions and should evaluate forming additional partnerships, which address the needs of the pedestrian system.

NCDOT will be a very important partner as more facilities are developed in the area. Many of the proposed improvements involve NCDOT. It will be imperative that this partnership has good communication and coordination for the efficient implementation of projects.

Direct requests should be made to potential partners, asking them to meet to evaluate the possible benefits of partnering. This step should be made to generate interest and agreement *prior* to solidifying any responsibilities for each participating party.

Land Acquisition and Development

There are many different types of *land acquisition* available to the City of Sanford for the pedestrian system expansion and/or future development. Due to the land costs, as well as land availability, it is recommended that the City prioritize the property to be acquired for facilities regarding multi-purpose trails, which are typically off-street facilities. Listed below are several methods for acquiring and developing multi-purpose trails:

Local Gifts

Donations of land, money, labor or construction can have a significant impact on the acquisition and development of pedestrian facilities. The solicitation of local gifts is highly recommended and should be organized thoroughly, with the utilization of very specific strategic methods. This often (untapped) source of obtaining funds requires the contacting of potential donors such as individuals, institutions, foundations, service clubs, et cetera.

Life Estate

A life estate is a gift whereby a donor retains the land during his/her lifetime and relinquishes title of the property after his/her death. In return, the owner (or family) is relieved of property tax for the given land.

Easement

An easement is the most common type of “less-than-fee” interest in land. An easement seeks to compensate the property owner for the right to use his/her land in some way or to compensate for the loss of his/her privileges to use the land. Generally, the land owner may still use the land and therefore continues to generate property tax revenue for the municipality.

Fee Simple Purchase

Fee simple purchase is the most common method used to acquire municipal property for pedestrian facilities. Although it has the advantage of simplifying justification to the general public, fee simple purchase is the most difficult method to pursue, due to limited monetary resources.

Fee simple with lease-back or resale

This method allows municipalities to acquire land by fee simple purchase, yet allows them to either sell or lease the property to prospective users with restrictions that will preserve the land from future development. The fee simple with lease-back or resale method of development commonly results from situations in which land owners who have lost considerable monetary amounts in property value, determine that it is more economical to sell the land to the municipality (with a lease-back option) than to keep it.

Long-term option

Long-term options allow municipalities to purchase property over a long period of time. This method is particularly useful because it enables the municipality to consider particular pieces of land that may have future value, though it is not currently desired or affordable at the time. There are several advantages to this method of property acquisition: the City can protect the future of the land without purchasing it upfront and meanwhile, the purchase price of the land will not increase, with the City having the right to exercise its option. The disadvantage to the City is that all privileges relinquished by the land owner require compensation in the form of securing the option.

Identify Special Funding Opportunities for High Priority Projects

The funding sources listed above can be used for numerous projects proposed in this plan as well as future projects. Many of these projects can be funded as enhancement projects of the TIP. The improvements along the major corridors (that have substantial construction cost) should be strongly considered. Funding for mapping and signage can be allocated through the Governor's Highway Safety Program.

It will be important to incorporate the future facilities with incidental highway projects. This document will be used by NCDOT to determine areas where pedestrian improvements should be incorporated into the proposed roadway improvements. Major construction projects may require more than grants. Although grant funding is a great resource, the amount of money available can limit the size of the project. A bond referendum could help to determine whether the City's residents are willing to accept the cost for construction of major facilities.

The grants available for funding pedestrian facilities will evolve in the future. The funding amount for many grants may not be as much as others, while some may be very competitive because of the monies available. Partnering with other organizations typically lends more project significance when applying to funding agencies. Having multiple organizations applying for a grant, shows unity within a community, this in turn supports the grant application. In addition, having multiple partners will allow for more monies to be used for matching funds.

7.7 THE CITY OF SANFORD COMPREHENSIVE PEDESTRIAN PLAN

Although a significant amount of planning was performed in developing this plan, it is only a guide for the future. As new development and growth occurs in Sanford, new priorities may develop. The City should continually evaluate and update the plan in order to meet the primary needs of the community. As the projects are implemented, the City should take steps to update all involved parties in the progress being made. Additions to the plan should be formalized in order to insure continuity as stakeholders change.

- END OF SECTION -