TOWN OF WINTERVILLE, NC
COMPREHENSIVE PEDESTRIAN PLAN

Approved by the NCDOT Division of Bicycle & Pedestrian Transportation on March 18, 2009

Recommended for Approval by Winterville Planning & Zoning Board on April 13, 2009

Approved & Adopted by the Town of Winterville Board of Aldermen on May 11, 2009

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

Division of
Bicycle &
Pedestrian
Transportation

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ACKNOWLEDGEMENTS

The participants in the Winterville Comprehensive Pedestrian Plan wish to thank NCDOT, Winterville Planning and Zoning Board, Winterville Town Council, and the citizens of Winterville for making this Comprehensive Pedestrian Plan a reality. Without their support, assistance, and input Winterville would not be on their way to being a walkable community.

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EXECUTIVE SUMMARY

WINTERVILLE

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EXECUTIVE SUMMARY

The purpose of Winterville Comprehensive Pedestrian Plan (Plan) is to give guidance on how to make Winterville a walkable community. As a rapidly growing bedroom community of Greenville, the pressure to preserve its small town character while promoting economic development, balancing automobile dependency, and providing the quality of life new and existing residents seek is a challenge for the Town. Therefore, with strong support from the public and governing body, Winterville received a grant from NCDOT and provided matching funds to develop this Plan to address opportunities for connectivity, programs, policies, partnerships, and funding to improve and sustain the pedestrian environment of the Town.

Benefits of a Walkable Community:

- *Improved Overall Health*
- *Less Emissions into the Environment, resulting in Cleaner Air*
- *Alternative Transportation for Short-Distance Trips*
- *Lower Out-of-Pocket Expenses for Transportation and Exercise*
- *Higher Quality of Life and Social Interaction*

In developing this Plan, an assessment of Winterville's pedestrian system was conducted and public input was gathered and analyzed to determine a plan of action to improve Winterville's pedestrian connectivity and safety. The plan of action was targeted towards making an accessible, safe, convenient, interconnected and functional pedestrian transportation system that will contribute to a higher quality of life for residents. This action plan includes over 113 identified potential projects that were prioritized, resulting in 40 recommended pedestrian projects, in addition to recommended programs and policies.

Winterville's continued dedication and desire to improve the pedestrian environment will be critical in implementing the Plan. Winterville needs to take an active and aggressive role in taking this Plan to the next level through developing partnerships and obtaining funding from local, state, and federal agencies to tackle the recommendations identified. An effort to raise public awareness about the many benefits of walking for all age groups is also important. As more people realize these benefits and see active leadership from various agencies and the Town on improving the pedestrian environment, more people will view pedestrian travel as a valid option in Winterville. Therefore, through collaboration, partnerships, proper planning, and obligation of funds, Winterville will become over time a more pedestrian-friendly community where everyone will want to call home.

To achieve the Winterville's vision and goals the following projects, programs, and policies are recommended for implementation at this time.

Overall Goals for Winterville:

- *Provide more walking opportunities to promote healthy lifestyles*
- *Provide safer walking environments*
- *Build a sense of community*
- *Improve connectivity and accessibility to allow for viable alternative transportation options*
- *Improve accessibility and safety for children, elderly, and disabled*

RECOMMENDED PROJECT PHASING SCHEDULE									
Project/ Map #	**Priority Rank**	**Type of Project**	**Road Class**	**At / On**	**From**	**To**	**Preferred Treatment**	**Est. Length (FT)**	**Est. Project Cost**
Short-Term Recommended Projects									
24	39	Pedestrian Crossing	NCDOT	Cooper Street & Ange Street	*N/A*	*N/A*	Install highly visible crosswalks, and signage	0	$2,242.00
19	36	Pedestrian Crossing	Town & NCDOT	Ange Street & Sylvania Street	*N/A*	*N/A*	Install highly visible crosswalks, 3-way stop sign, and signage (“Yield to Peds” & “School Zone”)	0	$2,875.00
97	11	Sidewalk Spot Improvements	Town	Blount Street (Spot)	Railroad Street	Existing sidewalk	Install sidewalk and curb ramps along south side of street to connect existing sidewalks and A.G. Cox	48	$5,400.00
92	14	Sidewalk Spot Improvements	NCDOT	Main Street (Spot)	Mill Street	Railroad Street	Install a continuous sidewalk and curb ramps along north side of road to connect existing sidewalks	96	$11,168.00
101	31	Sidewalk Spot Improvements	Town	Forbes Avenue (Spot)	Barrel Drive	Primrose Lane	Install sidewalk and curb ramps along east side of street to connect existing sidewalks	139	$14,217.00
94	30	Sidewalk Spot Improvements	Town	Depot Street (Spot)	Railroad Street	Mill Street	Install continuous sidewalks and curb ramps along south side of road to connect existing sidewalks to Downtown	179	$18,518.00
95	23	Sidewalk Spot Improvements	NCDOT	Church Street (Spot)	Depot Street	North Street	Install sidewalks and curb ramps along west side of road to connect existing sidewalks	206	$20,150.00
62	10	New Sidewalk Construction	NCDOT	Main Street	Railroad Street	Church Street	Install a continuous sidewalk and curb ramps along south side of road to connect existing sidewalks	247	$25,298.00

RECOMMENDED PROJECT PHASING SCHEDULE									
Project/ Map #	**Priority Rank**	**Type of Project**	**Road Class**	**At / On**	**From**	**To**	**Preferred Treatment**	**Est. Length (FT)**	**Est. Project Cost**
98	21	Sidewalk Spot Improvements	NCDOT	Cooper Street (Spot)	Mill Street	Railroad Street	Install sidewalks along both sides of road to provide a safety area for pedestrian travel to commercial areas and Downtown	220	$27,117.00
99	7	Sidewalk Spot Improvements	NCDOT	Cooper Street (Spot)	Church Street	Academy Street	Install a continuous sidewalk and curb ramps along both sides of street to connect existing sidewalks	340	$32,016.00
100	12	Sidewalk Spot Improvements	Town	Academy Street (Spot)	Cooper Street	Blount Street	Install continuous sidewalks and curb ramps along east side of street to connect existing sidewalks and provide a connection to A.G. Cox	322	$32,334.00
72	4	New Sidewalk Construction	Town	Blount Street	Ange Street	Existing sidewalk	Install a continuous sidewalk and curb ramps along entire length of street (south side) to connect A.G. Cox	363	$34,443.00
93	15	Sidewalk Spot Improvements	Town	Depot Street (Spot)	Railroad Street	Church Street	Install sidewalks and curb ramps along both sides of road to connect existing sidewalks	295	$34,569.00
64	13	New Sidewalk Construction	NCDOT	Cooper Street	Railroad Road	Church Street	Install sidewalk and curb ramps along north side of street to connect existing sidewalks and provide a connection to A.G. Cox and Downtown	348	$35,760.00
73	5	New Sidewalk Construction	Town	Blount Street	Mill Street	Church Street	Install a continuous sidewalk and curb ramps along north side of street to connect Downtown and A.G. Cox	454	$44,778.00
48	22	New Sidewalk Construction	Town	Tyson Street	Mill Street	Railroad Street	Install sidewalks along one side of road to connect residential area with Downtown and W.H. Robinson Elem. School	620	$61,755.00

RECOMMENDED PROJECT PHASING SCHEDULE									
Project/ Map #	**Priority Rank**	**Type of Project**	**Road Class**	**At / On**	**From**	**To**	**Preferred Treatment**	**Est. Length (FT)**	**Est. Project Cost**
71	3	New Sidewalk Construction	Town	Blount Street	Ange Street	Academy Street	Install continuous sidewalks and curb ramps along north side of street to connect A.G. Cox	699	$67,991.00
55	2	New Sidewalk Construction	Town	Railroad Street	Cooper Street	Sylvania Street	Install continuous sidewalks and curb ramps along east side of street to connect Downtown	858	$84,370.00
53	33	New Sidewalk Construction	Town	Railroad Street	Worthington Street	Hammond Street	Install continuous sidewalks and curb ramps along east side of street in front of W.H. Robinson	937	$87,916.00
21	16	Pedestrian Crossing	Town & NCDOT	Church Street & Blount Street	*N/A*	*N/A*	Install improved crosswalks (highly visible), curb ramps, 4-way stop sign, signage (“Yield to Peds”, “School Zone”), and possible curb extensions (further study is needed)	0	$99,590.00
22	17	Pedestrian Crossing	Town & NCDOT	Church Street & Sylvania Street	*N/A*	*N/A*	Install improved crosswalks (highly visible), curb ramps, 4-way stop sign, signage (“Yield to Peds”, “School Zone”), and possible curb extensions (further study is needed)	0	$99,590.00
59	6	New Sidewalk Construction	Town	Hammond Street	Railroad Street	Jones Street	Install continuous sidewalks and curb ramps along both sides of street to connect to Downtown and W.H. Robinson	1092	$103,550.00
10	24	Pedestrian Crossing	Town	Railroad Street & Depot Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, curb extension, and improved CSX railroad crossing (further study and coordination is needed)	0	$117,530.00

RECOMMENDED PROJECT PHASING SCHEDULE									
Project/ Map #	**Priority Rank**	**Type of Project**	**Road Class**	**At / On**	**From**	**To**	**Preferred Treatment**	**Est. Length (FT)**	**Est. Project Cost**
11	25	Pedestrian Crossing	Town & NCDOT	Railroad Street & Main Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, curb extension, and improved CSX railroad crossing (further study and coordination is needed)	0	$117,530.00
13	26	Pedestrian Crossing	Town & NCDOT	Railroad Street & Cooper Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, curb extension, and improved CSX railroad crossing (further study and coordination is needed)	0	$117,530.00
54	1	New Sidewalk Construction	Town	Railroad Street	Main Street	Sylvania Street	Install continuous sidewalks and curb ramps along west side of street to connect existing sidewalks and the Downtown	1152	$126,734.00
96	38	Sidewalk Spot Improvements	NCDOT	Laurie Ellis Road (Spot)	Barefoot Lane	Church Street	Install a continuous sidewalk and curb ramps along north side of street to connect existing sidewalks	144	$139,012.00
51	9	New Sidewalk Construction	NCDOT	Church Street	Liberty Street	Laurie Ellis Road	Install sidewalks and curb ramps along west side of street to provide a continuous sidewalk to A.G. Cox	1436	$139,347.00
50	8	New Sidewalk Construction	NCDOT	Church Street	Sylvania Street	Main Street	Install continuous sidewalks and curb ramps along west side of street for connection to Downtown and A.G. Cox	1492	$148,124.00
Mid-Term Recommended Projects									
57	27	New Sidewalk Construction	NCDOT	Mill Street	Sylvania Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along west side of street to connect Downtown	1961	$179,741.00

RECOMMENDED PROJECT PHASING SCHEDULE									
Project/ Map #	**Priority Rank**	**Type of Project**	**Road Class**	**At / On**	**From**	**To**	**Preferred Treatment**	**Est. Length (FT)**	**Est. Project Cost**
14	32	Pedestrian Crossing	NCDOT	Main Street & Mill Street	*N/A*	*N/A*	Install highly visible crosswalks, curb ramps, and pedestrian-activated signals on existing traffic signal, consider "No Right on Red" signs	0	$189,980.00
49	20	New Sidewalk Construction	NCDOT	Church Street	Blount Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along east side of street to connect A.G. Cox Middle School (also identified as a greenway route) with residential area	2387	$233,448.00
17	35	Pedestrian Crossing	Town & NCDOT	Main Street & Jones Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, possible curb extensions, and pedestrian-activated signals	0	$277,955.00
69	19	New Sidewalk Construction	Town	Sylvania Street	Ange Street	Railroad Street	Install continuous sidewalks and curb ramps along both sides to connect residential areas with A.G. Cox and park	1861	$297,594.00
58	28	New Sidewalk Construction	Town	Jones Street	Main Street	Worthington Street	Install continuous sidewalks and curb ramps along both sides of street to provide connection to W.H. Robinson Elem. School	2840	$308,683.00
Long-Term Recommended Projects									
46	40	New Sidewalk Construction	NCDOT	Boyd Street	Railroad Street	Hwy 11	Install sidewalks and curb ramps along both sides (if possible) of road to connect residential areas to Downtown and W.H. Robinson Elem. School	3792	$378,469.00
47	41	New Sidewalk Construction	Town	Depot Street	Railroad Street	Mill Street	Install sidewalks and curb ramps along north side of road provide connection to Downtown	358	$385,549.00

RECOMMENDED PROJECT PHASING SCHEDULE									
Project/ Map #	**Priority Rank**	**Type of Project**	**Road Class**	**At / On**	**From**	**To**	**Preferred Treatment**	**Est. Length (FT)**	**Est. Project Cost**
52	18	New Sidewalk Construction	Town & NCDOT	Railroad Street	Vernon White Road	Depot Street	Install continuous sidewalks and curb ramps along west side of street for connection to Downtown and W.H. Robinson	3094	$456,371.00
61	37	New Sidewalk Construction	NCDOT	Main Street	Old Tar Road	Church Street	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with schools, parks, Downtown, Winter Village, and existing sidewalks (identified as a component of greenway system) (further study is needed)	6559	$651,777.00
70	29	New Sidewalk Construction	Town & NCDOT	Ange Street	Main Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along both sides to connect residential areas with A.G. Cox, park, and Downtown	7153	$664,701.00
63	42	New Sidewalk Construction	NCDOT	Cooper Street	Old Tar Road	Academy Street	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with schools, Downtown and other commercial areas and connect existing sidewalks	8035	$794,184.00
56	34	New Sidewalk Construction	NCDOT	Mill Street	Vernon White Road	Sylvania Street	Install continuous sidewalks and curb ramps along both sides to provide connection to Downtown	10726	$1,050,734.00

RECOMMENDED PROGRAMS	
Route System	Post identification signs for Winterville's .65 miles of walking routes for easy use by pedestrians. Signs should include directional and general information; in addition, the routes should be well lit for night use.
Safe Routes to School Program	Program brings together educators, municipal and regional transportation professionals, law enforcement, public health professionals, and concerned citizens to address pedestrian safety within two miles of K-8th grade schools. This program concentrates on the five "E's": engineering, education, enforcement, encouragement, and evaluation.
Spot Improvement Program	Develop a spot improvement program to address problems at specific locations such as intersections, short lengths of roadway, small sidewalk gaps (10' or less in length), or single destinations (e.g., an office building or shopping center). Spot improvement could include retrofitting existing curbs to apply with ADA, repainting or striping crosswalks.
Sidewalk Maintenance Program	Develop and implement a sidewalk maintenance program to ensure existing facilities are regularly maintained and do not go into disrepair. The program should also include an updated inventory of existing sidewalks needing repairs to schedule improvements and maintenances of these facilities.
Pedestrian & Motorist Education and Enforcement Activities	Continue educational efforts on an annual, or as needed, basis for community volunteers and Town police officers. Utilize the existing agencies and volunteers to educate and enforce pedestrian laws. Educational brochures and pamphlets should also be distributed throughout the community, especially within schools, to educate pedestrian safety and promote the health benefits of walking.
Walking Programs & Events	Organize and hold various activities to encourage the public to participate in recreational or educational walking trips. Examples include a holiday walking tour of downtown, walking races for health campaigns, Walktober, and walking races during annual community festivals.
Annual Pedestrian Safety Roadshow	The Pedestrian Safety Roadshow assists communities in developing their own approach to identifying and solving the problems that affect pedestrian safety and walkability. It is a four-hour workshop given to local engineering, planning, enforcement, educators, and health officials, youth groups and senior groups, and local business leaders to increase awareness of pedestrian safety and walkability concerns.

RECOMMENDED POLICIES	
Bridge Enhancements for Pedestrians	Develop a policy to require all newly constructed bridges be equipped with sidewalks, or an offset area that provides space for future sidewalks or multi-use trails, and railings to accommodate pedestrians.
Reduction of Speed Limits	Create a policy for reducing the speed limits in areas of high pedestrian activity, such around schools, parks, the Downtown, and other major pedestrian destinations. "School zones" should be marked with pavement markings and flashing speed limit signs. Winterville should consider the use of active speed monitor speed limit signs be used near schools with speeding problems.
On-Street Parking Ordinance	Collaborate with NCDOT on creating a policy to paint parallel parking stalls on streets such as Church Street, Main Street, Cooper Street, and other wide streets to slow traffic and encourage on-street parking.
Street Tree Ordinance	Develop a street tree ordinance to add and protect shade trees along major thoroughfares and downtown streets. These trees will provide shade for pedestrians and improve the overall streetscape.
Subdivision Ordinance	1) Modifications to Winterville's Subdivision Ordinance should be made to specify that new subdivisions with any portion of the area proposed for subdivision lies within an area designated as a greenway corridor should be dedicated and/or reserved to the public at the option of the Town to protect or preserve a greenway. 2) Where residential developments have cul-de-sacs or dead-end streets, such streets shall be connected to the closest local or collector street or to cul-de-sacs in adjoining subdivisions via a sidewalk or multi-use path, except where deemed impractical by the Planning Director. 3) Incorporate the numerous street design recommendations and guidelines, as provided in Section 5. 4) Mixed use and Planned Unit Developments centered on pedestrian-friendly communities should be encouraged instead of separated uses. 5) All new streets within Winterville should be *Complete Streets* with amenities for pedestrians, bicyclists, and motorists. Thus, sidewalks should be placed all both sides of all streets to provide connectivity and improve pedestrian safety.
Zoning Ordinance	1) Any portion of an area proposed for any type of development that lies within a designated greenway corridor, must be included as part of the area set aside to satisfy the open space requirement, and that the area within a greenway corridor shall be dedicated and/or reserved to the public at the option of the Town. 2) Commercial development sites shall incorporate pedestrian-friendly accommodations such as pedestrian refuge

	islands, pedestrian channels through parking lots to commercial establishments, landscaping to provide shade and a sense of place within parking lots, and traffic calming techniques to reduce vehicular speeds. 3) Parking requirements should be modified to place a maximum amount of parking allowed and not a minimum, thus letting the market dictate the amount of parking that is created for a development and require shared parking spaces amongst adjoining or adjacent uses. 4) Ensure and allow mixed-uses within existing neighborhoods instead of separating uses as a use-by-right. By creating livable neighborhoods walking will become a more attractive mode of transportation. 5) Reduce the number of driveways and driveway design into a development. Reducing the number uncontrolled access points into a development will in turn reduce potential pedestrian-vehicle accident areas. The location and slope of the driveway will also ensure accessibility and safety for pedestrians. 6) Change the current street design standards with the ones identified in Section 5, to ensure all future road development are pedestrian-friendly. 7) Mixed use and pedestrian-friendly developments should be encouraged, if not required, for all future developments. 8) All new streets within Winterville should be *Complete Streets* with amenities for pedestrians, bicyclists, and motorists.

SECTION 1 – INTRODUCTION

WINTERVILLE
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SECTION 1 – INTRODUCTION

VISION STATEMENT

Winterville is rapidly growing as a bedroom community to Greenville. Winterville is nestled just east of Highway 11, which serves as a major transportation corridor between the cities of Greenville and Kinston. Bisecting the community is the CSX railroad which is graced on each side by historic Railroad Street, Winterville's "Main Street". Winterville's agrarian landscape is also very abundant. Swift and Fork Swamp Creeks envelop the community in pristine natural beauty. Resident demographics are diverse with the population consisting mostly of Caucasians and African Americans. Gender is evenly dispersed in proportion to the total population with the majority of residents below the age of 65. Poverty levels are relatively low with approximately ten percent (10%) of the population below the national poverty line.

Like other growing communities, Winterville is faced with the challenges of preserving its small town character while promoting economic development, balancing automobile dependency, and providing the quality of life new residents are seeking. These challenges will have to be confronted with new goals and strategies to keep up with changing times.

With the strong support of the public and governing body, Winterville's vision is to invest in the development of a comprehensive pedestrian plan to address opportunities for connectivity, programs, policies, partnerships, and funding to improve and sustain the pedestrian environment of the Town. The implementation of this vision will improve the quality of life for Winterville's citizens through increased health, social interaction, and accessibility.

HISTORY

The Pedestrian and Bicycle Information Center (PBIC) states "a transportation system that supports bicycling and walking enhances health, reduces traffic congestion, promotes economic vitality, and improves quality of living."[i] Individual citizens can strive towards these goals; although the greatest benefit will be realized when the community as a whole embraces the pedestrian initiative.

Prior to the emergence of the automobile, humans were a pedestrian oriented society. However, the automobile opened opportunities to expand our limits. Walking became more commonly recognized as a recreational endeavor, rather than a functional activity. History has a way of repeating itself and the recent movement towards pedestrian oriented growth has been spurred partially out of need. As gasoline prices continue to rise, people are seeking alternative forms of transportation, such as a safe, continuous pedestrian network.

Winterville leaders have recognized the benefits associated with a multi-modal transportation system and the importance pedestrian infrastructure plays in an effective comprehensive transportation system. The Town intends to expand and improve the pedestrian infrastructure, policies, and

programs to provide pedestrians with the ability to safely walk to work, school, and recreation, commercial, and service-oriented destinations. This Comprehensive Pedestrian Plan will guide future pedestrian facility installation, maintenance of existing facilities, and development of pedestrian programs and policies.

Educating the public on the numerous benefits of walking provides a vital start in developing a walkable community. The following provides a summary of the many benefits of a comprehensive pedestrian system.

- *Health* – Walking improves circulation and respiratory function, combats depression, bolsters the immune system, prevents heart disease, controls weight, and decreases risks of heart disease, diabetes, and osteoporosis.[ii]

- *Environmental / Energy* – Unlike walking, driving an automobile produces a substantial amount of air pollution. According to the Environmental Protection Agency (EPA), transportation is responsible for nearly eighty (80) percent of carbon monoxide and fifty (55) percent of nitrogen oxide emissions in the U.S.[iii] Automobile manufacturers are now producing models that are more environmentally friendly; however traffic continues to increase thus counteracting the possibility of air pollution reduction.

- *Transportation* – Walking can reduce traffic congestion and necessary parking spaces significantly when short distance vehicle trips are replaced with walking.

- *Economics* – The financial responsibility of automobile ownership is getting more expensive with the increasing costs of the purchase price, gasoline, insurance, license, registration, and maintenance. In multiple vehicle households, these costs can be higher than a mortgage or rent payment. However, the cost of walking is the price of a good pair of shoes.

- *Quality of Life* – Walking provides opportunities for social interaction within a community.

As Winterville continues to expand, many areas such as Downtown become underutilized, uninviting, and unsafe. This problem can be seen in communities across the country, not just in Winterville. Society in general has become less willing to walk due to inconvenience and inaccessibility. As energy costs continue to increase, these societal habits cannot be sustained. Communities must develop new strategies to promote alternative modes of transportation. As Winterville looks towards conserving its small town heritage, the opportunity to promote a walkable community is the first step. A walkable community will offer a wealth of social, health, economic, and environmental benefits.

The Town of Winterville is dedicated to expanding and improving pedestrian facilities. Along with these improvements, the creation of programs and policies will provide pedestrians the opportunity to safely venture to destinations such as school, work, recreation facilities, and commercial areas. This Comprehensive Pedestrian Plan will guide future pedestrian facility improvements, installation, maintenance of existing facilities and development of pedestrian programs and policies.

OVERALL GOALS

As a guide to developing this plan, goals were determined based upon participation by Task Force members and the citizens of Winterville. Goals for Winterville are:

- Provide more walking opportunities to promote healthy lifestyles
- Provide safer walking environments
- Build a sense of community
- Improve connectivity and accessibility to allow for viable alternative transportation options
- Improve accessibility and safety for children, elderly, and disabled

SCOPE AND PURPOSE OF PLAN

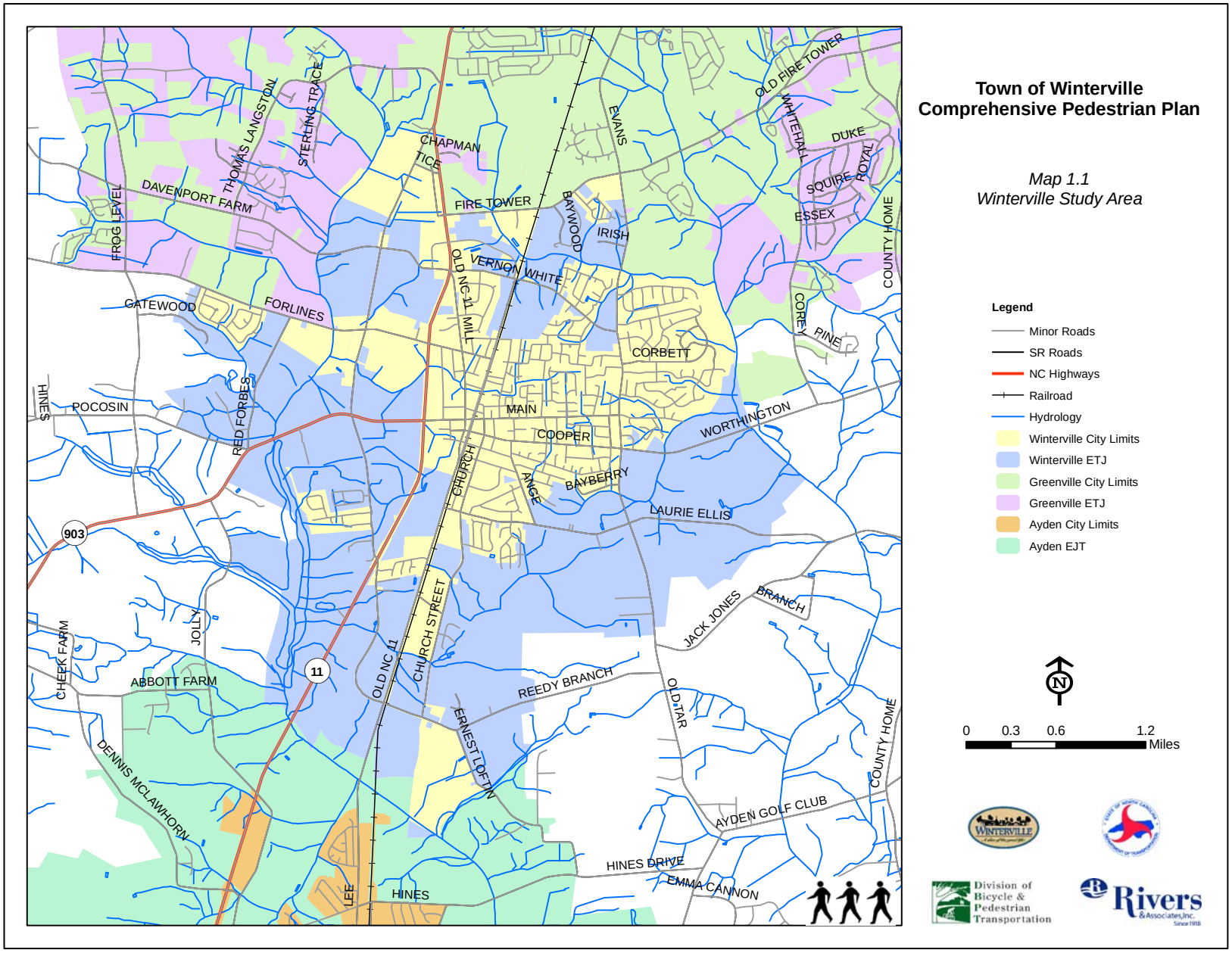
The purpose of the Comprehensive Pedestrian Plan is to make an accessible, safe, convenient, interconnected and functional pedestrian transportation system, ultimately contributing to a higher quality of living environment. Walking is more than a means of getting from one place to another; walking facilitates healthy living habits, conserves energy while improving air quality, and builds strong communities by increasing social interaction.

The scope and purpose of this plan is to assess Winterville's pedestrian system. Results yielded from this assessment, will help determine a strategy to improve the community's pedestrian connectivity and safety. The strategy identified is targeted towards increasing pedestrian traffic and providing accessibility to the entire community.

Plan Assessment includes:

- *Pedestrian Need*
- *Deficiencies*
- *Potential Improvements*
- *Pedestrian Routes*
- *Design Standards and Guidelines*
- *Pedestrian Projects, Programs, and Policies*
- *Viable Funding Sources*

Winterville's incorporated and extra territorial jurisdiction (ETJ) serves as the project analysis area. To increase accuracy and efficiency of the community's analysis, major pedestrian corridors were identified and then the entire project area was divided into 4 sections. In each region, development districts, points of interests, and destinations were identified.


Town of Winterville
Comprehensive Pedestrian Plan
Map 1.1
Winterville Study Area
Legend
Minor Roads
SR Roads
NC Highways
Railroad
Hydrology
Winterville City Limits
Winterville ETJ
Greenville City Limits
Greenville ETJ
Ayden City Limits
Ayden EJT
0 0.3 0.6 1.2
Miles
Division of Bicycle & Pedestrian Transportation
Rivers & Associates, Inc.
THOMAS LANGSTON
STERLING TRACE
CHAPMAN
TICE
EVANS
OLD FIRE TOWER
WHITEHALL
DUKE
SQUIRE ROYAL
ESSEX
COUNTY HOME
DAVENPORT FARM
FROG LEVEL
FIRE TOWER
BAYWOOD
IRISH
VERNON WHITE
OLD NC 11
MILL
GATEWOOD
FORLINES
COREY
PINE
CORBETT
HINES
POCOSIN
RED FORBES
MAIN
COOPER
WORTHINGTON
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ANGE
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LAURIE ELLIS
903
JACK JONES
BRANCH
JOLLY
CHEEK FARM
ABBOTT FARM
11
OLD NC 11
CHURCH STREET
REEDY BRANCH
OLD TAR
ERNEST LOFTIN
COUNTY HOME
DENNIS MCLAWHORN
AYDEN GOLF CLUB
HINES DRIVE
EMMA CANNON
LEE
HINES

[i] Walkinginfo.org. September 2007. (www.walkinginfo.org/develop/activities.cfm)

[ii] The Department of Cambridge Community Development, Harvard Study. September 2007. (www.ci.cambridge.ma.us/cdd/et/ped/ped_hlth.html)

[iii] EPA.gov. September 2007. (www.epa.gov/otaq/consumer/03-co.pdf)

SECTION 2 – EVALUATION OF CURRENT CONDITIONS

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SECTION 2 – EVALUATION OF CURRENT CONDITIONS

As determined by public involvement efforts and a field analysis, this section identifies the town's existing and future pedestrian-related needs. An analysis of the town's pedestrian crash data was also used to determine pedestrian infrastructure needs. Winterville's existing pedestrian infrastructure was also evaluated to determine areas in need of improvement. Evaluated pedestrian infrastructure included the following:

- Existing Sidewalks
- Street Networks
- Street Intersections
- Parking Lots
- Bridges
- Public Transportation

OVERVIEW OF WINTERVILLE

The incorporation of the Town of Winterville was a product of agriculture and technological innovation. The town's first resident, Amos Graves Cox, arrived in the area in 1880. By 1887, the Atlantic Coastline Railroad developed a rail line that brought economic and trade opportunities. The town became a hub for cotton production and industry. This prosperity led to the town of Winterville's incorporation on March 3, 1897. Winterville encompasses 6.575 square miles including the extra territorial jurisdiction (ETJ). It is located in the coastal plain region at an elevation of 7 feet above sea level, which is the highest point in Pitt County. The average rainfall is 48.24 inches per year. Although there are no major natural features in Winterville, Fork Swamp and Swift Creek run along the east and west limits of town and drain to the Neuse River. The Tar River is located approximately ten minutes by car north to the City of Greenville. Historical features include the Renston Historical District and the Cox-Ange House.

According to the 1990 U.S. Census, Winterville's population had grown modestly to 2,816. In 1996, *Money Magazine* ranked Winterville 23rd among 50 of the nation's most attractive suburbs. By the 2000 U.S. Census, population had increased to 4,791. Today Winterville has grown to become Pitt County's second largest municipality with a population of 7,698. This growth is expected to continue with an increase of 1,200 residents per year, which is two-times the County, State, and National growth rate.

The population is approximately 58.7% Caucasian, 38.4% African-American, and 1% Hispanic. Family households include 74.2%; the population under the age of 14 is 24.1% and 46.6% of the population is 25 to 54 years old. The median age is 33.4. 17.1% of residents are disabled.

Winterville is now a hub for recreational, educational, and economic activities. Pitt Community College serves as the community's institute for higher education. Pitt Community College is home to many sporting events, such as baseball and basketball, delivering local residents opportunities for entertainment. The community is also home to the annual Watermelon Festival, which has become a popular local event held in Winterville's Recreation Park. The six parks and recreation facilities in the community also provide residents with entertainment opportunities. These recreation centers support many youth activities such as baseball, softball, tee-ball, basketball, football and soccer. To accommodate adults, there has been the development of a local softball team as well as senior citizen special activities. These facilities are located throughout the community. A developed well-connected pedestrian network will compliment these existing and future activities.

Winterville has four public (not including Pitt Community College) and one private school with approximately 3,898 students in grades K-12. Pitt Community College has a student population of approximately 6,500 students and is growing at 5% per year. These educational centers are places where large populations gather. A safe and well-connected pedestrian network should be developed to link these pedestrian generators to the entire community.

Schools:

- *Creekside Elementary*
- *W. H. Robinson Elementary*
- *A.G. Cox Middle*
- *South Central High*
- *Brookhaven Christian School*
- *Pitt Community College*

Winterville is one of the fastest growing small towns in eastern North Carolina due to its proximity to Pitt County Memorial Hospital, East Carolina University, and the Brody School of Medicine, all located in Greenville. The Town has transitioned from agriculture to young professional population, of which 40% of the residents commute to Greenville for work primarily in education, health, and social services fields. It is considered an area where people can earn a living without most of the problems of the big cities.

With the Town's dramatically increasing population comes an increased demand for pedestrian accessibility and connectivity. For the first time, Winterville is experiencing a boom in service type businesses such as physicians' offices and restaurants. This, along with increased residential developments, is boosting the economy. However, if pedestrian needs are not addressed as soon as possible, a window of opportunity will be lost as retrofitting existing development involves more expensive design and construction.

Winterville's student population is also growing, increasing the need for safe and accessible routes to school. This population includes those attending elementary though high schools in the Town, as well as college students attending Pitt Community College. In addition, 14% of the population is over the age of 60. Many seniors depend on pedestrian connectivity to carry out daily activities, such as going to the post office. Many of Winterville's senior population maintain a post office box. The post office is strategically located on Main Street to provide convenient access for residents; however, it is currently only convenient by car as pedestrian connections are not available from surrounding neighborhoods.

Winterville is home to three large manufacturing companies, the Roberts Company, Winterville Machine Works, and Simclair employing over 400 employees. Their facilities are located within the Town in proximity to residential neighborhoods. Presumably, large percentages of their

employees live in Winterville and may benefit from pedestrian connections to their workplace. The same holds true for students and staff of Pitt Community College, which is located 1-2 miles from Winterville's Downtown.

Subdivisions built since 2004 provide a sidewalk on one side of the road due to the revised subdivision ordinance. However, much of the Town remains without sidewalks as most of the residential areas were developed prior to this revision, and commercial developments are not required to install sidewalks at time of development. The majority of the residential neighborhoods are within walking distance to schools, public facilities and commercial areas; however, accommodations for pedestrians do not exist. In addition, recent annexed development and current development are disconnected from the Town's main limits. Given the physical small scale of the Town, these remotely located residential communities can be linked to the Town if pedestrian connections are planned for and coordinated with the relevant agencies.

The Town had the foresight to locate Town Hall, Library, Post Office, Police/Fire/EMS Building, and the proposed Public Works Facility within the densely populated downtown area to provide convenient access; however, adequate pedestrian connectivity between these facilities does not exist.

Task Force Members:

- ***Eric Lucas**, Winterville Recreation Department*
- ***Chief Billy Wilkes**, Winterville Police Department*
- ***John Woods**, Winterville Public Works Department*
- ***Joey Weatherington**, Pitt County Schools Transportation Department*
- ***Rita Roy**, Pitt County Schools & Recreation*
- ***Daryl Vreeland**, Greenville Urban Area MPO*
- ***Tonna Chun**, Magnolia Ridge resident & West Winterville residents*
- ***Carol Kirby**, Brier Creek resident & East Winterville residents*
- ***Chief Alan Edwards**, Pitt Community College*
- ***John Faron**, Boys & Girls Club*
- ***Jo Morgan**, Pitt County Health Department & North Winterville residents*
- ***Stephanie Smith**, Pitt County Health Department*
- ***James Rhodes**, Pitt County Planning*
- ***Jennifer Smith**, ECJPP / Pitt County Memorial Hospital*
- ***Joanne Lee**, Active Living by Design & resident*
- ***Melissa Lockamy,** Winterville Planning Department & FROGGS*

COMMUNITY CONCERNS, NEEDS AND PRIORITIES

The Winterville Comprehensive Pedestrian Plan was developed to address the needs and priorities of the community. To determine these needs, Winterville and Rivers and Associates, Inc. (Project Team) initiated an extensive public involvement strategy and Rivers and the Louis Berger Group conducted a field site analysis. The following outlines specific activities that were undertaken by the Project Team for plan development.

Public Involvement Strategy

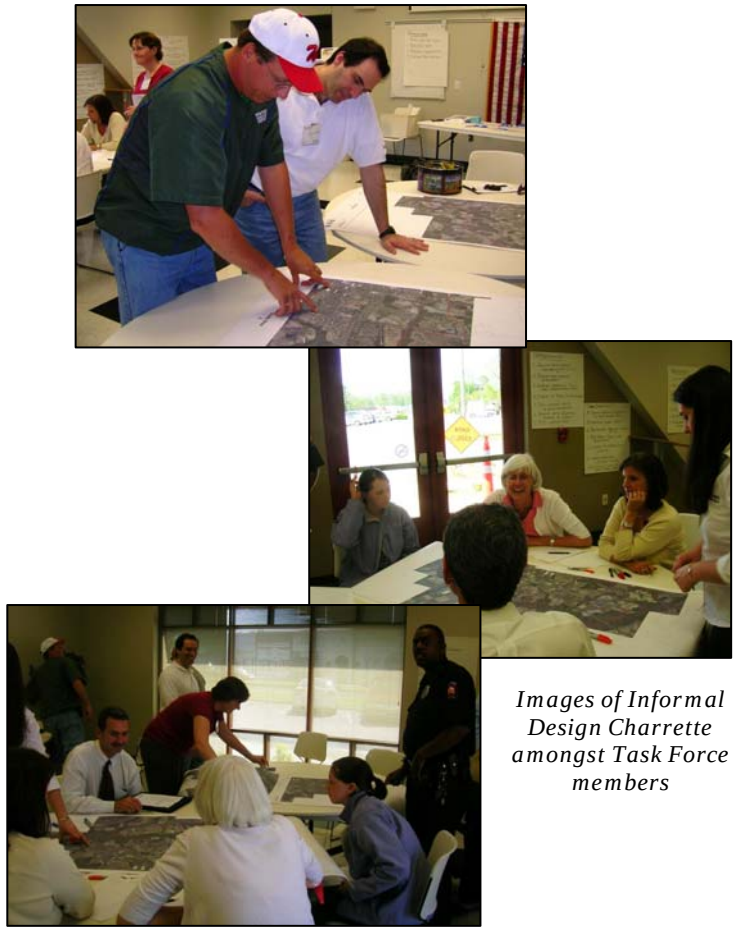
The Project Team implemented a project approach using planning techniques that have proven successful for previous planning projects. Encouraging active community participation during plan development was a goal of this public involvement strategy. This strategy was designed to inform, educate, and engage the public in the development of this Comprehensive Pedestrian Plan.

Four task Force meetings, two public open houses, an on-line public survey, and a project

website were planning tools used to obtain public input and concerns. Along with these tools, concerned citizens could also communicate directly with Town staff via phone, email or in person. The following is a summary of the public involvement methods utilized during the planning process.

Public Involvement Summary

The following paragraphs briefly summarizes the results of the above public involvement strategy and provided guidance for recommendations developed for the Town of Winterville. Detailed results of the various public involvement components are contained in Appendix A.



Images of Informal Design Charrette amongst Task Force members

Task Force

The Task Force members' identified the following concerns, needs, and opportunities/priorities:

- Inadequate pedestrian crossings
- Incomplete sidewalk segments / Poor connectivity throughout community
- Non-pedestrian friendly streetscape
- Uneven sidewalk surfaces
- Improve enforcement of rules and regulations
- Improve education about walkable communities and benefits of walking to all persons (parents, students, developers, etc.)
- Improve Town Ordinances to require more sidewalks and land for multi-use trails, and less 'red tape'
- Improve partnerships with neighboring entities (Greenville, Pitt County) and private and public agencies
- Use existing easements for multi-use trails

These comments were incorporated into the Plan's recommendations. A complete list of Task Force comments is available in Appendix A.

Public Open Houses

Public Open Houses for this Plan were held on May 12, 2008 and on October 9, 2008. The first open house was held at the Community Center to inform the public on the project status, importance/benefits of a comprehensive pedestrian plan, and identified deficiencies with current pedestrian network as well as gather public input. The second open house was held at Town Hall to present draft recommendations and priorities for comments. In general, the following comments were made during these public open houses:

- Improve streetscape with trees, benches, lighting, etc.
- Improve Town Ordinances to require pedestrian facilities for commercial development
- Connectivity from all portions of Town in some manner
- Expand the width of crosswalks to accommodate large groups of pedestrians
- Enforcement of speed limits
- Multi-Use trails are needed
- Sidewalks to key destinations

These comments were incorporated into the Plan's recommendations. A complete list of public comments is available in Appendix A.

Images of Public Open Houses

WINTERVILLE COMPREHENSIVE PEDESTRIAN PLAN
COMMUNITY INPUT SURVEY

The Town of Winterville is in the process of developing a Comprehensive Pedestrian Plan to identify projects, programs, and policies to improve the walkability of Winterville. The goal of this Plan is to develop a strategy to make Winterville a safer and more enjoyable place for you and your family to walk to work, downtown, school, and parks. This survey will provide the Town and Consultants with an understanding of the pedestrian improvements residents desire for their neighborhood and throughout the Town. Please take a few minutes to complete this survey. Your input is important!

1. How much time do you generally spend walking each day in Winterville? (Circle one)
   1) Not at all — Skip to Q7
   2) Less than 10 minutes
   3) 11 - 20 minutes
   4) 21 - 60 minutes
   5) More than one hour daily
2. How far do you generally walk each day in Winterville? (Circle one)
   1) Less than 1/4 mile
   2) 1/4 mile to 1/2 mile
   3) 1/2 mile to 1 mile
   4) More than 1 mile
3. How many days per week do you walk at least 10 continuous minutes in Winterville? (Circle one)
   1) 7 days
   2) 6 days
   3) 5 days
   4) 4 days
   5) 3 days
   6) 2 days
   7) 1 day
   8) 0 days
4. Where do you walk to in Winterville? (Circle all that apply)
   1) Work
   2) Park
   3) School
   4) Neighbor's house
   5) Post Office
   6) Church
   7) Library
   8) Store
   9) No destination / For pleasure
   10) Parking lot/car
   11) Other (specify): _____
5. Why do you walk? (Circle all that apply)
   1) Exercise/Health
   2) Enjoy nature
   3) Walking a pet
   4) Relaxation
   5) Accompany family/friend
   6) Most convenient
   7) Primary means of transport
   8) Cheapest way to get around
6. Do you generally walk... (Circle all that apply)
   1) Alone
   2) With a pet
   3) With friends and/or family
   4) With an organized group
7. What keeps you from walking more than you do now? (Circle all that apply)
   1) No time/too busy
   2) Health reasons
   3) Extreme heat
   4) Feel unsafe due to traffic
   5) Feel unsafe due to crime
   6) Not enough destinations
   7) Get enough exercise elsewhere
   8) Don't think about walking
   9) Other (specify): _____

Public Survey

A survey was developed and posted on-line using the software application Survey Monkey to obtain pedestrian information on existing pedestrian use, current conditions, concerns and pedestrian needs. This survey was available from March 26, 2008 – June 20, 2008. Hardcopies of this survey were also given to Task Force members and the Town for distribution to non-computer savvy citizens. The project website provided a link to the survey for completion. One

Hundred twenty-six (126) residents answered the survey. The survey form and all survey results are available in Appendix A.

The survey conducted during plan development showed 52% of respondents walk 11-60 minutes a day to the park, neighbor's house, recreation, or for pleasure rather than as a means of transportation. A small percentage of respondents walk to do errands or to go to work. The majority of the walking is occurring in neighborhoods viewed as attractive and safe for walking. The main issues that keep residents from walking more is 1) feeling unsafe due to traffic (52%), 2) lack of time (43%), 3) not enough destinations (34%), and 4) feel unsafe due to crime (17%). An overwhelming number of respondents indicated their neighborhood has no sidewalks and drivers travel at unsafe speeds; therefore, respondents with school-aged children stated they drive their children to school even though there is a public school in their neighborhood. Further, the survey also reveals overwhelming support (94%) for the development of guidelines, standards, etc. to ensure pedestrian-friendly development and accommodations.

According to the survey, specific destinations that are difficult to walk to are commercial areas, downtown, parks and schools. Intersection and/or streets identified most often for pedestrian facilities improvements were:

- Main Street
- Old Tar Road
- Cooper Street
- Ange Street
- Mill Street
- Worthington Road
- Near all schools
- Laurie Ellis Road
- Older sections of Town
- Vernon White Road

Images of existing conditions throughout Winterville

Summary of Concerns, Needs and Priorities

The results of Task Force meetings, Public Open Houses, and Public Survey reveal an overwhelming need to improve the pedestrian environment through connectivity, pedestrian facilities (crossings, etc.), enforcement of rules and regulations, Town policies, and the built environment.

For instance, Downtown Winterville contains offices, small shops, residential neighborhoods, and municipal buildings such as the Winterville Library, EMS/Community Center, and Town Hall. Downtown also has a large number of sidewalks and pedestrian facilities; however, these sidewalks are not easily accessible due to the lack of ADA-compliant curbs, inadequately marked crosswalks, crosswalks that

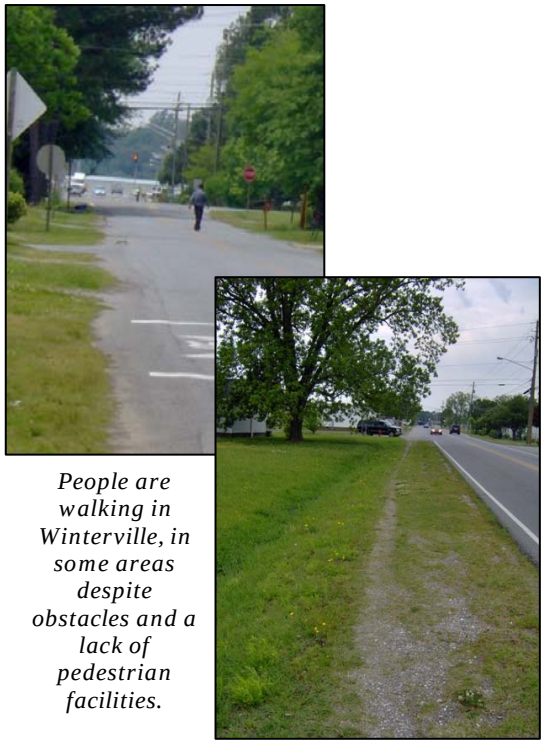
lead to unimproved pedestrian areas, and hazardous and inadequate railroad crossings for pedestrians. Removing these obstacles will increase the accessibility of the downtown by pedestrians.

The residential neighborhoods surrounding downtown have none or sporadically placed sidewalk segments that are incomplete or need repairs, thus preventing pedestrian connectivity to neighborhood schools, parks, the downtown, and surrounding commercial establishments.

Moving outside the town's central areas, there is sprawling residential and commercial construction. New subdivisions are now being built with sidewalks along one side of the street next to older residential or commercial areas with little or no pedestrian facilities resulting in low pedestrian connectivity.

Highway 11, a divided and undivided multi-lane highway, corridor has experienced an increased amount of commercial and residential development such as Sam's Club, Fred's Food Club, and Magnolia Ridge Subdivision. Many of the commercial developments feature large expansive parking with little to none pedestrian facilities to ensure a safe connection to store fronts. The residential areas on the west side of Highway 11 are only assessable by automobiles; therefore, pedestrian facilities are needed to provide pedestrian connectivity to surrounding commercial establishments, recreational opportunities, educational centers, and to the remaining community.

The eastern portion of Winterville has also experienced significant residential and commercial growth along Old Tar Road, Laurie Ellis Road, and Worthington Road; however, the connectivity and accessibility to these new and existing development areas needs to be address to ensure a walkable community.



People are walking in Winterville, in some areas despite obstacles and a lack of pedestrian facilities.

PEDESTRIAN CRASH ANALYSIS

According to the UNC Highway Safety Research Center the pedestrian crash rates for the Town of Winterville are very low (5); however, this may be attributed to a very low number of pedestrians due to a lack of safe and accessible facilities.

An analysis of crash data for the Town of Winterville was conducted using the NCDOT's web-based pedestrian crash database (NCDOT, Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data. March 2008, http://www.pedbikeinfo.org/pbcat/ped_main.htm). The database was created and housed by the Highway Safety Research Center. The data was used to evaluate pedestrian crash trends and identify high-risk areas and populations in Winterville.

Between the years of 1997-2005, the Town of Winterville experienced five pedestrian crashes. Four of these crashes occurred in 2005 with one occurring in 2004 (not graphed). There were no pedestrian crashes between 1997 and 2003. The following year (2005), four additional crashes occurred. This increase in pedestrian accidents correlates with recent population increases within the community.

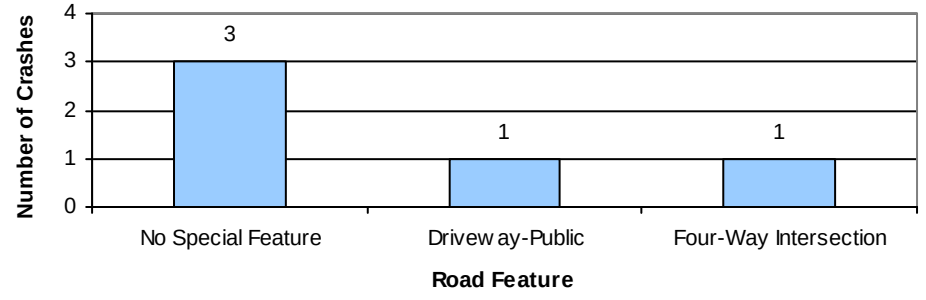
The crash data was further analyzed to determine the location, injuries, and outcomes of the crashes. These attributes are identified in the following graphs.

Figure 2.1 categorizes pedestrian crashes according to road classification. Areas classified as public vehicular areas account for sixty percent (60%) of all pedestrian crashes. Local city streets and N.C. Routes were also identified as areas where the remaining forty percent (40%) of pedestrian accidents occurred. These statistics indicate the need for increased pedestrian safety measures at designated pedestrian areas within parking facilities, crosswalks and sidewalks. Pedestrian signage improvements are also needed to increase safety.

Figure 2.1: Pedestrian Crashes and Road Classification, 1997-2005
(where at least one person was a pedestrian)

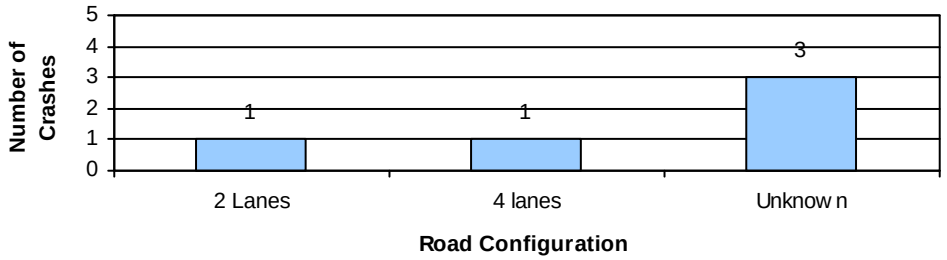
Source: NCDOT Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data

Figure 2.2: Crashes Depending on Road Feature, 1997-2005
(where at least one person was a pedestrian)



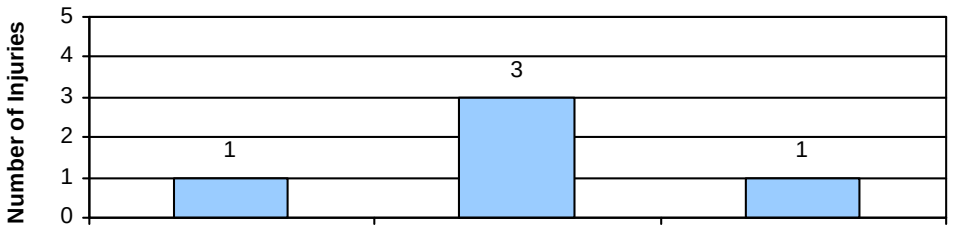
Source: NCDOT Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data

Figure 2.3: Road Configuration
(Pedestrian Crashes 1997-2005)
(where at least one pedestran was involved)



Source: NCDOT Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data

Figure 2.4: Pedestrian Injuries fron Crashes, 1997-2005
(total pedestrians involved in crash)



Source: NCDOT Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data

Figure 2.2 examines crashes based upon road characteristics. Three (3) or sixty percent (60%) of crashes occurred at locations that had "no special features". Locations having "no special features" are defined by the UNC Highway Safety Research Center as areas along roadways, between intersections or within public vehicle spaces. Public driveways and four-way intersections had two (2) or forty percent (40%) of pedestrian accidents.

Improving pedestrian facilities such as crosswalks and sidewalks will help reduce pedestrian accidents in these locations. These improvements should be accompanied by traffic calming devices, pedestrian lighting and enhanced pedestrian-friendly design guidelines.

Figure 2.3 shows the distribution of crashes according to road configurations. Three (3) or sixty percent (60%) of pedestrian accidents occurred on roadways in which the configuration is unknown. Two (2) or forty percent (40%) of pedestrian crashes were located on roads configured as two or four lanes. These statistics suggest that crosswalks and sidewalks improvements are needed along two and four lane thoroughfares and pedestrian facilities be installed within parking lots, along public driveways, and other public vehicular areas.

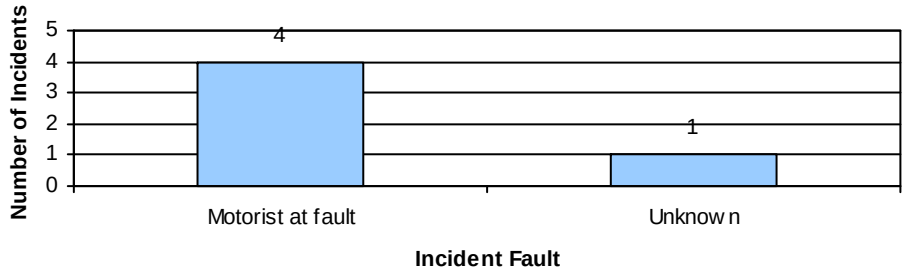
Winterville's crash data were also evaluated according to posted speed limits. Forty percent (40%) of crashes were located on roadways with a speed limit of 20 Mph. Another forty percent (40%) of crashes occurred in areas with speed limits greater than 20 Mph; respectively from 1997-2005 (no graph is provided for this data).

Figure 2.4 illustrates the severity of injuries sustained to the pedestrians in crash incidents. Sixty percent (60%) of pedestrians involved in crashes sustained evident injury while twenty percent (20%) received possible injuries. A report sponsored by the

National Highway Traffic Safety Administration (NHTSA) entitled *Literature Review on Vehicle Travel.* The publication *Speeds and Pedestrian Injuries* states pedestrians have a five percent (5%) chance of dying when involved in pedestrian-vehicle crashes where the vehicle is traveling 20 Mph or less. Fatality rates increase dramatically as vehicle speeds increase.[1]

Due to this correlation, it is important that vehicle speeds be reduced in areas with high pedestrian activity. Safety education and pedestrian facility improvements are also important considerations to avoid injuries.

Figure 2.5: Fault for Crash, 1997-2005
(where at least one person was a pedestrian)

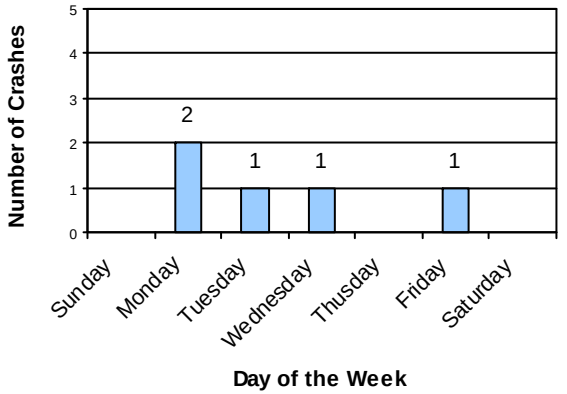


Source: NCDOT Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data

Figure 2.5 illustrates the fault of pedestrian accidents. The graph concludes that motorists caused eighty percent (80%) of all pedestrian accidents. Typical events or activities that have caused motorist induced accidents include failure to yield to pedestrians, not being aware of surroundings, backing up, turning or merging. These statistics reflect the need for driver and pedestrian safety education. This community education would include vehicle laws, safety, improved crossings, and separation of pedestrian and vehicle facilities with vegetation buffers and/or bollards.

Figure 2.6 explores the possible connections between days of week in relationship to the frequency of crashes. Crashes occurred throughout the week with an exception to Thursday, Saturday and Sundays. Accident rates increased on Monday, which indicates drivers and pedestrians are not giving their full attention to their task, as they head to work, school or local activities.

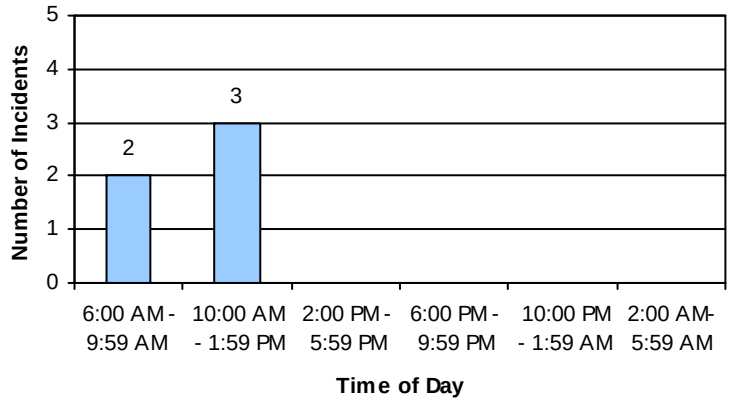
Figure 2.6: Day of Week of Crash, 1997-2005
(where at least one person was a pedestrian)



Source: NCDOT Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data

[1] United States Department of Transportation, National Highway Traffic Safety Administration, *Literature Review on Vehicle Travel Speeds and Pedestrian Injuries*, W. A. Leaf and D. F. Preusser, October 1999

Figure 2.7: Time-of-Day of Crash, 1997-2005
(where at least one person was a pedestrian)



Source: NCDOT Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data

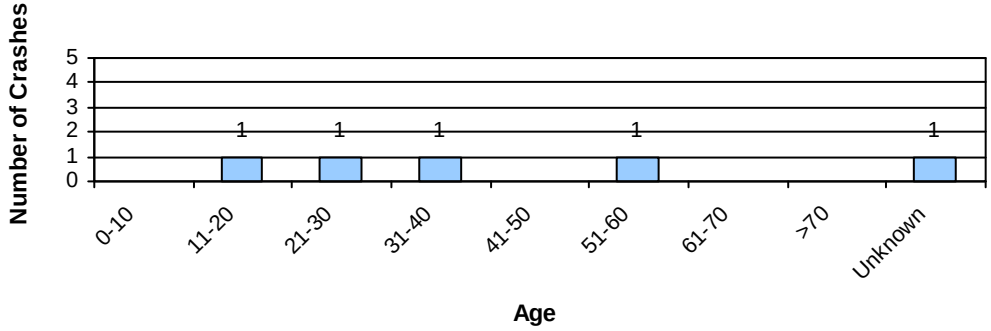
Figure 2.7 reveals that most accidents, sixty percent (60%) took place between 10:00 am and 2:00 pm. These hours are traditionally when drivers and pedestrians are traveling to lunch or running errands. Another forty percent (40%) of accidents occurred in early morning hours (6:00 am – 10:00 am) suggesting that these crashes are a result of pedestrians traveling to work and/or school.

According to the available crash statistical data, eighty percent (80%) of all pedestrian crashes occurred during daylight hours. The remaining twenty percent (20%) were experienced in early morning- dawn conditions. Three (3) or (60%) of pedestrian crashes transpired in sunny clear weather conditions while the remaining forty percent (40%) occurred in cloudy conditions.

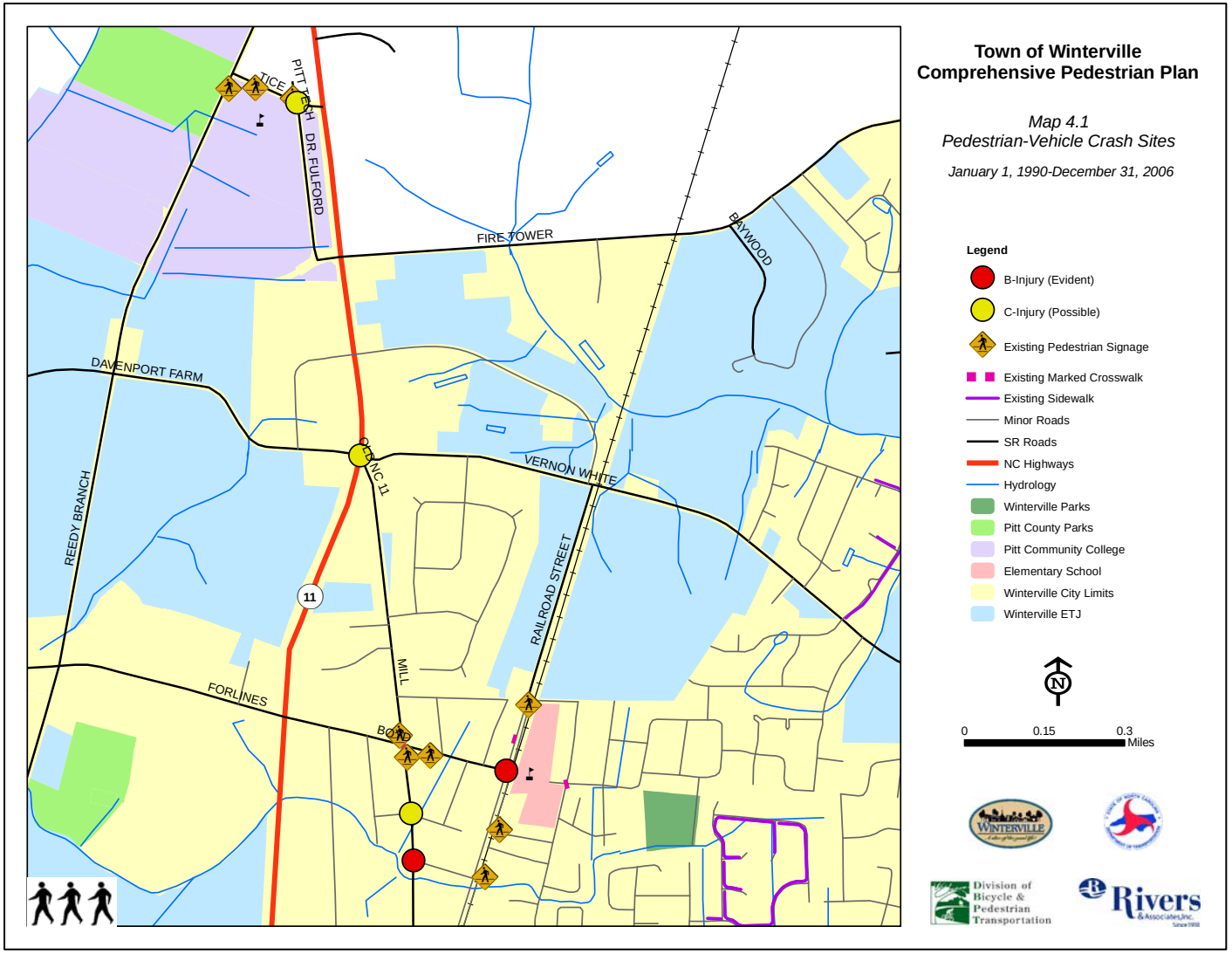
The five pedestrian crashes that have occurred in Winterville were distributed throughout the year. There were crashes in the months of December, January, May, August, and September. The summer month crashes may be attributed to increased recreational activity and students out of school for summer break. Winter month crashes can be attributed to increased holiday shopping and students out for winter break.

As illustrated by Figure 2.8, pedestrian crashes affect nearly every age group. There was only one pedestrian crash for age groups over 40 years of age. This may be attributed to a lower elderly population or less elderly pedestrian activity within Winterville. Safety education, enforcement, and safe pedestrian routes to schools are tools that can be used to reduce pedestrian accidents.

Figure 2.8: Age of Pedestrian in Crash, 1997-2005
(total pedestrians in crash)



Source: NCDOT Division of Bicycle & Pedestrian Transportation – Pedestrian Crash Data



High Crash Sites

Fortunately, Winterville has only experienced five pedestrian-vehicular crashes from January 1990 to December 2006. None of the crashes were fatal, but two resulted in type B-injuries (injury evident). These crashed occurred on roadways with no pedestrian facilities except for signage. Three crashes happened along Mill Street and Highway 11 (Mill and Tyson intersection, Mill and Hammond intersection, and Highway 11 and Vernon White intersection); one crash occurred in front of W. H. Robinson School at the intersection of Railroad and Boyd; and a crash happened at the intersection of Pitt Tech and Dr. Fulford on the Pitt Community College Campus. Improving these crash sites with sidewalks and proper crossing treatments will provide a safer environment for pedestrians. Map 2.1 illustrations the crash sites.

ASSESSMENT OF PEDESTRIAN COMPATIBILITY OF LOCAL TRANSPORTATION SYSTEM

Winterville has a sporadic network of sidewalks with few well-defined crosswalks, no crossing signals at major street intersections, and no pedestrian design facilities within parking lots. The basic "transverse" style solid white parallel lines mark pedestrian crossings in isolated areas in the community, but crossing treatments are rarely used or noticeable. An overwhelming majority of the Town has no pedestrian facilities and a major barrier, the railroad, does not accommodate pedestrians at crossings.

Several points of interests and destinations were identified during plan development that needs improved or new pedestrian facilities. For instance, Hillcrest Park is only assessable by a select number of residential areas without going through private property or driving almost a ¼-mile to the park entrance due to numerous cul-de-sac and dead-end street configurations. Winterville's Recreation Park is also only assessable by walking in the streets or by vehicle even though it is located in an area with some existing sidewalks. Winterville is fortunate to have several schools within it's community; however, these schools are not adequately connected to the surrounding residential areas resulting in busing of students who live only blocks away, an expensive alternative to walking.

Winterville has an opportunity to make significant enhancements to the existing pedestrian network. As a rapidly growing community, the need for safe and effective pedestrian facilities is essential to improve the quality of life for its residents. This Plan is the first step towards making Winterville a walkable community that will continue to attract families, young professionals, and retirees for years to come.

Current Usage / User Demographics

Winterville's U.S. Census data shows that the community's population demographics are very diverse. The median family household income as determined in the 2000 U.S. Census is $37,230. This median income value is slightly higher than the state average of $34,584. In Winterville, there are 560 persons or 8.5% of residents living below the poverty level. Most of Winterville's population has income levels above the poverty level; ninety-five percent (95%) of Winterville's population own at least one vehicle. As a result, a majority of the population (94.5%) commute to work via automobile. Of these vehicular commuters, 81.9% travel to work alone, 12.9% travel in carpools and none use public transportation. Only six (6) or 0.3% of all workers who completed the survey indicated that they walk to work. This low percentage attributed to the distances from employment. The average commute time for workers is over twenty-five (25) minutes.

Age and disability demographics also play a critical role in determining pedestrian-related improvements needed in the town. A total of 1,456 or 30.3% of the total population is below the age of 19. Another 2,847 or 59.5% of residents are between the ages of 20 and 64. The number of persons above the age of 65 is 488 (10.2%). There are 760 institutionalized residents living within the Town of Winterville, accounting for 6.3% of the total population.

After analyzing the census data, conclusions can be made to assess demographic needs. To encourage pedestrian traffic, connectivity and accessibility should be improved to local businesses, places of employment, schools and other destinations. Although most employment activities are located outside of town, opportunities for new places of work should be encouraged closer to residential areas. These changes will improve the

health, wellness and happiness for the community by reducing the amount of vehicular use and commuter time. A developed list of potential pedestrian projects is in Section 7. Although these projects provide connectivity and accessibility, continuous assessment of residents' needs will be required as Winterville continues to grow.

INVENTORY AND ASSESSMENT OF EXISTING PEDESTRIAN FACILITIES

Winterville's pedestrian network is fragmented making it hard for people to navigate the community. In places where there are sufficient sidewalks such as downtown and near A. G. Cox Middle School, the walking surface is often times in disrepair and unattractive. These conditions do little to provide easy connectivity for pedestrians with disabilities. Unattractive sidewalks and views (dilapidated structures and over-grown yards) can also discourage pedestrian activity.

Outside the immediate downtown area, sidewalks become more sparsely located. There is little to no pedestrian connectivity for surrounding neighborhoods to downtown activities. The sidewalks around the downtown are primarily incomplete segments. Many of the neighborhoods outside of downtown are newer residential and commercial developments; however, the residential developments were designed with cul-de-sac and dead-end streets that prohibit inter-neighborhood connectivity, and commercial developments were not required to install pedestrian facilities. Some of the newer residential developments have sidewalks along one side, but again little to no pedestrian infrastructure is available to neighboring developments. The commercial establishments were designed with only the vehicular access in mind. The characteristics of this design include large front setbacks and little pedestrian facilities within parking lots. Winterville's growth has pushed residential, commercial, and public facilities (parks and schools) further away from the community center resulting in an isolated and automobile dependent environment. To curb the trend of pedestrian inaccessibility, development regulations should require more pedestrian infrastructure and facilities for all types of development.

A description of Winterville's existing pedestrian facilities is summarized below.

Sidewalks

Sidewalks provide pedestrians with a safe means of travel to and from destinations and are an integral component of a walkable community. If a community does not have sidewalks to destinations, people will drive rather than walk. In addition, if a community has sidewalks that are obstructed or in disrepair, they will not be used.

The majority of Winterville's sidewalks are in good condition; however, they are fragmented and overgrown trees and shrubs obstruct clearance along some segments. Map 2.2 shows Winterville existing pedestrian facilities (sidewalks, crossings, and signage). As the map reveals, none of the major thoroughfares have a continuous network of sidewalks. The majority of the sidewalks along residential streets are located within newer subdivisions. Newer sidewalks in Winterville meet the required 5 feet in width, but older segments do not meet this minimum width. The width of sidewalks affects walkability. If the sidewalk is only wide enough for one person to walk comfortably then families may not use them. Therefore,

sidewalks with adequate width need to be constructed and existing narrow sidewalks need to be improved. Obstructions from signs, utility poles, and overgrown vegetation need to be resolved to provide adequate clearance for pedestrians.

Winterville has very few ADA-complaint curb cuts and several marked pedestrian crossings where the sidewalk does not extend to the intersection or across the railroad tracks. Immediate attention is needed to repair and improve pedestrian facilities near schools, parks, downtown, high accident areas and other major destinations points to ensure ADA-compliance and overall safety.

Multi-Use Trails

There are no existing multi-use trails in Winterville; however, multi-use trails are planned within Hillcrest Park and Winterville Recreation Park. Multi-use trails provide an excellent opportunity for functional daily and recreational opportunities. Multi-use trails can connect to destinations including outlying educational facilities, county parks, as well as residential areas along the outer edges of the community. It is also important to consider their relationship to other facilities such as residential neighborhoods, commercial districts, parks, and schools. Providing links to these facilities from the trail will increase the overall connectivity of the pedestrian network.

Roads

Road alignment and cross-sections affect the overall pedestrian network. Winterville's large number of dead-end or cul-de-sac streets prevent vehicular and pedestrian circulation; thus reducing connectivity. The few streets (i.e., Main, Cooper, Mill, Boy, Ange, Jones, and Old Tar) that are not cul-de-sacs have little to no pedestrian facilities, even though the roadways are wide enough for such facilities.

Careful planning and enforcement of local ordinances will ensure proper placement of new roads in or around Winterville so they appropriately accommodate vehicle and pedestrian traffic.

Intersections

Winterville can construct numerous sidewalks and multi-use trails throughout their community, but without proper design and installation of intersections and mid-block crossings, the pedestrian network will fail. Safe crossing of intersections is essential for connectivity and pedestrian safety. Because of inadequate pedestrian intersection treatments, there is a need to improve these crossings. The importance of these improvements are essential to ensuring safety in areas near pedestrian destinations such as schools, downtown, parks, and commercials areas. Major thoroughfares (i.e., Highway 11, Main Street, Mill Street, Old Tar, Cooper Street) and CSX Railroad will require additional planning and coordination to provide a safe pedestrian crossing.

Intersections near schools, parks, residential and commercial areas, and the downtown have been identified as locations that are in need of pedestrian crossing improvements. These locations were chosen based upon their proximity to destinations such as community facilities and activities, pedestrian-vehicle crashes, and their ability to provide connections to surrounding neighborhoods.

Parking Lots

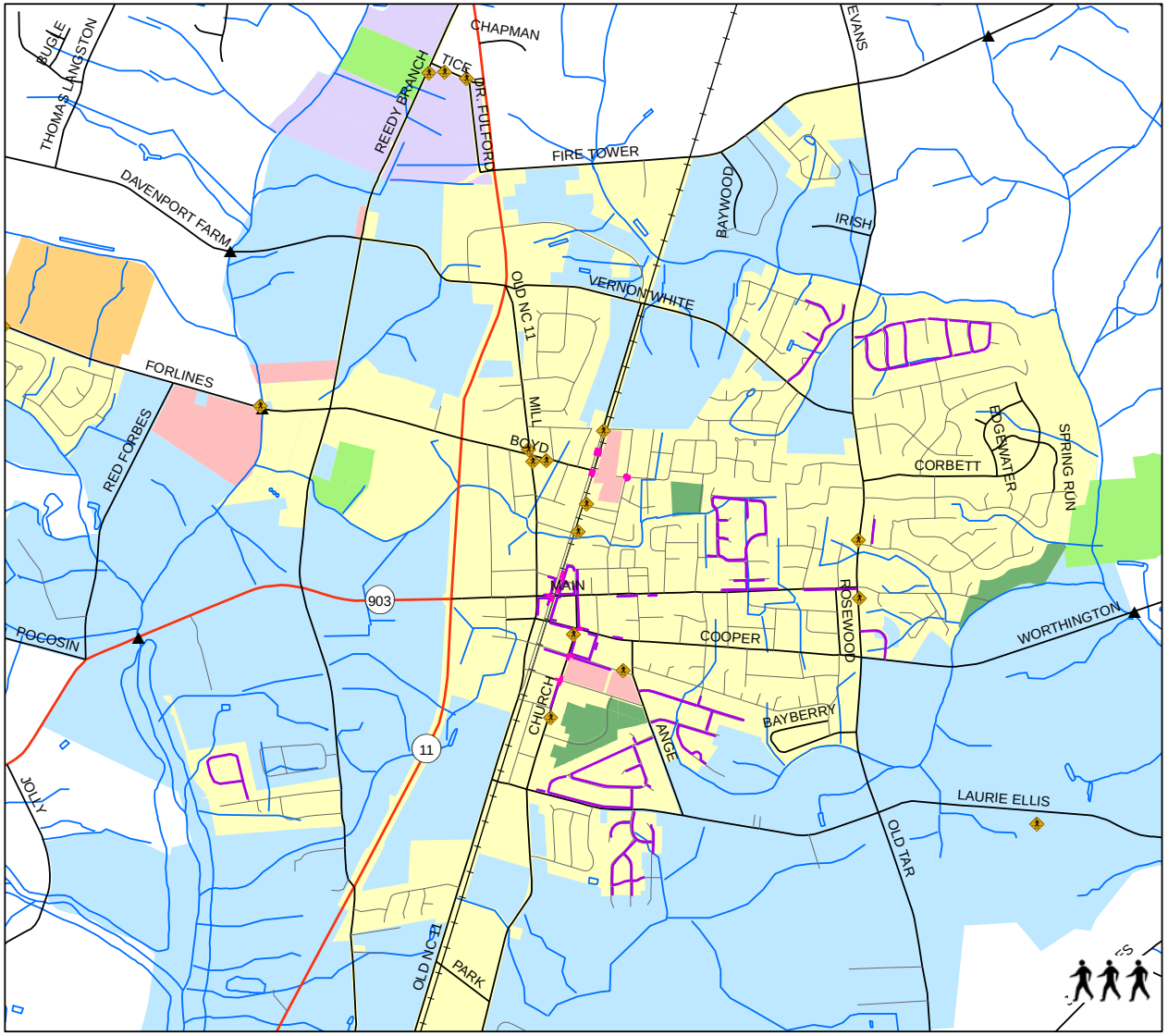
The majority of parking lots in Winterville were designed and constructed with minimal pedestrian accommodations. There are no designated pedestrian access routes from parking spaces to the store. In addition, little to no vegetation is planted within parking lots to provide refuge from the sun and to break up the expansive asphalt. To improve pedestrian conditions in parking lots, the Town of Winterville should adopt new development regulations that promote pedestrian-oriented design.

Public Transportation

The Greenville Area Transit (GREAT) provides public transportation service (Route 3) to Pitt Community College on Monday through Saturday (8:00 am-5:00 pm). This is the only public transportation stop in Winterville. A shelter is provided at this transit stop for pedestrians. Since this is the only transit stop in Winterville and with a location near Memorial Drive (NC 11) and West Fire Tower Road, pedestrians and potential transit users must be able to travel safely to this stop from surrounding properties. Therefore, improvements such as sidewalks, signage, crosswalks, and lighting should be done within proximity of this transit stop.

Bridges

Winterville has four bridges in the ETJ (Vernon White/Reedy Branch, Forlines Road/Reedy Branch, NC 903/Reedy Branch, and Worthington Road), which do not have pedestrian amenities. Two of the bridges are identified on the Transportation Improvement Program (TIP) for replacement. At time of replacement specific pedestrian accommodations should be determined and installed with the bridges.



Town of Winterville
Comprehensive Pedestrian Plan

Map 2.2:
Existing Pedestrian Facilities

Legend

- Existing Pedestrian Signage
- Existing Marked Crosswalk
- Existing Sidewalk
- Bridges
- Minor Roads
- SR Roads
- NC Highways
- Railroad
- Stream or Creek
- Winterville Parks
- Pitt County Parks
- Pitt Community College
- High School
- Elementary School
- Winterville City Limits
- Winterville ETJ

N

0 0.15 0.3 0.6 0.9 1.2 Miles

Division of Bicycle & Pedestrian Transportation

Rivers & Associates, Inc.

SECTION 3 – EXISTING PLANS, PROGRAMS & POLICIES

WINTERVILLE
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SECTION 3 – EXISTING PLANS, PROGRAMS & POLICIES

This section summarizes the existing plans, programs, and policies related to pedestrian planning. These plans, programs, and policies assisted in the development of this Plan.

EXISTING PLANS

Town's administrators, governing board, and citizens have initiated and supported plans to improve pedestrian transportation over the years. Those plans are summarized below.

Winterville Plans

The Town of Winterville has several plans that have a pedestrian component. These plans and their respective pedestrian components are summarized below.

Conceptual Sidewalk Improvement Plan (2005)

To address the inadequate pedestrian connectivity between major destinations (Town Hall, Library, Post Office, Police/Fire/EMS building, and Public Works) within downtown, the Town developed a "Conceptual Sidewalk Improvement Plan" to link these destinations. Within the next two years, the Town anticipates the construction of a sidewalk along portions of Railroad Street, Church Street and Sylvania Avenue that will connect these destinations with W.H. Robinson Elementary School, the downtown, A.G. Cox Middle School, and the Winterville Recreation Park. During the first fiscal budget upon developing this plan, the Town allocated $106,800 towards it and continues to allocate additional funding each year.

Conceptual Downtown Railroad Street Landscape and Pedestrian Access Improvement Plan (July 2008)

The intent of this project was to assess existing conditions and provide design recommendations for pedestrian/ADA accessibility at street crossings including crosswalks and ramps and curb extensions to define parking, decrease crosswalk distance, and receive appropriate ornamental vegetation. The scope of this project did not include discussions with NCDOT or CSX Railroad. The Town is currently working on the feasibility phase of this project.

Illustration of project limits for Railroad Street project

A Land Development Plan for the Town of Winterville (November 1997)

In 1997, the Board of Alderman adopted a Land Development Plan that is regularly updated. This plan included a survey of citizens of which 76% either "strongly agree" or "agree" with the need for "more sidewalks". In response to this, the Board passed a resolution in 2001 to amend the subdivision ordinance to require sidewalks, and in 2004, the zoning ordinance was amended to require sidewalks in the Central Business Transition Overlay District. Additionally, the Town's zoning allows for Planned Unit Development which "shall be designed and developed and uses so arranged to promote pedestrian access within the development".

2005 Comprehensive Recreation and Park Plan (December 2005)

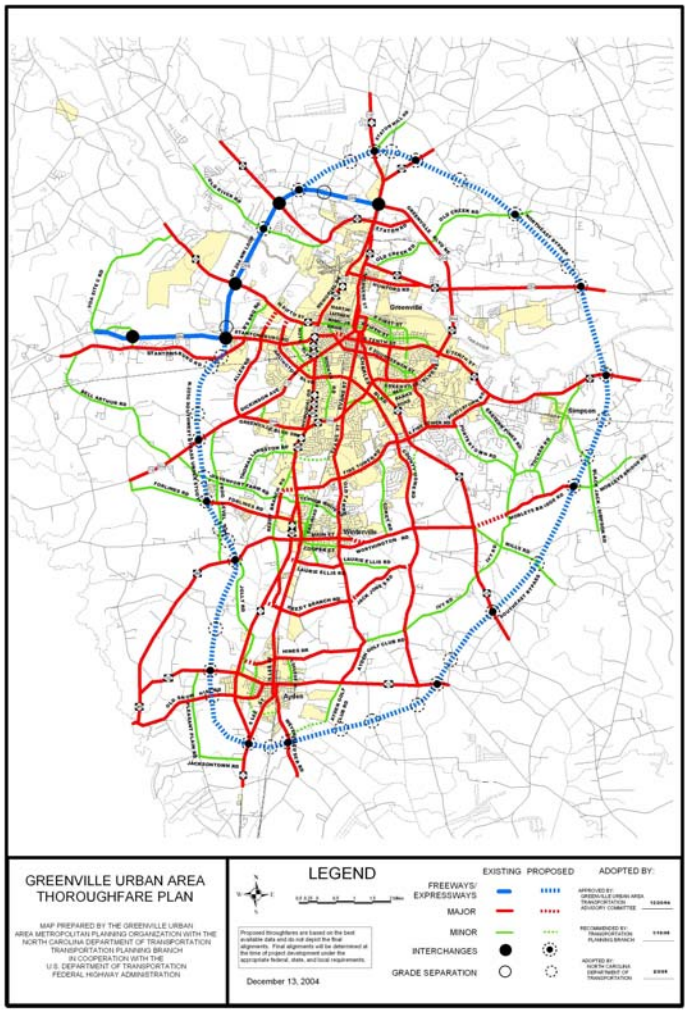
This plan's purpose was to identify and address the needs of Winterville citizens as they relate to park and recreation programs, facilities, and parks offered by the Town over the next five-ten years. During the planning process, two public meetings were held with the public identifying walking trails, instead of various sport activities as a popular recreation activity. Participants also stated they travel to Greenville to participate in various recreational activities, including walking trails. Opportunities identified by the citizens included the need for walking trials. A proposed mid-term goal (3-5 years) identified in the plan was the development of outdoor recreation opportunities (i.e., greenways system).

Surrounding Plans

There are also several plans for Pitt County that include pedestrian facilities linkages through Winterville. These plans and their respective pedestrian components are summarized below.

Greenville Urban Area Thoroughfare Plan (February 2005)

In recent years, the Greenville Urban Area Metropolitan Planning Organization (MPO) has changed the emphasis of their transportation planning from a "thoroughfare" plan to a "multi-modal" transportation plan to effectively address the needs of vehicular circulation, as well as bicycle and pedestrian transportation systems. In 2004, the MPO and NCDOT inventoried approximately 58.77 miles of streets and 21.62 miles were



Map of identified corridors from Greenville Urban Area Thoroughfare Plan

identified as "important pedestrian corridors" in Winterville. As new construction projects are funded, designed, and constructed, sidewalks are incorporated into the project. Identified pedestrian corridors for Winterville are:

- *Cooper Street / SR 1711 (Minor)*
  From Mill Street/SR 1149 to Ange Street and from Ange Street to Old Tar Road/SR 1700 (1.08 miles)

- *Davenport Farm Road / SR 1128 (Minor)*
  From Reedy Branch/SR 1131 to Memorial Drive/NC Highway 11 (0.48 miles)

- *Fire Tower Road / SR 1708 (Major)*
  From Reedy Branch Road/SR 1131 to Memorial Drive/NC Highway 11 and from Memorial Drive/NC Highway 11 to Evans Street Extension/SR 1700 (1.61 miles)

- *Main Street / SR 1133 (Major)*
  From NC Highway 11to 0.10 miles east of NC Highway 11, from 0.10 miles east of NC Highway 11 to Mill Street/SR 1149, from Mill Street/SR 1149 to East Street, from East Street to Old Tar Road/SR 1700, and from Old Tar Road/SR 1700 to Cooper Street/SR 1711 (2.38 miles)

- *Mill Street / Old NC Highway 11 / SR 1149 (Major)*
  From NC Highway 11 to Boyd Street/SR 1149, from Boyd Street/SR 1149 to Tyson Street, from Tyson Street to Main Street/SR 1133, from Main Street/SR 1133 to Cooper Street/SR 1711, from Cooper Street/SR 1711 to Blount Street, and from Blount Street to Reedy Branch Road/SR 1131 (2.61 miles)

- *Old Tar Road / SR 1700 (Major)*
  From Fire Tower Road/SR 1708 to Vernon White Road/SR 1130, from Vernon White Road/SR 1130 to Main Street/SR 1133, from Main Street/SR 1133 to Cooper Street/Worthington Road/SR 1711, from Copper Street/SR 1711 to Laurie Ellis Road/SR 1713, Laurie Ellis Road/SR 1713 to Reedy Branch Road/SR 1131, and from Reedy Branch Road/SR 1131 to Ayden Golf Club Road/SR 1723 (4.55 miles)

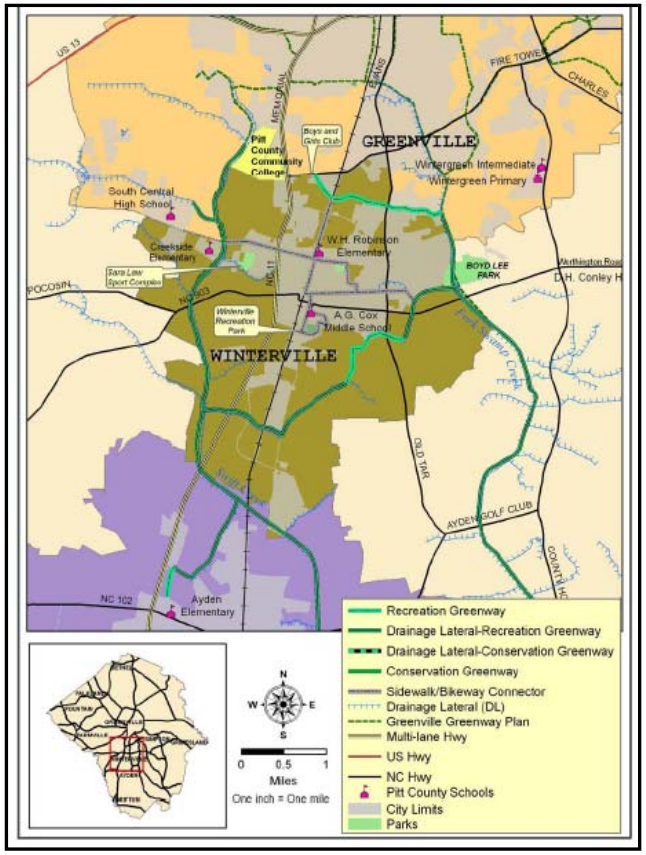
- *Railroad Street (Minor)*
  From Boyd Street/SR 1129 to Main Street/SR 1133 (0.40 miles)

- *Reedy Branch Road / SR 1131 (Minor and Major)*
  From Memorial Drive/NC Highway 11 to Fire Tower Road Extension and from Fire Tower Road Extension to Forlines Road/SR 1129 (1.35 miles)

- *Vernon White Road / SR 1130 (Minor)*
  From NC Highway 11 to Old Tar Road/SR 1700 (1.20 miles)

Pitt County Greenway Plan 2025 (February 2006)

The goals of this plan are to "encourage design of walkable communities with a mixed-use core to reduce vehicle miles traveled" and to "connect neighborhoods to nearby parks, shopping, schools and other neighborhoods forming part of a multimodal transportation network". This conceptual plan identified 215 linear miles of greenway primarily along major and critical streams and rivers in Pitt County. The plan proposed 14.7 miles (7.17 miles within Town limits, 7.53 miles within Winterville's ETJ). Winterville's proposed greenways consists of a mixture of trail types: Type 2 (limited natural surface), Type 4 (hardened structural surface), Type 5 (dual trail surface), and/or Type 6 (On-road, sidewalk and bikeways).

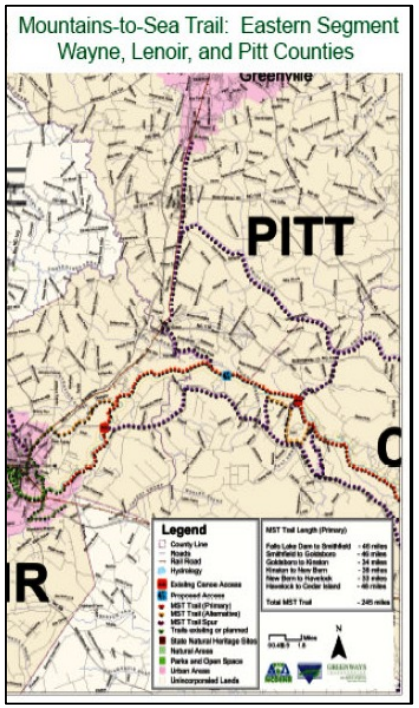


Map of proposed Town of Winterville area greenways, Pitt County Greenway Plan 2025

A Conceptual Plan for North Carolina's Mountains-to-Sea Trail from Fall Lake Dam to Cedar Island (April 2004)

North Carolina's proposed Mountain-to-Sea Trail (MST) extends nearly 900-miles from the Great Smoky Mountains to the Outer Banks. This conceptual plan identifies a route and alignment for a 246-mile eastern section of the trail, a program of action for acquiring the land and/or public right-of-way for the trail, and construction and management recommendations.

The eastern segment of the MTS is proposed within a 2000-feet corridor adjacent to the Neuse River from Fall Lake Dam in Wake County to Cedar Island in Carteret County for a distance of approximately 246 miles. The majority of this segment will be a natural surface hiking trail. A spur trail is also proposed to link towns, cities and other destinations to the main corridor. These spur trails would be either off-road or on-road trails. The plan proposes a 14.9 miles Greenville spur trail that runs Northwest from Neuse/MST corridor along Contentnea Creek and the Lenoir/Pitt County border, then turns North at CSX Railroad right-of-way to its completion in Greenville (running through Winterville).



Map of proposed routes of MTS trail in Pitt County

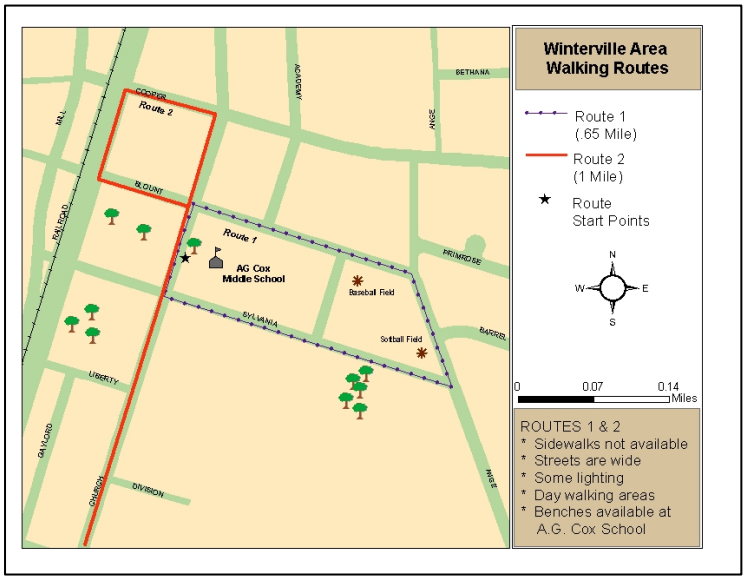
EXISTING PROGRAMS

Various agencies and organizations within the County have developed programs to promote walking to address obesity and health issues of Pitt County's citizens. According to the 2005 North Carolina State Center for Health Statistics, Pitt County ranked 7th in the State for the lowest percent of the population meeting the daily physical activity recommendation (only 37.3% of Pitt County meets the daily physical activity recommendation) and 13th in the State for highest body mass index (65% of Pitt County is overweight or obese). Much of this is attributed to a lack of pedestrian-friendly facilities that encourage walking.

In order to improve the quality of life and health of our community, efforts have been made over the past several years to develop safe, accessible places where people of all ages and abilities can walk in Pitt County. These efforts are part of a larger mission to build a community environment which is supportive of physical activity.

The Pitt Partners for Health

The Pitt Partners for Health is part of the statewide Healthy Carolinians program. Their role is to develop community partnerships with representative of local churches, businesses, community members, and human services agencies. A subcommittee of their program has initiated multiple walking trails in various locations across the county.



Map of Winterville's walking routes (partial)

Pitt County Physical Activity and Nutrition Coalition, the Pitt County Cardiovascular Health Program and the Pitt County Planning Department teamed to develop the "Trails to Good Health" walking routes. The walking trails and routes are designed to promote walking and were identified as the more desirable and safe routes. Most of these community-walking areas have been designed as loops. Therefore, once walkers know the area, they are encouraged to start at the most convenient point. Parking is available at schools, businesses, churches and parks, as well as public parking along streets.

In Winterville, .65 miles of walking routes were identified near the A.G. Cox Middle School. These routes are characterized on the brochure as "Day walking areas", "Some lighting", "Sidewalks not available, but roads are wide", "be careful here...this is a mini highway but not much traffic is present." Unfortunately, the routes are not well marked for easy use; instead, a walking route brochure is necessary to know the designated routes and its features.

Recommendation:
Install signage and lighting along these walking routes to ensure easy use by pedestrians.

Winterville Police Department

Community Watch Program

The purpose of the Neighborhood Watch Program is to reduce or eliminate criminal opportunity through citizen participation in crime prevention measures. All members of a neighborhood are encouraged to be alert and aware, reporting suspicious and criminal activity to the police, initiating actions which reduce criminal opportunity, and participate in periodic meetings on subjects of interest and safety in the community. An important first step is to know your neighbor and know what is going on to provide a safe environment to encourage outdoor activities (playing, walking, etc.).

Cops on Bikes

Winterville has a Cops on Bikes program to assist in enforcing the rules and regulations of the road and to promote bicycle safety.

Bicycle Rodeo Program

Winterville's Police Department holds an annual "Bicycle Rodeo" to promote bicycle safety, but there is no program focused upon pedestrian safety. Traffic safety is addressed by the Pitt County Schools, although great opportunities exist to increase partnerships and programs applicable to all members of the Winterville community from students to senior citizens.

Pitt County Schools Eat Smart Move More Program

Eat Smart Move More program is a statewide movement that encourages healthy eating and physical activity wherever people live, learn, work, play and pray. Its mission is to reverse the rising tide of obesity and chronic disease among North Carolinians by helping them to eat smart, move more and achieve a healthy weight. Pitt County Schools have joined the Eat Smart Move More movement upon receiving a FitTogether grant from the Health and Wellness Trust Fund. The Pitt Memorial Hospital Foundation has also contributed funds for this project.

Eat Smart Move More Initiatives in Pitt County Schools

Pitt County Schools have developed nutrition and physical activity programs for students and staff. The continued success of these programs is possible by a strong partnership between Pitt County Health Department, Brody School of Medicine, East Carolina University, Pitt County Memorial Hospital, ViQuest, Pitt County Health Education Foundation, and Pitt Partners for Health. Current programs are summarized below:

- Go Fit! After School - All schools have implemented the GO FIT! After School Program The program allows children to participate in weekly nutrition lessons, engage in 90 minutes of physical activity daily, and enjoy healthy snacks.
- Parent Newsletters - Every month a newsletter is sent home in the student's folder in K-5 that highlights nutrition and physical activities for the month. The goal of this program is to educate and encourage healthy eating and physical activities to do as a family.
- Active Recess - All classrooms in kindergarten through 5th grade have physical activity equipment kits and an "Active Recess For All" manual designed to get children active during recess. The NC Department of Public Instruction policy requires that all children receive 30 minutes of physical activity daily . This year the goal for active recess is 90 minutes per week, in addition to two days of physical education.
- Project Yeah – Every spring, Pitt County Community Schools and Recreation provides an incentive program for students in grades 3rd – 5th that challenge them to increase their physical activity levels outside the school day. Top performing classrooms and/or students receive a field trip to the East Carolina University Student Recreation Center. Each school must register for this program in January.
- Walking Trails - Walking trails have been placed at Ayden Elementary, Belvoir Elementary, Bethel School, Eastern Elementary, Elmhurst Elementary, Falkland Elementary, G.R. Whitfield, Northwest Elementary, Sam D. Bundy, Wellcome Middle, and the Wintergreen schools. The community is encouraged to use the trails during non-school hours. This school year, one more school will receive a walking trail; unfortunately there are no schools within Winterville participating in this program yet.
- Staff Wellness Program - Six elementary schools are participating in an incentive program designed to get staff eating smart and moving more. A graduate student from the Activity Promotion Lab at East Carolina University is coordinating the program.

Recommendation:
Continue working with Pitt County Public Health Department on expanding and improving existing programs, as well as identifying new programs.

NCDOT Transportation Improvement Program (TIP)

There are a few construction projects currently listed on the NCDOT TIP within this Plan's study area (TIP projects outside the Plan's study area were not discussed or mapped). Some of these projects could incorporate pedestrian facilities. Map 3.1 illustrates the location of those projects with mapped routes.

TIP Projects

1. Fire Tower Road (SR-1708) highway improvement project (U-3613B) – Widen existing two/three-lane roadway to multi-lane urban section facility with sidewalk, bicycle, and landscaping improvements from Corey Road (SR-1709) to Memorial Drive (NC 11). This project is currently under construction.

2. Fire Tower Road (SR-1708) highway improvement project (U-3613A) – Construct a multi-lane urban section facility on new location with sidewalk, bicycle, and landscaping improvements from Memorial Drive (NC-11/903) to SR 1128/Davenport Farm Road (1.6 miles). This is currently an unfunded project.

3. Evans Street and Old Tar Road (SR-1700) highway improvement project (U-2817) – Widen existing two/three-lane roadway to multi-lane urban section facility with sidewalk, bicycle, and landscaping improvements from Greenville Boulevard (US-264A) to Worthington Road/Cooper Street (SR-1711) for a total of 3.8 miles. This project is currently programmed for planning and environmental studies only.

4. Worthington Road (SR-1711) bridge replacement improvement project (B-4602) – Replacement of an existing bridge over Fork Swamp. This is currently an unfunded project.

5. NC 903 Highway bridge replacement improvement project (B-4232) – Replacement of an existing bridge over Swift Creek. Funding has been allocated for construction in fiscal year 2010.

6. Hazard elimination projects (W-5102) – Various safety improvements for SR 1711/Worthington Road from SR 1700/Old Tar Road to NC 43 (3.7 miles). TIP does not state the exact locations of these safety improvements or if they contain pedestrian facilities; however, wherever possible pedestrian accommodations should be considered. Slated for construction in fiscal year 2010.

MPO Priority Transportation Improvement Projects

The following are improvement projects identified by the Greenville Urban Area MPO Transportation Advisory Committee for Winterville that were submitted for inclusion into NCDOT TIP in November 2007. These projects are an unmet need, funding has not been allocated in the TIP for them. Map 3.1 shows the location of these projects.

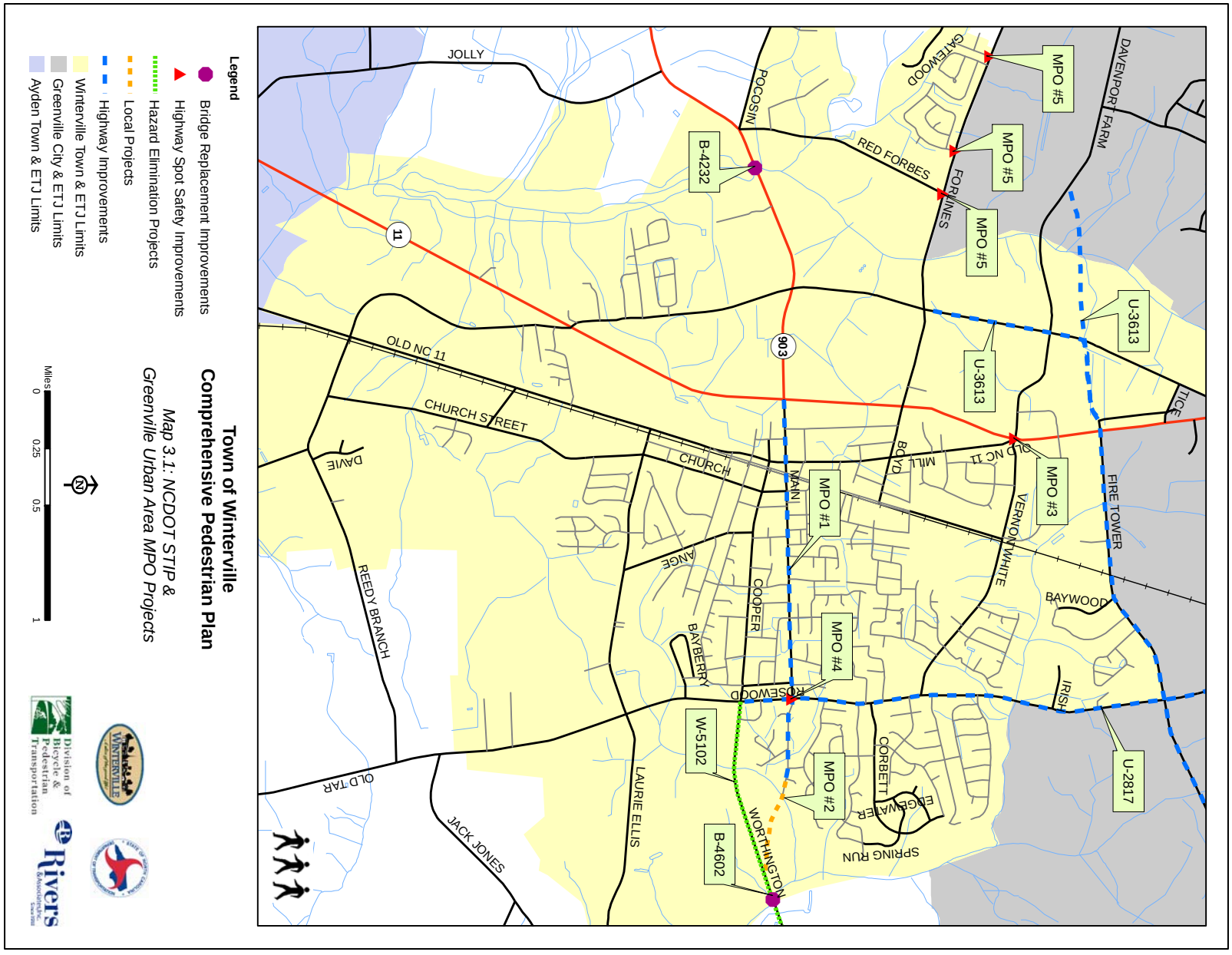
1. Main Street (SR-1133) highway improvement project – Reconstruct existing curb and gutter position with sidewalk, landscaping, and bicycle improvements from NC-11 to the end of curb and gutter; widen existing two-lane roadway to a multi-lane urban section facility with sidewalk, landscaping, and bicycle improvements from the end of existing curb and gutter to the end of the existing pavement east of Old Tar Road (SR-1700).

2. Main Street Extension (local project) – Construct a new multi-lane urban section facility with sidewalk, landscaping, and bicycle improvements from end of roadway to Worthington Road (SR-1711).

3. NC-11/Davenport Farm Road (SR-1128) Intersection (highway spot safety improvement project) – Improve safety and capacity at this intersection to accommodate pedestrians and bicyclists.

4. Old Tar Road/Main Street Intersection (highway spot safety improvement project) – Improve safety and capacity at this intersection; design and construct in anticipation of and accommodation of future widening of Old Tar Road (SR-1700) and Main Street (SR-1133).

5. South Central High School and Creekside Elementary School Safety Improvements (highway spot safety improvement project) – Improve safety on Forlines Road (SR-1126) in the vicinity of these schools. (Map 3.1 illustrates three locations along Forlines Road where highway spot improvements should be considered.)


Legend
Bridge Replacement Improvements
Highway Spot Safety Improvements
Hazard Elimination Projects
Local Projects
Highway Improvements
Winterville Town & ETJ Limits
Greenville City & ETJ Limits
Ayden Town & ETJ Limits
Miles
0
0.25
0.5
1
Town of Winterville
Comprehensive Pedestrian Plan
Map 3.1: NCDOT STIP &
Greenville Urban Area MPO Projects
JOLLY
POCOSIN
GATEWOOD
DAVENPORT FARM
MPO #5
MPO #5
MPO #5
RED FORBES
FORBNES
B-4232
11
903
U-3613
U-3613
ITCE
OLD NC 11
CHURCH STREET
CHURCH
DAVIE
MAIN
MPO #1
MPO #3
MILL
BOYD
OLD NC 11
VERNON WHITE
FIRE TOWER
BAYWOOD
ANGE
REEDY BRANCH
COOPER
BAYBERRY
MPO #4
ROSEWOOD
IRISH
W-5102
CORBETT
EDGEWATER
MPO #2
U-2817
SPRING RUN
WORTHINGTON
B-4602
LAURIE ELLIS
OLD TAR
JACK JONES
Division of Bicycle & Pedestrian Transportation
Rivers & Associates, P.C.

EXISTING POLICIES & INSTITUTIONAL FRAMEWORK

There are few existing pedestrian-related policies at the local as well as at the state and federal level. The following are these policies.

Local Ordinances

Winterville has committed to improving the pedestrian environment through approving a 2001 text amendment to their Subdivision Ordinance (Chapter 154 of the Code of Ordinances) to require the subdivider to provide the following:

1) Sidewalks shall be provided with public street extensions.
2) Location of proposed sidewalks required shall be in compliance with Town standards.
3) Sidewalks shall be along both sides of all minor and major thoroughfares as shown on the Thoroughfare Plan.
4) Sidewalks shall be along one side of all local streets.
5) Sidewalks shall be along one side of cul-de-sac streets with the sidewalk terminating where the cul-de-sac turnaround begins.
6) Arrangement of sidewalks in new subdivisions shall make provision for the continuation of existing sidewalks in adjoining areas.

Recommendation:
Require construction of sidewalks for all types of development, not just subdivisions.

Subdivisions are also required to be designed in relationship to adjoining property and land uses through conformance with Thoroughfare Plan, Street classification, and connection to adjoining property. And "cul-de-sacs shall not be used to avoid connection with an existing street to avoid the extension of a of thoroughfare or collector street, or to avoid connection to adjoining property....cul-de-sacs shall not be used to provide access to development on the boundary of the development."[i]

Recommendation:
Require pedestrian connectivity from sidewalks to the front of establishments.

Winterville's Zoning Ordinances (Chapter 155 of the Code of Ordinances) also requires that all entrances and exits to public streets shall be placed and constructed in accordance with NCDOT's street and driveway access policy.

Recommendation:
Place a maximum number of parking spaces allowed instead of a minimum.

The Town requires all sidewalks constructed on town property, town right-of-way or easement to be a minimum of four-inch (4") thick and five-feet (5') wide and must conform to the Town Manual of Standards Designs and Details (Chapter 98 of the Code of Ordinances).

State and Federal Policies

There are several State and Federal policies for the development of pedestrian facilities. Through updating these guidelines, NCDOT has shown they are committed to improving bicycling and pedestrian conditions and recognizes these facilities are "critical elements of the local, state and federal transportation system".[ii] These guidelines provide communities with information regarding NCDOT funding for replacement of existing sidewalks as a part of street widening projects.

In 2000, the North Carolina Department of Transportation (NCDOT) updated the *1993 Pedestrian Policy Guidelines*. The NCDOT pedestrian policy guidelines can be found at: http://www.ncdot.org/transit/bicycle/laws/laws_pedpolicy.html

NCDOT's greenway policy can be found at the following link: http://www.ncdot.org/transit/bicycle/laws/laws_greenway_admin.html.

The NCDOT's Traditional Neighborhood Development (TND) Street Design Guidelines are available for proposed developments. These guidelines delineate permit locations and encourage developers to design roadways according to TND guidelines rather than conventional subdivision standards. These guidelines promote the use of multi-mode/shared street that allows for pedestrians and bicyclists and encourages mixed use development. The link to this guideline can be found at: http://www.ncdot.org/doh/preconstruct/alturn/value/manuals/tnd.pdf

On September 8, 2000, the N.C. Board of Transportation adopted a *Resolution for Bicycling and Walking* to make bicycling and walking a critical part in the state's long-range transportation system. Additional information can be found at: http://www.ncdot.org/transit/bicycle/laws/laws_resolution.html

In October 2008, the Federal Highway Administration (FHWA) updated the *Policy for Mainstreaming Nonmotorized Transportation (FHWA Guidance – Bicycling and Pedestrian Provision of Federal Transportation Legislation)* and can be found at: http://www.fhwa.dot.gov/environment/bikeped/bp-guid.htm

[i] Section 154.21(3), Article 3, Chapter 154, Subdivision Ordinance
[ii] North Carolina Department of Transportation, *The Department of Transportation Pedestrian Policy Guidelines,* Effective October 1, 2000.

SECTION 4 – STRATEGIC PEDESTRIAN SYSTEM PLAN

WINTERVILLE
A slice of the good life!

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SECTION 4 – STRATEGIC PEDESTRIAN SYSTEM PLAN

This section provides an overview of pedestrian system components including types of pedestrian corridors and opportunities within special focus areas. This section should be used in conjunction with the recommendations listed in Section 8.

SYSTEM OVERVIEW

Winterville's current pedestrian system is limited and needs improvements, although the existing infrastructure provides a good foundation to build upon. For instance, new subdivisions are required to install sidewalks on at least one side of the street. However, a lack of well-defined crossings and continuous sidewalks restrict connectivity and safety and an overwhelming portion of Winterville is disconnected and auto dependent. This Plan will allow Winterville to develop a complete network of sidewalks and greenways that will provide the connectivity and assessability needed to make the Town a walkable community.

Winterville's pedestrian network is fragmented making it hard for people to navigate the community. In places where there are sufficient sidewalks such as Downtown and near A. J. Cox Middle School, the walking surface is often times in disrepair and unattractive. These conditions do little to provide easy connectivity to pedestrians with disabilities. Unattractive sidewalks and views (dilapidated structures and over-grown yards) can discourage pedestrian activity.

Outside of the immediate Downtown area, sidewalks become more sparsely located. There is little to no pedestrian connectivity for surrounding neighborhoods to Downtown activities. The sidewalks around the rest of town are primarily incomplete segments. Many of the neighborhoods outside of Downtown are newer residential and commercial developments. The majority of the residential developments are designed with cul-de-sacs and dead ends that prohibit inter-neighborhood connectivity. Some of these new neighborhoods have sidewalks but no connectivity to community facilities and amenities. There is commercial activity located close to residential neighborhoods but these sites feature little to no pedestrian infrastructure to adjacent neighborhoods. These commercial establishments are designed with vehicular access in mind. The characteristics of this design incorporate building setbacks far from the street with frontal parking lots. Development is also occurring farther away from the center near the town's edge. These schools, retail centers, and residential subdivisions should be providing adequate pedestrian connectivity into the community. This will become increasingly important as the community continues to expand. To curb the trend of walker inaccessibility, new development regulations should require more pedestrian infrastructure and facilities.

Barriers to Pedestrian Travel

In order to improve pedestrian accessibility and connectivity, Winterville has to address the barriers/obstacles that impede the creation of a walkable community. These barriers are both natural and man-made.

Natural and Environmental Barriers

Natural barriers restrict Winterville's walkability. Although the Town has no major rivers or large bodies of water, natural barriers still exist and restrict pedestrian connectivity. One of such barriers is the Fork Swamp Creek. This stream is located on Winterville's eastern edge and separates the community from the City of Greenville. Boyd Lee Park, a major Pitt County park, is on the east side of the Fork Swamp Creek. This park is located outside the extra territorial jurisdiction (ETJ) of Winterville but it is within walking distance of the Town's residential neighborhoods. Currently, there are no safe accesses over the creek for pedestrians. Due to these current conditions, citizens that would like to use the park's facilities have to travel by automobile to the site. A creation of pedestrian networks along this creek will increase recreational opportunities for Winterville's citizens.

Located on Winterville's western edge, Swift Creek acts as another natural barrier. Swift Creek separates some areas of the town, making it hard to walk to community amenities. Located on the western side of the creek are South Central High School and Creekside Elementary. As Winterville continues to grow, access to these facilities will become increasingly important. Placing pedestrian improvements in these areas will insure future neighborhood connectivity to public facilities.

Man-Made Hazards

In the analysis of Winterville's pedestrian system, several man-made barriers were identified. These obstacles restrict pedestrian connectivity throughout the Town of Winterville. The largest barrier to restrict connectivity is Highway 11. The highway is a major corridor that produces heavy truck and automobile traffic. This thoroughfare is located just west of Downtown Winterville. Positioned along this corridor are a variety of commercial/retail establishments and industrial uses. Although clustered together, it is difficult to travel from an establishment on one side of the road to the other due to inadequate pedestrian crossings. Due to inconveniences and danger, most people choose to travel by automobile to these destinations. Designated crossings along Highway 11 should be established to connect existing and future development.

Main Street serves as the Town's east to west corridor. The corridor features a wide street and discontinuous segments of sidewalk. Due to the street's width, it requires more time for pedestrians to cross the street, thus making it more dangerous for pedestrians to cross the street. As a major residential street, it has few continuous sidewalks and no street crossings.

Old Tar Road is also a barrier to pedestrian connectivity. Old Tar Road is narrow and features a mixture of commercial and residential uses. The road divides several residential subdivisions from amenities and commercial uses that are on the west side. Even though this road has become a residential corridor, there are no sidewalks or designated pedestrian crossings. It is important to provide safe crossings for pedestrians to encourage people to walk.

The CSX railroad is a dominate feature in Winterville's landscape, bisecting the community along Railroad Street. Due to its location, it creates a barrier for pedestrian activity between the west and east side of Winterville. Pedestrians have only a few areas to cross the railroad along Railroad Street; however, those areas require pedestrians to walk within the vehicular travel lanes. This increases the danger for students walking to nearby

schools that have to cross the railroad tracks. In addition, the available railroad crossings for pedestrians are not ADA-complaint. For instance, the opening or gap between the rail and existing asphalt is too big, resulting in a cane or walking stick falling between the gaps.

Additional safety measures are strongly recommended for these railroad crossings. A variety of preventative measures can be employed by Winterville, such as improved signage, flashing light signals, safety education, fencing that encloses the railroad right of way to restrict pedestrian crossing to designated areas only, and providing additional protection by installing barriers between any protruding objects and pedestrian pathways. Use of detectable warnings strips next to the tracks is strongly recommended. These strips will warn visually impaired pedestrians that they are close to the tracks.

Safety & Security Hazards

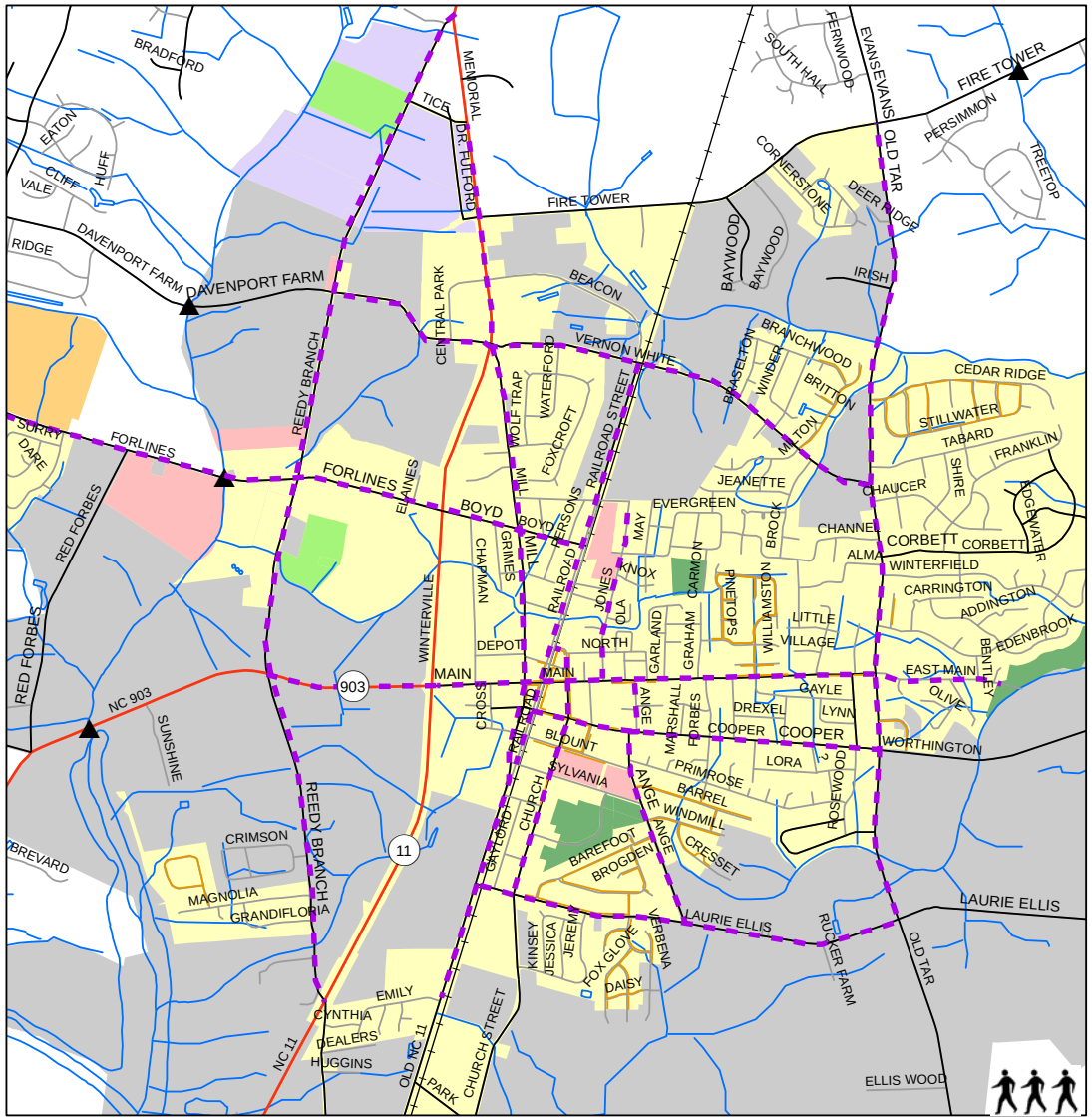
Collectively, Winterville has a disproportionate share of vehicular oriented spaces in comparison to pedestrian facilities. Areas with pedestrian amenities are sparsely located and unconnected. Gaps in the sidewalks increase danger for walkers by forcing them to walk in the streets. Pedestrians walking in streets are susceptible to crashes with on-coming traffic. This hazard is even greater for elderly and disabled citizens. These sidewalk system users may be less agile or use handicap accessories. Due to the danger, many people will avoid using the sidewalk system. To encourage pedestrian activity, missing sidewalks segments should be filled. Along with infilling sidewalk gaps, existing damaged sidewalk segments must be repaired or replaced. Overtime, sidewalks may begin to buckle or become layered with debris. This debris could be soil, grass or other obstructions. These obstacles can create tripping hazards for walkers. It can also pose a hazard to people using wheelchairs and other mobility devices.

Goals for Future System:

- Provide more walking opportunities to promote healthy lifestyles
- Provide safer walking environments
- Build a sense of community
- Improve connectivity and accessibility to allow for viable alternative transportation options
- Improve accessibility and safety for children, elderly, and the handicapped

Lack of personal security can be another barrier that deters people from utilizing pedestrian facilities. People are unlikely to utilize networks that are poorly lit, appear un-patrolled by police, or have unsightly buildings or roaming animals. To address this perception, street level lighting should be installed along sidewalks with inadequate visibility. Increased police patrols via foot or bicycle will help to increase personal security.

Inadequate sidewalks and crossing signals also detract from a person's sense of security. Crosswalks serve as safe means for people to cross streets by providing a separation between drivers and pedestrians, thus the lack of crosswalks force people to walk onto streets without any marked crossing. Additionally, crossing signals and/or four-way stop signs assist walkers crossing busy streets. These improvements should be implemented in areas of potentially high pedestrian activity, such as around parks/recreation, schools, Downtown, major intersections, previous vehicle-pedestrian crash sites (as noted in Section 2), and local destinations.



Town of Winterville Comprehensive Pedestrian Plan

Map 4.1: Pedestrian Corridors

Legend

- Pedestrian Corridors
- Existing Sidewalk
- BridgeLocations_points
- SR Roads
- NC Highways
- Railroad
- Stream or Creek
- Winterville Parks
- Pitt County Parks
- Pitt Community College
- High School
- Elementary School
- Winterville City Limits
- Winterville ETJ

N

0 0.375 0.75 Miles

Division of Bicycle & Pedestrian Transportation

Rivers & Associates, Inc.

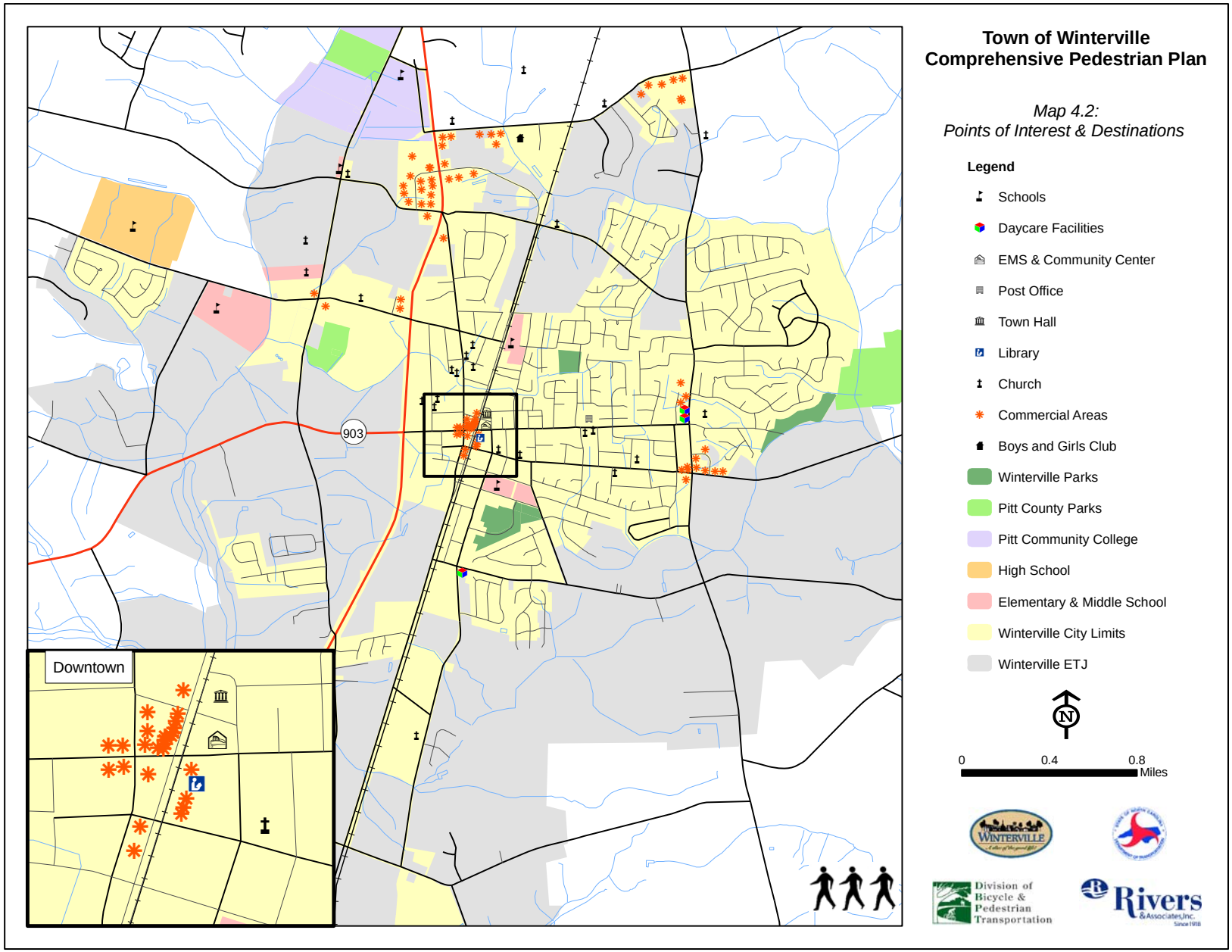
CORRIDOR IDENTIFICATION

To ensure easy connectivity, several roads were identified as prime corridors for pedestrian travel. These corridors were determined based on their potential connection to existing sidewalks and proximity to major pedestrian destinations. The following corridors were determined as areas in need of pedestrian accessibility improvements. The locations of these thoroughfares are illustrated on Map. 4.1.

- Reedy Branch Road
- Davenport Farm Road
- Vernon White Road
- Mill Street/ Old NC 11
- Main Street/ NC 903
- Highway 11
- Church Street
- Laurie Ellis Road
- Cooper Street
- Railroad Street
- Old Tar Road
- Boyd Street
- Forlines Road
- Ange Street
- Jones Street

Points of Interest and Destinations

To help identify areas in need of pedestrian amenities, high traffic destinations throughout the community were identified. They consist of typical driving trips to nearby commercial districts, schools, and recreational facilities. Currently, most of these destinations are not accessible by pedestrians due to incomplete sidewalk segments, no sidewalks or crossings. An illustration of these points of interest and destinations can be seen on Map. 4.2.



SHORT-TERM AND LONG-TERM OPPORTUNITIES

The Town of Winterville is a dynamic community that has different development patterns throughout the incorporated limits and ETJ. Due to these development patterns, the Town was divided into four quadrants (Northwest, Southwest, Northeast and Southeast). The boundaries of these quadrants are Main Street and NC Highway 11. These man-made boundaries were selected based upon their central location and bisection of the Town. Task Force members were asked during a meeting to identify potential opportunities for these regions. The following paragraphs provide a brief summary of these opportunities. A complete list of their comments is available in Appendix A.

Northwest Study Region

The northwest region is home to several major uses such as Creekside Elementary School, South Central High School, Pitt Community College, Sara Law Softball Complex, Downtown, and numerous residential, commercial and industrial developments. However, very few of the major and minor thoroughfares in the area have pedestrian facilities to provide connectivity to adjacent uses. Improving these thoroughfares should be an opportunity. In addition, utilizing Swift Creek which runs nearly parallel to Reedy Branch Road should be another opportunity to provide connectivity to surrounding uses.

Southwest Study Region

The southwest study area is home to a variety to land uses; the major uses are residential, agricultural and commercial. Due to the amount of undeveloped land in this area, this area has been identified as a "future growth area" by Winterville's Future Land Use Plan and Town staff. Therefore, pedestrian-friendly design guidelines are needed to ensure future development is built with pedestrians in mind, major thoroughfares should be improved with pedestrian facilities, and the continuation of a greenway along Swift Creek should be looked at as opportunities to provide better connectivity and safety for pedestrians.

Northeast Study Region

The northeast study region is Winterville's most densely populated area with several large subdivisions along Old Tar Road. However, these subdivisions have little or no pedestrian amenities with numerous cul-de-sacs that serve as a major obstacle for pedestrian connectivity. The older residential neighborhoods have narrow streets and no sidewalks, resulting in few safe routes to nearby destinations (post office, library, Town Hall, Downtown, Hillcrest Park, W.H. Robinson Elementary School, and Winter Village Shopping Center). This area needs additional or new ADA-compliant pedestrian facilities along all thoroughfares, in addition to connections from cul-de-sacs to surrounding recreational opportunities.

Southeast Study Region

The southeast study region is a diverse and growing area of town. This region is predominately residential; however, new commercial services and retail establishments are being developed. Winterville's Future Land Use Plan and Town staff has identified this area as a "future growth area" due

to the Town's Future Land Use Map and pending development applications. Therefore, pedestrian-friendly ordinances are necessary to ensure this new development is built with pedestrians in mind. Improvements to major and minor thoroughfares should be done to improve the connectivity and safety of pedestrians to Winterville Recreation Park, A.G. Cox Middle School, and residential neighborhoods.

Field Analysis

On Tuesday, May 20, 2008, representatives from Rivers & Associates (Colleen Simmons) and Louis Berger Group (Alison Carpenter) conducted a field visit in order to collect information on pedestrian conditions for this Plan. The following opportunities for improvements to the pedestrian environment were identified for consideration.

Pedestrian Crossings / Intersection Improvements Opportunities

- Add crosswalks and walk signals at the Downtown intersection of Main Street and Mill Street, and consider similar treatments for other signalized intersections throughout the community.
- The town should consider 4-way stops at major [un-signalized] intersections near school entrances, such as the Boyd Street and Mill Street intersection in front of W. H. Robinson Elementary.
- Install a four-way stop and high-visibility crosswalks at the Jones Street and Kennedy Street intersection (behind W. H. Robinson Elementary).
- Improvements to the intersection of Worthington Street and Railroad Street, near WH Robinson Elementary, should be made to create a safer crossing for students. Recommendations could include a four-way stop with marked crosswalks.
- See Map 4.3 for suggested locations of crossing improvements throughout Winterville. Many of these locations need further study, but treatment options include walk signals, curb ramps, marked crosswalks and curb extensions.

School Zones Opportunities

- School zones should be marked at all Winterville schools with pavement markings and flashing speed limit signs. The Town may consider active speed monitor speed limit signs in school areas where speeding is a problem.
- Important crossings should be painted with high-visibility, zebra-striped crosswalks and marked with high-visibility "school crossing" signs.
- Install a sidewalk along Kennedy Street to link residential area north of W. H. Robinson Elementary School to the school property (high-priority).
- Install a sidewalk along Forlines Road from Elm Street to Swift Creek to provide connection from residential areas to South Central High School and Creekside Elementary School.
- Install a sidewalk along Ange Street from Windmill Drive to Barrel Drive to provide connection to Winterville Recreation Park and A.G.Cox Middle School from neighboring residential neighborhoods.
- Install a sidewalk along Sylvania Street to provide a continuous connection from neighboring residential areas.
- Install a sidewalk along Church Street in front of A.G. Cox Middle School to improve safety and connectivity to the school.

- Install a sidewalk along Worthington Street to provide a connection to W.H. Robinson Elementary School and nearby residential neighborhoods.
- Remove the existing crosswalk on Mill Street near Boyd Street and instead consider a four-way stop with curb extensions, crosswalks and "Yield to Pedestrians" signage to create safer pedestrian movements to/from the school and surrounding neighborhood.
- Schools should be a priority for pedestrian improvements, including intersection improvements and greenway connectors to existing sidewalks. Funding may be available through the NCDOT Safe Routes to School program.

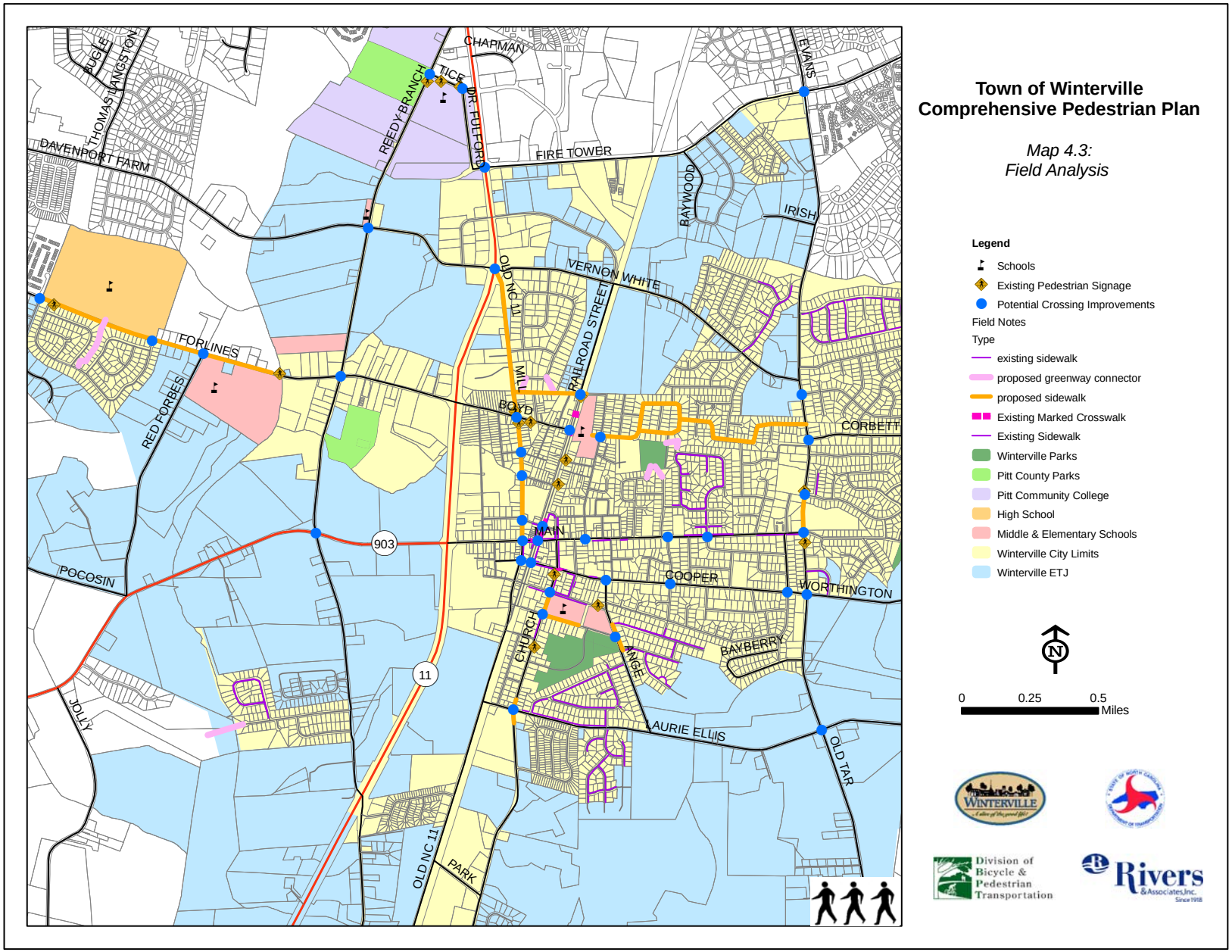
Policies Opportunities

- Consider development of street tree ordinances to add and protect shade trees along major thoroughfares and Downtown streets.
- Consider additional language in ordinances to encourage greenway connections between cul-de-sacs and schools, parks or other cul-de-sacs. Such greenway connections, as illustrated on Map 4.3, could greatly benefit pedestrians throughout Winterville and more safely accommodate children walking to parks, schools and other neighborhood destinations.
- Update sidewalk requirements in existing ordinances to require sidewalks on both sides of major arterials and connectors, as well as to require sidewalks along the frontage of property in order to create better sidewalk connections along major roads. Sidewalk requirements should be consistent for subdivided and un-subdivided (commercial) development.
- Create a maintenance program/policy to help keep sidewalks clear of debris and overgrowth.

Other Opportunities

- Install a sidewalk along Old Tar Road from Ashley Meadows Drive to Main Street to provide connection to existing commercial establishments.
- Install a sidewalk along Mill Street from Vernon White to Main Street to provide connection to Downtown from the surrounding residential areas.
- Install a sidewalk along Church Street to connect south Church Street and Laurie Ellis Road providing a connection to the existing daycare facility on the south side Laurie Ellis Road.
- In order to slow traffic and encourage on-street parking, parallel parking stalls should be painted on streets such as Church Street, Main Street and Cooper Street.
- Consider traffic calming tools such as speed humps, neckdowns, curb extensions and/or enforcement techniques to slow traffic on streets with speeding problems, such as Old Tar Road and Mill Street. These types of traffic calming techniques are summarized in Section 5.

Map 4.3 displays these identified opportunities.


Town of Winterville
Comprehensive Pedestrian Plan
Map 4.3:
Field Analysis
Legend
Schools
Existing Pedestrian Signage
Potential Crossing Improvements
Field Notes
Type
existing sidewalk
proposed greenway connector
proposed sidewalk
Existing Marked Crosswalk
Existing Sidewalk
Winterville Parks
Pitt County Parks
Pitt Community College
High School
Middle & Elementary Schools
Winterville City Limits
Winterville ETJ
0
0.25
0.5
Miles
CHAPMAN
BUGLE
THOMAS LANGSTON
DAVENPORT FARM
REEDY BRANCH
TICE
DR. FULFORD
FIRE TOWER
EVANS
BAYWOOD
IRISH
OLD NC 11
VERNON WHITE
RAILROAD STREET
MILL
FORLINES
RED FORBES
BOYD
CORBETT
MAIN
903
POCOSIN
COOPER
WORTHINGTON
CHURCH
BAYBERRY
ANGE
11
JOLLY
LAURIE ELLIS
OLD TAR
OLD NC 11
PARK
WINTERVILLE
Division of Bicycle & Pedestrian Transportation
Rivers & Associates, Inc.

POTENTIAL PROJECTS / INFRASTRUCTURE IMPROVEMENTS

Based upon a variety of information received and obtained during plan development, several potential projects and infrastructure improvements were identified:

- Provide access to Downtown Winterville from all portions of the community
- Improve a pedestrian environment in Downtown Winterville
- Provide safe access for children and adults to walk to and from school, parks, and commercial areas
- Provide connectivity from residential developments to surrounding areas
- Provide safe, well-defined crossings at specific locations to improve connectivity to destinations
- Provide an alternative to sidewalks to access destinations and provide recreation

Five types of pedestrian projects have been identified for Winterville and are discussed below.

Pedestrian Amenities

The pedestrian environment includes more than sidewalks and crossings; pedestrian-level lights, landscaping, and furniture also play an important role in creating a pleasant walking experience. The current pedestrian amenities are not adequate, for instance, flower boxes along Railroad Street are falling apart and do not have plants. As new street projects are planned, consideration for pedestrian amenities should be considered to soften the urban environment and make pedestrians feel welcome.

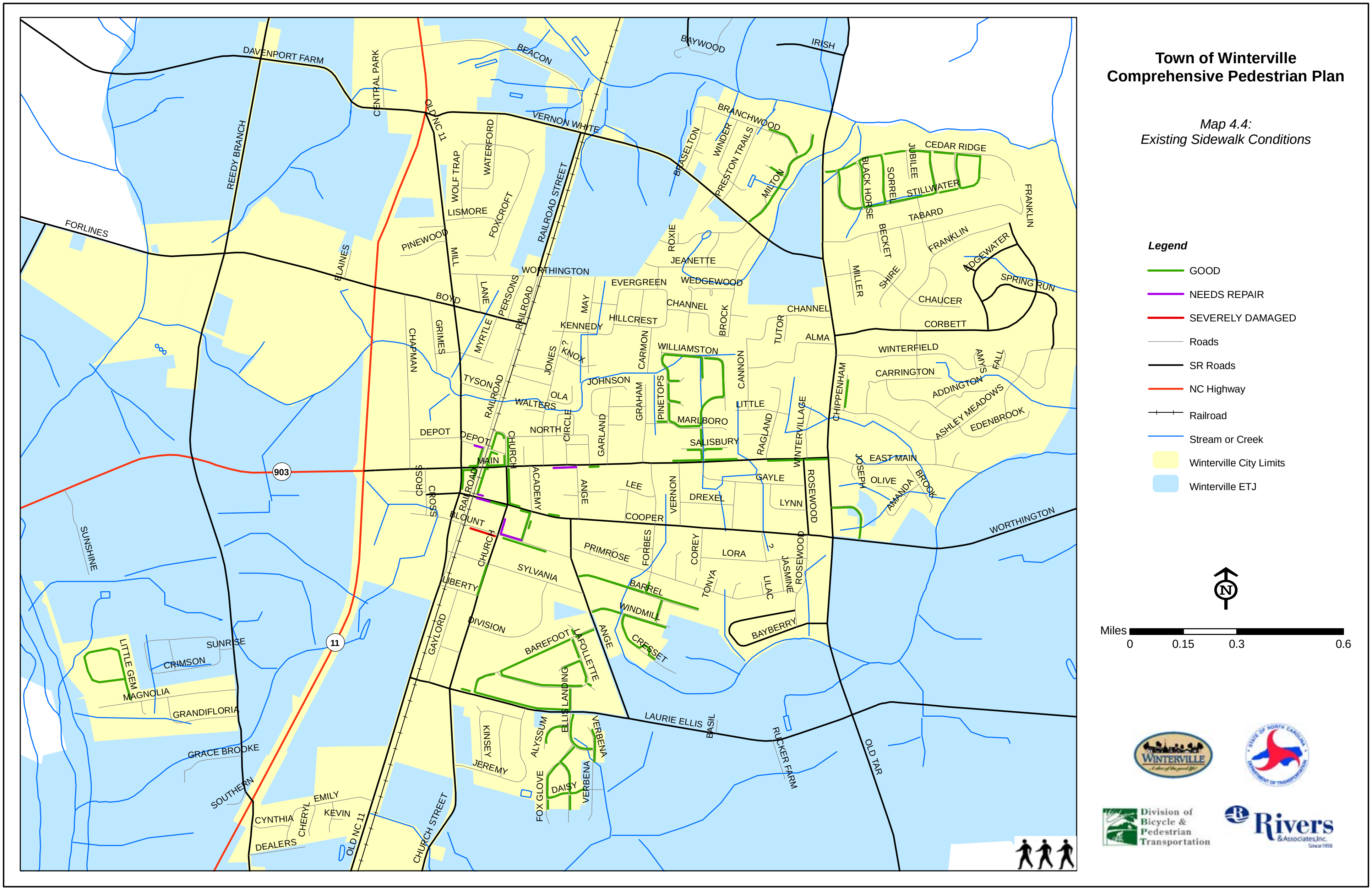
Existing Sidewalk Repairs

Existing sidewalks in disrepair need to be demolished and reinstalled with wider sidewalks and curb cuts to satisfy the standards set forth by the American Disability Act of 1991. Map 4.4 illustrates existing sidewalk conditions. The sidewalks that need repair are concentrated within the Downtown and adjacent neighborhoods, and range from 385 feet to 85 feet in length.

- Blount Street
- Church Street
- Depot Street
- Cooper Street
- Main Street

Map 7.1 in Section 7 illustrates the locations for potential sidewalk spot improvements and existing sidewalk repair projects.

Sidewalk segment in disrepair along Blount Street


Town of Winterville
Comprehensive Pedestrian Plan
Map 4.4:
Existing Sidewalk Conditions
Legend
GOOD
NEEDS REPAIR
SEVERELY DAMAGED
Roads
SR Roads
NC Highway
Railroad
Stream or Creek
Winterville City Limits
Winterville ETJ
N
Miles
0
0.15
0.3
0.6
DAVENPORT FARM
CENTRAL PARK
BEACON
BAYWOOD
IRISH
OLD NC 11
VERNON WHITE
WATERFORD
WOLF TRAP
REEDY BRANCH
BRANCHWOOD
BRASELTON
WINDIER
PRESTON TRAILS
MILTON
CEDAR RIDGE
JUBILEE
BLACK HORSE
SORREL
STILLWATER
FRANKLIN
TABARD
BECKET
LISMORE
FOXCROFT
RAILROAD STREET
FORLINES
PINEWOOD
BLAINES
MILL
WORTHINGTON
ROXIE
JEANETTE
WEDGEWOOD
EVERGREEN
MILLER
SHIRE
EDGEWATER
SPRING RUN
CHAUCER
BOYD
LANE
PERSONS
RAILROAD
MAY
KENNEDY
HILLCREST
CHANNEL
BROCK
TUTOR
ALMA
CORBETT
CHAPMAN
GRIMES
MYRTLE
JONES
KNOX
CARMON
WILLIAMSTON
CANNON
WINTERFIELD
TYSON
JOHNSON
OLA
WALTERS
GRAHAM
PINETOPS
LITTLE
CHIPPENHAM
CARRINGTON
AMYS
FALL
ADDINGTON
ASHLEY MEADOWS
EDENBROOK
DEPOT
NORTH
CIRCLE
GARLAND
MARLBORO
SALISBURY
RAGLAND
WINTERVILLE
MAIN
CHURCH
EAST MAIN
JOSEPH
OLIVE
AMANDA
BROOK
903
CROSS
ACADEMY
ANGE
LEE
VERNON
DREXEL
GAYLE
LYNN
ROSEWOOD
BLOUNT
COOPER
WORTHINGTON
SUNSHINE
PRIMROSE
FORBES
COREY
LORA
JASMINE
LIBERTY
SYLVANIA
TONYA
LILAC
BARREL
WINDMILL
DIVISION
GAYLORD
BAYBERRY
CRESSET
BAREFOOT
LAFOLLETTE
LITTLE GEM
SUNRISE
CRIMSON
11
MAGNOLIA
GRANDIFLORIA
ELLIS LANDING
LAURIE ELLIS
BASIL
RUCKER FARM
OLD TAR
KINSEY
ALYSSUM
VERBENA
GRACE BROOKE
JEREMY
DAISY
FOX GLOVE
SOUTHERN
EMILY
CYNTHIA
CHERYL
KEVIN
DEALERS
CHURCH STREET
WINTERVILLE
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New Sidewalk Construction

New sidewalk construction projects are designed to provide and encourage pedestrian accessibility and connectivity between residential and destinations that are currently isolated. Improvements along the identified corridors will include linking existing sidewalks to form continuous pedestrian routes and improving crossing facilities. All sidewalk projects should possess curb cuts with ramps at all driveways and intersections. All major intersections (Old Tar/Cooper Street, Main Street/ Old Tar, and Mill Street/Main Street, Highway 11/Vernon White, and Firetower/Highway 11) should have marked crosswalks, signage, and pedestrian crossing signals to ensure safe pedestrian crossing. Sidewalks should be constructed on both sides of the street along all major thoroughfares and residential collectors. Sidewalks should be constructed and gaps should be filled on all existing thoroughfares and residential collector streets. All future and proposed street widening and new roadway construction projects within Winterville's jurisdiction should incorporate pedestrian facilities. See Section 7, Map 7.2, for potential sidewalk construction projects.

Greenway Corridor

Construction of off-road pedestrian facilities along linear drainage corridors, easements, and other tracts of open space are types of greenway corridor projects. These projects will provide an excellent alternative transportation option for pedestrians and bicyclists along a natural setting. The majority of the greenway corridors were identified in *Pitt County Greenway Plan 2025*, with additional connectors and small residential linkages to provide access and connectivity between residential areas. Refer to Section 7, Map 7.3, for potential greenway projects.

Pedestrian Crossings

Numerous hazardous or problematic pedestrian crossings have been identified in Winterville. Currently pedestrians in Winterville are faced with significant barriers to travel, created by Highway 11 and confusing, high volume intersections. Pedestrian crossings projects range from striping crosswalks to installing pedestrian signals and curb extensions to cross major thoroughfares and the CSX railroad tracks. Correcting dangerous crossings will encourage pedestrian travel and safely connect isolated portions of town. Several intersections have been identified as problem spots through field research, public input and Task Force meetings. These intersections include:

- Highway 11 and Firetower Road
- Highway 11 and Vernon White Road
- Mill Street and Hammond Street
- Mill Street and Main Street
- Mill Street and Tyson Street
- Mill Street and Boyd Street
- Mill Street and Cooper Street
- Mill Street and Depot Street
- Main Street and Gayle Street
- Main Street and Forbes Street
- Ange Street and Sylvania Street
- Jones Street and Kennedy Street
- Church Street and Blount Street
- Church Street and Sylvania Street
- Church Street and Laurie Ellis Road
- Cooper Street and Ange Street
- Cooper Street and Forbes Street
- Cooper Street and Rosewood Street
- Old Tar Road and Main Street
- Old Tar Road and Cooper Street

- Old Tar Road and West Firetower Road
- Old Tar Road and Ashley Meadows Drive
- Old Tar Road and Corbett Street
- Old Tar Road and Laurie Ellis Road
- Old Tar Road and Chaucer Drive
- Reedy Branch Road and Davenport Farm Road
- Reedy Branch Road and Forlines Road
- Reedy Branch Road and Highway 903
- Reedy Branch Road and Tice Street
- Forlines Road and Westminster Street
- Forlines Road and Elm Street
- Forlines Road and Red Forbes Road
- Dr. Fulford Drive and Pitt Tech Road

Adequate railroad and highway at-grade separated pedestrian crossings should be installed at Main Street, Cooper Street, Depot Street, Boyd Street, and Worthington Street. Map 7.4 in Section 7 illustrates these pedestrian crossings.

SECTION 5 – FACILITY STANDARDS & GUIDELINES

WINTERVILLE
A slice of the good life!

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SECTION 5 – FACILITY STANDARDS & GUIDELINES

Design considerations for different pedestrian facilities are examined in this section. All pedestrian facilities must meet the guidelines of Americans with Disabilities Act (ADA). This requirement allows persons with disabilities and persons of all ages to enjoy the facilities. In addition to being ADA-compliant, the construction and installation of pedestrian facilities in North Carolina must meet the following:

- American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Planning, Design and Operation of Pedestrian Facilities*
- Federal Highway Association (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD)*

In addition to AASHTO and MUTCD, the following documents serve as pedestrian facilities guides:

- *FHWA Pedestrian Facilities User Guide* (available at: http://drusilla.hsrc.unc.edu/cms/downloads/PedFacility_UserGuide2002.pdf)
- *Design and Safety of Pedestrian Facilities*, A Recommended Practice of the Institute of Transportation Engineers (ITE) (available at: http://safety.fhwa.dot.gov/ped_bike/docs/designsafety.pdf)
- *Pedsafe: Pedestrian Safety Guide and Countermeasure Selections System* (available at: http://www.walkinginfo.org/pedsafe/)
- *Designing Sidewalks and Trails for Access, Part I and II* (available at: http://www.fhwa.dot.gov/environment/sidewalks/index.htm and http://www.fhwa.dot.gov/environment/sidewalk2/)

Minimum Design Standards & Guidelines Provided For:

- Sidewalks and Walkways
- Multi-Use Trails and Greenways
- Intersection Treatments
  - Marked Crosswalks
  - Mid-Block Crossings
  - Curb Ramps
- Traffic Calming Devices
  - Curb Extensions
  - Chicanes
  - Raised Medians
  - Crossing Islands
  - Roadway Narrowing
- Railroad Crossings
- Signs and Signals
- Pedestrian Amenities
  - Street Lighting,
  - Landscaping
  - Pedestrian Furniture
- Commercial Development Guidelines
  - Driveway Design
  - Parking Lots
- Residential Development Guidelines

TYPICAL CROSS-SECTIONS AND PEDESTRIAN DESIGN CONSIDERATIONS & SAMPLE COST ESTIMATES

Minimum design guidelines and sample cost estimates are provided below, with a compilation of cost estimates in Appendix C.

Sidewalks & Walkways

Sidewalks and walkways provide a safe refuge for pedestrian from motorists, connect destinations, and increase walking trips; therefore, all new and existing roadways should include sidewalks or walkways for people to safely walk. AASHTO identifies seven attributes of well-designed sidewalks:

- *Accessibility* - Sidewalk networks should be accessible for all users and meet ADA requirements. All street intersections or mid-block crossings should be retrofitted with adequate curb ramps.

- *Adequate Width* - Sidewalks should be wide enough to accommodate the volume of people using the facility. Higher volume sidewalks should have larger widths while underused areas can have standard widths. For instance, sidewalks to and around schools, parks, and downtown need to be wider.

- *Safety* - Sidewalks should provide a sense of security and predictability. Pedestrians should not feel at risk due to traffic adjacent to them. Examples include placement of a vegetated buffer between the sidewalk and travel lane and installation of barriers between pedestrian lanes and traffic lanes on bridges.

- *Continuity* – Sidewalks should be contiguous and in good to excellent condition. If a pedestrian must walk around sections of sidewalk that is in disrepair, they are unlikely to use that sidewalk again.

- *Landscaping* - Plantings and street trees along the roadside would contribute to the overall psychological and visual comfort of pedestrians. However, there should be care taken in placement of landscaping to avoid blocking sight distance, reducing vertical and horizontal clearance of sidewalk, and creating potential hiding places for attackers.

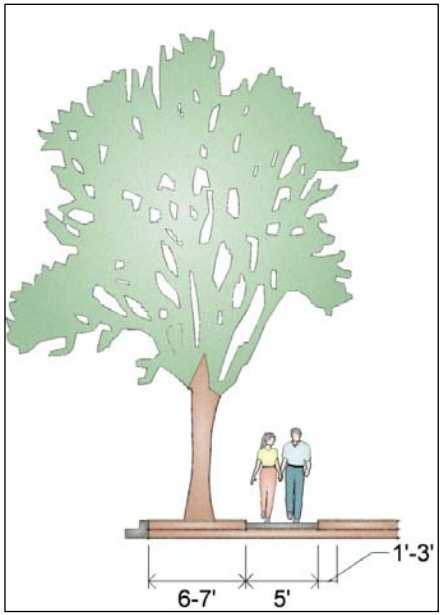


Illustration of standard sidewalk design with landscaped buffer

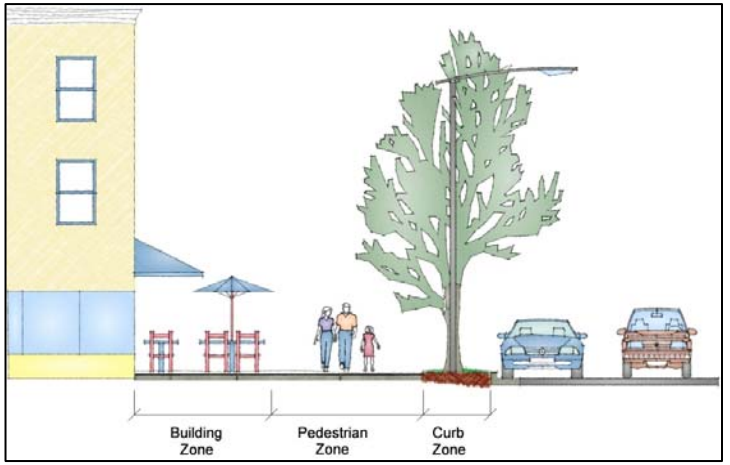


Illustration of pedestrian, building, & curb zone

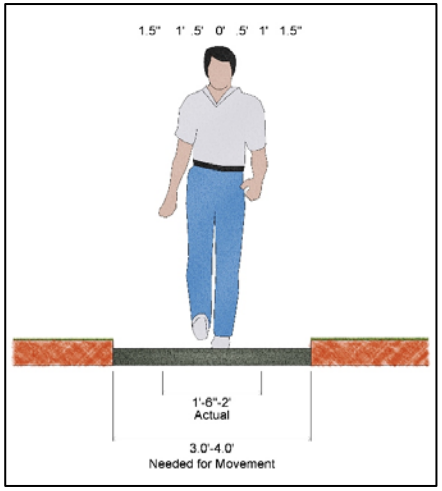


Illustration of standards clearance / width of sidewalks

- *Social Space* - Sidewalks should be places for people to interact. The use of street furniture, street-level lighting, and street cafes are ways to create these social spaces.

- *Quality of Place* - Sidewalks should contribute to the character of neighborhoods and businesses and help strengthen their identity. This can be done with different sidewalk treatments and width.

Concrete curb and sidewalk cost approximately $15/linear foot and $11/square foot for walkways without curb. Asphalt curbs and walkways are less costly but require more maintenance per year.

Sidewalks should be placed on both sides of the road, but it is acceptable to place them on one side when the street has a low volume of traffic or development is sparsely located. Sidewalks can also be placed in easements instead of within the right-of-way. Sidewalks should be constructed of durable, smooth yet slip resistant material, such as asphalt or concrete; however, alternative materials can be used. Alternative materials include brick and stamped concrete that can give the appearance of real bricks.

As recommended by both FHWA and the Institute of Transportation Engineers (ITE), sidewalks should have a minimum width of five (5) feet, excluding any attached curb and have a running grade of 5% or less. This width allows two people to pass comfortably or to walk side-by-side. Where sidewalks are less than five (5) feet in width, there should be passing spaces of at least five (5) feet at reasonable intervals. This gives wheelchair users or people with a stroller room to pass one another or to turn around. Schools, parks, and the Central Business District should also have wider sidewalks to accommodate higher pedestrian traffic. These sidewalks should be six to eight (6-8) feet wide with a planting strip or eight to ten (8-10) feet wide without planting strips. Street lights, utility poles, signs, and other furnishings should not obstruct desirable sidewalk widths.[1]

Buffers along sidewalks can improve pedestrian safety and scenery. The buffer width is the distance between the sidewalk and adjacent roadway. Landscaped buffers can be used to place utility poles, street lights, and serve as a splash guard for passing vehicles. The ideal buffer width on local and collector streets is two to four (2-4) feet. Along major thoroughfares, the buffer width should be five to six (5-6) feet.

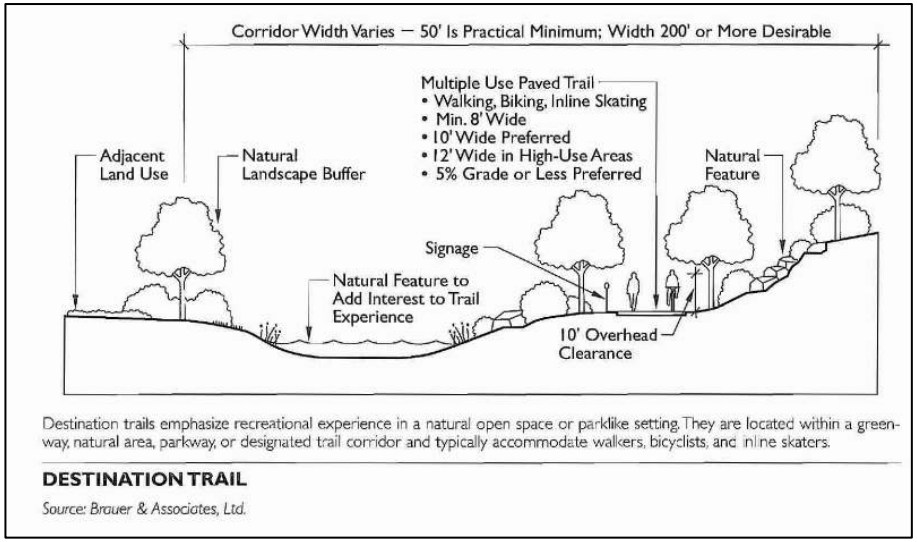


Illustration of a Destination Trail Layout -
A destination trail is used when a trail is located away from vehicular traffic in a more natural environment or park-like setting. This type of trail generally has large landscaped or native buffer between it and adjacent land uses

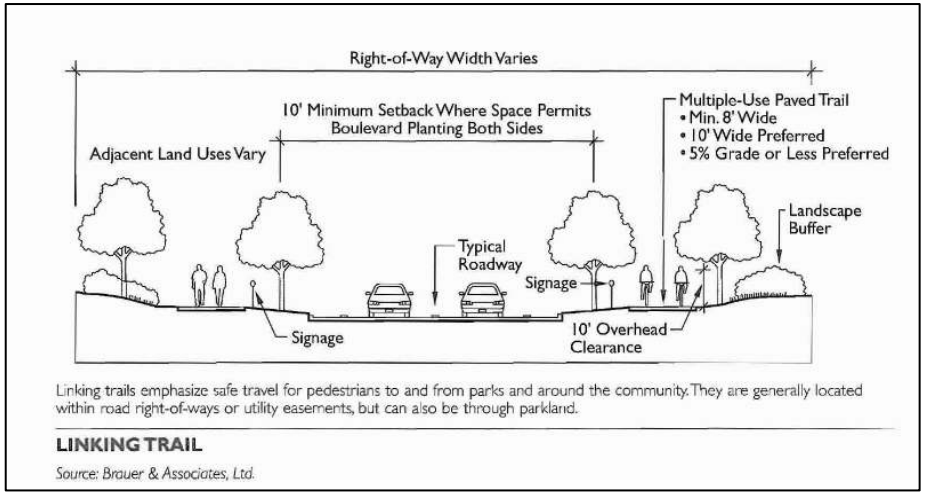


Illustration of a linking trail layout.
A linking trail is used with road right-of-ways to provide a link from residential areas to parks or other community points of interests. A minimum buffer between road and adjacent land uses is used.

Multi-Use Trails & Greenways

Multi-use trails and greenways are developed to serve bicyclists, runners, walkers, and wheelchairs. Multi-use trails are installed in many locations, such as a connection through residential neighborhoods, along rivers, on abandoned railroad beds, in parks to provide additional recreation, and along utility rights-of-way. Pavement for multi-use trails can range from conventional concrete to pervious concrete, asphalt, or compacted screenings. AASHTO and FHWA recommend multi-use trails meet the following[II]:

- A minimum width of ten (10) feet and twelve (12) feet for bi-directional trails
- A minimum width of six (6) feet for single direction trails
- A two (2) foot graded area adjacent to both sides of the trail with a maximum 1:6 slope
- Cleared of vertical obstructions, such as tree limbs lower than eight (8) feet to allow for safe under-passage
- On sloped landscapes, have grades that do not exceed 5% with a graduated scale up to 11% or more for short distances
- A cross slope of less than 2%
- A minimum of thirty to fifty (30-50) feet on curved trails
- Ninety (90) degree angles should be avoided for safety reasons
- A separation of at least five (5) feet from roadways or a forty-two (42) inch high physical barrier
- Carefully planned path-roadway intersections
  - Crossings should be a safe enough distance from neighboring intersections to not interfere (or be interfered) with traffic flow.
  - A roadway with flat topography is desirable to increase motorist visibility of the path crossing.
  - Motorists and trail users should be warned, such as with signage (including trail stop signs), changes in pavement texture, flashing beacons, raised crossings, striping, etc.

- A refuge is needed where crossing distance is excessive and in conditions exhibiting high volumes/speeds and where the primary user group crossing the roadway requires additional time, such as schoolchildren and the elderly.
- The crossing should occur as close to perpendicular (90 degrees) to the roadway as possible.
- If possible, it may be desirable to bring the path crossing up to a nearby signalized crossing in situations with high speeds/ADT and design and/or physical constraints.
- Signalized crossings may be necessary on trails with significant usage when intersecting with demanding roadways, but MUTCD warrants must be met for the installation of a signalized crossing.

■ Signage and measures at all intersections to avoid crashes between pedestrians, bicyclists, and motor vehicles

Accessibility should be a top consideration for developing these trails; therefore, as many barriers as possible need to be removed. Informational signs at trail access points indicating steep grades, excessive cross slopes, uneven surfaces, and narrow widths will help users determine if the trail is appropriate for their use. Trails should be built within the land contour and be designed with environmental sensitivity.

When adjacent to canals, ditches or slopes steeper than 1:3, a separation of five (5) feet from the edge of the path pavement to the top of slope is desirable. The vertical clearance should be a minimum of 8 feet; it may be greater (10 feet) if needed to provide for maintenance and access of emergency vehicles.[III]

The trail design needs to take into consideration user experience, serious bicyclist speeds and environmental conditions; however, the design minimum speed should be 20 mph.

For further guidance on multi-use trails see North Carolina Division of Bicycle and Pedestrian Transportation website at the following: http://www.ncdot.org/transit/bicycle/projects/project_types/Multi_Use_Pathways2.pdf

Land acquisition costs, structures needed, type of trail surface, width of trail, and facilities for trail users contribute to the cost of developing a trail system. Construction of a soft surface trail alone is approximately $40,000 per mile and construction of a paved trail can be more than $1.0 million per mile in an urban area.

Intersection Improvements

Intersections should be designed to ensure pedestrian connectivity as well as safety. For a street to be truly pedestrian-friendly, intersections cannot be intimidating for users. With the right design features and layout, intersections can improve walkability and pedestrian usage. An important aspect of redesigning intersections is providing adequate sight distance to reduce both vehicle-vehicle and vehicle-pedestrian crashes. Careful attention to placement of pedestrian design features such as bollards, landscaping, benches, and placement of on-street parking around intersections is essential at initial design stages. The following are design features and techniques that will enhance pedestrian safety at intersections[IV].

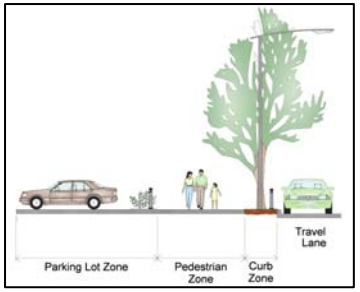
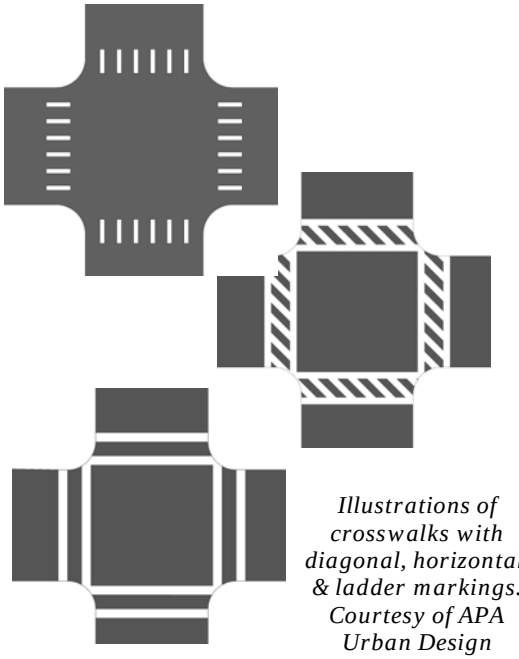


Illustration of bollard placement between pedestrian & vehicle spaces. Courtesy of APA Urban Design Standards

<u>Bollards</u>
Bollards are streetscape elements consisting of concrete or steel that prevents traffic from encroaching in pedestrian areas. Bollards are typically located along the curb edge of a sidewalk, but bollards can be used to protect pedestrians on traffic medians and islands. Plastic or break-away bollards can also be installed in the center of a roadway to warn and direct motorists of special roadway treatments.



Illustrations of crosswalks with diagonal, horizontal, & ladder markings. Courtesy of APA Urban Design Standards

<u>Marked Crosswalks</u>
Marked crosswalks are used to indicate appropriate locations for pedestrians to cross streets. These crosswalks are typically placed at signalized intersections and other selected locations. NCDOT typically requires sidewalks on both sides of a roadway when placing marked crosswalks. It is important to ensure that crosswalks are visible to motorists. According to the FWHA, the best material for crosswalks is inlay tape. Inlay tape can be applied to new or repaved streets and is highly reflective, long lasting, slip resistant, and maintenance free. Although this material is more expensive up front than traditional paint or thermoplastic, it is more cost effective over the long run.

AASHTO recommends that a marked crosswalk not be less than six (6) feet wide. In Central Business Districts the crosswalk widths should be increased to ten (10) feet or in accordance with an engineers study.[V]

Installing a regular striped crosswalk can cost $100, $300 for a ladder crosswalk and $3,000 for a patterned concrete crosswalk. There are no extra costs when the stop line is installed on new paving or as part of repaving projects. The use of words such as "STOP HERE" can assist in or replace the recessed stop line. The cost is low if applied as a retrofit.

Stop lines should be placed further back from pedestrian crosswalks to improve safety and visibility for vehicle and pedestrian. Care should be taken in recessing these stop lines. If placed too far back, motorist will likely ignore the line. AASHTO recommends a 10ft. setback (4ft. minimum) at controlled intersections with greater setbacks recommended at

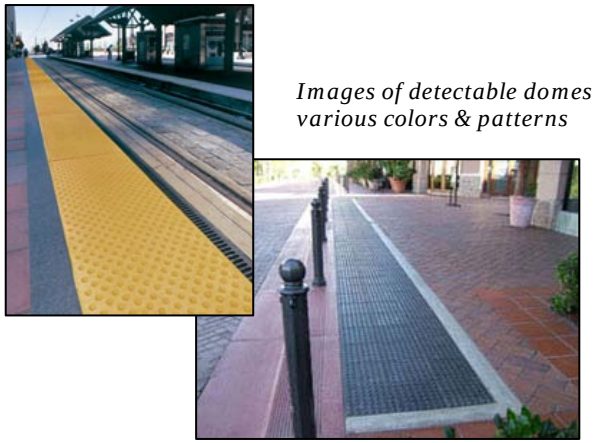
uncontrolled locations[VI].

Installing a mid-block crossing can range from $4,000 to $30,000 depending upon material used and if landscaping is provided.

Mid-Block Crossing

Mid-block crossings provide another location for pedestrians to cross streets safely. These crossings are recommended near schools, pedestrian routes, retail areas, recreation, and residential areas. Ideal streets for the placement of refuge islands are wide streets that:

- Have fast speeds, or large vehicle or pedestrian traffic volumes
- Where children, people with disabilities, or elderly people would cross
- Have complex vehicle movements
- Offer insufficient time to cross because of traffic demands
- Where the crossing exceeds 60 feet (crossings greater than 60 feet should provide a median or crossing island combined with a combination of signage, high-visibility markings, or curb extensions.)



Images of detectable domes in various colors & patterns

This crossing should not be used on roads with speeds greater than 40 mph. These crossings are good to supplement intersection crossings and may even be an alternative for intersections with heavy traffic volumes. Spacing between mid-block crossings and intersections should not exceed six hundred sixty (660) feet with adequate sight distance for both pedestrians and vehicles. These crossings can not be installed within 300 feet from another signalized crossing point. Mid-block crossings require advanced auto-warning signs and good visibility for both driver and pedestrian. The utilization of MUTCD is useful for crossing signalization. Within the median, any landscaping or signs should not obstruct the view of oncoming traffic.

Curb Ramps

Curb ramps should be designed to ADA requirements for pedestrians with mobility aids such as scooters and wheelchairs. The ideal grade of curb ramps should not exceed 8.33 percent with a cross slope of 2 percent per FHWA. A curb ramp for new construction should be at least four feet (4 ft.) wide not including the flare sides[VII]. In existing sidewalks the minimum width is three (3) feet excluding flares. Ramp landings should be a minimum of 4 ft. square. Detectable truncated domes must be placed at the end of these ramps to indicate the street edge. Perpendicular ramps should be placed at intersections with 90 degrees of curb face. Curb ramps should be located away from storm drains and inlets, which can catch wheelchair casters and canes. For more specific information regarding curb ramp design, curb ramp types (perpendicular, diagonal, and parallel), and curb ramp placement, consult AASHTO's *Guide for the Planning, Design and Operation of Pedestrian Facilities*.

Image of installed detectable truncated domes at the end of a curb ramp

Although a need exists throughout the community, priority locations are downtown and on streets near schools, parks, transit stops, residences, medical facilities, and shopping areas. For more information regarding curb ramp design see *Designing Sidewalks and Trails for Access, Part I,* by the Federal Highway Administration; as well as *Accessible Rights-of-Way: A Design Guide*, by the U.S. Access Board and the FHWA at http://www.access-board.gov.

All proposed curb ramps must have detectable truncated domes placed at the end the ramps to indicate street edge as required by the Americans with Disabilities Act (ADA). To comply with ADA requirements, detectable warnings should contrast visually with adjoining pavement surfaces. Warning strips are composed of numerous materials and colors.

Retrofitting an existing curb or constructing a new curb is approximately $800 to $1,500 per curb ramp.

Four-Way Stop Treatment

A four-way stop treatment is accomplished by permanently placing four stop signs at an intersection or placing the signs on a portable pole with an archer and a wheel to make a temporary 4-way stop (usually done around schools and special event areas during certain hours only). Traffic from all four directions must stop. The rules for a four-way stop are like those for a two-way: stop and look for ongoing traffic and pedestrians, and proceed when it is safe to do so. Motorists must give the right-of-way to pedestrians in marked crosswalks or within any unmarked crosswalk at or near an intersection. In cases where a motorist arrives at a four-way stop sign at the same time as another driver, the driver to the right has the right of way.

Traffic Calming Devices

There are a number of different ways to calm traffic. More often than not roads have more travel lanes than what is necessary. These multi-lane roads deter walkability. Reducing the number of lanes improves walkability by making it easier and safer for pedestrians to cross the street. A four-lane road can be converted to one-lane of travel in each direction with planted medians and center turning lanes. Two-lane roads with very wide lanes in each direction can be reduced to nine, ten, or eleven feet (9-11 ft.) wide with excess paving marked for bike lanes or paved shoulders. The street could also be physically altered to incorporate sidewalks, plantings, and on-street parking on the former curb lines.

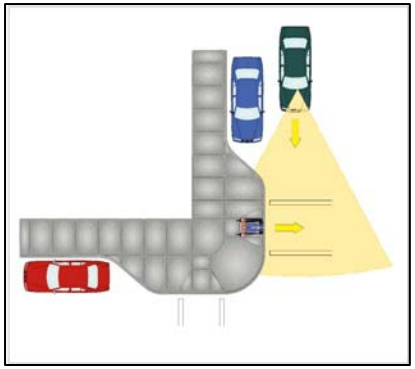


Illustration of curb extension with full sight lines. Courtesy of APA Urban Design Standards

Curb Extensions

Curb extensions also known as bulb-outs extend the sidewalk or curb line out into the parking lane, which reduces the street width. Curb extensions improve visibility and reduce the time needed to cross intersections and mid-block crossings. Curb extensions are only appropriate where there is an on-street parking lane. Curb extensions usually extend 6 ft. from the curb. Special consideration should be taken at intersections where large vehicles such as school buses are frequently used. These larger vehicles require larger turning radii and curb extensions

Costs vary for curb extensions from $2,000 to $20,000 per corner, depending upon design and site conditions. Costs increase when the curb extension area is large and drainage, special pavement, street furnishings, and vegetation are included in the project.

Images of installed chicanes

may not be appropriate in these areas. Retrofitting an existing curb with a smaller curb radius instead of a full curb will benefit pedestrians since it slows traffic speeds and shortens pedestrian crossings[VIII]. AASHTO recommends any landscape placed in these extensions be low-lying for visibility safety concerns.

This Plan proposes a combination of twenty (20) full and partial curb extensions at street intersections to slow vehicle approach and turning speeds, while creating shorter crosswalks and more prominent pedestrian viewing areas. Due to existing building setbacks and utilities, these curb extensions also provides the necessary clearance to meet ADA-compliance.

To maintain existing drainage patterns and stormwater gutters, certain curb extensions should have trench grates installed between the extensions and existing curb to allow stormwater to flow to existing gutters.

To reduce vehicles from "jumping the curb" and striking a pedestrian or damaging landscape, it is recommended bollards be placed along the perimeter or at the corners of curb extensions and mid-block extensions.

Chicanes

The use of chicanes creates a horizontal diversion of traffic and can be gentler or more restrictive depending on the design. Chicanes can be used to shift or divert the travel lane, resulting in lower traffic speeds. To effectively reduce speed, the desired taper length should reflect the desired speed which is posted prior to the chicane.

Chicanes can also be used to shift vehicle travel by shifting on-street parking from one side to the other. This allows for parking on one side or parallel parking on one side and angle parking on the other. This pattern can be switched back and forth from block to block[IX].

Another method of restricting travel lanes is using a series of curb extensions to narrow the street forcing traffic to slow down. Such treatments are intended for use on residential streets with low traffic counts. If no restriction exists, chicanes can be installed on streets with higher traffic volumes, such as collectors or minor arterials. To ensure safety and mobility of pedestrians, maintaining a good sight distance when planting vegetation is important.

Landscape chicanes cost approximately $10,000 (for a set of three) on an asphalt street and $15,000 - $30,000 on a concrete street. Drainage and utility relocation often represents the most significant cost consideration.

Raised Medians

Raised medians are raised barriers located in the center portion of the street and are most useful on high volume, high speed roads. The median can serve as a landing place for pedestrians crossing a street mid-block or at an intersection. The median can have vegetation for additional visual benefits. Raised medians will eliminate the middle turning lane; therefore, careful design is needed to ensure safe vehicle traveling.

Raised medians are approximately $15,000 - $30,000 per 100 feet, depending upon design, site conditions, and whether the median can be added as part of a utility improvement or other street construction project.

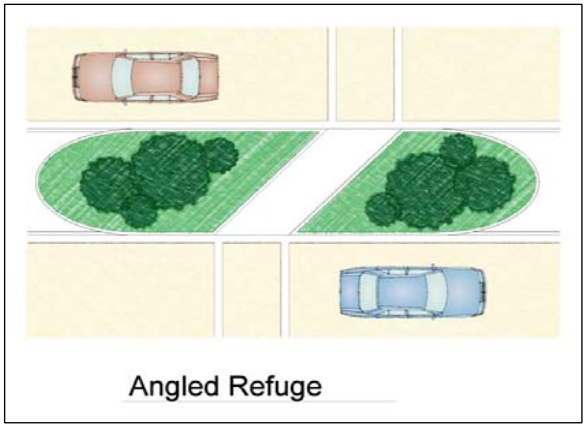
Design considerations are needed to ensure adequate space for wider sidewalks, bicycle lanes, landscaping buffer strips or on-street parking and to ensure the median does not create access problems for emergency vehicles. It is ideal that a median crossing be at least 6 ft. wide to accommodate the pedestrian and of greater width to accommodate high pedestrian traffic areas. In some environments, medians can be constructed in sections creating an intermittent rather than continuous median[X]. A good alternative for larger roads with two or more lanes is the crossing island, which provides a crossing refuge for pedestrians and can aid in decreasing vehicle speeds.

A raised median installed in Boston, MA

Crossing Islands

Crossing islands, also known as center islands, refuge islands, pedestrian islands or median slow points, are raised islands placed in the center of a street at the intersection or mid-block crossing locations to assist in protecting pedestrians from motorists. The island allows pedestrians to deal with only one direction of traffic at a time and enables them to stop part-way across the street and wait for an adequate gap in traffic to cross the remaining vehicle travel lanes.

Crossing islands should be considered at uncontrolled locations where there are no traffic signals or stop signs and on larger streets with multi-traffic lanes as a supplement to the pedestrian crosswalk. If the street is wide enough, these islands may be used with curb extensions to further enhance pedestrian crossings. AASHTO recommends that median/crossing island be at least 20 ft. in length and 6 ft. in width. They also recommend a 4 ft. square landing within the island to accommodate wheelchair users[XI].



A crossing island can run from $6,000-$9,000. Installing a raised concrete pedestrian refuge island with landscaping cost approximately $10,000 - $30,000. The least costly alternative is an asphalt island or one without landscaping.

All crossing islands should accommodate bicycles and persons in wheelchairs by providing a cut-through design. A "cut through" is areas where the road level incline up to the level of the median allowing wheels easier mobility. Consideration should also be

given for placement of islands at intersections or near driveways so they do not affect left turn access. Adequate signage is suggested to warn motorists of the island.

Speed Humps

Speed humps are raised devices, parabolic in shape, placed across a roadway to calm traffic. Speed humps slow traffic more gradually than speed bumps, although less so than speed tables (flat-topped speed humps that are generally long enough for the entire wheelbase of a passenger car to rest on top). Speed humps are usually installed along residential streets with two or less lanes with a posted speed limit of 30 mph or less. A typical speed hump is three to four inches high and 12-22 feet long[XII]. The use of speed humps are not addressed in the MUTCD and careful consideration and justification is needed before a speed hump is installed. However, traffic control devices (regulatory, warning, and guide messages) must be posted in conformance with MUTCD.

Image of installed speed hump

Neckdowns/Chokers

Neckdowns or chokers are curb extensions on both sides of a street at a specific point to narrow the street from two-lanes to one lane or two narrow lanes. The chokers can be used to narrow wide intersections, mid-block areas on the street, or as a transition between two different land uses (i.e., commercial and residential)[XIII].

An installed neckdowns or choker can range in price from $5,000 to $20,000, depending on site conditions, landscaping and drainage.

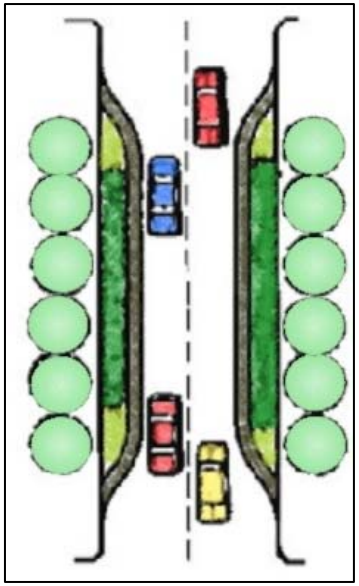


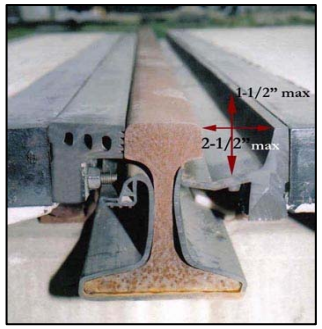
Illustration of a Neckdown/ Choker application

Railroad Crossings

Pedestrian crossings at railroads must be handled safely, since the CSX railroad bisects the Town and separates potential origins and destinations. Perception of the barrier effect is even stronger on the part of long-time residents, furthering the need to provide connectivity to both sides of the tracks. Railroad companies typically hold ownership of their rights-of-way in fee simple arrangements and closely control the frequency and width of crossings of any sort ("encroachments"). Working with the railroad companies has proved to be time consuming; however, many ideas that improve safety stem from published FRA (Federal Railroad Administration) sources and can reduce liability. Implementation of these ideas is likely to receive a favorable reception from the railroad.

Treatments can be thought of in three broad categories:

- Crossings adjacent to an existing or planned roadway;
- Crossings independent of an existing or planned roadway (e.g., greenways); and
- Education and Enforcement techniques discussed in Section 6.



ADA Flangeway Filler

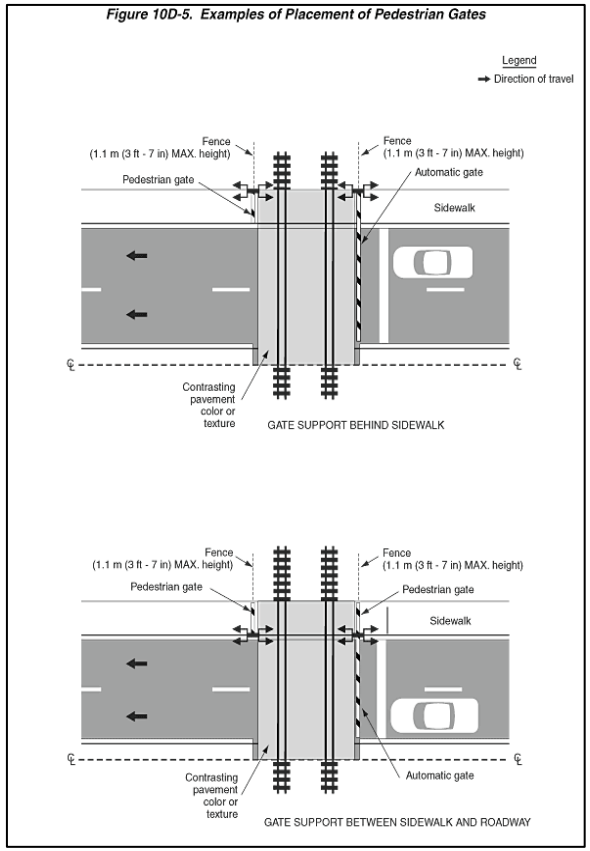
To comply with the American with Disabilities Act (ADA), the flangeway opening between the crossing material and track must be reduced. Numerous manufacturers make material to reduce this flangeway gap (example in first image to the right). Pedestrian crossings should intersect the railroad tracks at a 90-degree angle, to minimize problems with the flange-way gap width. When a perpendicular crossing cannot be achieved, wider crosswalks should be provided to allow pedestrians room to maneuver and position themselves to cross the tracks at a 90-degree angle. The second image to the right shows an example of a pedestrian crossing treatment. Various surface types can be used for the pedestrian crossing; however, the material should not buckle, expand, or contract significantly with the railroad tracks to hinder railroad function and pedestrian use. The pedestrian crossing of railroad tracks should meet or exceed the ADA accessibility guidelines for a minimum clearance for two wheelchairs to pass safely.

Illustration of a warning sign. Courtesy of FRA: Compilation of Pedestrian Devices in Use at Grade

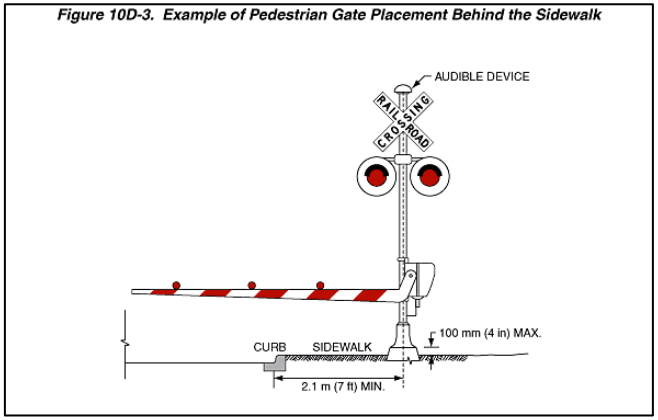
Additionally, railroad crossing safety devices can be thought of as either active and change their appearance and/or position in the event of an oncoming train (e.g. gates and flashing signals), or passive, such as the familiar "crossbuck" sign, a warning sign, or the "RxR" pavement markings applied to the sidewalk area[XIV].

The placement of gates and flashing signals should be set behind the sidewalk, to allow the same level of warning for pedestrian as motor vehicles. The following images illustrate the placement of pedestrian gates, signals, and warning arms.

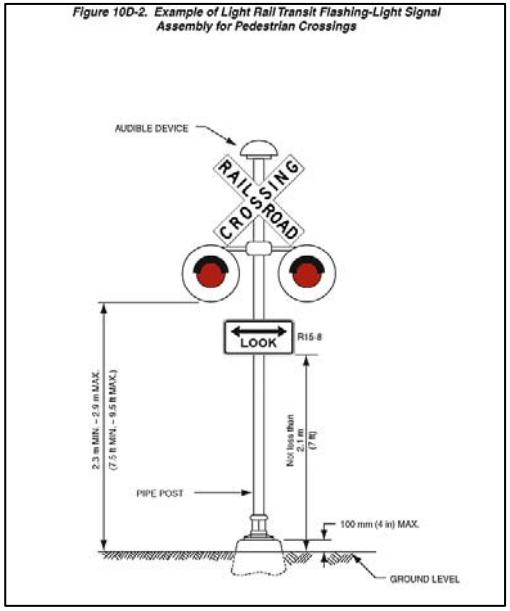

Image of installed textured precast concrete pedestrian crossing



Courtesy of: FHWA MUTCD, Section 10



Courtesy of: FHWA MUTCD, Section 10



Courtesy of: FHWA MUTCD, Section 10

Signs & Signals

Important information to improve road safety can be displayed on signs. Signs inform motorists on what they can expect, preparing them to react and behave appropriately when pedestrians are in the area. However, overuse of signs not only provides visual clutter to a motorist, they can foster noncompliance and disregard that could lead to crashes.

Regulatory signs range from $50 - $100 per sign.

Images of regulatory and warning signs for pedestrians and motorists.
Courtesy of MUTCD

Signs

Regulatory and warning signs provide helpful information to motorists and pedestrians unfamiliar with an area, notify motorists of the presence of pedestrians, and give pedestrians the ability to cross an intersection safely. Signs that restrict right turns on red can be used to help pedestrians cross intersections. Motorists often drive onto crosswalks to check traffic before turning without regard to pedestrians. The use of regulatory and warning signs within school zones can be extremely useful for pedestrian safety, in addition to slowing traffic speeds. However, all regulatory signs should only be used sparingly. There are concerns that this signage causes increased turning on green and anxious drivers. There are several different regulatory and warning signs to assist in warning or prohibiting actions by motorists and pedestrians, and they all must comply with MUTCD[XV].

Signals

Traffic and pedestrian signals create gaps within the traffic flow to allow pedestrians to cross a busy intersection. The NCDOT now mandates the use of the countdown signal. NCDOT does not have established guidelines for the placement of pedestrian signals, but they generally use MUTCD and ASSHTO warrants for the installation of traffic signals, which is partly related to pedestrian traffic. Generally, pedestrian signal heads are used at all intersections that have high use, mid-block crossings on higher speed roads, multi-lane roads, and at highly congested intersections. If a new facility is built that will generate a lot of pedestrian activity, such as schools and parks, a signal should be installed in conjunction with the new facility[XVI]. To reduce pedestrian delay, a signal cycle should be a maximum of thirty (30) seconds. There are two types of pedestrian signals, fixed-time and push button/pedestrian activated. The fixed-time signals are tied into the traffic signal and become part of the cycle. These are generally used in high pedestrian and traffic congestion areas. MUTCD recommends traffic signal timing for pedestrians be based on a crossing speed of 4 feet per second; however, if there are significant number of elderly, disabled, or children crossing a particular location, addition time should be given. Where pedestrian activity is infrequent and a fixed-time signal is not appropriate, a push button or pedestrian activated signal can be installed. A pedestrian will push the button to activate a break in the traffic circulation to cross an intersection. The pedestrian push-button should be mounted three and half to four (3 ½ - 4) feet above the sidewalk and placed in a conspicuous and convenient location, preferably next to curb ramps.[XVII]

The MUTCD has a variety of pedestrian signals heads that are allowed to be used, but the international symbol pedestrian signal head is the preferred signal. The pedestrian signal head should be clearly visible to the pedestrian at all times when in the crosswalk or waiting on the far side of the street. Attachments such as an audible signal can be added to the pedestrian signal head to assist impaired pedestrians. An audible signal is attached to an existing pedestrian signal and produces separate and distinctive electronic bird chirping sounds for both north/south and east/west crossings. These devices aid pedestrians who are blind or have low vision in crossing streets safety.

Pedestrian signals range from $30,000 - $140,000 per signal.

Images of countdown and audible signal, pedestrian push button & an international signal

Pedestrian Amenities

The use of street lighting, landscaping, and pedestrian furniture enhances a street environment and provides increased comfort and safety for pedestrians. These elements also turn the street into a pedestrian designation.

Cost of installing furniture is dependent upon the type of furniture, construction material, and amount of planting material used.

Image of bench along sidewalk

Street Lighting

Good placement and quality of lighting can enhance an environment, as well as provide increased pedestrian comfort and safety. Street lighting also improves the motorist ability to see pedestrians at night. Street lights and building lights within commercial areas can enhance the ambiance of the area, in addition to increased visibility of pedestrians by motorists within parking lots. All pedestrian street crossings should be provided with street lighting to ensure safety. For further guidance on street design lighting, refer to the *AASHTO Informational Guide for Roadway Lighting.*

Pedestrian level lighting in downtown will improve the atmosphere by providing comfort, security, and safety. The use of uniform lighting levels along all pedestrian walkways should be considered in all pedestrian facility improvements.

Landscaping

The use of landscaping along a street can provide several benefits, such as providing a separation between motorists and pedestrians, reducing the visual width of the roadway, and providing a more pleasant street environment. Landscaping can include a variety of trees, bushes, and flower beds that can be planted in the buffer area between the sidewalk and roadway or in the street median.

Cost of street lighting varies by type of fixture used and the utility provider.

Choosing appropriate plants for the local climate and surrounding area, providing adequate space for growth, and preparing the ground can help ensure they survive with minimal maintenance and do not buckle the sidewalks as they mature. The use of rain gardens and other plant alternatives should also be considered to reduce installation and continuous cost of irrigation. All shrubs should be low-growing and trees should be kept trimmed to at least eight (8) to ten (10) feet to ensure sight distance, vertical clearance, and security[XVIII].

Landscaping costs vary depending upon the size of planting areas, plants selected, and additional elements (irrigation and maintenance). However, the costs can be shared by multiple entities (neighborhoods, businesses, Town, Non-Profits).

Pedestrian Furniture

Well-designed walking environments are enhanced by urban design elements and street or pedestrian furniture including benches, transit shelters, trash receptacles, smokers' depot, and water fountains. The selection of good-quality street furniture will reveal the community's value in its public spaces and is more cost-effective in the long run. Sidewalks and walkways should be kept clear of poles, signposts, newspaper racks, and other obstacles that could block the pedestrian's path, obscure a driver's view or pedestrian visibility or become a tripping hazard. The proper placement of furniture is important to avoid blocking pedestrian walkways, curb ramps, creating sightline problems or restricting impaired pedestrians.

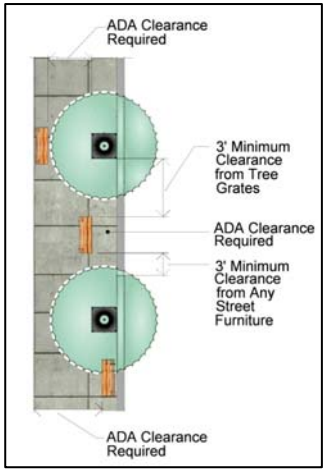


Illustration of bench placement to meet ADA clearance requirement. Courtesy of APA Urban Design Standards

Commercial Development Guidelines

Commercial establishments generate a high volume of vehicle traffic, which in turn can generate opportunities for pedestrian and vehicle crashes. Uncontrolled access points from the roadways into the parking area of a commercial building, parking lots, and access from parking lot to the building can all be potential accident areas. The following are some standards on how to improve pedestrian safety within and around commercial development.

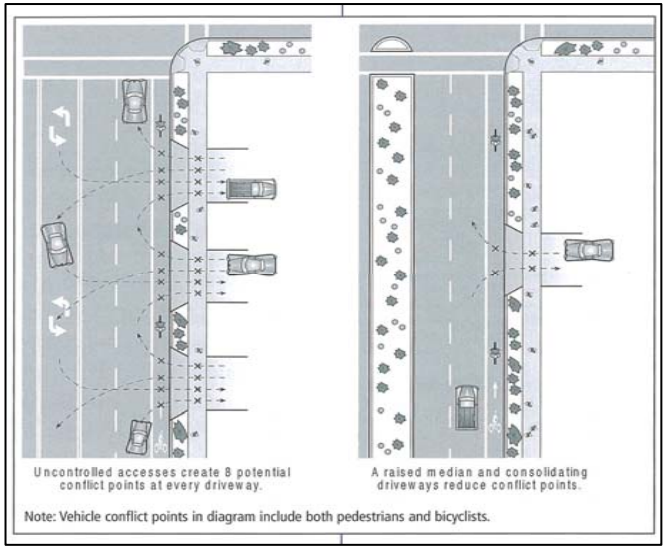
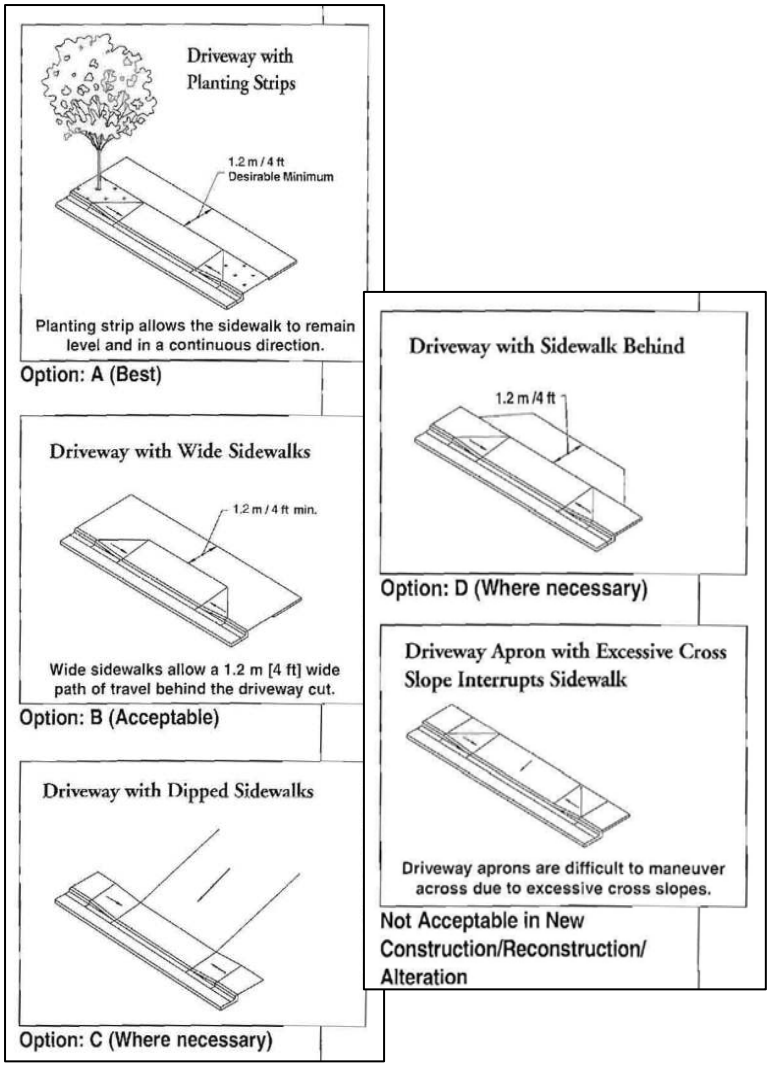


Illustration of uncontrolled and controlled driveway access.

Driveway Design

The driveway ramp design for commercial land uses, the number of vehicle access points, and the distance between existing driveways all have a direct effect on the overall pedestrian environment.

Limiting and consolidating vehicle driveways into a commercial site reduces conflict points. The illustration on the left shows how access management can be done. This method can also reduce the number of vehicle-vehicle crashes if the driveways are located near traffic control devices.



Illustrations of sidewalk design opinions at driveway.

The location and slope of the driveway is an important component of ensuring accessibly of the sidewalk on both sides of the driveway. To be ADA-compliant, the driveway must conform in width, cross slope, and grade to the design requirements for sidewalks. Unramped curb returns are prohibited. If the driveway does not adhere to this requirement, the likelihood of pedestrian accidents is increased since the disabled, children, and persons with strollers require a level travel surface. All cross slopes for new construction, reconstruction, and alternations cannot exceed 2% per ADA requirements.

There are four driveway designs that meet accessibility requirements. Each design maintains a level or nearly level travel area for pedestrians.

Option 'A' has a planting buffer to increase the safety of both pedestrian and motorist. These wide planting areas provide more turning area for the motorist. Option 'B' incorporates a sidewalk at the narrowest point of the driveway, but still maintains the minimum clearance for the sidewalk of four (4) feet. Option 'C' should be used in areas where the distance from the edge of the sidewalk to the curb face is insufficient to maintain the maximum two percent (2%) cross slope. The installation of curb ramps to and from the sidewalk on the driveway is how these types of situations should be handled. Option 'D' can be used when it is difficult to maintain the two percent (2%) cross slope. An easement may be purchased or obtained from the property owner to provide a level sidewalk area next to the driveway.

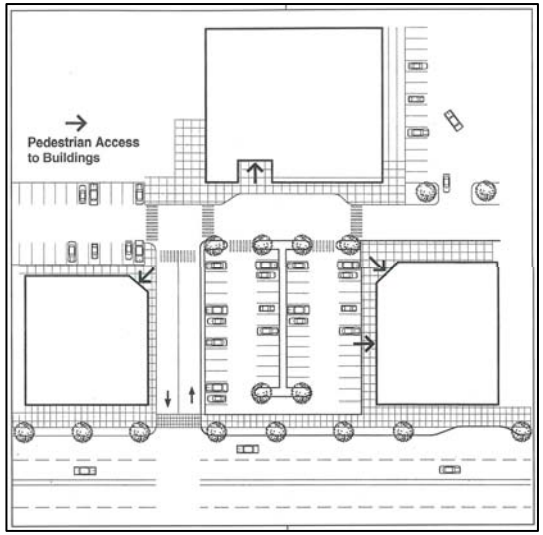


Illustration of a shared parking lot with distinct pedestrian areas and traffic calming devices. Courtesy of AASHTO

Parking Lots

Parking lots see a high number of pedestrian and vehicle crashes; therefore, the design of parking lots must have pedestrian accommodations to allow safe travel from the vehicle or sidewalk to the commercial building.

Requiring the placement of parking spaces on the side or rear of the buildings and moving the principal land use to the street is an option. Careful design of on-site circulation patterns with separated travel lanes, pedestrian access lanes, signage, and raised crosswalks will clearly define where pedestrians should travel within the commercial site in addition to slowing traffic down.

Adjacent commercial uses should be required to share parking areas to reduce the number of vehicles traveling from use to use. Parking garages should be considered to reduce the amount of impervious coverage in a commercial area. When designed in accordance with pedestrian safety, accessibility and security can be accomplished.

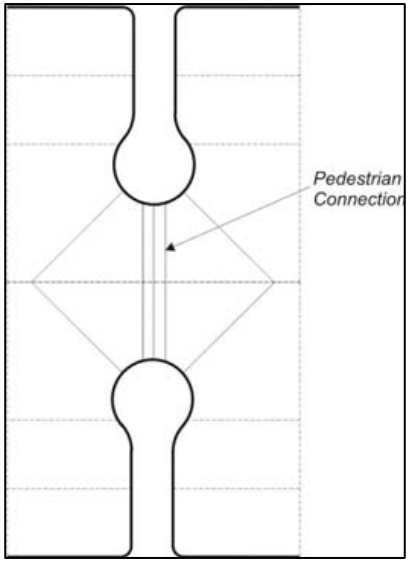


Illustration of pedestrian connection between cul-de-sacs. Courtesy of Citrus Heights, CA (www.ci.citrus-heights.ca.us/docs/106.31.030.pdf)

Residential Development Guidelines

Pedestrian traffic is also generated from residential developments with numerous pedestrian-vehicle conflict points on residential streets; therefore, applying the above mentioned driveway design components would assist in reducing those conflicts. As recommended in previous sections, existing or future cul-de-sacs should be connected to the closest local collector street or to other cul-de-sacs in adjoining subdivisions via sidewalks or multi-use paths. This connection will improve connectivity and accessibility to surrounding land uses.

[I] Federal Highway Administration (FHWA) Pedestrian Safety, *The Walking Environment – Provide Sidewalks or Walkways*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/01.htm

[II] Federal Highway Administration (FHWA) Pedestrian Safety, *The Walking Environment – Shared Use Paths*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/08.htm

[III] Walkinginfo.org – Pedestrian and Bicycle Information Center, *Trail Costs and Benefits*, October 2007, http://www.walkinginfo.org/engineering/trails-costs.cfm

[IV] Walkinginfo.org – Pedestrian and Bicycle Information Center, Crossing Enhancements, October 2007, http://www.walkinginfo.org/engineering/crossings-enhancements.cfm

[V] Federal Highway Administration (FHWA) Pedestrian Safety, *The Walking Environment – Marked Crosswalks & Enhancements*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/04.htm

[VI] Federal Highway Administration (FHWA) Pedestrian Safety, *Signs and Signals – Recessed Stop Lines*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/45.htm

[VII] Federal Highway Administration (FHWA) Pedestrian Safety, *The Walking Environment – Curb Ramps*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/03.htm

[VIII] Federal Highway Administration (FHWA) Pedestrian Safety, *The Walking Environment – Traffic Claming-Curb Extensions*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/23.htm

[IX] Walkinginfo.org – Pedestrian and Bicycle Information Center, Traffic Calming-Chicanes, October 2007, http://www.walkinginfo.org/engineering/calming-chicanes.cfm

[X] Federal Highway Administration (FHWA) Pedestrian Safety, *Road Design- Raised Medians*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/16.htm

[XI] Federal Highway Administration (FHWA) Pedestrian Safety, *Traffic Calming – Crossing Islands*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/25.htm

[XII] Iowa State University, Center for Transportation Research and Education, A Study on Speed Humps, September 1997, Retrieved January 2009, http://www.ctre.iastate.edu/Research/roadhump/

[XIII] Federal Highway Administration (FHWA) Pedestrian Safety, *Road Design- Roadway Narrowing*, October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/11.htm

[XIV] Federal Railroad Administration (FRA), Compilation of Pedestrian Safety Devices in Use at Grade Crossings, Retrieved January 2009, http://www.fra.dot.gov/downloads/safety/small_Jan08_Ped_Devices_GX2.pdf

[XV] Federal Highway Administration (FHWA) Pedestrian Safety, *Signs and Signals – Add/Modify Signing,* October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/46.htm

[XVI] Federal Highway Administration (FHWA) Pedestrian Safety, *Signs and Signals –Pedestrian Signals,* October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/43.htm

[XVII] Federal Highway Administration (FHWA) Pedestrian Safety, *Signs and Signals – Pedestrian Push,* October 2007, http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/49.htm

[XVIII] Walkinginfo.org - Pedestrian and Bicycle Information Center, *Traffic Calming - Landscaping*, October 2007, http://www.walkinginfo.org/engineering/calming-landscaping.cfm

SECTION 6 – ANCILLARY FACILITIES & PROGRAMS

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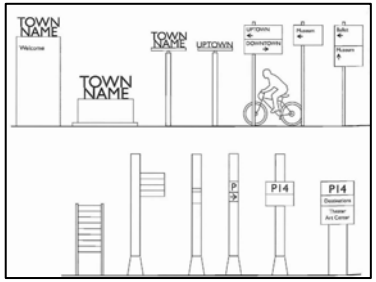
SECTION 6 – ANCILLARY FACILITIES & PROGRAMS

Planning for pedestrian facilities also includes maps of pedestrian routes, signage for pedestrian and motorists, programs for spot improvements and maintenance, safety education programs, enforcement programs, and encouragement and pedestrian promotions. The following section will address these additional facilities and programs Winterville should employ to create a walkable community.

MAPPING AND SIGNING PROJECTS



Levels of wayfinding signs Courtesy of Miami Beach, Fl (APA Urban Design Standards)

Wayfinding systems consist of maps, directional signs, destination arrival signs, general information signs, and banners that help guide and orient visitors around a community. This system of maps and signs not only welcome visitors but also gives the Town a unique sense of place. These signs should give direction to destinations, such as historical landmarks and other tourist destinations. Guide maps can be incorporated to include major roads, walking trails, destinations and brief local history.

Signs should direct pedestrians to state and regional trail and greenway routes. The existing walking routes within Winterville should have signage along the route. Vehicular route signage should follow highway sign design standards and orient motorists to vehicle-based destinations. Pedestrian route signage should direct pedestrians to pedestrian related destinations.

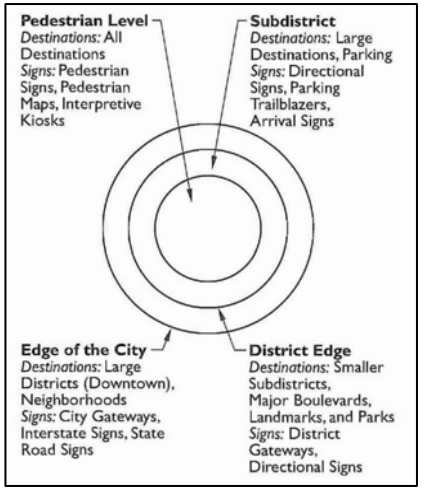


Illustration of the hierarchy of wayfinding signs Courtesy of Soviet of Environmental Graphic Design (APA Urban Design Standards)

Neighborhood Route Systems

Neighborhood route system signs should be placed at entrances of neighborhoods and special districts to serve as gateways. The sign could also provide a map of the pedestrian facilities within that neighborhood. These signs are usually placed in road medians or centered in street rights-of-way. The signs can be enhanced with landscaping.

Images of route mapping systems/signs

Comprehensive Route Systems

Comprehensive route maps should be used to show all route systems and destinations in a community. These maps should show major roads, districts, landmarks, destinations, and the pedestrian routes. A list of major destinations with a basic description of each destination, including hours of operation, prices, and historic landmark interpretive information should also be incorporated. When new routes become available, maps should be updated and redistributed to the Library, Post Office, and Town Hall.

SPOT IMPROVEMENT PROGRAM

Certain tasks can be accomplished immediately to improve the condition of the pedestrian facility network. These spot improvements can be done with minimum capital and labor. Removing and replacing severely broken sections of the network are tasks that will require more time and money than other surface improvements. Removing fallen leaves and debris from the sidewalks and edging grass and weeds along the network are simple low cost projects that can enhance the system. Pedestrian signals should be provided in high traffic areas and existing signals should be checked periodically to ensure they are functioning properly. Lighting at intersections and along pedestrian facilities should also be installed where needed, checked and replaced when necessary.

Images of sidewalk maintenance & retrofit Courtesy of Dan Burden (www.pedbikeimages.org)

Crosswalks that need painting or repainting could be done fairly quickly and will provide residents with visual evidence that pedestrian concerns are being addressed. Simultaneously, curb cuts could be checked for ADA compliance and retrofitted or replaced if necessary. Pedestrian-oriented signage should be installed to allow for greater use of the system. Overhanging branches and overgrown shrubs should be trimmed along the network to increase visibility of and for pedestrians. Where culvert crossings or bridges are too narrow to allow pedestrians to cross without entering the traveled way, culverts should be extended, shoulders should be widened, or separate pedestrian bridges should be constructed. Bridges should be equipped with 42-inch railings where pedestrian accommodations are provided.

MAINTENANCE PROGRAM

A maintenance program is required to keep any system operating, including a pedestrian network. The Town of Winterville needs to develop, adopt, and implement a thorough maintenance program to address the continuous needs of a pedestrian network (See Map 4.6 of existing sidewalk conditions). Without a maintenance program, the condition of the existing and future pedestrian facilities will suffer.

EDUCATIONAL PROGRAMS

Safe Routes to School Program

Establishing a "Safe Routes to School Program"[I] would encourage more children to walk to school. The program brings together educators, municipal and regional transportation professionals, law enforcement, public health professionals, and concerned citizens to address pedestrian safety within two miles of K-8th grade schools. This program concentrates on the five "E's": engineering, education, enforcement, encouragement, and evaluation. Engineering is addressed when existing or new pedestrian facilities are improved or constructed. Education may include teaching parents and children about pedestrian safety or launching safe driving campaigns focused on school zones. This can be done by incorporating pedestrian safety in school driver education programs. Local law enforcement could also be invited into schools to have seminars with students on pedestrian safety. Encouragement may include mileage clubs and contests, walking school buses, and promotional events. Establishing goals for a school and evaluating the participation at the end of the school year would be an evaluation method.

Each K-8th grade school should develop an action plan to identify safety concerns. These plans help to identify where sidewalk and roadway improvements are needed and where crossing guards or police enforcement is needed within a two mile area of each school. Parents and students should be involved in developing the plans. It is recommended that parts of the program focus on teaching children how to cross safely. A successful program will benefit the entire community. [II]

Adult School Crossing Guards

Adult school crossing guards can insure safe driver and pedestrian behaviors at crosswalks near schools. They help children cross the street safely and remind drivers of the presence of pedestrians. Adult school crossing guards can be parent volunteers, school staff or paid personnel. Annual classroom and field training for adult school crossing guards, as well as special uniforms and equipment are recommended.[III]

ENFORCEMENT PROGRAMS

Enforcement of pedestrian laws is critical to guarantee safety. One enforcement method is to use trained and educated volunteers to assist in enforcing pedestrian and motorists' laws around local schools and other high pedestrian traffic areas. A Police-on-Bikes program could also be developed and used to enforce laws in Downtown and in surrounding neighborhoods. Enforcement of key areas will force people who drive or walk to become more aware of their actions. Local police entities should also be properly educated on an annual or as needed basis to ensure effective enforcement of pedestrian laws. Here are a few basic legal pedestrian related rights mentioned in *A Guide to North Carolina Bicycle and Pedestrian laws*:

- Where traffic control signals are not in place, a vehicle must yield the right-of-way to a pedestrian crossing within a marked or unmarked crosswalk at or near an intersection.
- Drivers of any vehicle within a business or residential district must yield to the right-of-way at marked pedestrian crossings.
- When a flashing yellow light is erected or installed at a place other than an intersection, drivers must yield to the right-of-way to pedestrians.
- Drivers cannot obstruct traffic flow of pedestrians within a crosswalk by driving the vehicle over the crossing unless there is sufficient distance on the other side for the vehicle.
- At pedestrian control signals, ‘’walk’’ gives the pedestrian the right-of-way to cross the street and vehicles must yield to crossing pedestrians.

Outreach programs can also be very beneficial in promoting law abidance. Events like safety fairs should be done at local elementary schools to educate young pedestrians. At middle and high schools, safety brochures and pamphlets can be issued. The students should be shown how to obey these laws and also the consequences of not obeying the laws. Safe Route to School monies can be used to fund safety education programs at elementary and middle schools.

The community can also play an important role in enhancing traffic safety. Representatives of communities can improve driver and pedestrian behaviors in many ways. For more information regarding pedestrian laws, please visit:
http://www.ncdot.org/transit/bicycle/laws/resources/lawsguidebook.html

Neighborhood Speed Watch

This enforcement program allows a radar speed unit to be loaned to residents who are trained by police on how to collect speed data and vehicle descriptions. The local agency follows up and obtains the motorists' addresses from the state motor vehicle department using the recorded license plate numbers. If the vehicle description matches the recorded description of a vehicle observed speeding, the vehicle owner will be sent a letter asking for voluntary compliance. The program can educate neighbors about the issue and help boost support for long-term solutions, such as traffic calming devices.

Slow Down Yard Sign Campaigns and Pace Car Campaigns

Slow down yard sign campaigns allow residents of neighborhoods with speeding problems to participate in reminding drivers to slow down. Neighborhood leaders, safety advocates, and law enforcement work in partnership to identify problem areas, recruit residents to post yard signs, organize distribution of yard signs, garner media attention, and evaluate the effectiveness of the campaign. Slow down yard sign campaigns may be conducted along with other speed enforcement efforts such as pace car campaigns and the use of speed radar trailers.

Neighborhood pace car programs aim to make neighborhoods safer for pedestrians, bicyclists and drivers. Resident pace car drivers agree to drive courteously, at or below the speed limit, and follow other traffic laws. Programs usually require interested residents to register as a pace car driver, sign a pledge to abide by the rules, and display a sticker on their vehicle.

Neighborhood Fight Back Programs

Neighborhood fight back programs are collaborative efforts between local governments and concerned residents to address crime, blight, and other issues negatively affecting their neighborhoods. Though traditionally used to address illegal drug activity, traffic and pedestrian safety may be one area of concern. Through the program, the local government provides multi-agency support over a limited period of time to concentrate enforcement activities in specific neighborhoods.

Radar Speed Trailers and Active Speed Monitors

Fixed motorist feedback signs or movable radar speed trailers can be used as part of a community education program. The more effective units have bright strobe lights that will flash like a photo-enforcement camera or displays red and blue flashing lights when motorists exceed a preset speed. Radar trailers are moved to different locations and are occasionally supplemented with motor officer enforcement. Some radar speed trailers can record speed data and traffic counts by fifteen minute or hourly intervals throughout the day, which will help in targeting future police enforcement.

Image of dilapidated structure on Hammond Street near a school

Dilapidated Structure & Over-Grown Yard Abatement

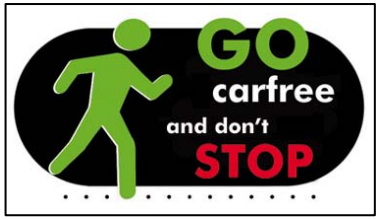
Having a dilapidated structure and over-grown yard abatement program can assist with removing unsafe and unsightly structures and yards that can pose a safety hazard for pedestrian, especially children. If left alone, these structures and yards can diminish the sense of personal safety and reduce the pleasure of walking.

ENCOURAGEMENT AND PROMOTION

Walk to School Day

"Walk to School Day" is a designated day once a week or month that encourages students and teachers to walk to school. This event should be well advertised and interactive. This event also gives the opportunity to educate walkers about positive health and environmental impacts of walking. It should also incorporate and promote other initiatives such as the Safe Routes to School Program[IV]. A Walk to School Day may also coincide with the International Walk to School Day and Month.[V]

Walking School Bus

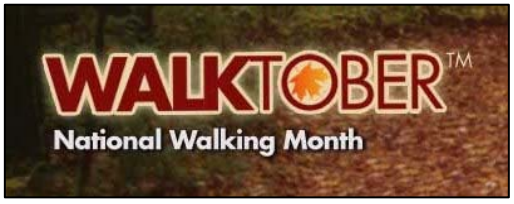


A walking school bus is a group of children walking to school supervised by one or more adults. Initiation of this campaign is fairly simple. To start, the program should be initiated in a single neighborhood that has an interest in walking to school. After a route has been determined, it can be fine-tuned and other neighborhoods may be added. This event not only promotes exercise, it also gives opportunity for pedestrian education. The Walking School Bus can be used collectively with Walk to School Day and the Safe Routes to School Program.[VI]

Carfree Day

"Carfree Day" is an international day set aside to give the public the opportunity to envision how our cities would be without the automobile. This event should encourage walking not only on the official day of September 22, but throughout the year. Downtown streets could be closed for entertainment, educational booths, and health and wellness booths. This day would provide a great opportunity for the Town to inaugurate a new and permanent pedestrian event. A "carfree day"[VII] should be a partnership between local businesses, residents, organizations, and the Town.

Walktober



"Walktober"[VIII] is a national walking campaign aimed at increasing walking in the community in October. October was chosen for this walking event due to beautiful fall scenery and cooler temperatures. This program could be a good catalyst for walking downtown and along trails. Initiation and promotion of this event should be done by community organizations in conjunction with the Town.

Pedestrian Safety Roadshow

The Pedestrian Safety Roadshow[IX] assists communities in developing their own approach to identifying and solving the problems that affect pedestrian safety and walkability. It is a four hour workshop given to local engineering, planning, enforcement, educators, and health officials, youth

groups and senior groups, and local business leaders. Roadshow objectives are to increase the awareness of pedestrian safety and walkability concerns, provide participants with information about the elements that make a community safe and walkable, and channel their concern into a plan of action for addressing pedestrian concerns. This program also provides the Town an opportunity to show the community what they are doing to address pedestrian safety. It also allows the community to identify new walkability barriers and pedestrian enhancement priorities.

Public Perception Marketing

The Town of Winterville should work in conjunction with law enforcement and other local agencies to promote pedestrian safety. This could be done by producing and distributing brochures and pamphlets. The NCDOT[X] website has information on numerous topics, such as the Walk a Child to School Initiative and school guard crossing programs.

To promote walking in the community, the Town will have to construct and infill sidewalks; however, some neighborhoods may associate sidewalks with crime resulting in not wanting sidewalks in front of their home. Although this is a perception, the truth is sidewalks actually improve neighborhoods. Therefore, the Town should take steps to create a positive image for these acquisition projects. Public workshops and meetings should be held to give facts concerning these projects.

[I] http://safety.fhwa.dot.gov/saferoutes/

[II] http://ncdot.org/transit/bicycle/saferoutes/SafeRoutes.html

[III] SRTS Guide, Adult School Crossing Guard Guidelines, October 2007, http://www.saferoutesinfo.org/guide/crossing_guard/index.cfm

[IV] http://www.iwalktoschool.org/

[V] www.walktoschool-usa.org

[VI] http://www.walkingschoolbus.org/

[VII] World Carfree Network, October 2007, http://www.worldcarfree.net/wcfd/documents/cfd_howto.pdf

[VIII] Welcome to Walktober, October 2007, http://www.walktober.com/content.aspx?PageID=8

[IX] http://safety.fhwa.dot.gov/ped_bike/ped/roadshow/walk/index.htm

[X] http://ncdot.org/transit/bicycle/walking/walking_intro.html

SECTION 7 – PROJECT DEVELOPMENT

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SECTION 7 – PROJECT DEVELOPMENT

This section identifies potential projects, preferred treatments, and lists potential funding sources to accomplish the specified projects. The projects were developed from public input activities, task force meetings, and community evaluation. All potential pedestrian projects are illustrated in Map 7.1, 7.2, 7.3, and 7.4 below. The comprehensive transportation system for Winterville is shown on Map 7.5, which includes existing, programmed, planned, potential, TIP, and MPO projects.

POTENTIAL PROJECTS AND PREFERRED TREATMENTS

During plan development, several potential projects were identified that would improve the existing pedestrian network. These potential pedestrian facilities projects have been broken down into the four categories: Pedestrian Crossings, New Sidewalk Construction, Sidewalk Spot Improvements and Existing Sidewalk Repairs, and Greenway Corridor Construction. Each project has its own project identification number that is used throughout this Plan and on all maps in this section and in Section 8 (Map 8.1). Projects on NCDOT maintained roads may require further review and approval by the NCDOT Division 2 Office in Greenville.

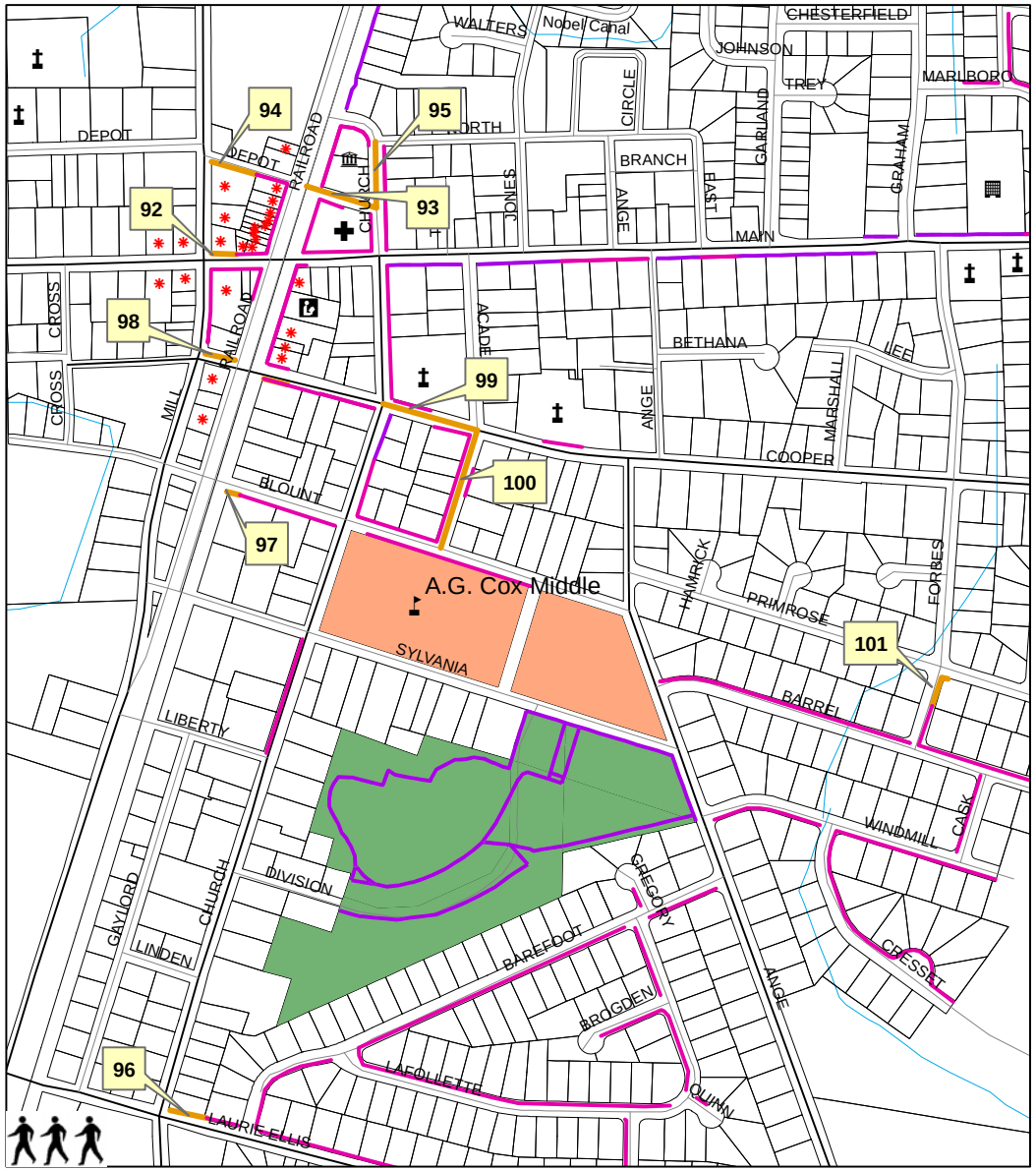
One hundred and thirteen (113) preliminary recommendations or potential projects have been identified. These projects were based upon:

- Task Force meeting #2 mini-charrette
- Public survey & Open House #1 comments
- Pedestrian-vehicle crash data
- Planned, proposed projects mentioned in existing plans
- Field Analysis
- Ability to provide connectivity & improve safety
- Satisfying American Disability Act of 1991

Sidewalk Spot Improvements & Existing Sidewalk Repairs

Sidewalk spot improvements and existing sidewalk repair projects include repairing existing sidewalks identified as ‘severely damaged’ or ‘needs repair’ and installing segments of sidewalk that are less than or equal to 200 feet to complete a sidewalk segment within a block. These projects will provide a cohesive pedestrian network for safe and enjoyable pedestrian movement. (See Map 7.1)

TABLE 7.1: POTENTIAL SIDEWALK SPOT IMPROVEMENTS & EXISTING SIDEWALK REPAIR PROJECTS				
PROJECT ID (REF. ON MAP)	SIDEWALK SPOT IMPROVEMENTS LOCATION	FROM	TO	PREFERRED ACTION / TREATMENT
92	Main Street (Spot)	Mill Street	Railroad Street	Install a continuous sidewalk and curb ramps along north side of road to connect existing sidewalks
93	Depot Street (Spot)	Railroad Street	Church Street	Install sidewalks and curb ramps along both sides of road to connect existing sidewalks
94	Depot Street (Spot)	Railroad Street	Mill Street	Install continuous sidewalks and curb ramps along south side of road to connect existing sidewalks to downtown
95	Church Street (Spot)	Depot Street	North Street	Install sidewalks and curb ramps along west side of road to connect existing sidewalks
96	Laurie Ellis Road (Spot)	Barefoot lane	Church Street	Install a continuous sidewalk and curb ramps along north side of street to connect existing sidewalks
97	Blount Street (Spot)	Railroad Street	Existing sidewalk	Install sidewalk and curb ramps along south side of street to connect existing sidewalks and A.G. Cox
98	Cooper Street (Spot)	Mill Street	Railroad Street	Install sidewalks along both sides of road to provide a safety area for pedestrian travel to commercial areas and downtown
99	Cooper Street (Spot)	Church Street	Academy Street	Install a continuous sidewalk and curb ramps along both sides of street to connect existing sidewalks
100	Academy Street (Spot)	Cooper Street	Blount Street	Install continuous sidewalks and curb ramps along east side of street to connect existing sidewalks and provide a connection to A.G. Cox
101	Forbes Avenue (Spot)	Barrel Drive	Primrose Lane	Install sidewalk and curb ramps along east side of street to connect existing sidewalks



Town of Winterville
Comprehensive Pedestrian Plan

Map 7.1:
All Potential Sidewalk Spot Improvements
& Existing Sidewalk Repair Projects

Legend

- Commercial Areas
- EMS & Community Center
- Library
- Town Hall
- Post Office
- Church
- Schools
- Existing Sidewalk
- Programmed Sidewalks
- Sidewalk Spot & Repair Projects
- Parcel
- Elementary School
- Winterville Parks

N

0 0.03 0.06 0.12 0.18 0.24
Miles

Division of Bicycle & Pedestrian Transportation

Rivers & Associates, Inc. Since 1918

New Sidewalk Construction (NSC)

New sidewalk construction projects (52) are aimed at providing pedestrian accessibility and connectivity between areas of Winterville that are currently isolated. These projects were identified to connect areas of high pedestrian density (residential areas) to surrounding destinations, such as parks, schools, commercial areas, downtown, and proposed greenways. Sidewalk construction also includes connections to existing sidewalks to form continuous routes. All sidewalk projects should include curb cuts with ramps at all driveways and intersections. (See Map 7.2)

TABLE 7.2: POTENTIAL NEW SIDEWALK CONSTRUCTION PROJECTS

PROJECT ID (REF. ON MAP)	NEW SIDEWALK CONSTRUCTION LOCATION	FROM	TO	PREFERRED ACTION / TREATMENT
40	West Firetower Road Extension	Memorial Drive	Davenport Farm Road	Install sidewalks and curb ramps along both sides of future road to connect residential, commercial, and PCC
41	Reedy Branch Road	Memorial Drive	Hwy 11	Install sidewalks and curb ramps along both sides of road to connect residential to PCC, elementary schools, parks and future commercial
42	Forlines Road	Elm Street	Reedy Branch Road	Install sidewalks and curb ramps along south side of road to connect residential to nearby schools
43	Memorial Drive	Vernon White Road	West Firetower Road	Install sidewalks and curb ramps along both sides of road to connect main portion of Winterville with sprawling commercial areas and PCC
44	Memorial Drive	West Firetower Road	Tice Road	Install sidewalks and curb ramps along west side of road to connect commercial and PCC
45	Hwy 903/Main Street	Mill Street	Reedy Branch Road	Install sidewalks and curb ramps along both sides of road to connect residential to downtown and future commercial and residential areas west of Hwy 11
46	Boyd Street	Railroad Street	Reedy Branch Road	Install sidewalks and curb ramps along both sides (if possible) of road to connect residential areas to downtown and W.H. Robinson Elem. School
47	Depot Street	Railroad Street	Mill Street	Install sidewalks and curb ramps along north side of road provide connection to downtown

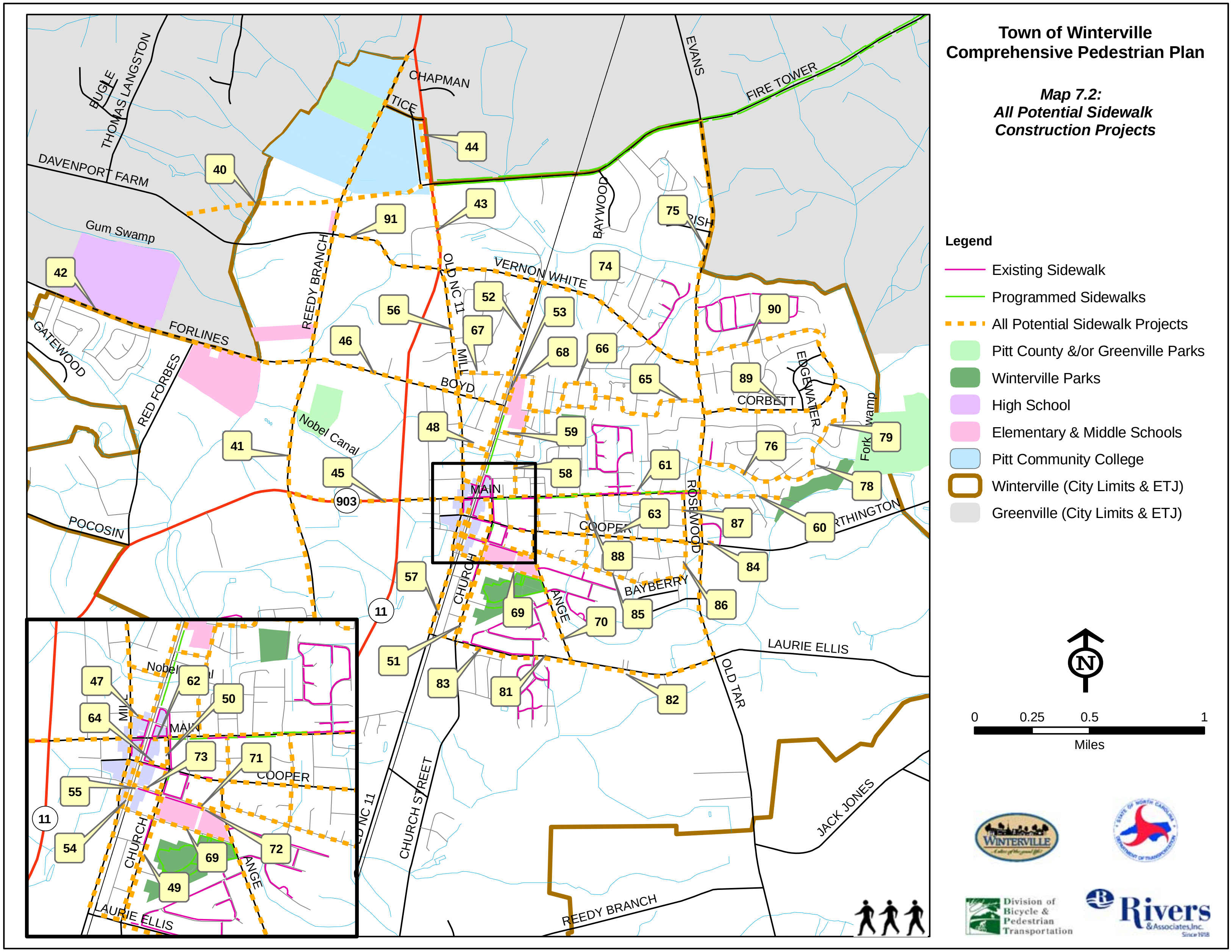
TABLE 7.2: POTENTIAL NEW SIDEWALK CONSTRUCTION PROJECTS				
PROJECT ID (REF. ON MAP)	**NEW SIDEWALK CONSTRUCTION LOCATION**	**FROM**	**TO**	**PREFERRED ACTION / TREATMENT**
48	Tyson Street	Mill Street	Railroad Street	Install sidewalks along one side of road to connect residential area with downtown and W.H. Robinson Elem. School
49	Church Street	Blount Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along east side of street to connect A.G. Cox Middle School (also identified as a greenway route per Pitt County Greenway Plan) with residential area
50	Church Street	Sylvania Street	Main Street	Install continuous sidewalks and curb ramps along west side of street for connection to downtown and A.G. Cox
51	Church Street	Liberty Street	Laurie Ellis Road	Install sidewalks and curb ramps along west side of street to provide a continuous sidewalk to A.G. Cox
52	Railroad Street	Vernon White Road	Depot Street	Install continuous sidewalks and curb ramps along west side of street for connection to downtown and W.H. Robinson
53	Railroad Street	Worthington Street	Hammond Street	Install continuous sidewalks and curb ramps along east side of street in front of W.H. Robinson
54	Railroad Street	Main Street	Sylvania Street	Install continuous sidewalks and curb ramps along west side of street to connect existing sidewalks and the downtown
55	Railroad Street	Cooper Street	Sylvania Street	Install continuous sidewalks and curb ramps along east side of street to connect downtown
56	Mill Street	Vernon White Road	Sylvania Street	Install continuous sidewalks and curb ramps along both sides to provide connection to downtown
57	Mill Street	Sylvania Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along west side of street to connect downtown
58	Jones Street	Main Street	Worthington Street	Install continuous sidewalks and curb ramps along both sides of street to provide connection to W.H. Robinson Elem. School

TABLE 7.2: POTENTIAL NEW SIDEWALK CONSTRUCTION PROJECTS				
PROJECT ID (REF. ON MAP)	**NEW SIDEWALK CONSTRUCTION LOCATION**	**FROM**	**TO**	**PREFERRED ACTION / TREATMENT**
59	Hammond Street	Railroad Street	Jones Street	Install continuous sidewalks and curb ramps along both sides of street to connect to downtown and W.H. Robinson
60	East Main Street	Old Tar Road	Future Town Park	Install sidewalks and curb ramps along both sides of street to connect residential areas, commercial areas, and potential recreation opportunities on a Town-owned parcel at the end of E. Main Street
61	Main Street	Old Tar Road	Church Street	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with schools, parks, downtown, Winter Village, and existing sidewalks (identified as a sidewalk/greenway connector in the Pitt County Greenway Plan 2025)
62	Main Street	Railroad Street	Church Street	Install a continuous sidewalk and curb ramps along south side of road to connect existing sidewalks
63	Cooper Street	Old Tar Road	Academy Street	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with schools, downtown and other commercial areas and connect existing sidewalks
64	Cooper Street	Railroad Road	Church Street	Install sidewalk and curb ramps along north side of street to connect existing sidewalks and provide a connection to A.G. Cox and downtown
65	Kennedy/Hillcrest/Channel	Jones Street	Old Tar Road	Install continuous sidewalks and curb ramps along one side of street to connect to W.H. Robinson Elem. School
66	Evergreen/Hillcrest	Kennedy/Hillcrest	Hillcrest/Channel	Install continuous sidewalks and curb ramps along one side of street to connect to W.H. Robinson Elem. School
67	Worthington Street	Mill Street	Railroad Street	Install continuous sidewalks and curb ramps along one side of street to connect residential areas to W.H. Robinson School

TABLE 7.2: POTENTIAL NEW SIDEWALK CONSTRUCTION PROJECTS				
PROJECT ID (REF. ON MAP)	**NEW SIDEWALK CONSTRUCTION LOCATION**	**FROM**	**TO**	**PREFERRED ACTION / TREATMENT**
68	Worthington Street	Railroad Street	Jones Street	Install continuous sidewalks and curb ramps along south side of street to connect to W.H. Robinson
69	Sylvania Street	Ange Street	Railroad Street	Install continuous sidewalks and curb ramps along both sides to connect residential areas with A.G. Cox and park
70	Ange Street	Main Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along both sides to connect residential areas with A.G. Cox, park, and downtown
71	Blount Street	Ange Street	Academy	Install continuous sidewalks and curb ramps along north side of street to connect A.G. Cox
72	Blount Street	Ange Street	Existing sidewalk	Install a continuous sidewalk and curb ramps along entire length of street (south side) to connect A.G. Cox
73	Blount Street	Mill Street	Church Street	Install a continuous sidewalk and curb ramps along north side of street to connect downtown and A.G. Cox
74	Vernon White Road	Old Tar Road	Memorial Drive/Highway 11	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with commercial, schools, and parks
75	Old Tar Road	West Firetower Road	Laurie Ellis Road	Install continuous sidewalks and curb ramps along both sides of street to provide a connection to surrounding areas
76	Ashley Meadows Drive	Old Tar Road	Edenbrook Drive	Install continuous sidewalks and curb ramps along one side of street to connect to neighboring commercial and residential areas
77	Edenbrook Drive	Ashley Meadows Drive	Ray Crawford Drive	Install continuous sidewalks and curb ramps along one side of street to connect to neighboring residential and commercial areas
78	Ray Crawford Drive	Edenbrook Drive	Spring Run Road	Install continuous sidewalks and curb ramps along one side of street to connect to neighboring residential and commercial areas

TABLE 7.2: POTENTIAL NEW SIDEWALK CONSTRUCTION PROJECTS				
PROJECT ID (REF. ON MAP)	**NEW SIDEWALK CONSTRUCTION LOCATION**	**FROM**	**TO**	**PREFERRED ACTION / TREATMENT**
79	Spring Run Road	Ray Crawford Drive	Corbett Street	Install continuous sidewalks and curb ramps along one side of street to connect to neighboring residential and commercial areas
80	Laurie Ellis Road	Church Street	Mill Street	Install continuous sidewalks and curb ramps along north side of street to connect neighboring residential areas
81	Laurie Ellis Road	Ellis Landing Lane	Ange Street	Install continuous sidewalks and curb ramps on both sides for connection to parks and neighboring areas
82	Laurie Ellis Road	Ange Street	Old Tar Road	Install continuous sidewalks and curb ramps on both sides of street for connection to future residential and commercial areas
83	Laurie Ellis Road	Church Street	Laurie Meadows Way	Install continuous sidewalks and curb ramps on south side of street for connection to daycare center and neighboring destinations
84	Worthington Road	Old Tar Village Road	Old Tar Road	Install sidewalks and curb ramps on north side of street to connect residential and commercial areas
85	Primrose Lane	Rosewood Drive	Ange Street	Install continuous sidewalks and curb ramps on south side of street for connection to school, park and neighboring development
86	Rosewood Drive	Primrose Lane	Cooper Street	Install continuous sidewalks and curb ramps on one side of street for connection to commercial area
87	Rosewood Drive	Cooper Street	Main Street	Install continuous sidewalk and curb ramps on one side of street for connection to surrounding destinations
88	Forbes Avenue	Primrose Lane	Main Street	Install continuous sidewalk and curb ramps on east side of street for connection to surrounding destinations
89	Corbett Street	Old Tar Road	Tabard Drive	Install sidewalk and curb ramps along one side of street for connection from residential area to surrounding land uses

TABLE 7.2: POTENTIAL NEW SIDEWALK CONSTRUCTION PROJECTS				
PROJECT ID (REF. ON MAP)	**NEW SIDEWALK CONSTRUCTION LOCATION**	**FROM**	**TO**	**PREFERRED ACTION / TREATMENT**
90	Tabard Drive	Old Tar Road	Corbett Street	Install sidewalk and curb ramps along one side of street for connection from residential area to surrounding land uses
91	Davenport Farm Road	Hwy 11	Reedy Branch	Install sidewalks and curb ramps along both sides of road to connect commercial properties


Town of Winterville
Comprehensive Pedestrian Plan
Map 7.2:
All Potential Sidewalk Construction Projects
Legend
Existing Sidewalk
Programmed Sidewalks
All Potential Sidewalk Projects
Pitt County &/or Greenville Parks
Winterville Parks
High School
Elementary & Middle Schools
Pitt Community College
Winterville (City Limits & ETJ)
Greenville (City Limits & ETJ)
0
0.25
0.5
1
Miles
N
CHAPMAN
TICE
DAVENPORT FARM
Gum Swamp
FORLINES
GATEWOOD
RED FORBES
REEDY BRANCH
OLD NC 11
VERNON WHITE
BAYWOOD
EVANS
FIRE TOWER
CORBETT
EDGEWATER
BOYD
MILL
MAIN
COOPER
CHURCH
BAYBERRY
ROSEWOOD
LAURIE ELLIS
OLD TAR
JACK JONES
CHURCH STREET
POCOSIN
Nobel Canal
903
11
Division of Bicycle & Pedestrian Transportation
Rivers & Associates, Inc.

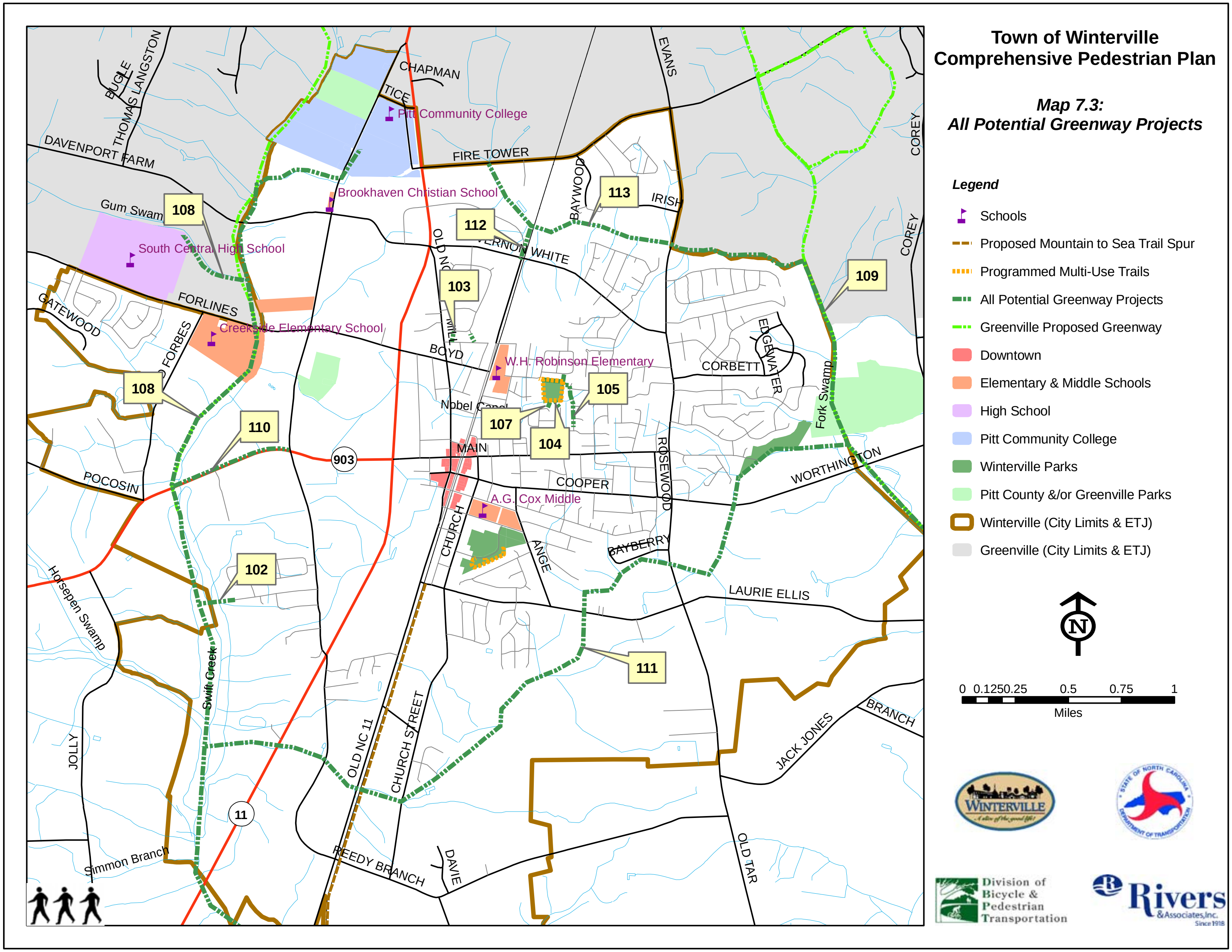
Greenway Corridor Construction (GCC)

Greenway corridor construction projects (12) include off-road pedestrian facilities, typically along lateral stream and drainage corridors, easements, and other open tracts of land. These projects will become a part of a larger greenway system, as identified in *Pitt County Greenway Plan 2025*. Adequate grade separated pedestrian crossings should be installed at all greenway corridor intersections. (See Map 7.3)

TABLE 7.3: POTENTIAL GREENWAY CORRIDOR CONSTRUCTION PROJECTS

PROJECT ID (REF. ON MAP)	GREENWAY CORRIDOR CONSTRUCTION LOCATION	FROM	TO	REASON	ALIGNMENT DETAILS
102	Magnolia Ridge Subdivision	Magnolia Drive	Swift Creek Greenway	To provide a connection to greenway system	Suggested alignment is between cul-de-sac lots (262 & 263 Magnolia Drive). Length of this alignment is approximately 913 feet (0.2 miles)
103	Waterford Subdivision	Foxcroft Place	Worthington Street	Connection from residential area to W.H. Robinson Elementary School and downtown	Suggested alignment between properties at cul-de-sac (297 & 293 Foxcroft Place) or between 2304 & 2305 Foxcroft Place. Length of this alignment is approximately 276 feet (0.05 miles)
104	Graham Street	Graham Street	Hillcrest Park	Connection between residential neighborhoods, park, and W.H. Robinson	Suggested alignment between 2500 & 2504 Graham Street. Length of this alignment is approximately 231 feet (0.04 miles)
105	Williamston Drive & Pinetops Drive	Williamston Drive & Pinetops Drive	Hillcrest Park	Connection between residential neighborhoods, park, and W.H. Robinson	Suggested alignment between 2421 & 2406 Pinetops Drive. Length of this alignment is approximately 1,187 feet (0.2 miles)
106	Carmon Street	Hillcrest Avenue	Hillcrest Park	Connection between residential neighborhoods, park, and W.H. Robinson	Suggested alignment along Carmon Street. Length of this alignment is approximately 88 feet (0.04 miles)
107	Johnson Lane	Johnson Lane	Hillcrest Park	Connection between residential neighborhoods, park, and W.H. Robinson	Suggested alignment between 383 & 385 Johnson Lane. Length of this alignment is approximately160 feet (0.03 miles)

TABLE 7.3: POTENTIAL GREENWAY CORRIDOR CONSTRUCTION PROJECTS					
PROJECT ID (REF. ON MAP)	GREENWAY CORRIDOR CONSTRUCTION LOCATION	FROM	TO	REASON	ALIGNMENT DETAILS
108	Swift Creek	Pitt Community College	Highway 11	Connection between PCC, South Central High School, Creekside Elementary School	Suggested alignment along existing drainage easements with adequate road crossings and a spur along Gum Swamp to South Central HS. Length of this alignment is approximately 40,167 feet (7.6 miles)
109	Fork Swamp Creek	Greenville limits & Old Tar Road	Boyd Lee Park	Connection to Boyd Lee Park and other destinations	Suggested alignment along existing drainage easements with adequate road crossings where needed. Length of this alignment is approximately 23,364 feet (4.4 miles)
110	Hwy 903	Swift Creek	Reedy Branch Road	Connection to Swift Creek Greenway Corridor and downtown	Suggested alignment along one side of road within right-of-way. Length of this alignment is approximately 3,108 feet (0.6 miles)
111	Lateral Drainage/Stream Branch	Swift Creek	Fork Swamp Creek	Connection between Swift Creek Greenway and Fork Swamp Creek Greenway	Suggested alignment along one side of stream/drainage with adequate road crossings where needed. Length of this alignment is approximately 11,338 feet (2.15 miles).
112	Railroad Street	Vernon White Road	Lateral drainage area	Connection to Fork Swamp Creek Greenway	Suggested alignment along railroad easement. Length of this alignment is approximately 506 feet (0.1 miles).
113	Firetower Road	Firetower Road	Old Tar Road	Connection to Fork Swamp Creek Greenway	Suggested alignment along one side of stream/drainage with adequate road crossings where needed. Length of this alignment is approximately 1,459 feet (0.3 miles).


Town of Winterville
Comprehensive Pedestrian Plan
Map 7.3:
All Potential Greenway Projects
Legend
Schools
Proposed Mountain to Sea Trail Spur
Programmed Multi-Use Trails
All Potential Greenway Projects
Greenville Proposed Greenway
Downtown
Elementary & Middle Schools
High School
Pitt Community College
Winterville Parks
Pitt County &/or Greenville Parks
Winterville (City Limits & ETJ)
Greenville (City Limits & ETJ)
0 0.1250.25 0.5 0.75 1
Miles
Pitt Community College
Brookhaven Christian School
South Central High School
Creekside Elementary School
W.H. Robinson Elementary
A.G. Cox Middle
102
103
104
105
107
108
109
110
111
112
113
CHAPMAN
FIRE TOWER
DAVENPORT FARM
FORLINES
BOYD
MAIN
COOPER
WORTHINGTON
LAURIE ELLIS
JACK JONES
REEDY BRANCH
CHURCH STREET
OLD NC 11
OLD TAR
ROSEWOOD
CORBETT
EVANS
POCOSIN
JOLLY
Swift Creek
Fork Swamp
Simmon Branch
903
11
Division of Bicycle & Pedestrian Transportation
Rivers & Associates, Inc.

Pedestrian Crossings (PC)

Pedestrian crossings (39 identified projects) range from striping crosswalks or installing curb extensions to crossing multi-lane highways and railroad tracks. Installing proper pedestrian crossings will encourage pedestrian travel and safely connect isolated portions of Winterville. Further study and cooperation with NCDOT and CSX railroad will be required to ensure proper crossings involving their infrastructure. (See Map 7.4)

TABLE 7.4: POTENTIAL PEDESTRIAN CROSSING PROJECTS

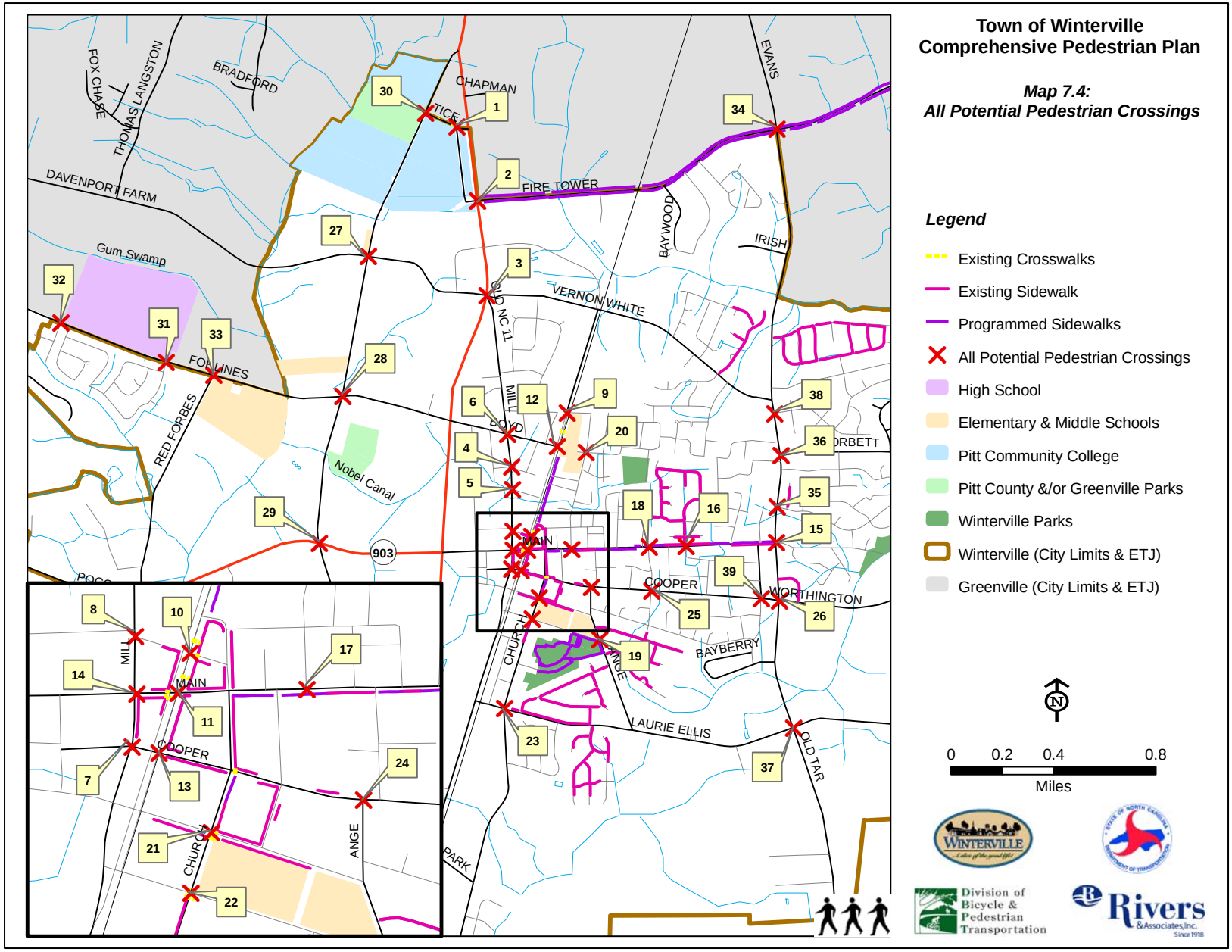
PROJECT ID (REF. ON MAP)	PEDESTRIAN CROSSING LOCATION	DESCRIPTION	PREFERRED ACTION / TREATMENT
1	Dr. Fulford Drive, Tice, & Pitt Tech Road	Location of a pedestrian-vehicle crash and near PCC	Install highly visible crosswalks, possible traffic calming measures (raised crosswalk, reduce speed limits, etc.)
2	Memorial Drive & West Firetower Road	Access to PCC, commercial areas, and transit stop at PCC	Install crosswalks, refuge island, pedestrian-activated signals, and signage
3	Vernon White, Davenport Farm Road, & Hwy 11	Location of a pedestrian-vehicle crash, an identified Highway Spot Safety Improvement Project (See Section 3), and connection to PCC and new Commercial area	Install highly visible crosswalks, pedestrian-activated signals, signage, and possible traffic calming measures (raised crosswalk or intersection, refuge island, reduced speed limits)
4	Mill Street & Hammond Street	Location of a pedestrian-vehicle crash and connects neighborhoods	Install highly visible crosswalks, signage, and traffic calming measures (i.e., reduced speed limits, raised crosswalk)
5	Mill Street & Tyson Street	Location of a pedestrian-vehicle crash and near downtown and W.H. Robinson Elem. School	Install highly visible crosswalks, signage, and traffic calming measures (curb extensions, lower speed limits, raised crosswalk, etc.)
6	Mill Street & Boyd Street	Access to W.H. Robinson Elem. School	Install highly visible crosswalks, 4-way stop signs and possible curb extensions
7	Mill Street & Cooper Street	Downtown	Install highly visible crosswalks, curb ramps, and signage
8	Mill Street & Depot Street	Downtown	Install highly visible crosswalks, signage, and possible curb extensions
9	Railroad Street & Worthington Street	Near W.H. Robinson Elem. School	Install 4-way stop signs, highly visible crosswalk, pedestrian signage, and improved railroad crossing

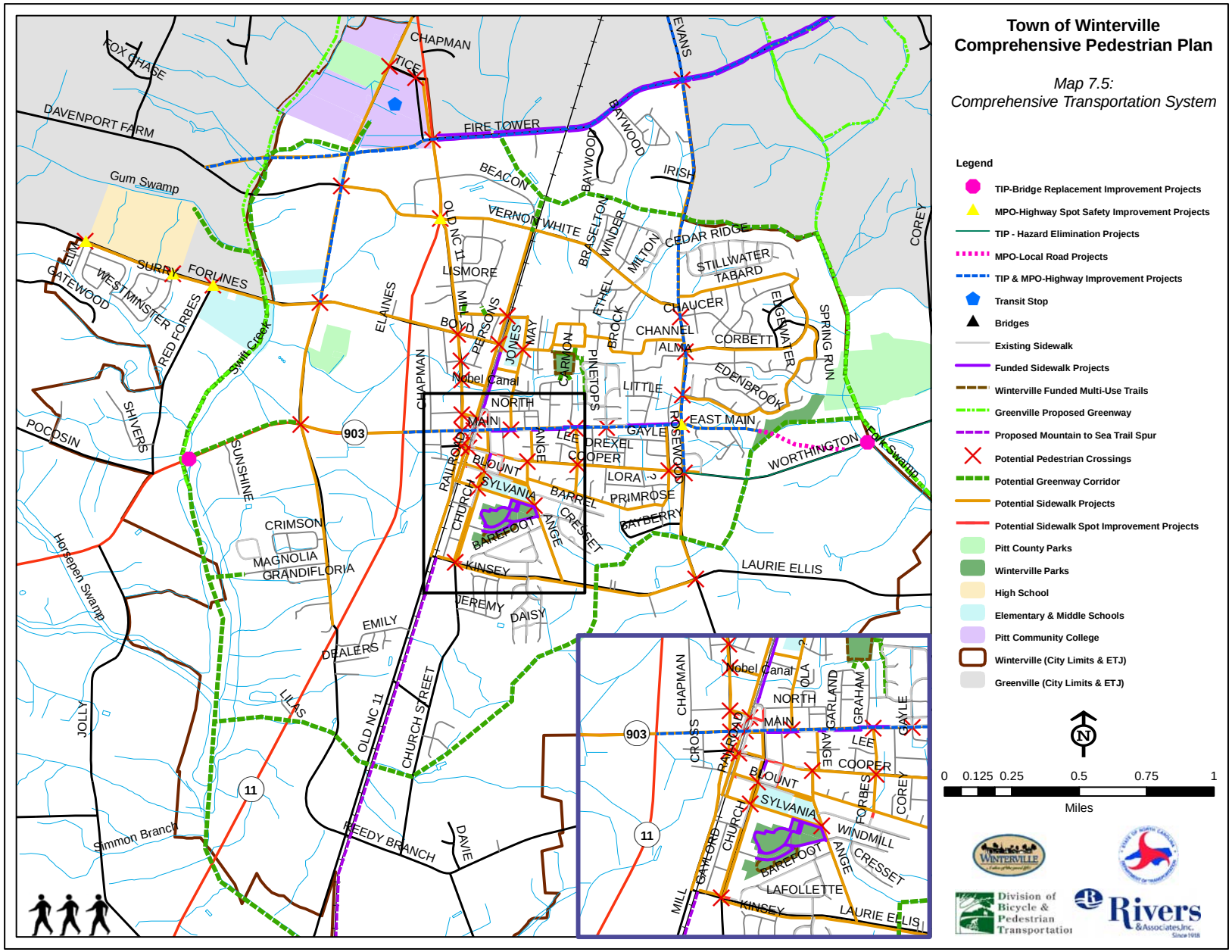
TABLE 7.4: POTENTIAL PEDESTRIAN CROSSING PROJECTS			
PROJECT ID (REF. ON MAP)	PEDESTRIAN CROSSING LOCATION	DESCRIPTION	PREFERRED ACTION / TREATMENT
10	Railroad Street & Depot Street	Downtown	Install highly visible crosswalks, signage, curb extension, and improved railroad crossing
11	Railroad Street & Main Street	Downtown	Install highly visible crosswalks, signage, curb extension, and improved railroad crossing
12	Railroad Street & Boyd Street	Location of pedestrian-vehicle crash and is in front of W.H. Robinson Elem. School	Install highly visible crosswalks, signage, 4-way stop signs, improved railroad crossing, and possible traffic calming measures
13	Railroad Street & Cooper Street	Downtown	Install highly visible crosswalks
14	Main Street & Mill Street	Downtown	Install highly visible crosswalks, curb ramps, and pedestrian-activated signals
15	Main Street & Old Tar Road	Connection to downtown from residential areas and is an identified Highway Spot Safety Improvement Project (See Section 3)	Install crosswalks, curb ramps, pedestrian-activated signals, and signage
16	Main Street & Gayle Street	Near Post Office and parks	Install highly visible crosswalks, signage, possible curb extensions, and pedestrian-activated signals
17	Main Street & Jones Street	Downtown and schools	Install highly visible crosswalks, signage, possible curb extensions, and pedestrian-activated signals
18	Main Street & Forbes Street	Near Post Office and parks	Install highly visible crosswalks, signage, possible curb extensions, and pedestrian-activated signals
19	Ange Street & Sylvania Street	Near A.G. Cox and park	Install highly visible crosswalks, 3-way stop sign, and signage
20	Jones Street & Kennedy Street	Access to W.H. Robinson Elem. School	Install 3-way stop sign, improve existing crosswalk to be more visible, and signage
21	Church Street & Blount Street	A.G. Cox Middle School	Install improved crosswalks (highly visible), curb ramps, 4-way stop signs, signage, and possible curb extensions
22	Church Street & Sylvania Street	A.G. Cox Middle School and park	Install improved crosswalks (highly visible), curb ramps, 4-way stop signs, signage, and possible curb extensions

TABLE 7.4: POTENTIAL PEDESTRIAN CROSSING PROJECTS

PROJECT ID (REF. ON MAP)	PEDESTRIAN CROSSING LOCATION	DESCRIPTION	PREFERRED ACTION / TREATMENT
23	Church Street & Laurie Ellis Road	Access to daycare and residential neighborhoods	Install highly visible crosswalks, signage, and 4-way stop sign
24	Cooper Street & Ange Street	Near A.G. Cox Middle School, downtown, and parks	Install highly visible crosswalks and signage
25	Cooper Street & Forbes Street	Near Post Office, A.G. Cox, and park	Install highly visible crosswalks and signage
26	Cooper Street/ Worthington Road & Old Tar Road	Connection to parks, schools, downtown and nearby commercial	Install highly visible crosswalks and signage
27	Reedy Branch Road & Davenport Farm Road	Connection to PCC and commercial areas	Install highly visible crosswalks and signage at time of sidewalk construction
28	Reedy Branch Road & Forlines Road	Near Creekside Elem. School and softball complex	Install highly visible crosswalks, signage and 4-way-stop signs
29	Reedy Branch Road & Hwy 903	Future commercial & residential growth area	Install highly visible crosswalks and signage
30	Reedy Branch Road & Tice Street	Near PCC and residential areas	Install highly visible crosswalks
31	Forlines Road & Westminster Street	Near South Central High School, Creekside Elem. School and residential areas, also an identified Highway Spot Safety Improvement Project (See Section 3)	Install highly visible crosswalks, signage, and 3-way stop signs
32	Forlines Road & Elm Street	Near South Central High School and residential, also a Highway Spot Safety Improvement Project	Install highly visible crosswalks and signage
33	Forlines Road & Red Forbes Road	Near Creekside Elem. School and an identified Highway Spot Safety Improvement Project (See Section 3)	Install highly visible crosswalks, signage, 3-way stop signs
34	Old Tar Road/Evans Street & West Firetower Road	Connection to surrounding commercial and residential areas	Install crosswalks, pedestrian-activated signals, and signage
35	Old Tar Road & Ashley Meadows Drive	Access to Winter Village (Food Lion) and nearby daycare centers	Install highly visible crosswalk and signage

TABLE 7.4: POTENTIAL PEDESTRIAN CROSSING PROJECTS			
PROJECT ID (REF. ON MAP)	**PEDESTRIAN CROSSING LOCATION**	**DESCRIPTION**	**PREFERRED ACTION / TREATMENT**
36	Old Tar Road & Corbett Street	Connection to parks, schools, downtown and nearby commercial	Install highly visible crosswalks, pedestrian-activated signals, and signage
37	Old Tar Road & Laurie Ellis Road	Future residential growth area	Install highly visible crosswalks and pedestrian signage
38	Old Tar Road & Chaucer Drive	Connection to parks, schools, downtown and nearby commercial	Install highly visible crosswalks, pedestrian-activated signals, and signage
39	Cooper Street & Rosewood Street	Connection to commercial	Install highly visible crosswalks


Town of Winterville
Comprehensive Pedestrian Plan
Map 7.4:
All Potential Pedestrian Crossings
Legend
Existing Crosswalks
Existing Sidewalk
Programmed Sidewalks
All Potential Pedestrian Crossings
High School
Elementary & Middle Schools
Pitt Community College
Pitt County &/or Greenville Parks
Winterville Parks
Winterville (City Limits & ETJ)
Greenville (City Limits & ETJ)
0 0.2 0.4 0.8
Miles
FOX CHASE
THOMAS LANGSTON
BRADFORD
DAVENPORT FARM
Gum Swamp
CHAPMAN
TICE
FIRE TOWER
EVANS
BAYWOOD
IRISH
VERNON WHITE
OLD NC 11
FOXVINES
RED FORBES
MILL POND
Nobel Canal
903
MAIN
COOPER
WORTHINGTON
BAYBERRY
CHURCH
LAURIE ELLIS
OLD TAR
PARK
ANGE
Division of Bicycle & Pedestrian Transportation
Rivers & Associates, Inc.


Town of Winterville
Comprehensive Pedestrian Plan
Map 7.5:
Comprehensive Transportation System
Legend
TIP-Bridge Replacement Improvement Projects
MPO-Highway Spot Safety Improvement Projects
TIP - Hazard Elimination Projects
MPO-Local Road Projects
TIP & MPO-Highway Improvement Projects
Transit Stop
Bridges
Existing Sidewalk
Funded Sidewalk Projects
Winterville Funded Multi-Use Trails
Greenville Proposed Greenway
Proposed Mountain to Sea Trail Spur
Potential Pedestrian Crossings
Potential Greenway Corridor
Potential Sidewalk Projects
Potential Sidewalk Spot Improvement Projects
Pitt County Parks
Winterville Parks
High School
Elementary & Middle Schools
Pitt Community College
Winterville (City Limits & ETJ)
Greenville (City Limits & ETJ)
0 0.125 0.25 0.5 0.75 1
Miles
CHAPMAN
TICE
FOX CHASE
DAVENPORT FARM
FIRE TOWER
BAYWOOD
EVANS
IRISH
COREY
BEACON
Gum Swamp
OLD NC 11
VERNON WHITE
BRASELTON
WINDER
MILTON
CEDAR RIDGE
STILLWATER
TABARD
LISMORE
ELM
GATEWOOD
WEST MINSTER
SURRY
FORLINES
RED FORBES
Swift Creek
ELAINES
MILL
BOYD
PERSONS
JONES
MAY
ETHEL
BROCK
CHAUCER
CHANNEL
ALMY
CORBETT
EDGEWATER
SPRING RUN
CARMON
PINETOPS
LITTLE
EDENBROOK
Nobel Canal
NORTH
MAIN
GAYLE
EAST MAIN
ROSEWOOD
WORTHINGTON
Cork Swamp
POCOSIN
SHIVERS
903
LEE
DREXEL
COOPER
BLOUNT
LORA
SYLVANIA
BARREL
PRIMROSE
BAYBERRY
CRESSET
BAREFOOT
KINSEY
LAURIE ELLIS
SUNSHINE
CRIMSON
MAGNOLIA
GRANDIFLORIA
Horsepen Swamp
JEREMY
DAISY
EMILY
DEALERS
JOLLY
LILAS
OLD NC 11
CHURCH STREET
11
Simmon Branch
REEDY BRANCH
DAVIE
CROSS
GARLAND
GRAHAM
WINDMILL
FORBES
LAFOLLETTE
MILL
GAYLORD

FUNDING OPPORTUNITIES

A combination of funding sources would need to be utilized to implement the identified projects and programs outlined in this Plan. The Town of Winterville should seek all funding opportunities for project implementation, including State and Federal monies where available. Special funding programs for specific types of projects such as Safe Routes to School should also be pursued. The use of private foundation contributions should be thoroughly researched and private donations accepted to assist in funding. Even with the vast funding sources available, there usually is a local match requirement. The most reliable funding will be local government; therefore, it is important for the Town of Winterville to continue to allocate the necessary funds each year to ensure completion of pedestrian infrastructure. This annual budget line item will ensure that pedestrian projects identified in this Plan will be completed. This action will also illustrate the Town's commitment to improve walkability in the community.

This Plan has identified funding opportunities for pedestrian facilities from local, state, and federal level; as well as from public and private initiatives to aid in the implementation of this Plan. As mentioned earlier, some projects will require a combination of funding sources.

Local Funding Sources

Several types of potential local funding sources are available for the Town of Winterville. Local funds should be used for projects not on major state routes and as local match. Local funding sources tend to be flexible and include general revenue expenditures as well as proceeds from bond programs. Some local funding sources are:

- Annual Improvement Program
  The Town should allocate a specified amount each fiscal year in the Capital Improvement Program (CIP) for sidewalk repairs, construction of new sidewalks, and intersection improvements.

- Fee or Payment "in-lieu of"
  Winterville currently using a fee in-lieu of dedication of recreation area within new residential developments; however, this funding source could be implemented for sidewalks and multi-use trails.

- Impact Fees
  Winterville could use impact fees to provide funding for greenways and multi-use trails. Impact fees are monetary one-time charges levied by a local government on new development. Unlike required dedications, impact fees can be applied to finance pedestrian facilities located outside the boundary of the development. The NC General Assembly has permitted a 'small but growing number of local governments to impose impact fees." These fees can be levied through the subdivision or building permit process to finance pedestrian facilities in Winterville.

- Special Assessment Bonds
  Winterville could use special assessment bonds to install sidewalks within an area in need. Special assessment bonds are secured by a lien on a property that benefits by the improvements funded with the special assessment bond proceeds. Debt service payments on these bonds are funded through annual assessments to the property owners in the assessment area.

- Revenue Bonds
  Revenue bonds are bonds that are secured by a pledge of the revenues from a certain local government activity. The entity issuing the bond pledges to generate sufficient revenue annually to cover the program's operating costs, and meet the annual debt service requirements (principal and interest payment). Revenue bonds are not constrained by the debt ceiling of general obligation bonds, but they are generally more expansive than general obligation bonds.

- General Obligation Bonds
  A general obligation bond (GOB) is a bond that is legally backed by the full faith and credit of the issuing government. The local government that issues the bond pledges to raise its property taxes, or use any other sources of revenue, to generate sufficient revenues to make the debt service payments on the bond. A GOB pledge is considered more robust than a revenue pledge, and thus is likely to carry a lower interest rate then a revenue bond.

- Transportation Bonds
  Transportation bonds have been instrumental in strategic implementation of local roadways, transit, and non-motorized travel throughout North Carolina. Voters in communities have regularly approved the use of these bonds in order to improve their transportation system. Improvements to the pedestrian system in Winterville would be a type of project that could be funded using a transportation bond program.

- Excise Tax
  Excise taxes are taxes on specific goods and services. These taxes require special legislation and the use of the funds generated through the tax are limited to specific uses. Examples include lodging, food, and beverage taxes that generate funds for promotion of tourism, and the gas tax that generates revenues for transportation related activities.

- Property Tax
  Property taxes generally support a significant portion of a municipality's activities. However, the revenues from property taxes can also be used to pay debt service on general obligation bonds issued to finance greenway or multi-use trail acquisitions. Because of limits imposed on tax rates, use of property taxes to fund greenways could limit the municipality's ability to raise funds for other activities. Property taxes can provide a steady stream of financing while broadly distributing the tax burden.

- Sales Tax
  North Carolina authorizes a sale tax at the state and county levels. Local governments that choose to exercise the local option sales tax, use the tax revenues to provide funding for a wide variety of projects and activities. Any increase in the sales tax, even if applying to a single county, must gain approval of the state legislature.

- Urban Greenville Metropolitan Planning Organization (UBGMPO)
  Winterville is a member of the UGMPO, which plans and assists with multimodal transportation planning for their area. As a member, Winterville is able to assist in determining the transportation needs for their community in regards to state and federal road improvements, as well as transportation enhancement projects that are placed on the State Transportation Improvement Program (STIP).

State & Federal Funding Sources

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEALU) law guarantees funding for highways, highway safety, and public transportation. Provisions of the law address specific safety issues, including pedestrian and bicycle safety. Funds for pedestrian projects come from several different sources that are described below; however, allocation of those funds depends on the type of project or program and other criteria.[i]

- Highway Safety Improvement Program (HSIP)
  HSIP allows States to target their most critical safety needs. States are required to develop and implement a safety plan and submit safety reports that describe hazardous locations, progress in implementation of highway safety improvement projects, and the effectiveness of those projects in reducing injuries and fatalities. [ii]

- Safe Routes to Schools Program (SRTS)
  The SRTS program is new to North Carolina. It intends to enable and encourage elementary and middle school students to walk safely to school. Funding is available to facilitate planning, development, and implementation of activities and projects that reduce traffic, fuel consumption, air pollution, and improve safety within approximately two (2) miles of elementary and middle schools (K-8 only). The North Carolina Safe Routes to School program provides opportunities for schools to apply for grant funding to develop an action plan, non-infrastructure improvements (education, enforcement, and encouragement), and infrastructure improvements to encourage walking and cycling to school. The maximum amount an applicant can receive to develop an action plan is $15,000 for one to two schools and $30,000 for three or five schools. The maximum amount for non-infrastructure grants is $50,000[iii]. The funding range for infrastructure projects is $100,000 to $300,000 per project.

- Highway Division Funds
  Highway Division Funds are a component of the SRTS program. Under the SRTS program, each Highway Division in North Carolina will receive $200,000 in fiscal year 2008 and $230,000 in fiscal year 2009. These funds will be used for timely, relatively low-cost spot safety improvements within the rights-of-way on state maintained roadways. Requests for these funds must be made directly to the Division offices. The maximum amount per request is $50,000. Winterville is in the NCDOT Division 2 with headquarters in Greenville.

- Powell Bill Funds
  Powell Bill funds are collected by the state in the form of a gasoline tax. These funds are distributed based on the number of street miles to be maintained and the Town's population.[iv]

- The Recreational Trails Program
  This program has thirty percent (30%) of its funds set aside for motorized trail projects, thirty percent (30%) for non-motorized trail uses, and the remainder can be spent on either. These funds can be used to cover the costs of construction, maintenance of equipment, real estate, educational programs, state administration, and assessment of trail conditions. The maximum amount an applicant can receive is $75,000 and there is a twenty percent (20%) local match requirement.[v]

- Transportation Improvement Program (TIP)
  As a part of the state's Transportation Improvement Program (TIP), incidental (those related to a scheduled highway project) pedestrian TIP projects can receive allocations through an array of funding resources including Federal Aid Construction Funds and State Construction Funds/State Highway Trust Fund. Projects programmed into the TIP as independent (those that are not related to a scheduled highway project) pedestrian projects are managed and selected by NCDOT, Division of Bicycle and Pedestrian Transportation (DBPT). The Division has an annual budget of $6 million. Eighty percent of these funds are from STP-Enhancement funds, while the State Highway Trust provides the remaining 20 percent of the funding.

  Each year, the DBPT regularly sets aside a total of $200,000 of TIP funding for the department to fund projects such as training workshops, pedestrian safety and research projects, and other pedestrian needs statewide. Those interested in learning about training workshops, research and other opportunities should contact the DBPT for information.

  A total of $5.3 million dollars of TIP funding is available for funding various bicycle and pedestrian independent projects, including the construction of multi-use trails, the striping of bicycle lanes, and the construction of paved shoulders, among other facilities. Prospective applicants are encouraged to contact the DBPT regarding funding assistance for bicycle and pedestrian projects. For a detailed description of the TIP project selection process, visit http://www.ncdot.org/transit/bicycle/funding/funding_TIP.html. Another $500,000 of the division's funding is available for miscellaneous projects.

However, one of the most cost-effective ways of providing pedestrian facilities is to incorporate them as part of larger reconstruction, new construction, and repaving projects as incidental projects. Projects with bicycle and pedestrian accommodations such as bike lanes, widened paved shoulders, sidewalks and bicycle-safe bridge design are frequently included as incidental features of highway projects. In addition, bicycle-safe drainage grates are a standard feature of all highway construction. Most bicycle and pedestrian safety accommodations built by NCDOT are included as part of scheduled highway improvement projects funded with a combination of National Highway System funds and State Highway Trust Funds.

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

- Surface Transportation Program (STP)
  Funds allocated to the STP can be used to construct pedestrian walkways, create maps and brochures, or develop public service announcements (PSAs) promoting safe walking. These funds can also be used to retrofit public sidewalks to comply with ADA.[vi]

- Transportation Enhancement Activities (TEAs)
  North Carolina earmarks ten percent (10%) of their annual STP funds for Transportation Enhancement Activities (TEAs). Transportation enhancements are transportation-related activities that are designed to strengthen the cultural, aesthetic, and environmental aspects of transportation systems. TEA provides for the implementation of non-roadway capacity improvement projects including pedestrian facilities, landscaping, and similar aesthetic improvements. Various forms of pedestrian facilities such as sidewalks, pedestrian tunnels and bridges, and crossing improvements are eligible for funding. Conversion of abandoned railway corridors to multi-use paths can also be funded with these monies.[vii]

- Statewide Discretionary Funds
  The Statewide Discretionary Fund consists of $10 million and is administered by the Secretary of the Department of Transportation. This fund can be used on any project at any location within the State. Primary, urban, secondary, industrial access, and spot safety projects are eligible for this funding. To request funding, an entity must submit a written request to the NCDOT Highway Division office with a clear description of project and project justification.

- Hazard Elimination and Railway-Highway Crossing Programs
  These funds are an additional subset of the State Transportation Improvement Program (STIP) funding, constituting ten percent (10%) of a state's funds. This program is intended to inventory and correct the safety concerns of all travel modes including pedestrian. Publicly-owned pedestrian pathways can be funded under this program. Pedestrian projects can also be eligible for the Hazard Elimination Program, which is administered through locations that have a documented history of previous crashes. A maximum of $100,000 is offered per NCDOT Highway Division for hazard elimination projects.[viii]

- Land and Water Conservation Fund (LWCF)
  The Land and Water Conservation Fund provide grants for communities to build a variety of park and recreation facilities including trails and greenways. In North Carolina, the federally granted money is allocated through the State Division of Park and Recreation. There is a fifty percent (50%) local match.[ix]

- North Carolina's Clean Water Management Trust Fund (CWMTF)
  CWMTF provides grants to local governments, state agencies, and conservation nonprofits to help finance projects that specifically address water pollution problems. CWMTF funds may be used to establish a network of riparian buffers and greenways for environmental, educational, and recreational benefits. Grants are designed to fund projects that bring parks and recreation, including multi-use trails closer to people's homes.[x]

- Governor's Highway Safety Program (GHSP)
  The Governor's Highway Safety Program is committed to enhancing the safety of the roadways in North Carolina. To achieve this, GHSP funding is provided through an annual program, upon approval of specific project requests to undertake a variety of pedestrian safety initiatives. Communities may apply for a GHSP grant to be used as seed money to start a program to enhance highway safety. Funding is provided on a reimbursement basis and evidence of reductions in crashes, injuries, and fatalities is required. Amounts of GHSP monies vary from year to year.[xi]

- North Carolina Parks and Recreation Trust Fund (PARTF) Grant Program
  The PARTF program provides local governments with dollar-for-dollar matching grants to acquire land and renovate or develop of recreational projects for the public, including multi-use trails. The maximum amount an applicant is eligible for is $500,000.[xii]

- North Carolina Adopt-A-Trail Program
  North Carolina Adopt-A-Trail Program provides communities with grant monies up to $5,000 for construction, maintenance, facilities, signage, brochures, and maps.[xiii]

- Conservation Tax Credit
  The Conservation Tax Credit program allows landowners who donate property for conservation purposes by easements or sale. These landowners are eligible for the North Carolina Conservation Tax Credit. The goal of the program is to provide incentive to protect water supply watersheds, manage stormwater, retain forests and working farms, and to allow for ecological communities through the formation of trails and wildlife corridors.[xiv]

- Congestion Mitigation and Air Quality Improvement Program
  This Environmental Protection Agency's (EPA's) program can assist in funding many of the same projects funded by the STP including pedestrian walkways, maps, brochures, and public service announcements.[xv]

- Watershed Protection and Flood Prevention Grants for Small Watersheds
  Watershed Protection and Flood Prevention Grants for Small Watersheds provides funding to state and local agencies or nonprofit organizations to create and maintain watershed improvements of less than 250,000 acres. Financial and technical assistance are available and a fifty percent (50%) local match is required for public recreation projects.[xvi]

Private Funding Sources

- Blue Cross Blue Shield Fit Together Grants
  The FitCommunity Program is a designation and grant program to recognize and reward municipality and county efforts to promote physical activity, healthy eating and tobacco-free programs, policies, environments and lifestyles. A municipality or county is eligible for grant money once it has received a FitCommunity designation. This program awards up to nine partnerships with up to $30,000 annually for a two-year period.[xvii]

- Active Living by Design (ALbD)
  Active Living by Design is a program sponsored by the Robert Wood Johnson Foundation. The program seeks to bring together the health care and transportation communities to create an environment that encourages residents to pursue active forms of transportation such as walking and bicycling. Grants are awarded each year to a selected number of communities with a local match requirement. These monies can be used to create plans, change land use policies, institute education policies, and develop pilot projects.[xviii]

- The Trust for Public Land
  The Trust for Public Land (TPL) is the only national nonprofit working exclusively to protect land to enhance the health and quality of life in American communities. TPL works with landowners, government agencies, and community groups to create urban parks and greenways as well as to conserve land for watershed protection.[xix]

- Developer Contributions
  Through diligent planning and early project identification, regulations, policies, and procedures could be developed to protect future pedestrian corridors and require contributions from developers when the property is subdivided. To accomplish this goal, it will take a cooperative effort between local planning staff, NCDOT planning staff, and the development community.

- Impact Fees
  Developer impact fees and development charges are another funding option for Winterville. Impact fees are commonly used for water and wastewater system connections or police and fire protection services, but they have recently been used to fund school systems and pay for the impacts of increased traffic on existing roads. Impact fees place the costs of new development directly on developers and indirectly on those who buy property in new developments.

- Design Arts Program, the National Endowment for the Arts
  The Design Arts Program can provide states, local agencies, individuals, and nonprofit organizations with grants if their project incorporates urban design, planning, historic preservation, architecture, landscape architecture, or other community improvement activities – for example multi-use trail development. Maximum amount per applicant is $50,000 with a required 50% local match.[xx] These monies can be used for sidewalks or multi-use trails/paths in the historical district of Winterville.

- The Robert Wood Johnson Foundation
  The Robert Wood Johnson Foundation is dedicated to enhancing the health and health care of every American. Grants are prioritized into four goal areas, one of which is the promotion of healthy communities and lifestyles. Projects would include multi-use trails and sidewalks.

- Small Grants
  Small grants of $250-$2,000 are offered for planning, design, and development of greenways through a partnership between the Conservation Fund's American Greenways Program[xxi], Eastman Kodak Corporation, and the National Geographic Society. These grants can be used for off-road multi-use trails.

- Wal-Mart Foundation
  Local community and environmental activities and educational programs for children that are put on by charitable organizations may be funded through the Wal-Mart Foundation.[xxii] Organizations must work with the local store manager to discuss application. These funds should be used for pedestrian safety education.

- Other Private Funding Opportunities
  Project sponsors can purchase amenities such as benches, trash receptacles, mile markers, entry signage and bollards to assist in funding while enhancing the overall project. Another option is to sell linear feet of a multi-use path at the unit cost for said path. Some sort of recognition should be provided for sponsors possibly through a plaque or certificate.

  Volunteers from within the community can aid in the expansion of the pedestrian network by conducting fundraisers or by donating labor to construction, landscaping, and maintenance after the facility is in place. Community volunteers can be drawn from civic groups, scouting groups, and outdoor clubs. Volunteers can adopt trails, sidewalks, or portions of them to keep clean and beautify through the years, saving the Town money over time.

SPECIAL FUNDING OPPORTUNITIES FOR HIGH PRIORITY PROJECTS

All of the funding opportunities listed above, and others that are not listed that may become available in the future should be applied for when possible. Mid- and long-range projects may be included in later editions of the TIP as enhancement projects. If a roadway improvement project is scheduled for a road that currently has no pedestrian facilities, NCDOT should be approached in an effort to get pedestrian facilities installed incidental to the project. Mapping and signing projects may also be included in the TIP. The Governor's Highway Safety Program should fund safety projects. The Safe Routes to School program funds should be utilized for pedestrian safety and access within two (2) miles of all K-8th grade schools.

Projects scheduled for construction along major and minor thoroughfares throughout the Town may be funded by a bond referendum. Grant programs are the preferred method of payment for large-scale projects, as they do not have to be repaid by the Town or its citizens. A Capital Improvement Program (CIP) should be utilized for planning and funding pedestrian facilities. Private partnerships are another good way to make pedestrian facility improvements since they allow the public to take an extra sense of pride from the facility.

EVALUATION / MONITORING PROCESS

The Town's commitment to implementing this Plan and accomplishing the recommended pedestrian projects, programs, and policies will improve Winterville's walkability; therefore, Winterville should strive to complete at least two pedestrian crossings, two spot improvements, and one sidewalk construction project per year; in addition to coordinating the design and construction of a multi-use trail (greenway connection). An annual assessment should be done on the pedestrian system to ensure that it stays up-to-date, based on needs. This should be done in conjunction with planning for the CIP each year, and the Pedestrian Plan should be updated at the same time to keep the document fresh by removing completed projects. Additional implementation guidelines can be found in Section 9.

[i] SAFETEALU, http://www.fhwa.dot.gov/safetealu/factsheets/hsip.htm

[ii] Highway Safety Improvement Program (HSIP), http://safety.fhwa.dot.gov/state_program/hsip/index.htm & http://www.fhwa.dot.gov/safetealu/factsheets/hsip.htm

[iii] North Carolina Safe Routes to School Program, http://ncdot.org/transit/bicycle/saferoutes/SafeRoutes.html

[iv] Powell Bill Funds, http://ncdot.org/programs/Powell_Bill/

[v] Recreational Trails Program, http://www.fhwa.dot.gov/environment/rectrails/index.htm

[vi] Surface Transportation Program, http://www.fhwa.dot.gov/programadmin/113005.cfm

[vii] Transportation Enhancement Activities, http://www.ncdot.org/financial/fiscal/Enhancement/ProgramInformation/Background/

[viii] Hazard Elimination & Railroad-Highway Crossing Programs, http://safety.fhwa.dot.gov/safetealu/siebyside.htm

[ix] Land and Water Conservation Fund, http://www.nps.gov/ncrc/programs/lwcf/

[x] North Carolina's Clean Water Management Trust Fund, http://www.cwmtf.net/

[xi] Governor's Highway Safety Program, http://www.ncdot.org/programs/GHSP/

[xii] North Carolina Parks and Recreation Trust Fund Grant Program, http://www.partf.net/

[xiii] North Carolina Adopt-A-Trail Program, http://ils.unc.edu/parkproject/trails/grant.html#a

[xiv] Conservation Tax Credit, http://www.enr.state.nc.us/conservationtaxcredit/

[xv] Congestion Mitigation and Air Quality Improvement Program, http://www.fhwa.dot.gov/environment/cmaqpgs/

[xvi] Watershed Protection and Flood Prevention Grants for Small Watersheds, http://12.46.245.173/pls/portal30/CATALOG.PROGRAM_TEXT_RPT.SHOW?p_arg_names=prog_nbr&p_arg_values=10.904

[xvii] Blue Cross Blue Shield Fit Together Grants, www.healthwellNC.com

[xviii] Active Living by Design, www.activelivingbydesign.org

[xix] The Trust for Public Land, www.tpl.org.

[xx] Design Arts Program, The National Endowment for the Arts, http://www.nea.gov/grants/apply/Design.html

[xxi] Conservation Fund's American Greenways Program, http://www.conservationfund.org/node/245

[xxii] Wal-Mart Foundation, http://www.walmartfoundation.org/wmstore/goodworks/scripts/index.jsp

SECTION 8 – RECOMMENDATIONS

WINTERVILLE
A slice of the good life!

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SECTION 8 – RECOMMENDATIONS

The recommendations for priority pedestrian projects, programs and policies for Winterville are provided in this section. These recommendations are based upon the input received from the public participation activities, existing plans, Task Force priorities and identified needs. These recommendations were presented and discussed at task force meetings for feedback and comments. The comments and concerns received were addressed and the following represents the summary of the projects, programs and policies that will make Winterville a pedestrian-friendly community. All recommended priority projects are illustrated on Map 8.1.

RECOMMENDATIONS FOR PEDESTRIAN PROJECTS

Recommended projects include intersections, streets, and greenway segments identified by the public, Task Force members and the Project Team.

Images of Task Force members identifying priority factors

Methodology of Priority and Ranking

The Task Force met on July 30, 2008, to discuss the potential list of projects and identify priority criteria to determine priority projects. To assist the Task Force in determining which projects to construct first, an exercise was performed at this meeting to prioritize projects based on preselected priority criteria. Task Force members were given five numbered dots from one to five (1-5) with one being the most important to five (5) being the least important. The list was tabulated with each criterion given a numeric value based on their ranking (1=5 pts, 2=4 pts, 3=3 pts, 4=2 pts, & 5=1 pts).

Prioritization and scheduling were based on the following criteria:

1. Number of Public Comments: Repeated comments from the Task Force and public at Open Houses and from surveys

2. Project Characteristics: A project's ability to address these items:
   - Connectivity to schools, parks, Downtown, commercial/retail areas, employment centers, and existing sidewalks
   - Improves a known safety issues (pedestrian-vehicle crash sites)
   - Improves an area of existing use or need (worn path and/or observed use)
   - Identified in existing plans as a pedestrian improvement/project
   - Listed or submitted for submission to NCDOT TIP

Project prioritization was a layered process, which incorporated the above-mentioned criteria in the following steps:

1. Each potential project was rated on the above criteria. A project received points for the following criteria:

   a) Connectivity: *Schools*. Is a schools located within the project limits?
   Yes, between .125-.25 miles = 3 points
   Yes, between .25 - .5 miles = 2 points
   Yes, between .5 – 1 mile = 1 point
   No (> 1 mile) = 0 points

   b) Connectivity: *Parks.* Is a park located within the project limits?
   Yes, between .125-.25 miles = 3 points
   Yes, between .25 - .5 miles = 2 points
   Yes, between .5 – 1 mile = 1 point
   No (> 1 mile) = 0 points

   c) Connectivity: *Commercial/Retail.* Is a commercial/retail area located within the project limits?
   Yes, between .125-.25 miles = 3 points
   Yes, between .25 - .5 miles = 2 points
   Yes, between .5 – 1 mile = 1 point
   No (> 1 mile) = 0 points

   d) Connectivity: *Downtown*. Is Downtown located within the project limits?
   Yes, between .125-.25 miles = 3 points
   Yes, between .25 - .5 miles = 2 points
   Yes, between .5 – 1 mile = 1 point
   No (> 1 mile) = 0 points

   e) Connectivity: *Employment Centers.* Is an employment center located within the project limits?
   Yes, between .125-.25 miles = 3 points
   Yes, between .25 - .5 miles = 2 points
   Yes, between .5 – 1 mile = 1 point
   No (> 1 mile) = 0 points

f) Connectivity: *Existing Sidewalk or Multi-Use Trail.* Does the project link to or complete a segment of existing sidewalk or multi-use trail?
Yes, Connect to = 1 point
No, Doesn't connect to = 0 points

g) Safety: Does the project improve a pedestrian-vehicular crash site?
Yes = 1 point
No = 0 points

h) Latent Demand/Existing Use: Does the project improve an area of existing use or need?
Yes, Worn path and/or observed use = 1 point
No, No worn path and/or observed use = 0 points

i) Within Existing Plans: Is the project listed in an existing plan?
Yes = 1 point
No = 0 points

j) Listed or Submitted for Inclusion on NCDOT TIP: Is the project listed or has been submitted for inclusion?
Yes = 1 point
No = 0 points

k) Number of Public Comments: Is the Project mentioned repeatedly either specifically, or as a part of connectivity to a stated destination?
Yes, Mentioned more than 5 times = 3 points
Yes, Mentioned at least 3-4 times = 2 points
Yes, Mentioned at least 1-2 times = 1 point
No, Not mentioned = 0 points

Potential Projects Prioritized

All prioritized potential projects were placed into an itemized table (Table B.1 in Appendix B) in order of their priority ranking (based on the above formula). These projects are illustrated on Maps 7.1, 7.2, 7.3, and 7.4 in Section 7. The top 10 potential projects are:

1. Railroad Street – From Main Street to Sylvania Street. Install continuous sidewalk and curb ramps along west side of street to connect existing sidewalks and the Downtown.

2. Railroad Street – From Cooper Street to Sylvania Street. Install continuous sidewalk and curb ramps along east side of street to connect Downtown.

3. Blount Street – From Ange Street to Academy Street. Install continuous sidewalk and curb ramps along north side of street to connect A.G. Cox.

4. Blount Street – From Ange Street to Existing Sidewalk. Install continuous sidewalk and curb ramps along entire length of street (south side) to connect A.G. Cox.

5. Blount Street – From Mill Street to Church Street. Install continuous sidewalk and curb ramps along north side of street to connect Downtown and A.G. Cox.

6. Hammond Street – From Railroad Street to Jones Street. Install continuous sidewalk and curb ramps along both sides of street to connect to Downtown and W.H. Robinson.

7. Cooper Street (Spot) – From Church Street to Academy Street. Install continuous sidewalk and curb ramps along both sides of street to connect existing sidewalks.

8. Church Street – From Sylvania Street to Main Street. Install continuous sidewalk and curb ramps along west side of street for connection to Downtown and A.G. Cox .

9. Church Street – Liberty Street to Laurie Ellis Road. Install sidewalk and curb ramps along west side of street to provide a continuous sidewalk to A.G. Cox.

10. Main Street – From Railroad Street to Church Street. Install continuous sidewalk and curb ramps along south side of road to connect existing sidewalks.

Recommended Projects (step 2)

Due to the amount of potential projects identified and prioritized, the Town's Planning Staff decided to recommend the Top 25 projects on State and the Top 25 projects on Non-State roads at this time due to manageability (See Map 8.1). To assist the Town in determining which recommended project to construct over a specific period, a preliminary opinion cost analysis was performed to further prioritize the projects. All recommended projects were assessed a preliminary opinion of cost estimate based only on proposed treatment for each recommended project. The preliminary cost estimates (See Appendix C – Sample Cost Estimates) are rough estimates based on the Federal Highway Administration[i] and similar projects recently implemented in the area. Therefore, the listed cost estimates should be used as a planning guide and do not include extra costs such as land acquisition, utility relocation, roadway accommodations, drainage, final materials used, grading, land clearing and demolition, professional engineering and surveying, inspection, permitting, legal and administration costs. These costs are not and should not be considered a substitute for professional engineering and surveying regarding actual costs of project construction.

All recommended projects will require some amount of additional coordination and cooperation between the Town, NCDOT, CSX, and/or property owners to resolve general constraints for some of these projects. The general constraints of implementing the below recommended projects include various right-of-way widths and obstacles (utility and light poles, fire hydrants, etc), existing curb and gutter on streets where little room is left for sidewalks, space limitations (existing building setbacks, remaining right-of-way remaining, etc.), large street trees, and resistance from property owners. In addition, there are streets (mainly NCDOT owned) that have excessive width; for instance, Jones Street, East Main Street, and Church Street that will require some sort of traffic calming feature to create safe pedestrian crossing distance. Rural roads (Laurie Ellis Road) with existing drainage ditches on both sides have their own special constraints to be handled before pedestrian facilities are installed. Therefore, some of these projects will require additional study and analysis due to the complexity of the situation (costs, ideal pedestrian facility type, right-of-way issues, drainage, existing utilities, etc.).

Once each project was ranked and given a cost estimate they were placed into a category (short-term, mid-term, or long-term) based upon their preliminary estimated cost and priority ranking. For instance, projects that had an estimated low cost (less than $150,000) and high priority ranking were placed on the short-term (0-5 yrs) implementation schedule. Mid-term (5-10 yrs) projects are those projects with a moderate cost ($150,000-$300,000) and low and high priority ranking. Long-term (10+ yrs) projects were those projects that had high cost (greater than $300,000) and low priority ranking. However, mid- and long-term projects should be expedited if financing becomes available.

Table 8.1 is the recommended phasing schedule of short-term, mid-term, and long-term projects; refer to Map 8.1.

- *Project & Map #* - Corresponds to the project identification number used through Plan and its associated maps
- *Priority Rank* – Corresponds to the project's priority ranking
- *Type of Project* – Identifies project type (pedestrian crossing, sidewalk, etc.)

- *Road Class* – Identified ownership of road(s) in project
- *At/On* – Identifies location of project (street, intersection, etc)
- *From* – Identifies starting point of construction project
- *To* – Identifies ending point of construction project
- *Preferred Treatment* – Identifies project information
- *Est. Length (FT)* – Identifies estimated length of project in feel (scaling was done with GIS)
- *Estimated Cost* – Cost estimates calculated using various sources (Federal Highway Administration published costs and recent projects in the area and rough GIS scaling). These costs are rough estimates and should not be considered final. Further surveying, professional engineering, and coordination among interested parties should be completed to determine final costs.

TABLE 8.1: RECOMMENDED PROJECT PHASING SCHEDULE

Project/ Map #	Priority Rank	Type of Project	Road Class	At / On	From	To	Preferred Treatment	Est. Length (FT)	Est. Project Cost
Short-Term Recommended Projects									
24	39	Pedestrian Crossing	NCDOT	Cooper Street & Ange Street	*N/A*	*N/A*	Install highly visible crosswalks, and signage	0	$2,242.00
19	36	Pedestrian Crossing	Town & NCDOT	Ange Street & Sylvania Street	*N/A*	*N/A*	Install highly visible crosswalks, 3-way stop sign, and signage (“Yield to Peds” & “School Zone”)	0	$2,875.00
97	11	Sidewalk Spot Improvements	Town	Blount Street (Spot)	Railroad Street	Existing sidewalk	Install sidewalk and curb ramps along south side of street to connect existing sidewalks and A.G. Cox	48	$5,400.00
92	14	Sidewalk Spot Improvements	NCDOT	Main Street (Spot)	Mill Street	Railroad Street	Install a continuous sidewalk and curb ramps along north side of road to connect existing sidewalks	96	$11,168.00

TABLE 8.1: RECOMMENDED PROJECT PHASING SCHEDULE

Project/ Map #	Priority Rank	Type of Project	Road Class	At / On	From	To	Preferred Treatment	Est. Length (FT)	Est. Project Cost
101	31	Sidewalk Spot Improvements	Town	Forbes Avenue (Spot)	Barrel Drive	Primrose Lane	Install sidewalk and curb ramps along east side of street to connect existing sidewalks	139	$14,217.00
94	30	Sidewalk Spot Improvements	Town	Depot Street (Spot)	Railroad Street	Mill Street	Install continuous sidewalks and curb ramps along south side of road to connect existing sidewalks to Downtown	179	$18,518.00
95	23	Sidewalk Spot Improvements	NCDOT	Church Street (Spot)	Depot Street	North Street	Install sidewalks and curb ramps along west side of road to connect existing sidewalks	206	$20,150.00
62	10	New Sidewalk Construction	NCDOT	Main Street	Railroad Street	Church Street	Install a continuous sidewalk and curb ramps along south side of road to connect existing sidewalks	247	$25,298.00
98	21	Sidewalk Spot Improvements	NCDOT	Cooper Street (Spot)	Mill Street	Railroad Street	Install sidewalks along both sides of road to provide a safety area for pedestrian travel to commercial areas and Downtown	220	$27,117.00
99	7	Sidewalk Spot Improvements	NCDOT	Cooper Street (Spot)	Church Street	Academy Street	Install a continuous sidewalk and curb ramps along both sides of street to connect existing sidewalks	340	$32,016.00
100	12	Sidewalk Spot Improvements	Town	Academy Street (Spot)	Cooper Street	Blount Street	Install continuous sidewalks and curb ramps along east side of street to connect existing sidewalks and provide a connection to A.G. Cox	322	$32,334.00
72	4	New Sidewalk Construction	Town	Blount Street	Ange Street	Existing sidewalk	Install a continuous sidewalk and curb ramps along entire length of street (south side) to connect A.G. Cox	363	$34,443.00

TABLE 8.1: RECOMMENDED PROJECT PHASING SCHEDULE

Project/ Map #	Priority Rank	Type of Project	Road Class	At / On	From	To	Preferred Treatment	Est. Length (FT)	Est. Project Cost
93	15	Sidewalk Spot Improvements	Town	Depot Street (Spot)	Railroad Street	Church Street	Install sidewalks and curb ramps along both sides of road to connect existing sidewalks	295	$34,569.00
64	13	New Sidewalk Construction	NCDOT	Cooper Street	Railroad Road	Church Street	Install sidewalk and curb ramps along north side of street to connect existing sidewalks and provide a connection to A.G. Cox and Downtown	348	$35,760.00
73	5	New Sidewalk Construction	Town	Blount Street	Mill Street	Church Street	Install a continuous sidewalk and curb ramps along north side of street to connect Downtown and A.G. Cox	454	$44,778.00
48	22	New Sidewalk Construction	Town	Tyson Street	Mill Street	Railroad Street	Install sidewalks along one side of road to connect residential area with Downtown and W.H. Robinson Elem. School	620	$61,755.00
71	3	New Sidewalk Construction	Town	Blount Street	Ange Street	Academy Street	Install continuous sidewalks and curb ramps along north side of street to connect A.G. Cox	699	$67,991.00
55	2	New Sidewalk Construction	Town	Railroad Street	Cooper Street	Sylvania Street	Install continuous sidewalks and curb ramps along east side of street to connect Downtown	858	$84,370.00
53	33	New Sidewalk Construction	Town	Railroad Street	Worthington Street	Hammond Street	Install continuous sidewalks and curb ramps along east side of street in front of W.H. Robinson	937	$87,916.00
21	16	Pedestrian Crossing	Town & NCDOT	Church Street & Blount Street	*N/A*	*N/A*	Install improved crosswalks (highly visible), curb ramps, 4-way stop sign, signage (“Yield to Peds”, “School Zone”), and possible curb extensions (further study is needed)	0	$99,590.00

TABLE 8.1: RECOMMENDED PROJECT PHASING SCHEDULE

Project/ Map #	Priority Rank	Type of Project	Road Class	At / On	From	To	Preferred Treatment	Est. Length (FT)	Est. Project Cost
22	17	Pedestrian Crossing	Town & NCDOT	Church Street & Sylvania Street	*N/A*	*N/A*	Install improved crosswalks (highly visible), curb ramps, 4-way stop sign, signage ("Yield to Peds", "School Zone"), and possible curb extensions (further study is needed)	0	$99,590.00
59	6	New Sidewalk Construction	Town	Hammond Street	Railroad Street	Jones Street	Install continuous sidewalks and curb ramps along both sides of street to connect to Downtown and W.H. Robinson	1092	$103,550.00
10	24	Pedestrian Crossing	Town	Railroad Street & Depot Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, curb extension, and improved CSX railroad crossing (further study and coordination is needed)	0	$117,530.00
11	25	Pedestrian Crossing	Town & NCDOT	Railroad Street & Main Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, curb extension, and improved CSX railroad crossing (further study and coordination is needed)	0	$117,530.00
13	26	Pedestrian Crossing	Town & NCDOT	Railroad Street & Cooper Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, curb extension, and improved CSX railroad crossing (further study and coordination is needed)	0	$117,530.00
54	1	New Sidewalk Construction	Town	Railroad Street	Main Street	Sylvania Street	Install continuous sidewalks and curb ramps along west side of street to connect existing sidewalks and the Downtown	1152	$126,734.00
96	38	Sidewalk Spot Improvements	NCDOT	Laurie Ellis Road (Spot)	Barefoot Lane	Church Street	Install a continuous sidewalk and curb ramps along north side of street to connect existing sidewalks	144	$139,012.00

TABLE 8.1: RECOMMENDED PROJECT PHASING SCHEDULE

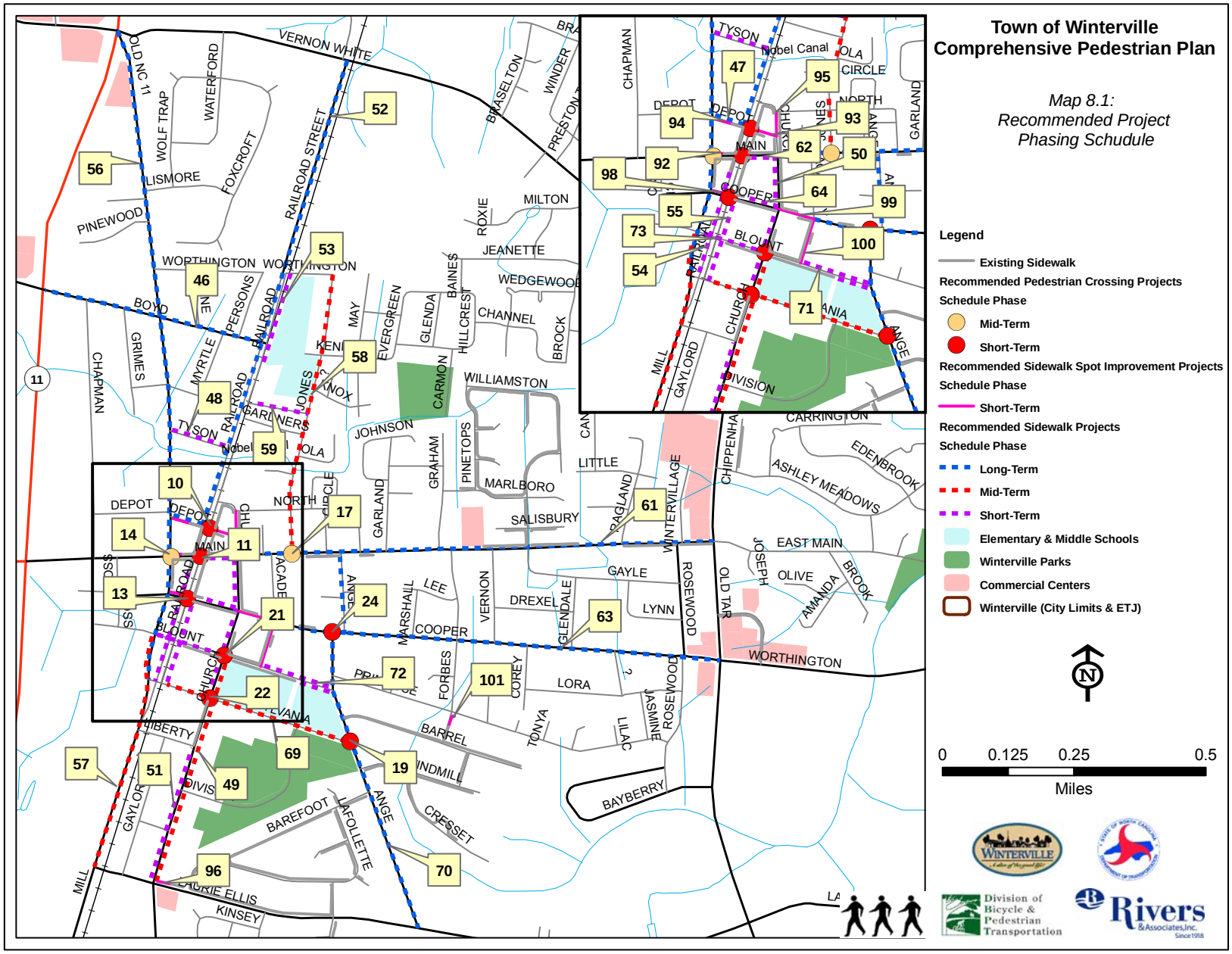
Project/ Map #	Priority Rank	Type of Project	Road Class	At / On	From	To	Preferred Treatment	Est. Length (FT)	Est. Project Cost
51	9	New Sidewalk Construction	NCDOT	Church Street	Liberty Street	Laurie Ellis Road	Install sidewalks and curb ramps along west side of street to provide a continuous sidewalk to A.G. Cox	1436	$139,347.00
50	8	New Sidewalk Construction	NCDOT	Church Street	Sylvania Street	Main Street	Install continuous sidewalks and curb ramps along west side of street for connection to Downtown and A.G. Cox	1492	$148,124.00
Mid-Term Recommended Projects									
57	27	New Sidewalk Construction	NCDOT	Mill Street	Sylvania Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along west side of street to connect Downtown	1961	$179,741.00
14	32	Pedestrian Crossing	NCDOT	Main Street & Mill Street	*N/A*	*N/A*	Install highly visible crosswalks, curb ramps, and pedestrian-activated signals on existing traffic signal, consider "No Right on Red" signs	0	$189,980.00
49	20	New Sidewalk Construction	NCDOT	Church Street	Blount Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along east side of street to connect A.G. Cox Middle School (also identified as a greenway route) with residential area	2387	$233,448.00
17	35	Pedestrian Crossing	Town & NCDOT	Main Street & Jones Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, possible curb extensions, and pedestrian-activated signals	0	$277,955.00
69	19	New Sidewalk Construction	Town	Sylvania Street	Ange Street	Railroad Street	Install continuous sidewalks and curb ramps along both sides to connect residential areas with A.G. Cox and park	1861	$297,594.00
58	28	New Sidewalk Construction	Town	Jones Street	Main Street	Worthington Street	Install continuous sidewalks and curb ramps along both sides of street to provide connection to W.H. Robinson Elem. School	2840	$308,683.00

TABLE 8.1: RECOMMENDED PROJECT PHASING SCHEDULE

Project/ Map #	Priority Rank	Type of Project	Road Class	At / On	From	To	Preferred Treatment	Est. Length (FT)	Est. Project Cost
Long-Term Recommended Projects									
46	40	New Sidewalk Construction	NCDOT	Boyd Street	Railroad Street	Hwy 11	Install sidewalks and curb ramps along both sides (if possible) of road to connect residential areas to Downtown and W.H. Robinson Elem. School	3792	$378,469.00
47	41	New Sidewalk Construction	Town	Depot Street	Railroad Street	Mill Street	Install sidewalks and curb ramps along north side of road provide connection to Downtown	358	$385,549.00
52	18	New Sidewalk Construction	Town & NCDOT	Railroad Street	Vernon White Road	Depot Street	Install continuous sidewalks and curb ramps along west side of street for connection to Downtown and W.H. Robinson	3094	$456,371.00
61	37	New Sidewalk Construction	NCDOT	Main Street	Old Tar Road	Church Street	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with schools, parks, Downtown, Winter Village, and existing sidewalks (identified as a component of greenway system) (further study is needed)	6559	$651,777.00
70	29	New Sidewalk Construction	Town & NCDOT	Ange Street	Main Street	Laurie Ellis Road	Install continuous sidewalks and curb ramps along both sides to connect residential areas with A.G. Cox, park, and Downtown	7153	$664,701.00
63	42	New Sidewalk Construction	NCDOT	Cooper Street	Old Tar Road	Academy Street	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with schools, Downtown and other commercial areas and connect existing sidewalks	8035	$794,184.00

TABLE 8.1: RECOMMENDED PROJECT PHASING SCHEDULE

Project/ Map #	Priority Rank	Type of Project	Road Class	At / On	From	To	Preferred Treatment	Est. Length (FT)	Est. Project Cost
56	34	New Sidewalk Construction	NCDOT	Mill Street	Vernon White Road	Sylvania Street	Install continuous sidewalks and curb ramps along both sides to provide connection to Downtown	10726	$1,050,734.00


Town of Winterville
Comprehensive Pedestrian Plan
Map 8.1:
Recommended Project
Phasing Schudule
Legend
Existing Sidewalk
Recommended Pedestrian Crossing Projects
Schedule Phase
Mid-Term
Short-Term
Recommended Sidewalk Spot Improvement Projects
Schedule Phase
Short-Term
Recommended Sidewalk Projects
Schedule Phase
Long-Term
Mid-Term
Short-Term
Elementary & Middle Schools
Winterville Parks
Commercial Centers
Winterville (City Limits & ETJ)
0 0.125 0.25 0.5
Miles
Division of Bicycle & Pedestrian Transportation
Rivers & Associates, Inc.

PEDESTRIAN PROGRAM RECOMMENDATIONS

The Task Force has identified the following pedestrian programs as priority programs to be implemented within the next five years and continued into the future; in addition, Winterville should implement additional programs identified in Section 6 as needed to ensure Winterville becomes a walkable community for years to come. A complete description of these recommended programs can be found in Section 6.

Route Systems

Winterville's .65 miles of walking routes should be well marked for easy use by pedestrians. Possible methods for marking these routes include directional signs, general information signs, and lighting.

Safe Routes to School Program

All current K- 8th grade schools within Winterville should develop and implement a Safe Routes to School Program. These schools include A. J. Cox Middle School, W.H. Robinson Elementary School, and Creekside Elementary School.

The program promotes walking and biking to and from school through infrastructure improvement projects, educational opportunities, encouragement, and pedestrian safety activities. This program would enable and encourage children to walk and bike to school by making walking and biking trips safer and more appealing.

As components to the Safe Routes to School program, the schools and community should promote and encourage the following programs.

- Walk to School Day Program
- Adult Crossing Guard Program
- Walking School Bus Program

Spot Improvement Program

Develop a spot improvement program to address problems at specific locations such as intersections, short lengths of roadway, small sidewalk gaps (10' or less in length), or single destinations (e.g., an office building or shopping center). Spot improvement could include retrofitting existing cubs to apply with ADA, repainting or striping crosswalks.

Sidewalk Maintenance Program

Develop and implement a sidewalk maintenance program to ensure existing facilities are regularly maintained and do not go into disrepair. The program should also include an updated inventory of existing sidewalks needing repairs to adequately schedule improvements and maintenances of these facilities. A successful program is an essential part of a planned walkable community.

Annual Pedestrian Safety Roadshow

Organize and participate in an annual pedestrian safety roadshow. This program should include going to various schools, community centers, and other locations to educate and provide pedestrian safety informational brochures to children and the public.

Pedestrian and Motorist Education and Enforcement Activities

Continue educational efforts on an annual, or as needed, basis for community volunteers and Town police officers on pedestrian laws; in addition to, how to educate and enforce those laws. Utilize community volunteers to educate and enforce pedestrian laws. Education brochures and pamphlets should also be distributed throughout the community to teach pedestrian safety and promote the health benefits of walking.

Walking Programs & Events

Organize and hold various activities to encourage the public to participate in recreational or educational walking trips. Examples include walking races for health campaigns, Walktober and walking races during annual community festivals.

PEDESTRIAN POLICY RECOMMENDATIONS

Winterville has an opportunity to further establish new policies for pedestrian-friendly design. Without these policies the vision and goals of the community will not come to fruition; therefore, it is important for the Town to adopt the following policy recommendations. These recommendations foster implementation and continuation of the existing safety and enhancement, encouragement, enforcement and maintenance programs identified in Section 3. Implementation of the following policy recommendations should start immediately and continue over the next five years given the approval and adoption process to amend Town ordinances.

Bridge Enhancements for Pedestrians

Given Winterville's desire is to have an interconnected pedestrian-friendly community and knowing vehicular bridges can pose a threat to this desire, it is recommended that Winterville develop a policy to require all newly constructed bridges be equipped with sidewalks, or an offset area that provides space for future sidewalks or multi-use trails, and railings to accommodate pedestrians.

Reduction of Speed Limits

Create a policy for reducing the speed limits in areas of high pedestrian activity, such around schools, parks, the Downtown, and other major pedestrian destinations. "School zones" should be marked with pavement markings and flashing speed limit signs. Winterville should consider the use of active speed monitor speed limit signs be used near schools with speeding problems.

On-Street Parking Ordinance

The Town should collaborate with NCDOT on creating a policy to paint parallel parking stalls on streets such as Church Street, Main Street, Cooper Street, and other wide streets to slow traffic and encourage on-street parking.

Street Tree Ordinance

Winterville should develop a street tree ordinance to add and protect shade trees along major thoroughfares and downtown streets. These trees will provide shade for pedestrians and improve the overall streetscape.

Subdivision Ordinance

The following amendments are suggested for Winterville's Subdivision Ordinance.

1. Modifications to Winterville's Subdivision Ordinance should be made to specify that any portion of new subdivisions that lie within a greenway corridor should be dedicated and/or reserved to the public at the option of the Town to protect or preserve the greenway.

2. Where residential developments have cul-de-sacs or dead-end streets, such streets shall be connected to the closest local or collector street or to cul-de-sacs in adjoining subdivisions via a sidewalk or multi-use path, except where deemed impractical by the Planning Director.

3. Subdivision Ordinance should be amended to incorporate the numerous street design recommendations and guidelines, as provided in Section 5.

4. Mixed use and Planned Unit Developments centered on pedestrian-friendly communities should be encouraged instead of separated uses.

5. All new streets within Winterville should be *Complete Streets* with amenities for pedestrians, bicyclists, and motorists. Thus, sidewalks should be placed along both sides of all streets to provide connectivity and improve pedestrian safety.

Zoning Ordinance

The Zoning Ordinance should be amended to specify the following:

1. Any portion of a development that lies within a designated greenway corridor must be set aside to satisfy the open space requirement, and the area within a greenway corridor shall be dedicated and/or reserved to the public at the option of the Town.

2. Commercial development sites shall incorporate pedestrian-friendly accommodations such as pedestrian refuge islands, pedestrian channels through parking lots to commercial establishments, landscaping to provide shade and a sense of place within parking lots, traffic calming techniques to reduce vehicular speeds within parking lot, and sidewalks along perimeter of property to provide connection from nearby properties.

3. Parking requirements should be modified to place a maximum amount of parking allowed and not a minimum, thus letting the market dictate the amount of parking that is created for a development and require shared parking spaces amongst adjoining or adjacent uses.

4. Ensure and allow mixed-uses within existing neighborhoods instead of separating uses as a use-by-right. By creating livable neighborhoods, walking will become a more attractive option to transportation.

5. Reduce the number of driveways and driveway design into a development. Reducing the number uncontrolled access points into a development will in turn reduce potential pedestrian-vehicle accident areas. The location and slope of the driveway will also ensure accessibility and safety for pedestrians.

6. Change the current street design standards with the ones identified in Section 5, to ensure all future road development is pedestrian-friendly.

7. Mixed use and pedestrian-friendly developments should be encouraged, if not required, for all future developments.

8. All new streets within Winterville should be *Complete Streets* with amenities for pedestrians, bicyclists, and motorists.

[i] Federal Highway Administration (FHWA) Pedestrian Safety, *Safer Journey Library* , October 2007, http://safety.fhwa.dot.gov/saferjourney/library/matrix.htm

SECTION 9 – PLAN IMPLEMENTATION

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SECTION 9 – PLAN IMPLEMENTATION

Winterville is responsible for monitoring and evaluating the implementation of the Comprehensive Pedestrian Plan. After the Plan has been completed and distributed, a coordinator will be responsible for stimulating, coordinating and managing the implementation of the Plan. Development of a comprehensive pedestrian network is a continuing process and depends on the active involvement of the Town in implementing, monitoring, evaluating and updating the Plan. It is important to realize that this on-going process does not end once the Plan has been written.

The Town's commitment to implementing this Plan and accomplishing the recommended pedestrian projects, program and policies (as outlined in Section 8) will improve Winterville's walkability; therefore, Winterville should strive to complete at least three short-term construction projects per year; in addition to coordinating the design and construction of mid-term and long-term projects. In addition, Winterville should adopt development regulations that require the dedication of land for multi-use trails along identified greenway corridors, even though none of the potential greenway corridors were placed into the phasing plan in Section 8. Winterville should also develop a process to acquire any additional easements and right-of-way necessary along these greenway corridors, so that the multi-use trails can be developed as funds and opportunities become available. It is recommended that if any of the greenway corridors should be constructed first, it should be the Fork Swamp greenway corridor to tie into the City of Greenville's greenway system they are working on.

An annual assessment should be done on the pedestrian system to ensure that it stays up-to-date, based on needs. This should be done in conjunction with planning for the CIP each year and the Pedestrian Plan should be updated at the same time to keep the document fresh by removing completed projects.

The recommended policy/ordinance amendments and pedestrian programs listed in Section 8 are low cost measures, which should be implemented as soon as possible or within the next five years and continued into the future; in addition, Winterville should implement additional programs identified in Section 6 as needed. These policies and programs will ensure a comprehensive pedestrian system; therefore, they should be evaluated annually and new policies and programs should be implemented as needed.

COORDINATOR

The implementation of this Plan involves oversight by a Coordinator, a selected Town staff member, and other local and state of officials whose agencies have been designated as having the responsibility for implementing specific recommendations specified in this Plan. To integrate pedestrian activities into work plans, the Coordinator should contact the local agency responsible for accomplishing the specific work to ensure that the issue is addressed by that agency; this includes ensuring Plan recommendations and potential projects are placed in the MPO thoroughfare plan updates and on the NCDOT STIP.

The Coordinator is encouraged to develop a pedestrian committee to assist in overseeing the implementation of this Plan. The committee should be made up of stakeholders and neighborhood representatives with the interest, knowledge and ability to ensure the proper steps are taken to find funding, change or create public policy, re-rank projects and identify new projects as necessary, ensure implementation of programs, carry out policy changes including developing pedestrian-friendly development guidelines and encourage the community to embrace foot travel. The committee is strongly encouraged to work with other community organizations and agencies to implement the various programs recommended in this Plan.

FUNDING

Winterville should continue to allocate funds by line item in the fiscal budget to ensure completion of pedestrian infrastructure. Winterville should also utilize a Capital Improvement Plan (CIP) for budgeting pedestrian-related projects, since these projects will usually be funded locally. The CIP will list the specific and general projects that will be funded over a five or ten-year period in the community. The specific projects and their expected costs will be listed for the next year and more general projects and cost estimates will be listed for future years. The CIP will contain a prioritized list of what Winterville wants to accomplish in regards to pedestrian facilities and usually provides a good indication of what the Town is planning to build in the future.

Projects involving NCDOT roads should be recommended by the MPO for placement on NCDOT's TIP, especially sidewalk and pedestrian crossing projects incidental to road construction projects. Sidewalk and pedestrian crossing projects should also be integrated within other Town projects (water or sewer line, park improvements, etc.) to save costs and roadway disturbance. In addition, Winterville should look to combine several small projects into one big one to achieve cost-savings since a bid price is reduced as unit quantities increase.

Other activities may require time that the Coordinator may not have available. The use of student interns from local universities or community colleges should be used to assist with plan implementation.

Finally, Winterville should take an active role in acquiring State, Federal, and private monies available for pedestrian-related facilities. These funds are very competitive thus continuous planning, budgeting and partnerships with local agencies is required to ensure a successful application. Refer to Section 7 for a complete list of funding sources.

Potential Partners for Plan Implementation:

- Pitt County Schools
- Pitt County Recreation Department
- Pitt County Planning Department
- Pitt County Public Health Department
- Pitt Community College
- Pitt County Boys & Girls Club
- Pitt County Memorial Hospital
- City of Greenville
- Urban Greenville Metropolitan Planning Organization (MPO)
- Friends of Greenville Greenways (FROGGS)
- Active Living by Design
- Winterville Planning Department
- Winterville Police Department
- Winterville Recreation Department
- Winterville's NAACP Chapter
- Winterville Tree Board
- Winterville Public Works Department
- Winterville Watermelon Festival Organizers
- Local Realtors
- Local Developers
- Local Business Owners

PARTNERSHIPS

Future coordination among all town departments, local government agencies and private agencies seeking funding to build pedestrian facilities is extremely important. Not only does it keep all parties informed, it also reduces duplicate applications for the same project to funding sources. Nothing speaks louder to state and federal funding sources that there is no communication or cooperative planning than duplicate applications from various parties for the same project. Potential partners for implementation of Winterville Pedestrian Plan are listed in the text box to the right.

MONITORING

Monitoring is an important component of the implementation process. A tracking and reporting system is essential to monitor the progress of the recommendations. To assist with this process, the Coordinator should designate an individual from private and public agency and/or department (NCDOT, CSX Railroad, Planning, Recreation, etc.) to periodically report on the status of each recommendation. This information, as well as the annual progress report should be shared with appropriate individuals to keep them informed and involved in the process. The Coordinator can also monitor progress through phone calls, visits, and meetings.

Those who have implementation responsibilities can provide the Coordinator with meeting agenda, attendance sheets, correspondence, legislation, minutes of public meetings, telephone records, and grant proposals as the basis for their report to a Coordinator.

ANNUAL REVIEW / PROGRESS REPORT / REVISIONS

Winterville's City Manager shall direct the Coordinator and Pedestrian Committee to take responsibility for conducting an annual review. The annual review shall ensure the Town Council receives an annual report and/or presentation on the progress of Plan implementation. The report will include a status report on the implementation of recommended projects, programs and policies and will recommend, as appropriate, any necessary revisions or amendments to the Plan. For instance, this may include different treatment options for a particular recommended intersection improvement, a change in Federal and State statutes or regulations, identification of additional projects, moving a potential project listed in Section 7 and Appendix B to the recommended project list in Section 8 or a change in pedestrian movement. This process will help ensure that local walkability efforts include the latest and most effective projects.

APPENDIX A – PUBLIC INVOLVEMENT STRATEGY

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Task Force Meetings

A Task Force of 18 persons was assembled with a wide representation from local governments, health department, schools, nonprofit organizations, private sector organizations, and residents. Committee members were asked to attend at least four (4) structured and facilitated meetings during the planning process to provide the necessary guidance and input on existing conditions and concerns; identify potential projects, programs, and policies; identify priorities and recommendations; act as a public liaison; and assist with plan implementation.

At the first Task Force meeting (March 26, 2008), members went on a walking tour of three separate areas of downtown to observe pedestrian functionality. There was a group discussion on the issues observed upon completion of the tour. Due to attendance, there was no team 4; therefore, that area was not toured and pedestrian concerns were not identified at this meeting. A list of key pedestrian concerns for each route is as follows:

MEETING AGENDA

DATE: Wednesday, March 26, 2008 at 3:00 p.m.

LOCATION: Community Center
Within Police/Fire/EMS Building
2593 Railroad Street (next to Town Hall)

SUBJECT: Town of Winterville Comprehensive Pedestrian Plan
Task Force Meeting #1

At this initial meeting of the Task Force, the Project Team will provide an overview of the Winterville Comprehensive Pedestrian Plan process and the purpose(s) of the Pedestrian Plan. This meeting will include a brief walking tour to identify components of a pedestrian friendly environment. Please bring your calendar so we can schedule the next meeting.

This meeting will begin promptly at 3:00 and will conclude by 4:45.

Agenda:

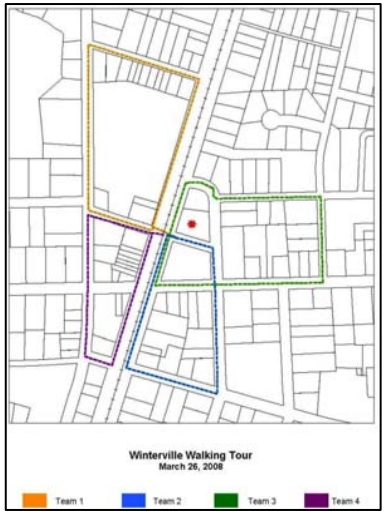
I. **Introductions** – Melissa Lockamy & John Vine-Hodge
II. **Project overview** – Myriah Shewchuk
III. **Purposes of a Pedestrian Plan** – Colleen Simmons
IV. **Downtown Winterville Walking Tour** – All
(please wear comfortable shoes for walking)
V. **Next Steps** – Colleen Simmons
VI. **Conclusion / Questions** – Colleen Simmons

We thank you for your time and assistance in improving Winterville's walkability.

Additional project information can be found at: http://walkablewinterville.com/

Team 1 / Orange (Route: Railroad Street to Tyson to Mill to Depot)

- Obstructions (signs)
- Lack of sidewalks
- Lack of curb cuts
- Lack of crosswalks
- Noisy (not pleasant)
- Mill Street is wider in areas (potential bike lane) both sides
- On-street parking in residential areas (pushes pedestrian out further into street)
- Varying vehicular speeds
- RR right-of-way
- Roads parallel to RR track



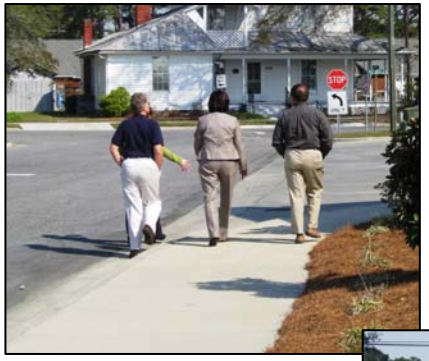
Team 2 / Blue (Route: Depot to Church to Cooper to Railroad Street)

- Crosswalks not marked; if so, paint is peeling
- Lack of curb ramps
- Need more signage (pedestrian yield and speed limit)
- Uneven / unleveled sections of sidewalks
- Need more buffers between sidewalk and street (no shade from sunlight)
- Too many utility and sign poles within sidewalk area – invites children to play and is a tripping hazard
- Existing flower boxes falling apart
- Residential streets too wide

- Incomplete sidewalks

Team 3 / Green (Route: Railroad to Church to North to Jones to Main Street)

- Need clearly marked crosswalks (reflectors, bright yellow, striped)
- Citizen / driver education
- Pedestrian right-of-way enforcement
- Uneven surfaces for handicap/stroller access
- Lack of pedestrian level lighting
- Lack of sidewalks
- Obstacles (utilities, trash cans)
- Handicap ramps do not align



Teams on walking tour

On April 29, 2008, a second Task Force meeting was held to identify strengths, weaknesses, opportunities, and threats (SWOT) to Winterville's pedestrian network. The following are the results of this exercise. Some suggestions were expanded upon after the initial Task Force meeting.

MEETING AGENDA

DATE: Tuesday, April 29, 2008 at 3:00 p.m.

LOCATION: Community Center
Within Police/Fire/EMS Building
2593 Railroad Street (next to Town Hall)

SUBJECT: Town of Winterville Comprehensive Pedestrian Plan
Task Force Meeting #2

At this meeting, findings from previous meeting and existing pedestrian facilities will be reported and a SWOT (strengths, weaknesses, opportunities, and threats) analysis and an informal design charrette will be conducted to identify goals, mission of plan, and potential corridors for connectivity. Please bring your completed walkability checklist to turn in and your calendar so we can schedule the next meeting.

This meeting will begin promptly at 3:00 and will conclude by 4:45.

AGENDA

I. Introductions & Recap
II. Review of Existing Facilities
III. Community-Wide SWOT Analysis
IV. Informal Design Charrette / Neighborhood SWOT Analysis
V. Next Steps
VI. Conclusion / Questions

We thank you for your time and assistance in improving Winterville's walkability.

Additional project information can be found at: http://www.walkablewinterville.com/

Strengths

1. Local citizens have expressed need for pedestrian activities through support of various plans.
2. Adults and children are walking to various destinations.
3. Pedestrian destinations such as Food Lion, downtown, and parks are in close proximity to residential neighborhoods.
4. The Town of Winterville currently has approved ordinances and subdivision ordinances in place that require sidewalk construction.

Weaknesses

1. There is a lack of a cohesive sidewalk network.
2. There is poor connectivity throughout the community. This problem is exemplified by cul-de-sac streets, which prohibit both pedestrian and vehicular circulation throughout the town.
3. Effectively distributing information out to the public is a challenge.
4. Residential areas are being developed "outside core".
5. General traffic laws and enforcement needs improvement.
6. Recreational opportunities such as multi-use trails should be increased.
7. Developers do not recognize constructing walkable communities as an asset.
8. Town ordinances allow little flexibility for developers. Current ordinances grant developers the opportunity to build planned unit developments, but the process is time consuming and impractical.
9. Sidewalks are only required on one side of local streets.
10. Winterville is experiencing rapid growth and timing for improving pedestrian facilities is important.
11. Policies for connections to future greenways are not accounted for in the existing town ordinances.
12. Fees in lieu of recreation space in new subdivisions have prevented the development of recreational areas (The fees have now been raised).

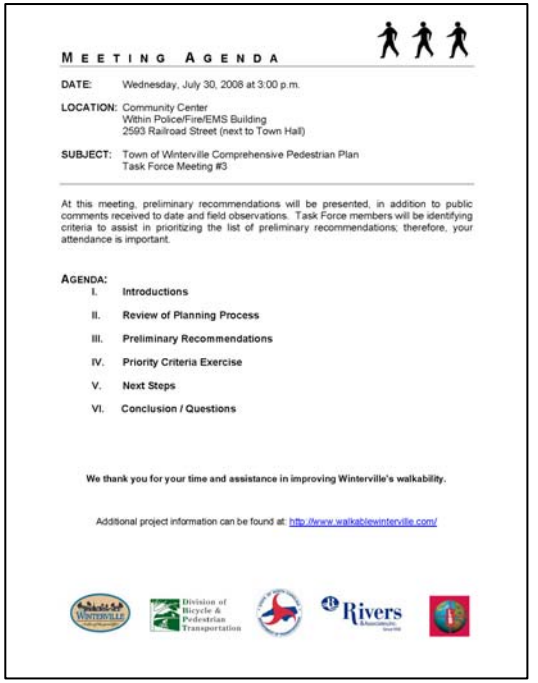
Opportunities

1. Developer can be educated of the benefit and quality of life walkable developments can create through pamphlets and brochures.
2. Improved policies can ensure that undeveloped areas can be dedicated for pedestrian facilities before development arrive.
3. The *Town of Winterville Alderman adopted the Pitt County Greenway Plan 2025* on December 12, 2005.
4. There are programs that are currently active such as the Bike Rodeo and Cops on Bikes.
5. The Town of Winterville currently owns land. A major parcel of town owned land is 14 acres located within Ashley Meadows subdivision. This area could serve as a connection between residential areas and Greenville's Boyd Lee Park.
6. Students reside in close proximity to local schools.
7. Pitt Community College has become an area for recreational activities during the day, especially late afternoon and early evening.
8. Parents and students could be educated about walking to school. The incorporation of the Walking School Bus and Safe Routes to School Programs could assist with this effort.

9. There is land available near Creekside Elementary School that could be used for a park with a trail crossing Swift Creek. This crossing will allow connectivity from the school to the Sara Law Softball Complex.
10. A partnership can be developed between the Town of Winterville, City of Greenville, and Pitt County to achieve the common goal of creating a walkable environment.
11. There are four parks and four schools located within relatively close proximity of one another.
12. Trail links can be developed to Greenville and Pitt County.
13. Easements for infrastructure (drainage, sewer, water, electric) are in place, which could possibly be used for walking trails.
14. Pitt County has applied for a Clean Water Management Trust Fund (CWMTF) grant to perform a stormwater management feasibility study for Swift and Fork Swamp Creeks.

Threats

1. There are currently inadequate pedestrian signage and signals.
2. Highway 11 acts as a major man-made barrier.
3. City politics can stall funding for pedestrian improvements.
4. The community generally lacks long-term vision.
5. The Town has to compete with other communities to secure funding for recommended projects.
6. The public is generally in favor of using funds for economic development instead of greenways and sidewalks.
7. Landowners are generally opposed to public access across their property.
8. Greenway construction along Swift and Fork Swamp Creek could possibly become delayed or prevented due to Drainage District Authority reluctance.
9. State statutes place a high liability on private property owners who allow public access through their land. It is more desirable for land to be owned solely by the town vs. purchasing easement rights. Note: The consultant does not agree with this statement, the use of easements can be used efficiently and effectively without placing high liability on the private property owner.



MEETING AGENDA

DATE: Wednesday, July 30, 2008 at 3:00 p.m.

LOCATION: Community Center
Within Police/Fire/EMS Building
2593 Railroad Street (next to Town Hall)

SUBJECT: Town of Winterville Comprehensive Pedestrian Plan
Task Force Meeting #3

At this meeting, preliminary recommendations will be presented, in addition to public comments received to date and field observations. Task Force members will be identifying criteria to assist in prioritizing the list of preliminary recommendations; therefore, your attendance is important.

AGENDA:

I. Introductions
II. Review of Planning Process
III. Preliminary Recommendations
IV. Priority Criteria Exercise
V. Next Steps
VI. Conclusion / Questions

We thank you for your time and assistance in improving Winterville's walkability.

Additional project information can be found at: http://www.walkablewinterville.com/

Also at this meeting, members were divided into two groups to identify pedestrian improvements in their assigned region. To achieve this objective, the Town of Winterville was divided into four regions: Northwest, Southwest, Northeast, and Southeast. The formal boundaries of these regions were Highway 11 and Main Street. Team One was given the northwest and southwest region. Team Two was given the

northeast and southeast region. The following is a summary of items discussed. Some suggestions were expanded upon after the initial Task Force meeting.

Northwest

1. There are currently several major community facilities located in the region: The Boys and Girls Club, Creekside Elementary, Pitt Community College, Sara Law Softball Complex and South Central High School. These facilities could benefit from an improved pedestrian network.
2. Swift Creek has potential to become a major greenway segment that could connect Pitt Community College and future development. This corridor spans north to south creating the opportunity to connect the cities of Greenville, Winterville, and Ayden.
3. Tributaries of Swift Creek can be used as greenway links. These links could provide access between destinations such as:
    - Future and existing residential neighborhoods to Downtown and Boyd Lee Park.
    - Creekside Elementary to the Sara Law Softball Complex (Wooded acreage located on the east side of Creekside Elementary could be converted into a parkland with connectivity over Swift Creek).
4. Highway 11 is a major thoroughfare which acts as a barrier to pedestrians. Sections along this highway should be identified for improvements to create safe crossings. The intersection of Highway 11 and Firetower Road is one area that should be improved to allow connectivity from the Boys and Girls Club to Pitt Community College.
5. The Sara Law Softball Complex is currently used by Pitt County for recreational activities. A stream located near the complex could add another source of recreational activity and connect residents to the facility.
6. South Central High School has a walking track that is open to the public; however, the track is gated and locked in the evenings restricting walkers from using the facility.
7. Neighborhoods adjacent to South Central High School and Creekside Elementary are unable to safely walk to school. Pedestrian improvements such as sidewalks and crosswalks will provide the opportunity for students to safely walk to school.
8. Pitt Community College has a scenic park like setting that is conducive to pedestrian activity. Areas on campus near the baseball field are currently used by walkers. This pedestrian area could be connected to surrounding commercial and residential uses.
9. Future Firetower Road extension and realignment could present a opportunity to incorporate pedestrian improvements along corridor.
10. Reedy Branch Road is in need of pedestrian infrastructure to connect existing residential neighborhoods and future development from Pitt Community College area down to Pitt County Greenway.
11. Davenport Farm Road could serve as a connector between future developments to the NC 11 business district. Improvements at the intersection of Davenport - Vernon White Road and Highway 11 would allow people to safely cross the busy thoroughfare.
12. Speed limits along Highway 11 should be decreased from Main to Pitt Community College. Lower speed limits in this area of high development would encourage people to walk instead of driving to destinations in close proximity.
13. NC 903 could serve as an “east-west” connector between Downtown and future growth areas near Highway 11.

14. Mill Street is often busy and presents a hazard to pedestrians. Sidewalks and marked crosswalks along this corridor will provide safety for walkers.

Southwest

1. A future Laurie Ellis Road extension project would create an opportunity to construct pedestrian improvements that will connect the Winterville Recreation Park to neighborhoods west of Highway 11. These neighborhoods include Summer Winds and Magnolia Ridge as well as future development.
2. A greenway along Reedy Branch could serve as a linkage between adjacent communities and the Pitt County Greenway. The Pitt County Greenway runs west to east, enabling residents to walk from Southwest Winterville to Boyd Lee Park.
3. Vacant properties at the rear of Magnolia Ridge abut Reedy Branch stream. These properties can serve as a linkage from this development to a future Reedy Branch greenway.
4. Old Tar Road could benefit from sidewalk construction to connect future and existing development in to Downtown.

Northeast

1. Old Tar Road serves many residential neighborhoods of the study area. Sidewalks along this corridor from Firetower Road to Laurie Ellis Road would connect residential and commercial uses.
2. Subdivisions located along Old Tar Road could benefit from sidewalks. Sidewalks in these subdivisions were recommended along the following streets:

Ashley Meadows

- Ashley Meadows Drive (Sidewalks are needed from Old Tar Road to Edenbrook Drive).

Brier Creek

- A possible greenway segment could be developed along drainage lateral on the subdivision's east side. This segment could connect with the proposed Pitt County Greenway.

Canterbury

- Tabard Road (Sidewalks are needed from Old Tar Road to Friar Drive).
- Chaucer Drive (Sidewalks are needed from Old Tar Road to Franklin Drive).
- Franklin Drive (Sidewalks are needed from Corbett Street to Corbett Street).
- Friar Drive (Sidewalks are needed along the entire street).
- Corbett Street (Sidewalks are needed along the entire street).

Cedar Ridge

- Friar Drive (Sidewalks are needed along the entire street).

Clevewood

- Spring Run Road (Sidewalks are needed from Ray Crawford Drive to Corbett Street).

Devonshire Square

- Channel Drive (Sidewalks are needed along the entire street).

Main Street Village

- Main Street (Sidewalks are needed from Old Tar Road to Colesbury Court).

Weathington Heights

- Brock Avenue (Sidewalks are needed along the entire street).
- Jeanette Street (Sidewalks are needed from Evergreen Drive to Channel Drive).
- Barnes Street (Sidewalks are needed along the entire street).

Winterfield

- Winterfield Drive (Sidewalks are needed along the entire street).
- Ray Crawford Drive (Sidewalks are needed along the entire street, with possible trail connector to Boyd Lee Park and proposed Pitt County Greenway at cul-de-sac).

3. There is a need for improved pedestrian access facilities throughout the study region. The following improvements were identified for the following street locations:
    - Carmon Street (Sidewalks are needed along the entire street. A possible pedestrian connector could be developed from Carmon Street to Graham Street if the parcel in-between is vacant).
    - Cannon Road (Sidewalks are needed along the entire street).
    - Evergreen Drive (Sidewalks are needed from Kennedy Street to Barnes Street).
    - Glenda Street (Sidewalks are needed along the entire street).
    - Graham Street (Sidewalks are needed along the entire street).
    - Hillcrest Avenue (Sidewalks are needed from Evergreen Drive to Channel Drive)
    - Intersection of Mill and Main Streets (Countdown timers and marked pedestrian crossing would improve walker safety).
    - Intersections of Old Tar Road and the proposed Pitt County Greenway should incorporate marked pedestrian crossings).
    - Hammond Street (Sidewalks are needed along the entire street).
    - Jones Street (Sidewalks are needed from Main Street to Kennedy Street, could serve as a connector from Robinson Elementary to Hillcrest Park).
    - Knox Street (Sidewalks are needed along the entire street).
    - Little Drive (Sidewalks are needed from Cannon Road to Letchworth Circle. A trail connector near Letchworth Circle would enable people to walk to Winter Village shopping center).
    - Mill Street (Sidewalks are needed along the entire street).
    - Railroad Street (Sidewalks are needed from Church Street to Vernon White Road).
    - Rayland Road (Sidewalks are needed along the entire street).

- Vernon White Road (Sidewalks are needed along the entire street).
- Winter Village Drive (Sidewalks are needed along the entire street).

Southeast

1. There is a need for improved pedestrian access facilities throughout the study region. The following improvements were identified for the following street locations:
    - Ange Street (Gaps between existing sidewalk segments should be in-filled along the entire street).
    - Blount Street (Sidewalks should be continuous from Church to Ange Streets).
    - Branch Road (Sidewalks are needed along the entire street).
    - Church Street (Gaps in existing sidewalk segments should be in-filled. Sidewalk segments should be continuous from Main Street to Reedy Branch Road).
    - Cooper Street (Gaps between existing sidewalk segments should be in-filled. Sidewalks should be continuous from Mill Street to Old Tar Road).
    - Pedestrian signage and marking improvements are needed at the intersection of Cooper Street and Old Tar Road.
    - Forbes Road (Existing sidewalks should be extended from Barrel Drive to Main Street).
    - Gayle Boulevard (Sidewalks are needed from Glendale Avenue to Main Street).
    - Glendale Avenue (Sidewalks are needed along the entire street).
    - Laurie Ellis Road (Gaps between existing sidewalk segments should be in-filled along the entire street. Sidewalks should be continuous from Highway 11 to Old Tar Road).

2. Subdivisions located in the study region could benefit from sidewalks. Sidewalks in these subdivisions were recommended along the following streets:

    Craftwinds
    - Rosewood Drive (Sidewalks are needed along the entire street).

    Cooper's Point
    - Primrose Lane (Sidewalks are needed along the entire street).

PUBLIC OPEN HOUSES

Two public open houses were held at specific stages of plan development to solicit valuable public input to assist the Project Team and Task Force on plan development.

The first open house was held within the third month on May 12, 2008, with attendance from ten citizens. The purpose of this open house was to garner the trust and support of the community by highlighting the benefits of a Comprehensive Pedestrian Plan and components of a pedestrian-friendly environment. The open house provided the public with status of project, identified deficiencies, and plan direction. The study area map was displayed and attendees had an opportunity to express needs and concerns and identify potential corridors. Attendees were also given the opportunity to complete the on-line survey. Information obtained from attendees was used to address items of the NCDOT Expanded Template.

A second open house will be held on October 9, 2008, with attendance from fourteen citizens. The purpose of this open house was to present and receive comments on the draft recommendations and priorities.

The following ideas and comments were generated during the public open houses:

1. More trees are needed to screen pedestrians from intense sunlight.
2. Cooper and Main Streets have become difficult to cross due to increased traffic. These increases in traffic prohibit students from walking to nearby schools.
3. Existing crosswalks are too narrow. Wider crosswalks would enable walkers to walk together across the street side-by-side. Narrow crosswalks constrain pedestrians to walking behind one another.
4. Town zoning ordinances should be improved to ensure new construction has sidewalks at time of development (commercial).
5. The number of residential developments west of Highway 11 is expected to increase. Therefore, subdivisions located within the ETJ on the west side of Highway 11 should be connected to downtown in some manner. There is also a need to ensure that these developments have access to proposed greenway segments and nearby schools.
6. Increased traffic has made the following street intersections difficult to cross:
    - Ange Street and Cooper Street
    - Highway 11 and Forlines Road
    - Highway 11 and Vernon White Road
    - Cooper Street and Main Street
7. Commercial development should be accessible to residential neighborhoods. These developments should be “walkable” to promote pedestrian usage.

8. Sidewalks should be located along the same side of the street connecting key destinations.
9. Lack of street right-of-way in older sections of town may prohibit new sidewalk construction.
10. Many handicapped citizens use motorized vehicles such as wheelchairs and carts. Sidewalks and trails should be constructed to accommodate these citizens.
11. Multi-use trails are needed to accommodate pedestrians as well as cyclists.
12. Pedestrians and cyclist could use sidewalks in unison if there is signage and adequate sidewalk width. Note: Even though the NC General Statutes do not address bicycling on sidewalks, local ordinances do; in addition, no matter what the sidewalk width is, the use of sidewalks for pedestrians and bicyclists is a dangerous situation that is not encouraged.
13. Some residents walk their pets and allow their animals to defecate onto sidewalks and other's properties without discarding the waste. There should be a town ordinance to combat this issue, which is getting out of control.
14. Some residents keep their pets in inadequate fences that are too low or let they allow their pets to roam free. These animals pose a danger to passing pedestrians. There should be a town ordinance restricting these dangers.
15. Motorists have a tendency to drive too fast, which creates a safety danger to pedestrians.
16. Crossings at Highway 11 should be constructed to ensure pedestrian safety.
17. Sidewalks are needed along Cooper Street.
18. A greenway along Fork Swamp Creek would connect Winterville to Greenville.
19. Sidewalks should be constructed along Church Street.
20. Sidewalks and marked pedestrian crossings are needed along Primrose Lane.
21. Greenway segments that cross Old Tar and Worthington Roads should incorporate marked pedestrian crossings.
22. Sidewalks are needed along Church Street from Sylvania Avenue to Laurie Ellis Road.
23. Feel that speed bumps are needed for school areas.
24. Sidewalks are very important to our community.
25. Need strong support from elected officials / citizens.
26. Need flower boxes, benches, trashcans, post lighting, and sidewalks for school walkers.
27. Need additional recreation opportunities for adults.
28. Need to consider bicycles.
29. Would like to see some benches around or along the sidewalks for resting spots.

Do you enjoy taking your dog for a walk? ■ Would you like a more walkable community? Do your kids walk with you to the park or school? ■ Do you walk to the store or downtown? Would you like to incorporate more walking into your daily life?

If you answered yes to any of these questions, please join us! We need your input to help create a

WALKABLE WINTERVILLE!

WHAT

Comprehensive Pedestrian Plan Open House

WHEN

Monday, May 12, 2008
5 - 7 PM

WHERE

Winterville Community Center within Police/Fire/EMS Building
2593 Railroad Street

www.walkablewinterville.com

GOALS FOR THIS OPEN HOUSE ARE:

- PROVIDE YOU WITH PROJECT INFORMATION
- REVIEW EXISTING PEDESTRIAN CONDITIONS THROUGHOUT THE TOWN
- FIND OUT YOUR NEEDS AND GOALS FOR A MORE WALKABLE WINTERVILLE
- DISCUSS FUTURE PLANS

Division of Bicycle & Pedestrian Transportation

Rivers & Associates, Inc.

This plan is being developed by professional consultants and is funded by the Town of Winterville & the NCDOT.

WANT A MORE

PEDESTRIAN-FRIENDLY WINTERVILLE?

IF YOU ANSWERED YES, PLEASE JOIN US!
THE TOWN OF WINTERVILLE NEEDS YOUR INPUT!

WHAT

Comprehensive Pedestrian Plan Open House #2

WHEN

Thursday, Oct. 9th, 2008
5 - 7 PM

WHERE

Winterville Town Hall
2571 Railroad Street

www.walkablewinterville.com

GOALS & OBJECTIVES:

- PROVIDE YOU WITH PROJECT INFORMATION
- PRESENT DRAFT RECOMMENDATIONS & PRIORITIES FOR THE COMPREHENSIVE PEDESTRIAN PLAN
- ACCEPT COMMENTS, RECOMMENDATIONS, & QUESTIONS FROM YOU

Division of Bicycle & Pedestrian Transportation

Rivers & Associates, Inc.

This plan is being developed by professional consultants and is funded by the Town of Winterville & the NCDOT.

COMMUNITY SURVEY RESULTS

WINTERVILLE PEDESTRIAN PLAN
COMMUNITY SURVEY RESULTS

Public surveys were conducted from March 25 to June 20, 2008. One hundred and twenty-six (126) persons completed the survey. Survey results will provide the Town, Task Force members, and Consultants with an understanding of the pedestrian improvements residents desire for their neighborhood and throughout the Town. Projects, programs, and policies will be developed based upon these survey results, field analysis, existing plans and policies, and pedestrian-vehicle data for the Comprehensive Pedestrian Plan. *The goal of this Plan is to develop a strategy to make Winterville a safer and more* enjoyable place for you and your family to walk to work, downtown, school, and parks.

1. How much time do you generally spend walking each day in Winterville?

		Response %	*Response #*
1)	Not at all → Skip to Q7	*24.6*	*31*
2)	Less than 10 minutes	*20.6*	*26*
3)	11 - 20 minutes	*21.4*	*27*
4)	**21 - 60 minutes**	***31.0***	***39***
5)	More than one hour daily	*2.4*	*3*

2. How far do you generally walk each day in Winterville?

		Response %	*Response #*
1)	Less than 1/4 mile	*19.3*	*16*
2)	1/4 mile to 1/2 mile	*20.5*	*17*
3)	1/2 mile to 1 mile	*27.7*	*23*
4)	**More than 1 mile**	***32.5***	***27***

3. How many days per week do you walk at least 10 continuous minutes in Winterville?

		Response %	*Response #*
1)	7 days	*11.8*	*10*
2)	6 days	*9.4*	*8*
3)	5 days	*22.4*	*19*
4)	4 days	*7.1*	*6*
5)	**3 days**	***27.1***	***23***
6)	2 days	*9.4*	*8*
7)	1 day	*3.5*	*3*
8)	0 days	*9.4*	*8*

4. Where do you walk to in Winterville?

		Response %	*Response #*
1)	Work	*2.3*	*2*
2)	Park	*20.9*	*18*
3)	School	*3.5*	*3*
4)	Neighbor's house	*26.7*	*23*
5)	Post Office	*5.8*	*5*
6)	Church	*2.3*	*2*
7)	Library	*2.3*	*2*
8)	Store	*1.2*	*1*
9)	**No destination / For pleasure**	***62.8***	***54***
10)	Parking lot/car	*7.0*	*6*
11)	Other (specify)...	*17.4*	*15*

In/around my neighborhood (10 responses)

I run in my neighborhood. The cars don't seem to give me much room. There's not enough space. Sidewalks would help this.
Around houses for work
WOULD WALK FAR BUT TOO MANY DOGS
To other neighborhoods
Vet's office (Animal Care East)
Town streets

5. Why do you walk?

		Response %	*Response #*
1)	**Exercise/Health**	***87.2***	***75***
2)	Enjoy nature	*26.7*	*23*
3)	Walking a pet	*30.2*	*26*
4)	Relaxation	*32.6*	*28*
5)	Accompany family/friend	*26.7*	*23*
6)	Most convenient	*1.2*	*1*
7)	Primary means of transport	*0.0*	*0*
8)	Cheapest way to get around	*4.7*	*4*

6. Do you generally walk...

		Response %	*Response #*
1)	Alone	*43.0*	*37*
2)	With a pet	*34.9*	*30*
3)	**With friends and/or family**	***55.8***	***48***
4)	With an organized group	*1.2*	*1*

7. What keeps you from walking more than you do now?

		Response %	*Response #*
1)	No time/too busy	*43.0*	*49*
2)	Health reasons	*2.6*	*3*
3)	Extreme heat	*7.9*	*9*
4)	**Feel unsafe due to traffic**	***51.8***	***59***
5)	Feel unsafe due to crime	*16.7*	*19*
6)	Not enough destinations	*34.2*	*39*
7)	Get enough exercise elsewhere	*8.8*	*10*
8)	Don't think about walking	*3.5*	*4*
9)	Other (specify)….	*17.5*	*20*

(Items with a (#) indicates the number of times that particular item was mentioned by respondents)

Lack of connectivity
Weather (2)
Traffic-too much/busy (3)
No sidewalk (3)
Work schedule
Grass too tall on sides of road. wary of snakes
Not enough planning on towns part
Areas not accessible by sidewalks
Not enough sidewalks along Main Street and around schools
COUCH POTATO JUST STARTING TO WALK
Work outside of Winterville so time in town is limited
I live outside the city limits
Would walk more if we had more NATURE TRAILS!!!
Lack of sidewalks and lack of adequate road shoulders!
The town needs more sidewalks
DOGS & TOO MUCH CRIMES GOING ON UNSAFE TRAFFIC WALKING YOUNG BOYS IN GROUP TOGETHER (2)
I'd love to walk recreationally or with my dog, but the only option is to do laps around my subdivision. The wide streets, far house setbacks, and lack of sidewalks, trees, and pedestrian level lighting do not make an inspiring pedestrian environment.

The following questions are about your neighborhood (the area within a 10-15 minute WALK from your home)

8. Is your neighborhood mostly:

		Response %	*Response #*
1)	**Single-family homes**	***84.8***	***95***
2)	Apartments and/or other multi-family structures	*6.3*	*7*
3)	A mix of single-family homes and multi-family structures	*5.4*	*6*
4)	A mix of residential and commercial	*2.7*	*3*
5)	Don't know/not sure	*0.9*	*1*

9. Are there public or private schools in your neighborhood? Do not include daycare centers, nursery schools, or home school locations.

	Response %	*Response #*
1) Yes	*45*	*50*
2) No	***55***	***61***

10. If you have school aged children, how do they get to school on a regular basis?

	Response %	*Response #*
1) You drive them	*29.5*	*33*
2) They ride the bus	*8.9*	*10*
3) A family member or friend drives them	*1.8*	*2*
4) They walk	*0.0*	*0*
5) Not applicable (N/A)	***59.8***	***67***

11. What best describes the sidewalks in your neighborhood?

	Response %	*Response #*
1) Sidewalks on both sides of all streets	*1.8*	*2*
2) Sidewalks on both sides of some streets	*0.9*	*1*
3) Sidewalks on one side of all streets	*14.3*	*16*
4) Sidewalks on one side of some streets	*17.9*	*20*
5) Sidewalks exist, but are inconsistent	*8.9*	*10*
6) No sidewalks	***56.3***	***63***

12. How would you describe the condition of sidewalks in your neighborhood?

	Response %	*Response #*
1) Excellent - sidewalks are easy to walk, no obstructions	*17.0*	*19*
2) Good - most sidewalks are easy to work on, few obstructions	*17.0*	*19*
3) Fair - some sidewalks in good condition, others need work	*5.4*	*6*
4) Poor - cracked, broken, uneven, many obstructions, gaps	*3.6*	*4*
5) No sidewalks	***57.1***	***64***

13-26. Using this scale, please rate the following statements:

In Your Neighborhood...	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	NA
13. Drivers drive at safe speeds	*3.8% (4)*	*27.4% (29)*	*18.9% (20)*	***33.0% (35)***	*16.0% (17)*	*0.9% (1)*
14. Drivers usually respect/yield to pedestrians	*5.8 (6)*	***45.2 (47)***	*19.2 (20)*	*18.3 (19)*	*11.5 (12)*	*0.0 (0)*
15. Traffic signals or signs are sufficient and crosswalks are well marked	*4.7 (5)*	***25.5 (27)***	*16.0 (17)*	*19.8 (21)*	*17.9 (19)*	*16.0 (17)*
16. Amount of curb ramps are sufficient	*3.8 (4)*	***29.2 (31)***	*20.8 (22)*	*15.1 (16)*	*12.3 (13)*	*18.9 (20)*
17. Traffic signals allow enough time to cross the street	*0.0 (0)*	*12.4 (13)*	*14.3 (15)*	*12.4 (13)*	*6.7 (7)*	***54.3 (57)***
18. Street lighting is sufficient	*8.6 (9)*	***43.8 (46)***	*17.1 (18)*	*16.2 (17)*	*14.3 (15)*	*0.0 (0)*
19. I feel safe walking in my neighborhood	*15.1 (16)*	***56.6 (60)***	*7.5 (8)*	*12.3 (13)*	*7.5 (8)*	*0.9 (1)*
20. Benches and/or places to sit are sufficient	*0.0 (0)*	*3.8 (4)*	*9.4 (10)*	*23.6 (25)*	***34.9 (37)***	*28.3 (30)*
21. Streets have enough trees and/or other attractive features along them	*5.7 (6)*	*21.0 (22)*	*21.9 (23)*	***25.7 (27)***	*21.9 (23)*	*3.8 (4)*
22. Walking trails are adequate	*0.9 (1)*	*2.8 (3)*	*9.4 (10)*	*26.4 (28)*	***38.7 (41)***	*21.7 (23)*
23. My neighborhood is attractive and enjoyable to walk	*13.5 (14)*	***42.3 (44)***	*22.1 (23)*	*12.5 (13)*	*9.6 (10)*	*0.0 (0)*
24. There are commercial areas within walking distance to my home	*10.6 (11)*	***47.1 (49)***	*12.5 (13)*	*13.5 (14)*	*12.5 (13)*	*3.8 (4)*
25. My neighborhood is full of active walkers	*5.7 (6)*	***47.2 (50)***	*24.5 (26)*	*14.2 (15)*	*7.5 (8)*	*0.9 (1)*
26. It is easy to walk in my neighborhood	*13.3 (14)*	***49.5 (52)***	*19.0 (20)*	*8.6 (9)*	*9.5 (10)*	*0.0 (0)*

27. What would be most likely to make you walk more in your neighborhood?

		Response %	*Response #*
1)	Cleaner street	*10.3*	*11*
2)	**Better/more sidewalks**	***60.7***	***65***
3)	Better/more lights	*32.7*	*35*
4)	Reduced vehicle speeds	*30.8*	*33*
5)	More street trees	*29.9*	*32*
6)	Better connection between developments	*37.4*	*40*
7)	**More parks and trails**	***62.6***	***67***
8)	Better/more crosswalks	*25.2*	*27*
9)	Better police enforcement	*15.9*	*17*
10)	More pedestrian amenities (benches, etc.)	*32.7*	*35*
11)	Other (specify) ...	*12.1*	*13*

(Items with a (#) indicates the number of times that particular item was mentioned by respondents)

Speed bumps for cars on longer stretches of road (Primrose)
Streets are okay in my neighborhood
Gangs of kids, teens walk down middle of street blocking traffic
Lighting and traffic are awful
Loose dogs
Peoples with dogs with leash on dogs. Dogs in fence
More time / leisure time (2)
There is no police enforcement on Tar Rd, dangerous to all. Sounds like a drag strip in front of my residence
Sidewalks on Old Tar and street light at Worthington
Access to nature trails!!!!!
SIDEWALKS
Winterville should have a playground (including a sand box) and walking trails
A PARK ON THE WEST SIDE OF HWY 11 - we have no place to play/walk/be active
More personal ambition

The following questions are about the Town of Winterville (community-wide)

28. What specific destinations (list names of schools, parks, shopping centers, etc.) are difficult to walk to? *Items with a (#) indicates the number of times that particular item was mentioned by respondents..*

All (6)	Sam's Club (2)
All, we are locked in by Old Tar	Doctor's Office
Food Lion Shopping Center (21)	Creekside Elementary (2)
W.H. Robinson (9)	Boyd Lee Park (4)
AG Cox (4)	All Schools (7)
Post Office (6)	All shopping centers / Commercial Areas (4)
Downtown (Public Library, Town Hall,Wimpies, shops) (14)	Dollar General
Post Office, Library difficult to access off Cooper St	Carolina East Mall
Winterville Rec Park (3)	All parks (6)
Paramore Park	Wintervillage
Pitt Community College	Convenience Store

Sheetz	Drug Store/Rite-Aid (2)
Lowe's Home Improvement	All of Old Tar Road
Family Dollar	
S. Central High School (4) - extremely dangerous due to no crosswalks or sidewalks	
I would like to walk to the Creekside Elementary school, but across the street there are 2 houses that keep unleashed dogs, and the dogs chase me when I walk near there, so I don't walk there anymore	
WH Robinson, no sidewalk or trail for those that might want to ride their bike or walk	
WH Robison is in desperate need a traffic/pedestrian walks/signals. Also, AG Cox has a lot of student walkers that battle heavy auto traffic. They have no significant lights or pedestrian signals	
Nothing is too difficult to walk to. The problem is there are not enough commercial areas near the residential sub-divisions. There are more sub-divisions coming up along Old Tar and Laurie Ellis Roads. Need less Dollar Stores.	
I would have to cross Hwy 11 and Reedy Branch Road	
Parks, trails, fun things for kids, there is NOTHING fun for kids to do around here. I struggle constantly to find something to do with my 3 year old!	
Winterville Library and post office due to lack of sidewalks and poor quality of side walks on Main Street and connecting roads (Cooper, Gayle, Forlines)	
I don't walk to specific destinations. there is too much traffic, going too fast	
Everything is difficult b/c I'm not in a subdivision	
Frog level road. It's an extremely busy road, too many house, not big enough roads. sidewalks down this busy road would benefit so many runners, and walkers	
Home is in a good neighborhood but locations besides schools are too far away/unsafe to walk to	
We are on Friar drive so nothing is close	
Winterville parks are not kept clean(glass in the park broke)to many young peoples hanging around and not use the field for sports	
Wh Robinson, parks and recreation, commercial businesses	
All destinations outside my subdivision. I live off Firetower - which is not pedestrian friendly	
Nothing is close you can not walk to school. I could walk to Food Lion the highway is so busy	
Any of the downtown area is difficult to access due to no sidewalks	
I live in Canterbury...nothing in Winterville is suitable to walk to without dodging traffic on Old Tar. Sidewalks are needed on Old Tar	
Winterville in general - live in west Winterville	
The congestion at the schools- the teachers and the staff do the best job they can trying to help control the car and walking traffic	
Schools, Town offices, library, downtown area, shopping centers, parks. A lack of safe connections to major destinations is lacking overall in Winterville	
The park behind AG COX because it is impossible to leave our neighborhood and get across the street because of all the traffic at the ball fields!!	
We live too far to allow the kids to walk to school; I'm not sure what the question is asking -- except for a part of the Main Street, I don't know where we have nice sidewalks to use.	
None, But I would like to see a walking trail in the park... with benches.. and landscaping. Mulch around the trees that have been planted for exp. and work to kill the fire ants.	
My neighborhood (Winterfield) is pretty much hemmed in from any destinations by Old Tar Road	
Many places, like the library, fire house, Winterville park, Ball fields, etc are too far away to walk to if you live on the west side of HWY 11. We live off Frog Level and have to drive to everything, even though there are a LOT of new neighborhoods around here. We	
Tar Rd. and Vernon White are not wide enough for people to walk safely anywhere, let alone the above.	
I live in Southridge - too isolated from the rest of Winterville to walk outside our development	
Easy walk to Hillcrest Park and Food Lion. Would be difficult to walk to downtown Winterville because no sidewalks on Main Street west of the Post Office	

29. What intersections and/or streets in Winterville need more pedestrian facilities? (sidewalks, traffic &/or pedestrian signals, crosswalks, etc.) *Items with a (#) indicates the number of times that particular item was mentioned by respondents..*

All (3)	Main Street / Mill Street (2)
Downtown (6)	Ange Street (5)
Main St. (20)	Hwy 11/903/Main
All intersections along Main Street	Memorial(Hwy11)/Vernon White/Davenport Farms (6)
Main/Ange	Memorial Drive (2)
Old Tar/Laurie Ellis	Memorial/Thomas Langston Road
Old Tar/Cooper Street/Worthington (8) - traffic light needed	Laurie Ellis / Ange
Old Tar Road (22)	Laurie Ellis (3)
Old Tar / Main Street (7) - traffic light needed	Old NC 11-Mill Street (7)
Old Tar / Vernon White (4) - light	Forlines (5)
Crossings along Old Tar	Crossings along Forlines to HS & Creekside (3)
Old Tar / Laurie Ellis	Frog level Road
Old Tar / Tabard	Firetower/Hwy 11(Memorial) (2)
Old Tar / Firetower (3)	Corey
Old Tar / Canterbury	Glenda Street/Railroad Street/African American Neighborhoods
Old Tar at Cedar Ridge & Irish Creek	Sterling Pointe
Old Tar / Wintergreen Park	Firetower Road
Old Tar / Ashley Meadows Drive (3)	Reedy Branch (4)
Church Street	Canterbury (2)
Cooper Street (10)	Craft winds
All intersections along Cooper Street	Vernon White (5)
Cooper Street / Church Street	Worthington Road (11)
Cooper / Ange (4)	Lee Street
Areas around A.G. Cox	Coopers Point (3)
Rosewood/Cooper	Rosewood
Forbes/Cooper	Near all schools
Forbes	Older Sections of town- North Winterville
Crossings along Worthington Rd	Roberson height behind Robinson Elem. School. (need sidewalks)
Railroad crossing on Cooper near Dixie Queen	Need a place to cross in front of PCC to get to Sheetz.
The town center of Winterville needs to be more attractive and pedestrian friendly. With more charming destinations the town center might experience a renaissance similar to downtown Greenville bringing increased business/shops/cafe revenue to Winterville.	
Craft winds and cooper's point need consistent sidewalks. it's hard to turn left onto cooper street from my neighborhood, craft winds, in the mornings on the way to work. parents are not stopping at stop signs after dropping their kids off in the mornings at the schools.	
Main street should be completed ASAP!!	
Old Tar RD and Vernon White no police enforcement of traffic at all. More like a drag strip than city neighbor hood. Going toward town and away doesn't matter which way you go.	
My neighborhood is at one end of Mills Street. I believe I would visit downtown more often if sidewalks were available.	
Would be nice to have sidewalks in the Canterbury Subdivision	
Canterbury would be a great place to put a small neighborhood park/playground	
Pretty the communities in/out the city limits	

Vernon White Road needs crosswalks, lights, sidewalks basically everything. Most neighborhoods between my house and the school do not have sidewalks, so my children and I have to ride our bikes on the street. Sidewalks should be on both sides of the street of every street in Winterville.

The intersection at Dixie Queen people in cars turning and people walking out of the restaurant people in cars really do not pay close enough attention to them crossing the street to the parking lot. It is really a dangerous intersection for the customers of the restaurant

Old Tar/Wintergreen Park (to get to from the surrounding neighborhoods like Ashley Meadows). Sidewalks - that's a general problem. This community encourages people to drive everywhere.

I can't speak for all of Winterville.. Barefoot is a good community neighborhood for all its sidewalks. I see more people walking in Barefoot, than other neighborhoods

The intersection of HWY 11 and Davenports Farms has a TERRIBLE set up. No one can turn onto Vernon White without causing a huge back up. The light is timed poorly and creates problems! Again, need a park on the west side of Winterville!!

The following questions are about walking programs and policies/guidelines to encourage, promote, and improve walkability within Winterville.

30. Do you know of any existing walking programs in Winterville?

	Response %	*Response #*
1) Yes	*1.9*	*2*
2) **No**	***82.7***	***86***
3) Not sure/ don't know	*15.4*	*16*

31. If Winterville provided opportunities for organized walking activities, would you participate?

	Response %	*Response #*
1) Yes	*39.8*	*41*
2) No	*15.5*	*16*
3) Not sure/ don't know	***44.7***	***46***

32. Which of the following would be your ideal neighborhood?

	Response %	*Response #*
1) Single-family homes, accessible only by vehicles	*17.3*	*18*
2) Single-family homes, accessible by multiple modes of transportation	***51.0***	***53***
3) Mixture of residential uses, accessible by by only vehicles	*3.8*	*4*
4) Mixture of residential uses, accessible by multiple modes of transportation	*12.5*	*13*
5) Mixture of residential and commercial uses, accessible only by vehicles	*1.0*	*1*
6) Mixture of residential and commercial uses, accessible by multiple modes of transportation	*14.4*	*15*

33. Should Winterville adopt guidelines, standards, or regulations to ensure proper development / growth focused on pedestrian needs?

		Response %	Response #
1)	**Yes**	***94.2***	***98***
2)	No	*5.8*	*6*

Finally, we'd like to learn a bit more about you.

Do you:

			Response %	Response #
34.	**Have children under 5**	Yes	*30.6*	*30*
		No	***69.4***	***68***
35.	**Have a physical disability**	Yes	*4.0*	*4*
		No	***96.0***	***95***
36.	**Have a drivers' license**	**Yes**	***100.0***	***103***
		No	*0.0*	*0*
37.	**Own a car**	**Yes**	***100.0***	***103***
		No	*0.0*	*0*

38. What is your primary mode of transportation?

		Response %	Response #
1)	**Car**	***98.1***	***101***
2)	Bus	*0.0*	*0*
3)	Bicycle	*0.0*	*0*
4)	Walking	*1.0*	*1*
5)	Ride in car (passenger)	*0.0*	*0*
6)	Other (specify)	*1.0*	*1*

I like to ride bikes for exercise except I have to cross very busy traffic to go from one sub division to the next

39. If you are a student, what school do you attend?

Creekside Elementary
ECU
Children attend WH Robinson Elementary
My children attend Creekside
Pitt Community College
Child attends WH Robinson
My kids attend WH Robinson and the Pitt Community College Preschool Lab
ECU

40. If you are employed, where do you work? (nearest intersection and city)

(Items with a (#) indicates the number of times that particular item was mentioned by respondents)

2nd and Evans, Greenville (6)	New Hope Road Greenville
At home (2)	Greenville (6)
licensed home daycare	Green & New Hope Rd
Teach at home	Memorial & West 5th Street, Greenville, NC
ECU (5)	Greenville, old creek rd and old pactolus hwy
ECU; and I'd love to be able to take a bus (even better, a 'green' one)!!!!	Pitt County Health Center
Corner of Evans/ firetower	HEALTH DEPT (2)
Pitt Community College (2)	Evans Street, Greenville
Pitt County Government Office Building (4)	hwy 33 and old river rd
5th st and Memorial blvd	County Home Road, Greenville
By the airport	Sales Rep.- On the road all day
5th Street, Greenville	Fire Tower Road, Winterville
Allen Road and Landfill Road Greenville	Greenville 264 and bypass
Old Creek Rd and Govt. Circle, Greenville	W.H. Robinson School, Railroad Street
Government Circle, Greenville (3)	Hospital/Greenville
Greene/New Hope Dr Greenville, NC	Ayden
ecu family medicine	Ayden Rt. 11
Greenville, West 5th Street	Frog Level Rd. Greenville
Pitt Co. DSS	PCMH (3)
5th/Memorial Dr Greenville	Greenville Blvd
Greenville 9th & Evans	the intersection of highway 11 and firetower
memorial and 5th street, Greenville	Pitt County Schools
Memorial Drive, Greenville	Arlington Blvd/Stantonsburg Rd, Greenville, NC
Brody School of Med.	Ayden, NC
US264 / 11 Greenville, NC	Greenville blvd Greenville
Greenville Blvd., & Charles Blvd.	Moye Blvd. & Stantonsburg Rd., Greenville
US 264 Washington NC	bells fork, Greenville
Uptown Greenville	Rocky Mount

41. Are you:

	Response %	*Response #*
Female	***70.3***	***71***
Male	*29.7*	*30*

42. What is your age?

	Response %	*Response #*
1) 12 to 15	*0.0*	*0*
2) 16 to 24	*1.9*	*2*
3) 25 to 34	*29.1*	*30*
4) 35 to 44	***31.1***	***32***
5) 45 to 54	*19.4*	*20*
6) 55 to 64	*15.5*	*16*
7) 65 and over	*2.9*	*3*

43. Where do you live in Winterville (street name and/or subdivision name)?

(Items with a (#) indicates the number of times that particular item was mentioned by respondents)

Craft Winds (4)	Winter field Drive, Winter field Subdivision
Old Tar Rd (2)	Manchester Subd. Off Forlines (4)
Tabard Road	Brier Creek Subdivision
ABBY LANE	Carroll Crossing
Selby Court (Coopers Pointe)	Olive Place Winterville Crossing
Cedar Ridge (4)	Church st
The Woods at Magnolia Ridge/Little Gem Circle	Garland/Bullock Farms
Magnolia Ridge (5)	Coopers Pointe
Devonshire	Gardners Street
Winterfield/Winterfield Drive	Bethany Court
Cooper's Point, Wynnewood Court	Lynn Loop
Barefoot Landing (8)	Winterfield Dr.
Langston Farms	Clevewood Subd
South Hall	Bristolmoor
Ashley Meadows (5)	Brier Creek
Ivy Chase	Southridge
Ange Street	Drexel Lane
Jeremy Lane, Carroll Crossing	Preston trails
Main Street Subdivision	Sterling Pointe Drive
Vineyards	Evergreen Dr.
Main Street	Cooper Street (2)
Friar drive	Lina Court
Main Street Village (2)	Winterville Crossing Subd (2)
Dudley's Grant on Firetower Rd	Glenda Street
Vernon White Rd (2)	OAKS SUBDIVISION
Clevewood	Quarterpath Drive
Sterling Pointe Townhomes	Tabard Road
Devonshire	Waterford Subdivision (5)
near PCC	Tallwood subdivision
Fieldstream	Canterbury (3)
Cliff Court	Tabard Road

44. Is there anything else you'd like to say about walking in your neighborhood or community-wide?

Need properly lighted broad walking/biking trails connecting local amenities/sites (schools, stores, parks and neighborhoods). Be an example and show the City of Greenville the benefit of biking to work, schools, and shopping. I would bike to work if there were connecting (safe) bike trails from Winterville to Downtown (Uptown) Greenville

Make it mandatory that developers connect new subdivisions, not with vehicle access, but bike/walking paths

Yes. I can't emphasize it enough, but please put a traffic light at corner of Vernon White and Old Tar Rd. At times backup on V.White is horrendous and very dangerous. We are bound to have a fatality. Not if, but when. People are making serious and flawed decisions trying to make a turn at this intersection. Another problem lies at the intersection of Old Tar and Firetower Rds. There is no safe/easy way to turn right onto Firetower from Old Tar Rd. while waiting for the light to turn green. Providing adequate access lane, free of chuck holes, would do much to alleviate terrible backups. Much work has been done at this intersection but this problem has been totally ignored

It would be nice to just have a path that people could ride their bikes or walk a stroller, even if we had to drive to it. I think it would add a great '"'event'"' or thing to do in Winterville. There is nothing to do here!!!
It would be great to have the opportunity to walk safely with my children to stores and parks. Also, there are many people in Winterville who do not own transportation and for whom it is dangerous to walk without sidewalks and proper crosswalks
This neighborhood desperately needs a walking path/sidewalk, bike path and close by walkable park, I can't walk to a park with my child (and one on the way) we always have to drive.
There are so many places to go with my children near my home such as the Post Office, Winterville Park, the library, and grocery/drug stores, but there are not safe sidewalks and so we do not walk as often and when we do it is a bit scary. We primarily walk in our neighborhood to ensure safety. Ange needs a sidewalk badly as it is by a school and the route to the park.
Would like more greenways, walking trails! Winterville has an excellent opportunity to tap into an increasing tax base and create a more walkable community. Would like to see a nicer, improved downtown with more restaurants, retail. I would walk downtown if it were more of a destination and would chose it over driving to Greenville
Winterville, in general, is not walker friendly. we need sidewalks to feel more protected from speeding traffic. Need a traffic light at intersection of old tar road and cooper street-it is very dangerous
Thank you to those who are actively working to make our community a more accessible walking/biking area
I think it is a wonderful idea to make walking and bicycling move convenient for the public to use. Bicycle lanes would be a big improvement
Would like to see walking trails.
Winterville should make it a priority to complete Main Street as it is the main road in Winterville and in the shape it is in, it is a disgrace to its citizens who use it regularly. To have such a nice police and fire station on this horrible road is terrible.
Main St already has NO front yards, sidewalks would take away what is already there. People are always walking in my yard, dropping paper and other debris.
My neighborhood is not really big enough to walk in so I walk across the street, but crossing Firetower Rd is a nightmare
It was safer to walk and ride bikes in neighborhood before they started connecting several neighborhoods. Traffic volume and speed increased dramatically when they connected neighborhoods. I feel less secure as far as potential crime now that the neighborhoods are connected. With one way in and out the criminal element was less likely to target the neighborhood. Now they have several avenues of escape. You cannot tell anymore if someone is a stranger to your neighborhood since they are connected.
Need more public tracks that are well lighted
I think a neighborhood/community should be just that--encouraging people to get outside and mix with others. Not segregate ourselves off into cars
Need the police to ride thru the communities more often no one area in Winterville but all street need to be check.
Sidewalks are needed in all neighborhoods and curb ramps, more signs needed in neighborhoods (children at play), more monitoring of speeding in neighborhoods
Side walks is a waste of time and money
I would not like for any bus to run through my area
This is a perfect time for Winterville to develop a walkable community. As more and more growth occurs in the Town, planning is essential to prepare for the growth. Planning for and providing the necessary infrastructure will impact the type of business and people we attract to our community
Please concentrate on the schools in the town of Winterville

We love living in Winterville. We attend the Watermelon festival every year. I would love to be able to walk to the Festival and not have to fight traffic but there are no sidewalks on Old Tar. My children's doctor office and our vet are both walking distance from the house but I choose to drive because there are no sidewalks and traffic on Old Tar is dangerous
Need to find ways to establish greenways
Better conditions of roads
I think a nice walking trail in Winterville would be a great addition to our wonderful community. I love living in the town of Winterville
Please add trails for west Winterville - rather than all city sidewalks..
I am continually amazed by the speed of cars through neighborhoods here. Traffic monitoring and control needs to be addressed before people will ever feel safe getting out and walking without fear of being hit by a speeding car.
I would love the opportunity to be able to walk downtown, or ride my bike down Laurie Ellis and old tar. This would reduce my car use, and increase my exercise. The weather is so nice and moderate here- I would love to take greater advantage of this
I feel that side walks will make it safer for pedestrians and also for children that play outside
It would be nice to have a safer way to cross the busy Forlines Rd. to get to SCHS and Creekside Elem.
It would be nice to have a designated area--like the tracks in Greenville. People go out there and walk. I think if dogs are allowed. People should pick up after their pets.
Would love to see more sidewalks to ensure safe walking. Winterville is a beautiful community
Kudos to the Town of Winterville for addressing such an important issue - making our community/town more accessible through means other than just auto has so many benefits (health, environment, social capitol, etc.)
I think this is a fabulous idea…
I would love a better walking neighborhood for me and my kids and their friends. The new section of our neighborhood has sidewalks but ours does not. Also, we frequently go to the park, but it is very dangerous trying to cross the street with all of the vehicles parked on the street for the ball fields and no sidewalks going down the street behind Cox to the park. Thanks so much for getting our input
Only that is very much needed. ANY improvement will mean a lot. Also worth considering is a city playground. There are many young families with children who'd appreciate a playground they could WALK to.
I would enjoy the addition of walking trails close by or a park.
Dogs pose a problem to walking. Many citizens would like to walk for health reasons. Safety is a major concern.
More trees. Stop the doggie poor!!!
I feel unsafe at times due to dogs being loose or behind low fences
Please give us recreational opportunities in Winterfield/Ashley Meadows/Clevewood area. We have nothing we can get to without driving because of the difficulty crossing Old Tar Road
With gas getting more expensive, walking to destinations may become more popular or a necessity for some. Is the school system going to be able to afford bussing all students? When I was in school in Florida, students who lived within a 2 mile radius of the school were not provided school bus transportation.
I think it is a wonderful idea. I wish we had more sidewalks and particularly on Cooper St. It would help those who wanted to walk to Rite-Aid Drugs
We need to make driving in Winterville safer by adding needed traffic lights before concentrating on the walking aspect
Love the sidewalks in our neighborhood. Wish some of the neighbors would not park their cars across the sidewalks
Thank you for making a walking track in Hillcrest Park. I previously walked in the town streets but now can use the Park
Most residential streets are too wide

APPENDIX B – POTENTIAL PROJECTS

WINTERVILLE
A slice of the good life!

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POTENTIAL PROJECTS

All prioritized potential projects were placed into an itemized table (Table B.1) in order of their priority ranking (based on the above formula). These projects are illustrated in Maps 7.1, 7.2, 7.3, and 7.4 in Section 7. Table B.1 lists the following information (if applicable) for each project:

- *Project & Map #* – Corresponds to the project identification number used throughout Plan and its associated maps
- *Priority Ranking* – Identifies project priority
- *Priority Points* – Identifies the total number of points project received during prioritization tabulation
- *Type of Project* – Identifies project type (pedestrian crossing, sidewalk, etc.)
- *At/On* – Identifies location of project (street, intersection, etc.)
- *From* – Identified starting point of construction project
- *To* – Identified ending point of construction project
- *Constraints* – General constraints with implementing these projects.
- *Preferred Treatment* – Identifies preferred treatment or action for project

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
54	1	71	Railroad Street	Main Street	Sylvania Street	Install continuous sidewalk and curb ramps along west side of street to connect existing sidewalks and the Downtown
55	2	71	Railroad Street	Cooper Street	Sylvania Street	Install continuous sidewalk and curb ramps along east side of street to connect Downtown
71	3	71	Blount Street	Ange Street	Academy Street	Install continuous sidewalk and curb ramps along north side of street to connect A.G. Cox
72	4	71	Blount Street	Ange Street	Existing sidewalk	Install continuous sidewalk and curb ramps along entire length of street (south side) to connect A.G. Cox
73	5	71	Blount Street	Mill Street	Church Street	Install continuous sidewalk and curb ramps along north side of street to connect Downtown and A.G. Cox
59	6	70	Hammond Street	Railroad Street	Jones Street	Install continuous sidewalk and curb ramps along both sides of street to connect to Downtown and W.H. Robinson
99	7	69	Cooper Street (Spot)	Church Street	Academy Street	Install continuous sidewalk and curb ramps along both sides of street to connect existing sidewalks
50	8	68	Church Street	Sylvania Street	Main Street	Install continuous sidewalk and curb ramps along west side of street for connection to Downtown and A.G. Cox
51	9	68	Church Street	Liberty Street	Laurie Ellis Road	Install sidewalk and curb ramps along west side of street to provide a continuous sidewalk to A.G. Cox
62	10	68	Main Street	Railroad Street	Church Street	Install continuous sidewalk and curb ramps along south side of road to connect existing sidewalks
97	11	68	Blount Street (Spot)	Railroad Street	Existing sidewalk	Install sidewalk and curb ramps along south side of street to connect existing sidewalks and A.G. Cox
100	12	68	Academy Street (Spot)	Cooper Street	Blount Street	Install continuous sidewalk and curb ramps along east side of street to connect existing sidewalks and provide a connection to A.G. Cox
64	13	67	Cooper Street	Railroad Road	Church Street	Install sidewalk and curb ramps along north side of street to connect existing sidewalks and provide a connection to A.G. Cox and Downtown
92	14	66	Main Street (Spot)	Mill Street	Railroad Street	Install continuous sidewalk and curb ramps along north side of road to connect existing sidewalks

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
93	15	66	Depot Street (Spot)	Railroad Street	Church Street	Install sidewalk and curb ramps along both sides of road to connect existing sidewalks
21	16	65	Church Street & Blount Street	*N/A*	*N/A*	Install improved crosswalks (highly visible), curb ramps, 4-way stop signs, signage ("Yield to Peds", "School Zone", Reduce Speed during school hours) and possible curb extensions (further study is needed)
22	17	65	Church Street & Sylvania Street	*N/A*	*N/A*	Install improved crosswalks (highly visible), curb ramps, 4-way stop signs, signage ("Yield to Peds", "School Zone") and possible curb extensions (further study is needed)
52	18	65	Railroad Street	Vernon White Road	Depot Street	Install continuous sidewalk and curb ramps along west side of street for connection to Downtown and W.H. Robinson
69	19	65	Sylvania Street	Ange Street	Railroad Street	Install continuous sidewalk and curb ramps along both sides to connect residential areas with A.G. Cox and park
49	20	64	Church Street	Blount Street	Laurie Ellis Road	Install continuous sidewalk and curb ramps along east side of street to connect A.G. Cox Middle School *(also identified as a greenway route)* with residential area
98	21	64	Cooper Street (Spot)	Mill Street	Railroad Street	Install sidewalk along both sides of road to provide a safety area for pedestrian travel to commercial areas and Downtown
48	22	63	Tyson Street	Mill Street	Railroad Street	Install sidewalk along one side of road to connect residential area with Downtown and W.H. Robinson Elem. School
95	23	63	Church Street (Spot)	Depot Street	North Street	Install sidewalk and curb ramps along west side of road to connect existing sidewalks
10	24	62	Railroad Street & Depot Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, curb extension and improved railroad crossing (further study and coordination is needed)
11	25	62	Railroad Street & Main Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, curb extension and improved railroad crossing (further study and coordination is needed)
13	26	62	Railroad Street & Cooper Street	*N/A*	*N/A*	Install highly visible crosswalks, improved railroad crossing, curb extensions (further study and coordination is needed)

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
57	27	62	Mill Street	Sylvania Street	Laurie Ellis Road	Install continuous sidewalk and curb ramps along west side of street to connect Downtown
58	28	62	Jones Street	Main Street	Worthington Street	Install continuous sidewalk and curb ramps along both sides of street to provide connection to W.H. Robinson Elem. School
70	29	61	Ange Street	Main Street	Laurie Ellis Road	Install continuous sidewalk and curb ramps along both sides to connect residential areas with A.G. Cox, park, and Downtown
94	30	61	Depot Street (Spot)	Railroad Street	Mill Street	Install continuous sidewalk and curb ramps along south side of road to connect existing sidewalks to Downtown
101	31	61	Forbes Avenue (Spot)	Barrel Drive	Primrose Lane	Install sidewalk and curb ramps along east side of street to connect existing sidewalks
14	32	60	Main Street & Mill Street	*N/A*	*N/A*	Install highly visible crosswalks, curb ramps and pedestrian-activated signals on existing traffic signal, consider “No Right on Red” signs
53	33	60	Railroad Street	Worthington Street	Hammond Street	Install continuous sidewalk and curb ramps along east side of street in front of W.H. Robinson
56	34	60	Mill Street	Vernon White Road	Sylvania Street	Install continuous sidewalk and curb ramps along both sides to provide connection to Downtown
17	35	59	Main Street & Jones Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, possible curb extensions, and pedestrian-activated signals
19	36	58	Ange Street & Sylvania Street	*N/A*	*N/A*	Install highly visible crosswalks, 3-way stop signs and signage (“Yield to Peds” & “School Zone”)
61	37	58	Main Street	Old Tar Road	Church Street	Install continuous sidewalk and curb ramps along both sides of street to connect residential areas with schools, parks, Downtown, Winter Village and existing sidewalks *(identified as a component of greenway system)*
96	38	58	Laurie Ellis Road (Spot)	Barefoot lane	Church Street	Install continuous sidewalk and curb ramps along north side of street to connect existing sidewalks
24	39	56	Cooper Street & Ange Street	*N/A*	*N/A*	Install highly visible crosswalks and signage
46	40	56	Boyd Street	Railroad Street	Reedy Branch Road	Install sidewalk and curb ramps along both sides (if possible) of road to connect residential areas to Downtown and W.H. Robinson Elem. School

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
47	41	56	Depot Street	Railroad Street	Mill Street	Install sidewalk and curb ramps along north side of road to provide connection to Downtown
63	42	56	Cooper Street	Old Tar Road	Academy Street	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with schools, Downtown and other commercial areas and connect existing sidewalks
4	43	55	Mill Street & Hammond Street	*N/A*	*N/A*	Install highly visible crosswalks and signage("Yield to Peds", "School Zone")
5	44	55	Mill Street & Tyson Street	*N/A*	*N/A*	Install highly visible crosswalks and signage
7	45	53	Mill Street & Cooper Street	*N/A*	*N/A*	Install highly visible crosswalks, curb ramps, and signage
20	46	53	Jones Street & Kennedy Street	*N/A*	*N/A*	Install 3-way stop sign, improve existing crosswalk to be more visible and signage ("Yield to Peds", "School Zone")
68	47	52	Worthington Street	Railroad Street	Jones Street	Install continuous sidewalks and curb ramps along south side of street to connect to W.H. Robinson
83	48	52	Laurie Ellis Road	Church Street	Laurie Meadows Way	Install continuous sidewalks and curb ramps on south side of street for connection to daycare center and neighboring destinations
2	49	51	Memorial Drive & West Firetower Road	*N/A*	*N/A*	Install crosswalks, refuge island, pedestrian-activated signals and signage (consider "No Right on Red" & "Yield to Peds") (future study and coordination is needed with NCDOT)
12	50	51	Railroad Street & Boyd Street	*N/A*	*N/A*	Install highly visible crosswalks, signage ("Yield to Peds" & "School Zone"), 4-way stops sign and improved railroad crossing (further study and coordination is needed)
43	51	51	Memorial Drive	Vernon White Road	West Firetower Road	Install sidewalks and curb ramps along both sides of road to connect main portion of Winterville with sprawling commercial areas and PCC
84	52	51	Worthington Road	Old Tar Village Road	Old Tar Road	Install sidewalks and curb ramps on north side of street to connect residential and commercial areas
104	53	51	Graham Street	Graham Street	Hillcrest Park	Suggested alignment between 2500 & 2504 Graham Street
105	54	51	Williamston Drive & Pinetops Drive	Williamston Drive & Pinetops Drive	Hillcrest Park	Suggested alignment between 2421 & 2406 Pinetops Drive

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
106	55	51	Carmon Street	Hillcrest Avenue	Hillcrest Park	Suggested alignment along Carmon Street
107	56	51	Johnson Lane	Johnson Lane	Hillcrest Park	Suggested alignment between 383 & 385 Johnson Lane
6	57	49	Mill Street & Boyd Street	*N/A*	*N/A*	Install highly visible crosswalks, 4-way stop signs (consider a portable one), flashers, signage ("Yield to Pedestrian"), and possible curb extensions (further study is needed)
65	58	49	Kennedy /Hillcrest /Channel	Jones Street	Old Tar Road	Install continuous sidewalks and curb ramps along one side of street to connect to W.H. Robinson Elem. School
80	59	49	Laurie Ellis Road	Church Street	Mill Street	Install continuous sidewalks and curb ramps along north side of street to connect neighboring residential areas
8	60	48	Mill Street & Depot Street	*N/A*	*N/A*	Install highly visible crosswalks, signage and possible curb extensions
9	61	48	Railroad Street & Worthington Street	*N/A*	*N/A*	Install 4-way stop sign (consider a portable one), highly visible crosswalk, pedestrian signage and improved railroad crossing
44	62	47	Memorial Drive	West Firetower Road	Tice Road	Install sidewalks and curb ramps along west side of road to connect commercial and PCC
45	63	47	Hwy 903/Main Street	Mill Street	Reedy Branch Road	Install sidewalks and curb ramps along both sides of road to connect residential to Downtown and future commercial and residential areas west of Hwy 11
23	64	46	Church Street & Laurie Ellis Road	*N/A*	*N/A*	Install highly visible crosswalks, signage ("Yield to Peds"), and 4-way stop signs
87	65	46	Rosewood Drive	Cooper Street	Main Street	Install continuous sidewalk and curb ramps on one side of street for connection to surrounding destinations
1	66	45	Dr. Fulford Drive, Tice, & Pitt Tech Road	*N/A*	*N/A*	Install highly visible crosswalks
40	67	45	West Firetower Road Extension	Memorial Drive	Davenport Farm Road	Install sidewalks and curb ramps along both sides of future road to connect residential, commercial and PCC
88	68	45	Forbes Avenue	Primrose Lane	Main Street	Install continuous sidewalk and curb ramps on east side of street for connection to surrounding destinations

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
103	69	45	Waterford Subdivision	Foxcroft Place	Worthington Street	Suggested alignment between properties at cul-de-sac (297 & 293 Foxcroft Place) or between 2304 & 2305 Foxcroft Place
67	70	44	Worthington Street	Mill Street	Railroad Street	Install continuous sidewalk and curb ramps along one side of street to connect residential areas to W.H. Robinson School
81	71	44	Laurie Ellis Road	Ellis Landing Lane	Ange Street	Install continuous sidewalk and curb ramps on both sides for connection to parks and neighboring areas
85	72	44	Primrose Lane	Rosewood Drive	Ange Street	Install continuous sidewalk and curb ramps on south side of street for connection to school, park and neighboring development
30	73	43	Reedy Branch Road & Tice Street	*N/A*	*N/A*	Install highly visible crosswalks
76	74	43	Ashley Meadows Drive	Old Tar Road	Edenbrook Drive	Install continuous sidewalks and curb ramps along one side of street to connect to neighboring commercial and residential areas
28	75	42	Reedy Branch Road & Forlines Road	*N/A*	*N/A*	Install highly visible crosswalks, signage and 4-way-stop signs
15	76	41	Main Street & Old Tar Road	*N/A*	*N/A*	Install crosswalks, curb ramps, pedestrian-activated signals, and signage
16	77	41	Main Street & Gayle Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, possible curb extensions and pedestrian-activated signals
18	78	41	Main Street & Forbes Street	*N/A*	*N/A*	Install highly visible crosswalks, signage, possible curb extensions and pedestrian-activated signals
41	79	41	Reedy Branch Road	Memorial Drive	Hwy 11	Install sidewalks and curb ramps along both sides of road to connect residential to PCC, elementary schools, parks and future commercial
60	80	41	East Main Street	Old Tar Road	Future Town Park	Install sidewalks and curb ramps along both sides of street to connect residential areas, commercial areas and potential recreation opportunities on a Town-owned parcel at the end of E. Main Street
66	81	41	Evergreen/Hillcrest	Kennedy/Hillcrest	Hillcrest/Channel	Install continuous sidewalks and curb ramps along one side of street to connect to W.H. Robinson Elem. School

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
3	82	40	Vernon White, Davenport Farm Road, & Hwy 11	*N/A*	*N/A*	Install highly visible crosswalks, pedestrian-activated signals and signage (consider "No Right on Red" signs, "Yield to Peds")
42	83	40	Forlines Road	Elm Street	Reedy Branch Road	Install sidewalks and curb ramps along south side of road to connect residential to nearby schools
25	84	39	Cooper Street & Forbes Street	*N/A*	*N/A*	Install highly visible crosswalks and signage
74	85	39	Vernon White Road	Old Tar Road	Memorial Drive/Highway 11	Install continuous sidewalks and curb ramps along both sides of street to connect residential areas with commercial, schools, and parks
91	86	39	Davenport Farm Road	Hwy 11	Reedy Branch Road	Install sidewalks and curb ramps along both sides of road to connect commercial properties
26	87	38	Cooper Street/ Worthington Road & Old Tar Road	*N/A*	*N/A*	Install highly visible crosswalks and signage
35	88	38	Old Tar Road & Ashley Meadows Drive	*N/A*	*N/A*	Install highly visible crosswalk and signage
31	89	36	Forlines Road & Westminster Street	*N/A*	*N/A*	Install highly visible crosswalks, signage ("Yield to Peds" & "School Zone") and 3-way stop signs (portable)
33	90	36	Forlines Road & Red Forbes Road	*N/A*	*N/A*	Install highly visible crosswalks, signage ("Yield to Peds" & "School Zone") and 3-way stop signs (portable)
86	91	36	Rosewood Drive	Primrose Lane	Cooper Street	Install continuous sidewalks and curb ramps on one side of street for connection to commercial area
27	92	35	Reedy Branch Road & Davenport Farm Road	*N/A*	*N/A*	Install highly visible crosswalks and signage at time of sidewalk construction
113	93	35	Firetower Road	Firetower Road	Old Tar Road	Suggested alignment along one side of stream/drainage with adequate road crossings where needed
36	94	33	Old Tar Road & Corbett Street	*N/A*	*N/A*	Install highly visible crosswalks, pedestrian-activated signals, and signage
39	95	33	Cooper Street & Rosewood Street	*N/A*	*N/A*	Install highly visible crosswalks
110	96	32	Hwy 903	Swift Creek	Reedy Branch Road	Suggested alignment along one side of road within right-of-way

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
75	97	31	Old Tar Road	West Firetower Road	Reedy Branch Road	Install continuous sidewalks and curb ramps along both sides of street to provide a connection to surrounding areas
29	98	28	Reedy Branch Road & Hwy 903	*N/A*	*N/A*	Install highly visible crosswalks and signage
77	99	28	Edenbrook Drive	Ashley Meadows Drive	Ray Crawford Drive	Install continuous sidewalks and curb ramps along one side of street to connect to neighboring residential and commercial areas
112	100	27	Railroad Street	Vernon White Road	Lateral drainage area	Suggested alignment along railroad easement
32	101	26	Forlines Road & Elm Street	*N/A*	*N/A*	Install highly visible crosswalks and signage
38	102	26	Old Tar Road & Chaucer Drive	*N/A*	*N/A*	Install highly visible crosswalks, pedestrian-activated signals and signage
89	103	26	Corbett Street	Old Tar Road	Tabard Drive	Install sidewalk and curb ramps along one side of street for connection from residential area to surrounding land uses
82	104	24	Laurie Ellis Road	Ange Street	Old Tar Road	Install continuous sidewalks and curb ramps on both sides of street for connection to future residential and commercial areas
78	105	23	Ray Crawford Drive	Edenbrook Drive	Spring Run Road	Install continuous sidewalks and curb ramps along one side of street to connect to neighboring residential and commercial areas
90	106	21	Tabard Drive	Old Tar Road	Corbett Street	Install sidewalk and curb ramps along one side of street for connection from residential area to surrounding land uses
108	107	21	Swift Creek	Pitt Community College	Highway 11	Suggested alignment along existing drainage easements with adequate road crossings and a spur along Gum Swamp to South Central HS
37	108	20	Old Tar Road & Laurie Ellis Road	*N/A*	*N/A*	Install highly visible crosswalks and pedestrian signage
34	109	19	Old Tar Road/Evans Street & West Firetower Road	*N/A*	*N/A*	Install crosswalks, pedestrian-activated signals, and signage (“No Right on Red” & “Yield to Peds’)
109	110	19	Fork Swamp Creek	Greenville limits & Old Tar Road	Boyd Lee Park	Suggested alignment along existing drainage easements with adequate road crossings where needed

Table B.1: Potential Projects Prioritized						
Project # (Map Ref. #)	**Priority Ranking**	**Priority Points**	**At / On**	**From**	**To**	**Preferred Treatment**
79	111	18	Spring Run Road	Ray Crawford Drive	Corbett Street	Install continuous sidewalks and curb ramps along one side of street to connect to neighboring residential and commercial areas
111	112	16	Lateral Drainage/Stream Branch	Swift Creek	Fork Swamp Creek	Suggested alignment along one side of stream/drainage with adequate road crossings where needed
102	113	6	Magnolia Ridge Subdivision	Magnolia Drive	Swift Creek Greenway	Suggested alignment is between cul-de-sac lots (262 & 263 Magnolia Drive)

APPENDIX C – SAMPLE COST ESTIMATES

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SAMPLE COST ESTIMATES

Preliminary opinion of probable costs for recommended pedestrian projects in this Plan are provided in this appendix. These costs are rough estimates based on the Federal Highway Administration[i] and similar projects recently implemented. The listed cost estimates should be used as a planning guide and do not include extra costs such as land acquisition, utility relocation, roadway size, drainage, final materials used, grading, land clearing and demolition, professional engineering and surveying, inspection and legal and administration. These costs are not and should not be considered to be a substitute for professional engineering and surveying regarding actual costs of project construction.

Sidewalks

- Standard concrete curb and 5' sidewalk w/gravel base cost approximately $77/linear foot and $25/linear foot for walkways without curb
- Asphalt curbs and walkways are less costly but require more maintenance per year
- Concrete driveway replacement and repair approximately $55 / linear foot
- Asphalt driveway replacement and repair approximately $55 / linear foot

Multiple-Use Trails

- Town of Winterville, NC spending $11.90 per linear feet for a 5 foot wide asphalt multi-use trail with 6 inches of CABC (2009)
- Warren County, NC sent $ 14.11 per linear feet for a 5 foot wide asphalt multi-use trail with 6 inches of CABC (2006)

Pedestrian Crossings

- Regular striped crosswalk is approximately $100 / each
- Ladder crosswalk is approximately $300 / each
- Patterned (stamped or stained) concrete crosswalk is approximately $3,000 / each
- Mid-Block crossing can range between $4,000 - $30,000
- ADA curb ramps is approximately $1,000 / each
- Curb extensions range from $2,000 - $20,000 / corner, depending upon design and site conditions
- Raised crosswalk/speed table cost approximately $15,000 - $100,000 / each
- Raised intersection typically cost between $25,000 - $200,000 / each
- Pedestrian-activated signal range from $20,00 – $40,000 / each
- Fixed-time pedestrian signal cost $40,000 - $200,000 / each
- Attachments to a pedestrian signal head to assist impaired pedestrian range from $30,000 - $140,000 / signal
- NO TURN ON RED Signs range from $30 - $150 / each plus installation at $200 / each
- Regulatory signs cost $50 - $150 / each plus $150 / each in installation costs

Traffic Calming Devices

Speed Bumps

- Standard speed bump is approximately $500 / each

Curb Extensions

- Concrete curb extension vary from $2,000 to $20,000 / corner, depending upon design and site conditions

Chicanes

- Landscaped chicanes cost approximately $10,000 for a set of three on an asphalt street and $15,000 - $30,000 on a concrete street

Raised Median

- Raised median cost approximately $15,000 - $30,000 / 100 feet

Crossing Island/ Pedestrian Refuge Island

- Crossing island cost approximately $6,000 - $9,000 / island
- Raised concrete pedestrian refuge island with landscaping cost approximately $10,000 - $30,000 / each

Road Striping

- Adding striped shoulders or on-street bike lanes cost $1,000 per mile if old paint does not need to be replaced
- Restriping a mile of street to bike lanes or reducing number of traffic lanes to add on-street parking cost approximately $5,000 - $20,000 depending upon the number of old lane lines to be removed

Streetscape Improvements

Lighting

- Varies depending upon type of light, location, and utility provider; however, costs usually starts at $3,000 per fixture.

Landscaping

- Street trees (depending on foliage, type, and size) range from $350 - $500 / street tree
- Shrubs (depending on type) cost approximately $50 - $75 / each installed by a contractor

Street Furniture

- Depending upon type and material used.
- Benches typically range from $1,300 – 2,500
- Trash receptacles range from 2,000 – 3,000

[i] Federal Highway Administration (FHWA) Pedestrian Safety, *Safer Journey Library* , October 2007, http://safety.fhwa.dot.gov/saferjourney/library/matrix.htm

APPENDIX D – GLOSSARY OF TERMS

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GLOSSARY OF TERMS

The following definitions are for terminology used throughout this document as defined by the American Association of State Highway and transportation Officials (AASHTO).

Americans with Disabilities Act (ADA) - Federal law prohibiting discrimination against people with disabilities. It requires public entities and public accommodations to provide accessible accommodations for people with disabilities.

Americans with Disabilities Act Accessibility Guidelines (ADAAG) – Provides scoping and technical specifications for new construction and alterations undertaken by entities covered by ADA.

Crosswalk – Area designated for pedestrians to cross an intersection or marked sections of a roadway.

Curb Extension – A section of sidewalk extending into the roadway at an area of a midblock crossing that reduces the crossing width for pedestrians and may help reduce traffic speeds.

Feasible – Capable of being accomplished with a reasonable amount of money and effort.

Flare – Sloped surface that flanks a curb ramp and provides a graded transition between the ramp and the sidewalk. Flares bridge differences between the ramp and sidewalks intended to prevent pedestrians from tripping.

Intermodal – A transportation policy that promotes full development of alternative modes of transportation to benefit travel mobility, efficiency, sustainability, economic, and physical health.

Intersection – Area where two or more roads meet.

Midblock Crossing – Crossing point positioned within a block instead of an intersection.

Parallel Curb Ramp – Curb ramp design where the sidewalk slopes down on either side of a landing. Parallel curb ramps require users to turn before entering the street.

Passing Space – Section of path or sidewalk wide enough to allow two wheelchair users to pass one another to travel abreast.

Path or pathway – Track or route along which pedestrians are intended to travel.

Pedestrian – A person afoot or in wheelchair.

Pedestrian Access Route – A continuous, unobstructed path connecting all accessible elements of a pedestrian system that meets ADAAG.

Pedestrian-Actuated Traffic Control – Pushbutton or other control activated by pedestrians to permits pedestrians to cross a signalized intersection or crossing.

Ramp – Sloped transition between two elevation levels.

Right-of-Way – Real property rights (whether fee-simple ownership, by easement, or other agreement) acquired across land for public purpose including pedestrian use.

Shy Distance – Area closest to buildings, fences, or other obstructions that are generally avoided by pedestrians.

Sidewalk – Paved surface paralleling a roadway intended for pedestrian use.

Sight Distance – The length of roadway visible to a driver or pedestrian; the distance a person can see along an unobstructed line of sight.

Wayfinding – A system of information comprising visual, audible, and tactile elements that help users experience an environment and facilitates getting to point A to point B.

Width, Sidewalk – ***Total width*** of sidewalk including obstructions that begins at the edge of a roadway to the side of the building. ***Clear width*** is the portion of the sidewalk k that excludes obstructions and any attached curb. ***Effective width*** is the portion of clear with that excludes any shy distances.