

Albemarle Comprehensive Pedestrian Plan October 2007



City of Albemarle

Comprehensive Pedestrian Plan

EXECUTIVE SUMMARY

Albemarle's Current Pedestrian Environment

- Recent development trends toward NC 24/27
- City is becoming more suburban in character
- A growing interest in downtown
- Excellent pedestrian environment downtown
- Existing sidewalks in older neighborhoods close to downtown
- Some existing off road paths, and good corridor possibilities exist for additional paths
- Viable potential pedestrian connections



Pedestrian Plan Goals

1. Connect important destinations with sidewalks, greenways, and other pedestrian routes along roadways, utility lines, creeks, railroad lines or other potential corridors so that walking becomes a more viable transportation option.
2. Support and guide pedestrian-friendly land use decisions such as mixed-use zoning, connectivity, and infill that encourages a development style conducive to non-motorized transportation.
3. Improve safety and accessibility for pedestrians with a special concern for the disabled, elderly, children, and low income residents.
4. Improve environmental conditions and community health by reducing air, water and noise pollution resulting from unnecessary vehicular traffic and by increasing physical activity and exercise.
5. Encourage economic and social vitality by creating market, social interaction, and healthcare cost-saving opportunities.
6. Promote awareness through education of the wide-ranging benefits of a pedestrian lifestyle throughout the community.
7. Update and maintain existing pedestrian facilities with the necessary funding and workforce.

October 2007

Pedestrian Needs in Albemarle

Deficiencies in Pedestrian Network

Although Albemarle has a fairly well-developed sidewalk and crosswalk network in the downtown area and some surrounding neighborhoods, pedestrian system elements elsewhere are limited. Many of the City's roadways are wide enough to support walkways, and countdown crossing signals are beginning to be placed at intersections across town. Unfortunately, many residential areas have no pedestrian facilities at all. The Highway 24/27 Bypass bisects the City of Albemarle and was designed to accommodate mainly automobile travel, creating difficult connectivity challenges.



Building setback and design have big impacts on walkability.



Wide roads and high speed-limits encourage speeding.



Roads planned only for automobiles limit safe walking.



Lack of crosswalks increase risks.



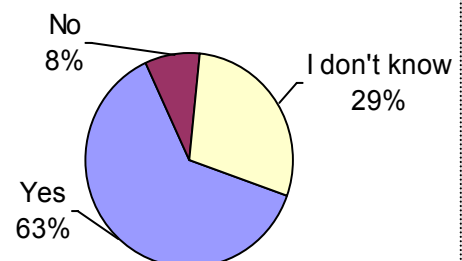
Poor pedestrian access to shopping areas encourages driving.

Summary of Public Input

A total of two public forums were held over the course of this project and a survey was distributed with the City utility bill. The first forum was intended to introduce the project, present background information, and seek input from the community regarding pedestrian needs and issues. The second forum presented draft recommendations, based on an assessment of needs through mechanisms including public and stakeholder input, a review of relevant policies, and field visits. Key points raised by the public at these meetings and in the survey results include:

- Sidewalks, greenways, traffic calming are needed
- Heavy traffic, poor crossings, and high speeds make walking dangerous
- Existing facilities need to be connected with a particular emphasis on schools, low-income areas, public facilities, and parks.

Would you support public funding initiatives for pedestrian facilities?



Pedestrian Opportunities

System Overview

National transportation surveys indicate that more than half of all auto trips in the United States are less than two miles long. More than 25% of car trips in the United States are one mile or less, and 14% of car trips are a half-mile or less. But, Americans choose to not take a car for trips less than a mile only 25% of the time.

In comparison, according to the London National Travel Survey, 39% of trips in London under five miles in length are walked, and 80% of trips under one mile in length are walked. In the Netherlands, up to 40% of all trips nationwide are made by bicycle, and a third of the people ride their bike to work everyday. Only 1% of all trips in American cities are by bicycle. Part of this difference is due to denser development in clusters, better pedestrian infrastructure, and intelligent land use policies in European cities.

Pedestrians generally have three needs when it comes to walking. Their routes need to be (1) short and direct, (2) safe, and (3) pleasurable.

Developing a pedestrian plan that provides more opportunities to make short trips by walking would provide the largest benefit the City can achieve over the long term. Increasing commercial and residential density in community centers would decrease the distance that pedestrians need to walk. Providing safe walking and road crossing infrastructure within community centers will help Albemarle's citizens become more comfortable with walking. Making the walking experience pleasurable by creating aesthetically pleasing routes that are free from the noise, stress and eyesores caused from pollution, traffic, unattractive architecture, crime, and other factors will allow the residents to enjoy and truly be a part of their community.

Pedestrian Oriented Development Districts

The Albemarle Comprehensive Pedestrian Plan is focused around a series of Pedestrian Oriented Development Districts. By identifying neighborhoods that presently or potentially have community necessities such as residential areas, shopping areas, schools, parks, and employment centers, a successful pedestrian plan can be implemented.

These Pedestrian Oriented Development Districts are defined using quarter mile and half-mile radius circles that currently have or potentially will have the ingredients necessary for frequent walking trips. A quarter mile is the distance that is most likely to be considered walkable by the greatest number of pedestrians. It is preferred that the majority of the most frequented trip generators be located within the quarter mile district. A half mile is considered to be the upper limit for most simple walking trips, and this portion of the Pedestrian Oriented Development District is usually best suited for lower density residential areas or less frequented trip generators. This plan identifies the center of each district and defines the borders of both the quarter mile and half mile radii. Shared-use paths and other pedestrian infrastructure connect these districts to each other.

The designated Pedestrian Oriented Development Districts are intended primarily to identify areas in which pedestrian-friendly development should be encouraged. Although many proposed pedestrian infrastructure projects are located within one or more of these districts, it is important to note that sidewalks, paths, other infrastructure projects, and policies can and should be implemented outside of these districts as well.



Projects

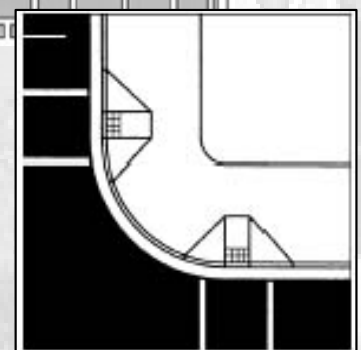
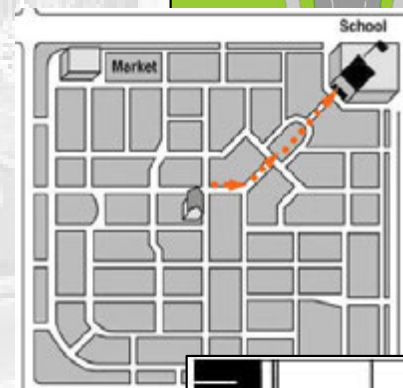
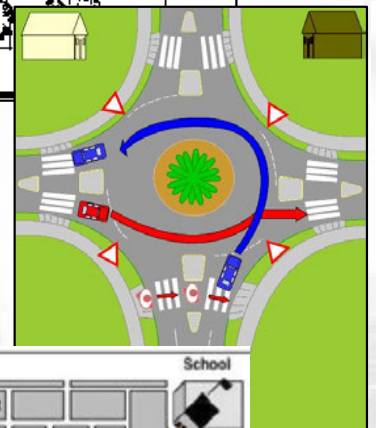
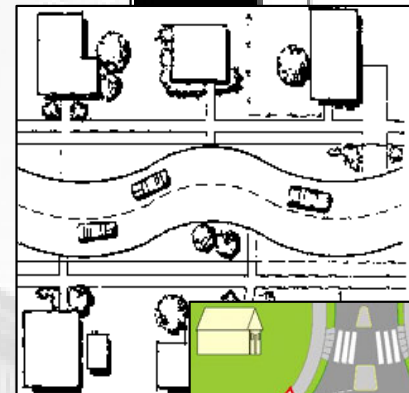
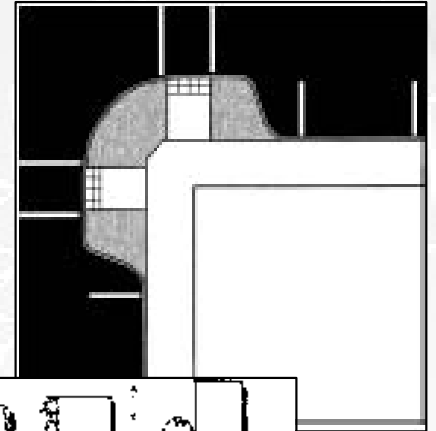
Sidewalks



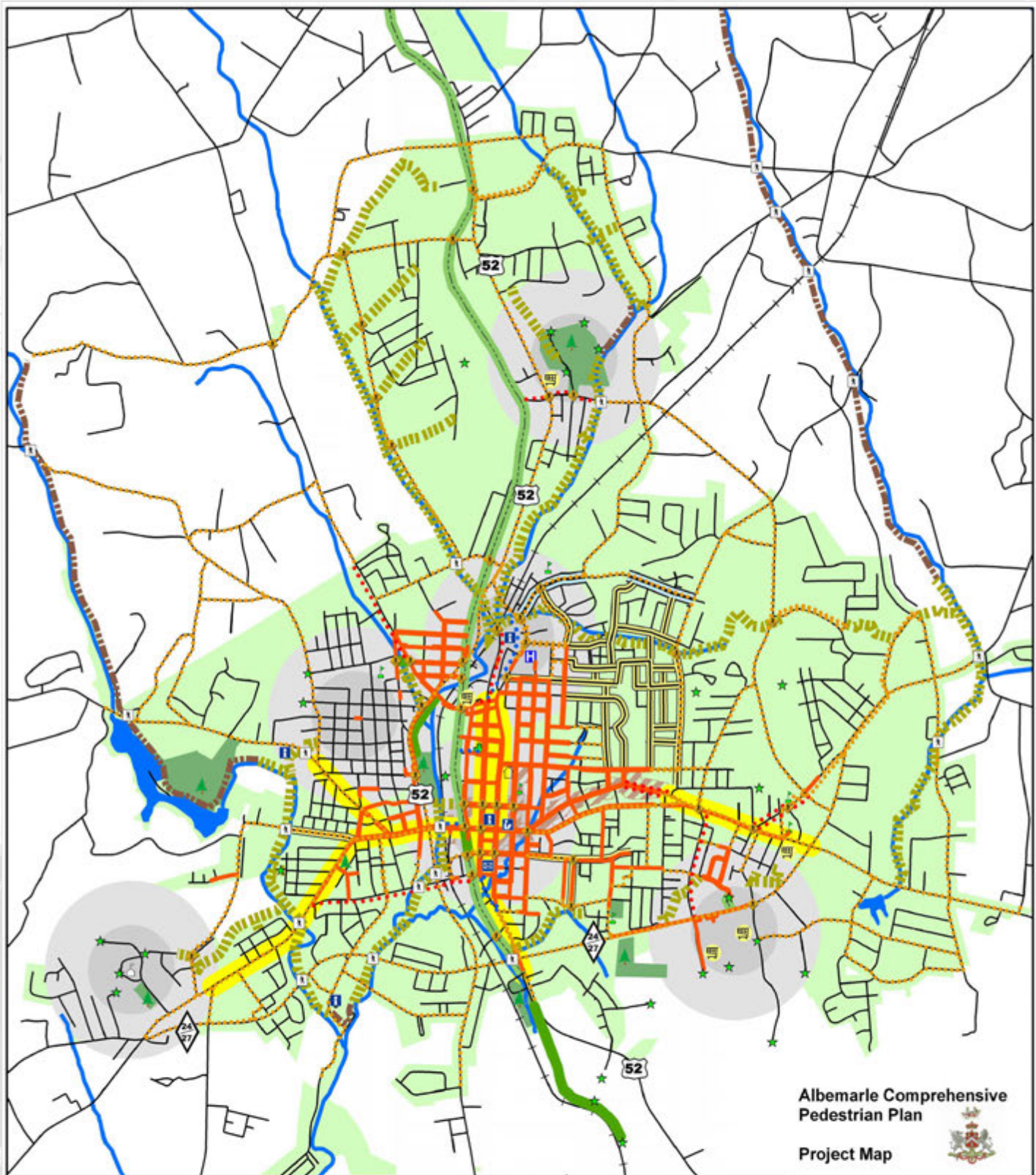
Shared-Use Paths



Crosswalks



Traffic Calming
and Accessibility



- Public Service Building
- Grocery
- Senior Center
- Library
- Community College
- Post Office
- Park
- Schools
- YMCA
- Hospitals

- Roads
- Railroads
- Existing Sidewalks
- Existing Shared-Use Paths
- Streams
- Lakes
- Parks
- Historic Districts
- Albemarle City Limits

Proposed Road Right-of-Way Features

- Retrofit 5' Sidewalks
- Sidewalks by Policy
- 6-15' Sidewalks
- Striped Shoulders
- Bike Lane
- Crosswalk
- Underpass
- Useful Connections
- Proposed Streetscape Corridor

Proposed Shared-Use Paths

- Along Sewer
- Along Abandoned RR
- River Walkway

Proposed Pedestrian Districts

- Quarter Mile Radius
- Half Mile Radius

0 0.5 1 Miles

Ancillary Programs

In addition to infrastructure projects and policy modifications, a variety of ancillary programs are recommended to enhance the overall pedestrian environment and help establish a walking “culture” in Albemarle. Examples of beneficial programs are highlighted below; these and other programs are discussed in detail in the full report.

Spot Improvement & Maintenance Programs

Just as potholes, uneven pavement, unsafe intersections, and visual obstructions irritate automobile drivers, they do the same to pedestrians. Funding should be set aside for maintenance of worn sidewalks and consideration should be made as to which material to use to maximize the life of the sidewalk. A sidewalk inventory needs to be completed immediately, and maintenance improvements, connectivity, and ADA compliant upgrades should be prioritized.



Education Programs

School Safety Patrol Programs, safety signs, positive public marketing, and other programs have been responsible for an increased awareness and an increase in safety for pedestrians across the nation. In addition, driver and pedestrian education efforts will make the streets safer so that citizens feel safe walking along the roadways.



Encouragement and Promotional Programs

City programs that distribute and award pedometers, patches, and certificates of achievement could encourage the public to walk. Community gatherings or athletic activities on greenways, parkland, or closed roadways can spark awareness and create a desire for Albemarle’s citizens to interact and travel by foot. Programs that give security and comfort to the elderly and other adult pedestrians also help to increase the walking population, while organized days where citizens walk to work or school create a sense of security. One valuable program, Safe Routes to School, can be initiated to help create a better walking environment for school children.



Enforcement Programs

Enforcing existing laws, reducing the speed limits, and increasing the police presence throughout the community can help to enforce laws that protect walkers in Albemarle.

Pedestrians Hit by 30 MPH Car



Other Programs

Providing alternate forms of transportation such as transit or bicycle accommodations can increase the practicality of lifestyle choices to increase walking. Keeping the streets and walkways clear of litter can make the walking environment more appealing, and wayfinding signs can create routes that are more practical and accessible.



Policies and Ordinances

The City of Albemarle is currently updating its Land Use Plan. This pedestrian plan is intended to recommend policies that should be considered by the City as part of its comprehensive update of ordinances. The recommendations provided are intended to create a more pedestrian-friendly environment in the City. Key recommendations are summarized below; additional suggestions and information are contained in the full report.

Policy Recommendations

Use of Pedestrian Oriented Development Districts as a Planning Tool

As a planning tool, the Pedestrian Oriented Development District should be used to guide the locating of mixed-use pedestrian-oriented developments (such as shopping, high-density residential, and public services). Future growth of this type should be strongly encouraged within Pedestrian Oriented Development Districts and strongly discouraged outside of these districts; likewise, development types that are not pedestrian-friendly by nature (such as most industrial sites, distribution centers, and some low-density residential uses) should not be encouraged within these areas.

Local Ordinance Recommendations

Requirements for Infrastructure Associated with New Developments

Requirements for new pedestrian infrastructure should be consistent throughout the City's planning jurisdiction, not just in the designated Pedestrian Oriented Development Districts. Selected suggested guidelines are as follows (these requirements should apply to all new developments; not just those that are new subdivisions):

- New residential development must have a grid-like or interconnected curvilinear street pattern. These block separations may be vehicular roads or 10 -12 foot wide non-motorized traffic connections.
- New commercial development must be oriented to the pedestrian and include pedestrian walkways.
- Most cul-de-sacs will not be permitted unless geographic or other natural barriers exist that make connections unrealistic. A developer may create a short cul-de-sac or a "close" if an acceptable bicycle and pedestrian connection is created.
- Any new development or road construction where there is a pedestrian project mapped from the Comprehensive Pedestrian Plan must include that project to a functioning level according to guidelines. In many cases, exact alignment of the projects is not definite.
- New developments must connect to neighboring developments. Commercial areas must create a vehicular and/or pedestrian connection to adjacent residential communities and provide a future connection option for future developments. New residential communities must connect to existing residential and commercial developments, as well as provide connection possibilities to future adjacent developments. Exemptions may apply if there is a substantial natural or geographical barrier, or if there is an environmental concern with such a connection.
- All new commercial, residential, and mixed-use developments should provide sidewalks on both sides of the street, provide buffering from auto traffic and off-street parking lots, and provide trees that will shade sidewalks. All road construction projects should include acceptable pedestrian facilities that complete the transportation system. Accommodating motor vehicle traffic only is not acceptable.

Acquisition of Easements for Pedestrian Projects

As the City seeks to create sidewalk connections in areas that are already developed, the availability of right-of-way inevitably will be an obstacle. The City should take steps to formalize a policy regarding the construction of sidewalks or other pedestrian projects outside of the public right-of-way. Ideally, the City should identify opportunities to reach agreements with property owners to provide a sidewalk or shared-use path easement as necessary for new projects without acquiring property, or to use existing utility easements.

Implementation Plan

Infrastructure Project Summary

To help narrow the immediate focus for the City in the implementation of pedestrian projects, a subset of “high priority projects” was defined based on the scores received by each project as part of a prioritization process. The fifteen projects receiving a score of at least 70 out of 100 points were designated as high priority projects. Focusing initially on this more limited list of infrastructure projects will enable the City to implement the projects that will have the most benefit to pedestrians in the area, while building support for additional development of the pedestrian network. The other projects identified in the plan could still be implemented with or before these high priority projects if the resources become available and the need or opportunity is apparent.

Rank	Description of Improvement	Roadway / Location
1	Countdown signal & crosswalks	At all intersections within 1/4 mile from City Hall
2	6-15' sidewalk	1st St. from Old Charlotte Rd. to East Park Avenue
3	5' sidewalk	Leonard Ave. from Main St. to Hwy. 24/27 Bypass
4	10' paved upland shared-use path with appropriate lighting and crossing considerations	Social trail from Inger Street terminus to Highway 24/27 Bypass
5	Countdown signal & crosswalks	24/27 and Henson Street
6	Striped shoulders for traffic calming	Martin Luther King Jr. Dr. from 4th St. to Colston St.
7	10' paved lowland shared-use path with pedestrian-scaled lighting	On sewer line social trail from Inger St. to Arey Ave.
8	10' paved upland shared-use path including appropriate road crossings	Abandoned rail line from current rail trail to Snuggs Street
9	Streetscape/sidewalks/landscaping/crosswalks	Main Street & Pee Dee Ave. from Ridge St. to 24/27
10	5' sidewalk including appropriate road crossings	Both sides of Badin Road to middle school and continue on one side to the NE Connector
11	Striped shoulders for traffic calming including appropriate neighborhood crosswalks	Throughout neighborhoods in between 2nd Street, Ridge St., Park Ridge Rd., and Montgomery Ave.
12	5' sidewalk including appropriate crosswalks	Salisbury Ave. from Watts St. to McKee St.
13	10' paved lowland shared-use path including appropriate road crossings	On Sewer Line (Coley Branch) from the existing path to Montgomery Park Greenway
14	Streetscape/sidewalks/landscaping/crosswalks	1st and 2nd Streets from Salisbury Ave. to US 52
15	5' sidewalk	Old Charlotte Road from 1st St. to Main St.

Funding Sources

A combination of funding sources will be needed to construct the infrastructure projects proposed in this plan. The City of Albemarle should seek all viable funding opportunities for project implementation, including Federal and State monies where available. Special funding programs for specific types of projects (e.g. Safe Routes to School) should also be pursued. Private foundations should be thoroughly researched to identify possible funding options.

Although many funding sources potentially can provide revenues for project implementation, it is likely that local government funding will be a primary component (for matching federal / state funds and for implementation where other revenue streams are not available). Therefore, it is recommended that the City establish a set aside amount in the annual Public Works budget for pedestrian infrastructure project implementation. An annual set aside would ensure that progress is made every year on constructing the specified projects, and would illustrate a commitment from the City to improve walkability.



**THE CITY OF ALBEMARLE COMPREHENSIVE PEDESTRIAN PLAN
OCTOBER 2007**



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ACKNOWLEDGEMENTS

This pedestrian plan required help from numerous agency representatives and citizens, and would have been lacking in substance, quality, and foresight without input from each of these stakeholders.

The following city, county, and state staff members participated in the development of this plan:

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Lindsey Dunevant
John Fields, Stanly County Family YMCA
Rick Laton, Laton's Body Shop
Margaret Rudisill, Stanly Regional Medical Center
Laura Wheeler, Albemarle Greenway Commission

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Bill Hatly
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Additionally, the Albemarle City Council members and the North Carolina Department of Transportation made this plan possible when they agreed to fund the Plan in 2005, and then to adopt the Plan in October of 2007.



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SECTION I: INTRODUCTION





1.1. SETTING THE STAGE

Albemarle has undergone radical change since it was founded. Built on an old stage road that connected Charlotte and Raleigh, it was an important hub for regional commerce and trade. Rail service began with the Yadkin Railroad in 1891, then with the Winston Salem Railway in 1910. The Yadkin Railroad soon was abandoned, the first paved highway was built from Albemarle to Charlotte in 1923, and the automobile trend has continued since. Today, the railroad is no longer the primary means of transporting people and goods into and out of town; trucks and automobiles serve this purpose. Rising costs of living and a change in social norms create dual income households, which, in turn, position families' homes geographically between the employment areas. The pace of life has increased, free time has decreased, nutritional and exercise habits are slipping, and the public more commonly perceives pedestrian transportation as inferior, hazardous, or even dangerous. In fact, the words "dull" and "ordinary" appear in a thesaurus as synonyms for "pedestrian". All of these factors make transportation by foot very difficult for those who currently walk, those who would prefer to walk but cannot, and those who will need to walk in the future. But Albemarle is showing similar trends as other municipalities by rediscovering foot power. Part of the Yadkin Railroad is now a multi-use trail, and Albemarle is recognized as a National Main Street City by the National Trust for Historic Preservation.

Quick Facts on Walking

- Current land use patterns such as large-lot or strip development, lack of through streets or walkways, dead wall space, lack of crosswalks, long blocks, unappealing walks, wide and unshaded streets, wide streets with no medians and large shopping malls all inhibit walking. (*Local Government Commission. Why People Don't Walk and What City Planners Can Do About It (online at www.lgc.org - no date)*)
- In neighborhoods with square city blocks, people walk up to three times more than in neighborhoods with cul-de-sac streets or other connectivity-reducing features. (*Rutherford, McCormack, and Wilkinson. Travel impacts of urban form: implications from an analysis of two Seattle area travel diaries. Presented at the TMIP Conference on Urban Design, Telecommunications and Travel Forecasting, 1996*)
- One-fourth of all trips are one mile or less, but three-fourths of these short trips are made by car. (*Nationwide Personal Transportation Survey. US Department of Transportation, Federal Highway Administration, Research and Technical Support Center, 1997*)
- In 1969, approximately 50 percent of children walked or biked to school. Today, fewer than 15 percent of schoolchildren walk or bike to school. (The National Center for Safe Routes to School, 2007)
- A recent study of South Carolina schools found that children today were much less likely to walk to a school that had been built more recently. More than 20 percent of students that attended schools that were built during the 1960s walked to school. For schools built in the 1970s the share dropped below 15 percent, while for those built in the 1980s and 1990s it fell below 5 percent. (*Childhood Obesity Journal, Volume 16, Number 1 Spring 2006*)



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- The majority of U.S. children do not walk or bike to school, approximately one third ride a school bus, and half are driven in a private vehicle. Less than one of their trips in seven is made by walking or biking. (*Center for Disease Control, 2002*)
- Urban Sprawl is linked to obesity. The denser the city's development, the less likely its citizens are to be overweight. (*University of Maryland's National Center for Smart Growth, no date*)
- 38% of all Americans feel that the availability of bikeways, walking paths, and sidewalks for getting to work, shopping and recreation is very important in choosing where to live. (*Bureau of Transportation Statistics (BTS) October 2000 Omnibus Household Survey*)
- Trails and greenways have been shown to bolster property values and make adjacent properties easier to sell. A 1998 study of property values along the Mountain Bay Trail in Brown County, Wisconsin, shows that lots adjacent to the trail sold faster and for an average of nine percent more than similar property not located next to the trail. (*Recreation Trails, Crime, and Property Values: Brown County's Mountain-Bay Trail and the Proposed Fox River Trail, Brown County Planning Commission, Green Bay, July 6, 1998*)
- 57% of home buyers rank walking trails as their most desired amenity, ahead of ball parks and outdoor pools. (*National Home Builder Survey, 2004*)
- Multiple nationwide studies indicate parks, greenways, and trails increase the resale value of nearby properties by 5 to 20 percent. (*Mecklenburg County Park and Recreation web site, 2006*)
- A School of Public Health study showed that where more walking trails had been built, nearly 40% of people with access had used the trails and more than 55% of trail walkers had increased their amount of walking since they began using the trail. (*Public Walking Trails May Increase Community Fitness Levels, Center for the Advancement of Health, no date*)
- Studies show that a 5 to 10 mph reduction in traffic speeds can increase adjacent property values by roughly 20% (*Local Government Commission. The Economic Benefits of Walkable Communities (online at www.lgc.org - no date)*)
- Around one-third of all Americans cannot or do not drive because they may be too young, too old, or unable to afford a car. (*2000 U.S. Census*)
- Widening roads actually worsens traffic congestion in cities. (*University of London Center for Transport Studies, 2000*)
- The average American directly spends almost 20% of their salary on transportation. This does not include the numerous extra shared public and commercial costs that occur because of an auto-dependent society. (*AAA, 2005 & Bureau of Labor Statistics, 2003*)



- 45% of people in August of 2005 spent less on other things to pay the increase in gas prices. (*ABC News Poll, 2005*)
- Regions with transportation choices such as walking and mass-transit are the most economically productive and competitive, while those that are limited to the automobile tend to have reduced regional economic development. (*World Bank, no date*)
- Traffic calming, mixed-use zoning and pedestrian projects can increase private investment substantially along previously automobile-dominated roads. (*Engineering News Record, 1998*)

The amount of facts that could be listed to support pedestrian improvements could go on indefinitely, but it is clear that a better pedestrian community creates a better community economically, aesthetically, socially, and health-wise. Current trends show that planning efforts to accommodate the automobile while ignoring the pedestrian has made our population less active than it ever was in history, and thus more prone to health problems. These trends need to be reversed.

Benefits of Walking

Transportation Benefits

Walking and bicycling can help to reduce roadway congestion. Walking and bicycling require less space per traveler than automobiles, and roadway improvements to accommodate pedestrians and bicycles can actually enhance safety for motorists. A 1995 Rodale Press survey found that Americans want the opportunity to walk or bike instead of drive and 40% of U.S. adults say they would commute by bike if safe facilities were available.

Health Benefits

The health benefits of regular physical activity include the reduced risk of coronary heart disease, stroke, and other chronic diseases; lower health care costs; and improved quality of life for people of all ages. Regular exercise gives senior adults a stronger heart, a positive mental outlook and an increased chance of remaining independent longer. In fact, walking for a minimum of 30 minutes each day or about 12 miles each week is required to retain a healthy body, but 60% of Americans lead completely sedentary lifestyles and 40% are clinically overweight (*1998 Report of the American Medical Association*).

Environmental Benefits

Reductions in air pollution (emissions and tire wear), water pollution (surface runoff, oil production, and disposal), noise pollution, landfill materials, litter, urban sprawl, and wildlife habitat fragmentation will be a result of each person who chooses to walk instead of drive. Sixty percent of the pollution created by automobile emissions happens in the first few minutes of operation, meaning that shorter car trips are more polluting on a per-mile basis than longer trips.

Economic Benefits

Direct driving costs include gasoline, insurance, taxes and registration, maintenance, accidents, fines, parking, tolls, and depreciation. In fact, the American family spends about one-fifth of its income on transportation expenses, second only to housing. There are indirect costs of driving that society subsidizes with tax dollars, product pricing, salaries, and housing costs including



road infrastructure, environmental mitigation, parking, health costs, and work loss due to traffic, health, or maintenance issues. In addition, the recent gas price increases showed that when people spend more money on gas, they spend less money on other things. (An ABC News Poll found that 45% of people in August of 2005 spent less on other things to pay for gas, and the Charlotte Observer reported that vacationers for the Fourth of July weekend in 2006 still packed Myrtle Beach, but “spent tremendously less (money.)”)

Walking could also stimulate the economy. Pedestrian-friendly shopping areas attract customers that would typically miss the vendors’ storefront advertisements and are more convenient for passers-by on foot to “hop in” for a quick purchase. Shopping is also likely to become a social or a tourist attraction in pedestrian areas, which could enhance sales for storeowners. Property and home values also climb as the area becomes more pedestrian-accessible. Residents have confirmed time and time again through surveys and home purchases that they want to be able to live where they can safely walk. Higher home values increase the tax base for the community, which in turn provides more public services that increase the residents’ quality of life.

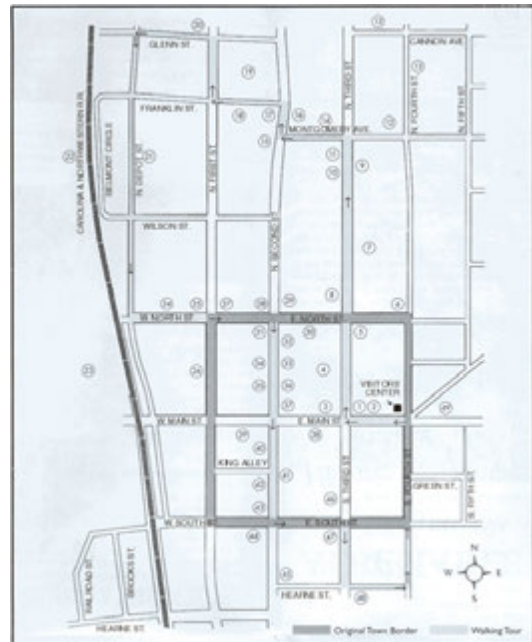
Quality of Life Benefits

Walking relieves stress, creates better health, saves money, provides outdoor recreational opportunities, creates learning opportunities for children, gives citizens the freedom of independence, and provides countless other benefits that make life better. In addition, the acts of removing vehicles from the roads or creating more areas where people are free to be away from automobiles make life less stressful. Several studies show that children who live near busy roads have higher blood pressure, faster heart beats, and higher levels of stress hormones due to the constant low level noise. (One source is a 2001 Cornell University study.)

1.2. PLANNING FOR PEDESTRIANS IN ALBEMARLE

Past Efforts

The City of Albemarle has been actively involved in several planning efforts containing elements related to pedestrian travel. The paved rail trail along the old Yadkin Railroad bed, the walking and jogging rail trail in Rock Creek Park, the signed running route through downtown, the restoration of the former Winston Salem Southbound Railway Depot into a farmer’s market, and pedestrian safety features downtown have helped to keep the historical center of Albemarle pedestrian-friendly. In addition, the Albemarle Downtown Development Corporation distributes a map that shows a walking tour of the historic sites around downtown Albemarle. Future transportation plans will include findings from this pedestrian plan as a component of plans that encompasses all modes of transportation in Albemarle. Each of these plans will have a significant effect on the pedestrian environment in the area, and thus have a large effect on Albemarle’s future.





Current Trends

This pedestrian plan represents Albemarle's first comprehensive study that focuses entirely on improving walking conditions. Southern cities are growing rapidly, and Albemarle recognizes that if it wants to retain its charm, character, and quality of life, walking must be integrated into the fabric of the community across the entire city. Pedestrian facility improvements must be made to realize the benefits of walking described earlier, and programs and policies must be in place to ensure that walking is a viable option for area residents in the years to come.

Local residents are becoming more actively involved in advocating for pedestrian and bicycle improvements, particularly with regard to safety concerns for walkers along busy streets in primarily residential areas. Residents of Albemarle understand that rapid growth is changing their town, and want to protect the safety of pedestrians as growth and development continue to occur. The citizens that have participated in this planning process have reacted favorably to the development of the Comprehensive Pedestrian Plan, and generally are excited about the prospects of improved conditions for walking. In time, the rising fuel prices will cause more citizens to demand alternatives to motor vehicles, and having a plan and the necessary infrastructure in place at that time will be a great value.

North Carolina Department of Transportation Bicycle and Pedestrian Planning Grant Initiative

In 2005, the City of Albemarle was awarded a \$24,500 matching grant from the NCDOT Bicycle and Pedestrian Planning Grant Initiative to create a comprehensive pedestrian plan. This program encourages the development of comprehensive municipal bicycle and pedestrian plans. The Initiative stipulates that plans may be developed by consultants or by a combination of both municipal staff and consultants and a full time, permanent employee of the municipality must be assigned as project manager to oversee the plan development. URS Corporation and The Lawrence Group, using staff primarily based in Charlotte, was selected to develop the plan with Albemarle's Director of Parks and Recreation, Lindsey Dunevant acting as Project Manager for the City for the first half of the project followed by Public Works Director Michael E. Lambert for the second half. The requirements also call for a steering committee comprised of relevant local staff, regional planning staff, advocates and representatives of stakeholder groups to oversee development of the plan. Mary Meletiou, NCDOT's consultant for their Bicycle and Pedestrian Planning Grant Initiative with the Institute for Transportation Research and Education (ITRE) was actively involved with the process of this plan's completion.



Scope and Purpose of Plan

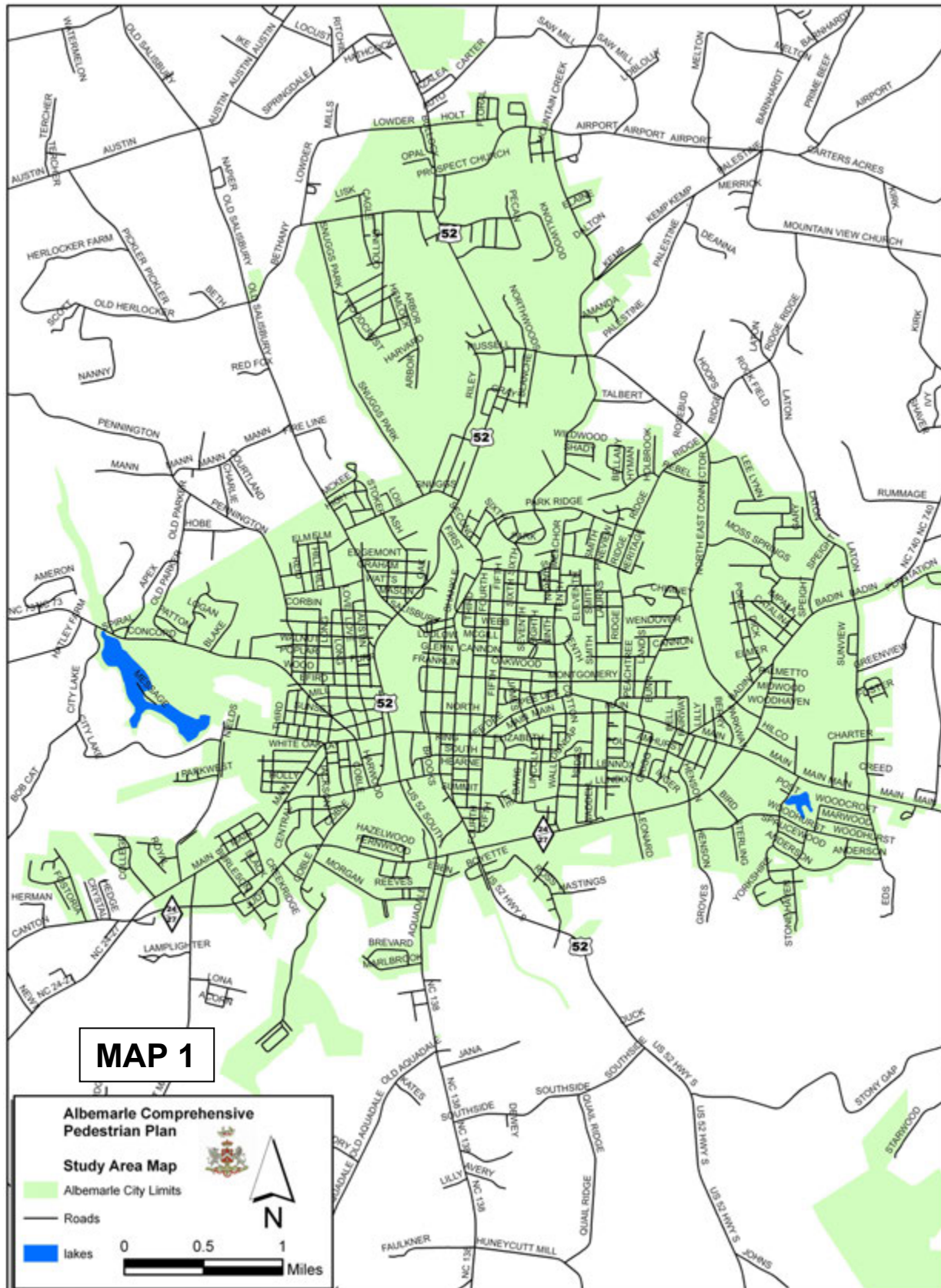
The scope of this pedestrian plan is to provide a comprehensive assessment, including identifying pedestrian needs and deficiencies, examining optional improvements, and prioritizing implementation strategies with viable funding sources. The Plan also examines existing conditions, identifies pedestrian route networks, conducts needs assessments, identifies design elements, and develops a strategic implementation plan.

The development of this plan was guided by a steering committee comprised of City staff and local stakeholders, including representatives of the following organizations:

- Albemarle Planning staff;
- Albemarle Police Department – School Resource Officer;
- Albemarle Parks and Recreation Department;
- Albemarle Public Works Department;
- Public Housing;
- Stanly County Health Department;
- Stanly County Family YMCA;
- North Carolina Department of Transportation; and
- Local citizens.

The Steering Committee met four times through the planning process to review interim material and offer guidance on study direction and efforts. As discussed later in this document, it is recommended that the Steering Committee or a similar appointed committee continue to be active after the conclusion of this study as an advisory committee to monitor implementation of the Plan and to advocate for additional pedestrian improvements.

The study area includes the City limits of Albemarle. A map of the study area is shown in **Map 1**.





1.3. GOALS OF PEDESTRIAN PLAN

To guide the development of the Plan itself, a series of goals was defined. Goals provide the framework for the entire study, and are needed to ensure that the Plan's recommendations address the true needs of the City. These goals illustrate the most important pedestrian principles to local stakeholders, based on input received from the Steering Committee, the mailed survey, and at the first public forum (discussed later in this report). The goals developed for this plan were also used as a basis for the project prioritization criteria (also described later in this report). Improvements that address these goals will make Albemarle a better community for pedestrians.

Defining the goals at the beginning of the project ensures that the recommendations are tailored to the needs of the City, and linking the project prioritization criteria to the goals provides a mechanism for ensuring that the most beneficial projects are ranked highly for implementation. The following seven goals were defined, based on stakeholder input:

1. Connect important destinations with sidewalks, greenways, and other pedestrian routes along roadways, utility lines, creeks, railroad lines or other potential corridors so that walking becomes a more viable transportation option.
2. Support and guide pedestrian-friendly land use decisions such as mixed-use zoning, connectivity, and infill that encourages a development style conducive to non-motorized transportation.
3. Improve safety and accessibility for pedestrians with a special concern for the disabled, elderly, children, and low income residents.
4. Improve environmental conditions and community health by reducing air, water and noise pollution resulting from unnecessary vehicular traffic and by increasing physical activity and exercise.
5. Encourage economic and social vitality by creating market, social interaction, and healthcare cost-saving opportunities.
6. Promote awareness through education of the wide-ranging benefits of a pedestrian lifestyle throughout the community.
7. Update and maintain existing pedestrian facilities with the necessary funding and workforce

SECTION 2: EXISTING CONDITIONS





2.1. OVERVIEW OF CURRENT CONDITIONS

Albemarle has an opportunity. Although the City is growing and changing quickly, it has the opportunity to take action before it experiences the growth-associated problems that other southern cities have already experienced. Acting now to acquire new lands and easements, encouraging pedestrian friendly developments, and supporting healthy lifestyles will help ensure that Albemarle continues to be a good place to live and visit.



Downtown Albemarle, NC

Albemarle has a functioning historical town center complete with a library, visitor center, City Hall, restaurants, schools, a nearby YMCA, clothing stores, a running/vacuum store, antique shops, banks, florists, a farmer's market, and other specialty shops. It also houses the county seat and draws visitors from around the county for work, chores, or pleasure who become pedestrians and consumers while downtown. As the City's commercial growth has evolved around the NC Highway 24/27 Bypass, the traditional business center has remained intact and functional. The majority of the grocery stores are now located away from the city center, along with the general stores and a growing number of the

residential units. County, state, and federal service buildings with health, extension, education, and social security services are located at the Stanly Commons, just north of downtown. Keeping or replacing these necessary community ingredients will ensure that downtown Albemarle is self-functioning and not merely a pseudo-town center with novelty stores and municipal worker lunch spots. Every effort must be made to revitalize and continue to develop the inner core of Albemarle's historical downtown. A downtown is the most pedestrian accessible region of a city because the blocks are short, the sidewalks are accommodating, the distances are short, vendors are numerous, roadways are narrow with low traffic speeds, and the conveniences are huge. Denser development is typically associated with limited parking as well, which in turn encourages people to walk.

Revitalization of a downtown can benefit a community because it:

1. Increases the tax base of the community; taking unoccupied or underutilized buildings and converting them to revenue producing businesses.
2. Increases the retail mix; dollars that would be spent elsewhere are circulated locally.
3. Encourages much needed building maintenance and facade rehabilitations.
4. Increases tourism and tourism-related dollars.
5. Promotes the image of downtown as a single entity: a fun, attractive place that serves as the hub of community life.
6. Portrays the image and pride of the entire community. It is an active and attractive downtown image which potential new businesses and industries want when looking for new locations.
7. Instills pride in the community.
8. Creates jobs and investment.



9. Decreases the municipal service costs for an outwardly expanding City Limit.
10. Reduces traffic and its associated health and economic costs.
11. Provides for a self-functioning community where people can live, work, and socialize.

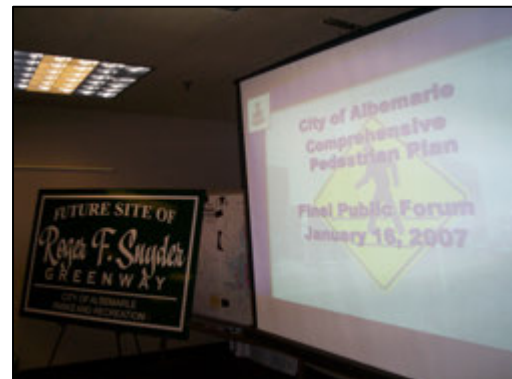
The commercial development style of the Highway 24/27 Bypass both divided downtown Albemarle from southern Albemarle, and guided growth towards an automobile-dependent pattern. Multi-laned highways are very intimidating for pedestrians to walk along, unsafe to cross and can eliminate access to an entire section of the city for foot travelers. Policies for future roadways can make certain that this disconnection for pedestrians does not happen again.

2.2. COMMUNITY CONCERNS, ISSUES, AND NEEDS

The determination of community concerns, issues, and needs is paramount to a successful pedestrian plan. The issues described in the following pages were used as the framework to develop strategies and recommendations to improve the walking environment in and around Albemarle. Specific recommendations resulting from these efforts are described in subsequent sections.

Public Forums

A total of two public forums were held over the course of this project. The first forum was intended to introduce the project, present background information, and seek input from the community regarding pedestrian needs and issues. A second forum was held later in the study to present draft recommendations, based on an assessment of needs through mechanisms including public and stakeholder input, a review of relevant plans and projects, and policies, and field reconnaissance.



January 2007 Public Forum

The first public forum for the Albemarle Comprehensive Pedestrian Plan was held on September 25th at the City Hall Annex. There was an initial presentation at 7:00 PM followed by a comment and open house period until 9:00 PM. Approximately a dozen people attended, many of which were City staff. Seven citizens signed the register.

The second public forum was held on January 16th in the City Council Chambers of the City Hall Annex. The meeting was held from 5:30 PM to 7:00 PM, with a 30-minute presentation and a 15-minute question and answer session on the highlights of the plan. Approximately fifteen people attended, with approximately ten of those being citizens and not City staff. The presentation summarized the highlights of the draft plan, including the following elements:

- Purpose of Pedestrian Plan / Benefits of Walking;
- Pedestrian Plan Goals;
- Existing Pedestrian Conditions and Policies;
- Summary of Public Input;

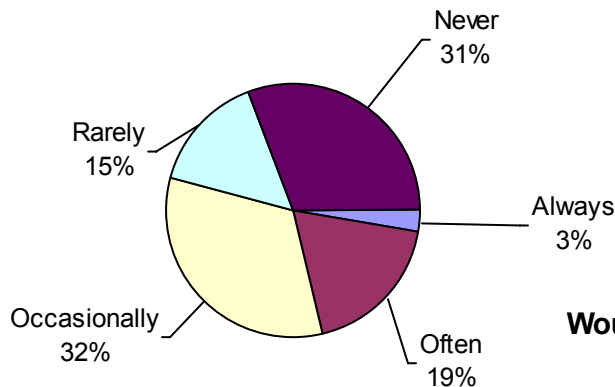


- Deficiencies in Pedestrian Network;
- Development Patterns and Walkability;
- Types of Pedestrian Projects;
- Overall Recommendations;
- Summary of Projects;
- Policy and Program Recommendations;
- Funding Sources;
- Implementation Process; and
- Next Steps.

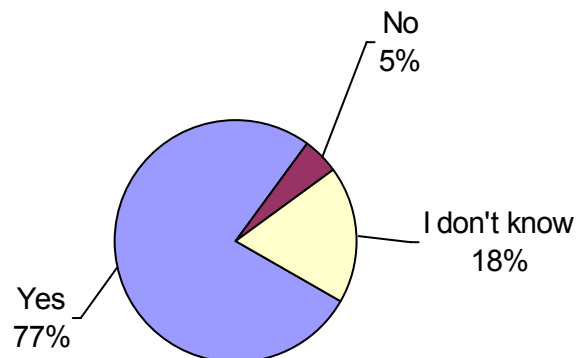
The participants were invited to comment on the highlights of the draft plan to ensure that public feedback is fully incorporated into the findings and recommendations. A question-and-answer session followed the formal presentation. Neither of these forums produced many suggestions, mainly overall comments on how this plan is supported.

In addition, The City of Albemarle distributed approximately 6,500 surveys to some of its utility customers with their bill in December of 2006. 358 surveys were completed and returned (5.5% of the total distribution). In general, the survey found that 22% of the respondents always or often walk for transportation while 46% of the respondents never or rarely walk for transportation. 32% of the respondents said they occasionally walk for transportation. Of those respondents that did walk for transportation, 12% walk as their transportation mode out of necessity rather than because of choice.

I choose to walk for TRANSPORTATION (not recreation) around my community



Would you support public development policies that encourage pedestrian facilities?





Albemarle Comprehensive Pedestrian Plan

56% of the respondents said they often walk for pleasure or exercise, 41% said they occasionally do this, while 3% never walk for pleasure or exercise.

Citizens were asked to choose from a list of obstacles that most often have prevented them from walking in Albemarle in the past. The ten most common obstacles were:

- | | |
|--|-----|
| 1. No sidewalks or paths | 54% |
| 2. Destination is too far away to walk | 42% |
| 3. Weather (too hot, cold, rainy, icy, etc.) | 39% |
| 4. Concern of crime | 37% |
| 5. Heavy or fast traffic | 35% |
| 6. It is easier to drive | 34% |
| 7. Dangerous or intimidating intersections | 31% |
| 8. Travel areas are not well lit | 27% |
| 9. Sidewalks are poorly maintained | 26% |
| 10. No crosswalks | 21% |

The five most common walking areas in Albemarle according to this survey are the:

- | | |
|---|-----|
| 1. Downtown and Pee Dee area including nearby residential roads | 41% |
| 2. YMCA facilities | 34% |
| 3. Various neighborhood streets not specified in this survey | 32% |
| 4. Stanly Commons/hospital area and nearby residential roads | 31% |
| 5. Rock Creek Park | 31% |

77% of the respondents favored development policies that encourage pedestrian facilities, (with an additional 18% being unsure) while 63% of the respondents favored public funding of these facilities (with an additional 29% being unsure).

Further comments on this survey also helped to prepare a plan that provides for the services that concerns the public. Some of the most common comments include:

"We need to develop greenways and bicycle paths."

"We need more sidewalks."

"Please increase police/bike patrol in pedestrian-friendly areas."

"We need to enforce the traffic laws."

"We need more crosswalks."

Questions and complete responses to these surveys and comments submitted at public forums are located in **Appendix A**.



Steering Committee

A Steering Committee was formed to help guide the development of this plan. This committee, which met four times over the course of the study, provided insight and ideas that were incorporated into the planning process. Minutes from the Steering Committee meetings are included as **Appendix B**.

Media Contacts

Some light media coverage occurred in the development of this plan including two newspaper articles in the Stanly News & Press and a radio advertisement the day of the second public forum.

Media and advertisements are included as **Appendix C**.

Staff and Agency Concerns and Issues

Representatives from City departments included the Planning, Parks and Recreation, Public Works, Public Housing and the Police Department. The County was represented by the Health Department. NCDOT, the YMCA and Centralina Council of Governments also participated in the Steering Committee for this planning process.

The minutes from the Steering Committee meetings, contained in Appendix B, describe the input and feedback received from these stakeholders. In general, the stakeholders had a big concern for traffic speeds and lack of pedestrian walkways. They agree that pedestrian improvements should focus on areas of greatest need, including low-income areas in which many residents may not have means of transportation other than walking. Another point of emphasis should be modern pedestrian facilities such as shared-use paths along with a transition from conventional zoning to a more mixed-use land use plan.

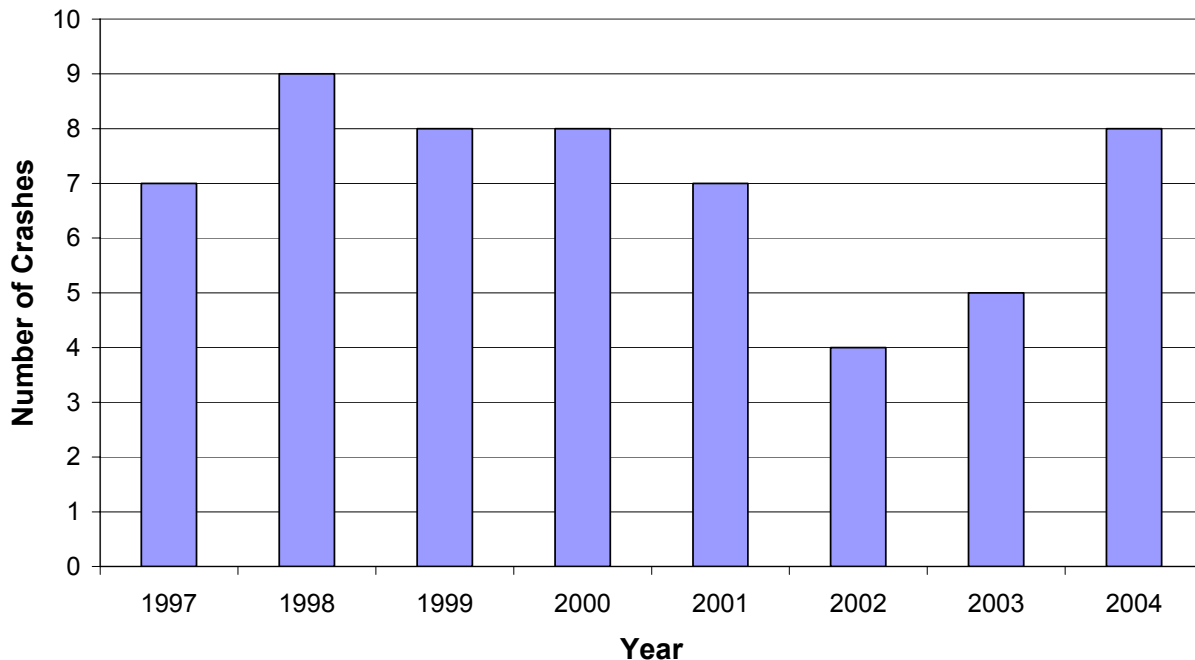
Planning staff emphasized the need for a pedestrian plan that is realistic, implementable, and cost-effective. The City of Albemarle has implemented some sidewalk projects in recent years, but this document should provide a framework for further improvements.



Pedestrian Crash Data

Recent pedestrian crash data for Albemarle were analyzed using NCDOT's web-based pedestrian crash database (<http://www.pedbikeinfo.org/pbcat/>) to determine safety trends and identify specific areas of concern with regard to motorist / pedestrian incidents. Using this database, a total of 56 pedestrian crashes was reported between 1997 and 2004 in Albemarle (more recent data were not available). The distribution by year of these incidents is illustrated in Exhibit 2-1. Over the past eight years for which data are available, the number of pedestrian crashes per year has varied between four and nine. These data sets were generally similar to other local, statewide, and national trends. It is important to note that many pedestrian related incidents with vehicles are never reported, and incidents that do not involve a vehicle (because of poor sidewalk maintenance or railroad crossings) are often left unreported as well.

**Exhibit 2-1: Total Albemarle Pedestrian Crashes by Year
(Albemarle Pedestrian Crash Data 1997-2004)**



It is not easy to say what factors contributed to this range in the number of crashes each year. One might suppose that a high crash rate is the result of poor safety features in the infrastructure, or on the other hand, the more crashes might mean that there are more pedestrians on the road that year. More pedestrians one year might be because of better pedestrian facilities than the previous year, or it might mean that economic conditions are forcing people to walk more. A change in roadway crowding because of development patterns, job market changes, or changes in populations would also play a role. It is important to remember that any number of factors can contribute to these statistics, and not to assume anything because of the data unless considerable study has been put forth.

The following graphs (Exhibit 2-2 & Exhibit 2-3) show the percentage of US citizens at poverty level from 1997-2004 according to the US Census Bureau and the average gasoline costs in the



nation for the same period. From 2000 to the present, the cost in gas fell slightly until 2002 then has generally increased, the poverty rate has grown yearly, and the number of pedestrian crashes in Albemarle has showed a similar dip and then rising pattern from 2000 to 2002 and then to 2004. Some relation might be seen here that shows harder economic times and fuel costs creating more of a need to walk, and thus more pedestrian/automobile collisions. Without more specific information on Albemarle's situation, this is merely an educated guess. This set of economic conditions data only begins to explain any fluctuation in the number of pedestrians that are involved in accidents with motor vehicles in Albemarle.

Exhibit 2-2: Percentages of US Citizens at Poverty Level

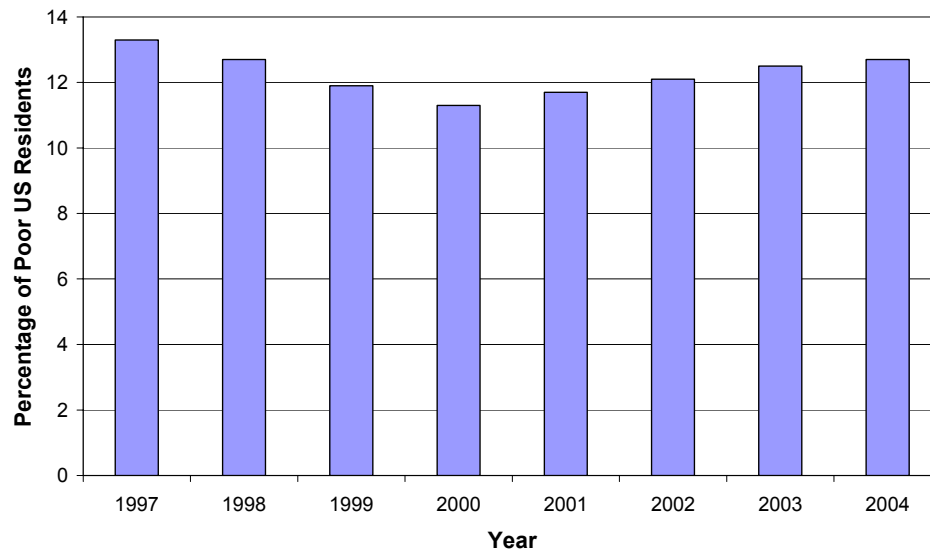
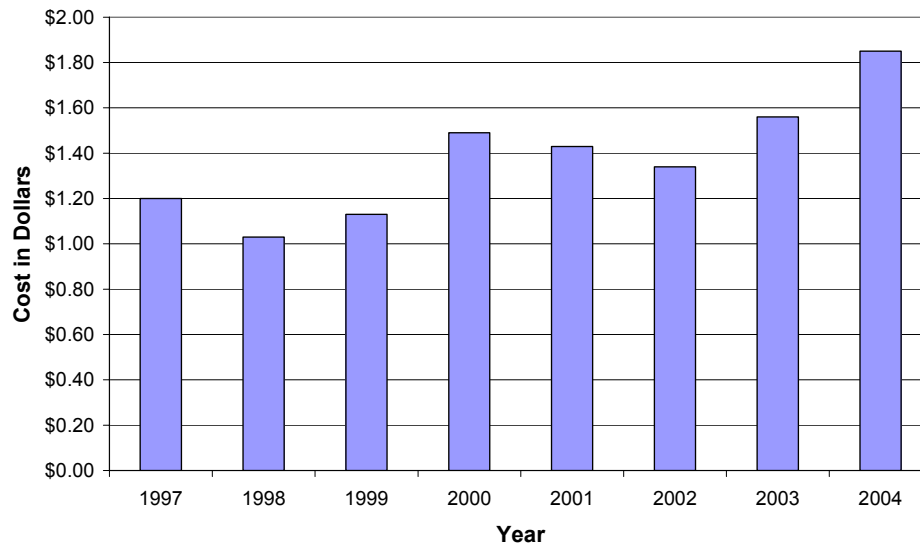


Exhibit 2-3: US Gas Price Change





Crash data were further analyzed to determine specific characteristics of the reported incidents, including aspects related to the incident location, injuries resulting from the crashes, and the circumstances of the crashes. These attributes are illustrated in the following charts.

Exhibit 2-4 identifies any special road features associated with the reported incidents. Of note, fourteen incidents occurred at driveways, while eight more occurred at intersections with four of these being a disabling injury. One crash occurred at a bridge. Although these feature locations only contribute to 41% of the total crashes (*the other crashes in Albemarle graphed earlier were at no particular roadway feature*), it illustrates that conflict points, while not being a large percentage of the roadway, make up a good percentage of the crashes. The fact that the remaining 59% of pedestrian crashes occur elsewhere shows the necessity to evaluate the functionality of all of the existing road features in Albemarle.

**Exhibit 2-4: Road Features and Injuries
(Albemarle Pedestrian Crash Data 1997-2004)**

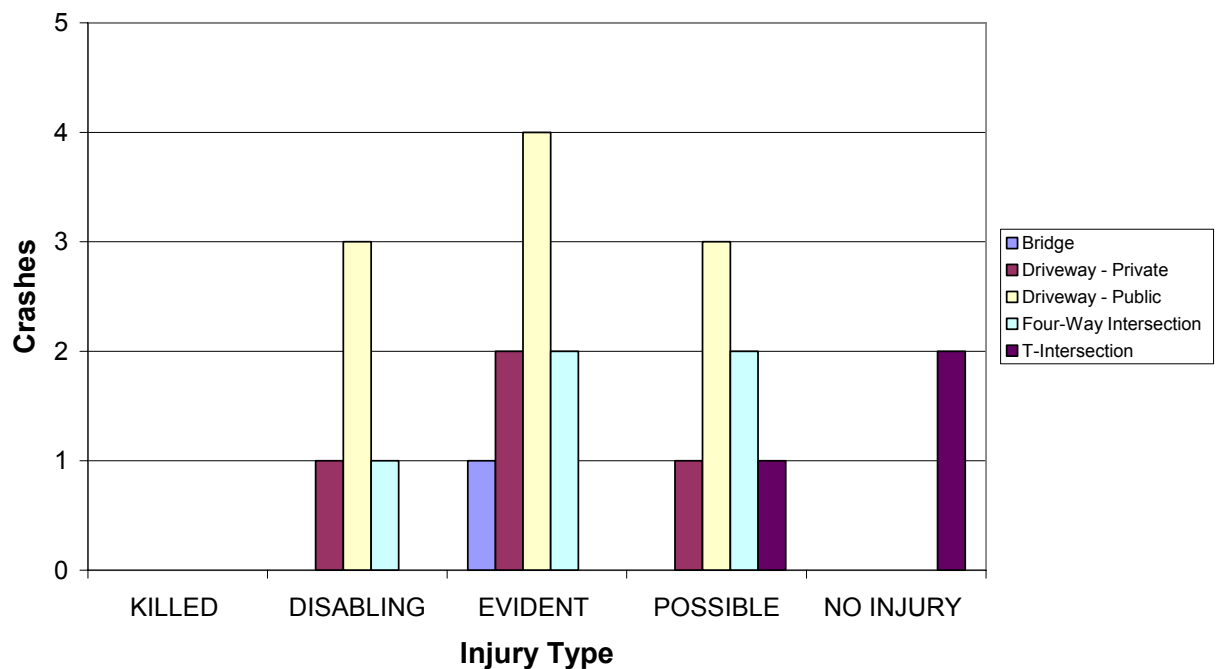




Exhibit 2-5 shows that most pedestrian crashes occurred on local city streets or in public vehicular areas (e.g. parking lots). These statistics are logical because these two areas represent places in which more pedestrians typically can be found. U.S. routes and N.C. routes typically have fewer pedestrians due to the higher-speed nature of the roadways. However, safety is of paramount importance in all areas, including parking lots.

**Figure 2-5: Road Classification
(Albemarle Pedestrian Crash Data 1997-2004)**

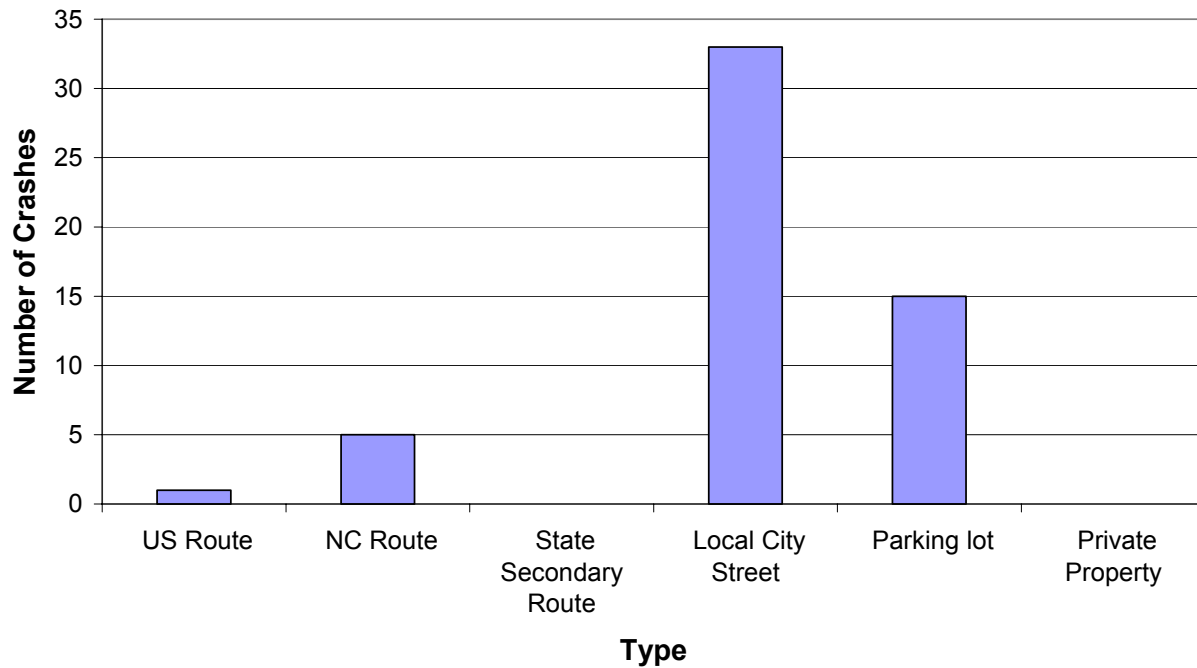
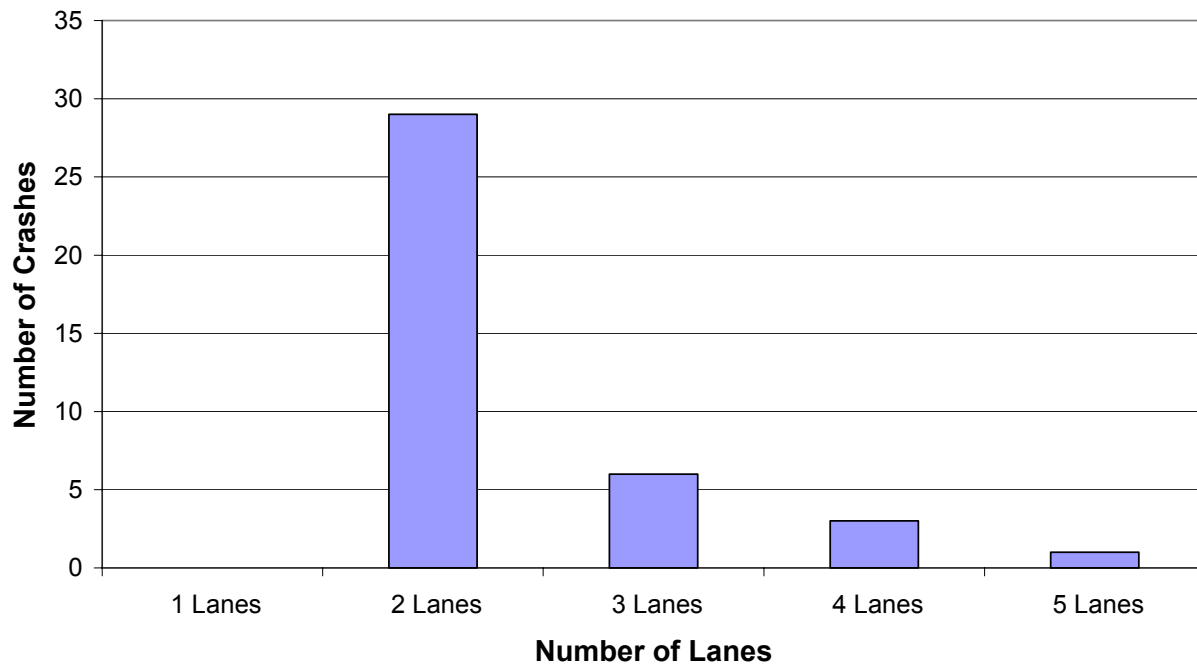




Exhibit 2-6 shows how roadways with fewer lanes have higher pedestrian crash rates (odd numbers being one way or with turn lanes). Most roadways in Albemarle are two laned roadways without medians or exclusive turn lanes; therefore, it is logical that most crashes occurred on these roads. Additionally, these roads are less intimidating to the pedestrian and might attract more foot traffic than wider roadways. Also, users may be more likely to attempt crossing these more narrow roadways, naturally increasing the number of crashes. However, the crashes involving several pedestrian injuries on four-laned roadways show a need to give a safe crossing point such as a pedestrian refuge island fit into a center turn lane so that a pedestrian is not forced to cross two directions of fast traffic at once.

**Exhibit 2-6: Road Configuration
(Albemarle Pedestrian Crash Data 1997-2004)**





The severity of pedestrian injuries associated with reported incidents between 1997 and 2004 is illustrated in Exhibit 2-7. Two pedestrians were killed, while eleven others had a severe, “disabling” injury.

**Exhibit 2-7: Pedestrian Injuries
(Albemarle Pedestrian Crash Data 1997-2004)**

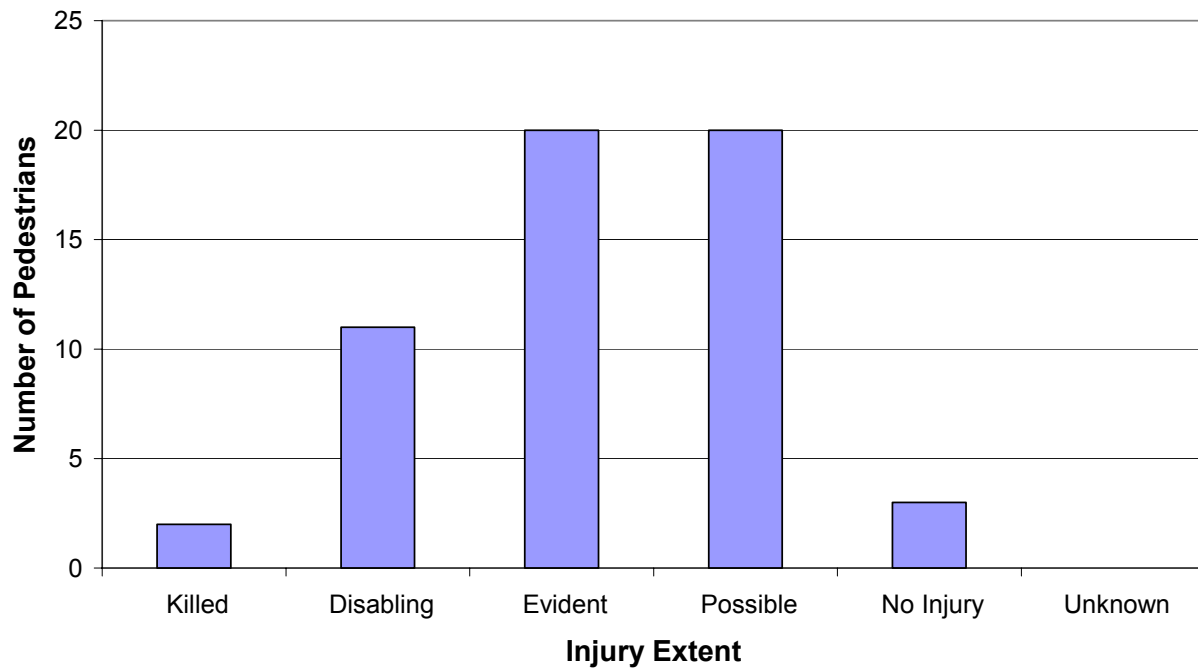
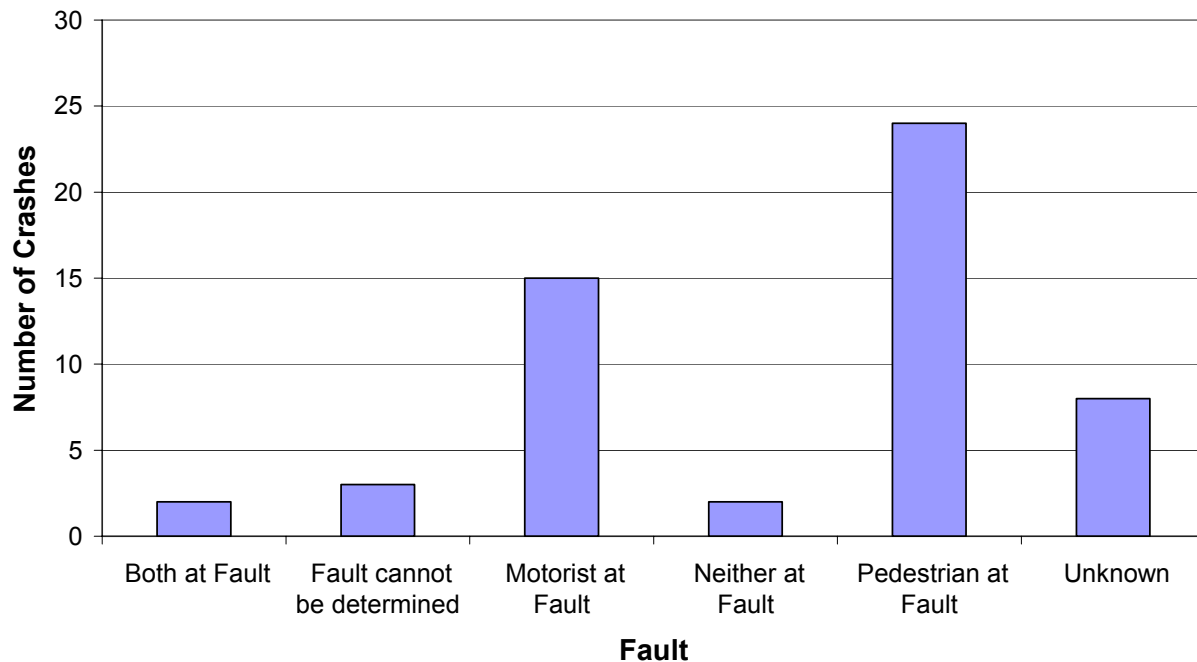




Exhibit 2-8 displays the incident fault for recently-reported crashes. In 24 cases, the pedestrian was at fault, while the motorist was at fault in 15 other cases. These data demonstrate the need to develop safety programs that are oriented to both motorists and pedestrians, and to increase law enforcement for all motorized and non-motorized offenses. It is important to educate motorists on the rights of pedestrians; however, it is just as important to educate pedestrians on the rules of the road and safe walking practices. These data may also show the need to determine what made the pedestrian put themselves at risk in each of these situations. Was it a lack of safe facilities? Was it poorly designed facilities that tempt pedestrians to make unsafe decisions? It is important to know what caused the pedestrian to make their decision before placing complete blame, important to enforce all the laws correctly, and important to educate both the public and the enforcement agencies as to how to interpret the laws.

**Exhibit 2-8: Fault
(Albemarle Pedestrian Crash Data 1997-2004)**





The time-of-day of recently-reported pedestrian crashes is illustrated in Exhibit 2-9. The highest number of crashes (18) occurred in the later hours after the afternoon commute when many people are making after-dinner errands. The next largest crash rate (15) was in the afternoon school dismissal and commute hours, when a large number of motorists and pedestrians are on the road at one time. However, crashes occurred throughout the day, including midday hours, early morning hours, and late night hours. These data might imply a need for strategies to increase awareness of pedestrians in light traffic (when motorists can drive at higher or at more constant speeds) or in periods of reduced visibility.

**Exhibit 2-9: Time of Day of Albemarle Incidents
(Albemarle Pedestrian Crash Data 1997-2004)**

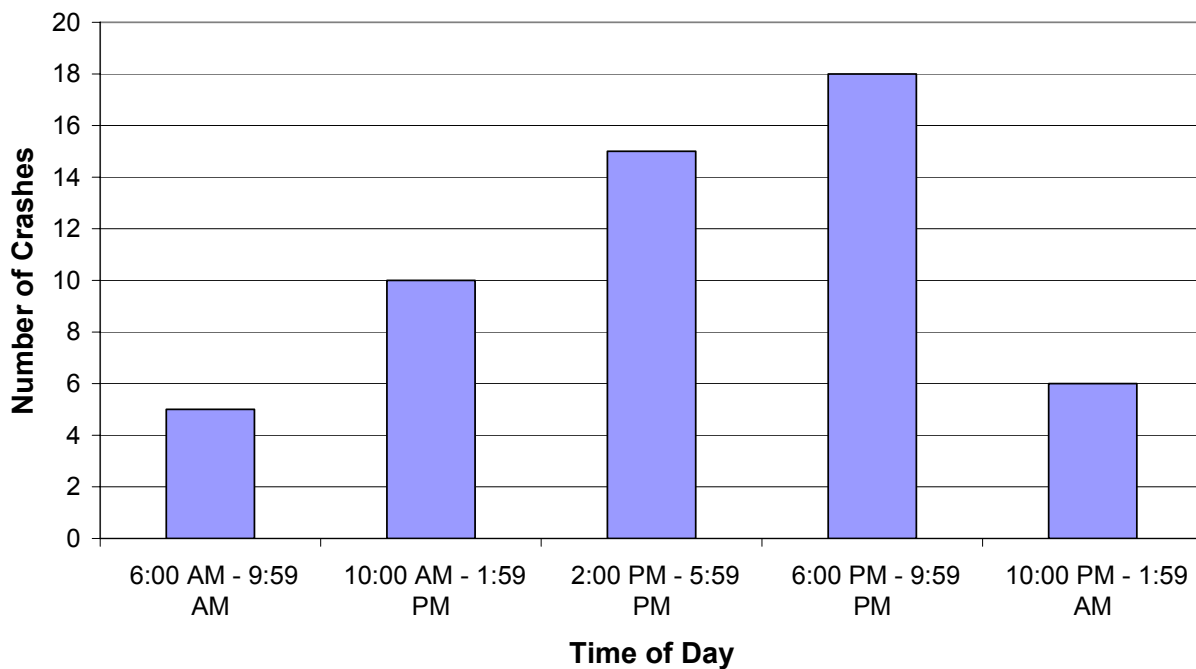




Exhibit 2-10 shows the age of pedestrians involved in the crashes. People of all ages are pedestrians at some point, and as illustrated in the chart, pedestrians of all ages can be involved in incidents. The highest crash rate amongst age groups was the fourteen crashes that occurred among pedestrians of ages 41-50, followed by thirteen for those 10 years and less. The number of citizens over the age of 65 involved in pedestrian crashes is 3% less than the percentage of persons over the age of 65 in Albemarle according to the US census of 2000. Pedestrians in their 40s are the most common group to be involved in a collision with a vehicle. Although a fair amount of accidents involve the younger and older citizens who cannot drive, this spike with middle aged victims shows that this might be an age where some citizens might be walking more for fitness or when some might be struggling financially. One conclusion on a fairly positive note might be that these data show that our young and elderly are indeed out walking, and deserve safe walking areas.

**Exhibit 2-10: Age of Pedestrian in Crash
(Albemarle Pedestrian Crash Data 1997-2004)**

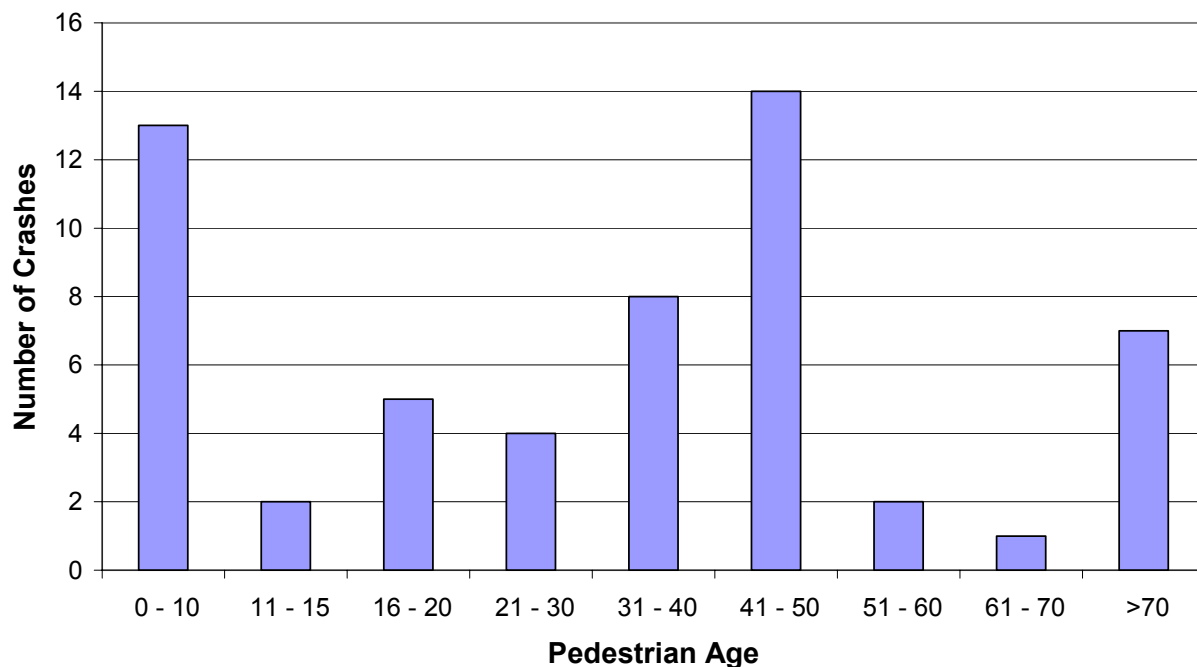




Exhibit 2-11 shows that the motorists involved in pedestrian crashes tended to be younger drivers. Forty-nine percent of crashes that involve a pedestrian are with a driver 29 years or younger. Almost a quarter of the total crashes involve a driver in their teens. In fact, there were more pedestrian/vehicle collisions involving drivers during the first four years of being licensed than from all of the pedestrian-involved accidents combined for drivers aged 60 and up. Older drivers were not significant contributors to these accidents, accounting for roughly the same percentage of accidents as their population while middle-aged drivers had their fair share of collisions. These data help support a need for pedestrian awareness programs aimed at all drivers, with an emphasis on young drivers and drivers who might be experiencing new changes associated with age.

**Exhibit 2-11: Age of Motorist in Crash
(Albemarle Pedestrian Crash Data 1997-2004)**

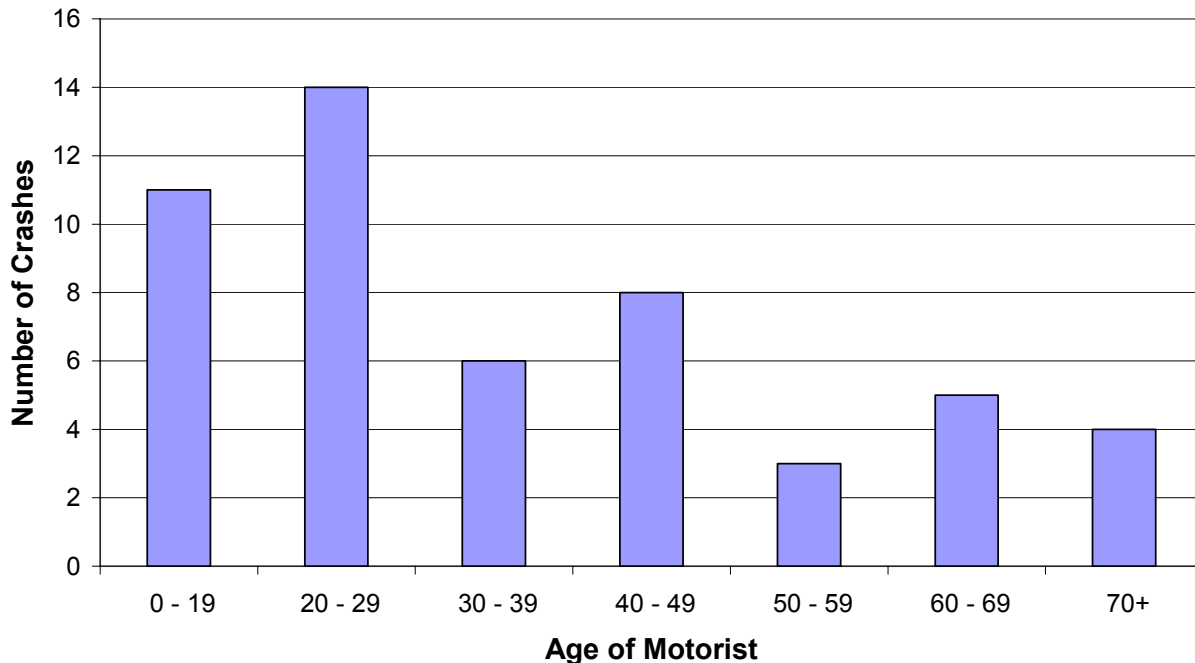




Exhibit 2-12: Albemarle Pedestrian Crashes According to Speed Limit (Albemarle Pedestrian Crash Data 1997-2004)

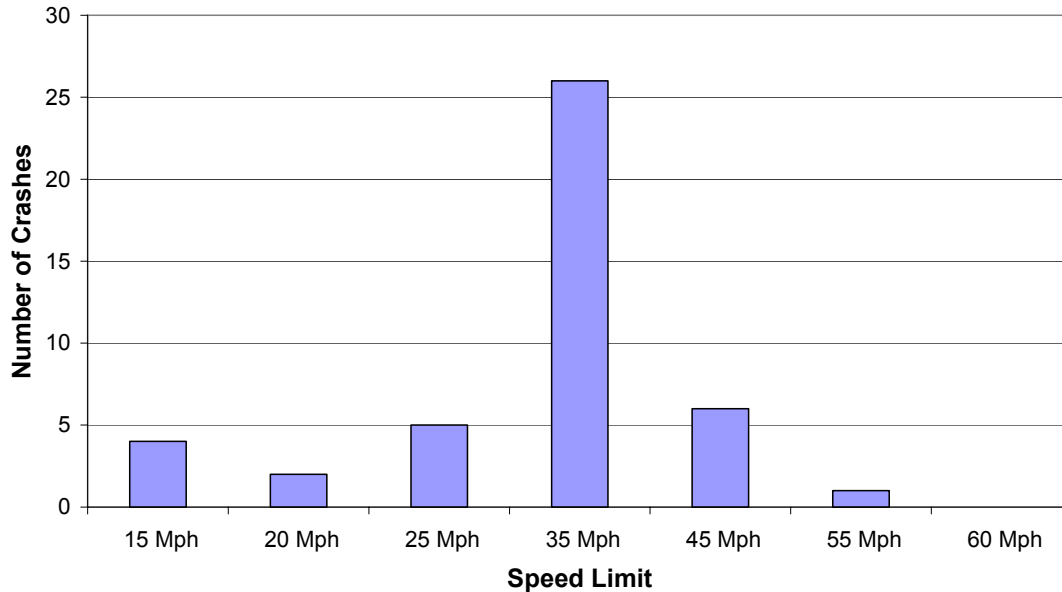


Exhibit 2-12 shows that the vast majority of crashes between automobiles and pedestrians in Albemarle between 1997 and 2004 happened in 35 MPH zones. This is not shocking, since the majority of roads in Albemarle are 35 MPH zones, and these roads are the corridors that consist of a wide range of commercial and residential development that pedestrians are likely to travel to and from.

Exhibits 2-13 through 2-14 show how the injuries sustained to pedestrians in 20 MPH zones were not as severe as the injuries in 25-35 MPH zones. This trend is shown more clearly when we look at the injuries according to the actual speed of the vehicle when it hit the pedestrian.

Exhibit 2-13: Albemarle Pedestrian Injuries with a 20 MPH Speed Limit or Less (1997-2004 Data)

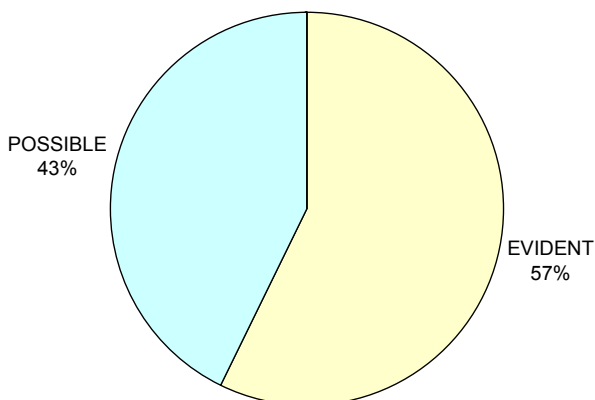
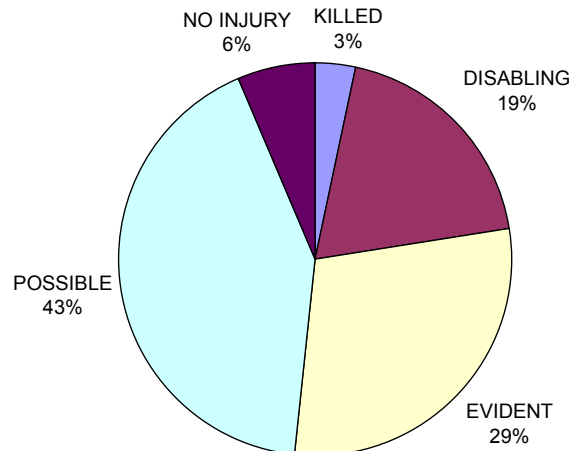


Exhibit 2-14: Albemarle Pedestrian Injuries in a 25 - 35 MPH Speed Limit (1997-2004 Data)





Figures 2-15 through 2-17 show how the severity of injuries to pedestrians increases as the actual speed upon impact increases. Notice how these speeds are not related to speed limit. A pedestrian can be hit by a 35 MPH car in a 20 MPH zone, or be hit by a 20 MPH car in a 35 MPH zone. These data are from NCDOT's 1997-2004 crash records for Albemarle.

Exhibit 2-15: Albemarle Pedestrian Injuries from Vehicle Estimated Speeds of 20 MPH or Less (1997-2004 Data)

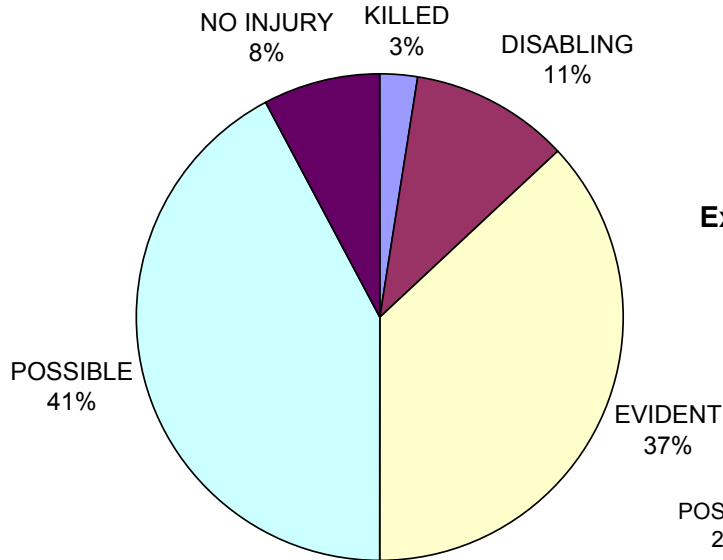


Exhibit 2-16: Albemarle Pedestrian Injuries from Vehicle Estimated Speeds of 21 - 35 MPH (1997-2004 Data)

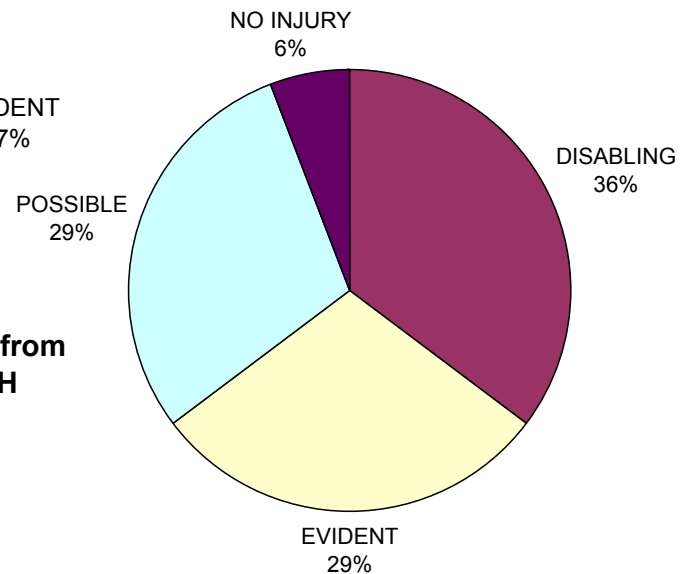
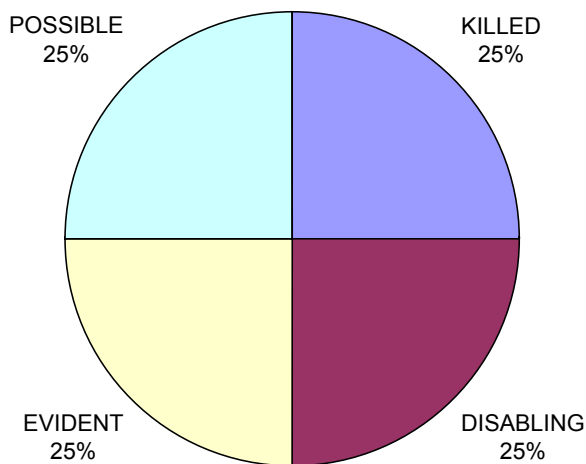


Exhibit 2-17: Albemarle Pedestrian Injuries from Vehicle Estimated Speeds of 36 - 50 MPH (1997-2004 Data)





2.3. EXISTING PEDESTRIAN FACILITIES

Pedestrian Friendliness of Local Transportation System

Although Albemarle has a fairly well-developed sidewalk network and well developed intersection treatments in the downtown area and some surrounding neighborhoods, these elements become more limited the further you get from the center of the city. Special signage and signals are used to identify pedestrian crossing areas in a few areas with high levels of walking (Albemarle has several countdown crossing signals around downtown and elsewhere), but intersection treatments such as walk signals for pedestrians are rare elsewhere. Many residential areas designed in the late part of the 20th Century have no pedestrian facilities at all and intersections near NC Highway 24/27 and US Highway 52 were designed to accommodate automobile travel only. This creates unique connectivity challenges.



Children walking near Leonard Street

There appears to be higher levels of walking in neighborhoods where sidewalks are present (especially older neighborhoods with sidewalks on both sides of the street); however, most of this pedestrian activity appears to be recreational in nature and is confined to the specific neighborhood where sidewalks are present. Opportunities for longer-distance walking (i.e. between neighborhoods or to nearby commercial districts) are limited, possibly because of the distance to these areas and the lack of safe connecting paths. When such pedestrian activity occurs outside of these neighborhoods with established sidewalks, walkers are forced to walk in the road or in potentially

unsafe areas (e.g. ditches, overgrown areas) adjacent to the roadway.

Albemarle has the opportunity to make significant positive enhancements for pedestrians. A growing community awareness of the need for safe and effective pedestrian infrastructure is establishing a climate for improvements, as illustrated by the City's desire to develop a comprehensive pedestrian plan.

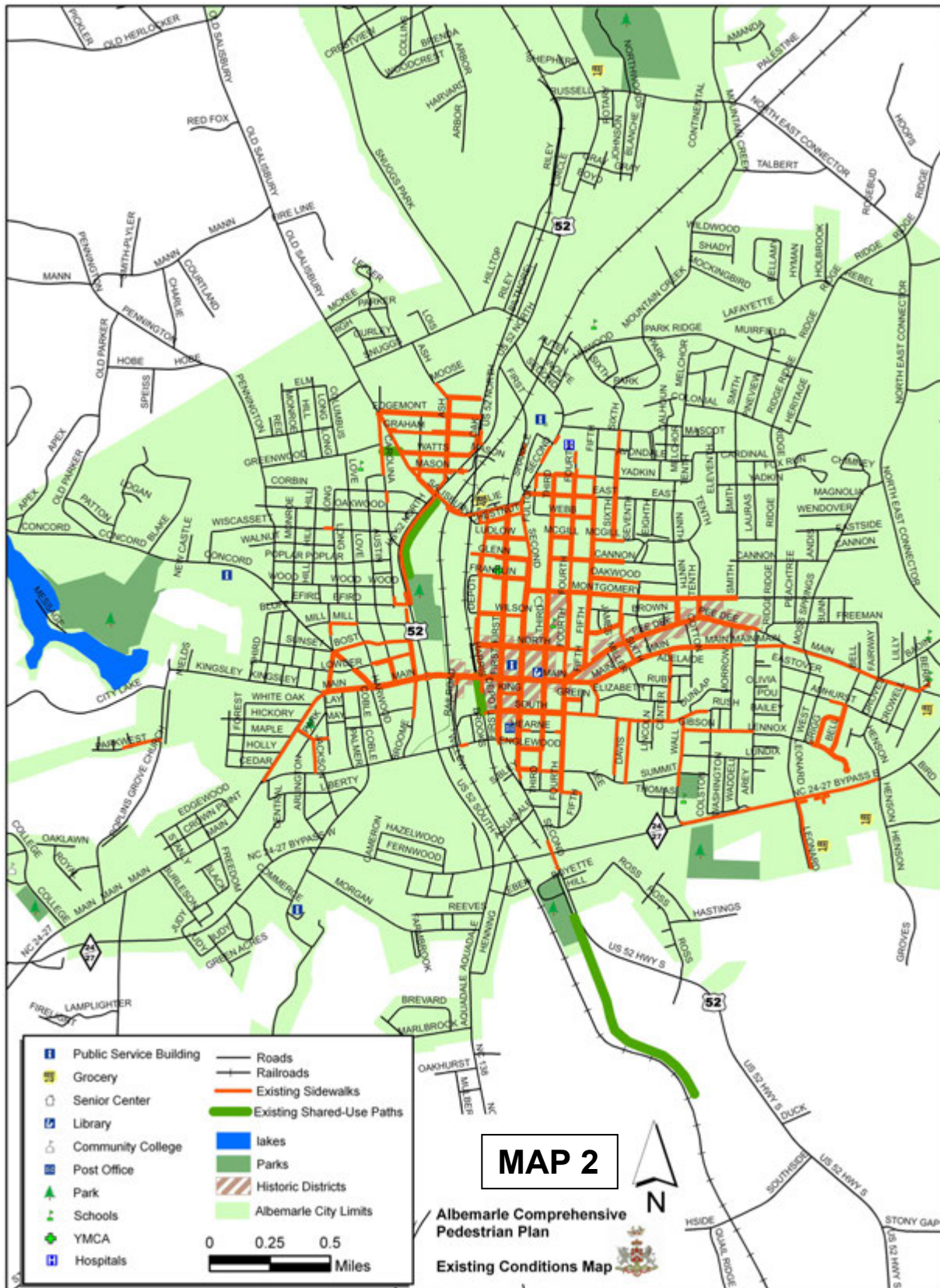
Inventory of Existing Facilities

A basic inventory of existing sidewalks was not available until the final review of this plan. Existing roadways and possible destinations in the study area are mapped in **Map 2**.

Albemarle's sidewalk network is fairly well-developed in the older downtown area, with sidewalks present along most downtown streets. However, many of the neighborhoods surrounding downtown, as well as those developed in the 1960s, 70s, and 80s, have limited sidewalk provisions. Examples of neighborhoods lacking sidewalks include the neighborhoods east of the hospital, Oak Grove, and even the public housing area.



Wide neighborhood streets - Yadkin





*Many sidewalks are without curb cuts on
Pee Dee Avenue*

Most new sidewalks are in good condition; however, some of the older sidewalks outside the downtown area are in need of repair. Crosswalks and curb cuts are needed at most major intersections outside of downtown, but the downtown has pedestrian friendly treatments such as curb extensions, “No Right When Pedestrian is in the Intersection” signage, highly visible mid block crossings, countdown signals, and cooperative businesses that provide alternate routes when sidewalk work is underway.

The study area has several well-developed and well-utilized parks and three shared use paths. City Lake Park, Rock Creek Park, Roosevelt Ingram Park, Montgomery Park, and Chuck Morehead Park are all very popular as recreational walking locations. A side path reaches along Highway 52 from Montgomery Park to Salisbury Avenue, and two segments of rail trail exist; one in downtown and one at the southern end of Rock Creek Park. There is also a half-mile walking path at Albemarle Middle School.



Montgomery Park side path

Identification of Deficiencies

Although Albemarle has remained relatively connected, with a decent existing sidewalk network in the center of the City and many neighborhood route options for pedestrian travel, several key deficiencies are apparent, and a number of barriers increase the challenge associated with providing effective pedestrian facilities. These deficiencies are categorized as follows:

- Natural barriers;
- Man-made barriers;
- Safety hazards; and
- Gaps in system.

Natural Barriers

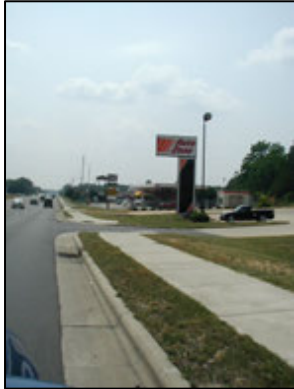
The most significant natural barriers in the area are the creeks. Creeks run in every direction through and around Albemarle and these features form a barrier that divides potential origins and destinations of pedestrian trips. Neighborhoods and transportation corridors have been developed around these barriers. In addition, neighborhoods have traditionally been built with these creeks running closely to the rear of the houses, making access to these waterways difficult without entering private property. Utilizing the sewer easements that usually run adjacent to these creeks for public access paths is one way to overcome this barrier.



Sewer lines near Summit



Man-Made Barriers



Sidewalk along NC 24/27

Several man-made barriers impact walkability in the Albemarle area, the most significant of which is NC Highway 24/27. Not only is this road a formidable physical barrier, but the highway is also a psychological barrier that can deter citizens from walking altogether. There are few, if any, pedestrian-friendly roadway crossings of NC 24/27, and the shoulders are extremely hazardous to pedestrians. There is, however, a sidewalk along much of the north side of this road and a countdown signal at the intersection of Leonard and NC 24/27. Unfortunately, the development patterns and high traffic volumes along this corridor also make walking impractical and stressful. US 52 is another major roadway through Albemarle that presents an obstacle to pedestrian use. The Northeast Connector is another roadway that has design characteristics that make it a deterrent to pedestrians.

The recent development patterns outside of the historical City Center also create a barrier to safe, effective pedestrian connections. Significant commercial development has occurred in these areas in recent years, and most construction



Cul-de-sacs near Park Ridge

has been almost entirely oriented to automobile access. Neighborhoods limit connectivity, and commercial development backs up to residential areas, but restrict pedestrian access. Large parking lots, setbacks and limited connectivity severely reduce the opportunities for walking to and from these destinations. As additional development occurs, site planning should include provisions to make the infrastructure and building access more pedestrian friendly.



Commercial development on US 52 does not connect to each other

The railroad tracks in Albemarle create a unique barrier. Because of the limited rail traffic, the trains are not the major barrier at this point; however, the tracks themselves can be an obstacle for disabled or elderly citizens. The tracks also restrict future off-road pedestrian connections because of the expense, liability, and other considerations that need to be taken into account when creating and inviting public access. If a need exists for connectivity, pedestrians will use railroad corridors whether official infrastructure exists or not.

Safety Hazards

Although the Albemarle area has many key sidewalk connections in place, the lack of sidewalks in specific areas is a significant safety hazard. For example, Badin Road has notable pedestrian traffic from the nearby schools, but no sidewalks. The Yadkin and Park Ridge area have notoriously wide lanes, fast traffic, and no sidewalks. Many of the middle to higher income residents in these areas



A popular crossing location on NC 24/27



walk regularly, but are forced to walk in the street because there are no pedestrian facilities. The immediate area surrounding the hospital has sidewalks on some roads, but has limited safe connections to popular nearby destinations like Stanly Commons and Harris Teeter. Remarkably, the most used pedestrian area around the public housing area has no sidewalks and one of the riskiest and most highly-used road crossings in the City.

Many potential pedestrian destinations are located along NC Highway 24/27, but heavy traffic volumes, limited pedestrian access from the rear, and strip-developed shopping areas limit pedestrian opportunities. While options to improve these conditions are limited, the City should take steps to ensure that future commercial development provides more pedestrian-friendly infrastructure.

Gaps in System

As mentioned above, gaps in the existing sidewalk and crossing network present a safety hazard for pedestrians walking in these areas. Furthermore, these gaps discourage walking in these areas for anyone other than those who must walk. A key focus area for pedestrian facility recommendations as part of this study is to identify these critical gaps in the system. Gaps are evident in areas such as the following:

- Small areas in and around downtown;
- Pee Dee Avenue and adjoining neighborhoods north to Park Ridge Road;
- Low income neighborhoods south and east of downtown;
- All roadways surrounding schools;
- The commercial developments along NC Highway 24/27 and US Highway 52.



A popular connection leading to NC 24/27

2.4. CURRENT USAGE

No formal pedestrian counts have been conducted in Albemarle; however, the survey discussed earlier and anecdotal evidence indicate that there is a growing concern for pedestrian safety. During the field investigations for this project, a moderate number of pedestrians were observed. Most pedestrian traffic occurs around the downtown area because it has compact development and a well-developed sidewalk network. However, a significant number of pedestrians walk in areas without an extensive sidewalk and crosswalk network, such as areas along commercial strips such as East Main Street, Highway 24/27, and US 52. According to the 2000 U.S. Census 7,365 workers age 16 and over live in Albemarle. Of these workers, 170 (2.5%) reported that they walk to work. The national average of workers who walk to work is 2.9%.

SECTION 3: EXISTING PLANS, PROGRAMS, AND POLICIES





3.1. INVENTORY OF RELEVANT PLANS AND CURRENT PROJECTS

Some relevant plans have been prepared that include findings that can be incorporated into this pedestrian plan. Limited concepts recommended in these other efforts have been integrated as recommendations and considered in the prioritization of projects in this pedestrian plan. Highlights of these relevant planning projects are presented below.

Comprehensive Plans

At the time of this plan, Albemarle is considering undertaking the development of a comprehensive land-use plan. The land use strategies addressed in such a plan will likely include discussions of pedestrian-friendly land development patterns and action items to encourage new land-use decisions to consider pedestrian mobility. Any future comprehensive transportation plan will use this plan as its pedestrian component.

Rail-Trail Plans

The City has received grants from the North Carolina Department of Transportation to construct the first two segments of the Roger F. Snyder Greenway System, which will connect to the City's existing bike path at Montgomery Park and will follow Little Long Creek to N.C. 24-27. The City has plans to extend this system in the future with a goal of eventually connecting the downtown, neighborhoods, schools, and parks via a network of greenways, bike paths, and sidewalks. Several opportunities for potential greenways are identified as part of this pedestrian plan.

Roadway Project Plans

Some roadway projects in the Albemarle area are currently being designed. As these plans are advanced, appropriate pedestrian accommodations should be incorporated into the plans to enhance walking opportunities in these developing areas. On-going roadway design projects that should account for pedestrian travel include the following:

- TIP projects: The North Carolina Department of Transportation (NCDOT) will construct sidewalks included in TIP projects if local entities will participate in the cost and will agree to maintain them.
 - The bridge (Bridge # 33) over Long Creek on NC 73 near City Lake Park is scheduled to be replaced as a TIP project (B-4276).
 - US 52 from 24/27 south is scheduled to be a four laned-divided highway (R-2320).
 - Ridge from Northeast Connector to NC 740 (U-3300).
 - NC 24/27 road widening(R-2530 & R-967).
 - B-3700: SR1214 over Long Creek, Replace bridge #187
 - B-3908: SR1225 over Big Beak Creek, Replace bridge #246
 - B-4279: SR 1963 over Scaly Bark Creek, Replace bridge #120
- Another project of note, the YMCA is planning the construction of a new sidewalk around their facility that improves an already popular walking route.



Small-Area Plans

No small area plans have been completed in Albemarle.

Capital Improvement Plans

The City of Albemarle maintains a Capital Improvement Plan and routinely evaluates transportation improvements as part of the City's long-range plan.

Bicycle Plans

Albemarle has not developed a Comprehensive Bicycle Plan, but North Carolina State Bicycle Route 6 (The Piedmont Spur) travels through Albemarle. Signs directing bicyclists to Routes 1 and 3 are also posted in Albemarle. Although this pedestrian plan will not address bicycle facilities and programs in detail, its recommendations will be designed in a way not to preclude bicycle improvements.



Pedestrian Plans

No other pedestrian plans have been developed in recent years in the Albemarle area.



3.2. EXISTING POLICIES AND INSTITUTIONAL FRAMEWORK

Existing Funding Sources

There is currently no dedicated funding source for pedestrian projects in Albemarle.

Existing Local Ordinances

Subdivision Ordinance

The primary local ordinance guiding sidewalk additions is the City's subdivision ordinance. This ordinance applies to all new subdivisions within Albemarle's planning jurisdiction. The subdivision ordinance includes the following provision for sidewalks in all new subdivisions:

"A five-foot wide sidewalk will be required on one side of the street" (City of Albemarle Subdivision Ordinance, Sections 91.09 and 91.11)

Furthermore the subdivision ordinance states that where new sidewalks are constructed, a planting strip with a minimum width of seven feet must be provided between the curb and the sidewalk. The sidewalk itself must be a minimum of five feet in width.



Sidewalk development should be required by policy for all new developments

Although the City's Subdivision Ordinance mandates the provision of sidewalks in new subdivisions, there are **few requirements for sidewalks or other pedestrian facilities along with new construction or reconstruction that is not associated with the subdivision of existing parcels**. However, the Ordinance does require all non-residential developments on existing streets to install a five-foot sidewalk. A more detailed description of Albemarle's policies and ordinances are discussed and critiqued in Section 8, *Recommended Policies and Ordinances*.

Zoning Ordinance

The City's Zoning Ordinance (which does cover single-parcel projects) contains no specific references to the provision of pedestrian facilities.

Comparison to Other Ordinances in the Region

The sidewalk dimension requirements specified in Albemarle's subdivision ordinance (sidewalk width, location, and planting strip width) compare favorably to that of other municipalities and counties in the region. Table 1 provides a comparison of the sidewalk policies in Albemarle to that of other North Carolina localities.



Table 1: Regional Sidewalk Policies (For New Subdivisions)

LOCALITY	MINIMUM SIDEWALK WIDTH	MINIMUM PLANTING STRIP WIDTH	BOTH SIDES OF STREET?
Albemarle	5 feet	7 feet	No
Charlotte (<i>current</i>)	4 feet	4 feet	Yes
Charlotte (<i>proposed</i>)	5 feet	8 feet	Yes
Davidson	5 feet	6 feet	Yes
Mint Hill	5 feet	3 feet	No
Huntersville	5 feet	7 feet	Yes
Matthews	5 feet	8 feet	Yes
Pineville	5 feet	4 feet	Yes
Concord	5 feet	6 feet	Yes
Cabarrus County	5 feet	6 feet	Yes
Monroe	5 feet	10 feet	Yes
Union County	None	None	No
Belmont	4 feet	6 feet	Yes
Gastonia	4 feet **	2.5 feet ***	No
Gaston County	None	None	No
Rock Hill	4.5 feet	3 feet	Yes on most streets (unless waived)
Hickory	5 feet	4 feet	Yes, on streets with an average of more than 200 cars per day
Catawba County	None	None	No
Lincoln County *	None	4 feet	Yes
Lincolnton	4 feet	6 feet	Yes

* Sidewalk requirements in Lincoln County apply only to new subdivisions in "areas likely to be subject to heavy pedestrian traffic such as near schools and shopping areas."

** The requirement is 5 feet if the subdivision is built along a major thoroughfare or state road.

*** The planting strip is 6 feet and includes trees if the project is a planned residential development.

SOURCE: The Charlotte Observer, June 23, 2005, page 10A

Staffing and Committees

The City of Albemarle's Public Works Director is responsible for the development of this pedestrian plan, but other City staff is expected to play a role in its implementation as well. As described in Section 1, a steering committee comprised of agency representatives, local citizens, and other stakeholders was established to provide input to this planning process.

After completion of the pedestrian plan, the existing Steering Committee should be maintained as a bicycle / pedestrian advisory committee or a new committee should be formed to perform this role. This group will work toward implementation of the plan and help continue to build momentum for pedestrian projects.

The City of Albemarle works closely with other local, regional, and statewide agencies as needed for all transportation projects, including pedestrian improvements. Partnerships with Centralina Council of Governments and NCDOT will be particularly important as the City implements additional projects.

SECTION 4: OPPORTUNITIES





4.1. SYSTEM OVERVIEW

National transportation surveys indicate that more than half the auto trips in the United States are less than two miles long. More than 25% of car trips in the United States are one mile or less, and 14% percent of car trips are a half-mile or less. But, Americans choose to leave their car behind for trips less than a mile only 25% of the time. In comparison, according to the London National Travel Survey, 39% of trips in London less than five miles in length are walked, and 80% of trips less than one mile in length are walked. In the Netherlands, up to 40% of all trips nationwide are made by bicycle, and a third of the people ride their bike to work everyday. One percent of all trips in American cities are by bicycle. Part of this difference is due to denser development in clusters, better pedestrian infrastructure, and intelligent land use policies in European cities. **Developing a pedestrian plan that encourages a reversal of the current tendency to drive short trips or that provides for more opportunities to make short trips would provide the largest benefit the City can achieve over the long term.**

A preferred pedestrian environment would position schools, businesses, and entertainment in the center of a cluster of residences that use these services daily. As one travels out from a compact center, high density housing becomes compact single family houses, then suburban housing, then transitions to rural residential areas and agricultural land that soon becomes suburban and then urban centers again. This development pattern makes it easy for residents to walk to their daily chores, with the option of using automobiles on connecting roads to make less frequent trips to neighboring communities.

Downtown Albemarle was initially designed around the locomotive, and thus around the pedestrian as well. Pedestrian corridors in this area are easy to spot. Since the automobile has arrived, it has spurred a different type of growth (particularly around the Highway 24/27 Bypass). Albemarle has grown outward, and clusters of pedestrian centers have become difficult to identify. However, potential pedestrian corridors can be developed from current automotive corridors that connect destinations.

4.2. PEDESTRIAN ORIENTED DEVELOPMENT DISTRICTS

The Albemarle Comprehensive Pedestrian Plan is focused around a series of ***Pedestrian Oriented Development Districts***. By identifying neighborhoods that presently or potentially have community necessities such as residential areas, shopping areas, schools, parks, and employment centers, a successful pedestrian plan can be implemented. The two most important factors in designing a walkable community are pedestrian infrastructure and distance. There is a possibility that if the infrastructure is put in place physically or by policy, then the surrounding growth would develop to the pedestrian scale. So just as communities once evolved to fit with the pedestrian, then the horse and wagon, the train, the car; they can evolve to acomodate the pedestrian once again. A non-motorized transportation corridor installed today could attract appropriate shops and restaurants tomorrow.

These Pedestrian Oriented Development Districts are defined using quarter mile and half-mile radius circles that currently have or potentially will have the ingredients necessary for frequent walking trips. A quarter mile is the distance that is most likely to be considered walkable by the greatest number of pedestrians. It is preferred that the majority of the most frequented trip generators be located within the quarter mile district. A half mile is considered to be the upper



limit for most simple walking trips, and this portion of the Pedestrian Oriented Development District is usually best suited for lower density residential areas or less frequented trip generators. This plan identifies the center of each district and defines the borders of both the quarter mile and half mile radii. Greenways and other pedestrian infrastructure connect these districts to each other.

Each of these Pedestrian Oriented Development Districts can be developed differently. Some might develop as a true community, with all of the elements that create a functioning society including significant residential and shopping areas. Infill and redevelopment of these districts can potentially accommodate the mixed-use and higher density desired for a “walkable community.”

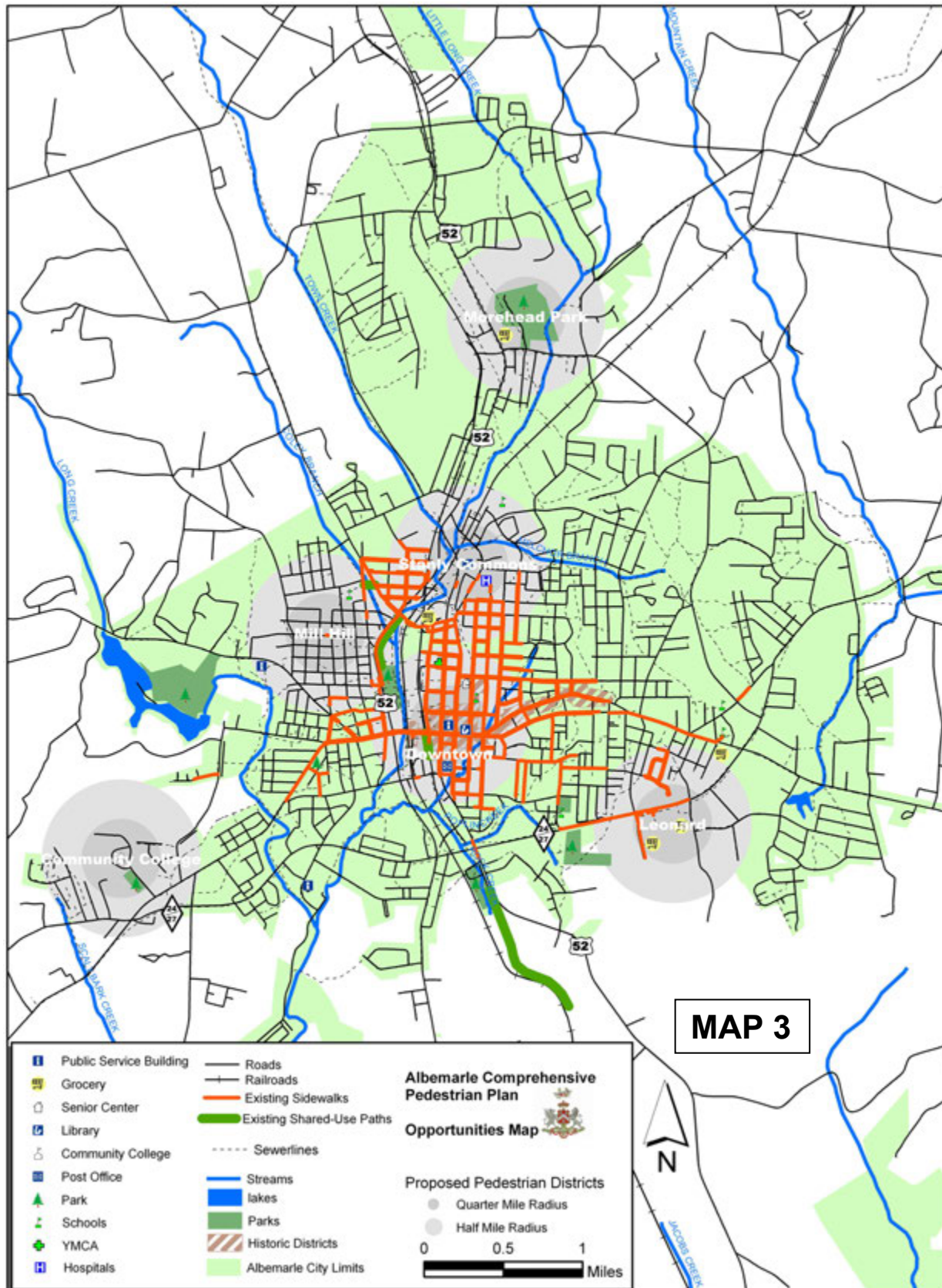
Alternately, the Pedestrian Oriented Development Districts might develop more as primarily residential neighborhoods that do not have significant commercial sections. Policies supporting connectivity and higher density would support a more walkable neighborhood, and the existence of a school, community center, or another public meeting facility where the residents have shared ownership would help bring the neighborhood together socially. These Pedestrian Oriented Development Districts might not be as densely developed as the communities mentioned above, but would benefit Albemarle’s walking environment if they included a mix of low, medium and high density units with good connectivity and a central public gathering place. Allowing mixed-use zoning designations in portions of these neighborhoods would provide small business opportunities and a greater sense of community.

Several of the following identified Pedestrian Oriented Development Districts have been labeled as such based on their potential to develop. These designations were only based on an educated guess as to whether significant commercial/mixed use development could be drawn to the area in the future, and should not be considered a certainty. Proper zoning and support from Albemarle’s Planning Commission and City Council could help develop these areas into walkable mixed-use communities.

The designated Pedestrian Oriented Development Districts are intended primarily to identify areas in which pedestrian-friendly development should be encouraged. Recommendations for policies related to these districts are discussed in Section 8. Although many proposed pedestrian infrastructure projects are located within one or more of these districts, it is important to note that **sidewalks, paths, other infrastructure projects, and policies can and should be implemented outside of these districts as well.**

Map 3 illustrates opportunities for pedestrian improvements in the Albemarle area, focused on the Pedestrian Oriented Development Districts. Major pedestrian destinations are also identified on the map.

Descriptions of the opportunities that exist in each of the districts are provided on the following pages, referenced by the district areas as mapped in Map 3. The project map (Map 4) shown in Section 7 of this plan illustrates improvements suggested in this section.





I. Downtown

Albemarle's historical downtown is the ideal Pedestrian Oriented Development District. The center point for this district is at City Hall, and is surrounded by the library, the post office, an elementary school, a senior center, the YMCA, and a greenway. This is the model for what Albemarle should want each of the other five districts mentioned in this plan to eventually resemble to some extent. It has a compact shopping and service district with wide sidewalks, a connecting street pattern, residential units within walking distance of the business center, and a pleasant environment that includes tree-lined narrow roads, pedestrian lighting, public open space, low vehicle speeds and low automobile traffic volumes. In addition, Albemarle draws people downtown to do business because it is the County Seat. These people become downtown's pedestrians.



Opportunities in this district are almost endless. Businesses have been returning to downtown for several years now. The lure of traditional American town centers has attracted private investment in these places recently, and Albemarle is no exception. Increasing its residential base in the immediate central business area and encouraging necessary retail markets such as grocery, hardware, and general stores will further create a small but fully self-contained and functioning urban community. It has been determined that placing jobs

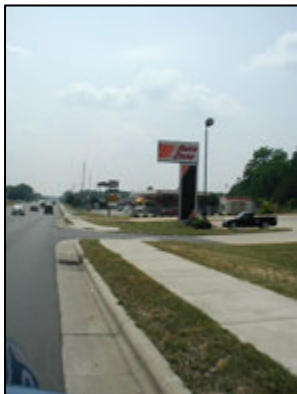
near housing reduces vehicle trips somewhat more than placing housing only near retail, so downtown being Albemarle's employment center creates the need to increase the density of desirable residential units in this district to achieve the maximum amount of walking trips.

Pedestrian improvements and economic stimulation in this district will benefit all of Albemarle with a sustainable center piece to the community.

II. Leonard

In many communities, the location with the highest percentage of pedestrians is the government housing district. Car ownership and access statistics are not readily available for Albemarle, but

it can be assumed that this particular area includes a population that may depend more heavily on non-motorized transportation than other sections of the City. These residents commonly have inadequate walking facilities and little representation, but nonetheless find ways to travel by foot.



Economically depressed areas typically show the worn signs of pedestrians walking along roads without



sidewalks or with holes cut through fenced-off areas exist near shopping areas. Pedestrians involved in motor vehicle accidents on these roadways may have been forced to take risks because of the lack of proper pedestrian accommodations. These risks may be taken because these residents have no other choice.

The chosen center point for this district is the Wal-Mart, which is across the highway from the principal residential areas in this part of Albemarle. The location of Albemarle's government housing district is in fairly close proximity to this Wal-Mart shopping area, downtown, the businesses on Main Street, and the Waddell Center. The primary opportunity here is the ease with which connections can be made that give some of these residents a more direct and safe route to places they need to go. Evaluating the several locations where safe walkways are needed and considering ADA (Americans with Disabilities Act) accessibility concerns will make this area easier to navigate by foot. See section 5.4 for more information on ADA Guidelines.

Development opportunities also exist south of the Wal-Mart, and smart land use decisions and connectivity planned now can create a better pedestrian environment for future residents.

Pedestrian improvements in this district will greatly benefit the low income residents of Albemarle.

III. Mill Hill

This old mill neighborhood surrounds a Baptist Church and a small but abandoned retail center. The elementary school campus sits on the edge of this neighborhood, with both Montgomery and City Lake Parks being within walking distance for its residents, if a safe route is created. Very little right of way exists on these narrow streets, trees line the road, and the building setbacks are not far from the roadway. The grid-like patterns of the roads offer good connectivity as well. These conditions, along with steep grades, would make it difficult to retrofit sidewalks in this neighborhood, but at the same time, provide decent traffic calming on roadways that are already low in traffic volume.



Being mostly a residential neighborhood, a pedestrian plan will benefit the residents here by encouraging safe streets or by encourage nearby future shopping vendors (possibly near the corner of Wiscassett and Hill). Pedestrian travel here could be positively influenced by minor improvements to connectivity, additional traffic calming such as four-way stops and pedestrian crosswalks, some nearby mixed-use developments, and multi-use pedestrian pathways to connect them to the nearby parks. The convenient locations of an interconnecting system of sewer lines provide potential trail corridors near this district and throughout the City.

Pedestrian improvements and economic stimulation in this district will primarily benefit the diverse age and income levels of the residents in these neighborhoods.



IV. Chuck Morehead Park

The center point for this Pedestrian Oriented Development District, Chuck Morehead Park, might create the catalyst for a new mixed-use community. But it will need some help. Right now, there is little in this area to drive the development of higher density housing units surrounding a park. Many residents seeking land here are purposely trying to find a neighborhood away from the traffic of the nearby highways, and possibly prefer not to have multi-family housing in their neighborhood. The possibility does exist though, of the land surrounding this park to be developed with single family homes on small lots.



It would be prudent to request that future developments here use this park as its "Town Center" and create a road and pedestrian path system that connects directly to it instead of solely to the main roads. Further connecting the park with pleasant pedestrian routes to the grocery and retail areas on US 52 will give residents the option of walking to their shopping destinations. A mixed-use development in this district would make this a future hot spot of North Albemarle and help to preserve some of the existing open space and farm land in the vicinity by focusing the sprawl development in this tight circle.

Pedestrian connections, a land use plan that incorporates a public park as part of a planned community, and mixed use land development will benefit the residents of northern Albemarle. It will also create economic stimulation and tax revenue, and control unplanned sprawl in the north side of town.

V. Stanly Commons

This government center, and past shopping mall, will serve as an excellent center to this Pedestrian Oriented Development District. Stanly Commons is already a popular walking area for many groups of residents, particularly



Albemarle's retired community. Within this district there is a substantial amount of high and low density residential units, a hospital campus, an abandoned rail right of way, power line and a sewer easement (good for shared-use paths), and a high school. While some of the neighborhood roads close to the hospital have sidewalks, most do not. Wide neighborhood roads that exist in this district act to encourage high automobile speeds. This lack of safe and comfortable walking facilities might be





one reason why residents must walk inside Stanly Commons for exercise, and why few can walk to this facility from the neighboring areas. These wide roads, however, might provide an inexpensive solution to this lack of safe facilities.

A high school is often the cultural center of a small town. Albemarle's high school campus houses a beautiful stadium and running track, along with finely landscaped grounds and appealing architecture. The nearby residential community is limited to an apartment complex across the street and few single family homes. The school's adjacent roadways, however, are wide enough to accommodate some pedestrian infrastructure.

The location of the hospital in the district will certainly be a large benefit to this plan. The hospital's campus itself can act as a pedestrian activity center. A nearby abandoned railroad offers recreation and transportation opportunities that the hospital and its visitors could enjoy.

Pedestrian improvements and economic stimulation in this district will benefit a very wide range of residents. School children, the elderly, lower and middle income families, and hospital staff and visitors will all be positively impacted by a greater emphasis on pleasant walking facilities.

VI. Stanly Community College

Presently an automobile-access only section of the City, this section can highly benefit from surrounding residential development opportunities, more connectivity, shared-use paths, and nearby food vendors (preferably on campus). Community college campuses are large economic centers of many communities, so pedestrian improvements and economic stimulation in this district will benefit multiple students and staff in the region, as well as offer walkable eating and shopping opportunities for commuters.



In this case, as with many community colleges, students enrolled in this school typically commute to this campus by automobile. The purpose of creating a pedestrian community around the school is to keep those students, instructors, and staff from driving elsewhere for lunch or errands. The use of the campus by surrounding residents for community events on nights or weekends will also be a valuable social gain.



4.3. ROADWAY CORRIDORS

This plan stresses the three main route needs of pedestrians; 1) short and direct; 2) safe; and 3) pleasurable. Because of high traffic volumes, zoning, and growth opportunities, highway corridors often have a great amount of commercial and residential development, and thus have a great amount of trip generators. These corridors are often 1) long in distance; 2) generally unsafe for pedestrians; and 3) unpleasant for pedestrians. However, since these roadways serve as the only access to many of the major shopping opportunities, they need to be certain to provide acceptable transportation accommodations for pedestrians.



A. All Highway and Roadway Corridors in Albemarle

By policy, the United States Department of Transportation, the North Carolina Department of Transportation and the City of Albemarle have the opportunity to incorporate what is known as a *Complete Streets Policy* on every one of its arterials within the city limits of Albemarle.

Complete Streets Policy:

A policy where every new or refurbished roadway should be designed and built to be able to functionally, safely and comfortably accommodate motorized and non-motorized transportation. Motorized vehicles (automobiles) and non-motorized vehicles (bicycles) should both be accommodated together in the road right-of-way, with separate lane designations, additional roadway width, or additional shoulder pavement for each where appropriate. Pedestrians should have a grade-separated travel corridor, along with appropriate and safe road-crossing points and acceptable access points to destinations.



US Highway 52

B. Historic Pee Dee Avenue and Main Streets



Residential and historic Pee Dee Avenue extends east from downtown until it merges with Main Street, which is currently a mix of older historic stores, gas stations, parking lots, vacant buildings, and other buildings. Zoning this strip as a mixed use corridor that encourages restaurants, shopping, arts and entertainment, and other such uses could spur economic growth and attract pedestrians. Many cities are redesigning streets such as this to become their “signature street” radiating from their downtown area. In addition to the Complete Streets Policy, this roadway could incorporate

narrow roadways, on street parking, wide sidewalks with shade trees, benches, and public open space. With time, this investment may attract an eclectic mix of businesses geared towards pedestrians to live and shop in this section of Albemarle. It may also create a valuable east-west pedestrian connection from downtown to the East Albemarle Elementary and Albemarle Middle School region.

4.4. OTHER OFF ROAD CITY-WIDE CORRIDORS

The numerous creeks, sewer lines, railroad corridors, and other utility easements and lowlands that surround Albemarle offer the City the opportunity to develop a shared-use path system that circumnavigates the City. This path system can help define the prime development boundaries as the City grows, and have a plan in place before the growth occurs so that these paths can be linked to the destinations appropriately without the need to retrofit.

SECTION 5: FACILITY STANDARDS AND GUIDELINES





5.1. GENERAL PEDESTRIAN FACILITY GUIDELINES

Guidelines for the placement and design of pedestrian facilities should be flexible to some extent so that context-sensitive design solutions can be implemented, but should adhere to standards established by the American Association of State Highway and Transportation Officials (AASHTO), the Manual on Uniform Traffic Control Devices (MUTCD), and the NCDOT. Several overall guidelines for facility development are highlighted below.

- Give transportation priority to the completion of pedestrian routes to schools, neighborhood shopping areas, parks, and transit stops.
- Incorporate the natural and historical linear aspects of the city into pedestrian projects.
- Ensure that the safety and convenience of pedestrians are not compromised by transportation improvements aimed at motor vehicle traffic.
- Ensure that the pedestrian circulation system is safe and accessible to children, seniors and the disabled.
- Street furniture, vendors, water fountains, bicycle racks, lighting, and other pedestrian amenities should be welcomed, but also be placed out of the immediate pedestrian travel area.
- Establish links between sidewalks, trails, parks, and the rest of the community.
- Retain public pedestrian access when considering private right-of-way requests.
- Support changes to existing policies that would enhance pedestrian travel.
- The pedestrian system should connect to residential, commercial, industrial, educational, and recreational areas.
- Off-site street improvements or enhanced bicycle and pedestrian facilities may be required as a condition of approval for land divisions or other development permits.
- Aesthetics and landscaping shall be a part of the transportation system.
- Coordinate transportation planning and efforts with neighboring municipalities.

A number of specific pedestrian improvement projects are proposed in this plan. These projects will play an important role in helping to improve the walkability of the City; however, it is even more important to ensure that appropriate pedestrian accommodations are made with future development. It is useful for the City to consider a set of guiding design principles that cater to the needs of pedestrians and the general means by which these needs are to be met. Some basic principles for incorporating pedestrian accommodations in a transportation system include the following:

- It should be accessible.
- It should connect to the places where people want to go.
- It should be easy to use and convenient.
- It should provide a sense of place and make an effort to be appealing to the senses.
- It should be well maintained.
- External factors such as noise, crime potential, exposure to the elements, and hazardous objects should be minimized.
- It should be used for multiple purposes such as dining, shopping, and special events so long as it does not contradict any of these principles.



5.2. SPECIFIC FACILITY DESIGN RECOMMENDATIONS

Design considerations for a variety of types of pedestrian facilities are highlighted on the following pages. These design considerations are not intended to serve as “standards”, since the most appropriate design will vary from project to project. However, suggested minimums and guidelines are addressed for the following types of facilities:

- Sidewalks and planting strips/furniture zones;
- Intersections and crosswalks;
- Shared-use Paths;
- Lighting, Landscaping, and Signage.



Sidewalks

Clearly, no pedestrian system is complete without sidewalks. Even if no pedestrian travel exists, studies show that walking can be expected to increase when the facilities are provided, and walking levels are highest when the pedestrian routes are complete and continuous. It is relatively easy to design a policy that requires new development to include sidewalks in their construction, but it can be difficult to retrofit new sidewalks into existing communities. The American Association of State Highway and Transportation Officials (AASHTO) recommends the construction of sidewalks on all city streets, including those in rural areas. The Institute of Transportation Engineers (ITE) recommends sidewalk installation on both sides of the street whenever possible for new urban and suburban streets, especially in commercial areas, residential areas with four or more units per acre, or residential areas on major arterials and collectors. If sidewalks on both sides of the road are not possible, lower density rural residential areas might adequately serve its pedestrians with a sidewalk on only one side and or four-foot wide shoulders.

Although separate pedestrian and automobile corridors are necessary on any roadway other than a low-speed driveway, sidewalks are the most useful along roadways with a fair amount of traffic volume and with speeds higher than 25 miles per hour. The higher the speed of traffic, the more the need may exist to route the pedestrian away from that road. Store frontage walkways or shared-use paths that provide the pedestrian with multiple options are sometimes preferred. Sidewalks should never be intentionally built directly adjacent to a roadway if the space exists for a buffer such as a planting strip, on-street parking, a furniture zone or bicycle lanes. Because of frequent intersections, dips, and narrow widths, sidewalks are not meant for bicycles other than new riders who are accompanied by a pedestrian trainer. One of the most common reasons for bicycle/car collisions are attributed to that rider being on the sidewalk. Bicycle provisions are addressed briefly in this plan as a traffic calming measure, but should be addressed completely in a separate plan.

ITE Recommendations for Sidewalks:

- *Central Business District: Wide enough to accommodate users. Minimum 8 feet.*
- *Commercial area outside the central business district: 7 feet wide if no planting strip is possible, or 5 feet wide with a 2-8 foot planting strip (Wider planting strips*

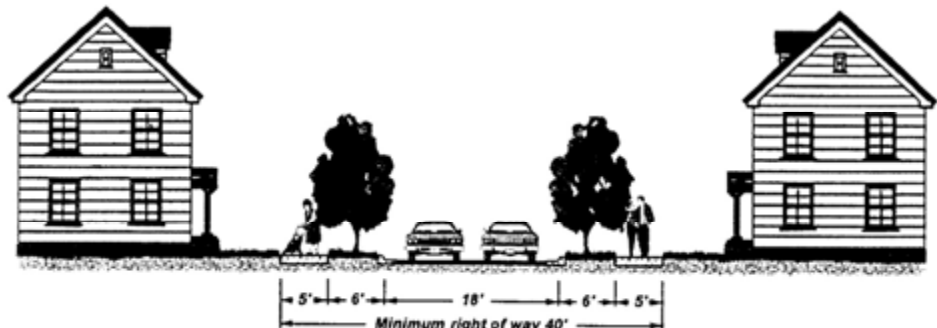


accommodate greater buffers from traffic and the opportunity to plant large shade trees).

- Residential areas should have 5 foot-wide sidewalks with a minimum of two-foot wide planting strips.
- 4 to 8 foot wide planting strips or furniture zones are recommended along all sidewalks to provide separation from vehicles. This space is useful for landscaping, lighting, poles, trash receptacles, signage, water fountains, benches, weather debris, bike racks, and curb ramps. Six foot wide minimum buffer strips between the sidewalk and the curb are required for the correct slope needed to accommodate ADA requirements for curb ramps while maintaining the sidewalks' 2 % maximum cross slope (see section 5.4). Eight foot wide buffers are recommended for the planting of any shade tree.
- Sidewalks should be clear of obstructions such as utility poles, sign posts, fire hydrants, bike racks, newspaper stands, etc. These objects must remain in the furniture zone or planting buffer strip.
- Vertical clearance should be at least 7 feet from ground level to the bottoms of signs or the lowest tree branches.
- Increasing sidewalk widths by 2 - 3 feet would accommodate shoulder-high intrusions like building walls, bridge railings, and fences.
- Maximum cross-slope of 1:50 (2%) is considered to be level. Limit running slope to 5% (1:20), or no greater than 8.33% (1:12) where topography requires it. Ramps with level upper and lower landings are necessary for ADA requirements.



The recommendations of this plan are to require sidewalks in neighborhoods and on arterial roads to be a minimum of 5 feet wide. Planting strips with a minimum width of 6-8 feet should be required as 6 feet is required to keep the slope necessary for curb ramps to a sidewalk, and 8 feet is the recommended width for medium and large shade trees.



A typical neighborhood cross-section street from NCDOT's TND Street Design Guidelines

Sidewalks in mixed-use and higher density commercial corridors such as the Central Business District and the Neighborhood Business Districts that should appear in Pedestrian Oriented Development Districts should be a minimum 6-15 feet wide with 8-10 foot wide furniture zones.

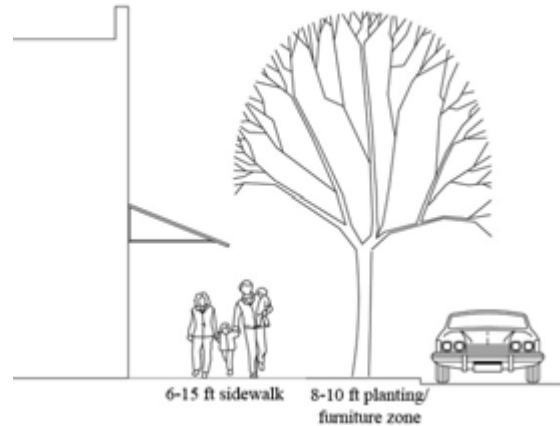


Frontage Zone:

Store frontages should be encouraged to be built with small setbacks close to the sidewalks with a frontage zone of 1-3 feet from the sidewalk travel area.

Sidewalk Zone:

The width requirements for the sidewalks increase to provide for the increased use in higher density, mixed use or commercial centers. This sidewalk zone continues immediately adjacent to the building frontage zone and extends a minimum of 6 to 15 feet from that frontage zone. This area should be kept completely clear of all obstacles so that pedestrians have a clear walkway. All benches, poles, racks, newspaper stands, signs, etc should be placed in the *Furniture Zone*.



Furniture Zone:

Furniture zones are different from planting strips in that they can, in many places, be paved areas adjacent to the sidewalk for street furniture such as benches, trash receptacles, dining, lighting, bicycle racks, water fountains, informational boards, or for additional walkway width. Tree planters should be added to these furniture zones by policy and should be placed every 25-50 feet, depending on type and depending on the demand for sidewalk furniture and parking. Trees in the Poplar family should not be planted in planting strips because of the extensive pavement damage that their roots can cause. Shade trees require a minimum width of 8 feet, while the minimum width suggestions for furniture zones are 8-10 feet. If space is minimal, a six foot minimum width is acceptable to provide the slope necessary for curb ramps.

On some roadways, on-street parking pockets could alternate in-between the occasional landscaping or sidewalk furniture in the space that is otherwise utilized as a furniture zone. On-street parking pockets require a minimum width of 7 feet. Using pervious materials for parking, the furniture/planting strip zone, and for some parts of the frontage zone could reduce storm drainage concerns.

Intersections

Driveways



Sidewalks that ramp down to driveways gives the false impression to the pedestrian and to the driver that this section of the sidewalk is the drivers' territory, plus it makes conditions difficult for the disabled, along with common walkers and runners. Sidewalk and driveway standards that require new and maintained driveways to ramp up



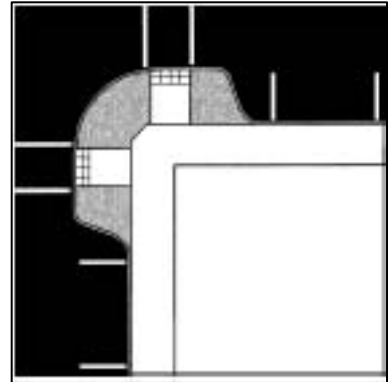


to greet a level sidewalk makes the driver more aware that they are crossing into the pedestrians' territory, and makes the sidewalk more agreeable to the user.

Curb Extensions

Curb extensions can be installed into places where the sidewalk can project into the roadway such as near planting strips, furniture zones, or where on-street parking is provided.

- The curb/walkway should protrude out to the width of the parking spaces at intersections. This:
 - tightens the curb radius;
 - reduces the length of the crosswalk;
 - gives drivers better visibility;
 - restricts fast turns.
- Limiting right turns on red may decrease the chances of pedestrians being hit by right-turning vehicles. The above curb extension treatment reduces the common collision between fast-moving vehicles turning right on a *green* light and pedestrians crossing with the green light.



A curb extension (Image Source: United States Department of Transportation)

Crosswalks

Every effort must be made to ensure the safety of locations where pedestrians and vehicles will cross paths, and visibility is vital. Every intersection (even small neighborhood crossings) should receive some visual clue to automobile drivers that pedestrians may be crossing, whether it is a sign, pavement markings, flashing warnings, or all of the above.

Eight-foot to ten-foot wide crosswalks are recommended, with 6 feet being the absolute minimum (most likely in neighborhoods). Wider crosswalks could be used in locations with higher



Even many small neighborhood roads could have crosswalks

pedestrian volumes or where the crosswalk needs to be more conspicuous. Crosswalk lines of 10-12 inches of width are the recommended minimum for the standard double horizontal bar crosswalk, but may differ for the thicker-lined *Piano* style crosswalk illustrated in Exhibit 5-1. Crosswalks must line up with curb cuts. Other recommendations include the following:

- The shorter the crosswalk the better. Minimize intersection widths with curb extensions, decreased lane widths, or pedestrian refuge islands (explained in more detail on page 5-8).
- Pedestrian refuge islands are important safety considerations for any crossing point. These should be included in every intersection or mid-block crossing where there is more than one



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travel lane in any direction or on two lane arterial roads that have a significant vehicle or pedestrian volume.

- Countdown signals give pedestrians a clear understanding of the amount of time that they have to cross an intersection and should eventually be placed at every signalized intersection in Albemarle.
- A continuous travel path from sidewalk on to crosswalk is necessary.



Although this crosswalk includes positive features such as a countdown signal, a pedestrian refuge island, and detectable warnings, it fails to line up with the curb cuts.

- All sidewalks must have adequate curb cuts, ramps, landing areas, and detectable warning plates (See Section 5.4). These curb cuts must align exactly with crosswalks and pedestrian refuge islands.
- Provide clear, consistent white markings (Zebra, Ladder, or Piano bars are recommended). Textured crosswalks such as brick are not recommended because they may cause difficulties for the disabled and are less visible to the motor vehicle driver than the crosswalks recommended here. See Exhibit 5-1 for examples of crosswalk types.

- Bring the road to meet the sidewalk rather than the sidewalk to meet the road at driveways wherever possible. This reduces travel problems for the disabled and alerts drivers that they are crossing a pedestrian zone.
- ADA ramps should be a minimum of 8 feet wide.

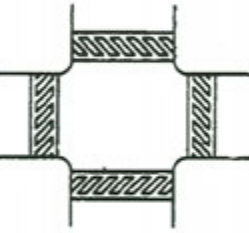
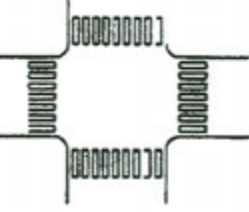
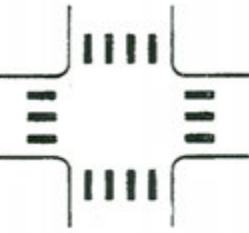
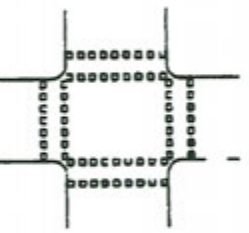
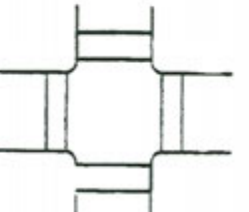
Combining safe crosswalks with traffic calming devices (explained in more detail in Section 5.3) such as raised crosswalks and curb extensions are useful in commercial, residential, or mixed use areas with high amounts of vehicular and pedestrian traffic.



A raised crosswalk connecting a parking lot to a storefront, but lacking paint markings that would increase visibility



Exhibit 5-1: Types of Crosswalk Markings
(Source: Washington DOT, *Pedestrian Facilities Guidebook*)

MARKING PATTERNS	ADVANTAGES	DISADVANTAGES
 HORIZONTAL BARS	Common practice at stop-controlled intersections, less expensive, easy to install and maintain.	Not as visible as some other marking types; bars tend to wear faster than other types; not appropriate for mid-block locations.
 ZEBRA	Highly visible.	More maintenance required since wheel friction rubs off diagonal stripes; surface can be slippery.
 LADDER BAR	Highly visible.	Wider stripes rub off with wheel friction, but can be placed to minimize this effect; surface can be slippery.
 PIANO	Highly visible and becoming more commonly used; easy to maintain since stripes can be placed outside the wheel friction areas.	
 DASHED (European)	Captures attention because it is not a commonly used pattern.	May not define space as well as some other choices.
 SOLID	Visible (but may not be as eye-catching as other patterns); not commonly used.	Expensive; more difficult to install and maintain; surface can become slippery.



Mid-Block Crossings

- Install only on roads with a speed limit of less than 45 MPH.
- Do not install within 300 feet from another signalized crossing point.
- Base installation of a mid-block crossing on an engineering study or pedestrian route.
- These crossings are recommended near schools, pedestrian routes, retail areas, recreation, and residential areas.
- Require advance warning signs and good visibility for both the driver and the pedestrian. Placing a stop bar with signage a few car lengths before the crosswalk will ensure better visibility for the vehicles and the pedestrian.
- Providing a safe crossing point is necessary since pedestrians will not walk far for a signalized intersection.
- Provide an audible tone at signalized crosswalks.
- Include a pedestrian refuge island on wide streets where:
 - There are fast vehicle speeds or large vehicle or pedestrian traffic volumes.
 - There is more than one travel lane in any direction.
 - Children, people with disabilities, or elderly people would cross.
 - There are complex vehicle movements.
 - There is insufficient time to cross the entire road because of traffic demands.



A Mid-block crosswalk in Charlotte, NC that has piano-style markings and a pedestrian refuge island

Pedestrian Refuge Islands

These are 4-6 foot wide and 8-12 foot long refuges that are physically separated from motorized traffic, and can be in the center of two directions of traffic as the one pictured here, or can offer pedestrians a safer place in between right turning vehicles and through traffic (pork chop refuge islands). Some benefits to these refuge islands are that they:



Center turn lanes offer safety island opportunities

- enable pedestrians to focus on crossing each direction of traffic separately and provide a safe place in the middle of the street to wait;
- offer shorter crossings and improve safety at heavy right-turn traffic intersections;
- place pedestrians in a better position to see oncoming and turning traffic, and allow drivers to more clearly see pedestrians.

Pedestrian Signals at Intersections

- A displayed automatic *Walk* signal with a countdown is recommended at all intersections when pedestrians have the right-of-way to cross, whether or not the button was activated.
- Timed signals should display the entire countdown phase until it reaches zero, when all pedestrian and vehicle traffic



Countdown signals allow pedestrians to cross with more certainty



should get a red light in that direction. Pedestrian signals should display a walk symbol at all times when the pedestrian has the right of way, and include the countdown as soon as the signal is scheduled to change.

- A safe and adequate time must be allowed for any pedestrian to cross who may already be in the intersection. A 3.8 ft/s walking speed is recommended for timing pedestrian clearance intervals at locations with normal pedestrian demographics (i.e., downtown areas, shopping areas, most neighborhoods, schools areas) or locations where the age or physical disability status of the pedestrian population is unknown. When the proportion of pedestrians over the age of 65 exceeds 20, 30, 40, and 50 percent of the total pedestrians at a location, walking speeds of 3.6, 3.5, 3.4, and 3.3 ft/s, respectively, are recommended for pedestrian clearance timings. A 2.9 ft/s walking speed is recommended for intersections where nearly all of the pedestrians are over age 65.
- Clear, consistent activation buttons 42" high are necessary where these buttons are preferred.
- Countdown signals can be installed 7 – 10 feet high.
- Visible signs should be placed in the medians for automobiles to be reminded that North Carolina State Law requires vehicles to stop for pedestrians in both marked and unmarked crosswalks.



Examples of common signage at signalized crosswalks

Signalized Mid-Block Crossings

The in-pavement flashing light crosswalk is a mid-block crosswalk that is better visible to motorists than crosswalk markings alone. The HAWK signal is a mid-block crosswalk that is used on roads where the pedestrian would require help crossing with a signal. This system uses traditional traffic and pedestrian signal heads but in a different configuration. It includes a sign instructing motorists to “stop on red” and a “pedestrians” overhead sign. There is also a sign informing pedestrians on how to cross the street



In-pavement flashing crosswalks improve visibility



A HAWK signal in Tucson, Arizona

safely. When not activated, the signal is blanked out. The HAWK signal is activated by a pedestrian push button. The overhead signal begins flashing yellow and then solid yellow, advising drivers to prepare to stop. The signal then displays a solid red and shows the pedestrian a “Walk” indication. Finally, an alternating flashing red signal indicates that motorists may proceed when safe, after coming to a full stop. The pedestrian is shown a flashing “Don’t Walk” with a countdown indicating the time left to cross.



Shared-Use Paths



A shared-use path on an old rail corridor in Madison, Wisconsin

Shared-use paths are intended to serve walkers, wheelchair users, runners, bicyclists, or any other non-motorized mode of transportation. These facilities may also be referred to as “greenways,” or greenway trails and should not be confused with sidewalks that share the right-of-way with vehicular roads, nor with “Greenbelt Buffers” that are not necessarily intended to accommodate public access. Shared-use paths can act both as pedestrian walkways and as vegetative buffers with an ecological function. Besides encouraging the reduction of all of the harmful environmental effects of automobile use, these trails can also stimulate the acquisition and conservation of wildlife corridors, be associated with stream improvement projects, and give people a healthy respect

for their natural surroundings by making public open space more accessible.

Shared-use paths need to be a minimum of 10 feet wide; with minimum 2 foot wide graded shoulders on each side (AASHTO recommends 5 foot shoulders) to protect users from grade differences. These shoulders can be grass, sand, finely crushed rock or gravel, natural groundcover, or other material. Sections of the trail where shoulders are not possible because of stream crossings or other elevated grade issues should have protection such as rails, fences, or hedges. Parks and urban corridors tend to be highly-used sections of these trails and should possibly be wider. If it is not possible to increase the width in these popular sections, consider including a stripe down the center to indicate bi-directional traffic, especially around sharp or blind curves.

The alignment of these corridors should avoid road right-of-way whenever possible to minimize intersection and driveway crossings. Because these paths typically do not cross roads at signalized intersections, they should include pedestrian crosswalks, underpasses, converted culverts, or overpasses at each road crossing for safety. Vertical clearance of 8 feet is required for safety of all users, and structures and shrubbery should not extend horizontally into the corridor. A vertical clearance of 10 feet is recommended for underpasses and culverts. Safe road crossings are very important in creating a successful shared-use path. Proper crossings should be included in all design for these paths.



This underpass was designed and built during bridge construction



These paths should follow the contour of the land for aesthetic and environmental reasons, but for practical reasons should not be unnecessarily curved. The minimum radii or curvature recommended by AASHTO is 30-50 feet, and the cross slope should typically be less than 2%. The grade should not be more than 5%, but could reach 11% for short distances according to



A shared-use path along a sewer easement in Charlotte, NC

ADA and AASHTO guidelines. Right angles should be avoided for safety reasons, especially when considering bridge and road crossings.

Environmental protection should be a priority with the planning and construction of a trail. Trail design, construction type, and construction schedule should all reflect environmental considerations. For example, a trail offers some leniency with its alignment compared to a sidewalk, offering opportunities for selective clearing of vegetation. Also, asphalt may not be considered a good surface material in wet areas because of its

petroleum base, and construction during certain months of the year may disrupt wildlife nesting.

These trails should be open at all hours so that it can serve as a reliable transportation route. Lighting is not necessary and not recommended except through underpasses and culverts, and near safety hazards such as curbs, sharp directional changes, road crossings, obstacles, or ending points, and some high-use areas such as parks and urban locations. A reflective center stripe or markers would help to make this trail navigable in limited light. Lighting the trail itself can restrict the visibility of areas beyond the trail. Existing street and structure lighting in urban areas can effectively and adequately light the adjacent trail. For safety reasons, a requirement that states that all bicycles and skaters carry lights and all pedestrians wear reflective clothing during non-daylight hours would be useful.

We recommend that these paths should be surfaced with a hard material that allows for easy walking and bicycling. Asphalt is cost effective and practical in most terrains, while concrete and boardwalks are best suited for flood prone (culverts and underpasses) or wet areas (wetlands and creek borders). Finely crushed stone or granite screening (rock dust) is a cost effective alternative that may be used outside of high traffic urban areas. Private motorized vehicles of any kind (besides motorized wheelchairs for legally disabled citizens) should never be allowed access to these trails. A summary of our recommendations for two-directional traffic shared-use trails is below:

- Trails adjacent to roadway
 - Minimum 10 feet wide. (12 feet preferred)
 - Minimum 10-foot planting strip. (except for intersection approaches)
 - A cross slope of 2% is recommended.
 - Grades of less than 8.3% are required, with more than 5% being treated as a ramp.
 - Minimum 2-foot graded shoulder on each side, with 5 feet preferred.
 - Asphalt is the best surface for multiple users such as bikes and roller blades. Concrete is a good alternative in flood-prone areas such as culverts, while boardwalks are best in



frequently wet parts of the trails. Very fine gravel or Granite Screenings (rock dust) is a cost-effective substitute in rural areas and can accommodate pedestrians and most bicyclists; however, non-paved trails may have higher maintenance costs.

- Minimize intersection and driveway conflicts; path should stay level over driveways. Non-paved driveways should have paved bibs to restrict debris accumulation.
- On separate right-of-way
 - Minimum 10 feet wide. (12 feet is preferred in high use areas)
 - A cross slope of 2% is recommended.
 - Grades of less than 5% are required, with occasional grades up to 11% for short distances.
 - Minimum 2-foot graded shoulder on each side with 5 feet preferred.
 - Asphalt is best surface for multiple users such as bicycles and roller blades. Concrete is a good alternative in flood-prone areas such as culverts, while boardwalks are best in frequently wet parts of the trails. Very fine gravel or granite screenings (rock dust) is a cost-effective substitute in rural areas and can accommodate pedestrians and most bicyclists; however, non-paved trails may have higher maintenance costs.

Examples of typical shared-use path cross-sections are shown in **Appendix D**. An upland shared-use path cross section from NCDOT's guidelines is shown separately from an example of a floodplain example from Mecklenburg County Parks and Recreation.

Lighting, Landscaping, and Signage

Lighting

- Use lighting that is appropriate for the pedestrian scale, not the automobile scale. When lighting is not feasible or desirable (such as on suburban or rural sidewalks or greenways,) reflective materials on signs or paint striping on pavement can be used to guide pedestrians.
- Well used pedestrian areas such as Central Business Districts, Neighborhood Business Districts, and parks should have appropriate lighting.
- Determine a need for lighting before installing it. In many cases, lights can make visibility poorer in areas beyond an off road path, which causes some uneasiness for pedestrians. Lighting should be standard where pedestrians cross under a structure, or when the sidewalk or path has obstacles such as curbs, steps, roadway crossings, or abrupt directional changes.



Lighting should be to the pedestrian scale

Landscaping

- Native vegetation should be used to minimize maintenance and long term costs.
- Use low height shrubs near crossings or transit stops.
- The limbs of large canopy trees should not encroach within the walking area.
- Some tree species have more damaging root systems than others and should not be planted in tight planting strips or without root barriers.
- Planting strips should be wide enough to accommodate the vegetation planted. Large canopy trees need 5 – 8 feet, with 8 feet being preferred.

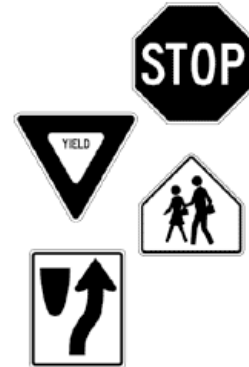


- Space large canopy trees evenly to provide adequate shade (25-50 feet apart). Small canopy trees might be spaced 20-25 feet apart.
- Utilize smaller canopy trees when conflicting overhead utilities are present.
- Recent studies suggest that the cover that trees provide sidewalks actually increase their lifespans. It may not be appropriate to use sidewalk cracking issues as a reason not to include trees in a pedestrian plan.
- Consider trees that are low maintenance. Evergreen or tardily deciduous trees that continually drop too many leaves or acorns throughout the year would need constant attention. Deciduous trees that only drop leaves once in the year are easier to maintain.

Signage

- Signage is typically used for regulatory, warning, or way-finding purposes.
- Signage should be minimal.
- Signage should be aesthetically appealing.
- Signage should be maintained to be readable.

Signing is governed by the Manual on Uniform Traffic Control Devices (MUTCD), which provides specifications on the design and placement of traffic control signs installed within public rights-of-way. The MUTCD encourages a conservative use of signs (Sections 2A-1, 2A-6, 2B-1, and 2C-1). Signs should only be installed when they fulfill a need based on an engineering study or engineering judgment. In general, signs are often ineffective in modifying driver behavior, and overuse of signs breeds disrespect. Used judiciously and located with consistency, signs and markings can be effective.



Planners have a variety of regulatory and warning signs that can be used to increase pedestrian safety

The MUTCD outlines guidelines governing signs and pavement markings but it does not prohibit any creative design. Colors for signs and markings should conform to the color schedule recommended by the MUTCD to promote uniformity and understanding from jurisdiction to jurisdiction. For the background color of signs, use:



This crosswalk in Mooresville uses a Pedestrian Crossing street sign, an in-street warning sign and pavement markers

YELLOW & FLUORESCENT YELLOW/GREEN - General warning
 RED - Stop or prohibition
 BLUE - Service guidance
 GREEN - Indicates movements permitted, directional guidance
 BROWN - Public recreation and scenic guidance
 ORANGE - Construction and maintenance warning
 BLACK - Regulation
 WHITE - Regulation

Warning signs are used to inform unfamiliar motorists and pedestrians of unusual or unexpected conditions. Advance pedestrian warning signs should be used where pedestrian crossings may not be expected by motorists, especially if there are many motorists who



are unfamiliar with the area. A new fluorescent yellow/green color is approved for pedestrian, bicycle, and school warning signs (Section 2A.11 of the MUTCD). When used, warning should be placed in a way that allows adequate response times. Warning signs are generally diamond-shaped with black letters or drawings on a yellow background and shall be reflectorized or illuminated.

Regulatory signs, such as STOP, YIELD, or turn restrictions require certain driver actions and can be enforced. Warning signs can provide helpful information, especially to motorists and pedestrians unfamiliar with an area. Some examples of signs that affect pedestrians include pedestrian warning signs, motorist warning signs, NO TURN ON RED signs, and guide signs.

North Carolina General Statute § 20-173 states that vehicles must yield to pedestrians in any marked crosswalk or within any unmarked crosswalk at or near an intersection. Each intersection should be marked with the proper crosswalk and some intersections may benefit from signs reminding drivers of this law.



Signs may be placed on pavement, furniture, or other locations

Sample costs for these items shown in Section 5.2 are given in **Appendix E**.

5.3. TRAFFIC CALMING INITIATIVES

Tightening Turns and/or Extending Sidewalks

Tightening turns at intersections will force motorists to reduce their speeds and will give drivers a better angle-view on approaching traffic and pedestrians while decreasing the length of the crosswalk for pedestrians. This solution enhances pedestrian safety at all intersections, and would greatly improve the safety at major intersections where vehicles make quick turns. A drawback to this is that standard intersections with minimum turn radii increase fuel efficiency because vehicles can make rolling stops more easily and that design can therefore decrease air pollution. Pedestrian islands (pork chops) at these right turn locations where it is desired to keep traffic moving can make it a little safer for pedestrians, and still save motorists fuel costs. This technique, however, is still not optimum for the pedestrian and should be limited to select major intersections. Each new intersection and driveway should be constructed according to new guidelines that address these considerations.



Albemarle has a curb extension downtown. Pedestrians have less road width to cross and cars are forced to slow down to make right turns.



Road Diets (Lane Conversions)



A lane conversion creates bike lanes from motor vehicle lanes and a new center turn lane.

Roads with two or more wide travel lanes in each direction (or one very wide travel lane) and no designated left turn lanes may be evaluated for the possibility of applying a “road diet”. This lane conversion typically reduces the widths of and/or the number of motor vehicle travel lanes in each direction, includes designated center left turn lanes with occasional median strips for pedestrian crosswalks, and adds bicycle lanes. This configuration will allow through traffic to keep a constant pace without stopping for turning vehicles, supports alternate forms of transportation, provides buffers for pedestrians on the sidewalks, slows traffic to the posted speed limit, and may give pedestrians safer crossing opportunities.

Some studies show that this configuration could be safer and can be more efficient as a traffic mover than some other roadway configurations. The ideal roadway for this conversion is often a four-lane road carrying 12-18,000 auto trips per day, but upper limits of 20-25,000 ADT are also achievable on some roadways without decreasing their capacity. No specific roadways in Albemarle were studied for this practice in this report, but it may be a conceivable alternative in the future for conversion plans that meet specific objectives.

Back-in Diagonal Parking

A new method of on-street diagonal parking has some positive benefits to pedestrians. Instead of diagonal parking that allows a car to quickly enter a space, and then have to back out of it rather blindly, some towns have been considering diagonal back-in parking. This method requires the driver to pull in front of the space on the roadway and then back into the parking slot. This gives easy access for the driver, the passengers, and the car’s payload to the sidewalk without having to first shut the door. The open door also acts as a buffer to keep small children from moving towards the roadway when they exit the car. When the car is ready to leave the parking space, the driver has a clear view on their side of the vehicle of the oncoming traffic and can maneuver easily into the flow. Uncertain maneuvers into traffic and speedy turns into parking spaces that may have pedestrians blocked from view are eliminated.

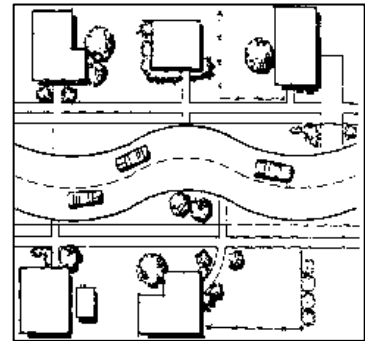


*Back-in diagonal parking has benefits for pedestrians
(Photo by Michael Ronkin)*



Alternate On-Street Parking and Chicanes

Where there is space for on-street parking on only one side of the street on low-speed roads, consider striping the travel lanes so that the parking spaces alternate from one side of the street to the next with each block or half block. This will give the road a serpentine shape and naturally reduce the speed of traffic. Roads through downtown that currently have some on-street parking and that have speed issues may be candidates for this treatment. Chicanes can also be artificially created by adding landscaping, changing lane striping, or by creating pedestrian refuges with crosswalks. (This picture and other traffic calming techniques can be found on the Federal Highway Administration's Web Site at <http://www.ite.org/traffic/tcdevices.htm>)



Chicanes can be developed on wide streets to help maintain a desired traffic speed

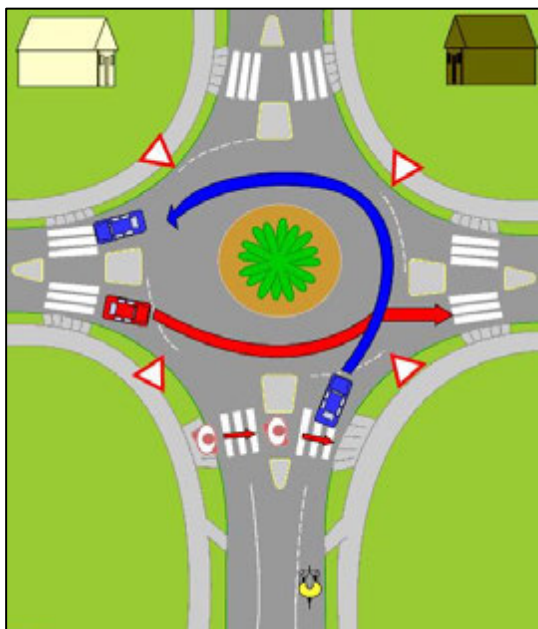
All-Way Stops and Yields



A four way yield intersection, with some modification, can become a mini-roundabout

Neighborhood road intersections that currently have a stop in one direction can be modified to have a stop or a yield in all directions, if other speed controls are already in place. This photo shows a four-way yield, but this location can easily be made safer for pedestrians by including a mini-roundabout in the middle of this intersection.

Roundabouts



This roundabout image from Yorkton, Canada shows crosswalks, safety islands, and optional bike exits for inexperienced cyclists who prefer not to take the lane.

Roundabouts are great for pedestrians, bicycles, and automobiles, despite the fears from those who are unfamiliar with these traffic control devices that are popular worldwide. Roundabouts limit potential conflict points because the automobiles and bicyclists are unable to make left turns. Instead, the vehicle moves in a counter-clockwise direction around the circle, and turns right at their chosen road. Vehicles get through the intersection more quickly, even though their speed is lower. Since these traffic speeds are slow, bicyclists can move into the travel lanes as if they were a larger vehicle.

Pedestrians and novice bicyclists use sidewalks and crosswalks (sometimes with



A mini-roundabout in Madison, WI



pedestrian refuge islands) on the outside of the roundabout, and have been shown to have fewer collisions with vehicles at these roundabouts than with conventional intersections.

Narrowing Residential Streets with Striping

On low volume neighborhood roadways where some streets currently have no sidewalks, pedestrians sometimes choose to use portions of the roadway for walking. While this practice is allowed by law, it is important that vehicle speeds be controlled for safety purposes. This is particularly true when street lanes are so wide that drivers feel less constricted and can travel at speeds not conducive to safely sharing the roadway with pedestrians or young cyclists. Narrowing lanes and other traffic-affecting policies are effective in reducing vehicle speed on streets with or without sidewalks.



A striped shoulder in Albemarle

When retrofitting to install sidewalks in neighborhoods is not currently feasible, reducing vehicle lane width, and thereby vehicle speed, on these broad neighborhood streets will increase safety for pedestrians sharing the street with vehicles. Standard 9½ to 10½-foot lanes can be established by installing outside boundary lines with either paint or thermoplastic striping. While thermoplastic striping costs more, it will last significantly longer than will lines of standard paint, although standard paint will likely last for years on lower-volume streets. This practice is best on roadways with speed limits of 25 miles per hour or less, and with an ADT of 3,000 or less.

The opportunity for on street parking does not necessarily need to be removed to accomplish this. If the newly striped shoulder is less than seven feet wide (including gutter pans), cars parked along a street in these margins can effectively create a chicane for vehicle drivers, and also contribute to slowing traffic. Margins seven feet wide (including gutter pans) can adequately fit vehicles, but pedestrians will be forced to cautiously walk around them. On-street parking should not be allowed near intersections or other common pedestrian crossing points.

Pedestrians who choose to use the areas outside the painted lanes must still comply with local and state law. North Carolina General Statute § 20-174 specifically states that pedestrians must



*Striped shoulders in Albemarle
wide enough for on-street parking*

use sidewalks where they are provided. When no sidewalks are provided, pedestrians should walk facing traffic and must yield right of way to vehicular traffic, while vehicle drivers must use due care to avoid pedestrians on the roadway. The presence or the expectation of pedestrians on a street may also slow traffic on these neighborhood roadways.

Experienced bicyclists should use, and be expected to use, the vehicle lanes. Young and inexperienced bicyclists may use the area with the pedestrians, but should ride in the same direction as traffic. This photo shows striped shoulders in Albemarle that are primarily for on-street parking, but still offer decent pedestrian accommodations.



Bicycle Lanes

It is important to understand that sidewalks are not designed for bicycles, and bicycle planning needs to be incorporated with roadway planning or with paved paths off of the road right-of-way. This plan does not provide specific projects or recommendations for bicycles. The previous paragraph describes lane striping specifically for traffic calming, but bicycle lanes are functional lanes for bicycles that also serve to slow traffic and as traffic buffers for pedestrians on the sidewalk. Although neighborhood roads typically have low enough automobile speeds and volumes for cyclists to ride in the vehicle lanes, bicycle lanes on arterial roads offer a perception of safety to bicyclists, and make many drivers more comfortable with sharing the road with a cyclist. NCDOT guidelines require designated bicycle lanes to be a minimum of 4 feet from the edge of the gutter pan to the stripe.



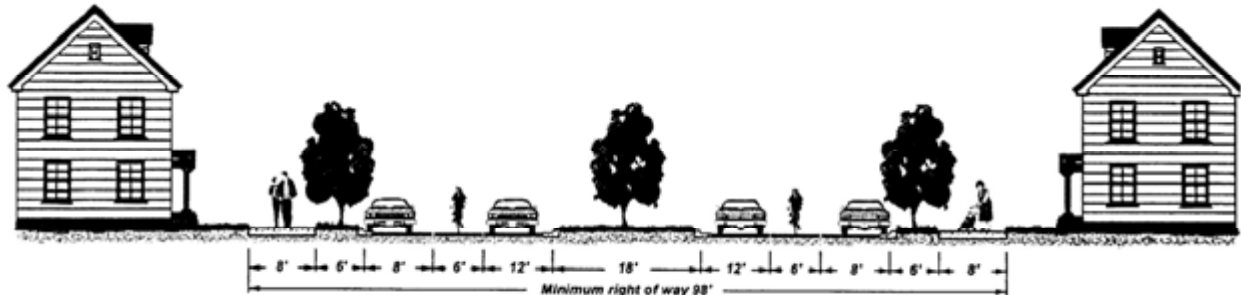
A bike lane in Charlotte, NC

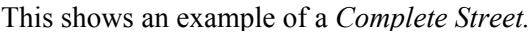
Vehicular Lanes

To keep pedestrians safe and comfortable, roadways in the core of the Pedestrian Districts and in residential areas should keep traffic speeds at a maximum of 20-25 mph. Keeping motor vehicle lanes at a width of 9.5' – 10.5' with other traffic calming features could naturally keep speeds limited. 30-40 mph roadways should have 11' wide inside travel lanes and 12' outside lanes, but 35 MPH roadway lanes can be as narrow as 10' if separate bicycle lanes exist, and outside lanes can be as wide as 14' if they are meant to be shared travel lanes for bicycles and automobiles. Roadways that are 45 mph or greater are not recommended within Pedestrian Districts, and travel lane widths depend on a range of existing conditions.

Designing “Complete Streets” that provide accommodations for pedestrians, bicycles, and motor vehicles are the optimal means by which vehicular traffic and pedestrian traffic can coexist. The Federal Highway Administration states that, “Bicycling and walking facilities will be incorporated into all transportation projects unless exceptional circumstances exist.” Albemarle and NCDOT need to adopt a *Complete Streets* policy as well. A good resource that should be obtained from the North Carolina Department of Transportation is their *Traditional Neighborhood Development Street Design Guidelines* from July 2000. The cross-section below is from those guidelines. This manual goes into further detail on design speeds, street widths, on-street parking, sidewalks and other street features and can be found on-line at:

<http://www.ncdot.org/doh/preconstruct/altern/value/manuals/tnd.pdf>.





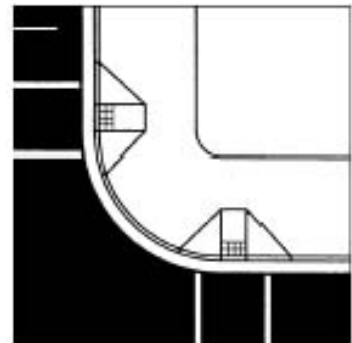


5.4. AMERICANS WITH DISABILITIES ACT (ADA) FACILITY TRANSITION PLAN



Lack of pedestrian planning in this NC neighborhood disadvantages the disabled population as well

Title II of the Americans with Disabilities Act of 1990 (ADA) requires that local governments complete a Transition Plan that describes how that municipality will upgrade its existing public right of way facilities so that they are compliant with ADA. This plan was supposed to be complete for states and larger municipalities by July of 1992; with modifications done by January of 1995. The US government and the disabled community realized that this goal was lofty, but now, ten years later, it is likely that its



This is a good design



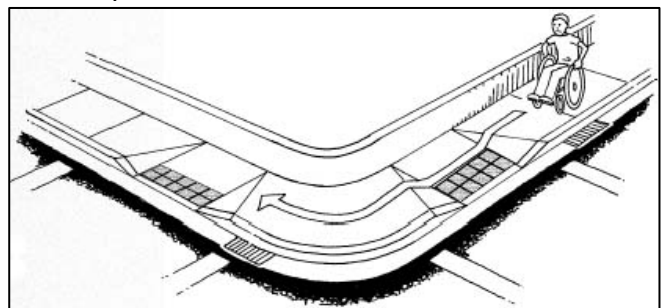
New sidewalks with ADA considerations.

provisions will be expected to be completed. In some instances, comprehensive pedestrian plans have served as the Transition Plan for municipal and state governments around the country.

This plan recommends that the City of Albemarle takes special care to make certain that each and every right-of-way project done in the City incorporates upgrades to its existing pedestrian features such as curb ramps, sidewalk maintenance, and crosswalks that will satisfy ADA guidelines. This includes, but is not limited to: sidewalk and crossing cross slopes, sidewalk widths, surface, grades, curb cuts, ramps, landing areas, gaps, obstacles, detectable warnings, and signals. The illustrations here show some of the problems, issues and solutions that are

involved with the proper planning for disabled pedestrians. Placing curb ramps out of the travel area, making sure to accommodate all users once they are in the vehicle right-of-way, and providing detectable warnings on the ramps for the visually impaired are some of the many improvements that can be done. These illustrations and a lot more information and guidance on this topic are located on the United States Department of Transportation's web site at:

<http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks207.htm>



Curb cuts and ramps without a minimum 6 foot buffer from the curb create dips and the absence of adequate landing areas.

SECTION 6: ANCILLARY PROGRAMS AND PRACTICES



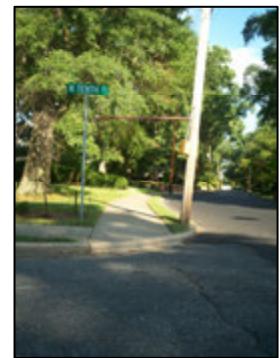


Ancillary programs and practices are an important part of establishing a pedestrian-friendly community without necessarily being incorporated with any on-the-ground projects. Facility design, maintenance, traffic calming, education programs, law enforcement, promotion, and offering transportation choices are all necessary to create a community that is walkable. Some of these recommendations could be implemented immediately, while others may need the basic land-use and infrastructure to be incorporated into the defined Pedestrian Oriented Development Districts to be effective.

6.1. SPOT IMPROVEMENT AND MAINTENANCE PROGRAMS

Sidewalks / Walkways

Just as potholes, uneven pavement, and visual obstructions irritate automobile drivers, these do the same to pedestrians. Current sidewalks should be free of cracks, dead-ends, or uneven alignment. All sidewalk/roadway intersections should include curb cuts, ramps, detectable warnings and landing areas that comply with ADA. Funding should be set aside for maintenance of worn sidewalks and consideration should be given as to which material to use to maximize the sidewalks' lives. An annual budget of \$100,000 should be set aside for small spot improvement projects. The City should apply for any available state or federal funding to correct any gaps in its existing sidewalk network and to retrofit ADA specific accommodations.



Maintenance issues such as worn sidewalks and retrofitting opportunities such as curb cuts and ramps are very important.

Currently, a limited sidewalk inventory exists for the City of Albemarle. It is recommended that the City conduct a comprehensive inventory, including notes on where these sidewalks need maintenance or ADA upgrades. A means should also be established by which the City can annually determine where new maintenance issues occur, and continually receive alerts from the public on sidewalk maintenance concerns. Once an initial list of necessary repairs and upgrades is compiled, each particular maintenance project can be ranked according to the criteria set in Section 7.2 (Table 2 on page 7-4). These maintenance projects should be ranked separately from the projects outlined in Appendix G, and be continuously updated as additional maintenance needs arise.

Additionally, small gaps in the sidewalk may occur when separate public or private projects do not completely connect. A serious effort must be made to connect these pieces of walkways, and future policy must be created and enforced that ensures that these connections are always created in future projects (see Section 8).



6.2. EDUCATION PROGRAMS

School Safety Patrol Programs



School Safety Patrol Programs across the United States have been responsible for decreased pedestrian/vehicle collisions. The American Automobile Association (AAA), municipalities, and schools have sponsored these important safety programs in the past, and should be continued by Albemarle's schools. AAA Carolinas' contact phone number is 704-569-7883. They can provide pertinent information in reference to ordering supplies and starting up the program at Albemarle's schools.

North Carolina School Crossing Guard Training Program

As traffic continues to increase on North Carolina's streets and highways, concern has grown over the safety of our children as they walk to and from school. At the same time, health agencies, alarmed at the increase in obesity and inactivity among children, are encouraging parents and communities to get their children walking and biking to school. In response, the Division of Bicycle and Pedestrian Transportation decided to establish a consistent training program for law enforcement officers responsible for school crossing guards. According to the office of the North Carolina Attorney General, school crossing guards may be considered traffic control officers when proper training is provided as specified in GS 20-114.1.

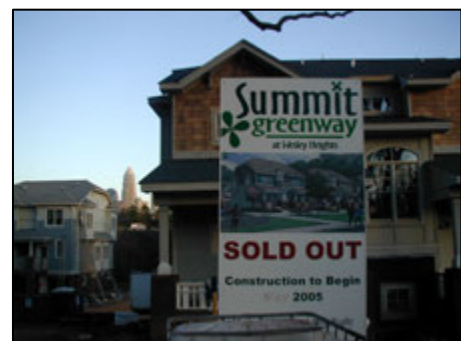
Law enforcement agencies interested in participating in the School Crossing Guard Training Program should contact the Division of Bicycle and Pedestrian Transportation by phone at (919) 807-0777 or visit http://www.ncdot.org/transit/bicycle/safety/programs_initiatives/crossing.html

Safety Signs on Pedestrian Routes

Pedestrian walkways should have certain amenities to make them comfortable such as benches, water fountains, shelters, waste and recycle cans, restrooms, landscaping, interpretation signs, lockers, boardwalks, bridges, etc. Use these structures to your advantage. Safety messages could be placed on any of the aforementioned amenities in a location where users could clearly read it, and quite possibly abide by its message. Using riddles, rhymes, or stories to make the point increases the public's interest. A local business or family could sponsor each structure and its corresponding safety sign.

Public Perception Marketing

Although an increase in pedestrian facilities is far more popular than many transportation projects, it is highly recommended that a positive marketing campaign start as soon as possible. Shared-use paths, sidewalks, bikeways, and intersection improvements cost tax dollars, require



Greenways corridors are showing to be popular neighbors



right-of-way, and sometimes create friction between the impatient driver and the pedestrian. In addition, recent political events concerning the acquisition of right-of-way have created some public uneasiness with sidewalk and other projects that might require land easements.

In reality, shared-use paths such as greenways have shown through studies to occasionally increase property re-sale values, have no increase or actually might decrease neighborhood crime, and result in more positive ecological effects than negative. Once greenways are successfully on the ground in communities, the residents know first hand of their benefits and welcome more. However, communities are sometimes wary as to how these trails might negatively affect them, and false information and negative perceptions may allow for a public relations issue before the walkways are in place.

Plus, designing a community where transportation choices exist has been shown to place communities at an economic advantage over communities that rely solely on the automobile. Tax dollars spent to improve or create pedestrian facilities are tax dollars that place a return on the investment for the community.

The City should first act to create a positive image for future greenways, sidewalks, zoning changes, intersection improvements, traffic calming and other pedestrian expenditures before any opposition occurs. Circulate the facts concerning these facilities and show the positive benefits.

Driver Education



Targeting the young generation with this plan is very important. Children aged 5-15 are not yet old enough to drive, are young enough to have the energy and ability to learn new skills and habits, and sometimes have no choice but to walk. Once these children turn sixteen, it should be expected that the majority of these youth are drawn to the automobile. The car is a status symbol, a mode of independence, and a sign that they are becoming an adult.

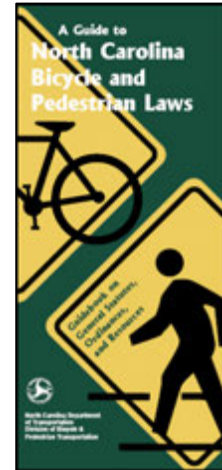
At the same time young drivers are very impressionable and this provides excellent opportunities to educate the driving population. Pedestrian safety, as well as how to safely maneuver an automobile while in the presence of pedestrians and bicycles can be an instrumental part of any driver's education program in Albemarle. This training will allow this new generation to be more aware of the simple fact that motorized vehicles do not have sole right to the transportation network, and it is everyone's responsibility to be careful when in the roadways.



Pedestrian Education

Many pedestrian crashes occur because the pedestrian disobeyed traffic laws. Crossing signalized intersections on the red phase, walking on the roadway in the same direction as traffic, and darting across traffic lanes are not only dangerous, they are illegal.

Indeed, much of the reasoning why a pedestrian breaks the law is because of conditions unknown to the motorist such as the scarcity of proper crossing locations or the absence of walkways out of the roadway. But unfortunately, many pedestrians do take unnecessary risks often. Much of the time, they may not know that any traffic laws apply to them, but it would be fair to say that many pedestrians choose not to follow the law. In addition to creating safe walking areas for pedestrians, walkers must be taught to respect the laws for their own safety. Pedestrian Education courses should be offered at schools, libraries, or on informational web sites.



Resources



- The North Carolina Department of Transportation Division of Bicycle and Pedestrian Transportation has a wealth of information on their web site: http://www.ncdot.org/transit/bicycle/safety/safety_programs.html This web site includes information on programs such as the *Basics of Bicycling Curriculum*, *Bicycle Helmet Initiatives*, *Bike Repair*, the *North Carolina School Crossing Guard Training Program*, the *Share the Road Initiative*, the *Safe Routes to School Program* and the *Walk a Child to School Initiative*. The web site is also a good source of resources and materials.

- <http://www.walkinginfo.org> also has a great amount of information and program ideas, including design and engineering guidelines, programs, facts, news, outreach and solutions to problems.



- <http://safety.fhwa.dot.gov/> offers ideas for a variety of pedestrian-safety focused curricula.



6.3. ENCOURAGEMENT AND PROMOTIONAL PROGRAMS

Safe Routes to Schools



The Safe Routes to School Program was established in August 2005 as part of the most recent federal transportation re-authorization legislation, SAFETEA-LU. This law provides multi-year funding for the surface transportation programs that guide spending of federal gas tax revenue. Section 1404 of this legislation provides funding (for the first time) for State Departments of Transportation to create and administer these programs which allow communities to compete for funding for local projects. Visit the Federal Highway Administration's web address for Safe Routes to School at <http://safety.fhwa.dot.gov/saferoutes/>

The steps below provide a framework for a Safe Routes to School (SRTS) program based on what has worked in other communities according to the website <http://www.saferoutesinfo.org>.

- Identify and contact the people who want to make walking and bicycling to school safe and appealing for children.
- Hold a kick off meeting and set a vision: A goal of the first meeting is to create a vision and generate next steps for the group members.
- Gather information and identify issues: Collecting information can help to identify needed program elements and provide a means to measure the impact of the program later.
- Identify solutions: Solutions to identified issues will include a combination of education, encouragement, engineering and enforcement strategies. Safety is the first consideration.
- Make a plan: It does not need to be lengthy. Include encouragement, enforcement, education and engineering strategies. Create a time schedule for the plan.
- Get the plan and people moving: Hold a kick off event starting with a fun activity. Participate in International Walk to School Day or celebrate a Walking Wednesday.
- Evaluate, adjust and keep moving: To sustain the program, consider building additional program champions and letting people know about your successes.

Visit the North Carolina Safe Routes to School Program at:

http://www.ncdot.org/transit/bicycle/safety/programs_initiatives/Safe_Routes.html

Walk to Work, Shop, School and Play Days

Designate a day, or preferably even a week or month where people walk to their destinations. This can coincide with *International Walk to School Week*, or with Bike to Work Week, or with another common "Hike, Bike, and Bus" week that some municipalities sponsor. Advertise these events, have some fun events along common pedestrian routes, and offer prizes and recognition for shining participants. *International Walk to School Week* typically falls on the first week of October, and their web site with good information can be found at <http://www.walktoschool.org/>. Walk to School events can be as simple as a few kids and parents meeting to walk to school or can be very elaborate celebrations. Event logistics range





from a central walking location to people walking from their homes. Successful events have the support and participation of the principal, police and parents, and programs such as this give public agencies and representatives the opportunity to publicly support health, environment and safety initiatives.

Walking School Bus

A walking school bus is a group of children walking to school with one or more adults. It can be as informal as two families taking turns walking their children to school to as structured as a route with meeting points, a timetable and a regularly rotated schedule of trained volunteers. More information can be found at <http://www.walkingschoolbus.org/>.

Walk a Child to School in North Carolina

Thanks to the national initiative and support from the NC Governor's Highway Safety Program, Walk a Child to School Programs have gained a foothold in North Carolina and are growing each year. To date more than 5,000 students in 12 communities in the state have participated.

Four Stanly County schools (Badin Elementary, Norwood Elementary, Stanfield Elementary, and Central Elementary) first participated in Walk to School in 2000 and 2001. The schools had over 600 participants and did all of the organizing while the Healthy Carolinians committee helped promote the walk. With grant money, the health department placed ads in the paper, made copies of flyers and checklists, and purchased zipper pulls from the *Partnership for a Walkable America* for the schools to give to the students. For 2007, Badin Elementary School organized a Police escort for students/ adults walking from North of town; Fire Truck escort for student/adults walking from South of town; and the mayor and city council members will be invited to walk as well.

Access International Walk to School's website at www.walktoschool.org to let them know about what the City of Albemarle is doing today to encourage children to walk (or bike) to school.

Walking Challenge



Have a web page set up where residents can enroll to receive a pedometer (at no cost or at a cost determined by the City) and a map of Albemarle's pedestrian routes. Participants record on the web site how much they walk each month, and have the opportunity to win recognition or awards. It is amazing how recording the results from a pedometer can addict users to walking. As one such regional example, the Cleveland County Health Department, the Alliance for Health and the Cleveland Regional Medical Center teamed together to sponsor a walking event of this nature for Cleveland County. The event is entitled "Take the Step One Challenge," and is a community-wide approach to increasing physical activity and supporting obesity prevention strategies among Cleveland County residents. Partners in the health organizations of Stanly County are exploring this type of program.



Urban Walker Program

The State of Florida's Division of Forestry realized that Floridians knew of their many State Parks, but were mostly unfamiliar with their State Forests. They began a "Trail Walker" Program that gave users a map of the forests and their trails, and allowed them to earn stickers and patches according to the number of trails that they have done. The State Forests became more widely recognized, and many trail hikers scrambled to earn trail stickers and patches.

There are 33 proposed pedestrian projects in the Albemarle Comprehensive Pedestrian Plan, and dozens of opportunities to integrate these into pedestrian routes. These routes could be named, mapped, and signed (marking the pavement is a less expensive and less intrusive method) for easy identification, and used in a similar program as Florida's Trail Walker program.

Residents could obtain a pedestrian route map, record log, and sticker sheet from the Park and Recreation Department and commence their walking. Each time a user walks a portion of a route, they would record this walk in their log book and place a sticker in it.



Once they walk five different routes, they earn a "Pathfinder" patch. Five more routes, and they earn an "Urban Pioneer" patch. If they complete all of the routes, they earn a "Trekker" patch.

This way, residents become familiar with local pedestrian routes, and maybe determine that they can also use these routes to get to shopping, work, school, or to leisure activities.

Three more patches can be created for those who use the same paths routinely for these purposes. If the user records five walks on any path within one month, they earn a "Weekend Warrior" patch. If they record ten total walks in a month, they earn the "Rambler" title. With 20 walks in the same month, they earn the very prestigious designation of a "Pedestrian." This program is an inexpensive way to familiarize residents (especially the elderly and children) with the local pedestrian network, and naming the highest level as a "Pedestrian" will associate the act of being a walker as a great honor.

Walkers' Discounts

Americans end 90-99 percent of their car trips in deceptively "free" parking spaces. With the average parking space costing \$1,000, fifty percent of this cost is paid by employers, the businesses drivers patronize, and by taxpayers. Another 40 percent is paid through rent and mortgages for off-street parking at home. This means that only about 1-10 percent of the nation's parking costs are at pay-per-use at meters, lots, or garages. Pay parking is rare because outdated provisions in zoning and tax codes - along with expansive street designs - produce an abundance of available parking. Businesses where "free" parking exists in designated Pedestrian Oriented Development District centers could join with the City to offer discounts to patrons who walk to these businesses (using the honor system). Perhaps the market may then favor some businesses to develop parking lot land for denser infill development that supports pedestrian travel. This program can be tried during walk, bike, and transit encouragement weeks.



Spot Trot



A safe pedestrian route can be created near the shelter (or the volunteers could take the dogs to other existing pedestrian paths), and a volunteer dog walking joint program between the City and the Humane Society could be established. The Stanly County Animal Control is located on Coble Street near a proposed shared-use path recommended in this plan. These animals would always benefit from a walk and nearby residents would also benefit from walking the dogs.

“Walk for Prevention”

The Susan G. Komen Breast Cancer Foundation Race for the Cure is a highly successful organized event whose proceeds go toward finding a cure for breast cancer. Some studies suggest that non-active lifestyles, poor diets, environmental cigarette smoke, and other lifestyle choices contribute to breast cancer risks and other health issues. The City’s Park and Recreation Department or the Stanly County Health Department could sponsor a 5K and/or 1 mile run/walk whose proceeds might go to Albemarle’s pedestrian facilities, healthy school lunch foods, and tobacco education programs. The event would also educate the community about healthy lifestyle choices (especially walking) and the effects of unhealthy living. The route could include downtown or the YMCA area, and the right advertising might attract a large audience.



Greenway Events and Street Closings



A event street closure in Shelby, NC

Once many of the recommended projects are constructed, it would create a perfect opportunity for regular special events. A festival could be set up downtown, at a park, or on a greenway, closing roadways off to vehicular traffic for seasonal festivals, or even on currently low traffic days like Saturdays, spurring a new and desired shopping experience that may draw more business than a typical Saturday.

An international trend is to turn major city roads into “Sunday Parkways.” This concept takes long strips of roadways (linear or in a looping pattern) and converts one or both directions of traffic to pedestrian malls during a portion of every Sunday and holiday. This encourages people to get out and walk, increases the amount of public space, and motivates people to walk more often throughout the rest of the week.

Twilight Walks

This library or senior center volunteer program would be for both elderly residents and younger residents. The two will get together on a predetermined regular schedule and walk to a destination (such as the grocery store, movies, or restaurant). This walk will give the senior



time to talk to a young person about anything that they want to talk about. It will also give the younger participant an opportunity to hear stories of the past and understand their city's history. The two will benefit from walking and from learning to become less dependent on their automobiles, and the senior who already depends on walking will have some security against possible (or usually just perceived dangers of) crime attacks.

6.4. ENFORCEMENT PROGRAMS

Enforce the Laws

Continued police enforcement of traffic laws is always necessary to protect pedestrians. Albemarle's Police Department should be particularly encouraged to ticket violators in residential, high density commercial, and other popular pedestrian areas. Pedestrians must also be encouraged to follow the law for their own safety, with pedestrian violators also being educated as to the correct behaviors.

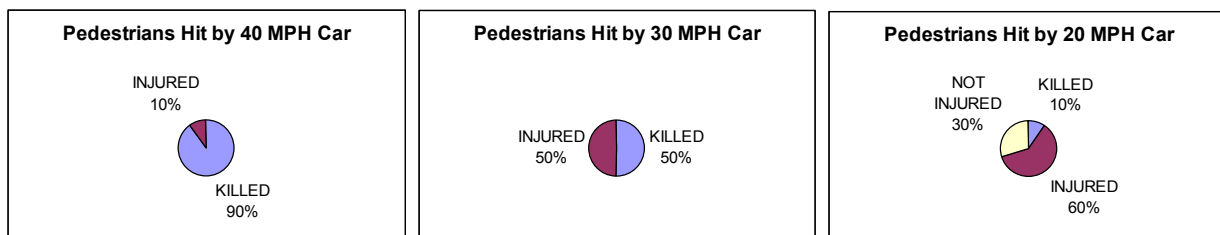
Sting Operations

This tactic, along with others, is a method from www.walkinginfo.org for making an impact upon motorists who fail to stop for pedestrians in crosswalks.

1. Identify high risk locations for pedestrians.
2. Observe to see the types of violations that are occurring and choose a location for the sting.
3. Calculate a reasonable amount of time for a driver to see and react to the pedestrian, mark that distance back from the crossing with a cone or sign.
4. A police officer in high visibility civilian clothes acts as a pedestrian, stepping into the street before the car has passed the "cone".
5. Other officers observe the crossing attempts from concealment and pursue and apprehend violators. The media is invited to view and report on this sting operation.

Twenty's Plenty

There is always a need to reduce automobile speeds to accommodate for increased pedestrian traffic. Creating an awareness program that encourages drivers to drive no more than 20 MPH in certain areas of town will make it more comfortable for the pedestrian to venture out on foot. As illustrated with national data in the graphs below, the severity of pedestrian / automobile incidents drastically decreases with lower automobile speeds. The name, "Twenty's Plenty" has been used with success in other communities.





Foot Patrol

The Albemarle Police Department should assign pedestrian officers to be visible and personal presence, particularly in downtown and other Pedestrian Districts. These officers will therefore get to know business owners, residents, and frequent visitors well, as they would be more reachable to the people of these communities.

6.5. ALTERNATIVE TRANSPORTATION OPTIONS THAT COMPLIMENT WALKING



Transit gives pedestrians options

Future Local Bus Transit

Currently, Albemarle has no local bus transit, but it would be important in a pedestrian plan to mention planning similarities between the two. Mass transit works well with compact or mixed-use developments. Land use plans that encourage this type of development will maximize the efficiency of future transit routes, stops, and costs, ensuring a viable system with which pedestrians can be comfortable. Furthermore, encouraging pedestrian amenities now will make future transit routes more simple and affordable.

Bicycle Accommodations and Loaner Programs

Providing bicycle parking throughout Albemarle will give pedestrians an option of using a bicycle for slightly further or quicker trips. In addition, bicycle loaner programs may be an option in areas where pedestrian and bicycle trips might be more common. Although this program is more typical of larger municipalities, Albemarle may be able to customize a version of this program to suit its needs and realities. Some operational difficulties with this program could be mitigated by issuing any interested person a "Bicycle Loan Card" from the public library for a small fee or no fee.



Bicycle programs give options to pedestrians

Car Sharing Programs

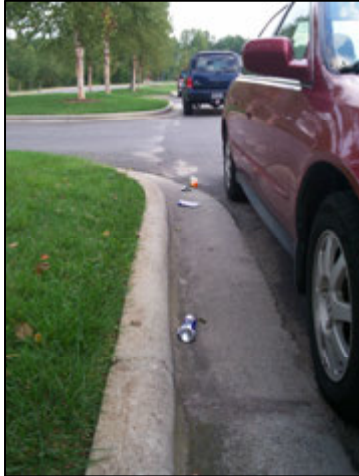
Densely developed pedestrian-friendly communities are good candidates for car-sharing opportunities to take root. Car-share programs primarily allow families to own fewer cars while still giving them the convenience of "renting" a car by the hour for local tasks. Downtown public agencies or businesses may also designate these shared cars for pedestrian commuters who might need to borrow a car for mid-day tasks. Some areas of Albemarle might be good candidates for publicly supported car share programs. Retirement communities and low-income neighborhoods might benefit from such a program or public agencies may keep some cars for employee use. While this concept is not a realistic option for the public at this time, it may be



feasible in the future when Albemarle's downtown and other Pedestrian Districts grow, or for public employees downtown.

6.6. ANTI-LITTER PROGRAMS

Provide Trash Receptacles and Enforce Litter Laws



Pedestrians are sensitive to trash – its existence may determine whether people walk there or not

Automobile traffic, by nature of its speed and relative isolation from the outside world, is less sensitive to litter than pedestrian traffic. Litter indicates a lack of social order, which is a deterrent to pedestrians. Automobile-generated litter tends to accumulate in places where drivers generally wait such as traffic lights. Pedestrians may tend to litter if there are limited waste receptacles at transit stops or benches. Ample bins should be provided in these areas for the pedestrians, and there should be a known venture to enforce litter laws for both motorists and pedestrians.

NCDOT offers a statewide litter reporting hotline exists named the "Swat-A-Litterbug Program." This program gives the user an opportunity to call, mail, or submit violation information online. The phone number of the Customer Service Office is 1-877-DOT-4YOU (1-877-368-4968).

The web address is:

http://www.ncdot.org/doh/operations/dp_chief_eng/roadside/Beautification/litterbug/

Swat-A-Litterbug



Adopt a Road / Adopt a Sidewalk Programs

Adopt a Road programs are common, enabling members of the community to sponsor and help to clean a road of litter. The City of Albemarle can begin a similar program for its sidewalks and (future) greenways. This program could also be used as a means for the community to alert the city when there is a maintenance issue with a sidewalk, or as a means for a sidewalk to get special attention, funding, and improvements because of the dedication of its community sponsor. In the end, if the number of pedestrians in the City increases, the awareness and sense of pride and ownership should eventually create a cleaner streetscape.



Adopt a road – or even adopt a walkway programs can be made possible by public involvement



6.7. MAPPING AND SIGNING PROJECTS

Neighborhood and Comprehensive Route Systems

An ideal city transportation system might have neighborhood roads that take residents from their homes to densely developed satellite shopping, employment, and interior schools. Albamarle's roads get less grid-like and more complicated to navigate the further out you get from downtown. Newer residential roads commonly end in cul-de-sacs and some housing developments have only a few exits out of the development. Commercial strip development away from residential areas is far more common than nearby dense commercial development. A national trend is to have new schools built on cheaper land on main highways away from neighborhoods. Realistically, changing the future development patterns is a far more effective planning strategy than most infrastructure additions, but sometimes simple and affordable solutions need to be implemented to enhance existing conditions. Pedestrian mapping or signing projects are one such tool.



Signage programs on shared-use paths and neighborhood routes can reassure pedestrians about their whereabouts.



Several pedestrian routes have been identified in this plan, and missing gaps in the connections should be built immediately to ensure that the proposed routes are functional. Once a route is physically connected with pedestrian walkways, it should be named, mapped, and marked. Maps should be printed and distributed, with occasional updates added. The pedestrian structures, waste cans, or sidewalks themselves should have the route name posted on it without the need for additional signage. These marked routes would eventually serve to make the walker less unsure of connection problems. Once a policy-driven street connection system is developed, there will be no need for additional mapped local routes.



Way-finding signs help pedestrians find their way easily

SECTION 7: PROJECT DEVELOPMENT





7.1. IDENTIFICATION OF PROJECTS

Section 4 illustrates six “*Pedestrian Oriented Development Districts*,” each representing an area small enough to realistically walk and which contains some of the essential elements of a community including housing, shopping, businesses, and schools. Districts would develop according to the local market, possibly as a fully functioning mixed-use community, a neighborhood with scattered small businesses, or as a business or activity center.

Map 4 provides an overall view of proposed projects, and more detailed maps are presented in **Appendix F**. **Appendix G** shows each of these project descriptions in a table, ranked according to a prioritization method described below, and sorted as being a High Priority Project, a Mid Range Project, or a Long-Range Project. Their specific locations, dimensions, and costs (for High Priority and Mid-Range Projects) were also tabulated. Long Range Projects, by request of the City, were not costed-out in this table because of future uncertainties with costs and implementation opportunities.

7.2. PRIORITIZATION OF PROJECTS

A project prioritization methodology is an important tool through which the City can determine where to focus its efforts on the development of pedestrian facilities. A methodology was developed to objectively compare the attributes of proposed projects. This methodology is used to prioritize projects as part of this plan, and in the future, the City can use the same methodology to reassess its priorities and consider new projects.

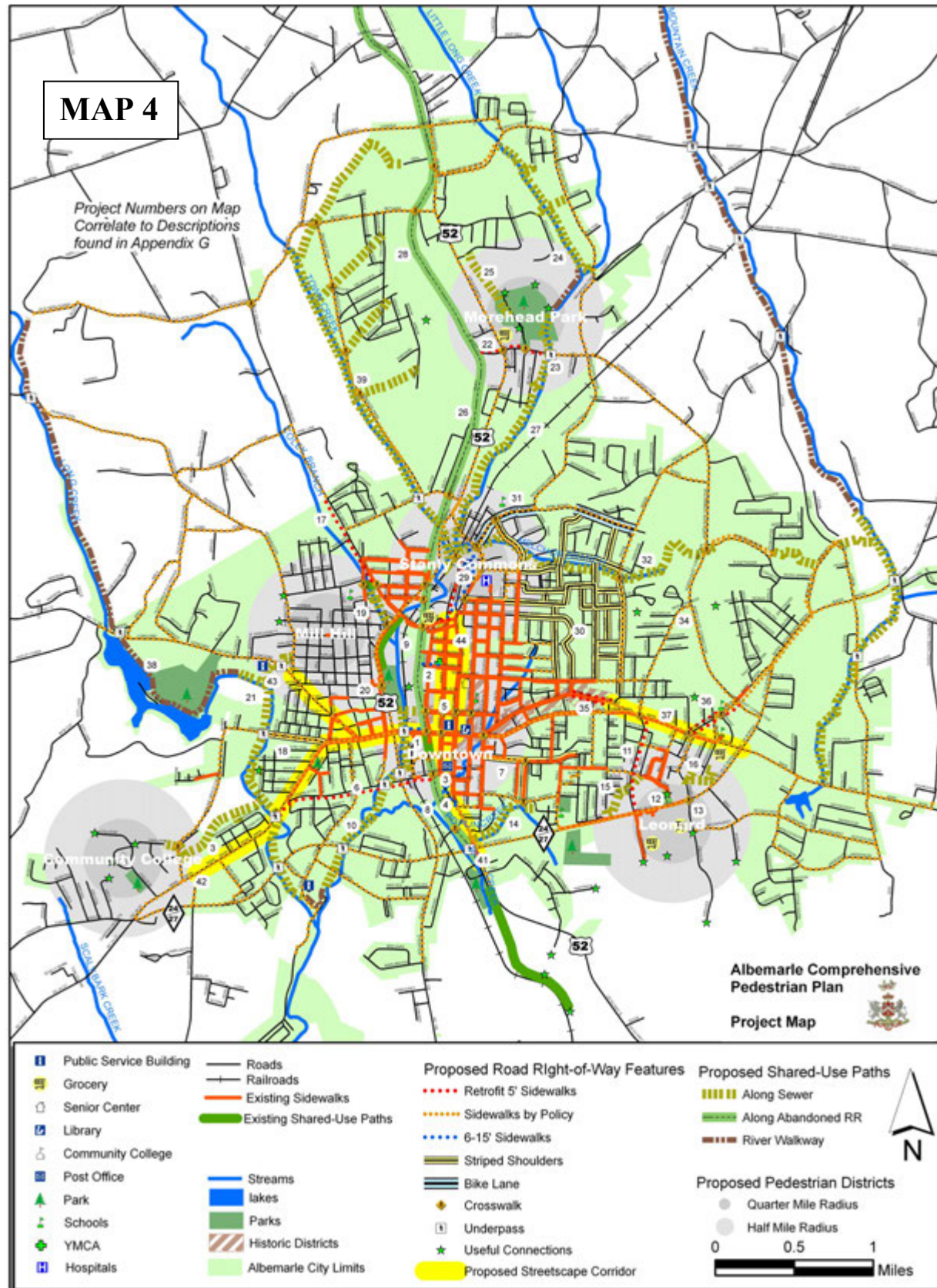
Prioritization Methodology

To compare the merits of each project, a scoring system is used to assign “points” to each proposed project. Points are assigned according to ten specific criteria, as described below. Projects are assigned points in each category based on how well the project meets each criterion. A higher number of points indicates a “better” project.

The total number of points across all criteria indicates each project’s final score. The maximum score for a project is 100 points, based on a scale of 0-10 points for each of the ten criteria. All criteria are weighted equally.



Albemarle Comprehensive Pedestrian Plan





Suggested criteria are based on three major elements: connectivity, safety, and ease of implementation. Specific criteria are defined for each of these three areas:

Connectivity

1. Provides access to major destinations such as shopping/business, schools/community centers, homes, public/social services, or recreation/entertainment (10 points maximum)
2. Provides obvious access to special groups such as the youth, elderly, low-income residents, the disabled (10 points maximum)
3. The project is already used by the community as a social trail or connection (10 points maximum)
4. Closes gaps in or improves existing facilities (10 points maximum)

Safety

5. Improves safety for the special groups mentioned in number 2 above (10 points maximum)
6. Improves an existing known safety issue (10 points maximum)
7. Improves routes with high levels of vehicular traffic or provides alternate routes (10 points maximum)

Ease of Implementation

8. The project is already in consideration by the City or a development (10 points maximum)
9. Project is supported by officials or by the public (10 points maximum)
10. The project can be implemented at a reasonable cost without extensive right-of-way acquisition or intensive design features (10 points maximum)

After the scores of all the projects have been tallied, some projects may have identical scores. In this case, the City of Albemarle can determine which project should be ranked ahead of the other based on its knowledge of what project will best fit the needs and cost considerations of the City.

Application of Methodology

Each project was rated based on the criteria described above and with the point-values described below in **Table 2**. Summary information is presented in the Implementation Plan in Section 9, and raw scores assigned to each project are detailed in Appendix G. Although this methodology is intended to objectively compare the qualities of individual projects, there is some inherent subjectivity in assigning the number of points in each category. The methodology used in scoring for each of the categories is described below.



Albemarle Comprehensive Pedestrian Plan

Table 2

Ranking Criteria for Projects
100 points Total

Bold conditions are individually tallied
Italicized condition is recorded as the total score

Provides Access to Major Destinations (10 pts.)	Shopping / Business (2)	Schools / Community Centers (2)	Homes (2)	Public / Social Services (2)	Recreation / Entertainment (2)
Provides Obvious Access to Special Groups (10 pts.)	Youth (2)	Elderly (2)	Low-Income (2)	Disabled (2)	All Others (2)
Project is an Existing Social Connection (10 pts.)	<i>Yes, Very Popular (10)</i>	<i>Existing (8)</i>	<i>Potential (6)</i>	<i>Unknown (4)</i>	<i>No (2)</i>
Closes Gaps in or Improves Existing Facilities (10 pts.)	<i>Definitely (10)</i>	<i>Significantly (8)</i>	<i>Modestly (6)</i>	<i>Unknown (4)</i>	<i>No (2)</i>
Improves Safety for Special Groups (10 pts.)	Youth (2)	Elderly (2)	Low-Income (2)	Disabled (2)	All Others (2)
Improves an Existing Known Safety Issue (10 pts.)	<i>Definitely (10)</i>	<i>Significantly (8)</i>	<i>Modestly (6)</i>	<i>Unknown (4)</i>	<i>No (2)</i>
Improves Routes with High Vehicular Traffic or Provides Alternate Routes (10 pts.)	<i>Definitely (10)</i>	<i>Significantly (8)</i>	<i>Modestly (6)</i>	<i>Unknown (4)</i>	<i>No (2)</i>
Project Already in Consideration (10 pts.)	<i>Yes (10)</i>	<i>Most Likely (8)</i>	<i>Potentially (6)</i>	<i>Unknown (4)</i>	<i>No (2)</i>
Potential or Existing Political or Public Support for Project (10 pts.)	<i>Yes (10)</i>	<i>Significant (8)</i>	<i>Modest (6)</i>	<i>Unknown (4)</i>	<i>No (2)</i>
Cost (10 pts.)	<i>Desirable (10)</i>	<i>Standard (8)</i>	<i>Modest (6)</i>	<i>Acceptable (4)</i>	<i>Excessive (2)</i>

Grouping of Projects

To help identify the most beneficial projects as determined through this prioritization methodology, those receiving a score of 70 or higher out of 100 possible points are identified as “high priority” projects. All projects presented in this plan have merit and should be pursued; however, the identification of a subset of “high priority” projects will enable City officials to focus their efforts on the early implementation of a few infrastructure projects in the short term that will make significant improvements to the pedestrian environment in the near future. Projects that received a score in the 60s were considered “mid-range” projects that have the possibility of climbing to high priority level in future re-rankings of pedestrian projects when the existing conditions change. Projects that realistically have little chance of implementation in the near future are categorized as “long-term” projects and scored less than 60 out of 100 possible points. The City of Albemarle chose not to rank some projects that were considered to be not possible until well into the future. However, these projects always have the outside possibility of being built with the help of policies that require projects identified in this plan to be constructed as part of adjoining developments or roadways.

Reconsideration of Priorities

The projects included in this plan have been prioritized based on current conditions. However, conditions affecting these proposed projects are constantly changing – as time passes, new projects may be proposed, currently proposed projects may no longer be feasible, and completion of some projects may impact the viability of other projects. For these reasons, it is



suggested that the City of Albemarle, through a proposed bicycle / pedestrian advisory committee, update the prioritized project list every two years based on changing conditions. Projects may be added to or deleted from the overall list, and the prioritization of specific projects may change based on new developments, a change in public support, construction of connecting facilities or new destinations, or other factors potentially affecting project implementation. Funding opportunities for these projects are listed in **Appendix H**.

7.3. PROPOSED HIGH PRIORITY PROJECTS

Table 3 below shows a brief summary of the fifteen high priority projects by order of ranking. The project number correlates to the number found on Map 4 and in Appendix G. Each of these fifteen priority projects are described below by order of their ranking.

Table 3

Rank	Proj #	Description of Improvement	Roadway / Location
1	5	Countdown signal & crosswalks	At all intersections within 1/4 mile from City Hall
2	4	6-15' sidewalk	1st St. from Old Charlotte Rd. to East Park Avenue
3	11	5' sidewalk	Leonard Ave. from Main St. to Hwy. 24/27 Bypass
4	12	10' paved upland shared-use path with appropriate lighting and crossing considerations	Social trail from Inger Street terminus to Highway 24/27 Bypass
5	13	Countdown signal & crosswalks	24/27 and Henson Street
6	7	Striped shoulders for traffic calming	Martin Luther King Jr. Dr. from 4th St. to Colston St.
7	15	10' paved lowland shared-use path with pedestrian-scaled lighting	On sewer line social trail from Inger St. to Arey Ave.
8	9	10' paved upland shared-use path including appropriate road crossings	Abandoned rail line from current rail trail to Snuggs Street
9	37	Streetscape/sidewalks/landscaping/crosswalks	Main Street & Pee Dee Ave. from Ridge St. to 24/27
10	36	5' sidewalk including appropriate road crossings	Both sides of Badin Road to middle school and continue on one side to the NE Connector
11	30	Striped shoulders for traffic calming including appropriate neighborhood crosswalks	Throughout neighborhoods in between 2nd Street, Ridge St., Park Ridge Rd., and Montgomery Ave.
12	17	5' sidewalk including appropriate crosswalks	Salisbury Ave. from Watts St. to McKee St.
13	19	10' paved lowland shared-use path including appropriate road crossings	On Sewer Line (Coley Branch) from the existing path to Montgomery Park Greenway
14	44	Streetscape/sidewalks/landscaping/crosswalks	1st and 2nd Streets from Salisbury Ave. to US 52
15	6	5' sidewalk	Old Charlotte Road from 1st St. to Main St.

Priority 1. Countdown Pedestrian Signals Downtown (Project Number 5 in Appendix G)

Countdown pedestrian signals with appropriate high-visibility marked crosswalks should be incorporated into every signalized intersection within ¼ mile of City Hall. This includes an estimated eight intersections.

Priority 2. Sidewalk on First Street Downtown (Project Number 4 in Appendix G)

Sidewalks wider than the standard 5 feet are recommended on Albemarle's downtown streets to accommodate the potential higher volumes of pedestrian traffic. Widths of 6 to 15 foot wide sidewalks are appropriate, depending on available right-of-way and the expected pedestrian traffic. Five-foot sidewalks are generally accepted to be sufficient to allow two people to walk



side by side, therefore, ten foot sidewalks would be suggested to allow two people walking side by side to pass two other people walking side-by side. These sidewalks should eventually be built on both sides of every road within ¼ mile of City Hall that does not currently have sidewalks.

The City of Albemarle identified First Street from Old Charlotte Road to where South Second Street and East Park Avenue intersects with First Street to be a priority segment of needed sidewalk, which will serve a soup kitchen, homes, and numerous businesses.

Priority 3. Sidewalk on Leonard Avenue (Project Number 11 in Appendix G)

If proper right-of-way exists or if the homeowners are in support of giving up an easement for this project, a five foot wide sidewalk should be built on Leonard Avenue from Main Street to the 24/27 Bypass. A high-visibility crosswalk with a countdown signal should be installed at the corner of Main Street and Leonard Avenue. A countdown signal currently exists at Leonard & NC 24/27 but does not display the walk signal and countdown unless activated by the push-button. The signal should be reconfigured to display the countdown with every green-light cycle for motorized traffic and be marked with high-visibility pavement markings.

Priority 4. Safe Path Connecting Inger Street with NC 24/27 Bypass (Project Number 12 in Appendix G)

A ten foot wide paved shared-use path should be constructed on the current “social trail” from the terminus of Inger Street to Highway 24/27 Bypass. This path would require some grading and concern for slope, and include pedestrian scale lighting for security and safety. The highest concern for this area is where this location meets NC 24/27 Bypass. There is currently no signalized intersection here, but it is a common crossing point for locals. At this point, the City wishes to enhance the sidewalk on the north side of NC 24/27 to entice pedestrians to cross at the signalized intersections at Leonard Avenue or Henson Street. If this technique does not work, a study should be done to determine the safety and feasibility of a crossing opportunity between Leonard Avenue and Henson Street. This may include a traditional signalized intersection, a pedestrian-only crossing signal, or an overpass.

Priority 5. Countdown Pedestrian Signals at Henson Street & NC 24/27 Bypass (Project Number 13 in Appendix G)

The signalized intersection at NC 24/27 Bypass and Henson Street should receive a countdown pedestrian crosswalk with high-visibility pavement markings.

Priority 6. Striped Shoulders for Traffic Calming on Dr. Martin Luther King Jr. Drive (Project Number 7 in Appendix G)

The lanes on Dr. Martin Luther King Jr. Drive should be striped to give the road 10-foot lanes. Currently, a sidewalk exists on one side of this road, but traffic speeds and the popularity of this route for pedestrians and basic level bicyclists create the need for safer streets for all users. This lane width reduction would slow vehicles to a more reasonable and safe speed while giving pedestrians a buffer from traffic and a safer walking environment.



Priority 7. Safe Path Connecting Inger Street with Arey Avenue (Project Number 15 in Appendix G)

A ten foot wide shared-use path should be completed on the sewer easement that connects Inger Street to Arey Avenue. Proper pedestrian lighting might be necessary in some sections for safety and security.

Priority 8. Continue Current Rail Trail to Snuggs Street (Project Number 9 in Appendix G)

A ten foot wide shared-use path should be completed on the abandoned rail bed between the current rail trail north to Snuggs Street. Proper mid-block crosswalks must be included with this project at each road crossing, with a particular crossing concern at US 52.

Priority 9. East Main Street Streetscape Project (Project Number 37 in Appendix G)

Streetscape improvements on Pee Dee Avenue and Main Street to the NC 24/27 Bypass are recommended to attract appropriate businesses to this historic roadway. Wide sidewalks, marked midblock crosswalks every 300-500 feet, pedestrian refuge islands, appropriate lighting, ADA compliant improvements, signage, and landscaping could create a pedestrian corridor that may attract a desired market of restaurants, entertainment, shopping, and residential units.

Project Number 35 recommends a continuation of the sidewalks on Pee Dee Avenue and Main Street to this streetscape project. Currently, project Number 35 ranked as a mid-term project because of the necessary work on East Main Street and Badin Road. However, this project may be done in conjunction with the streetscape project on Main Street. A five foot sidewalk is recommended on both sides of Pee Dee Avenue where it ends near Tenth Street to Ridge Street, also on Main Street from Morrow Avenue to Pee Dee Avenue.

Priority 10. Sidewalks along Badin Road (Project Number 36 in Appendix G)

A five foot sidewalk is recommended on both sides of Badin Road from Main Street to Parkway/Albemarle Middle School. The current street width is wide enough to accommodate the sidewalks and travel lanes, and can be narrowed with a new curb and gutter. New sidewalks and planting strips can be created on both sides of the roadway from Main Street to the middle school. Depending on future development prospects, a sidewalk should be extended to the Northeast Connector and possibly further northeast as necessary to serve future development. A crosswalk with proper high-visibility markings is recommended on the corner of Main Street and Badin Road. The absence of a signal here makes this a challenging task, but one that could be successful with a good crossing guard program. A signed and marked crosswalk is necessary in front of the middle school near the intersection of Parkway Drive and Badin Road.

Priority 11. Striped Shoulders for Traffic Calming on Wide Neighborhood Roads North of Downtown (Project Number 30 in Appendix G)

Thirty foot wide neighborhood roads are common in the neighborhoods that surround the hospital, but most of these roadways east of 6th Street do not have sidewalks. Creating 10 foot wide travel lanes (maximum) by striping shoulders on most of the roads east of 6th Street and



north of Montgomery Avenue will provide some traffic calming in these neighborhoods. Roadways that are recommended for this striping include but are not limited to Yadkin, Tenth, Avondale, Eleventh, East, Tenth, Cannon, McGill, Cardinal, Ninth, Smith, Luras, Eighth, Hawthorn, Colonial, Sixth, Melchor, and Pineview. Posted speed limits should also be set at 20-25 miles per hour on these roads (with 20 MPH being preferred), and future traffic calming such as roundabouts, signage, chicanes, or traffic enforcement should be considered. Proper crosswalk markings are recommended at the corners of Yadkin Street and 2nd Street and at Sixth Street and Park Ridge Road.

Priority 12. Sidewalk on Salisbury Avenue (Project Number 17 in Appendix G)

A five foot sidewalk is recommended on Salisbury Avenue from Watts Street to McKee Street. This road has numerous homes with limited setback, fast traffic, and little right-of-way. To create a sidewalk here, some additional easements may need to be acquired. Midblock crosswalks with signs and high-visibility markings are recommended at each end of the existing path that connects Salisbury Avenue with Carolina Avenue.

Priority 13. Path from Elementary School to Montgomery Park Greenway (Project Number 19 in Appendix G)

A ten foot wide paved shared-use path is recommended from the existing path connecting Salisbury Avenue and Carolina Avenue to the existing Montgomery Park Greenway. A safe and appropriate crossing either with a signalized intersection or an underpass needs to be included to safely transfer users from one path to the other.

Priority 14. Streetscape along 1st and 2nd Streets Downtown (Project Number 44 in Appendix G)

The City is considering the creation of several “Gateways” into and out of Albemarle to provide a message to motorists that they are approaching a city core filled with character and history. These Gateways will also serve the pedestrian because of the inclusion of wide sidewalks, marked midblock crosswalks every 300-500 feet, pedestrian refuge islands, appropriate lighting, ADA compliant improvements, signage, and landscaping. These amenities could create a pedestrian corridor that may attract a desired market of restaurants, entertainment, shopping, and residential units.

Priority 15. Sidewalk on Old Charlotte Road (Project Number 6 in Appendix G)

A five foot wide sidewalk should be built on Old Charlotte Road from First Street to Main Street. The width currently exists inside the roadway to include vehicle travel lanes, staggered on-street parking, a five foot sidewalk, and possibly a few feet of planting strip. Narrowing the road width by bringing in one curb line would make this possible. If sidewalks are not feasible for economic reasons, narrowing the roadway width by restriping its alignment in a chicane-like manner with bicycle lanes, staggered on-street parking on alternate sides of the roadway, and a 2-3 foot buffer strip between the bike lane and the parked cars might provide a traffic calming solution.

SECTION 8: RECOMMENDED POLICIES AND ORDINANCES





8.1. OVERALL POLICY GOALS

Land use policies and regulations of the last half of the 20th Century have probably done more to discourage pedestrian-friendly development than any other single force. The City of Albemarle will begin the process of updating its zoning and subdivision ordinances. The Pedestrian Plan is intended to recommend policies and regulatory provisions that should be considered by the City as part of its comprehensive ordinance update. The recommendations provided in this section are intended to create a more pedestrian-friendly environment in the City's planning area.

Emphasis on Pedestrian Travel

The provision of transit, bicycle and pedestrian facilities shall be embraced by policy as a primary element in accommodating travel demand and relieving congestion before street widening projects are undertaken. All transportation projects shall include provisions for pedestrians.

Locations of New Public Facilities

By policy, locations of new public facilities should first take into consideration pedestrian access.

- A policy statement should be made that the preferred method of transportation of children to Albemarle's schools is non-motorized (walking, bicycling, skating, etc.). For the development of new schools, finding a school location inside of a developed or future residential development is preferred. If this is not feasible, design the school so that its main entrance faces away from thoroughfares or collectors and toward future or existing residential areas. Schools must encourage children to get themselves to school without the use of cars or buses.
- The locations of post offices, health departments, Social Security offices, parks, libraries, police stations, abuse care centers, courts, DMV offices and other civic facilities should be in a location where pedestrian access is top priority. Simply placing these facilities near a sidewalk is not adequate, but placing these facilities on a sidewalk within a short walk to neighboring residents is ideal. Many of the users of these facilities are not able to or cannot afford to drive. In cases such as Social Security offices where there is typically one branch office, a central location is best. The City should have a policy to work with the county, the state, and the federal governments to make this possible.
- Plans for new roadway construction must not compromise projects and concepts brought forth in the Comprehensive Pedestrian Plan. A new roadway should never sever a planned shared-use path corridor and a road widening project must always leave room for sidewalks. A copy of NCDOT's policy that provides protection for local municipalities' greenway plans regarding new state road construction is found in **Appendix I** and can be found at:

http://www.ncdot.org/transit/bicycle/laws/laws_greenway_admin.html



8.2. GENERAL POLICY RECOMMENDATIONS

Use of Pedestrian Oriented Development Districts as a Planning Tool

The concept of the “Pedestrian Oriented Development District” is emphasized throughout this Plan. As stated earlier, these districts are not intended to designate the only places where pedestrian infrastructure projects can occur (many projects are recommended outside of these districts as well); rather, these districts are intended to identify areas in which a strong emphasis should be placed on enabling pedestrian-friendly development patterns as growth occurs.

The Pedestrian Oriented Development Districts can be applied as an “overlay” district. As a planning tool, the Pedestrian Oriented Development District should be used to guide the location of pedestrian-oriented developments (such as shopping, high-density residential and public services). These types of developments should be strongly encouraged within Pedestrian Oriented Development Districts and strongly discouraged outside of Pedestrian Oriented Development Districts. Likewise, development types that are not pedestrian-friendly by nature (such as most industrial sites, distribution centers, big-box retailers, and very low-density residential uses) should not be allowed to locate within the designated districts. A list of “compatible” uses for the Pedestrian Oriented Development Districts should be compiled. If a proposed use is not compatible with the pedestrian orientation of the district, it should not be allowed within the designated districts. Likewise, “pedestrian compatible” uses should be strongly encouraged to occur within the designated districts only. Growth confined, more-or-less, to these districts will help to curb sprawl in Albemarle. In the same sense, mixed-use zoning should be more widely incorporated in the zoning ordinance both inside and out of these Pedestrian Oriented Development Districts to discourage large parcels of single-use commercial or residential development that requires car trips from one area to another.

Zoning in Pedestrian Oriented Development Districts should enable mixed commercial/residential development. Zoning outside of Pedestrian Districts should be modified so that urban sprawl and strip mall development is not encouraged, but so that new growth is guided toward the Pedestrian District. “Sprawl” is the term used for the pattern of development that is generally dependent on the use of the automobile. The nearby Towns of Huntersville, Cornelius, and Davidson recently changed their Land Use Ordinances to reverse this trend, and have defined sprawl as possessing a number of unwanted qualities:

- Development that requires extensive areas of land further from a town center;
- Loss of farmland and other open spaces that define the character of a community;
- Zoning codes that mandate rigid separation of land uses;
- Expensive reliance on the automobile as the only viable transportation option and reducing an individuals’ right to have options;
- Minimal pedestrian amenities;
- Expensive extensions of tax requirements for water, sewer and road systems to serve far-flung development;
- Houses arranged around cul-de-sacs rather than interconnected streets;
- Strip malls with extensive parking lots as opposed to traditional village centers; and
- Urban traffic volumes in non-urban settings as suburb-to-suburb commutes become more prevalent.



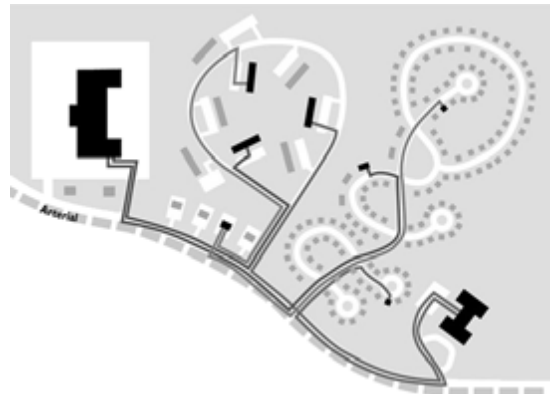
Zoning in Pedestrian Oriented Development Districts should enable mixed commercial/residential development. Zoning outside of pedestrian districts should be modified so that urban sprawl and strip mall development is not encouraged, but so that new growth is guided toward the pedestrian district. The City should ensure that land use zoning changes comply with pedestrian district mixed-use standards. Without a mix of residential and retail land uses, the entire concept of this pedestrian plan *will not work*. The businesses must be sure of a constant stream of pedestrian traffic from the local residents in order to make up for the lack of apparent vehicular access that might accompany a higher density shopping area with less land devoted to parking. Likewise, without proper retail within walking distance of housing, residents will not walk.

Water resource protection must always be taken into consideration when designating high density areas inside these districts. In some cases, high density development alongside a waterway is not environmentally safe, and should be discouraged or mitigated. Furthermore, new infill developments should seek to create more pedestrian-friendly environments in areas currently occupied by low-density, automobile-oriented development. An example of such development would be the reduction in size of large, mostly unoccupied strip mall parking lots to provide ground space for new businesses.

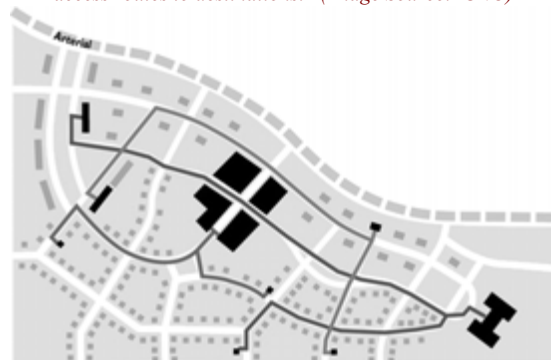
Requirements for Infrastructure Associated with New Developments

Requirements for new pedestrian infrastructure should be consistent throughout the City's planning jurisdiction, not just in the designated Pedestrian Oriented Development Districts. These requirements should be strengthened for all areas of the planning area. Suggested guidelines are as follows (these requirements should apply to all new development):

- New commercial development must be oriented to the pedestrian and include pedestrian walkways connecting the development to the external sidewalk network in the public right-of-way.
- New residential development of two dwelling units per acre or greater must have a grid-like or interconnected curvilinear street pattern with block lengths no more than 660 feet in distance. These block separations may be streets or 10-12 foot wide paths for pedestrian and bicycle users.
- Cul-de-sacs will not be permitted unless geographic or other natural barriers exist that make connections unrealistic. A developer



The development style above has a complete lack of connectivity and forces all trips onto the arterial road versus the development style below, which allows multiple access routes to destinations. (Image Source: CNU)





Albemarle Comprehensive Pedestrian Plan

may create a cul-de-sac or a *close* if an acceptable bicycle and pedestrian connection is created with a 10-12 foot wide paved path that is built to standards set forth in this plan for shared-use paths.

- New developments must connect to neighboring developments. Commercial areas must create a vehicular and/or pedestrian connection to adjacent residential communities and provide a future connection option for future developments. New residential communities must connect to existing residential and commercial developments, as well as provide connection possibilities to future adjacent developments. Exemptions may apply if there is a substantial natural or geographical barrier, or if there is an environmental concern with such a connection. New developments should be required to provide pedestrian connections across natural barriers if they are listed as projects in this plan. The City may also determine that a connection across a natural barrier is necessary and worth the higher costs to developers.
- All new commercial, residential, and mixed-use developments should provide sidewalks on both sides of the street, provide buffering from auto traffic and off-street parking lots, and provide trees that will shade sidewalks. Any frontage road to the development that has no current sidewalk must also receive sidewalks. These sidewalks should also be of adequate width according to the standards set in this plan for future levels of pedestrian usage. Trees, utility poles, and street furniture shall not be placed where they may hinder the view from pedestrian crosswalks and intersections. In some cases, developments offer suitable walkway connections or traffic calming without the need to necessarily include sidewalks on both sides of the roadway within the neighborhood or along frontage roads and thoroughfares. If the City feels that suitable pedestrian linkages exist so that sidewalks along both sides of these roads are unnecessary or when residential densities are less than four dwelling units per acre this requirement may be waived in favor of facilities such as a common off-road path, retail frontage zones and walkways, or sidewalks on only one side of the roadway.
- Any new development where there is a pedestrian project mapped from the Comprehensive Pedestrian Plan must include that project to a functioning level according to guidelines. In most cases, exact alignment of the projects is not definite.
- New developments should include public green/open space with public rest rooms, public water fountains, and public seating areas. These features add vital necessities and aesthetics to Albemarle that will make the pedestrian trips enjoyable. Greenways that serve to connect key destinations may be developed as part of the open space requirement.
- When an existing sidewalk or pedestrian path is closed for construction or maintenance reasons on the walkway itself or on adjacent property, an adequate detour route should be established. Consider closing on-street parking or a lane of traffic as a temporary pedestrian route or establishing a temporary crosswalk to a walkway on the other side of the street.
- All local, state, and federal road and bridge project planning and construction projects must include reasonable non-motorized accommodation for both pedestrians and



bicycles. According to NCDOT policy, 5'-6' sidewalks shall be included on new bridges, and a determination on providing sidewalks on one or both sides of new bridges will be made during the planning process according to the NCDOT Pedestrian Policy Guidelines. NCDOT shall fund all or part of the cost of sidewalks when they are mapped and recommended as part of a transportation plan. Map 4 shows sidewalks on most state and federal roadways in Albemarle and labels them as *Complete Streets* because they completely include safe facilities for automobiles, bicyclists, and pedestrians. **Appendix I** includes NCDOT's Pedestrian Policy Guidelines and can be found at http://www.ncdot.org/transit/bicycle/laws/ped_guide.pdf

- All walkways must be ADA accessible. See Section 5.4 for more information.

8.3. SPECIFIC LOCAL ORDINANCE CRITIQUE AND RECOMMENDATIONS

Zoning Ordinance

There are two primary issues in the zoning ordinance that directly (and negatively) impact the pedestrian friendliness of development in Albemarle. First is the inability to mix residential uses with neighborhood-serving commercial uses except in the Central Business District (CBD). The second major issue is that the Area, Yard, and Height Requirements (Section 92.086) need to be modified to allow for more pedestrian-friendly development.

1. Mixed-Uses

Residential and non-residential uses need to be allowed to mix for convenient pedestrian access. Only the CBD zoning district allows significant mixed commercial and residential use. In this intentionally pedestrian-oriented area, developed in the pre-automobile era, residents near the town center were able to access goods and services within a short distance of their homes.

In order to promote walkability, more people need to live within walking or comfortable biking distance of shopping, employment, recreation, and/or civic destinations. The normal order of density progression is to concentrate people and activities closer together at the core and in mixed-use nodes to provide efficient service and encourage healthy, vibrant, pedestrian environments. The most efficient way for the City to provide for residents – including but not limited to youth under the driving age, those of limited means, and the elderly and those of limited physical capacities (people in all of the categories above typically make up 30% or more of a local population) – to access goods and services is to allow for housing, especially multi-family (apartments and condos) housing and townhouses, to be developed in conjunction with or adjacent to businesses that provide for residents' needs: grocery stores and other convenience services.

The two specifically neighborhood-serving business districts in the Zoning Ordinance, Neighborhood Business District (NBD) and Neighborhood Shopping District (NSD) do not allow the development of residential uses in their boundaries. NBD provides for residential development as a conditional use, subject to the approval of City Council. The NSD does not allow for residential uses at all. This plan recommends that these districts allow residential uses to mix with other uses.



2. Pedestrian-Friendly Development Standards

Use Density-based Requirements versus Lot Size:

Albemarle's residential zoning districts are all based on minimum lot dimensions that limit the ability to cluster lots and ensure, if not require, that most lots in new development will be of an identical nature. For example, in the R-10 District all single family lots must be at least 10,000 square feet in area (approximately 4.4 dwelling units per acre) and at least 75 feet in width.

There are two problems with this practice. First, it limits creativity in neighborhood design and creates "cookie cutter" subdivisions based on the minimum lot size. Second, it limits the preservation of open space by encouraging developers to plat every possible portion of a site.

A more flexible tool is the application of base density requirements for new development. These can aid in neighborhood design by allowing (but not necessarily requiring) a variety of lot sizes within close proximity while regulating the actual number of units that impact surrounding infrastructure. Such a requirement also helps to protect natural features and open space by allowing flexibility in developing sites that are not flat. Detached single family homes can actually be developed to a density of 12-16 units per acre before a fire-rated wall, such as those used in town homes, is required. To that end, we recommend the use of maximum density for zoning districts instead of minimum lot sizes.

Reduce Setback Requirements:

The residential districts mandate building setbacks based exclusively on the zoning district. First of all, this is an inappropriate relationship. Building setbacks, especially front setbacks, are more appropriately related to the type of street, the use of the building, and the surrounding development context than the size of the lot. For example, buildings on large, busy thoroughfares should rightfully be set back. However, buildings on pedestrian friendly streets, especially neighborhood streets can easily and appropriately be built close to the street to promote pedestrian appeal and safety.

More importantly, this limited approach to setbacks, in general, provides little room for the preservation of natural features within the prescribed building envelope, eliminates the opportunity for staggered facades, and organizes the garage on the site in close proximity to the front facade. In truth, the front yard is the least used portion of a typical single family house lot. Deep setbacks also tend to be less attractive for pedestrians since they remove the feeling of enclosure and proximity to human activity that people desire for interest and feeling of security.

The current setback requirements, while necessary to protect the house from noise and vibration if located on thoroughfares, is not appropriate within most neighborhoods. By permitting a reduction in front and rear setbacks to 10 or 15 feet, house lots can increase the private, usable space of the rear yard as well as the building envelope. Such a change also increases the pedestrian-friendliness of the street by bringing front doors closer to the sidewalk, where people walking by can interact with people in the semi-public spaces of front porches and front yards.



Currently, most of Albemarle's residential zoning districts have building setbacks of 35 to 40 feet from the property line, which yields an effective setback of 50 to 65 feet from the road when the width of the right-of-way between the property line and the street is included. This may be an appropriate width on busy thoroughfares, but a setback of 10-20 feet (10 feet is allowed in the R-4 zoning district) is much more pedestrian-friendly.

The setback requirements in the CBD (no building setbacks required, meaning that buildings can be built up to the right-of-way line) allow for the continuation of pedestrian friendly development that was the early pattern of the downtown's development. However, nowhere else in the City could such development be replicated under the current development standards. The Zoning Ordinance includes extensive language on the preservation of historic buildings in historic districts within the City. Unfortunately, the replication of the very pedestrian-oriented urban design standards of the City's historic neighborhoods would hardly be allowed in new development in the City.

Automobile Parking

In his book *The High Cost of Free Parking*, renowned Economist Donald Shoup shows that minimum parking requirements are the source of many urban ills, including impeding the use of active modes of transport – walking and biking. He compares the requirement for and provision of “free” parking at almost every location in America to a rental apartment where the utilities are required to be included in the rent thus giving the tenants no incentive to curtail their use of electricity or water. In fact, the tenants have an incentive to use as much of these commodities as possible since they will incur no additional cost to do so. The same is true for motor vehicle parking. Since almost everywhere that we take our car will have a free place for us to keep it at our destination, we have little incentive to consider other options for getting there:

And with ubiquitous free parking, we have a cheap, convenient, direct, sedentary connection to almost every point in the city. . . . parking requirements reduce pedestrian access [since pedestrians typically have to find their way through fields of parked cars]. No wonder we rarely walk anywhere. (Shoup, p. 62)

Unlike many jurisdictions across the country, Albemarle appears to have no established minimum parking standards. Shoup recommends that municipalities let developers decide how many parking spaces they require and this is what Albemarle has done. However, to further reduce the impact of automobile parking on the pedestrian environment, the City should consider including the following measures in its development regulations:

Establish Parking Maximums

Consider parking maximum thresholds. This will limit the overbuilding of parking lots. Parking maximums can encourage additional development since more land can be used for building instead of parking and existing buildings with little existing parking can be reused.

Encourage Shared Parking

Shared parking for uses that have different operating hours (such as night clubs and offices) makes efficient use of space, reduces the size of parking lots, and increases the amount of land on a parcel that may be devoted to buildings versus parking. In certain



districts, such as the CBD, Shoup suggests offering developers an in-lieu fee option to contribute to public parking instead of building their own parking on-site.

Encourage On-Street Parking

On-street parking should be encouraged to be included with any off-street parking. On-street parking is one of the most efficient ways to provide and share parking. It also benefits the pedestrian environment by buffering pedestrians from motor vehicle traffic and slowing the speed of cars on the roadway.

Require Bicycle Parking

Just as the provision of motor vehicle parking has been shown to induce driving, the provision of safe and convenient parking for bicycles can have the same effect on bicycling, and therefore offer the pedestrian a convenient alternate form of transportation. Bicycle parking can be provided at a fraction of the cost of automobile parking and in a fraction of the space – 10 to 12 bicycles can be parked in the area of one car parking space at a cost of tens of dollars per bicycle space versus hundreds or thousands of dollars per motor vehicle space. The City should consider requiring bicycle parking for multifamily and all non-residential development. Different standards of bicycle parking are needed for short term visitors and customers and for longer term users like employees, residents and students. Typically, 1 bicycle space per 20 motor vehicle spaces is sufficient to provide for visitor parking demand.

Subdivision Regulations

There are a number of development standards in the City's current Subdivision regulations that should be modified to allow for more pedestrian-oriented buildings and neighborhoods:

1. Section 91.09(A) should be revised to reduce the minimum pavement width requirements.

The current required pavement widths for local streets, marginal access streets, and cul-de-sacs (26 to 32 feet, back-of-curb to back-of-curb), are too wide for low-speed, pedestrian-oriented neighborhood streets. These dimensions are excessive for most low-density, residential neighborhoods. Not only is it more expensive to build (a cost that is passed on to the home buyers), but the additional width encourages speeding, which makes the environment less appealing and safe for pedestrians and cyclists.

The minimum widths should be reduced and a greater range of street widths based on density and projected on-street parking demand should be allowed. For single family neighborhoods, the minimum roadway width may be decreased up to a minimum 18 feet in pavement width (or 20 to 22 feet face-of-curb to face-of-curb) with no perceptible impact on service delivery. This dimension permits occasional on-street parking. Where on-street parking is expected with higher frequency, a minimum width of 22-24 feet of pavement width is recommended.

Collector street widths can be reduced as well and should be based on projected traffic and development context to create more pedestrian-oriented streets. A 32 to 34-foot (face-of-curb to face-of-curb) street will accommodate full-time on-street parking on both sides of the street and two travel lanes. However, "where houses do not front on the residential collector street and [/or] parking is not normally needed, two moving lanes of pavement are adequate" (National



Association of Home Builders, 2001). Thus, based on design speed, and expected volume, collector streets could be as narrow as 20 to 22 feet.

Other factors to consider in defining minimum widths for collector streets is the need for on-street bicycle accommodations such as bike lanes (minimum 4 feet of pavement in each direction) or wider shared travel lanes (typically 13-14 feet). All of these factors – the need for on-street parking, design speed, projected motor vehicle volumes, and the need for bicycle accommodations – should be considered in defining the widths for collector streets.

2. Section 91.09(A)(8) should be revised to modify cul-de-sac requirements.

Cul-de-sacs create a very safe environment within their confines, but create inhospitable pedestrian environments because they result in fewer route choices and thus longer distances from destinations. The current maximum length for cul-de-sacs, 400 feet, is good – better than many communities' requirements in the region. However, it could be reduced to as little as 250 feet.

Furthermore, the City should specify conditions for when cul-de-sacs are allowed. They should be allowed to be used only as a condition of last resort when street connections are not possible due to topographic, environmental, or lack of street stubs on adjacent properties. When cul-de-sacs are used, they should be required to provide pedestrian connections through the end of the cul-de-sac to other near by streets or destinations.

3. Section 91.08(C) should be revised to reduce block lengths.

The current maximum allowed block length of 1500 feet is too long for pedestrian-oriented blocks. Ideally sized pedestrian-oriented blocks are 200-400 feet wide. The block length should be based on a variety of factors, including the density of the development and the zoning district and the development context of the development (urban versus rural) up to a maximum of 800 to 1,000 feet.

The Subdivision Regulations include a good statement regarding the provision of a “pedestrian crosswalk,” but this is only required “where deemed necessary by the Planning Board.” More objective requirements regarding when such crosswalks are required and how they should be constructed (in this section and in Section 91.08(F), “Easements”) should be provided in the ordinance. Consider requiring blocks longer than 800 feet to provide a pedestrian crosswalk through the block. Consider requiring 15-20 feet easements and pedestrian paths to be at least 10 feet wide and of pavement or a crushed gravel surface.

4. Section 91.08(D) should be revised to reduce minimum lot widths or to use density-based standards.

As noted above, this report recommends the use of density versus lot size in all residential developments. This approach is already allowed for in the Cluster Residential Development regulations (Section 91.21). The current minimum lot width of 70 feet makes for relatively wide lots. Smaller, more compact lots put more residents within walking distance of destinations such as parks, schools, and commerce. If lot size is to be used, consider allowing single-family lots as narrow as 35 to 45 feet on streets that are served by public water and sewer.



5. Section 91.08(E) should be revised to reduce building setback lines.

The minimum building setback of 35 feet from the front property line yields an effective setback of nearly 50 feet from the street when the right-of-way width is included. As noted above, this dimension may be appropriate on higher speed, higher volume collector and arterial streets, but is not appropriate for pedestrian-oriented neighborhood streets and commercial streets. Consider reducing front setbacks to as little as 10-15 feet on local and collector streets.

6. Section 91.08(I) should be amended for better access.

- Establish Connectivity Requirements. Improving connectivity and limiting cul-de-sacs result in improved mobility for pedestrians, motorists, and cyclists; decreased response time for emergency services and delivery costs for services such as garbage collection through improved routing options; and, improved water pressure and maintenance from the ability to loop lines through a development rather than have to rely on less efficient dead-end pipe runs. Traffic studies have shown that highly connected street networks provide much greater traffic capacity and mobility for a community, at less cost. A high degree of connectivity should occur not only at the level of thoroughfares, but also on collector or local roads. Such connectivity vastly improves a street network's performance. The street pattern should not force short trips of one or two miles onto arterials; it should be possible to make trips of this sort by using collector or other local streets, which are also more favorable to pedestrians and cyclists. With a highly-connected street network, cross-town trips should be possible using fairly direct residential roads.
- Enhance Sidewalk and Planting Strip Requirements: The existing standards provide excellent width for sidewalk and planting strips (5 and 7 feet respectively); however, context-based requirements are needed for when sidewalks should be provided on one or both sides of a street. For example, sidewalks can be required on one or both sides based on street type (arterial, collectors, and sub-collectors should have sidewalks on both sides) or density (the FHWA suggests that developments of over 4 dwelling units per acre should have sidewalks on both sides, while developments of lesser density can be served with a sidewalk on one side).

Sidewalks for non-residential developments and mixed-use development should be at least 6 feet in width and preferably 12-15' feet in width where there is ground floor retail, and on-street parking. (The current requirement is only 5 feet.)

The planting strip requirement is very pedestrian-friendly since it provides a buffer between the pedestrian zone and the vehicle zone of the street, and provides the width necessary for adequate ADA ramp slopes from the street to the sidewalk. An 8 foot-wide planting strip, however, would better provide space for most street tree varieties to be planted, which provide shade for pedestrians and additional buffer from moving vehicles. The City should consider requiring that shade trees be planted in these planting strips in all new developments since street trees not only benefit pedestrians, but can help reduce stormwater runoff, increase the life of pavement, and increase property values, among many other benefits. Unfortunately, Albemarle requires street



trees to be planted on private property rather than in the planting strip in the right-of-way. This plan recommends that street trees be required to be planted in the planting strip.

7. Section 91.11 should be revised to enhance “Improvements with the City Limits” requirements.

The City should establish objective standards for when sidewalks should be required. Objectives such as the context-based standards suggested above should be provided.

Speed Limit on Residential Streets

The speed limit should be reduced to 20 mph on all residential and mixed-use commercial streets. Previous sections to this plan show that five times the number of people die when hit by a car going 30 miles per hour versus a car going 20 miles per hour. Speed limits in school zones during arrival and dismissal times should be no more than 15 mph. If possible, avoid placing pedestrian entrances to schools along North Carolina state roads as a 15 mph speed limit may not be permitted.

Streets are designed for a specific speed, and simply changing the speed limit does not alter driving habits unless there is significant enforcement. As new streets are rebuilt, or existing streets are improved, the opportunity exists to create an environment where the driver would rather drive at a speed that is safer near pedestrian activity areas. Consider creating a policy that includes incorporating low speed design into residential and high density commercial street design. As Albemarle develops the proposed Pedestrian Oriented Development Districts, streets should change to accommodate the pedestrian. Narrow lane widths, curvy alignments, alternating on-street parking, landscaping, short building setbacks, bicycle lanes, sidewalks, and other added features could eventually naturally decrease the comfortable driving speed. Lower posted speed limits on roads with higher design speeds, some traffic calming measures, and increased law enforcement would be necessary to deter speeding, particularly where pedestrians must share the roadway with cars. Residential streets with no sidewalks will become much safer and thus much more attractive to the pedestrian if the speed limit were to be reduced to 20 miles per hour.

Garbage Truck Ordinance

A University of Florida study in 2000 found that the amount of litter substantially increased after automated garbage and recycling trucks made their rounds on garbage pickup day. On some weeks, the amount of loose paper, packaging, bags, cups and other litter more than doubled after the trucks came through, the study found. The major conclusions found that the blame can be placed on citizens for not bagging loose and especially light material, automated trucks that frequently spill container contents, and uncovered load compartments on trucks. Any truck that transports trash through Albemarle should be required by ordinance to keep all access bays fully shut and all rooftops covered when it does not interfere with actively collecting garbage. All non-recyclable trash placed in outside bins should be bagged to accommodate for newer automated trash collection trucks.



Acquisition of Easements for Pedestrian Projects

As the City seeks to create sidewalk connections in areas that are already developed, the availability of right-of-way inevitably will be an obstacle. The City should take steps to formalize a policy regarding the construction of sidewalks or other pedestrian projects outside of the public right-of-way. Ideally, the City should identify opportunities to reach agreements with property owners to provide a sidewalk or shared-use path easement as necessary for new projects without acquiring property. Easements for public access should be a standard addition for any new or re-contracted utility easements. For example, standard 10 foot wide utility rights of way should be modified to a 30 foot utility and public access shared right of way. In addition, an effort should be made to ensure that conservation easements purchased by developers should not restrict environmentally mindful construction of a shared-use path or public access for such a path.

There are several means by which pedestrian facilities can acquire the financial and land resources needed to be completed. These include *Reservations*, *Dedications*, *Payment-in-Lieu*, *Impact Fees*, and the *Transfer of Development Rights*. These methods are defined below. It is important to note that if Federal Highway funds are sought or used, the land owner must be offered fair market value for any land acquired.

Reservation:

Residential developments impacting a public facility (school, park, shared-use path) are required to set aside land for a certain period of time so public agencies can purchase a specified area.

Dedication:

These are usually found in zoning or subdivision ordinances, whereby a piece of land from a development is given fee-simple to the public for a particular use, such as a park or shared-use path. Dedication requirements are almost always attached to residential development, but can be extended to commercial development as well. Local governments can require a dedication based on the need to provide more public recreation facilities due to the needs of the new residents coming with the development. If a planned residential or commercial development is located on a planned pedestrian project, an easement must be dedicated for the future shared-use path. The regulation should also clearly state the standards for size, topography, and accessibility. This information helps with consistency and legality of the dedication process. If the new development is not on a planned route, the developer shall make a payment-in-lieu of a dedication.

Payment-in-Lieu:

These payments are tied to dedication regulations. The developer pays a fee that represents the value of the site or the improvement that would have been dedicated or provided. Donations are required when affected by a planned park or shared-use path route, but those developments not affected still bear similar expenses. Payment-in-lieu fees are typically earmarked by its purpose, geographic area, and have a specific time limit. These fees can be used to pay the development costs of nearby pedestrian shared-use paths.



Impact Fees:

This is a one time fee imposed on new development. The intent of an impact fee is to shift the cost of providing public facilities (roads, sewers, parks, etc.) needed to serve new growth from the general tax base to the new development generating the demand for the new facilities. Tied to numbers of people (dwelling units, bedrooms) rather than land use, impact fees require state-granted enabling legislation to enact.

Transfer of Development Rights:

This is an arrangement that allows landowners to sell/transfer potential density of development of their property (sending area) to another location better suited to accommodate additional development (receiving area). Sending areas are typically those areas preferred to be protected and conserved such as open space, forests, watersheds, wetlands, and historic landmarks. Receiving areas are places that have capacity to accommodate new development, such as pedestrian and transit oriented development, infill, etc.

Incentives:

There are a range of incentives that can be used to acquire and protect open spaces, like Density Bonuses, tax incentives, Conservation Subdivision Ordinances, Cluster Development, etc.

An example ordinance that uses some of these tactics is found in **Appendix J**, and there is an example of an easement agreement document in **Appendix K**.



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SECTION 9: IMPLEMENTATION PLAN





9.1. IMPLEMENTATION OF PROPOSED INFRASTRUCTURE PROJECTS

The implementation of new and expanded pedestrian infrastructure projects is an important component of Albemarle's Pedestrian Plan. Infrastructure projects are classified as either an *incidental project* or an *independent project*.

Incidental projects are pedestrian enhancements that are implemented in conjunction with roadway and new development projects. Because the list of upcoming roadway improvements is long and subject to change, all of these possible projects are not mentioned specifically in this plan or illustrated individually on a map. However, the City of Albemarle Planning staff should review all plans for upcoming roadway and bridge improvements (constructed by the City, NCDOT, or the Federal Government) to ensure that pedestrian (and bicycle) accommodations are included to the full extent possible as part of these projects. In many cases, pedestrian accommodations can be constructed as part of the overall roadway project cost, avoiding the need for a separate pedestrian project later to retrofit the roadway facility. To ensure that no opportunities "fall through the cracks", the City should implement a mechanism to ensure that pedestrian and bicycle considerations and associated traffic calming (as described in Section 5) are made as part of all pending roadway expansion and maintenance projects, as well as all new development projects. Map 4 shows a "Complete Streets" policy on most NCDOT arterials in Albemarle that would require all new road and road improvement projects to include accommodations for non-motorized travel (pedestrian and bicycle) as well as motorized traffic.

Independent projects are pedestrian improvements that are implemented as a separate project, not in conjunction with any roadway improvements. These projects are intended to provide new or enhanced facilities in existing roadway corridors or along new rights-of-way (for off-road paths). The proposed high priority infrastructure projects outlined in Section 7 are indicative of projects that will most likely be implemented as independent projects, while the mid-range and long-range projects tabled in Appendix G may be more efficiently completed as incidental projects, but not necessarily in all cases.

Funding Opportunities

A combination of funding sources will be needed to construct the infrastructure projects summarized in Appendix G. The City of Albemarle should seek all viable funding opportunities for project implementation, including Federal and State monies where available (i.e. inclusion on the State TIP). Special funding programs for specific types of projects (e.g. Safe Routes to School) should also be pursued. Private foundations should be thoroughly researched to identify possible funding options.

Although many funding sources potentially can provide revenues for project implementation, it is likely that local government funding will be a primary component (for matching federal / state funds and for implementation where other revenue streams are not available). Therefore, it is recommended that the City establish a set aside amount in the annual Public Works budget for pedestrian infrastructure project implementation. An annual set aside would ensure that progress is made every year on constructing the specified projects, and would illustrate a commitment from the City to improve walkability. Appendix H shows more detail on potential funding sources.



9.2. ADOPTION OF POLICY AND ORDINANCE REVISIONS

The recommended policy and ordinance revisions discussed in Section 8 should be fully considered as the City of Albemarle updates its existing zoning ordinances. Incorporating the policy recommendations described in Section 8 in the City's updated planning and zoning tool kit will play a major role in defining the future pedestrian environment of Albemarle.

9.3. PRIORITIZATION AND IMPLEMENTATION OF ANCILLARY PROGRAMS

A variety of possible ancillary programs are described in Section 6. Some of these programs should be implemented in the near-term, while others should not be implemented without a more developed pedestrian facility network. Specific comments for each of the types of programs discussed in Section 6 are offered below.

Spot Improvement and Maintenance Programs

A Spot Improvement Program to inventory, repair, maintain, and enhance sidewalks, crosswalks, and other pedestrian facilities should be implemented as soon as possible. Many municipalities set aside a set level of funding for a Spot Improvement Program every year. It is suggested that Albemarle adopt a similar approach, including a set amount of funding in the Public Works budget every year for minor repairs and enhancements. Specific projects can be decided by suggestions received from the public. An annual budget of \$100,000 for spot improvements would provide a starting point for enabling minor improvements around the City.

Education Programs

Education programs such as crossing guard programs or driver's education programs should be pursued in the near-term, working especially with the Albemarle school system to identify opportunities for new programs within the schools. Safety programs are beneficial regardless of the extent of the pedestrian infrastructure network.

Encouragement and Promotional Programs

Various encouragement and promotion programs are described in Section 6. These programs should be phased in over time. It is important that encouragement and promotion activities are on-going, rather than one-time efforts. Some programs, such as the *Urban Walker Program*, are more appropriate after a more extensive pedestrian network has been developed. Other programs, such as *Safe Routes to School* can be implemented immediately.

Enforcement Programs

The City should strongly consider reductions in speed limits on residential roads in the near-term, because the safety benefits of reduced speeds are significant. The Foot Patrol program can be phased in as additional pedestrian-oriented development occurs in the designated Pedestrian Oriented Development Districts, and an increase in the enforcement of existing laws would be an immediate improvement.

Alternate Transportation Options

Many of the policies and projects recommended in this plan also create a strong framework for a viable multimodal transportation system. Transportation options such as mass-transit, bicycle facilities, and car sharing programs help to create more choices for pedestrians. As more



options create a stronger pedestrian system, good pedestrian facilities also create stronger mass transit systems.

Anti-Litter Programs

Programs to clean litter, such as Adopt-a-Sidewalk, should be implemented immediately to maintain the attractiveness of Albemarle's sidewalks. This program would be especially beneficial in areas with high levels of pedestrian traffic, such as Albemarle's downtown. These programs can be expanded as the pedestrian network grows.

Mapping and Signing Projects

Pedestrian route mapping and signing projects should be implemented in conjunction with the completion of new pedestrian facilities that comprise a route connecting major origins and destinations. It is inappropriate to develop maps and / or signage until the routes to be mapped and / or signed are developed to the extent that a route is fully usable and accessible.

High Priority Programs

Many of these programs depend on a strong pedestrian infrastructure to be in place to be successful, but some can be implemented immediately. These high priority programs include inventorying Albemarle's sidewalks and crosswalks and developing a spot maintenance program, all school safety and walk-to-school encouragement programs, the litter reduction programs, the reduction of speed limits on residential roads, active increase in enforcement of existing traffic laws. The city should also begin aggressive marketing strategies and campaigns to educate the community on the importance and value in the pedestrian projects and ideas mentioned in this plan.

9.4. ORGANIZATION OF A PEDESTRIAN COMMITTEE

A committee should be created immediately that will oversee the implementation of this plan. The committee should be made up of stakeholders that will have the interest, knowledge, and ability to become familiar with the details of this plan and to ensure that the proper steps are taken to find funding, change or create public policy, re-rank projects as necessary, and encourage the community to embrace foot travel. This committee may be combined with the implementation of future bicycle and greenway plans if necessary. Albemarle's Planning Department, Utilities Department, Police Department, Parks and Recreation Department and Stanly County Schools should all make an effort to become familiar with and make decisions based off of this plan. Citizens groups, organizations, and businesses are also encouraged to get involved with the implementation of this plan.



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APPENDIX A: PUBLIC INPUT





PEDESTRIAN SURVEY SUMMARY

Survey Questions

Number of respondents: 358

	Always	Often	Occasionally	Rarely	Never	No Response
#1 - I _____ choose to walk for my transportation mode around my community	9	63	112	52	104	18
	Choice	Necessity	No Response			
I walk for transportation because.....	184	26	148			
	Often	Occasionally	Never	No Response		
#2 – I _____ walk for pleasure, exercise, or recreation	196	143	10	9		
#3 - The following obstacles have prevented me from walking in Albemarle in the past:	# Responses	% Responses				
No sidewalks or paths	192	54				
Destination is too far away to walk	149	42				
It takes too much time	59	17				
Heavy or fast traffic	125	35				
It is easier to drive	119	34				
Weather (too hot, cold, rainy, icy, etc.)	137	39				
I have too much stuff to carry	66	19				
I need to keep a clean appearance	16	4				
Sidewalks are poorly maintained	92	26				
No crosswalks	73	21				
Dangerous or intimidating intersections	111	31				
Lack of accessibility for the disabled	24	7				
Travel areas are not well lit	97	27				
Concern of crime	132	37				
My health does not permit me to walk	19	6				
Other (list) (See attached)						
Nothing stops me from walking to where I need to go	40	12				



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#4 - What areas in Albemarle do you regularly walk for transportation or recreation?	# Responses	% Responses		
I do not walk anywhere	34	10		
Downtown & Pee Dee area including nearby residential roads	148	41		
Stanly Commons/Hospital area including nearby residential roads	112	31		
Walmart/NC 24-27/ and nearby residential areas	26	7		
North US 52/Northeast Connector area and nearby homes	33	9		
The Mill Hill Neighborhoods west of US 52	17	5		
Neighborhood streets located outside of the areas mentioned above	113	32		
High School	47	13		
Elementary Schools	11	4		
Rock Creek Park	110	31		
Montgomery Park	9	3		
Roosevelt Ingram Park	10	3		
Middle School	11	3		
YMCA Facilities	121	34		
City Lake Park	50	14		
Chuck Morehead Park	45	13		
Other (See attached)				
	Yes	No	I Don't Know	No Response
#5 - Would you support public development policies that encourage pedestrian facilities?	265	17	63	13
#6 - Would you support public funding initiatives for pedestrian facilities?	215	29	99	15

#7 Do you have specific suggestions to help Albemarle become a safer and more practical city for pedestrians?

- ◆ Would like walkway from Eastgate Shopping Center to Walmart (2 respondents)
- ◆ More sidewalks (15 respondents)
- ◆ Occasional benches to rest
- ◆ Sidewalks on Ninth St
- ◆ 10:00 pm curfew
- ◆ Increase police/bike patrol in pedestrian friendly areas (13 respondents)
- ◆ More crosswalks and/or caution lights (5 respondents)
- ◆ Enforce traffic laws and leash law; ticket pedestrians for jaywalking (7 respondents)
- ◆ Emergency call boxes (2 respondents)
- ◆ More underground utilities
- ◆ Cleaner sidewalks (4 respondents)
- ◆ Develop greenway/bicycle paths (19 respondents)
- ◆ Improve street or park lighting (11 respondents)
- ◆ More fitness trails
- ◆ Walking track similar to Norwood's
- ◆ Convert railroad track through downtown corridor into bike path/walkway/greenway connecting as many areas as possible (2 respondents)
- ◆ Extend sidewalk from the Optimist Park to Main Street with lighting
- ◆ Construct sidewalk on Hwy 73 from Main Street to new City Lake Park



- ◆ “Brick sidewalks that “jut out” into street are very dangerous”
- ◆ “Get drugs off the street”
- ◆ Public transportation (3 respondents)
- ◆ Sidewalks extending from Albemarle Middle School to East Albemarle School
- ◆ Sidewalks in Forest Hills area
- ◆ Pedestrian controlled crosswalk lights (2 respondents)
- ◆ Extend sidewalks on 5th St to Hawthorn Avenue and on Second Street from Park Ridge Rd to Post Office (2 respondents)
- ◆ Construct sidewalk extending from Chuck Morehead Park on Hwy 52 North to Rock Creek Park on Hwy 52 South (3 respondents)
- ◆ Encourage pedestrians with “rewards” system
- ◆ Construction of sidewalk around perimeter of hospital compound
- ◆ Security Cameras in pedestrian friendly areas
- ◆ Keep City parks open later in the evening
- ◆ Stop light on Pee Dee Ave

#3 – Other pedestrian obstacles listed by respondents:

- ◆ “Crackheads on Salisbury Ave; too many drugs around here to be comfortable walking.”
- ◆ Dogs not kept chained.
- ◆ Garbage cans on sidewalks.
- ◆ Cars parked on sidewalks; broken glass/vegetative debris on sidewalks.
- ◆ “Greenway was never completed; money was appropriated and never used.”
- ◆ “My largest concern is walking or riding bicycles with my grandchildren; our youth need more freedom to safely ride their bicycles.”
- ◆ Dog waste not picked up from sidewalk or walking area.
- ◆ Need improved lighting around YMCA park; no public restrooms that are easily accessible.
- ◆ Inattentive and/or speeding drivers.
- ◆ Stigma attached to walking (i.e., no vehicle, no driver’s license, economically disadvantaged)

#4 – Other areas listed by respondents regularly walked for transportation or recreational purposes:

- ◆ Northeast Connector
- ◆ Bellamy – Lafayette subdivision
- ◆ Brookwood Executive Park
- ◆ “My own backyard”
- ◆ Ridge Street
- ◆ Hwy 73 (Concord Rd) from Main Street to Efird Street
- ◆ Forest Hills area
- ◆ Shopping center parking lots



PUBLIC FORUMS

Oral comments from both of the public meetings were limited, but focused mainly on the importance of walking paths, sidewalks, crosswalks, and traffic calming.

Written comments from the public meetings:

- *“Please continue to extend sidewalks around town.”*
- *“Repair sidewalks downtown to make it more walkable.”*
- *“I (propose) the idea of connecting Lofton Farms (ie Bellamy Circle, etc) through Muirfield Development to proceed into Smith Street and further into Forest Hills without going up Ridge Street.”*

APPENDIX B: STEERING COMMITTEE MEETING MINUTES





Meeting: Steering Committee Meeting # 1
May 31, 2006
11:00 AM – 1:30 PM
City Hall Annex

Attendees:

Ray Allen, Albemarle City Manager
Debbie Bennett, Stanly County Health Department
Elbert Branch, School Resource Officer
Bill Clark, URS Corporation
John Cock, The Lawrence Group
Lindsey Dunevant, Albemarle Parks and Recreation
David Eddy, Albemarle Parks and Recreation Department
John Fields, Stanly County Family YMCA
Rachel Hough, Public Housing
Mike Lambert, Albemarle Public Works
Rick Laton, Layton's Body Shop
Mary Meletiou, ITRE / NCDOT
Bob Sasser, Albemarle Planning and Community Development
Brett Wallace, URS Corporation

The meeting began with Lindsey introducing himself and allowing each member of the Committee to introduce themselves. Mary then took some time to discuss the NCDOT bicycle / pedestrian planning grant program and how the City of Albemarle could best utilize this opportunity for the development of a Pedestrian Plan. She explained that enhancement applications will not be accepted again until 2008, but that the City could use Independent Project Transportation Improvement Program (TIP) funds. Projects are most likely to get funded in areas that haven't received much funding before. Identify segments of roadway improvements in TIP that would accommodate bike/ped facilities. Albemarle can request bike/ped improvements with a 20% match. She emphasized that the plan should look at the long-range comprehensive transportation plan, and incorporates pedestrian accommodations and policies into it. She asked about transit plans for Albemarle, and none were known to be in the works. She commented on how a transit system can increase the effectiveness of a pedestrian system, and Bill Clark commented how a pedestrian system can increase the effectiveness of a transit system.

There is also money available for pedestrian projects close to elementary and middle schools through the *Safe Routes to School* program. Schools may also request a day-long workshop with school staff, community members, and other key stakeholders. An opportunity exists for participants to apply for project funds after the workshop. Ray Allen commented that the new middle school in town has no



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sidewalks and requires the kids to be shuttled by parents. Mary also discussed the potential for a *Fit Communities* program to be implemented for Albemarle as well to deal with the health issues.

There is a Community Needs Assessment Survey to be conducted in Stanly County next year. This study will be led by the Health Department. It would be good to include pedestrian-related questions on the survey. The *Active Living by Design* website may have such questions as examples.

Mary concluded her comments by reminding the Committee that there is an Americans with Disabilities Act (ADA) design workshop sponsored by NCDOT and NC State on June 26 and 27. Registration is \$250.

Brett Wallace then discussed the purpose of this plan, its scope, and our anticipated schedule. He described how we will get input from the City of Albemarle, this steering committee, and from the citizens to determine the needs of the community. He emphasized that we will write a detailed plan that will include a prioritization and an implementation strategy, but it will be up to the City of Albemarle and its citizens to see that the plan is implemented.

After lunch, Bill pointed out the printed map to the committee and asked to hear specific issues, concerns, or ideas that could help defined areas of emphasis for this plan. A supplemental sheet was included in their materials with the map to show examples of some types of improvements. Comments included the following:

- Greenways are being actively pursued now in Albemarle along some abandoned rail lines. The concepts for greenways in Albemarle emphasize connections to parks, schools, public spaces, and commercial areas.
- Need connection from Fairway Street to middle school.
- Papa John's / Wal-Mart area – residential area on north side of NC 24/27, commercial area on south side. (Brett and Bill actually watched pedestrians dash across this street after this meeting). Need pedestrian refuge islands, look at a midblock crossing between Papa John's Pizza and convenience store.
- Old core of the city has sidewalks, but there are very few sidewalks outside of the core.
- Need connection from the hospital to YMCA; applied for funds in the past, but was denied.
- ADDC plan mentioned connection from hospital to Montgomery Park.
- As part of discussion on connectivity, Mary mentioned signs in Matthews on stubbed (dead end) roads that say "future connection to..."
- Mary mentioned the need to ensure that greenways and sidewalks are connected to each other.
- Stanly Commons near hospital is big walking area (it is a former shopping center, now government services center). Stanly Commons is between 1st and 2nd Street.
- It would be good to have a "public service" layer on the map.
- Most of Albemarle is connected well north to south, but needs more east-west connections.



- An ordinance should be developed to encourage parking lots to develop walkways into the property from the fronting arterial.
- US 52 at Little League ball park needs a safe crossing.
- In discussion about the school environment for potential *Safe Routes to School* programs, it was noted that Albemarle has 3 elementary schools, 1 middle school.
- Walk to School Day has been done at 2 schools.

At that point, Bill asked that the members of the committee keep thinking about new projects or concerns that exist in the community that could be incorporated into the pedestrian plan. The planning team can be contacted throughout the process with additional comments.

Example goals from other cities' pedestrian plans were shown to the group and Bill asked for suggestions on and how we might want to incorporate these goals into Albemarle's plan or develop new goals.

- The themes of the discussion centered on connectivity, the ability to move around without cars, and recreational and health aspects of greenway corridors.
- Albemarle is currently seeking to revise their land-use ordinance and add a streetscaping element. Information from the pedestrian plan could be beneficial to the land use plan update.
- It was mentioned that we should consider school access as a specific goal.
- Lindsey mentioned the importance of managing the existing inventory of sidewalks – currently used for maintenance.
- Youth programs, education awareness, and enforcement were mentioned.
- A goal to make certain that the plan is implemented was recommended.
- Mary suggested a goal related to “soft programs”

The ideas presented at this meeting will be incorporated into a draft goal list, which the committee can edit at our next meeting.

The next steps in the planning process are for the planning team to look at the existing conditions and compile that information so that this steering committee and the citizens of Albemarle can evaluate and comment on it. Another committee meeting will be held in August to begin to look more closely at how the plan will take shape and to prepare for the public forum.

The meeting ended at approximately 1:30 PM.



Albemarle Comprehensive Pedestrian Plan

Meeting: Steering Committee Meeting # 2
August 31, 2006
11:00 AM – 1:30 PM
City Hall Annex

Attendees:

Peter Ascutto, Uwharrie Running Club
Ray Allen, Albemarle City Manager
Elbert Branch, School Resource Officer
Bill Clark, URS Corporation
Lindsey Dunevant, Albemarle Parks and Recreation
David Eddy, Albemarle Parks and Recreation Department
John Fields, Stanly County Family YMCA
Margaret Rudisill, Stanley Regional Medical Center
Bob Sasser, Albemarle Planning and Community Development

After introductions, Bill showed the committee the basic concept that URS and the City of Albemarle were considering for this plan. Included in with projects such as sidewalks, shared-use paths, safe crossings, and striped pedestrian shoulders are some major land use recommendations. Six regions of the City, known as Pedestrian Oriented Development Districts, are established in this plan that define parts of Albemarle where pedestrian traffic will be concentrated. This concentration is not possible alone with the infrastructure, but must include land use decisions such as mixed-use and higher density development, small building setbacks, and roadways designed with the safety and comfort of pedestrians in mind. Existing land-use policies that encourage large surface parking lots, far setbacks, cul-de-sacs, wide multi-lane roadways, sprawl, and a general lack of connectivity will be reviewed for revision in this plan. A map showing the conceptual pedestrian network was then reviewed with the committee showing the existing conditions along with proposed locations of sidewalks, shared-use paths, striped shoulders, and pedestrian districts. At this time, the Albemarle Pedestrian Plan Steering Committee agreed on this concept for the Pedestrian Plan and the proposed project locations with the understanding that the public's upcoming comments could further revise these proposals.

The next item on the agenda was the adoption of the goals for the plan. The previous meeting defined seven goals for this plan, and these goals were presented to the committee. Some minor modifications were suggested that add some language on the health and fitness benefits of the plan, resulting in the agreement of the goals.



The next item on the agenda was to discuss the public survey. A draft survey was presented that's primary purpose is to determine the need for this plan by discovering if there are people in Albemarle who currently walk, and to determine where they walk regularly for either recreation or transportation. This survey will also ask if there are any barriers that currently keep residents from walking, and if the public will support initiatives that encourage walking. These survey questions and format were generally accepted by the committee, with recommendations to specifically mention specific parks, schools, and the YMCA as places to walk.

With the survey ready to be distributed, the next step is to have this done to a wide audience across Albemarle. The most cost effective method that will reach the most people will be to include it in the City's water bill. Bill mentioned that including this survey in the next available water bill (October) will also serve as a way to advertise for the next public meeting. A public meeting held in November could have a draft plan to this committee by the end of the year. The committee agreed that they would like to see a draft plan by this time, but understood that it might not be possible to distribute this survey until the December mail out. In this case, the survey will act to advertise a public meeting in January.

Two dates were then proposed for the first public meeting. These two dates were Monday the 25th at 7:00 PM or Tuesday October 3rd at 7:00 PM. The committee was strongly encouraged to be there if they could, and Bill promised to send out an email for everyone on the committee for their opinion on the better of the two dates (*Monday the 25th was later determined to be preferred*).

At this time, the meeting was adjourned. The next meeting of the Albemarle Pedestrian Plan Steering Committee will take place before the second Public Meeting. This date would be in November or in January, depending on the survey distribution.

The meeting ended at approximately 1:30 PM.



Albemarle Comprehensive Pedestrian Plan

Meeting: Steering Committee Meeting # 3
January 16, 2007
12:00 PM – 1:15 PM
City Hall Annex

Attendees:

Ray Allen, Albemarle City Manager
Debbie Bennett, Stanly County Health Department
Bill Clark, URS Corporation
Lindsey Dunevant, Albemarle Parks and Recreation
David Eddy, Albemarle Parks and Recreation Department
Michael E. Lambert, Albemarle Public Works
Bob Sasser, Albemarle Planning and Com. Development
Laura Wheeler, Albemarle Greenway Commission
Toby Thorpe, Albemarle Parks and Recreation
Nina Godwin, Albemarle Public Works

Absent:

Ernie Borders
Peter Ascuitto
Elbert Branch
John Fields
Rachael Hough
Rick Laton
Mary Meletioui
Margaret Rudisill

Mike Lambert began the meeting by introducing himself as the new project manager for this project since the retiring of Lindsey Dunevant. He proceeded to show the recorded results from a survey that Albemarle distributed with its utility bill in December. At the time of this meeting, over 200 people have responded, with typical results.

A copy of the Draft Concept to the Albemarle Comprehensive Pedestrian Plan was distributed to each member of this steering committee. There was a simple agenda at this meeting to review this draft plan section by section. Members were asked to take some additional time on their own to review the plan and encouraged to send additional comments or suggestions to Walt within the month on a date that will be determined shortly. At the conclusion of this quick review of this draft concept plan, some minor suggestions were given that will be incorporated into the final plan, and some comments were made from the citizens on the committee that they were happy with the plan's development and looking forward to its implementation. *(Absent members can pick up their copy from Mr. Lambert, who can be reached at 704-984-9674)

The next steps in the planning process would be a presentation of this concept plan to the public later this evening. Once all the ideas, suggestions, and concerns from this public forum, from the steering committee, and from the survey are incorporated into the plan, a draft will be presented to the City Council for adoption. This can be expected to occur in early March. *(This date may be extended to April or May depending on NCDOT review)



At this time, the meeting was adjourned. Mr. Lambert will send out an email within the week that will give a date for the final steering committee meeting and that will give a deadline for comments on this draft. The final meeting of the Albemarle Pedestrian Plan Steering Committee is expected to take place near the end of February.

The meeting ended at approximately 1:15 PM.



Albemarle Comprehensive Pedestrian Plan

Meeting: Steering Committee Meeting # 4
 September 20, 2007
 12:00 PM – 1:15 PM
 City Hall Annex

Attendees:
Ray Allen, Albemarle City Manager
Debbie Bennett, Stanly County Health Department
Bill Clark, URS Corporation
Michael E. Lambert, Albemarle Public Works
Rick Laton
Nina Godwin, Albemarle Public Works
Bob Sasser, Albemarle Planning and Com. Development

Absent:
Peter Ascutto
Ernie Borders
Elbert Branch
David Eddy
John Fields
Rachael Hough
Mary Meletiou
Margaret Rudisill
Toby Thorpe
Laura Wheeler

This was a simple meeting that consisted only of a final review of the Draft Plan that will be presented to City Council for adoption during their October 1 meeting. All Steering Committee members are encouraged to attend this meeting held at City Hall Annex on Monday, October 1st at 7:00 P.M.

The only major new material in this plan from the last time the committee reviewed it were the final rankings of the proposed projects. There were 15 identified “High Priority” projects that may have the largest impact on the pedestrian environment in Albemarle. The Plan thoroughly explains the process that the City or a future Pedestrian/Bicycle Committee can use to address changes to these proposed priority projects as the conditions on the ground change or when new opportunities present themselves.

Some comments were presented regarding policy intentions and clarification on street names in Section 7, and the idea that concepts in this plan will be heavily incorporated into the ongoing revisions to the Land Use Plan was discussed. At this point (almost 1:15), the meeting came to a close.

URS and the City of Albemarle would like to sincerely thank every member of this steering committee for their effort throughout this process.

APPENDIX C: MEDIA ARTICLES





Pedestrian planning process a step closer in Albemarle

By Matt Irvin, Staff Writer

Tuesday, March 28, 2006 — Sidewalk and pedestrian improvements are in sight for Albemarle.

City council has entered an agreement with URS Corporation to help with a comprehensive pedestrian planning process.

The city council recently approved a contract between the city and URS not to exceed \$34,981.

Albemarle Parks and Recreation Director Lindsay Dunevant said the study was to see where and how to make connectivity for pedestrian needs in specific areas as well as the overall needs of the community.

"We are hoping to hold the first meetings in the next two or three weeks," Dunevant said. "The steering committee will be selected by the city council by April 3 in the council meeting."

Dunevant said the connectivity was an important part of the study.

"We want to make this a very public process," Dunevant said. "We want to seek input where we can."

At the council meeting last week, Dunevant recommended the council choose members of the steering committee for the process from a diverse cross section of the community. Two public workshops will be held to solicit input from residents. The steering committee will review summaries of each the meetings.

Studies will be made of location and conditions of present sidewalks, existing and proposed developments. Key destinations and land uses will be included and the identification of handicapped accessibility issues. Other areas that will be included in the study will be special population areas like schools, the disabled and the elderly. Existing master plans for parks, recreation, greenways and open space in the city will be reviewed for the study.

The final report on the plan is scheduled to be completed by December.

"The study looks at all types of pedestrian issues, anything related to pedestrian activity, standards and land use policy."

"It also identifies pedestrian needs and changes in land use zoning and incorporate policy changes," City Manager Ray Allen said.

Allen said the study also identifies possible funding for projects from state and federal sources.

The North Carolina Department of Transportation grant for the study is \$24,000 with a \$10,500 match from the city.



Albemarle residents get last shot at guiding pedestrian plan

By Matt Irvin, Staff Writer

Tuesday, January 9, 2007 — Final input on Albemarle's pedestrian plan will be sought next week.

The final stages of Albemarle's comprehensive pedestrian plan are starting to wrap up next week.

A meeting on Tuesday will give the public an opportunity to comment on the city's consultant's draft plan.

The city entered an agreement last spring with URS Corporation to help with the comprehensive pedestrian planning process. The \$34,981 contract is being paid by a North Carolina Department of Transportation (NCDOT) grant. The grant is for \$24,000 with a \$10,500 city match.

The proposed plan recommends new sidewalks and shared-use paths, new policies for future improvements, land use suggestions and programs to encourage walking in the community.

The draft plan is a result of the first public hearing from April. More than 40 people attended the public hearing to give input on the plan.

A survey was distributed in December seeking more public input.

"We sent out surveys in the December bill stuffing," said Director of Public Works Michael Lambert. Lambert is the chair of the steering committee of the plan.

"The steering committee represents all areas in our community," he said.

Studies were made of location and conditions of present sidewalks, existing and proposed developments. Key destinations and land uses were included and identification of handicapped accessibility issues.

Other areas that have been included in the study are special population areas like schools, the disabled and the elderly. Existing master plans for parks, recreation, greenways and open space in the city are included in the study.

"In order to develop a plan for future needs, we need to identify and have a solid understand of the current conditions," Lambert said.

City Manager Raymond Allen said the city needs a plan for future growth and planning.



"There are several benefits to the plan, it is a planning tool as we look forward for capital projects," he said. "We need to have a study on sidewalks, greenways related to roads and transportation."

Allen said the plan will give the city a heads up to plan for state and federal grants.

"The fact of having it in place will help plan for grants," he said.

Allen said there is still time to return surveys for comments.

"There are still surveys at the YMCA, city hall and the Parks and Rec Department," Allen said. "There is time to get them in before the meeting."

Lambert said his department is collating the information from the surveys that have been returned.

"We will be putting together an outline of the responses from December's responses," Lambert said.

He has not seen the draft proposal yet. "It will be brought down by the consultant (URS Consultants).

The elements included in the plan are:

- Sidewalks;
- Off-road paths and greenways;
- Traffic calming methods;
- Policies and standards;
- Connectivity;
- Land use suggestions;
- Benefits of walking;
- Programs to encourage walking.

The hearing will be held Tuesday at the city hall annex at 5:30 p.m.

Questions or comments can be made to Michael E. Lambert, director of Public Works, P.O. Box 190, Albemarle, N.C. 28002. Or by e-mail to mlambert@ci.albemarle.nc.us



Albemarle Comprehensive Pedestrian Plan

Published: October 05, 2007 08:37 am

Albemarle wants to be pedestrian friendly

By Sarah Jane Rosser, Staff Writer

Thursday, October 4, 2007 — The aim is to make Albemarle safe and easily accessible to those walking on foot.

The Albemarle Comprehensive Pedestrian Plan was brought before the city council Monday night.

Bill Clark, lead consultant in developing the plan, presented the plan that council members adopted and they plan to appoint a committee to investigate what's feasible for the city.

Some of the projects in the plan Clark said would make Albemarle a safer area are wide sidewalks, striped shoulders, shared use paths away from vehicle paths and various traffic calming techniques.

Council member Jack Neel posed the question as to how to get people to walk on the sidewalks and not on the streets. Clark said it's hard to monitor walkers and runners since the asphalt is better for knees.

Council member Judy Holcomb said she was hesitant to adopt the pedestrian plan because she had not had the chance to read it in its entirety. She also said she had a lot of questions about what she had read so far.

Once a committee is put in place, the team will look over the plan and decide what Albemarle needs and how to go about localizing the pedestrian plan for the city.

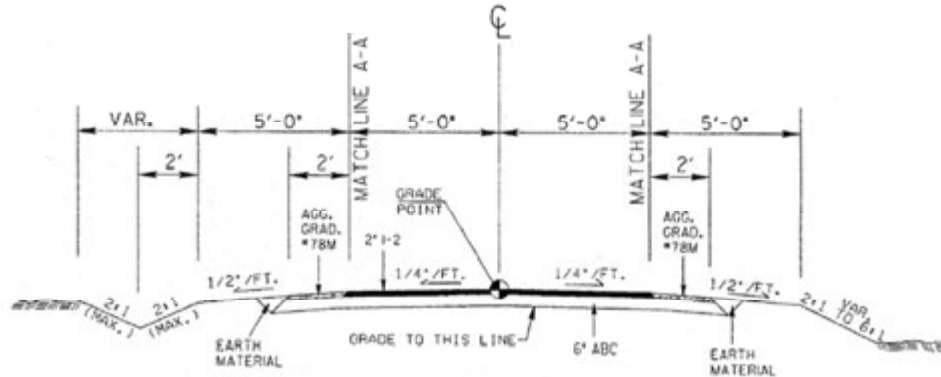
The next meeting is scheduled for Oct. 16 at 7 p.m. in the City Hall Annex.

APPENDIX D: SAMPLE SHARED-USE PATH CROSS-SECTIONS



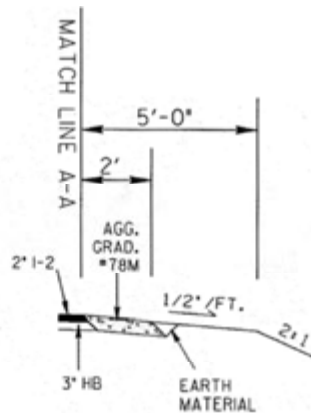


RECOMMENDED TYPICAL SECTION OF 10-FT ASPHALT PATHWAY With 2-Ft Crushed Stone Shoulder



RECOMMENDED PAVEMENT DESIGN

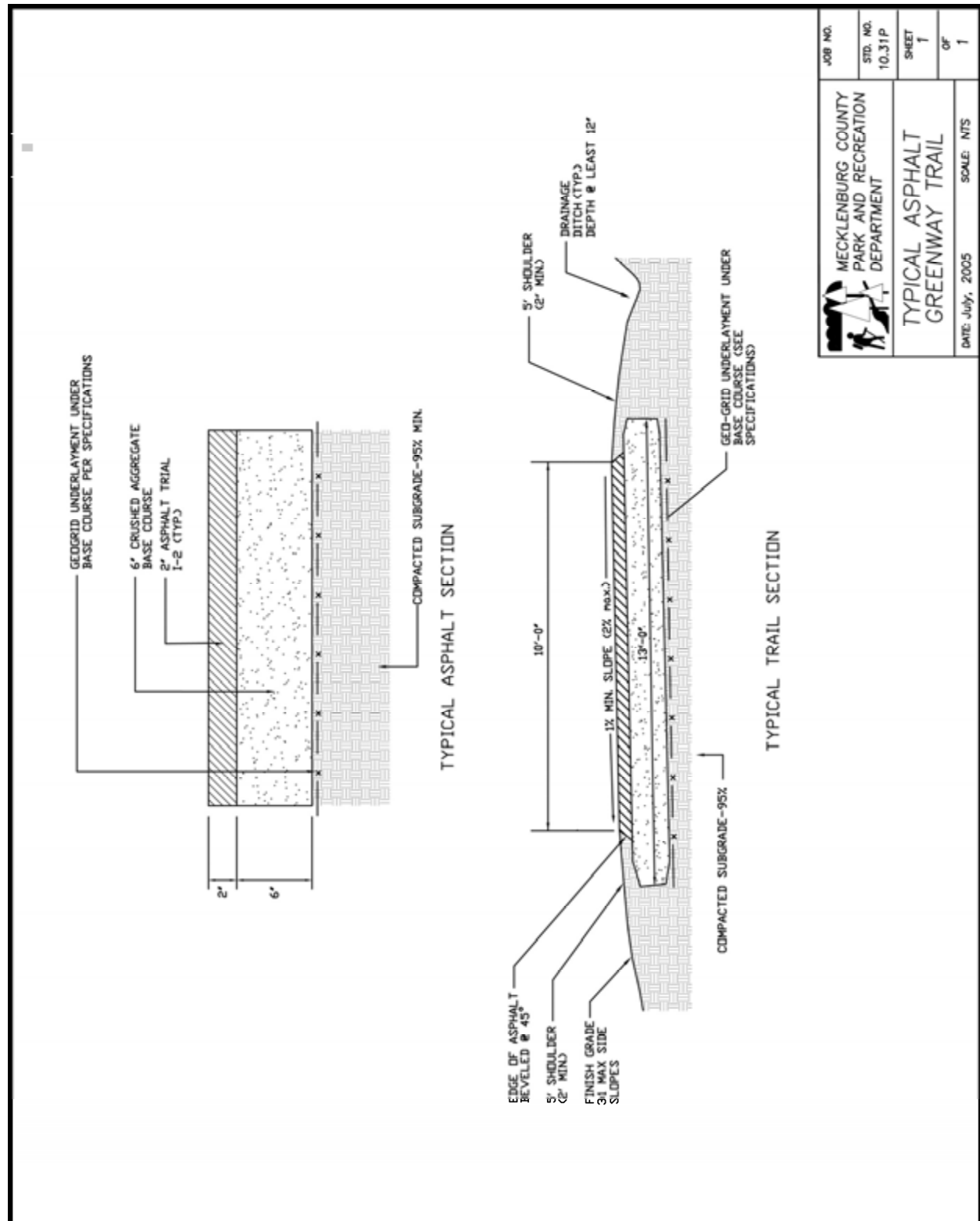
NOTE : PROJECTS WITH POOR SOILS
MAY SUBSTITUTE 6" OF ABC
WITH 3" OF HB.



NCDOT – Bicycle Facilities Guide: Types of Bicycle Accommodations



Albemarle Comprehensive Pedestrian Plan



JOB NO.	MECKLENBURG COUNTY PARK AND RECREATION DEPARTMENT
STD. NO.	10.31P
SHEET	1
OF	1
DATE: July, 2005	SCALE: NTS

APPENDIX E: SAMPLE COST ESTIMATES AND EXAMPLES





SAMPLE COST ESTIMATES

Below are approximate unit costs for the types of pedestrian projects proposed in this plan, based on some example project costs that have been recently implemented, along with costs of other pedestrian projects. Project cost estimations in Appendix G are based on these figures, and do not necessarily include extra costs involved in the project such as advanced grading issues, land acquisition, land clearing, etc.

Sidewalks

- \$15 per foot for curb and gutter (plus 10% for design and administration)
- \$30 per square yard sidewalk (plus 10% for design and administration)
- 5' sidewalk – The nearby Town of Mooresville is spending \$119 - \$200 per linear foot (\$629,000 - \$1,056,000 per mile) for recent sidewalk projects. This figure includes all necessary costs design & administration, curb & gutter, various retrofitting costs, etc.

Shared-Use Paths

- Floodplain paths, such as creek or sewer paths may require more site preparation. Floodplain costs usually involve drainage issues (i.e., need for culverts and bridges, or geotextiles), permitting issues, and boardwalk. Mecklenburg County Park and Recreation's greenways are typically constructed on creek corridors or sewer easements, and whose greenways therefore provide good cost examples for many of Albemarle's recommended shared-use paths.
- Rail Trails and sidepaths that have the advantage of being on a relatively cleared alignment with some existing grading and base work already complete can be constructed more economically.

Typical Costs Associated with Floodplain Shared - Use Paths on Waterways or Sewer Lines

- \$120 per linear asphalt foot (installation including grading, clearing, construction, and a subbase with 18" on either side of asphalt for shoulder stabilization) 633,600 per mile + 10% administration and design = approximately \$700,000 per mile = \$132 per linear foot
- 10' Concrete walkway: \$300,000 - \$500,000 per mile (with design and administration – add 10%)
- 10' wide prefabricated "Steadfast" type Pedestrian Bridge: \$1,200 per linear foot with design, engineering, installation and administration costs. An 8' wide clearance can reduce this cost.
- 10' paved asphalt path (with two-foot margins and associated improvements): \$100 - \$125 per foot (\$528,000 - \$660,000 per mile.) Add 10% for design and administration.
- Boardwalk: Historically \$200 / linear foot (\$1,056,000 / mile), lately has increased to \$225 - \$250 per linear foot. Unit prices on bids can see boardwalks come in anywhere from \$150 - 350/LF. Boardwalk is 8' clear.
- Converted Culverts and Underpasses: \$60,000 - \$100,000. Varies according to width, lighting needs, if stream restoration is involved, and other circumstances.
- Mecklenburg County Park and Recreation's designers typically estimate \$120 per linear foot for construction of path (clearing, grading, subbase -- 14' wide, asphalt trail 10' wide).
- Mecklenburg County Park and Recreation routinely estimates \$1,000,000/mile for the design and construction of greenway paths in Mecklenburg County (10' wide asphalt



trail). This cost takes into account various factors including need for culverts, drainage and flood studies.

- Mecklenburg County Parks and Recreation recently spent \$615,000 for 1.6 miles of a new portion of Mallard Creek Greenway. Other recent construction costs: 1.9 miles (Four Mile Creek Greenway) Design: \$241,102 Construction: \$1,663,255. Irwin Creek Greenway (1.0 miles) Design: \$107,000, Construction: \$428,088. These costs do not include any funds for contingency (typically around 5% for construction and 10-15% for FFE -- i.e., signage, benches, trashcans, bike racks, water fountains, etc.)
- Mecklenburg County Park and Recreation recently paid \$128,000 for an 80' span on Briar Creek (included concrete approaches) and \$142,000 for an 80' span on Little Sugar Creek (approaches and railing included in costs) both bridges are 10' clear. Cost includes design, engineering and installation.
- Mecklenburg County Park and Recreation recently paid \$60,000 for a simple bridge underpass conversion for a greenway under Remount Road along Irwin Creek, \$150,000 for an underpass conversion on Toby Creek with a major stream restoration project included in the cost, and \$170,000 for NCDOT to design and install a Con-Span under a pre-existing bridge to build a greenway path.

Costs Typical with Upland Multi-Use Paths on Rail Beds, Road Corridors, Gas, or Electric Lines.

- Construction is less expensive in upland areas, especially where grading is already complete or where a subbase is not needed.
- Rail Trail construction can be estimated at \$510,000 per mile, based on other North Carolina Rail Trail projects plus an additional 10% for design and administration. This plan uses \$106 per linear foot to calculate all costs estimations for paths built on roadway and other upland corridors.
- The American Tobacco Trail (a rail trail in the Raleigh-Durham area) cost \$330,000 per mile for construction costs in 2002. The City of Durham notes that they have seen a 10 – 11% increase in construction costs in later years, with a more moderate climb earlier. This cost included hauling away ballast and ties (not rails), filling in areas of bad soil, upfitting 12" and 18" drain pipes to 24" and 36" to meet new code requirements, grading, and paving.
- 10' Crushed Rock walkway: \$80,000 - \$120,000 per mile (with design and administration – add 10%). These greenways have high maintenance costs.
- Mecklenburg County Park and Recreation's most recent construction cost for a stand alone asphalt parking lot (34 spaces) at Four Mile Creek/Johnston Rd was \$173,000.
- Parking lot: \$18 per square yard. (Parking lots for greenways can typically be shared with shopping areas, parks, or other public destinations and more typically are not needed at all because they are neighborhood access points.)

Intersections

- Crosswalk/Countdown signal: \$5,000 per intersection (this includes installation and an additional installed post). This cost can be up to \$15,000 per intersection if a retrofit is done with APS devices.
- Curb extensions: \$5,000 - \$25,000
- Simple neighborhood crosswalks with signs and markings: \$500 - \$1,500
- Enhanced crosswalk with special stencils, raised platforms, or special signage: \$5,000
- Raised crosswalks: \$2,000 – \$15,000
- Refuge island: \$10,000 – \$40,000
- In pavement illumination: \$25,000 – \$40,000 per crossing



- Pedestrian only traffic signal: \$40,000 - \$75,000
- Hawk signal: \$40,000
- Mid Block Flashing Crosswalk: \$20,000 for equipment and \$20,000 to install

Lane Marking

- Bicycle or vehicle lane striping (thermoplastic): \$15,000/mile with design and administration for both sides of the road.
 - \$1.20 per linear foot of thermoplastic for line striping
 - \$350.00 for each set of performed thermoplastic bike symbols with arrows

Lighting, Landscaping, and Signage

- Lighting: Varies widely depending on type of light and location. Lighting an underpass could be \$2,000 - \$5,000 for 3 to 4 lights. Mecklenburg County Park and Recreation recently paid approximately \$11,000 for the wiring and installation of 2 underpasses (8-12 lights under each).
- Landscaping: Contractor installed foliage costs around \$400 - \$500 per tree and \$25 - \$50 per shrub.
- Marking a route with signs: \$2,000 per mile with design and administration
- Signs: \$250 – \$350 each

Streetscape Projects

- The City of Charlotte recently completed these streetscape projects:
 - Tuckaseegee Rd. Streetscape including repaving for a road diet from 4 motor vehicle lanes to 2 motor vehicle lanes, 2 bicycle lanes, a turn lane, improved ADA curb cuts and crosswalks with safety islands.
 - Length = 1.3 Miles, Final Cost = \$2,500,000 (\$365 per linear foot)
 - East Blvd. Pedscape including repaving for a road diet from 4 motor vehicle lanes to 2 motor vehicle lanes, 2 bicycle lanes, a turn lane, improved ADA curb cuts and crosswalks with safety islands.
 - Length = ½ Mile, Final Cost = \$1,050,000 (\$398 per linear foot)
 - Morehead Avenue Streetscape including repaving for a road diet from 4 motor vehicle lanes to 2 motor vehicle lanes, a turn lane, paved shoulders, wide sidewalks, planting strips, pedestrian lighting, improved ADA intersections and crosswalks with safety islands.
 - Length = ½ Mile, Final Cost = \$3,000,000 (\$1,137 per linear foot)
- For simplicity, the cost of \$425.00 per linear foot is used for estimating streetscape project costs outlined in this report. This cost estimates only the basic cost for sidewalk and crosswalk infrastructure and not any roadway repaving or conflicting utility or drainage costs. Every project is very different, and a complete study would be necessary before it would be possible to adequately estimate the complete cost for any streetscape project.



Albemarle Comprehensive Pedestrian Plan

Some general cost estimates and other notes are included below from the United States Department of Transportation for traffic calming facilities:

Measure	Reduces Traffic	Noise	Loss of Parking	Restrict Access	Emergency Entrance	Maintenance	Cost
Traffic Education Campaign	Maybe	No change	None	None	None	No	Varies
Speed Display	Yes	No change	None	None	None	No	\$250/day
Neighborhood Sign	Maybe	No change	None	None	None	No	\$200/sign
High Visibility Crosswalks	Maybe	No change	None	None	None	Yes	\$1K-\$5K
Police Enforcement	Yes	No change	None	None	None	No	\$75/hour
Narrowing Lanes	Yes	No change	None	None	None	Yes	\$1K-\$3K
Speed Limit Signing	Maybe	No change	None	None	None	No	\$200/sign
Stop Signs	Maybe	Increase	None	None	None	No	\$200/sign
Signing Restrictions	No	No change	None	Yes	None	No	\$200/sign



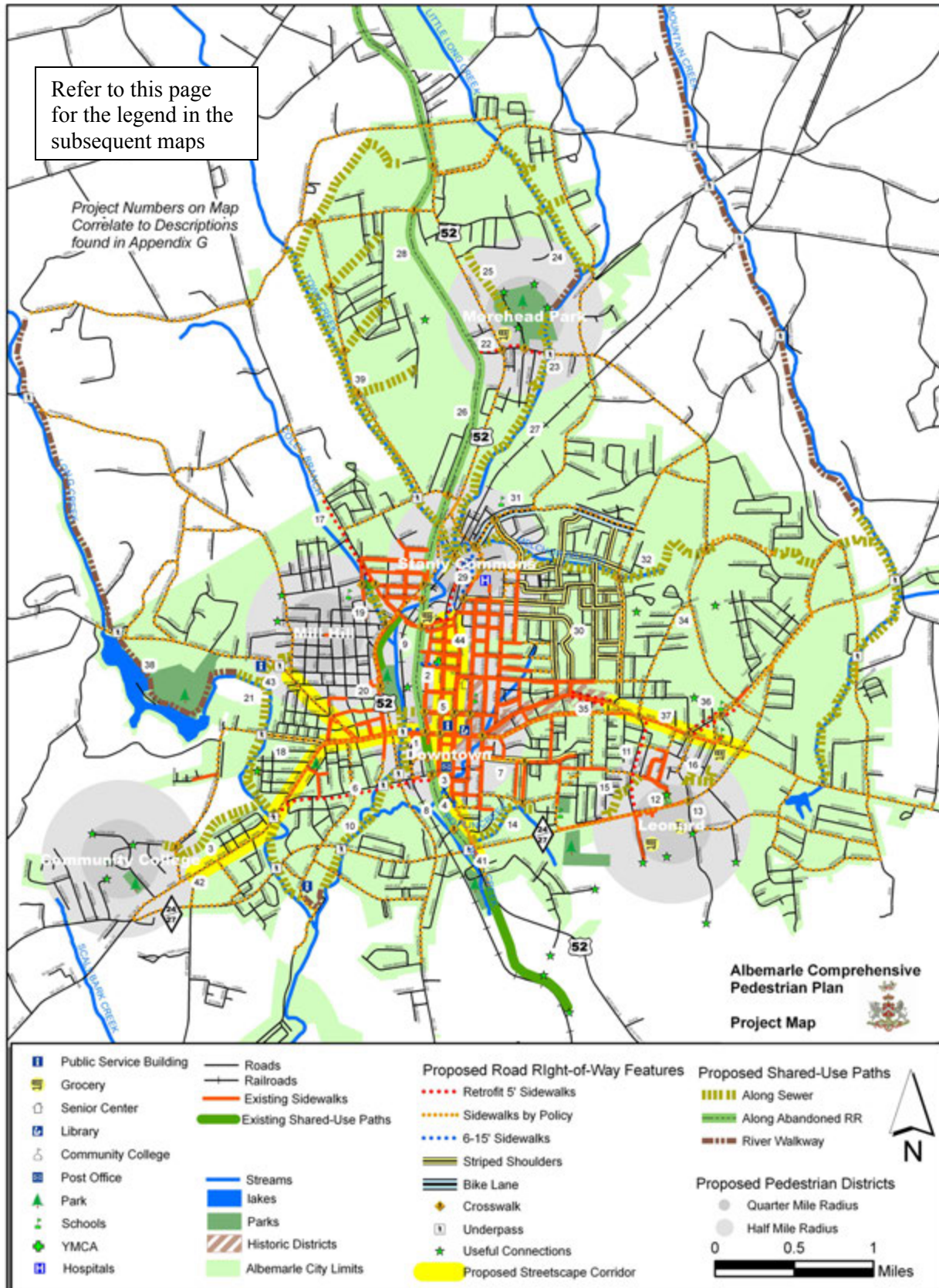
Measure	Reduces Traffic	Noise	Loss of Parking	Restrict Access	Emergency Entrance	Maintenance	Cost
Bike Lane	Maybe	No change	Maybe	No	None	Yes	\$25K-\$75K/mile
Sidewalk	No	No change	Maybe	No	None	Yes	\$20-\$30/foot
Median Island	Maybe	Decrease	Maybe	Yes	Yes	No	\$10K-\$75K
Gateway	Yes	Decrease	Maybe	Yes	None	No	\$10K-\$20K
Curb Extension	Maybe	No change	Yes	None	Some	Yes	\$10K-\$20K
Choker	Yes	No change	Yes	None	Some	No	\$15K
Speed Hump	Yes	Increase	Maybe	None	Yes	Yes	\$5K
Raised Crosswalk	Yes	Increase	Yes	None	Some	Yes	\$5-\$10K
Raised Intersection	Yes	Increase	Yes	None	Yes	Yes	\$25K-\$50K
Traffic Circle	Yes	No change	Maybe	None	Some	Maybe	\$15-\$25K
Intersection Channelizing	Yes	No change	Yes	None	None	Maybe	\$15-\$20K
Chicane	Yes	Maybe	Yes	None	Yes	Maybe	\$20K-\$40K
Entrance Barrier	Maybe	No change	Maybe	Yes	Maybe	No	\$15-\$20K
One-way Streets	No	No change	None	Yes	Yes	No	\$5K

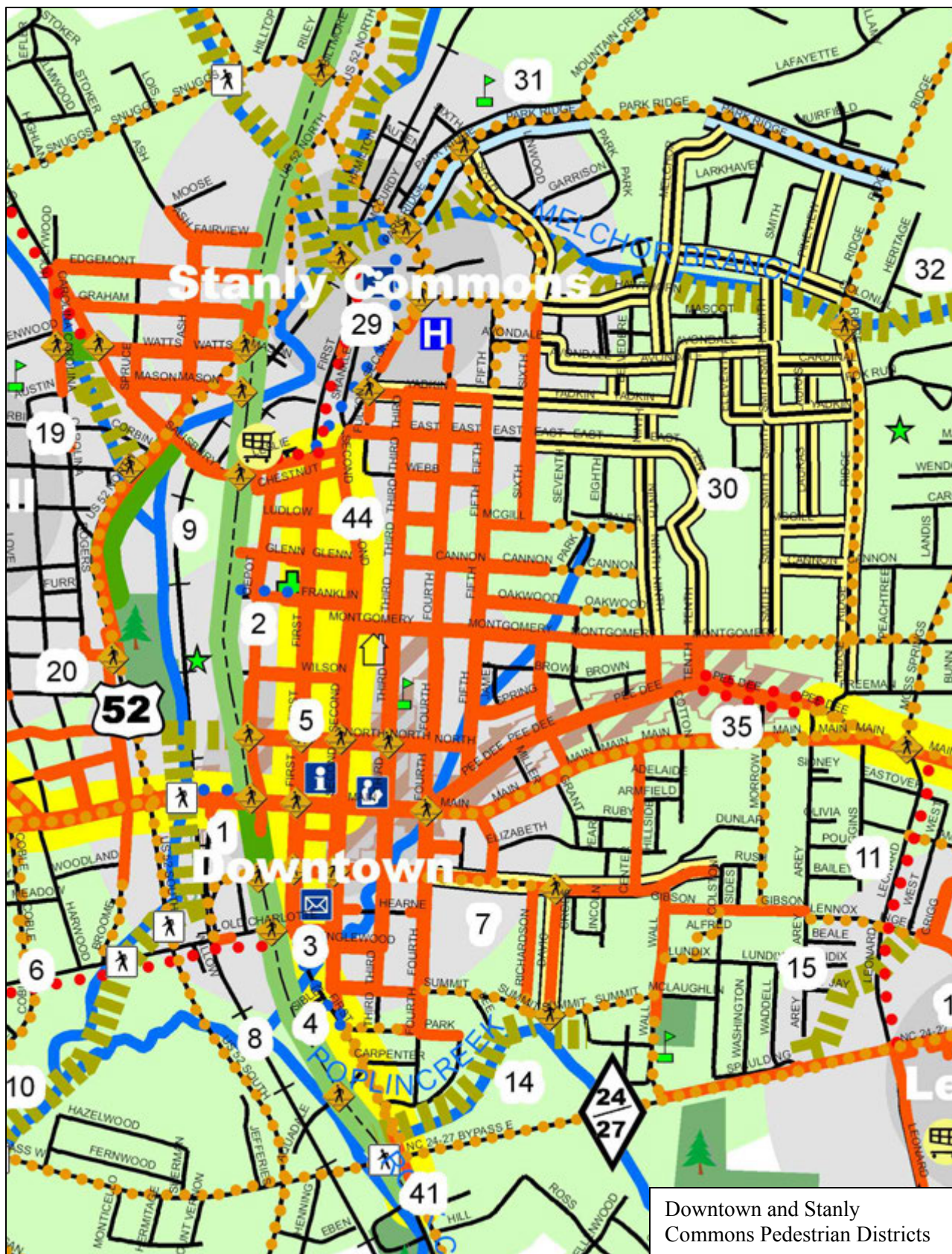


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APPENDIX F: PROJECT MAPS

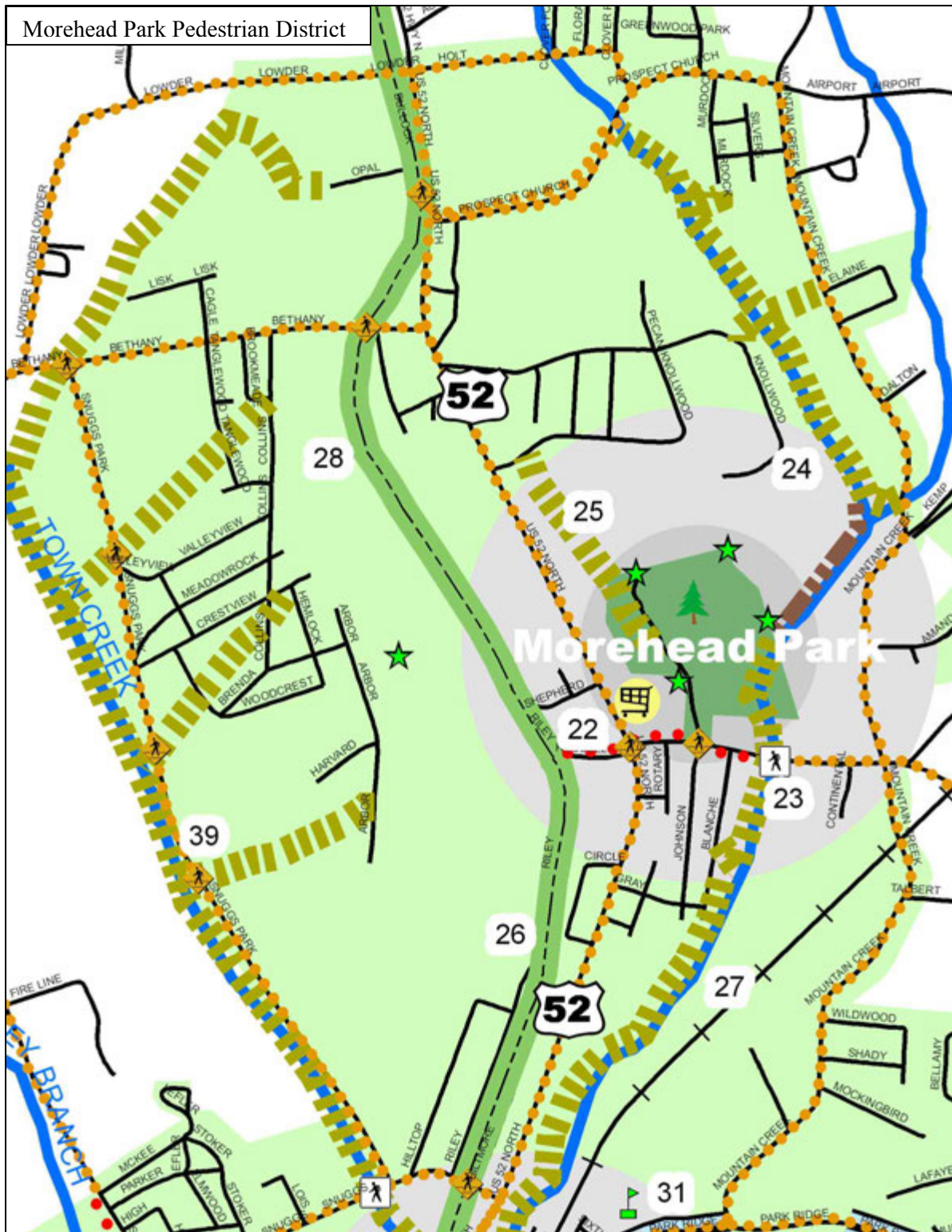


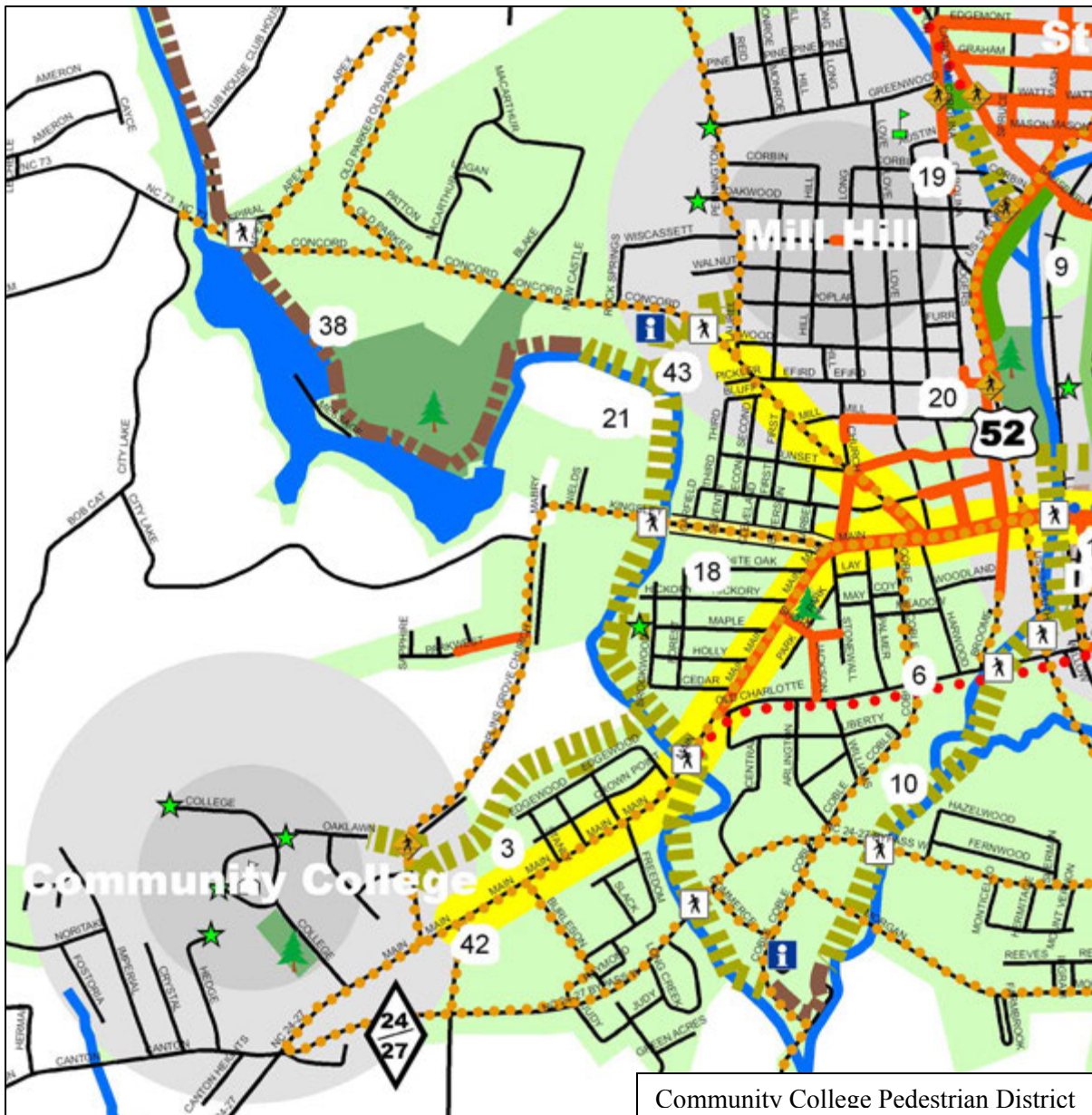












APPENDIX G: PROJECT TABLE





Project Description										Project Evaluation (Total of 100 Points)														
Proj. #	Pedestrian District	Description of Improvement	Roadway / Location	From	To	Distance in Linear Feet or # of Items	Unit Cost	Estimated Project Cost	Estimated TOTAL Project Cost	Connectivity				Safety				Ability to Implement				Total Points	Ranking	Priority Level
										Provides Access to Major Destinations (10 pts.)	Provides Obvious Access to Special Groups (10 pts.)	Project is an Existing Social Connection (10 pts.)	Closes Gaps in or Improves Existing Facilities (10 pts.)	Improves Safety for Special Groups (10 pts.)	Improves an Existing Known Safety Issue (10 pts.)	Improves Routes with High Vehicular Traffic or Provides Alternate Routes (10 pts.)	Project Already in Consideration (10 pts.)	Potential or Existing Political or Public Support for Project (10 pts.)	Cost (10 pts.)					
1	Downtown	6-15' Sidewalk	Main Street	Proposed Shared-Use Path	Existing Rail Trail	360	\$200	\$72,000	\$72,000	10	6	6	10	4	6	6	4	4	6	62		Mid-Range		
2	Downtown	6-15' Sidewalk	Franklin	Proposed rail trail	YMCA	690	-	-	-	10	10	2	2	2	2	2	10	6	4	50		Long-Range		
3	Downtown	6-15' Sidewalk	Old Charlotte Road	First Street	Second Street	240	\$200	\$48,000	\$48,000	10	8	6	8	10	4	8	2	4	8	68		Mid-Range		
4	Downtown	6-15' Sidewalk	First Street	Old Charlotte	E. Park Ave/2nd St Intersection	1,290	\$200	\$258,000	\$258,000	10	10	10	8	10	8	8	5	8	8	85	2	HIGH		
5	Downtown	Countdown Signal & Crosswalks	At all intersections within 1/4 mile from City hall			8	\$10,000	\$80,000	\$80,000	10	8	10	10	10	10	10	4	10	10	92	1	HIGH		
6	Downtown	5' Sidewalk	Old Charlotte Road	First Street	Main Street	4,940	\$150	\$741,000	\$741,000	8	8	6	8	8	6	8	4	6	8	70	15	HIGH		
7	Downtown	Striped Shoulders for Traffic Calming	Martin Luther King Jr	Fourth Street	Colston	3,210	\$3	\$9,630	\$9,630	4	8	10	8	8	10	6	6	8	10	78	6	HIGH		
8	Downtown	10' Paved Upland Shared-Use Path	Abandoned Rail Line	Rock Creek Park	Current Rail Trail	3,920	-	-	-	6	4	6	8	4	2	8	2	6	8	54		Long-Range		
		Midblock Crosswalk	All intersections of Rail Trail with Roadways			3																		
		Underpass	Rail Trail and 24/27			1																		
9	Downtown	10' Paved Upland Shared-Use Path	Abandoned Rail Line	Current Rail Trail	Snuggs	8,030	\$106	\$851,180	\$871,180	10	8	10	10	4	6	6	8	8	6	76	8	HIGH		
		Midblock Crosswalk	All intersections of Rail Trail with Roadways			4	\$5,000	\$20,000																
10	Downtown	10' Paved Lowland Shared-Use Path	On Sewer Line/Little Long Creek	Proposed Rail Trail	Water Treatment Center	7,570	-	-	-	6	4	6	8	4	2	6	2	6	6	50		Long-Range		
		Underpass	Little Long Creek & Main, 52, Old Charlotte, 24/27			4																		
		Pedestrian Bridge				3																		
11	Leonard	5' Sidewalk	Leonard	Main Street	Highway 24/27 Bypass	3,220	\$150	\$483,000	\$493,000	8	8	10	10	8	10	8	6	8	8	84	3	HIGH		
		Countdown Signal & Crosswalks	Leonard & Main Street			1	\$10,000	\$10,000																
12	Leonard	10' Paved Upland Shared-Use Path	Existing Social Trail	Inger Terminus	Highway 24/27 Bypass	500	\$106	\$53,000	\$158,000	6	6	10	10	10	10	10	6	8	6	82	4	HIGH		
		Pedestrian-scaled lighting	Existing Social Trail	Inger Terminus	Highway 24/27 Bypass	1	\$5,000	\$5,000																
		24/27 Crossing Considerations	Between Leonard and Henson across 24/27			1	\$100,000	\$100,000																
13	Leonard	Countdown Signal & Crosswalks	24/27 and Henson			1	\$10,000	\$10,000	\$10,000	6	4	10	10	8	10	8	6	8	10	80	5	HIGH		
14	Leonard	10' Paved Lowland Shared-Use Path	On sewer line along Poplin Creek	Summit	Proposed Rail Trail	2,230	-	-	-	10	6	6	8	6	2	6	2	6	6	58		Long-Range		
		10' Paved Lowland Shared-Use Path	On sewer line	sewer/Davis	Flake	360																		
		Striped Shoulders for Traffic Calming	Davis	Martin Luther King Jr	Summit	1,270																		
		Crosswalk	Davis & Summit and Davis and Martin Luther King			1																		
15	Leonard	10' Paved Lowland Shared-Use Path	On sewer line	Inger	Arey	1,950	\$132	\$257,400	\$262,400	10	6	10	10	6	8	6	6	8	7	77	7	HIGH		
		Pedestrian-scaled lighting	Existing Social Trail	Inger	Arey	1	\$5,000	\$5,000																
16	Leonard	10' Paved Lowland Shared-Use Path	On sewer line connecting Morningside/Henson/Crowell	Morningside	Crowell	1,660	\$132	\$219,120	\$219,120	6	4	10	10	4	8	2	6	8	8	66		Mid-Range		
17	Mill Hill	5' Sidewalk	Salisbury	McKee	Watts	3,120	\$150	\$468,000	\$478,000	6	6	6	10	6	8	8	6	10	8	74	12	HIGH		
		Midblock Crosswalk	At each end of path(Watts & Salisbury & on Carolina)			2	\$5,000	\$10,000																
18	Mill Hill	Striped Shoulders for Traffic Calming	Kingsley	Long Creek	Main Street	1,920	\$3	\$5,760	\$5,760	4	2	10	8	2	10	6	6	8	10	66		Mid-Range		
19	Mill Hill	10' Paved Lowland Shared-Use Path	On Sewer Line (Coley Branch)	Existing path	Montgomery Park Greenway	1,430	\$132	\$188,760	\$193,760	6	6	10	10	6	8	6	6	8	8	74	13	HIGH		
		Crosswalk	Highway 52 and path			1	\$5,000	\$5,000																
20	Mill Hill	Signalized Intersection with Crosswalks	Highway 52 and Efrd			1	-	-	-	0	0	0	0	0	0	0	0	0	0	0		Long-Range		
21	Mill Hill	10' Paved Lowland Shared-Use Path	On Sewer Line	Poplar & Laurel	Long Creek	1,720	-	-	-	6	6	4	4	6	6	8	2	4	6	52		Long-Range		
		Underpass	Concord (NC 73) and sewer			1																		
		10' Paved Lowland Shared-Use Path	On Sewer Line along Long Creek	Sewer term.@ City Lake Park	Water Treatment Center/Coble	8,950																		
		Underpass	Creek and Kingsley, Main, and 24/27 Bypass			3																		
		Pedestrian Bridge				4																		
		10' Paved Lowland Shared-Use Path	Along Sewer Line	Proposed Trail/Long Creek	Maple	410																		
22	Morehead Park	5' Sidewalk	Along Russel and Northeast Connector	Proposed Rail Trail	Long Creek/Proposed Trail	1,520	-	-	-	6	2	4	4	2	2	8	2	4	6	40		Long-Range		
		Midblock Crosswalk or Future Safe Intersection	Northwoods/Johnson & Northeast Connector			1																		
		Countdown Signal & Crosswalks	Northeast Connector & US 52			1																		
23	Morehead Park	10' Paved Lowland Shared-Use Path	On Sewer Line - Little Long Creek	Blanche	Through Chuck Morehead Park	3,090	-	-	-	4	4	6	4	4	2	6	2	4	8	44		Long-Range		
		Underpass	Creek & Northeast Connector			1																		
24	Morehead Park	10' Paved Lowland Shared-Use Path	Along River - Little Long Creek	Chuck Morehead Park	Sewer Line	1,750	-	-	-	0	0	0	0	0	0	0	0	0	0	0		Long-Range		
		10' Paved Lowland Shared-Use Path	On Sewer Line - Little Long Creek	Mountain Creek Road	Airport Road	5,020																		
		10' Paved Lowland Shared-Use Path	On Sewer Line	Knollwood	Mountain Creek Road	950																		
		10' Paved Lowland Shared-Use Path	On Sewer Line	Little Long Creek	Murdock Road	440																		
		Pedestrian Bridge				2																		
		Policy Driven Walkway or Connection	Alternate Along Prospect Church Corridor	Long Creek	US 52																			
25	Morehead Park	10' Paved Lowland Shared-Use Path	On Sewer Line	Chuck Morehead Park	Knollwood Road	2,640	-	-	-	6	4	6	6	4	6	8	2	4	8	54		Long-Range		
26	Morehead Park	10' Paved Upland Shared-Use Path	Abandoned Rail Line	Snuggs	Russell	4,960	-	-	-	0	0	0	0	0	0	0	0	0	0	0		Long-Range		
		Midblock Crosswalk	All intersections of Rail Trail with Roadways			1																		
27	Morehead Park	10' Paved Lowland Shared-Use Path	On Sewer Line on Little Long Creek	First Street	Blanche	6,230	\$132	\$822,360	\$822,360	8	4	8	8	4	4	10	2	6	8	62		Mid-Range		
28	Morehead Park	10' Paved Upland Shared-Use Path	Abandoned Rail Line	Russell	Bethany	5,380	-	-	-	0	0	0	0	0	0	0	0	0	0	0		Long-Range		
		Midblock Crosswalk	All intersections of Rail Trail with Roadways			1																		



Project Description										Project Evaluation (Total of 100 Points)													
Proj. #	Pedestrian District	Description of Improvement	Roadway / Location	From	To	Distance in Linear Feet or # of Items	Unit Cost	Estimated Project Cost	Estimated TOTAL Project Cost	Connectivity				Safety			Ability to Implement			Total Points	Ranking	Priority Level	
										Provides Access to Major Destinations (10 pts.)	Provides Obvious Access to Special Groups (10 pts.)	Project is an Existing Social Connection (10 pts.)	Closes Gaps in or Improves Existing Facilities (10 pts.)	Improves Safety for Special Groups (10 pts.)	Improves an Existing Known Safety Issue (10 pts.)	Improves Routes with High Vehicular Traffic or Provides Alternate Routes (10 pts.)	Project Already in Consideration (10 pts.)	Potential or Existing Political or Public Support for Project (10 pts.)	Cost (10 pts.)				
		Bicycle Route Signage	Park Ridge - "Share The Road" Corridor	Mountain Creek Road	Almost to Melchor	2	\$250	\$500															
		Striped Shoulders - bike lane	Park Ridge	Melchor	Ridge	2,120	\$3	\$6,360															
		Policy Driven Bikeway, Walkway or Connection	Park Ridge - "Share The Road" Corridor	Mountain Creek Road	Almost to Melchor																		
		Policy Driven Bikeway, Walkway or Connection	Ridge - "Share The Road" Corridor	Park Ridge	Melchor Branch Creek																		
32	Stanly Commons	10' Paved Lowland Shared-Use Path	Along Sewer line on Melchor Branch	Proposed Rail Trail	Moss Springs Road	12,090	-	-	-	0	0	0	0	0	0	0	0	0	0	0			Long-Range
		Midblock Crosswalk	Trail & 1st, 2nd, Ridge, NE Connector			4																	
		Midblock Crosswalk	Neighborhood Crossings			3																	
		Pedestrian Bridge				3																	
33	Stanly Community College	10' Paved Lowland Shared-Use Path	Along Sewer Line	Oaklawn	Long Creek	4,290	-	-	-	0	0	0	0	0	0	0	0	0	0	0			Long-Range
		10' Paved Lowland Shared-Use Path	Along Sewer Line	Proposed Trail	Edgewood	290																	
		Midblock Crosswalk	Proposed Trail & Poplins Grove Church			1																	
		Pedestrian Bridge				1																	
34	All Roadways	Policy Driven Walkway or Connection	Complete Streets Policy for all new & improved roads			var																	
35	Historic Pee Dee and Main Streets	5' Sidewalk	Pee Dee Ave - North Side	Tenth Street	Ridge	1,390	\$150	\$208,500	\$379,500	4	4	8	8	4	8	8	6	6	8	64			Mid-Range
		5' Sidewalk	Pee Dee Ave - South Side	Tenth Street	Ridge	1,140	\$150	\$171,000															
36	Historic Pee Dee and Main Streets	5' Sidewalk	Badin Rd - east side	Main Street	Northeast Connector	1,780	\$150	\$267,000	\$455,500	8	6	8	8	8	8	10	6	6	7	75	10		HIGH
		5' Sidewalk	Badin Road - west side	Main Street	Albemarle Middle School	1,190	\$150	\$178,500															
		Crosswalk	Main Street & Bogan/Badin			1	\$5,000	\$5,000															
		Midblock Crosswalk	Badin & Parkway			1	\$5,000	\$5,000															
37	Historic Pee Dee and Main Streets	Streetscape/sidewalks/landscaping/crosswalks	Main Street & Pee Dee	Ridge	24/27 Bypass	4,800	\$425	\$2,040,000	\$2,040,000	10	8	8	8	8	8	10	6	6	4	76	9		HIGH
38	Connector	10' Paved Lowland Shared-Use Path	Long Creek	City Lake Park	Old Herlocker	17,690	-	-	-	0	0	0	0	0	0	0	0	0	0	0			Long-Range
		Underpass	Long Creek & NC 73, Pennington			2																	
		Policy Driven Walkway or Connection	Old Herlocker Road Corridor	Long Creek	Town Creek	9560																	
		Crosswalk	Old Herlocker Corridor & Old Salisbury Corridor			1																	
		Pedestrian Bridge				1																	
		10' Paved Lowland Shared-Use Path	Sewer Line	Town Creek	Opal	5,900																	
		Midblock Crosswalk	Bethany and Snuggs Park with Path			1																	
		Midblock Crosswalk	Prospect Church & US 52			1																	
		10' Paved Upland Shared-Use Path	Abandoned Rail Line	Bethany Road	Active Norfolk Southern RR	11,360																	
		10' Paved Upland Shared-Use Path	Along active Norfolk Southern Railroad	Proposed Rail Trail	Mountain Creek	8,330																	
		10' Paved Lowland Shared-Use Path	Along Mountain Creek	Norfolk Southern Railroad	Proposed Sewer Line Trail	24,230																	
		Underpass	Trail & Mountain Creek Rd, Palestine, RR, Ridge			4																	
		10' Paved Lowland Shared-Use Path	Sewer Line along Mountain Creek	Mountain Creek Trail	Main Street	10,480																	
		Underpass	Trail & Badin, Anderson Grove Church			2																	
		10' Paved Lowland Shared-Use Path	Sewer Line	Mountain Creek	Laton/Speight	1,300																	
		Policy Driven Walkway or Connection	Speight/Badin Corridor	Sewer Line Trail	Northeast Connector	1,070																	
		10' Paved Lowland Shared-Use Path	Sewer Line	Speight	Atom	1,690																	
		Policy Driven Walkway or Connection	Moss Springs Corridor	Sewer Line Trail	Sewer Line Trail near NE Conn.	2,100																	
		Policy Driven Walkway or Connection	Main Street Corridor	Sewer Line Trail	NC 24/27 Bypass	2,710																	
39	Connector	10' Paved Lowland Shared-Use Path	Along Sewer line on Town Creek	Proposed Rail Trail	Bethany Road	10,630	-	-	-	0	0	0	0	0	0	0	0	0	0	0			Long-Range
		10' Paved Lowland Shared-Use Path	Along Sewer Spur	Town Creek	Arbor	26,420																	
		10' Paved Lowland Shared-Use Path	Along Sewer Spur	Town Creek	Crestview	26,420																	
		10' Paved Lowland Shared-Use Path	Along Sewer Spur	Town Creek	Emerald	26,420																	
		Underpass	Snuggs & Snuggs Park			1																	
		Midblock Crosswalk	At Snuggs Park Road Crossings			3																	
		Pedestrian Bridge	At each creek crossing			3																	
						3																	
40	Connector	Route Signage System	On all pedestrian routes			100	-	-	-	4	4	8	4	8	6	6	6	6	4	56			Long-Range
41	Connector	Streetscape	First Street	First Street @ Sibley	Rock Creek	1,700	\$425	\$722,500	\$722,500	6	6	8	8	6	8	8	2	6	4	62			Mid-Range
42	Connector	Streetscape	West Main Street	West Main @ Creek	St Martin	3,300	\$425	\$1,402,500	\$1,402,500	4	6	8	8	6	8	8	2	6	4	60			Mid-Range
43	Connector	Streetscape	NC 73	West Main	Laurel	3,000	\$425	\$1,275,000	\$1,275,000	6	6	8	8	6	8	8	2	6	4	62			Mid-Range
44	Connector	Streetscape	1st and 2nd Streets	Salisbury Ave	US 52	7,000	\$425	\$2,975,000	\$2,975,000	10	10	8	8	10	8	8	2	6	4	74	14		HIGH
45	Various	Sidewalk Survey	City of Albemarle				various																

APPENDIX H: FUNDING SOURCES





FUNDING OPPORTUNITIES

A variety of funding sources are available for implementing the projects and programs recommended as part of this plan. Many sources have eligibility restrictions that limit their use to specific types of projects, but other sources can be used for a variety of projects. Brief descriptions of potential funding sources, along with the types of projects that are applicable, are provided below. Funding opportunities are categorized as follows:

- Federal Government Sources;
- State Government Sources;
- Local Government Sources;
- Private Sector Sources;
- Local Fundraising; and
- Foundations.

Federal Government Sources

Although most federal / state governmental funding sources are competitive in nature, these sources represent an important opportunity for funding large-scale projects. For more information on these funding programs as enabled under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), please refer to the SAFETEA-LU website at <http://www.fhwa.dot.gov/safetealu>.

- Federal Aid Construction Funds – Several categories of federal aid construction funds — National Highway System (NHS) and Surface Transportation Program (STP) — or Congestion Mitigation and Air Quality (CMAQ) funds provide for the construction of pedestrian and bicycle transportation facilities. The primary source of funding for bicycle and pedestrian projects is STP Enhancement Funding (source: NCDOT Division of Bicycle and Pedestrian Transportation). These Federal funds typically require a 20% local match.

Appropriate Projects: Sidewalk construction, pedestrian path / greenway construction

- Recreational Trails Program – The Recreational Trails Program provides funds to States to develop and maintain trails, including trails for non-motorized uses as well as motorized uses. These Federal funds typically require a 20% local match.

Appropriate Projects: Pedestrian path / greenway development (easement acquisition, construction, and maintenance); trail safety and environmental protection programs

- Safe Routes to School Program – This program is intended to enable and encourage children, including those with disabilities, to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate the planning, development and implementation of projects that will improve safety, and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

Funds are to be administered by State departments of transportation to provide financial assistance to State, local, and regional agencies, including non-profit organizations, that



Albemarle Comprehensive Pedestrian Plan

demonstrate the ability to meet the requirements of the program. The allocation for North Carolina is approximately \$15 million over a five year period.

Appropriate Projects: Eligible activities include the planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school. These include sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements in the vicinity of schools (within approximately 2 miles). Such projects may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools.

Each state must set aside from its Safe Routes to School apportionment not less than 10 percent and not more than 30 percent of the funds for non-infrastructure-related activities to encourage walking and bicycling to school. These include public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, and training, volunteers, and managers of safe routes to school programs (source: <http://www.fhwa.dot.gov/safetealu/factsheets/saferoutes.htm>).

The North Carolina contact for the Safe Routes to School program is as follows:

Safe Routes to Schools
NC Dept of Transportation, Division of Bicycle and Pedestrian Transportation
1552 Mail Service Center
Raleigh, NC 27699-1552
Phone: 919-807-0777
http://www.ncdot.org/transit/bicycle/safety/programs_initiatives/Safe_Routes.html

State Government Sources

- State Construction Funds – State roadway construction funds (not including the Highway Trust Fund for Urban Loops and Interchanges) may be used for the construction of sidewalks and bicycle accommodations that are a part of roadway improvement projects (source: NCDOT Division of Bicycle and Pedestrian Transportation).

Appropriate Projects: Sidewalk / pedestrian path construction

- 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 (source: NCDOT Division of Bicycle and Pedestrian Transportation).

Appropriate Projects: Sidewalk / pedestrian path construction; safety programs

- NCDOT Transportation Improvement Program (TIP) – Six million dollars are annually set aside for the construction of bicycle improvements that are independent of scheduled



highway projects in communities throughout the state. For independent pedestrian and greenway projects to be added to the TIP, they will follow essentially the same TIP process as do highway projects. See the DBPT web site for more information on the TIP process -

http://www.ncdot.org/transit/bicycle/funding/funding_TIP.html

For incidental projects, many times a cost-sharing approach will be used to fund pedestrian facilities. Based on the City of Albemarle's population, 30 percent of local contributions are required, while NCDOT will provide 70% of the costs. See the DBPT web site for DOT's Pedestrian Policy Guidelines –

http://www.ncdot.org/transit/bicycle/laws/laws_pedpolicy.html

For more information on how to receive these state funds, contact the regional NCDOT office.

The NCDOT Division 10 Office currently receives \$200,000 annually for small pedestrian projects, i.e. sidewalk links. Contact info:

North Carolina Department of Transportation
Division 10
716 West Main Street
Albemarle, NC 28001
Phone: (704) 982-0101
Fax: (704) 982-3146

<http://www.ncdot.org/doh/operations/division10/>

Local Government Sources

Local governments participate in funding pedestrian projects through dedicated funding sources as well as annual set-asides of departmental budgets. In the future, Albemarle should strive to identify a set amount of funding every year for pedestrian infrastructure improvements. This amount can be included as a line item in the City's budget, to be applied toward projects identified in this plan. Additionally, communities are generally supportive of local bond options for pedestrian improvements and recreational trails. Bonds could be Albemarle's most crucial local funding source. Taxes levied on utilities, gas, vehicle registrations, or retail goods can also apply toward pedestrian infrastructure. Powell Bill funds may also be used.

Private Sector Sources

Perhaps the most important funding source for improvements to Albemarle's pedestrian infrastructure is private sector sources. Ensuring that pedestrian facilities are implemented in conjunction with future developments is important so that the City does not have to go back and retrofit facilities later using government funding.

In addition, local companies may be interested in financially supporting pedestrian projects and programs. Major local employers may support projects as part of their community giving



programs or employee health programs. Recognition for contributions could be prominently displayed on signage along the sidewalk or path that was supported by private funds.

Local Fundraising

Local matching monies could be raised for projects by seeking private donations for specific projects. Several examples of these efforts are given below (information taken from the Pedestrian and Bicycle Information Center at <http://www.walkinginfo.org>).

- *In Ashtabula, Ohio the local trail organization raised one-third of the money they needed to buy the land for the trail, by forming a "300 Club." Three hundred acres were needed for the trail and they set a goal of finding 300 folks who would finance one acre each. The land price was \$400 an acre and they found just over 100 people to buy an honorary acre, raising over \$40,000.*
- *In Jackson County, Oregon a "Yard Sale" was held. The Bear Creek Greenway Foundation sold symbolic "yards" of the trail and placed donor's names on permanent markers that are located at each trailhead. At \$40 a yard, they raised enough in private cash donations to help match their \$690,000 Transportation Enhancements program award for the 18-mile Bear Creek trail linking Medford, Talent, Phoenix and Ashland.*
- *Selling bricks for local sidewalk projects, especially those in historic areas or on downtown Main Streets is increasingly common. Donor names are engraved in each brick, and a tremendous amount of publicity and community support is purchased along with basic construction materials. Portland, Oregon's downtown Pioneer Square is a good example of such a project.*
- *In Colorado Springs, the Rock Island Rail-Trail is being partly funded by the Rustic Hills Improvement Association, a group of local home-owners living adjacent to the trail. Also, 10 miles of the trail was cleared of railroad ties by a local Boy Scout troop.*
- *A pivotal 40-acre section of the Ice Age Trail between the cities of Madison and Verona, Wisconsin, was acquired with the help of the Madison Area Youth Soccer Association. The soccer association agreed to a fifty year lease of 30 acres of the parcel for a soccer complex, providing a substantial part of the \$600,000 acquisition price.*

Foundations

A number of charitable foundations have provided funds for pedestrian projects, including infrastructure projects as well as safety programs. One of the largest of these foundations is the Robert Wood Johnson Foundation, which has a strong focus on projects that have a positive benefit on public health, such as walking. The Foundation Center (www.fdncenter.org) is an online resource that catalogs numerous foundations.

APPENDIX I: RELEVANT NCDOT POLICIES





NCDOT Greenway Administrative Process

In 1994 the NCDOT adopted administrative guidelines to consider greenways and greenway crossings during the highway planning process. This policy was incorporated so that critical corridors which have been adopted by localities for future greenways will not be severed by highway construction. Following are the text for the Greenway Policy and Guidelines for implementing it.

Administrative Action to Include Local Adopted Greenways Plans in the NCDOT Highway Planning Process

January, 1994

In concurrence with the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and the Board of Transportation's Bicycle Policy of 1978 (updated in 1991) and Pedestrian Policy of 1993, the North Carolina Department of Transportation recognizes the importance of incorporating local greenways plans into its planning process for the development and improvement of highways throughout North Carolina.

NCDOT Responsibilities:

The Department will incorporate locally adopted plans for greenways into the ongoing planning processes within the Statewide Planning (thoroughfare plans) and the Planning and Environmental (project plans) Branches of the Division of Highways. This incorporation of greenway plans will be consistent throughout the department. Consideration will be given to including the greenway access as a part of the highway improvement.

Where possible, within the policies of the Department, within the guidelines set forth in provisions for greenway crossings, or other greenway elements, will be made as a part of the highway project or undertaken as an allowable local expenditure.

Local Responsibilities:

Localities must show the same commitment to building their adopted greenway plans as they are requesting when they ask the state to commit to providing for a certain segment of that plan. It is the responsibility of each locality to notify the Department of greenway planning activity and adopted greenway plans and to update the Department with all adopted additions and changes in existing plans.

It is also the responsibility of each locality to consider the adopted transportation plan in their greenways planning and include its adopted greenways planning activities within their local transportation planning process. Localities should place in priority their greenways construction activities and justify the transportation nature of each greenway segment. When there are several planned greenway crossings of a proposed highway improvement, the locality must provide justification of each and place the list of crossings in priority order. Where crossings are planned, transportation rights of way should be designated or acquired separately to avoid jeopardizing the future transportation improvements.

Guidelines for NCDOT to Comply With Administrative Decision to Incorporate Local Greenways into Highway Planning Process



Thoroughfare plans will address the existence of greenways planning activity, which has been submitted by local areas. Documentation of mutually agreed upon interface points between the thoroughfare plan and a greenway plan will be kept, and this information will become a part of project files.

Project Planning Reports will address the existence of locally adopted greenways segment plans, which may affect the corridor being planned for a highway improvement. It is, however, the responsibility of the locality to notify the Department of the adopted greenways plans (or changes to its previous plans) through its current local transportation plan, as well as its implementation programs.

Where local greenways plans have not been formally adopted or certain portions of the greenways plans have not been adopted, the Department may note this greenway planning activity but is not required to incorporate this information into its planning reports.

Where the locality has included adopted greenways plans as a part of its local transportation plan and a segment (or segments) of these greenways fall within the corridor of new highway construction or a highway improvement project, the feasibility study and/or project planning report for this highway improvement will consider the effects of the proposed highway improvement upon the greenway in the same manner as it considers other planning characteristics of the project corridor, such as archeological features or land use.

Where the locality has justified the transportation versus the leisure use importance of a greenway segment and there is no greenway alternative of equal importance nearby, the project planning report will suggest inclusion of the greenway crossing, or appropriate greenway element, as an incidental part of the highway expenditure.

Where the locality has not justified the transportation importance of a greenway segment, the greenway crossing, or appropriate greenway element, may be included as a part of the highway improvement plan if the local government covers the cost.

A locality may add any appropriate/acceptable greenway crossing or greenway element at their own expense to any highway improvement project as long as it meets the design standards of the NCDOT.

The NCDOT will consider funding for greenway crossings, and other appropriate greenway elements only if the localities guarantee the construction of and/or connection with other greenway segments. This guarantee should be in the form of inclusion in the local capital improvements program or NCDOT/municipal agreement.

If the state pays for the construction of a greenway incidental to a highway improvement and the locality either removes the connecting greenway segments from its adopted greenways plans or decides not to construct its agreed upon greenway segment, the locality will reimburse the state for the cost of the greenway incidental feature. These details will be handled through a municipal agreement. Locality must accept maintenance responsibilities for state-built greenways, or portions thereof.

Details will be handled through a municipal agreement. 06/01/05



**DEPARTMENT OF TRANSPORTATION
PEDESTRIAN POLICY GUIDELINES
EFFECTIVE OCTOBER 1, 2000**

These guidelines provide an updated procedure for implementing the Pedestrian Policy adopted by the Board of Transportation August 1993 and the Board of Transportation Resolution September 8, 2000. The resolution reaffirms the Department's commitment to improving conditions for bicycling and walking, and recognizes non-motorized modes of transportation as critical elements of the local, regional, and national transportation system. The resolution encourages North Carolina cities and towns to make bicycling and pedestrian improvements an integral part of their transportation planning and programming.

REQUIREMENTS FOR DOT FUNDING:

REPLACEMENT OF EXISTING SIDEWALKS:

The Department will pay 100% of the cost to replace an existing sidewalk that is removed to facilitate the widening of a road.

TIP INCIDENTAL PROJECTS:

DEFINED: Incidental pedestrian projects are defined as TIP projects where pedestrian facilities are included as part of the roadway project.

REQUIREMENTS:

1. The municipality and/or county notifies the Department in writing of its desire for the Department to incorporate pedestrian facilities into project planning and design. Notification states the party's commitment to participate in the cost of the facility as well as being responsible for all maintenance and liability. Responsibilities are defined by agreement. Execution is required prior to contract let. The municipality is responsible for evaluating the need for the facility (ie: generators, safety, continuity, integration, existing or projected traffic) and public involvement.
2. Written notification must be received by the Project Final Field Inspection (FFI) date. Notification should be sent to the Deputy Highway Administrator - Preconstruction with a copy to the Project Engineer and the Agreements Section of the Program Development Branch. Requests received after the project FFI date will be incorporated into the TIP project, if feasible, and only if the requesting party commits by agreement to pay 100% of the cost of the facility.
3. The Department will review the feasibility of including the facility in our project and will try to accommodate all requests where the Department has acquired appropriate right of way on curb and gutter sections and the facility can be installed in the current project berm width. The standard project section is a 10-ft berm (3.0-meter) that accommodates a 5-ft sidewalk. In accordance with AASHTO standards, the Department will construct 5-ft sidewalks with wheelchair ramps. Betterment cost (ie: decorative pavers) will be a Municipal responsibility.



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4. If the facility is not contained within the project berm width, the Municipality is responsible for providing the right of way and/or construction easements as well as utility relocations, at no cost to the Department. This provision is applicable to all pedestrian facilities including multi-use trails and greenways.

5. A cost sharing approach is used to demonstrate the Department's and the municipality's/county's commitment to pedestrian transportation (sidewalks, multi-use trails and greenways). The matching share is a sliding scale based on population as follows:

MUNICIPAL POPULATION	DOT PARTICIPATION	LOCAL PARTICIPATION
> 100,000	50%	50%
50,000 to 100,000	60%	40%
10,000 to 50,000	70%	30%
< 10,000	80%	20%

Note: The cost of bridges will not be included in the shared cost of the pedestrian installation if the Department is funding the installation under provision 6 - pedestrian facilities on bridges.

6. For bridges on streets with curb and gutter approaches, the Department will fund and construct sidewalks on both sides of the bridge facility if the bridge is less than 200 feet in length. If the bridge is greater than 200 feet in length, the Department will fund and construct a sidewalk on one side of the bridge structure. The bridge will also be studied to determine the costs and benefits of constructing sidewalks on both sides of the structure. If in the judgment of the Department sidewalks are justified, funding will be provided for installation. The above provision is also applicable to dual bridge structures. For dual bridges greater than 200 ft in length, a sidewalk will be constructed on the outside of one bridge structure. The bridges will also be studied to determine if sidewalks on the outside of both structures are justified.

7. FUNDING CAPS are no longer applicable.

8. This policy does not commit the Department to the installation of facilities in the Department's TIP projects where the pedestrian facility causes an impractical design modification, is not in accordance with AASHTO standards, creates an unsafe situation, or in the judgment of the Department is not practical to program.

INDEPENDENT PROJECTS

DEFINED: The DOT has a separate category of funds for all independent pedestrian facility projects in North Carolina where installation is unrelated to a TIP roadway project. An independent pedestrian facility project will be administered in accordance with Enhancement Program Guidelines.

APPENDIX J: DEDICATION REQUIREMENTS (SAMPLE ORDINANCE)





The following example is from Wake County's Subdivision Ordinance, which describes dedication requirements:

SECTION 3-4-14 CONTRIBUTION TO NEIGHBORHOOD RECREATION AREA

(A) **PURPOSE**

Residential development generates demands for recreation space and facilities, just as it generates demands for roads, utilities, and other community facilities. Whereas the County bears the responsibility for meeting most of the demand for regional recreation space and facilities, residential developments should themselves contribute something to providing at least the neighborhood recreation space their residents need. This Section is intended to ensure that each subdivision at least contributes toward providing recreation area that can be developed and used to meet the neighborhood recreational needs expected to be generated by the subdivision's future residents.

(B) **CONTRIBUTION REQUIRED; AMOUNT AND FORM**

A subdivision shall contribute to providing recreation area to meet the neighborhood recreational needs of its future residents. The minimum amount of recreation area deemed sufficient to meet the neighborhood recreational needs of a subdivision's residents, and thus required to meet this contribution requirement, shall be one thirty-fifth (1/35) acre of land per lot. A subdivider may meet this contribution requirement by (1) dedicating the required acreage of land for public recreational use, (2) reserving the required acreage of land for recreational use by subdivision residents, (3) paying the County funds equal to the value of the required acreage (to be used to acquire land for public recreational use), or (4) a combination of dedication, reservation, and payment - provided, however, that the form of contribution used shall be in accord with the requirements and limitations in Subsection (C) below. A potential subdivider is encouraged to use the pre-application conference with County staff to discuss and decide the appropriate form(s) of contribution to be used.

(C) **FORMS OF CONTRIBUTION - WHERE REQUIRED OR ALLOWED**

(1) **Dedication of Land**

Where the subdivision site contains land that could be used to establish, expand, or extend a public park, greenway, or other recreation area identified in an adopted County or municipal plan, the subdivision shall include dedication of such land for public recreational use, at least to the extent necessary to meet the minimum recreation area contribution requirement set forth in Subsection (B). Subdividers are encouraged to use Cluster or Open Space Subdivision regulations to dedicate any additional land on the site planned for public recreational use. Dedication of off-site land planned as public recreation area may also be used to meet the minimum contribution requirement, provided such land is located so as to be conveniently accessible to subdivision residents and has not been reserved to meet the recreation area contribution requirement for another subdivision. *[Added "Open Space" 1/18/05 (OA 04/11)]*



(2) Reservation of Land

To the extent that the minimum recreation area contribution requirement set forth in Subsection (B) will not be met through dedication of land in accord with Paragraph (1) above, a subdivision may meet the requirement, in whole or in part, by reserving land within the subdivision site for recreational use by subdivision residents - but only if, and to the extent that, the County determines that doing so would contribute more to meeting the neighborhood recreational needs of subdivision residents than the County's use of funds paid in accord with Paragraph (3) below. Such determination shall be based on the following factors:

- (a) What types of recreation facilities subdivision residents will need, considered in the context of what public recreation areas and facilities exist or are planned in the vicinity;
- (b) Whether there is a planned or existing public recreation area in the vicinity that could be established, expanded, or extended so as to provide a site for the types of recreation facilities needed by subdivision residents;
- (c) How conveniently accessible any such planned or existing public recreation areas are to the subdivision;
- (d) Whether the proposed reserved recreation area would be suitable (in size, shape, and physical characteristics) as a site for the types of recreation facilities needed by subdivision residents; and
- (e) The extent to which the subdivision proposes to improve the proposed reserved recreation area with the types of recreation facilities needed by subdivision residents.

(3) Payment of Funds to County

To the extent that the minimum recreation area contribution requirement set forth in Subsection (B) will not be met through required dedication of land per Paragraph (1) above, a subdivision may meet the requirement, in whole or in part, by paying funds to the County for its use in acquiring public recreation area that can meet the neighborhood recreational needs of subdivision residents. The amount of the payment shall be equal to the value of the portion of required acreage (as set forth in Subsection (B)) that is proposed to be contributed via a payment, based on the average per-acre assessed land value of the parcel being subdivided (from the County tax rolls). The subdivider shall make the payment before approval of a record plat for the subdivision, provided, however, that payments may be phased in accord with the approved phasing of the subdivision.



(D) OWNERSHIP AND MAINTENANCE OF DEDICATED OR RESERVED RECREATION AREA

- (1) Land required to be dedicated as recreation area shall be conveyed to the County or other public agency or nonprofit organization that is organized for, capable of, and willing to accept responsibility for managing the recreation area to serve the neighborhood recreational needs of residents of the subdivision and other developments in the immediate area. Land required to be reserved as recreation area shall be conveyed to such organizations as listed above, or to a homeowners association, property owners association, or similar legal entity meeting the provisions of Section 3-3-17, or to any agency, organization, person, or other legal entity that is organized for, capable of, and willing to accept responsibility for managing the recreation area to serve the neighborhood recreational needs of residents of the subdivision - provided such conveyance is restricted to ensure continued recreational use and maintenance.
- (2) The owner of the recreation area shall be responsible for maintaining the recreation area so that it continues to effectively function to serve neighborhood recreational needs of residents of the subdivision and other developments in the immediate area, and any dedication or conveyance of an open space parcel shall provide for such responsibility. Where the recreation area is located within a Residential-40W, Residential-80W, Water Supply II Overlay, Watershed Critical Area Overlay, Watershed Management Area Overlay, Watershed Protected Area Overlay, or Watershed Protected Area Overlay-2 District, any undeveloped part of it shall be retained in a vegetated or natural state, and such retention shall be ensured by maintenance provisions filed with the Wake County Register of Deeds, either as part of recorded documentation providing for establishment of a homeowners association or similar legal entity that is to be responsible for maintenance and control of open space (as provided for in Section 3-3-17), or in a maintenance agreement recorded with the property deeds.
- (2) Each dedicated or reserved recreation area parcel shall be shown on all subdivision plans and on a record plat recorded with the Wake County Register of Deeds, with a notation of its area and its use to serve neighborhood recreational needs.

(E) COUNTY USE OF RECREATION AREA FUNDS

The County shall ensure that any funds a subdivision pays the County to meet the recreation area contribution requirement will be used only to acquire land for the establishment, expansion, or extension of public parks, greenways, or other recreation areas that will serve the neighborhood recreational needs of residents of the subdivision. It shall do so by assigning funds paid by a subdivision to an account that may be used only to acquire neighborhood recreation area in a defined geographic area that includes the subdivision and an area conveniently accessible to subdivision residents - that is, an area defined such that any subdividable parcel within it would generally be no more than approximately three (3) miles from any other parcel within it that could be developed as a public recreation area.



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The County may transfer funds paid by one or more subdivisions to a municipality or make arrangements for the joint County/municipal expenditure of the funds where the County determines that such transfer or arrangements would better ensure the funds will be used to acquire public recreation area that will serve the neighborhood recreational needs of subdivision residents, as specified in the paragraph above.

[Section added 5/20/2002 (O-7-02)- effective 7/19/2002 except as to development pursuant to an application for preliminary plan, construction plat, record plat, or minor subdivision approval that was approved before 7/19/2002 or that was accepted as complete before 3/18/2002 and was still pending on 7/19/2002]

APPENDIX K: EASEMENT AGREEMENT SAMPLE





***THE FOLLOWING IS AN EXAMPLE EASEMENT AGREEMENT USED BY
MECKLENBURG COUNTY AND CHANGED TO BE STANLY COUNTY***

STATE OF NORTH CAROLINA

COUNTY OF STANLY

THIS EASEMENT AGREEMENT is made and entered into as of the _____ day of _____, 200__, by and among _____, “Grantor(s)”; and **THE CITY OF ALBEMARLE, a political subdivision of the State of North Carolina**, “Grantee”;

WITNESSETH:

WHEREAS, Grantors are the owners of certain property located in Stanly County, North Carolina, which property is more particularly described on Exhibit A attached hereto (the “**Easement Area**”); and

WHEREAS, The City of Albemarle is developing a City-wide plan for greenway, recreational, park and land preservation purposes along the various creeks, floodplains, and other areas in the City, including the property which is described on Exhibit A; and

WHEREAS, Grantors desire to grant to Grantee a perpetual easement over said property for the uses set forth herein;

NOW, THEREFORE, for and in consideration of the premises and the sum of One Dollar (\$1.00) to it in hand paid, the receipt of which is hereby acknowledged, Grantors hereby give and grant unto Grantee a perpetual right and easement over the property described on Exhibit A attached hereto for public active or passive green space, greenway, park, recreational, watershed or land preservation purposes, including the right to maintain and make improvements to the bank and bed of _____ Creek. Grantee shall have the right to grant easements or rights-of-way across the Easement Area for underground utilities, roadways incident to the use of the Easement Area, or other public purposes consistent with the primary purposes set forth above. Grantee shall have the sole right to promulgate rules and regulations for the reasonable use of the property by the public, provided the property is used for the purposes stated herein. If reasonable access to the greenway property is otherwise unavailable, Grantors further grant unto the Grantee reasonable access from time to time to the Easement Area over any remaining



contiguous property owned by Grantors for the purpose of developing and maintaining the property (but not for public access) for the purposes set forth herein; provided, Grantee shall (a) to the extent possible, utilize existing roads for such purposes, (b) repair any damage resulting from such access, and (c) upon request of Grantors execute a supplemental instrument delineating an appropriate access route to provide the agreed access.

GRANTORS AND GRANTEE, for themselves and their heirs, successors and assigns, further agree as follows:

1. Grantee shall be responsible, at its expense, for maintaining the Easement Area in accordance with the purposes set forth herein, including construction and maintenance of a trail, removal of trash, waste and litter, and efforts to control vandalism and other crimes within the Easement Area. Grantors shall have the right, but not the obligation, to enter the Easement Area to plant flowers, remove litter, and beautify same in the event Grantee fails to perform such functions in a reasonable manner, subject to approval by Grantee, which approval will not be unreasonably withheld.

2. Grantors, for themselves and their successors and assigns, reserve the right to grant easements or rights-of-way for underground utilities within the Easement Area for the benefit of the Grantors' adjacent land, at such locations and in such manner as may be approved by Grantee in the exercise of its reasonable discretion, provided such easements do not interfere with the use of the Easement area as set forth herein and provided Grantors repair any damage to the Easement Area resulting from the implantation of such utilities.

3. To the full extent permitted by law, Grantee shall defend, indemnify and hold harmless Grantors, and their successors and assigns, from and against all claims, demands, loss and damage by third parties arising out of or relating to use of the property by the public, provided such claims do not result from the acts, negligence or willful misconduct of Grantors or their heirs, successors or assigns.

4. Grantors retain fee simple ownership of the title to the Easement Area, subject to the rights granted to Grantee herein, for the specific purpose of allowing the land burdened by the Easement Area to be included in the calculation of zoning density for building improvements permitted on Grantors' land abutting the Easement Area, as such density may be allowed under current or future zoning ordinances.



5. Grantors make no representations or warranties whatsoever, whether express or implied, with respect to the condition of or title to the property that is the subject of this Agreement, which property Grantee agrees to accept, AS IS, in its present legal and physical condition.

TO HAVE AND TO HOLD the aforesaid rights, privileges, and easement unto the Grantee, its successors and assigns, for so long as said property is utilized by Grantee, its successors and assigns, for the purposes set forth herein, and no longer.

IN WITNESS WHEREOF, the parties have executed this Easement Agreement the day and year first above written.

(Name of Grantor)

(Name of Grantor)

**STATE OF NORTH CAROLINA
CITY OF ALBEMARLE**

I, _____, a Notary Public for THE CITY OF ALBEMARLE, North Carolina, _____ certify that _____ and (Spouse), _____ personally appeared before me this day and acknowledged the execution of the foregoing instrument.

Witness my hand and official stamp or seal this _____ day of _____, 200__.

[Stamp/Seal]

Notary Public

My Commission Expires: _____



Albemarle Comprehensive Pedestrian Plan

IN WITNESS WHEREOF, the parties have executed this Easement Agreement the day and year first above written.

CITY OF ALBEMARLE

By: _____,
Chairman
ALBEMARLE CITY COUNCIL

STATE OF NORTH CAROLINA CITY OF ALBEMARLE

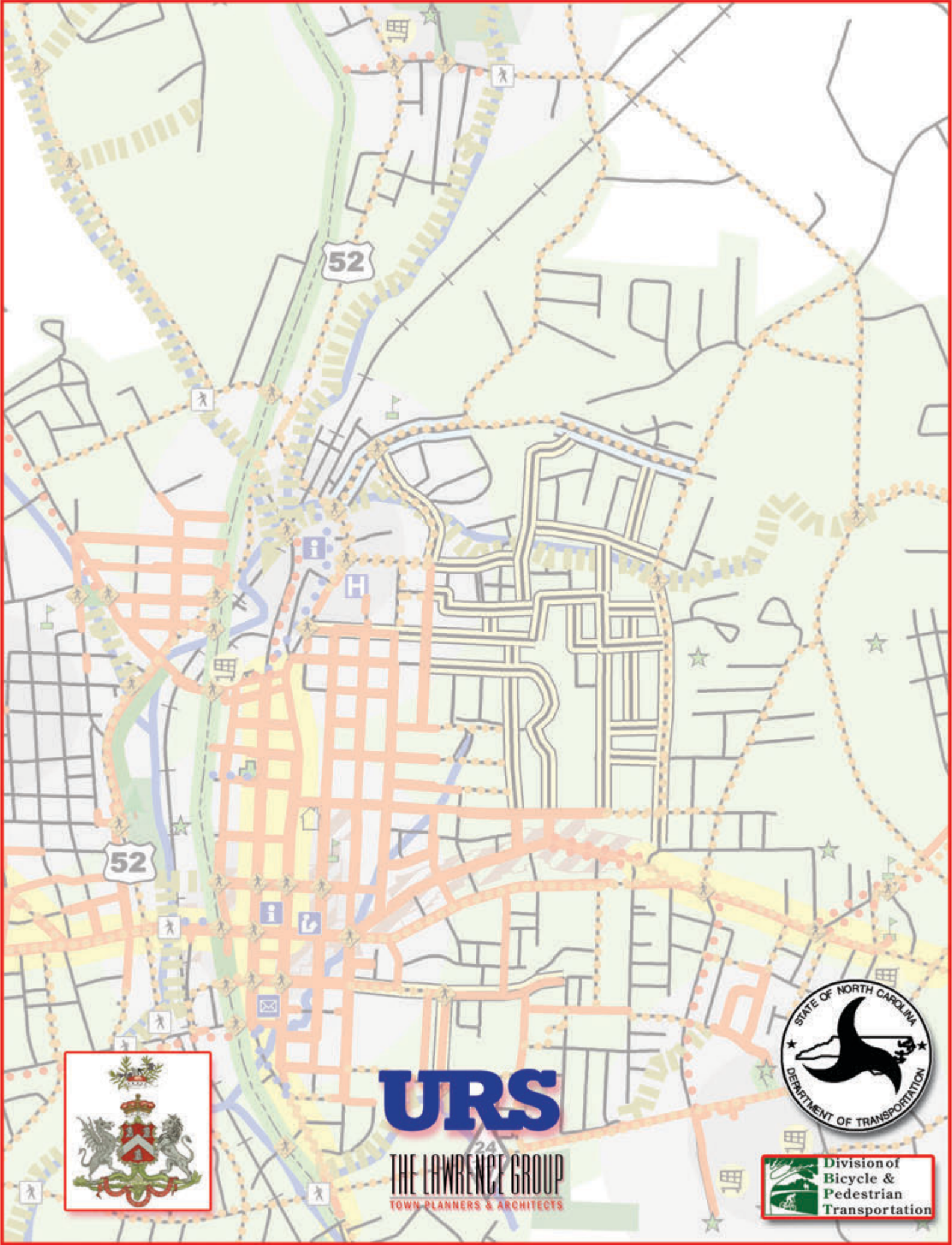
This ____ day of _____, 200__, personally came before me _____, who, being first duly sworn, says that (s)he is the Chairman of the Albemarle City Council, and that said writing was signed by him on behalf of the City of Albemarle by its authority duly given. And the said _____ acknowledged the said writing to be the act and deed of the City of Albemarle.

[Stamp/Seal]

Notary Public
My Commission Expires:

EXHIBIT A

Lying and being in Stanly County, North Carolina, and being more particularly described as follows:



URS

THE LAWRENCE GROUP
TOWN PLANNERS & ARCHITECTS



**Division of
Bicycle &
Pedestrian
Transportation**