



BUTNER

PEDESTRIAN TRANSPORTATION PLAN



Division of
Bicycle &
Pedestrian
Transportation

ACKNOWLEDGEMENTS

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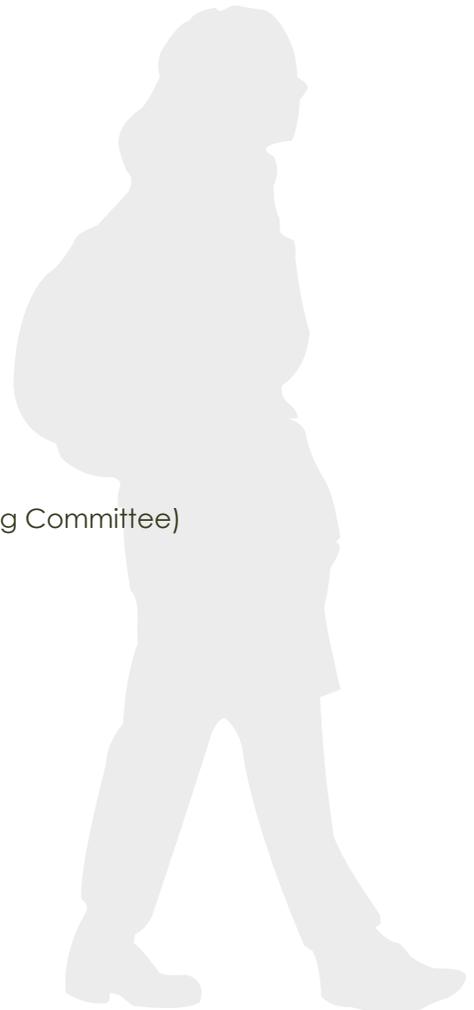


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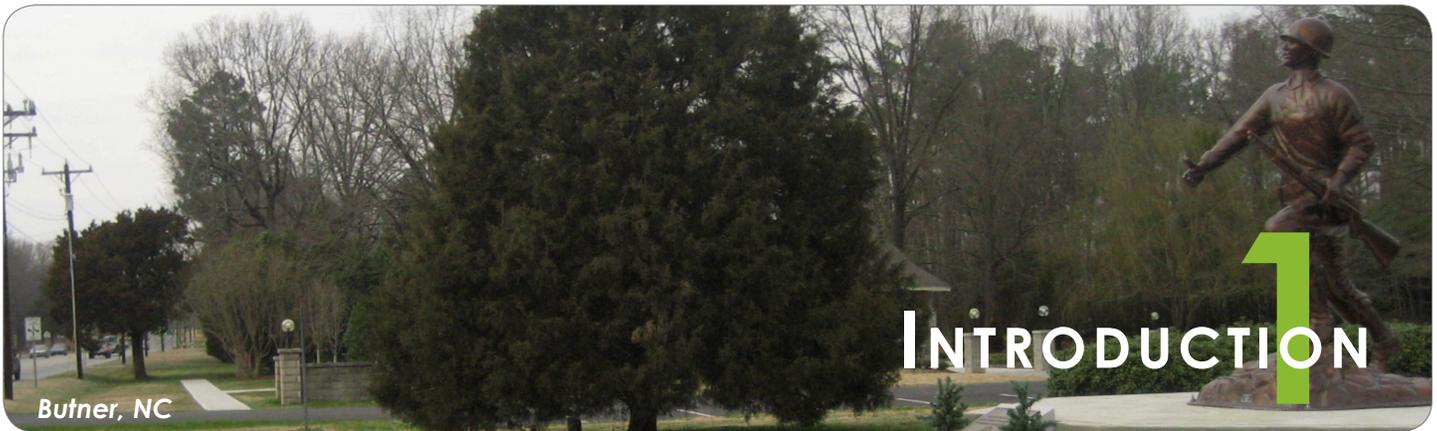
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CHAPTER OUTLINE:

OVERVIEW

VISION and GOALS

PLANNING PROCESS

PUBLIC BENEFITS OF PEDESTRIAN TRANSPORTATION

OVERVIEW

In 2009, the Town of Butner applied for and was awarded a grant from the North Carolina Department of Transportation (NCDOT) to develop this Pedestrian Transportation Plan. This Plan combines past planning efforts with new research and analysis, and includes public input. The result is a complete, up-to-date framework for moving forward with tangible pedestrian improvements.

The Town is very committed to becoming pedestrian-friendly. In fact, as a newly incorporated town in 2007, one of its first initiatives is to create a more walkable, vibrant community. The Town has already received grant monies to construct a greenway and develop sidewalk near its two schools.

Current pedestrian conditions within Butner are not adequate to serve the needs of its residents. This plan will provide guidance for enhancing conditions for pedestrians throughout town, particularly in areas identified by the project steering committee and Town staff. Beyond physical improvements, this plan also outlines policies and programs to help encourage people to walk more often, drive more safely, and to grow as a Town with the needs of pedestrians taken into full consideration.

VISION and GOALS

The following vision statement and goals were developed out of the Town's planning grant application and were reconfirmed early in the planning process, during the project Kick-Off meeting. The statement below apply to both the Plan itself, and the desired outcome of its implementation:

Butner's Pedestrian Plan Vision Statement:

Butner is a walkable and vibrant community, where pedestrians of all ages are provided with safe infrastructure, connectivity, safety, and access to destinations, and where walking is an accepted form of both transportation and recreation.

Butner's Pedestrian Plan Project Goals

- Make pedestrian infrastructure and safety a priority for the Town of Butner.
- Address the needs of both bicyclists and pedestrians.
- Provide sidewalk connectivity throughout all of Butner.
- Improve pedestrian roadway crossings especially in the downtown, shopping areas, and school areas.
- Control and enforce traffic speeds to create a calmer walking environment.
- Provide safe pedestrian facilities, treatments, and programs to make it safe for children to walk to school.
- Develop education and encouragement programs to facilitate safe walking.
- Provide for pedestrian user groups of all ages.
- Provide walkways for both transportation and recreation needs.
- Connect to long-term regional trail projects such as the East Coast Greenway and Mountains-to-Sea Trail should be further explored.
- Collaborate with local and regional partners such as the Granville Greenways, Live Well Granville, and NCDOT.
- Create a more economically vibrant community, partly through making Butner more attractive and walkable.
- Follow a "Complete Streets" approach with new development and existing development retrofits.

PLANNING PROCESS

This planning process began with a 'kick-off' meeting in March 2010, which included a visioning and goals session and map working session with the project staff, steering committee, and consultants. This meeting was followed by development of a series of working documents that formed a draft plan. The plan communicates the current conditions for walking in Butner, recommends improvements, and outlines strategies to carry out those recommendations. The planning process also included opportunity for public input with two public workshops and other types of outreach.

PUBLIC BENEFITS of PEDESTRIAN TRANSPORTATION

When considering the level of dedication in time and valuable resources that it will take to fulfill the goals of this plan, it is also important to measure the immense value of pedestrian transportation. Walking helps to improve people's health and fitness, enhance environmental conditions, decrease traffic congestion, and will contribute to a greater sense of community.



Committee members discuss pedestrian needs in Butner during the kick-off meeting.

Scores of studies from experts in the fields of public health, urban planning, urban ecology, real estate, transportation, sociology, and economics have supported such claims and have acknowledged the substantial value of supporting walking as it relates to active living and alternative transportation. Communities across the United States and throughout the world are implementing strategies for serving the walking needs of their residents, and have been doing so for many years. They do this because of their obligations to promote health, safety and welfare, and also because of the growing awareness of the many benefits of walking.

The CDC determined that creating and improving places to be active could result in a 25 percent increase in the number of people who exercise at least three times a week.

INCREASED HEALTH and PHYSICAL ACTIVITY

A growing number of studies show that the design of our communities—including neighborhoods, towns, transportation systems, parks, trails and other public recreational facilities—affects people’s ability to reach the recommended daily 30 minutes of moderately intense physical activity (60 minutes for youth). According to the Centers for Disease Control and Prevention (CDC), “physical inactivity causes numerous physical and mental health problems, is responsible for an estimated 200,000 deaths per year, and contributes to the obesity epidemic.” The increased rate of disease associated with inactivity reduces quality of life for individuals and increases medical costs for families, companies, and local governments.

The CDC determined that creating and improving places to be active could result in a 25 percent increase in the number of people who exercise at least three times a week. This is significant considering that for people who are inactive, even small increases in physical activity can bring measurable health benefits. The establishment of a safe and reliable network of sidewalks and trails in Butner will have a positive impact on the health of local residents. The Rails-to-Trails Conservancy puts it simply: “Individuals must choose to exercise, but communities can make that choice easier.”

ECONOMIC BENEFITS

Walking is an affordable form of transportation. According to the Pedestrian and Bicycle Information Center (PBIC), of Chapel Hill, NC, the cost of operating a car for a year is approximately \$5,170, while walking is virtually free. The PBIC explains, “When safe facilities are provided for pedestrians and bicyclists, more people are able to be productive, active members of society. Car ownership is expensive, and consumes a major portion of many Americans’ income.”

Walking becomes even more attractive from an economic standpoint when the rising price of oil (and decreasing availability) is factored into the equation. The unstable cost of fuel reinforces the idea that local communities should be built to accommodate people-powered transportation, such as walking and biking.

From a real estate standpoint, consider the positive impact of sidewalks and greenways, which are essential components of a complete pedestrian network. According to the recent 2009 Walk the Walk (CEOs for Cities) report, “houses with above-average levels of walkability command a premium of about \$4,000 to \$34,000 over houses with just average levels of walkability in the typical metropolitan areas studied.” According to a 2002 survey of homebuyers by the National Association of Home Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices (incidentally, ‘highway access’ ranked first). Additionally, the study found that ‘trail availability’ outranked 16 other options including security, ball fields, golf courses, parks, and access to shopping or business centers. In the Town of Butner, walking was ranked as the #1 desired activity in the 2008 Parks and Recreation Survey. Findings from the American Planning Association (How Cities Use Parks for Economic Development, 2002), the Rails-to-Trails Conservancy (Economic Benefits of Trails and Greenways, 2005), and the Trust for Public Land (Economic Benefits of Parks and Open Space, 1999) further substantiate the positive connection between trails and property values across the country.

ENVIRONMENTAL IMPROVEMENTS

Granville County received EPA non-attainment status for unacceptable air quality standards (8-hour ozone levels) from 2004-2006 as part of the greater Triangle area. When people choose to get out of their cars and walk, they make a positive environmental impact, improve air quality, and help avoid regional non-attainment status. They reduce their use of gasoline, which then reduces the volume of pollutants in the air.

Other environmental impacts can be a reduction in overall neighborhood noise levels and improvements in local water quality as fewer automobile-related discharges wind up in the local rivers, streams, and lakes. Furthermore, every car trip replaced with a pedestrian trip reduces U.S. dependency on fossil fuels, which is a national goal.

Trails and greenways are also part of the pedestrian network, conveying their own unique environmental benefits. Greenways

Environmental benefits can be further promoted through walking by offering interpretive signs that educate passers by about the local environment and environmental systems.



protect and link fragmented habitat and provide opportunities for protecting plant and animal species. Aside from connecting places without the use of air-polluting automobiles, trails and greenways also reduce air pollution by protecting large areas of plants that create oxygen and filter air pollutants such as ozone, sulfur dioxide, carbon monoxide and airborne particles of heavy metal. Finally, greenways improve water quality by creating a natural buffer zone that protects streams, rivers and lakes, preventing soil erosion and filtering pollution caused by agricultural and road runoff.

TRANSPORTATION BENEFITS

In 2001, the National Household Travel Survey found that roughly 40% of all trips taken by car are less than 2 miles. By taking these short trips on foot, rather than in a car, citizens can have a substantial impact on local traffic and congestion. Additionally, many people do not have access to a vehicle or are not able to drive. An improved pedestrian network provides greater and safer mobility for these residents.

According to the Brookings Institution, the number of older Americans is expected to double over the next 25 years . All but the most fortunate seniors will confront an array of medical and other constraints on their mobility even as they continue to seek an active community life. Senior citizens deserve access to independent mobility, and providing safe place for them to walk is an essential factor in meeting this important need.

Children under the age of 16 also deserve access to safe mobility. According to the U.S. Environmental Protection Agency, fewer children walk or bike to school than did so a generation ago: In the past few decades, the percent of students between the ages of 5 and 15 who walked or biked to or from school has dropped from roughly 50% to about 15%.



By walking for our trips that are less than 2 miles, we could eliminate 40% of local car trips.

QUALITY OF LIFE

Many factors go into determining the quality of life for the citizens of a community: the local education system, prevalence of quality employment opportunities, and affordability of housing are all items that are commonly cited. Increasingly though, citizens claim that access to alternative means of transportation and access to quality recreational opportunities such as parks and greenways, are important factors for them in determining their overall pleasure within their community. Communities with such amenities can attract new businesses, industries, and in turn, new residents. Furthermore, quality of life is positively impacted by walking through the increased social connections that take place by residents being active, talking to one another and spending more time outdoors and in their communities.

PLAN COMPONENTS

This Plan document includes the following components:

This **Introduction** that presents the background, visions and goals, and the benefits of a walkable town (Chapter 1).

An assessment of **Existing Conditions** that overviews existing pedestrian conditions, land use, demographics, trip attractors, and also summarizes existing related plans of Butner (Chapter 2).

A recommended **Pedestrian Network** that puts forward a framework of recommended facilities (pedestrian corridors, intersection improvement projects, and greenways) (Chapter 3).

Program Recommendations for education, encouragement, enforcement and **Policy Recommendations** that address town policies and pedestrian needs for future development (Chapter 4)

Implementation recommendations that outline specific steps for achieving the plan's key elements along with facility development methods (Chapter 5).

Design Guidelines to guide the Town of Butner in current facility design and standards (Chapter 6).

Appendices that provide a summary of public input, funding sources, acquisition strategies, and federal and state policies.

**CHAPTER OUTLINE:****OVERVIEW****LAND USE AND DEVELOPMENT****DEMOGRAPHICS****TRIP ATTRACTORS****PEDESTRIAN CONDITIONS****SUMMARY OF
EXISTING DOCUMENTS****OVERVIEW**

The Town of Butner was recently incorporated in 2007 after being managed by the State of North Carolina since 1947. Originally an agricultural community, it became a training camp during World War II. John Umstead Hospital was built for returning veterans and since then, multiple institutions and industries have been established in Butner, including the Central Regional Hospital. Situated on the periphery of Raleigh and Durham and in the southwestern corner of Granville County, Butner, a town of over 7,500 people, anticipates new growth and development.

Today, the Town of Butner seeks change and enhancement to make it a more livable, attractive community and destination. It also seeks greater mobility for its residents, some of which are dependent on walking as a primary means of transportation.

One of the aspects of this plan is to address the needs of pedestrians within Butner by providing connectivity across Town for both recreation and transportation. Providing pedestrian connectivity around the Town will help in reducing traffic congestion, improving livability, and facilitating a healthier and safer pedestrian environment.

LAND USE AND DEVELOPMENT

Current land use is a result of development activity over the past several decades. Multiple land uses can be found throughout the Butner area with distinct patterns emerging. These patterns and characteristics have a major influence on pedestrian transportation. Proximity of uses and types of uses matter in a person's choice to walk, along with the quality of environment, ease of access, and safety.

The Town of Butner is quite small (6.6 square miles), making it possible to walk to many destinations. The main Town core (west of I-40) is shaped in an elongated southwest to northeast shape with a grid roadway structure of mostly residential neighborhoods. The major roadways that traverse the Town are I-85, NC 56 (C Street), and Central Avenue.

Residential land uses dominate the Town of Butner. The majority of residential is of the single-family variety in the grid roadway network of Butner. Multi-family housing can be found scattered throughout Town but especially along C Street, with additional apartments (Granville Oaks) on NC 56 across I-85.

The two chief commercial areas are found along Central Avenue, west of I-85 and along NC 56, east of I-85.

Several pods of future development have been identified during the time of this study and are critical when considering future pedestrian accommodations.

Map 2.1 shows current land uses. Future areas of development can be seen in Map 2.7

DEMOGRAPHICS

To understand pedestrian needs, it is useful to understand population composition and demographics. For instance, the need for greater pedestrian access and mobility is greater for lower-income communities and high-density areas, where more people would be impacted.

The Town has a 2009 population of 7,464 up from 5,792 in 2000. With new development planned and continued development pressure from the Triangle, the population should continue to grow.

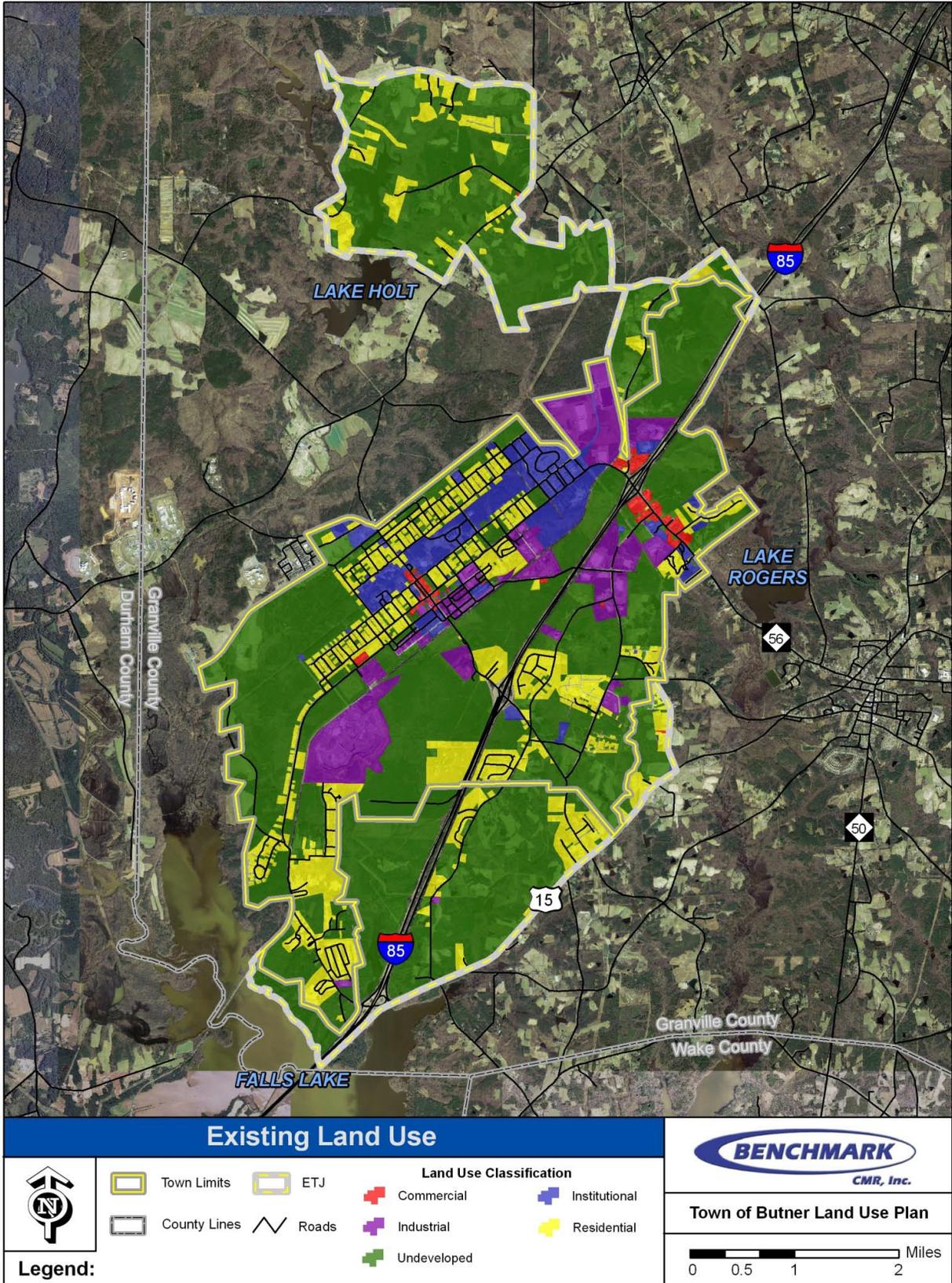
As of the 2000 Census, the population density was 873 per square mile, and there were 1,438 housing units at an average density of 224.5/sq mi. The racial makeup of the town was 48.6% White, 45.3% African American, 4.6% Hispanic/Latino, and 7% other.

The median income for a household in the town was \$40,341, and the median income for a family was \$46,348. There are lower-income communities throughout the town in apartment complexes and trailer parks. About 2.0% of families and 5.3% of the population were below the poverty line.



The Town's commercial businesses are primarily found on NC 56, to the east of I-85.

MAP 2.1 LAND USE



4-32

Map taken from Butner 2020
Comprehensive Land Use Plan.

Town of Butner
Comprehensive Land Use Plan

In 2000, approximately 1.7% of the working population over age 16 walked to work. On average, about 4% do not own a vehicle. When examined in more detail (by block group), there are geographic trends in car ownership and walking to work. The block group in the northwestern side of Butner has the highest percentage of people walking to work and not owning a vehicle in Granville County (around 45% for both). This indicates a special need for the Town of Butner. This particular block group includes the John Umstead Hospital which treats special needs populations and psychiatric disorder patients, helping them return to community.

Maps 2.2 - 2.5 show census-related information (population density, median family income by block group, population percentage not owning a vehicle by block group, and population percentage walking to work by block group). This information was used to help determine areas where there is greater need for pedestrian enhancements. For example, pedestrian improvements in densely populated areas would have a greater impact than improvements in sparsely populated regions.

TRIP ATTRACTORS

The term "trip attractors" refers to places which people commonly walk to or from, or places they would like to walk to or from with improved pedestrian facilities. For example, the Butner Elementary School is one of the main trip attractors within the Town of Butner since children walk to and from the school and its associated playing fields regularly. A few of the other trip attractors within Butner include:

- NC 56 Businesses
- Food Lion
- Town Hall
- Sports Arena
- Butner-Stem Middle School
- Butner-Stem Elementary School
- Central Avenue/Butner-Stem Elementary Park
- Future park complex at B Street and 8th Street
- Vance Granville Community College (South Campus)
- Murdoch Center
- Central Regional Hospital

See Map 2.6 to view sites of key trip attractors.

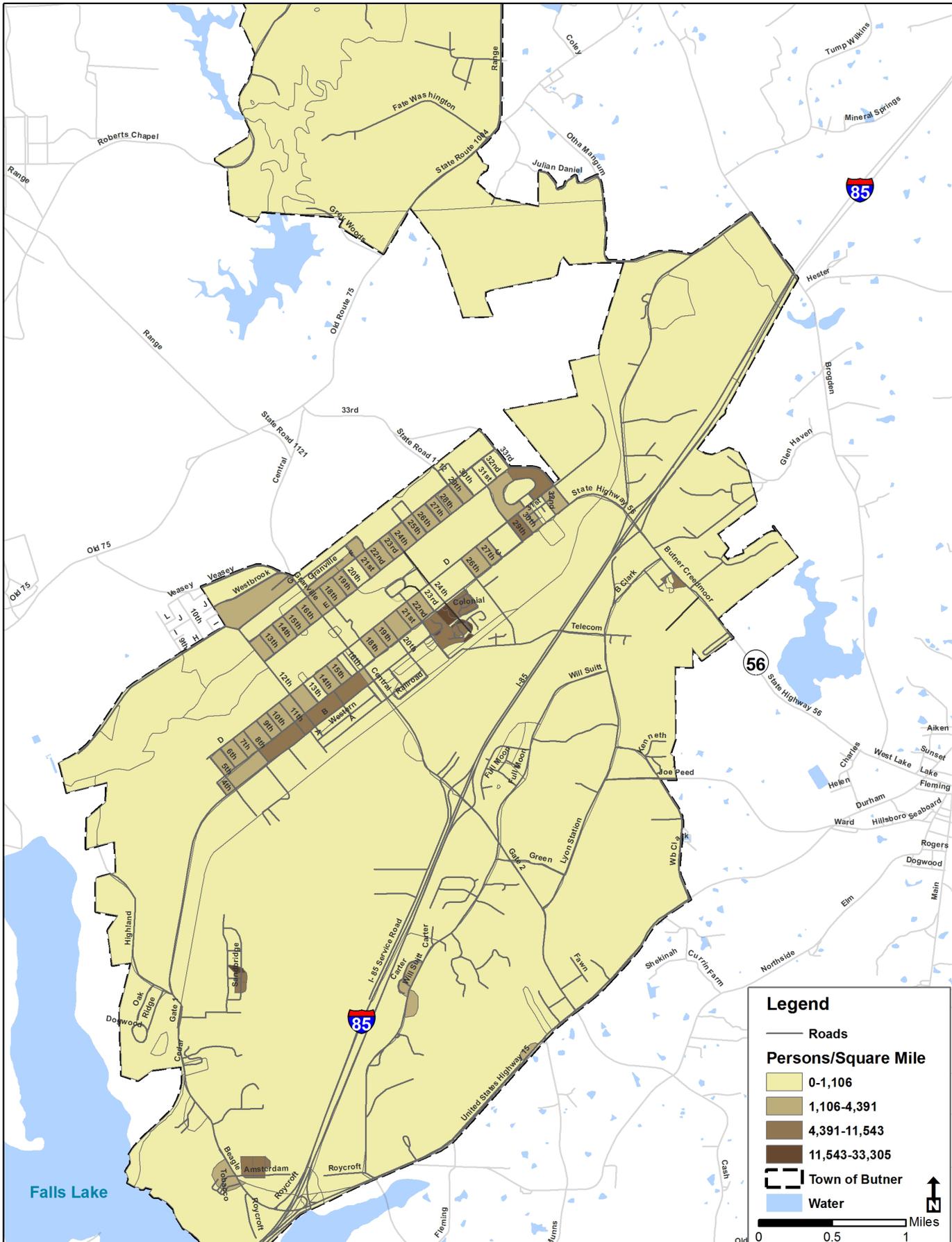


Above: Pedestrians walking as a form of transportation on C Street, just west of Central Avenue.



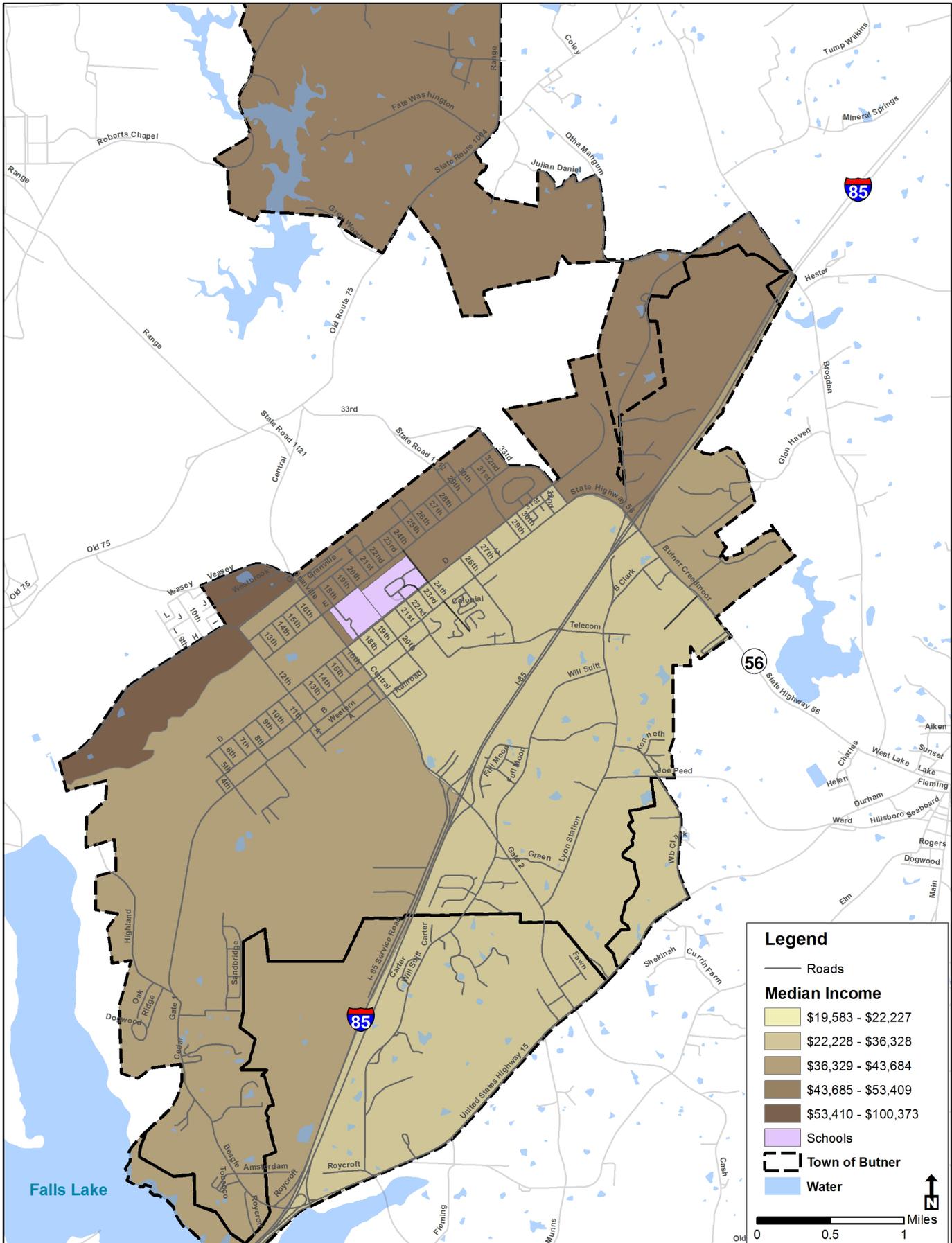
Above: Entrance to Butner-Stem Middle School, a major walking destination in Butner.

MAP 2.2 POPULATION DENSITY



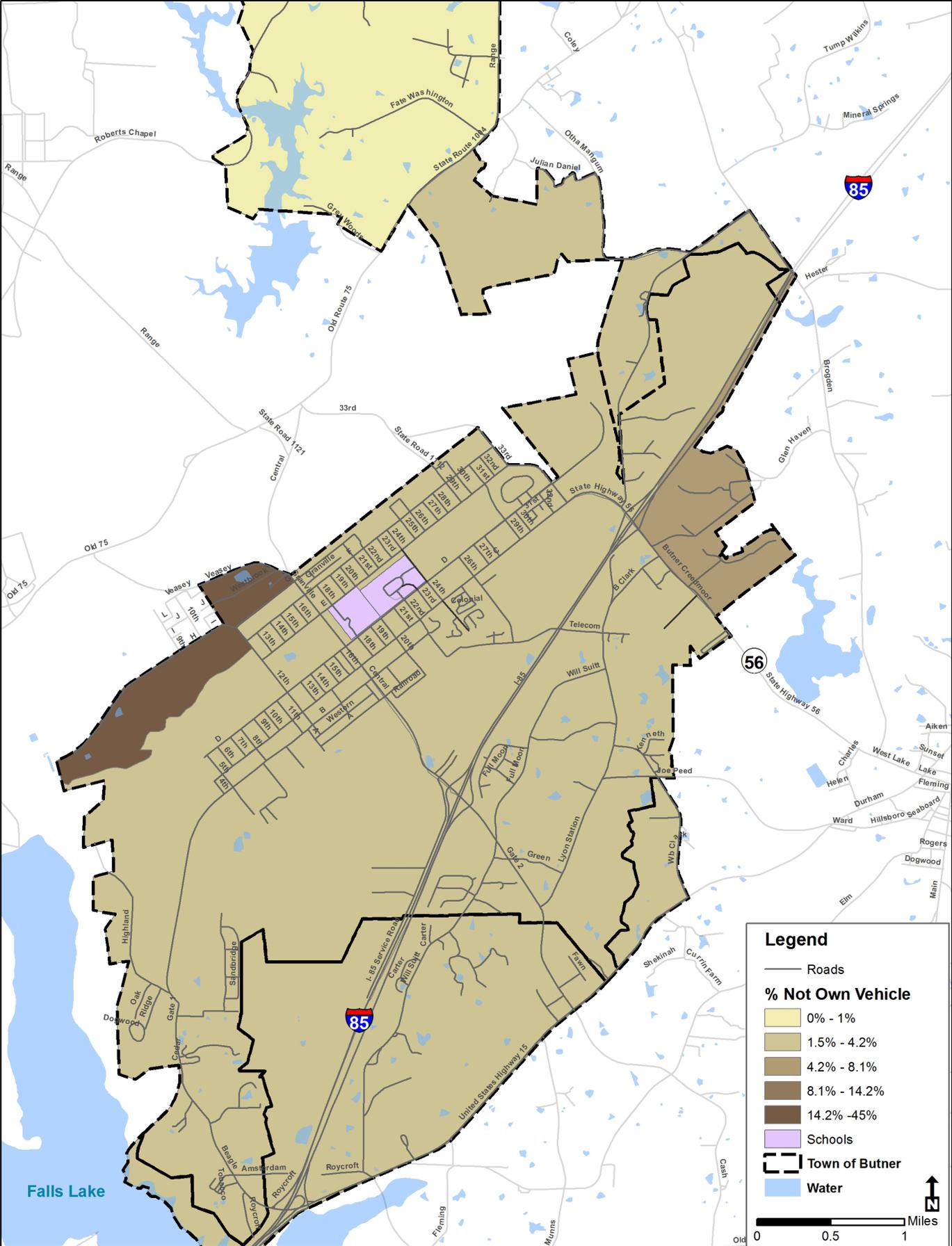
Maps based on data from 2000 US Census. Maps should be updated when 2010 US Census data is available.

MAP 2.3 MEDIAN FAMILY INCOME



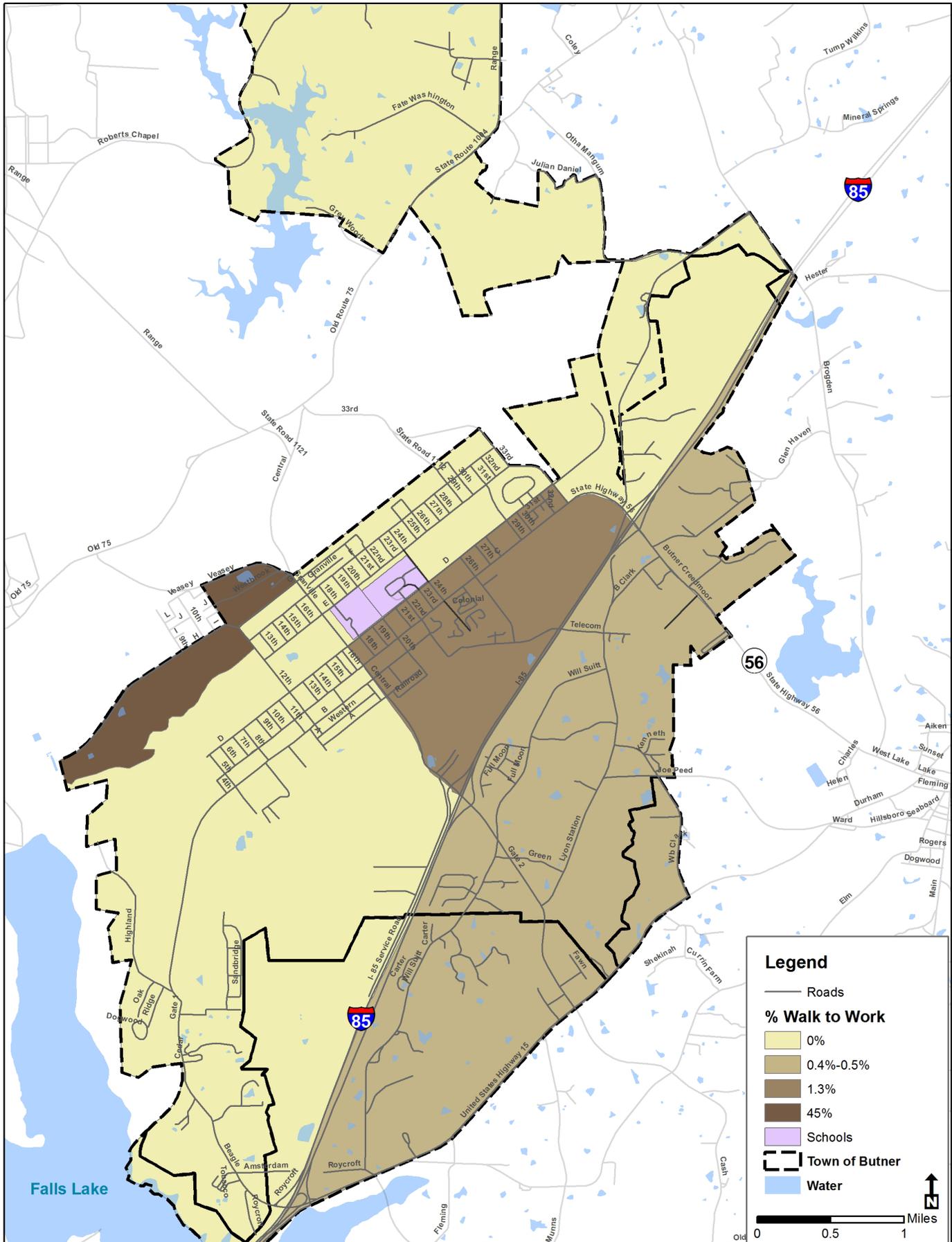
Maps based on data from 2000 US Census. Maps should be updated when 2010 US Census data is available.

MAP 2.4 POPULATION NOT OWNING A VEHICLE



Maps based on data from 2000 US Census. Maps should be updated when 2010 US Census data is available.

MAP 2.5 POPULATION WALKING TO WORK



Maps based on data from 2000 US Census. Maps should be updated when 2010 US Census data is available.

PEDESTRIAN CONDITIONS

Pedestrian facilities are deficient across the Town of Butner. There are existing sidewalks and crosswalks in some locations, but these do not connect the vast majority of residents and some are in need of improvements. See Map 2.6 for more detail.

STRENGTHS OF EXISTING PEDESTRIAN SYSTEM

- **Existing sidewalks** can be found along D Street from Central Avenue, southwest to 12th Street, and along 12th Street, from D to G Street. Some businesses have sidewalk along the western side of Central Avenue, but there are numerous gaps. The Murdoch Center features numerous sidewalks and crosswalks throughout its campus.

- At the time of this study, **three key sidewalk and greenway projects are funded** with design/construction underway (See Map 2.7 for their location):

- 1) West side of Central Avenue from G Street to an existing sidewalk at the Credit Union & Central Avenue sidewalk gaps from the Credit Union to B Street.

- 2) North side of D Street from Central Avenue to 24th Street (and possibly north along 24th Street as well). This is part of a Safe Routes to School (SRTS) grant and connects Butner Stem Elementary with Butner Stem Middle Schools.

- 3) Greenway along East Lyon Station Road area, west of I-85 (alignment being determined at time of this study). This is part of a CMAQ grant.

WEAKNESSES OF EXISTING PEDESTRIAN SYSTEM

- There are **no sidewalks along major roadway corridors** such as B Street, C Street, most of D Street, E Street, F Street, and NC 56. The NC 56 corridor features the majority of Butner's commercial destinations and only grocery store but lacks sidewalks and crosswalks.

- The majority of roads, with the exception of portions of Central Avenue, **lack curb and gutter features**. If sidewalk is added, there will be higher costs associated as curb and gutter may be necessary.

There are **sections of paved shoulder** that can serve to separate pedestrian traffic from vehicular traffic:

- 2 foot shoulder along sections of C Street, west of



Above: A gap in the existing sidewalk along Central Avenue.



Above: D Street between Butner-Stem Middle and Butner-Stem Elementary Schools. This section is planned for sidewalk and funded by a SRTS infrastructure grant.



Above: Worn footpath at 24th Street and C Street indicating pedestrians are traveling from Colonial Trailer Park across C Street.

Central Avenue

- Wide 4 foot shoulder along G Street from 12th Street to Central Avenue
- Wide 6 foot shoulder on NC 56 bridge crossing of I-85 (heavy amounts of debris and low wall make it inhospitable to pedestrians).

• **Most intersections are either lacking pedestrian crossing treatments or are deficient in crossing treatments.** See Table 2.1 on page 23 for a detailed intersection inventory. All or most intersections lack:

- High-visibility marked crosswalks
- Pedestrian signalization
- Curb extensions
- Curb ramps
- Signage

• Many intersections had **wide turning radii**, especially along Central Avenue and the NC 56 commercial area.

• Many businesses had **multiple driveways and/or wide driveway entrances** especially along Central Avenue and the NC 56 commercial corridor. Excess driveways create hazards for pedestrians.

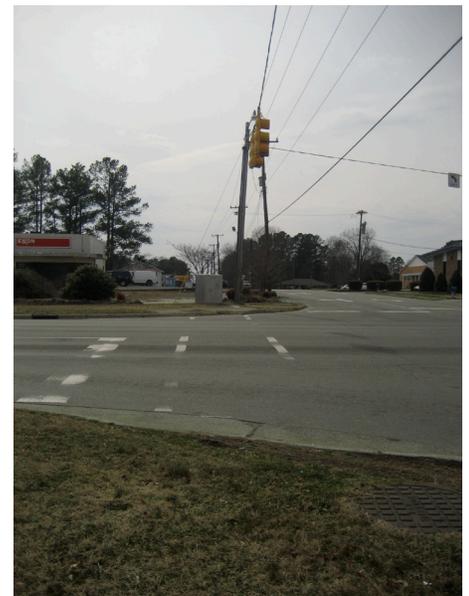
• **Safe crossings are lacking or are inadequate across the major roadway corridors**, especially in areas of need near schools, commercial areas, and multi-family housing. Two marked crosswalks across D Street (one to each school respectively) are in need of improvement.

• There are **no crossing guards** during school hours, although one **Butner Public Safety official assists with traffic** during peak school and pedestrian traffic times **at D Street and Central Avenue.**

• Pedestrian safety is a concern along Butner roadways, especially the east-west alphabetized streets, because of **high-speed traffic.**

• There have been **several pedestrian crashes** in the area within the past ten years. These can be seen in Map 2.6. The crash locations include:

- Central Avenue and D Street
- C Street and 22nd Street
- F Street and 27th Street
- Hwy 56 near Pond Street



Above: One of the few marked crosswalks in Butner, at Central Avenue and C Street, shows fading.

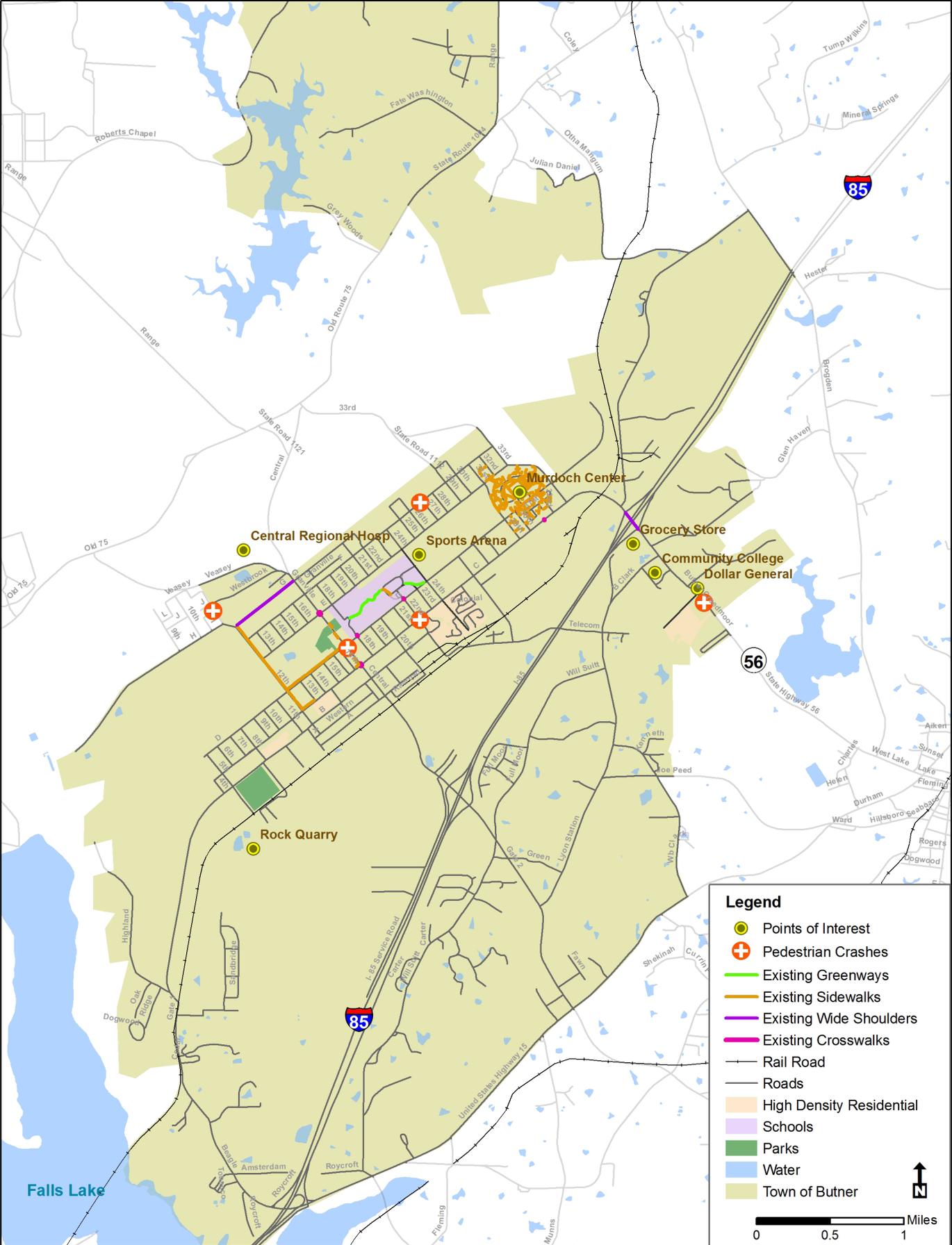


Above: Sidewalks and driveway access management are needed, here along NC 56, near I-85.

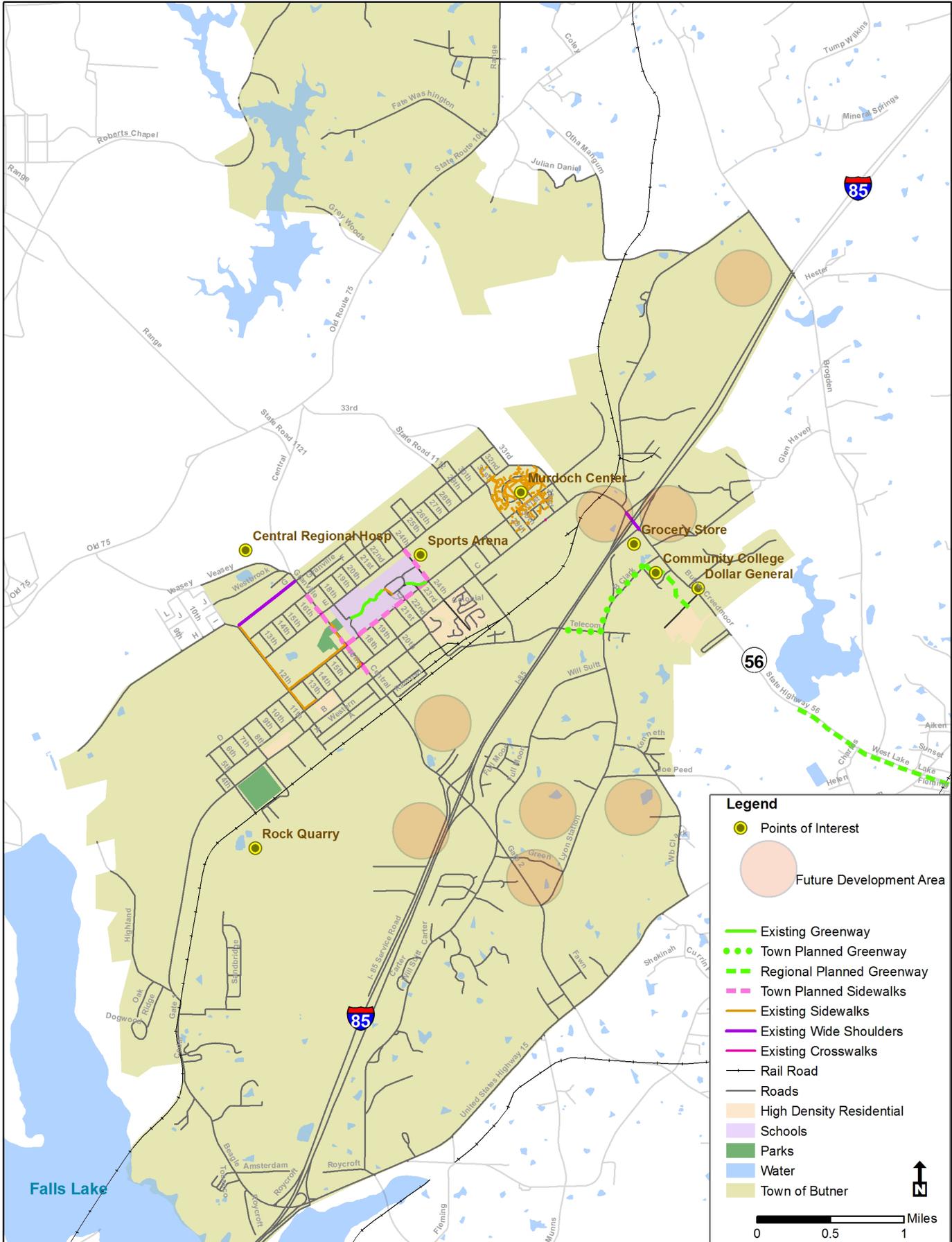


Above: Pedestrian traveling without a sidewalk on NC 56 (southeast side of I-85).

MAP 2.6 EXISTING PEDESTRIAN CONDITIONS



MAP 2.7 FUTURE DEVELOPMENT



SUMMARY OF EXISTING DOCUMENTS

2020 COMPREHENSIVE LAND USE PLAN

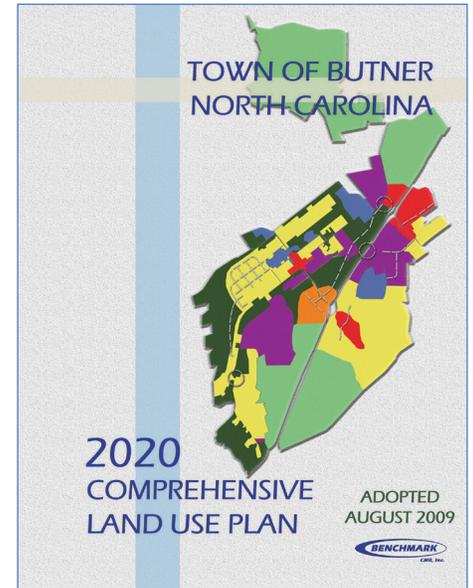
Adopted in 2009, the purpose of this plan is “to set forth a set of clear policy goals and objectives that set forth the desired vision for the Town’s future.” The plan provides guidance for land use/development patterns and policies that promote and sustain the Town’s livability and economic development goals.

Many goals and strategies are provided in this plan including the need for compact, integrated neighborhoods that allow for alternative transportation and the goal to enhance the appearance of its primary gateways. Goal 7 is specifically related to pedestrian issues and is taken from the plan verbatim below:

Goal 7: The Town of Butner will be a walkable and bicycle friendly community, with an expansive and conveniently located bike and pedestrian network which connects neighborhoods to commercial areas, employment centers, schools and parks.

The Town has submitted a grant application for a bicycle / pedestrian plan that will be created with the assistance of a consultant if the grant is awarded. This plan will be a master plan for non-vehicular infrastructure and access throughout the Town. This will be an important document for the Town in light of the current lack of pedestrian facilities and the need for such a plan to support the funding of new bicycle and pedestrian facilities when seeking grant funds for their construction.

- Explore funding opportunities through the Safe Routes to School program to increase pedestrian connectivity between residential neighborhoods and the Town’s schools.
- Ensure that the Land Development Ordinance has strong requirements for the provision of sidewalks, multi-use paths and other pedestrian/bike facilities in connection with development activity.
- Work with utility providers to acquire pedestrian access easements for greenway trails in conjunction with utility line extensions.
- Require pedestrian connection between new commercial development and residential neighborhoods, as well as between commercial developments.



Several key pedestrian topics were addressed and described below:

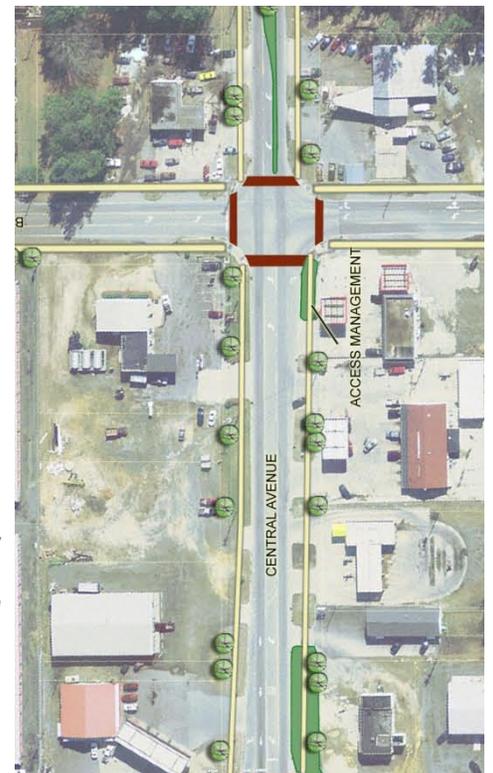
NC 56 Commercial Area: The plan recommends that NC 56 be widened to accommodate more users. As part of this effort, the plan recommends that pedestrian improvements, access management, and aesthetic improvements are needed as well.



Photo visualizations of NC 56 widening with pedestrian accommodations.



Central Avenue Commercial: The plan suggest that greater connectivity, pedestrian enhancements, and landscaping improvements should be made. Access management and pedestrian safety need to be improved by creating sidewalks, controlling commercial driveway entrances, providing median refuges where possible, and providing safer crossings.



Conceptual enhancements for Central Avenue include tree plantings, sidewalk, and enhanced crossings.

BUTNER COMPREHENSIVE SYSTEMWIDE PLAN FOR PARKS AND RECREATION (2008)

The main goal was to plan for the future of parks and recreation in the newly incorporated Town of Butner. It helps plan for future recreation activities and facilities.

The planning process included a public input period. Interestingly, when asked what their preferred activity was, walking and running ranked highest for the 340 respondents (64% wanted to participate in that activity). The most often requested facilities were safe places to walk. One of the main project goals and strategies that resulted from this planning process was to move forward with pedestrian and greenway planning/development as a priority.

GRANVILLE COUNTY COMPREHENSIVE TRANSPORTATION PLAN (2008)

The main goal was to examine present and future transportation needs of the county and develop a Comprehensive Transportation Plan to meet these needs. Recommendations were made for each mode of transportation, including bicycle and pedestrian.

One of the major goals of this plan (taken verbatim) was:

Goal: Provide a comprehensive multi-modal transportation network that should improve air quality through reduction of single-occupancy vehicle trips.

Objective 1: Provide transit, bicycle, and pedestrian options for transportation within the county

Objective 2: Educate the public about transportation options, and the benefits of choosing alternative modes of transportation.

Some key off-road recommendations from this Plan through Butner include:

- Develop north-south rail with trail route connecting Oxford to Butner along Norfolk Southern RR Line. At southwest corner of County (at Falls of Neuse Lake), branch the trail to connect with planned Durham County trails.
- Develop east-west route connecting central Butner to Creedmoor accessing residential, commercial, and industrial developments.
- Widen NC 56 and provide bicycle/pedestrian accommodations as part of this project.

Town of Butner

Comprehensive Systemwide Plan for Parks and Recreation

3-5 year Master Plan

Accepted by the Butner Town Council December 17, 2008

GRANVILLE COUNTY GREENWAY MASTER PLAN (2005)

The Granville County Board of Commissioners and the County Municipalities adopted the Granville County Greenway Master Plan, funded by Eat Smart Move More NC, in 2006. The Greenway Master Plan details the mission and vision for Granville Greenways and provides oversight for Greenway planning in Granville County. The Plan contains maps of 22 proposed trails throughout Granville County as well as provides recommendations for funding, land development, easement acquisition, and connectivity. Also, the Creedmoor Greenway Plan should become adopted into the Granville County Greenway Master Plan.

Key greenway recommended routes (shown in the South County map on the next page) that affect Butner are the Norfolk-Southern Rail trail (G20), NC 56 greenway (G17), Murdoch Center-Butner Stem Middle School connection (G22), Old Hwy 75/Central Avenue north entrance to town (G12a), and connection across I-85 from the Butner core to industrial areas east of I-85 (G21).

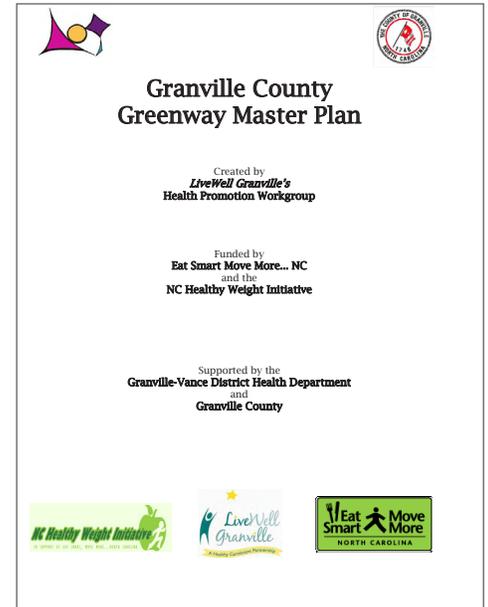


TABLE 2.1 INTERSECTION INVENTORY

This table presents the existing pedestrian treatments, or lack thereof, at key intersections in Butner. At the time of this study, there were no pedestrian signals, high-visibility marked crosswalks, or curb extensions (all key components of pedestrian-friendly intersections).

Road 1	Road 2	Reason (Major intersection, school, connectivity, etc)	Sight Distance (Good, Fair, Poor)	Signage (Y/N)	Controlled/Uncontrolled	Stop Light/Stop Sign	Curb Ramp (Y/N)	Curb Ramp (Complete/Incomplete)	Curb Radius (Very Wide, Wide, Not Wide)	Marked Crosswalk (Y/N)	Number and Location of Crosswalks Adequate (Y/N)	Crosswalk Condition (Good/Fair/Poor)	Advanced Stop Line (Y/N)	Type of Signal (Regular, Countdown)	Sidewalk (Y/N)	Sidewalk Complete/Incomplete	Median Island Condition (Y/N)	Median Island (Concrete/Chop Islands)	Estimated Traffic Volume (High/Medium/Low)	Speed Limit	Other Notes
Lyon Station	NC 56	Commercial-Industrial	Good	N	C	SL	N (no curb)	-	Very wide	N	-	-	-	-	N	Incomplete	N	-	Medium-High	35	Sidewalk needed first. High percentage of heavy vehicles. Wide driveway entrance to gas station across intersection (top of T intersection)
NC 56	I-85 (south side)	Commercial	Good	N	C	SL	N (no curb)	-	Very wide (pork chop for on-ramp)	N	-	-	-	-	N	Incomplete	(concrete pork chop islands)	High	35	Dangerous for pedestrians with incoming and outgoing traffic. Much debris/rocks in area.	
NC 56	W. Lyon Station	Commercial	Poor (hill on W. Lyon Station up to intersection and NC 56 curve)	N	C	SL	N (no curb)	-	Wide	N	-	-	-	-	N	Incomplete	N	-	High	35	Sight issues and substantial traffic.
C Street	33rd Street	Mudloch area	Good	N	C	SL	N (no curb)	-	Very wide	N	-	-	-	-	N	Incomplete	N	-	Medium	35	Crosswalks and sidewalks needed. Crosswalk over C Street should be on west side (side of campus)
C Street	24th Street	Schools; Colonial mobile home park; residential	Good	N	C	SS for 24th Street traffic	N (no curb)	-	Not wide	N	-	-	-	-	N	Incomplete	N	-	Medium	35	Very important crossing with mobile home park and schools nearby. Distinct loop path formed at SE corner of intersection. Many children walk to school across this intersection.
C Street	22nd Street	Apartments; Schools	Fair (hills)	N	C	SS for 22nd Street traffic	N (no curb)	-	Not wide	N	-	-	-	-	N	Incomplete	N	-	Medium	35	Very important crossing with multi-family housing and schools nearby. Many children walk to school across this intersection.
C Street	Central Avenue	Commercial corridor; residential nearby	Fair (hill on C Street)	N	C	SL	Y	Incomplete	Wide	Y (crossing Central Avenue on both sides)	N	Poor (faded badly)	Y (faded badly)	-	N	Incomplete	N	-	Medium-High	35	Major intersection in town. Sidewalk is needed first and crosswalks are in major need of improvement.
E Street	Central Avenue	Commercial corridor; residential nearby	Good	N	C	SS for E Street traffic	Y	Complete	Wide	Y (crossing Central Avenue on both sides)	N	Fair (faded)	N	-	N	Incomplete	N	-	Medium-High	35	Opportunity for a more complete street on Central Avenue. Need sidewalk first. Need to determine ways to make crossing Central Avenue safe for pedestrians.
D Street	Central Avenue	Commercial corridor; residential nearby; schools	Good	N	C	SS for D Street traffic	Y	Complete	Wide	Y (crossing Central Avenue on both sides)	N	Poor (faded badly)	N	-	Y	Incomplete	N	-	Medium-High	35	Many destinations nearby (schools, post office, commercial destinations). Officer on duty during school drop-off/pack-up hours to help direct traffic. Traffic calming and/or traffic light probably needed here to slow traffic.
B Street	Central Avenue	Commercial corridor; residential nearby	Good	N	C	SS for B Street traffic	Y	Incomplete	Very wide (right hand turn lane)	N	-	-	-	-	N	Incomplete	N	-	Medium-High	35	Driveway access management also an issue here. Significant traffic, including heavy truck traffic from the quarry. Right-hand turn lane creates hazard. Traffic calming, pedestrian facilities needed.



Photo Visualization for Central Avenue/C Street

CHAPTER OUTLINE:

OVERVIEW

METHODOLOGY

THE PEDESTRIAN NETWORK:

• **SIDEWALKS**

• **PEDESTRIAN-FRIENDLY CROSSINGS**

• **GREENWAYS/ MULTI-USE TRAILS**

• **TRAFFIC CALMING**

ANCILLARY FACILITIES

PRIORITY PROJECT CUT SHEETS

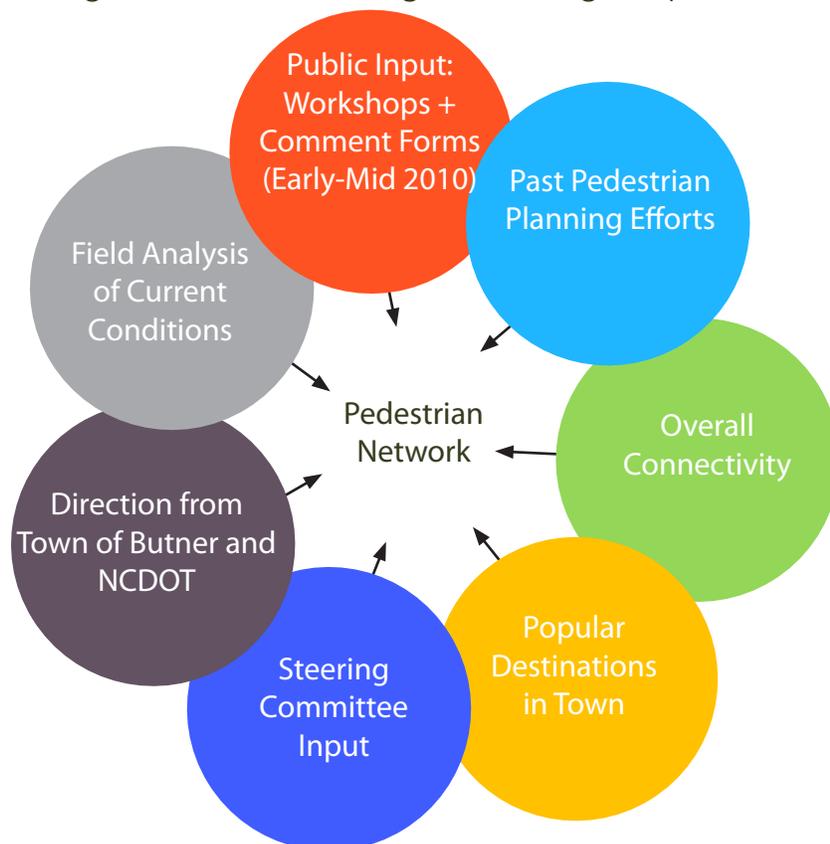
OVERVIEW

This chapter contains a series of recommended changes to the Town of Butner's physical environment that will create a safe, accessible, and connected pedestrian network throughout Butner.

METHODOLOGY

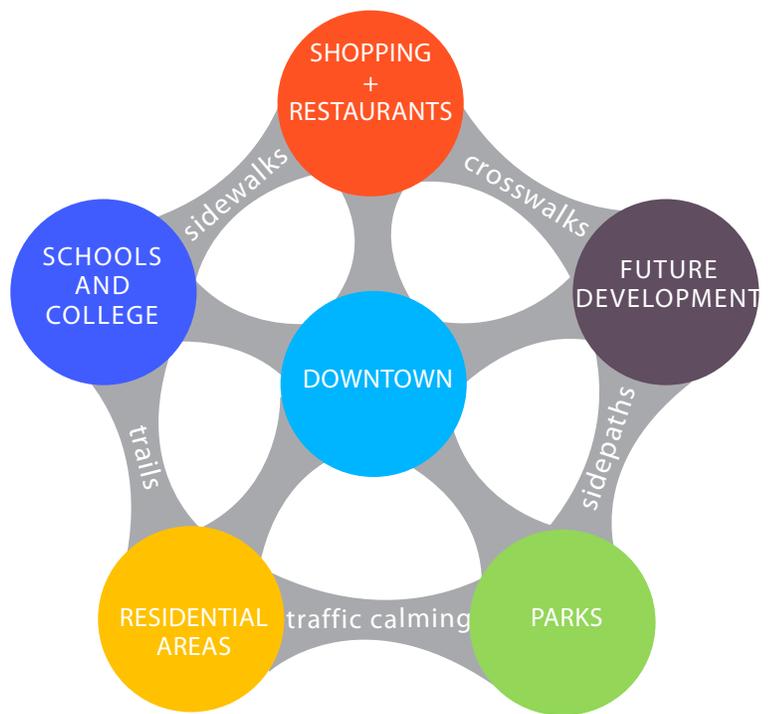
A variety of sources were consulted during the development of these recommendations: input from the town staff and steering committee, previous plans and studies, maps of existing pedestrian conditions, the consultant's fieldwork inventory, public input, and noted pedestrian destinations. Fieldwork included an examination of conditions at key roadway crossings, primary roadway corridors, and a consideration of trail opportunities. Map discussion and analysis was conducted at the project steering committee meeting and during the public meeting.

INPUTS FOR PEDESTRIAN RECOMMENDATIONS



THE PEDESTRIAN NETWORK

Four main types of pedestrian projects have been identified for the Town of Butner and are outlined on the following pages. They include sidewalks, crossing improvements, multi-use trails (a.k.a, greenway trails and sidepaths), and traffic calming. Conceptually, these pedestrian recommendations can be seen as a network of ‘hubs and spokes’, with the core of Butner being the central feature (see right). Residential areas, schools, restaurants, and other places where people might walk to and from are the ‘hubs’, whereas sidewalks, crosswalks, trails, and other pedestrian facilities are the ‘spokes’ that connect them.



The complete recommended network of sidewalks, crossing improvements, and trails can be found on Map 3.1, page 27.

The recommendations should be completed in phases (as prioritized at the end of this chapter). However, individual projects within the network could be developed as opportunities arise, regardless of the order. Also, new programs could make walking safer, and encourage people to walk more often, as outlined in Chapter 4: Policies and Programs.

The ‘hubs and spokes’ model conceptually illustrates how destinations in Butner will be linked through various types of pedestrian facilities.

SIDEWALKS

The recommended sidewalks in Butner aim to expand upon the existing sidewalks (Map 3.1, page 25). Guidance for the design of sidewalk projects is provided in Chapter 6.

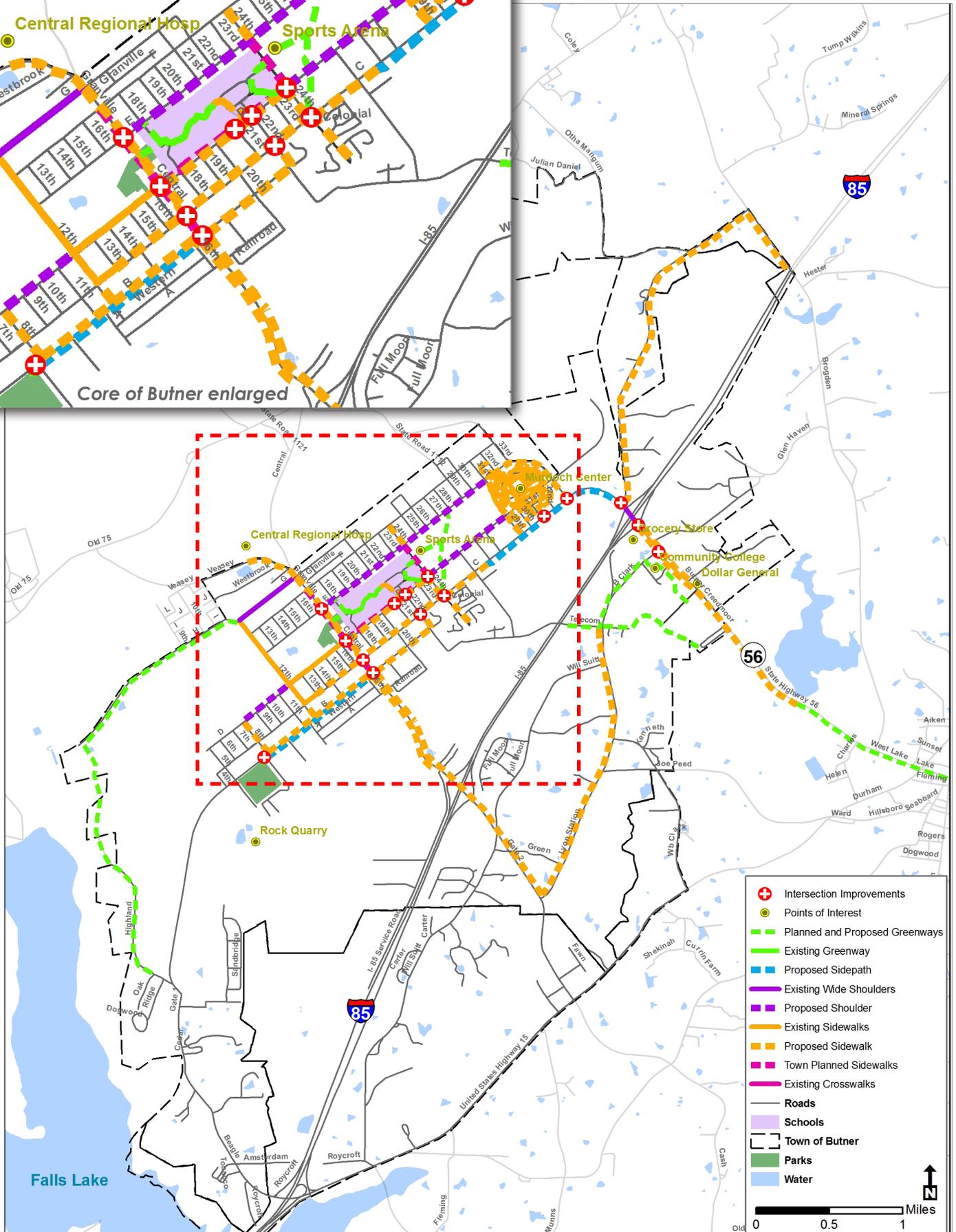
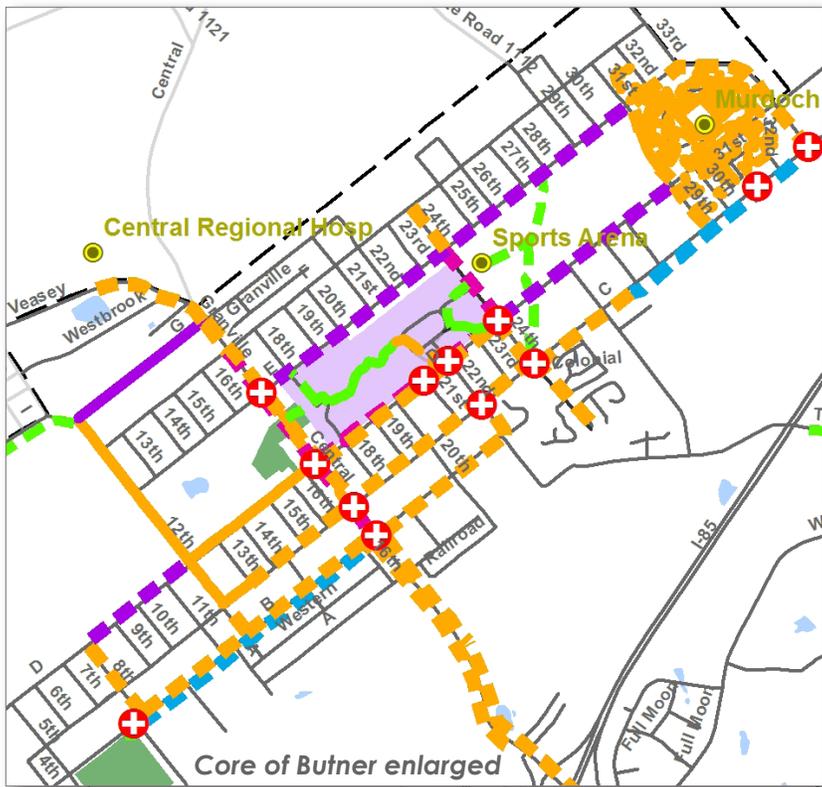
PEDESTRIAN-FRIENDLY CROSSINGS

Several pedestrian improvements are located at roadway crossings. Consultant fieldwork and committee input helped to identify popular crossing points that are in need of minor to significant improvements (Map 3.1, page 27, and Table 3.1, page 28).

Pedestrians have a much greater risk of being struck by a vehicle when crossing a roadway as opposed to walking on the shoulder or sidewalk beside it. Nationally, nearly 75% of all police-reported pedestrian crashes involve pedestrians crossing roadway travel lanes.

At a minimum, crossings with sidewalks on each side should possess curb cuts with ramps and marked crosswalks (which helps to satisfy the standards set forth by the American Disability Act of 1991). Busy

MAP 3.1 PEDESTRIAN NETWORK



- Intersection Improvements
- Points of Interest
- Planned and Proposed Greenways
- Existing Greenway
- Proposed Sidepath
- Existing Wide Shoulders
- Proposed Shoulder
- Existing Sidewalks
- Proposed Sidewalk
- Town Planned Sidewalks
- Existing Crosswalks
- Roads
- Schools
- Town of Butner
- Parks
- Water

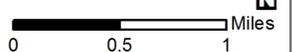


TABLE 3.1 INTERSECTION RECOMMENDATIONS

This table presents the recommended pedestrian treatments at key intersections in Butner (for the same intersections inventoried in Chapter 2). Further analysis is warranted and NCDOT cooperation will be necessary.

Road 1	Road 2	Needs Sidewalk (Y/N)	Stripe New Crosswalk Markings (Y/N)	Restripe Existing Crosswalk Markings (Y/N)	Advanced Stop Lines (Y/N)	Reconstruct Existing Curb Ramps (Y/N)	Construct New Curb Ramps (Y/N)	Median Refuge Islands(Y/N)	Curb Extensions (Y/N)	Reduce Turning Radius (Y/N)	Pedestrian Countdown Signal Heads (Y/N)	Restrict Right turn on Red	High - Visibility Pedestrian Warning Signs	In-Roadway Pedestrian Crossing Signs	Remove Sight-Distance Obstruction	Details and Extra Notes
Lyon Station	NC 56	Y	Y	-	Y	-	Y	N	Y	Y	Y	N	N	N	N	Sidewalk is needed first. Reducing the turning radius on/off Lyon Station would improve safety for pedestrians.
NC 56	I-85 (south side)	Y	Y	-	-	Y (on pork chop islands)	Y (if curb is added)	N	N	N	Y	N	Y	N	N	Pork chop island refuges important to define pedestrian space
NC 56	W. Lyon Station	Y	Y	-	Y	N	Y (if curb is added)	N	N	N	Y	N	N	N	N	
C Street	33rd Street	Y (on west side of 33rd and south side of C)	Y (West side crossing C Street)	-	Y	-	Y (if curb is added)	N	Y	Y	Y	N	Y	N	N	Sidewalk/sidewalk are needed first. Reducing the turning radius would improve safety for pedestrians.
C Street	24th Street	Y	Y	-	-	N	Y (if curb is added)	N	Y (on NE corner which is currently just a large concrete pad now)	N	N	Y (with flashing lights, at least during school hours)	N	N	N	Sidewalk is needed first. Highly visible marked crosswalks across C Street needed. School zone speed limit reduction needed on C Street. Flashing lights (during school hours or pedestrian-activated) needed for this crossing. Consider crossing guard during school hours.
C Street	22nd Street	Y (north side of C and east side of 22nd)	Y	-	N	N	Y (if curb is added)	N	N	N	N	Y (with flashing lights, at least during school hours)	N	N	N	Sidewalk is needed first. Highly visible marked crosswalks across C Street needed. School zone speed limit reduction needed on C Street. Flashing lights (during school hours or pedestrian-activated) needed for this crossing. Consider crossing guard during school hours.
C Street	Central Avenue	Y	Y	Y	Y	Y (on pork chop islands)	Y	N	N	N	Y	N	Y	N	N	Restripe existing, faded crosswalks. Sidewalk needed all ways. Upgrade existing curb ramps to ADA compliance.
E Street	Central Avenue	Y	Y	Y	Y (for crossing E)	N	N	N	N	N	N	Y	N	N	N	With no stoplight, this intersection is a challenge. To create safe crossings of Central Avenue, the complex of Central needs a change.
D Street	Central Avenue	Y	Y	Y	Y (for crossing D)	Y	N	N	Y	Y	(If stoplight is added, Yes)	N	Y	N	N	Currently, an officer helps direct traffic here during school hours. With no stoplight, this intersection is a challenge. With a stoplight, countdown signals would be needed. To create safe crossings of Central Avenue, the complex of Central needs a change.
B Street	Central Avenue	Y	Y	-	Y (for crossing B)	Y	Y	N	Y	Y (rid of right hand turn lane)	(If stoplight is added, Yes)	N	Y	N	N	With no stoplight, this intersection is a challenge. The right hand turn lane off Central Avenue onto B Street is a safety hazard for pedestrians. Eliminating this turn would allow for the creation of a curb extension. To create safe crossings of Central Avenue, the complex of Central needs a change. Finally, a roundabout should be considered as a gateway/slow down point into town.

intersections could have a variety of improvements, such as pedestrian-activated crossing and countdown signals, medians, and pedestrian refuge islands. Some of these treatments have been proven to reduce crashes, as shown in the 2007 FHWA Crash Reduction Factors Study (<http://safety.fhwa.dot.gov>). The table below shows some typical countermeasures and associated crash reduction factors from that study.

PEDESTRIAN CRASH REDUCTION FACTORS

Countermeasure	Crash Reduction Factor
<i>Install sidewalk</i>	74%
<i>Install pedestrian countdown signal heads</i>	25%
<i>Install pedestrian refuge islands</i>	56%
<i>Improve/install pedestrian crossings</i>	25%

GREENWAYS/MULTI-USE TRAILS

A greenway is defined as a linear corridor of land that can be either natural, such as rivers and streams, or man-made, such as utility corridors or abandoned railroad beds. Many greenways contain trails. Greenway trails can be paved or unpaved, and can be designed to accommodate a variety of trail users, including bicyclists, walkers, hikers, joggers, skaters, horseback riders, and those confined to wheelchairs (hence, the term 'multi-use trail').

Greenway corridors can serve environmental purposes, protecting forests, enhancing water quality, and offering ample opportunities for environmental education. Greenway trails can be constructed of natural materials, gravel, crushed stone, asphalt, or concrete, depending upon the projected usage and surrounding landscape. Greenway trails in Butner should be integrated with and serve as an off-road extension of the on-road pedestrian network. Proposed greenway trail corridors for Butner are illustrated on Map 3.1, page 25.

This is a planning level of analysis for trail corridors. Each trail project should continue to have close coordination with the property owners along and adjacent to each corridor. Particular attention should be given to the design of landscape screening, fencing, and other treatments that help ensure the privacy (if so desired) of adjacent properties. The benefits of greenways (economic, environmental, etc), which are outlined in Chapter 1 of this Plan, should also be emphasized during the planning process for specific greenway corridors.

TRAFFIC CALMING

The term “traffic calming” is often described as the combination of mainly physical measures that reduce the negative effects of motor vehicle use and improve conditions for nonmotorized street users. The objectives of traffic calming are to reduce vehicular speeds, provide safer and more pleasant conditions for all roadway users, improve the livability of neighborhood streets, improve real and perceived safety for nonmotorized users, and to discourage the use of residential streets as cut through traffic options. There are a number of different traffic calming engineering techniques such as gateways, median islands, speed humps, raised crosswalks, traffic circles, chicanes, and curb extensions. These treatments and more are discussed in detail in Chapter 6 - Design Guidelines.

Recommendations for traffic calming along specific roadways are discussed on individual cutsheets from pages 33-47. As with all recommendations of this Plan, further analysis, planning, and neighborhood meetings should be conducted before installing treatments. It is important to assess the impact of traffic calming installations on parallel roadways, emergency vehicles, and the local community.

ANCILLARY FACILITIES

In addition to sidewalks, crossings, greenways, and traffic calming measures, ancillary facilities can greatly improve walkability. Transit bus stops, benches, and landscaping are examples. These are described in further detail in Chapter 6.

Of significant importance in Butner are school bus stops. Currently, schoolchildren do not have sidewalks and safe spaces for waiting on the bus. Some of these locations are identified in the cutsheets on the following pages. The Town of Butner should identify stops frequently used and provide clearly defined separated space and include shelters, concrete pads, benches, and a connected sidewalk. At the time of this study, the following school bus stops were identified as needing improvements:

- C Street and 24th Street
- East Lyon Station Rd. stops

PRIORITY PROJECT LIST AND CUTSHEETS

The projects on the following pages are the key projects identified during this planning process as having a significant impact on pedestrian connectivity and safety. These projects are not in any priority order. Each project has its own set of constraints and costs. Further, more detailed engineering analysis is required to implement each of these projects. Also, because

many recommendations occur on NCDOT roads, coordination is necessary for approval of recommended treatments. This list does not include key projects already funded at the time of this study including the D Street sidewalk from Central Avenue to 24th Street (Safe Routes to School project) and the Butner Greenway along East Lyon Station Rd.

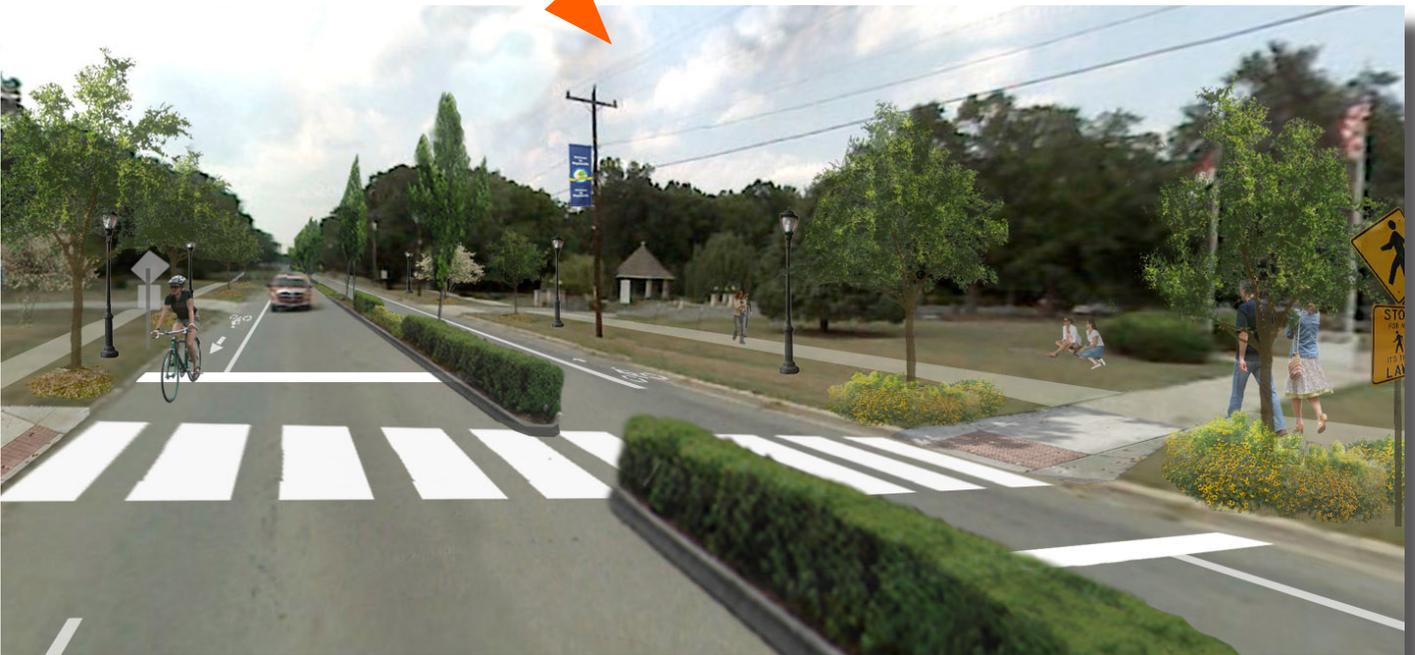


Photo visualization of improvements to Central Avenue, between D and E Streets. A roadway restripe with bike lanes, center median, high-visibility marked crosswalks, curb ramps, and street trees would enhance the walkability, livability, and attractiveness of Butner's main road. This midblock crossing is ideally located with parkland and walkways on both sides.

PROJECT #1 - CENTRAL AVENUE (A STREET TO G STREET)

Central Avenue is a key, central corridor in Butner that could be enhanced dramatically to create a thriving area and a safer space for pedestrians. This roadway provides an opportunity for significant reconstruction into a "Complete Street" environment but could also be improved with the relatively simple addition of sidewalk and crossing improvements. These two scenarios are presented below and in the map on the following page. The Comprehensive Land Use Plan calls for the enhancement of Central Avenue to a more pedestrian-friendly environment with driveway access management, median islands, and sidewalks. This Plan supports those recommendations and calls for additional, specific enhancements listed below and on the following map.

Scenario One

- Sidewalk added on both sides
- Crossings improved as shown in Table 3.1 (Central/B, Central/C, Central/D, Central/E). Request NCDOT to conduct traffic count/signal study for Central Avenue and D Street.
- Street trees and landscaping added at selected locations
- Median refuge for majority of section (especially where left turning movements are minimal)
- Driveway entrances consolidated and reduced in size where possible
- Mix uses and require new development to feature pedestrian connectivity within and between other development.
- Ensure future development between A Street and I-85 has pedestrian connectivity to the Town core.

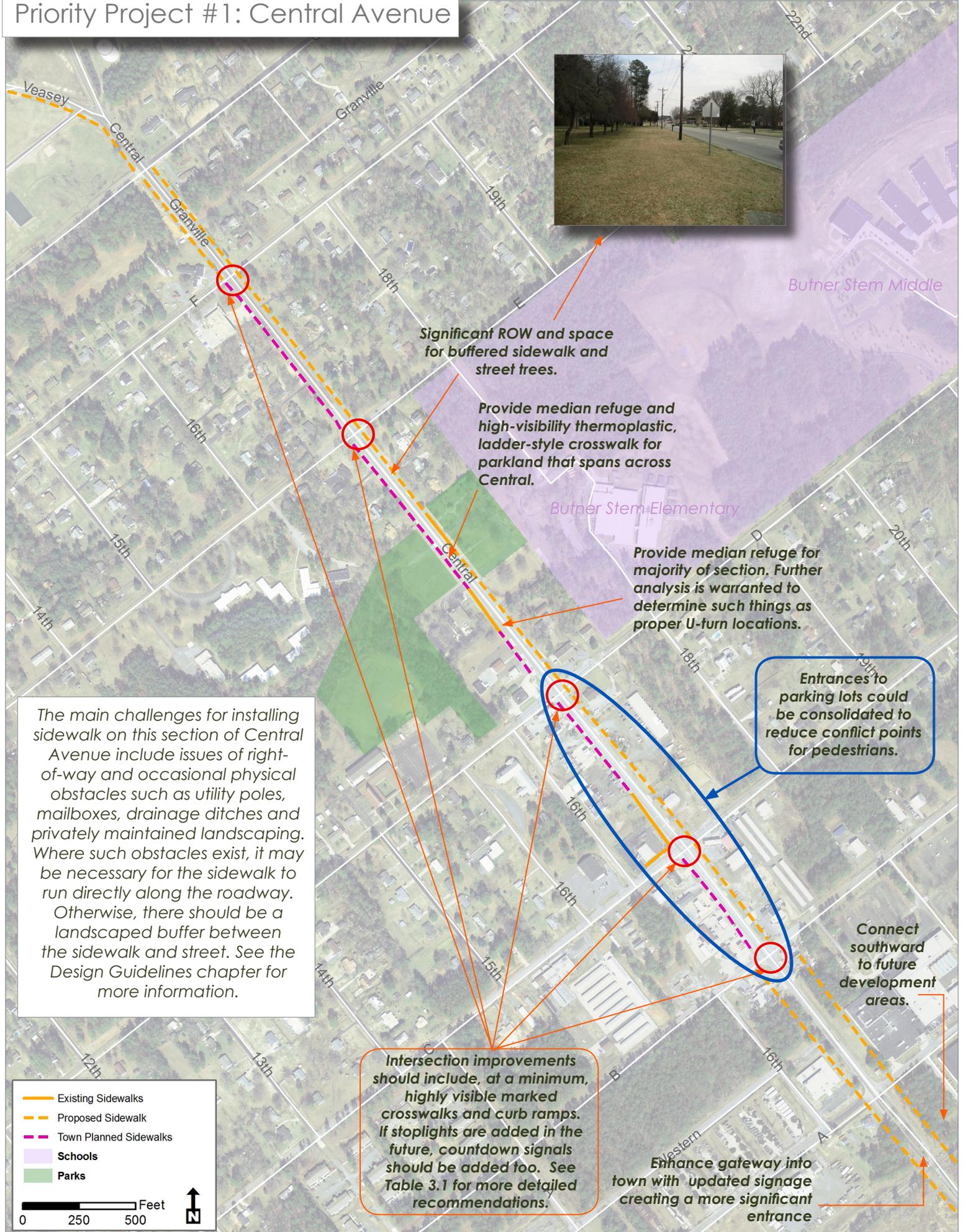
Scenario Two

- Projects listed in Alternative One
- Roundabouts on B Street and D Street
- Bicycle lanes
- Street furniture
- Traffic calming elements such as median refuges, curb bulbouts, on-street parking



Photo visualization of improvements to the intersection of Central Avenue and C Street.

Priority Project #1: Central Avenue



Butner Stem Middle

Significant ROW and space for buffered sidewalk and street trees.

Provide median refuge and high-visibility thermoplastic, ladder-style crosswalk for parkland that spans across Central.

Butner Stem Elementary

Provide median refuge for majority of section. Further analysis is warranted to determine such things as proper U-turn locations.

Entrances to parking lots could be consolidated to reduce conflict points for pedestrians.

The main challenges for installing sidewalk on this section of Central Avenue include issues of right-of-way and occasional physical obstacles such as utility poles, mailboxes, drainage ditches and privately maintained landscaping. Where such obstacles exist, it may be necessary for the sidewalk to run directly along the roadway. Otherwise, there should be a landscaped buffer between the sidewalk and street. See the Design Guidelines chapter for more information.

Connect southward to future development areas.

Intersection improvements should include, at a minimum, highly visible marked crosswalks and curb ramps. If stoplights are added in the future, countdown signals should be added too. See Table 3.1 for more detailed recommendations.

Enhance gateway into town with updated signage creating a more significant entrance

- Existing Sidewalks
- Proposed Sidewalk
- Town Planned Sidewalks
- Schools
- Parks

0 250 500 Feet

PROJECT #2 - C STREET (W. LYON STATION RD. TO CENTRAL AVE.)

C Street is a two-lane thoroughfare that parallels I-85 through the center of Butner. Currently, there is no sidewalk present and very few pedestrian crossing treatments. It is recommended that sidewalk be added on at least one side with distinct crossings at appropriate locations throughout.

Key Recommendations

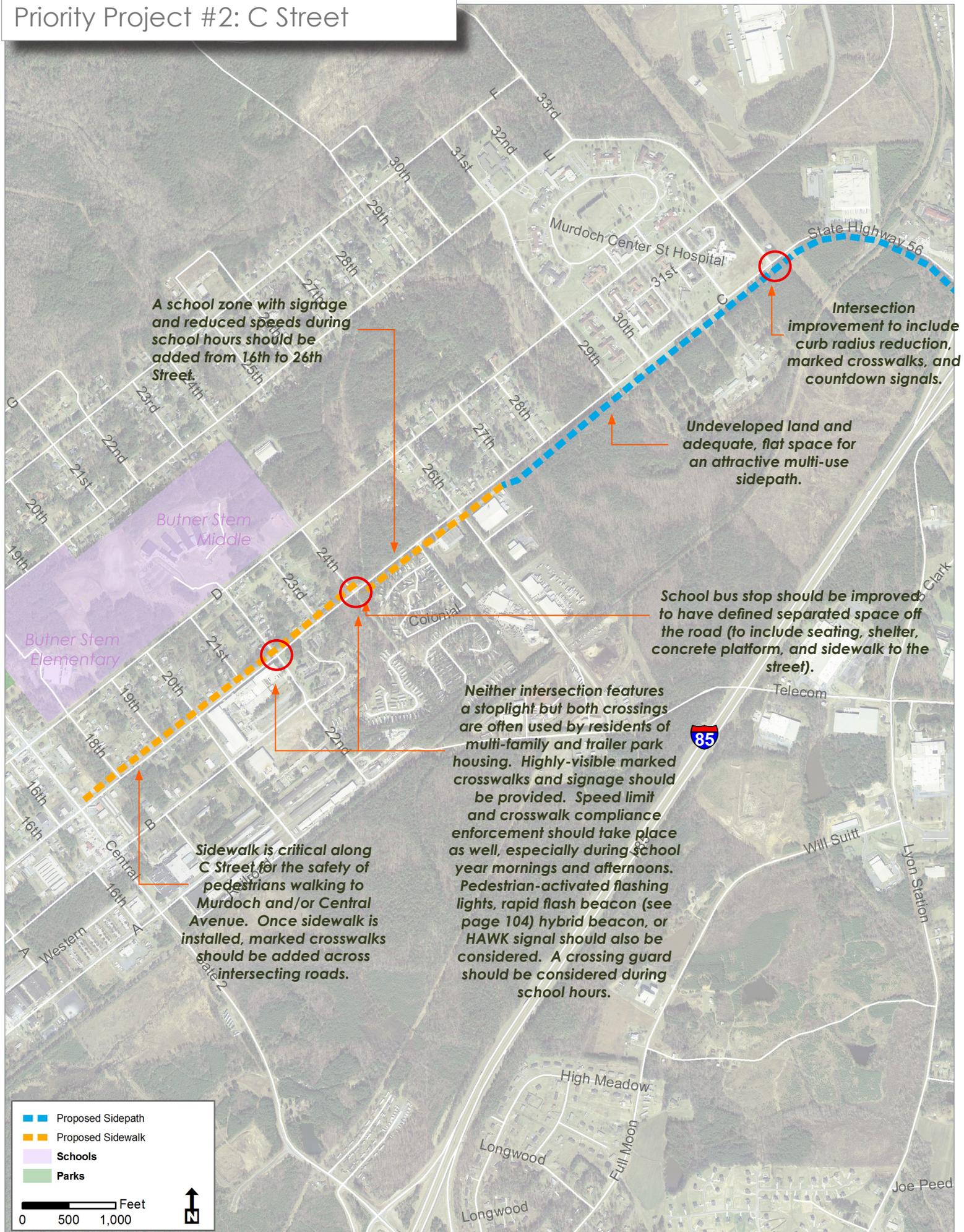
- Sidepath added from West Lyon Station Road to 27th Street on south side (adequate space for multi-use sidepath facility)
- Sidewalk continuing from 27th Street to 24th Street on south side
- Sidewalk continuing from 24th Street to Central Avenue on north side
- Crossing Improvements at 33rd Street, 24th Street, 22nd Street, and Central Avenue (See Table 3.1 for more details).
- Because crossings of C Street at 22nd and 24th do not feature stoplights, the addition of marked crosswalks will need to be enhanced with other treatments and programs. Pedestrian signage and speed limit/crosswalk compliance should be enforced, especially during school year mornings and afternoons. Timed and/or pedestrian-actuated flashing lights, rapid flash beacons, or HAWK signals should be considered (See page 104 in Design Guidelines chapter for more information) (Rectangular rapid flash beacons are in use in Wilmington, North Carolina).



Photo visualization of the addition of a sidepath along C Street, across from the Murdoch Center.



Priority Project #2: C Street



PROJECT #3 - NC 56 (EAST OF I-85)

NC 56 is the second chief commercial corridor in Butner and connects Butner to Creedmoor. NC 56 also provides connectivity to the Vance Granville Community College (South Campus). A grocery store, convenient stores, and restaurants are commonplace along this corridor.

The Comprehensive Land Use Plan calls for a widening of NC 56 to include sidewalk, driveway access management, median islands, and aesthetic improvements. This Plan supports those recommendations and calls for additional, specific enhancements such as high-visibility marked crosswalks at intersections and appropriate midblocks, speed limit reduction, countdown signals, and ADA-compliant curb ramps.

Key Recommendations

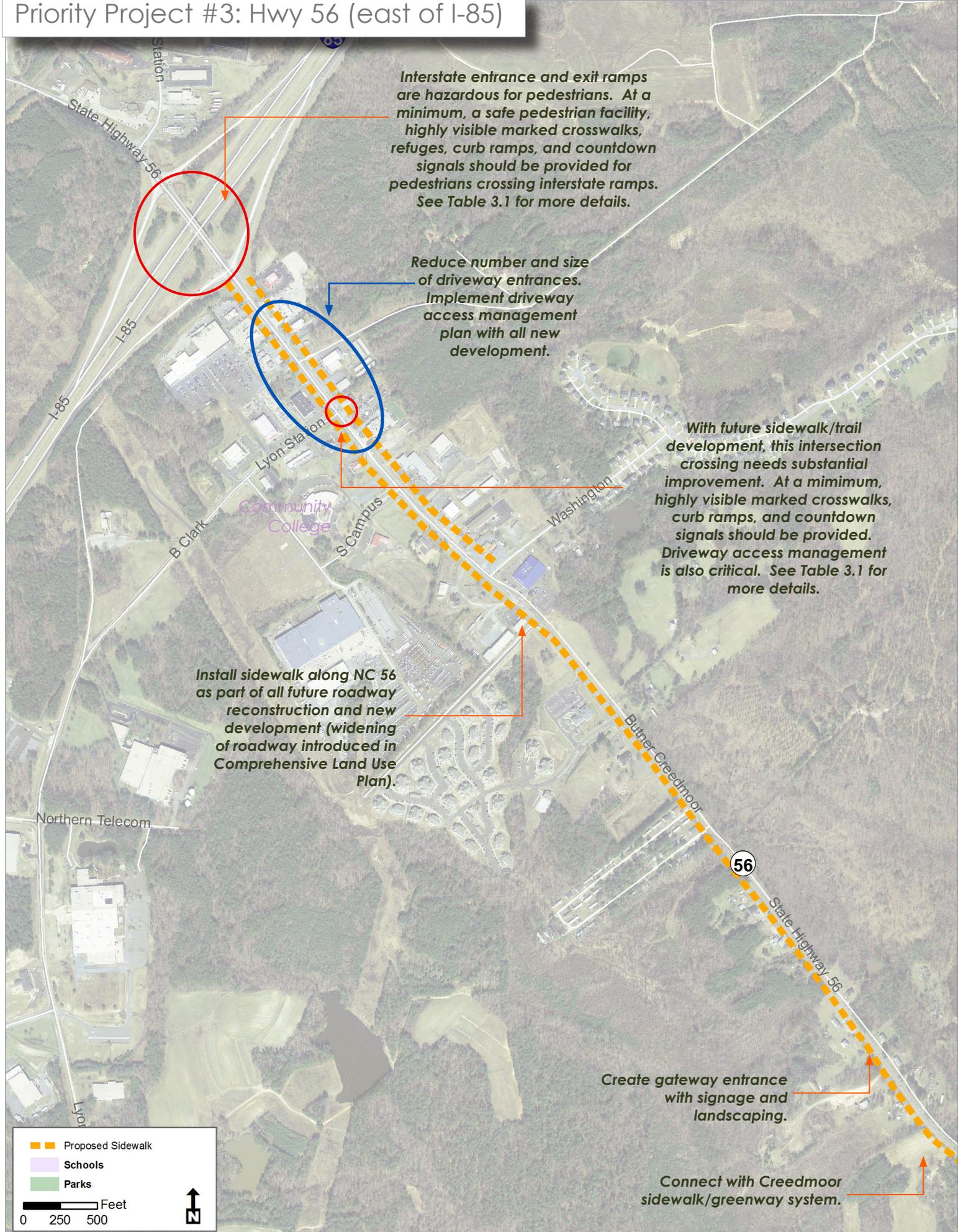
- Sidewalk added on both sides from I-85 to Washington
- Crossings improved as shown in Table 3.1 (I-85/NC 56 and E. Lyon Station/NC 56)
- Driveway entrances consolidated and reduced in size where possible
- Provide connectivity to Creedmoor greenway system



Sidewalk and crossing improvements are needed along NC 56, southeast of I-85. Left: NC 56 and I-85 on-ramp intersection with no pedestrian accommodation. Below: NC 56 commercial area currently with no sidewalk.



Priority Project #3: Hwy 56 (east of I-85)



Interstate entrance and exit ramps are hazardous for pedestrians. At a minimum, a safe pedestrian facility, highly visible marked crosswalks, refuges, curb ramps, and countdown signals should be provided for pedestrians crossing interstate ramps. See Table 3.1 for more details.

Reduce number and size of driveway entrances. Implement driveway access management plan with all new development.

With future sidewalk/trail development, this intersection crossing needs substantial improvement. At a minimum, highly visible marked crosswalks, curb ramps, and countdown signals should be provided. Driveway access management is also critical. See Table 3.1 for more details.

Install sidewalk along NC 56 as part of all future roadway reconstruction and new development (widening of roadway introduced in Comprehensive Land Use Plan).

Create gateway entrance with signage and landscaping.

Connect with Creedmoor sidewalk/greenway system.

— — — — Proposed Sidewalk
 Schools
 Parks
 0 250 500 Feet

PROJECT #4 - D STREET (CENTRAL AVE. TO 31ST ST.)

D Street runs adjacent to Butner Stem Elementary and Butner Stem Middle with both main entrances to the schools on D Street. There are also sports fields that receive regular use during weekday evenings and weekends. A school zone is present along D Street adjacent to school property. Currently, a traffic officer directs traffic at D Street/Central Avenue during school drop-off and pick-up times. The Town of Butner received a Safe Routes to School (SRTS) infrastructure grant to build sidewalk along the north side of D Street. Sidewalk connections, improved crossings, and traffic calming would make this roadway more pedestrian-friendly for kids and parents walking to school.

Key Recommendations

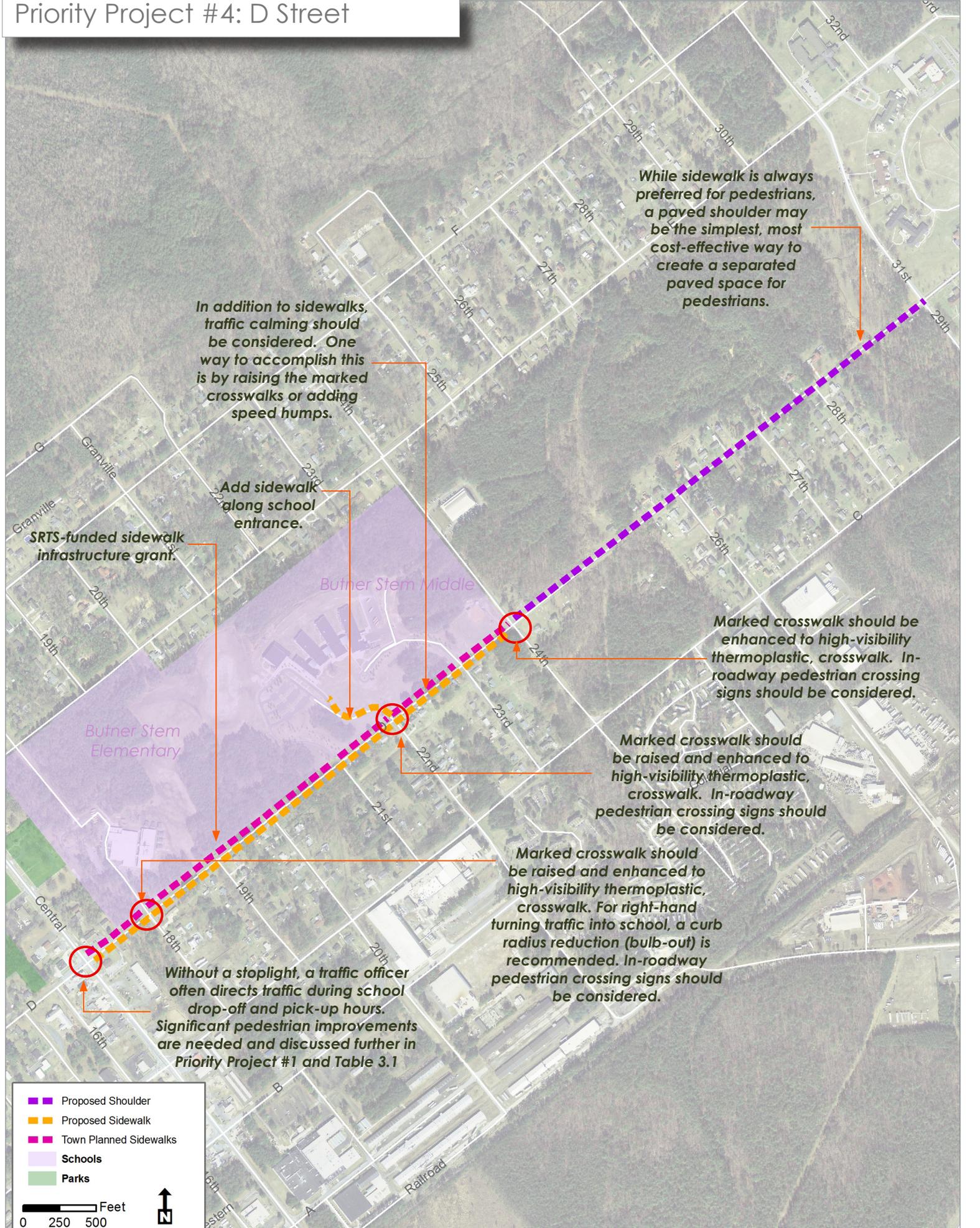
- Sidewalk added on both sides between Central Avenue and 24th Street
- Paved shoulder or sidewalk along one side from 24th Street to 31st Street.
- Crossings improved as shown in map (Central/D, 18th/D, 22nd/D, 24th/D)
- Sidewalk along Middle School entrance across from 22nd Street.
- Crossing guards should be considered at main school entrances.
- For each individual sidewalk/greenway recommendation on school property, the Town of Butner should provide separate easement request to the School Board.



Photo visualization of a crossing improvement and addition of sidewalk on campus at D Street and 22nd Street. Curb is added and extended. The crosswalk is raised and made highly-visible.



Priority Project #4: D Street



In addition to sidewalks, traffic calming should be considered. One way to accomplish this is by raising the marked crosswalks or adding speed humps.

While sidewalk is always preferred for pedestrians, a paved shoulder may be the simplest, most cost-effective way to create a separated paved space for pedestrians.

Add sidewalk along school entrance.

SRTS-funded sidewalk infrastructure grant.

Butner Stem Middle

Butner Stem Elementary

Marked crosswalk should be enhanced to high-visibility thermoplastic, crosswalk. In-roadway pedestrian crossing signs should be considered.

Marked crosswalk should be raised and enhanced to high-visibility thermoplastic, crosswalk. In-roadway pedestrian crossing signs should be considered.

Marked crosswalk should be raised and enhanced to high-visibility thermoplastic, crosswalk. For right-hand turning traffic into school, a curb radius reduction (bulb-out) is recommended. In-roadway pedestrian crossing signs should be considered.

Without a stoplight, a traffic officer often directs traffic during school drop-off and pick-up hours. Significant pedestrian improvements are needed and discussed further in Priority Project #1 and Table 3.1

- Proposed Shoulder
- Proposed Sidewalk
- Town Planned Sidewalks
- Schools
- Parks

0 250 500 Feet

PROJECT #5 - 24TH STREET (COLONIAL TRAILER PARK TO F STREET)

24th Street runs parallel to Central Avenue about halfway between Central Avenue and the Murdoch Center. It provides a connection from trailer park and multi-family housing to Butner Stem Middle School, Butner Stem Elementary School, the sports fields, and the Sports Arena. Creating a safe pedestrian environment for pedestrians of all ages is critical for this roadway. Pedestrian crossing treatments are needed along the route.

Key recommendations

- Sidewalk added on one side along 24th Street (NE side from Colonial Trailer Park to C Street and from D Street to F Street; SW side from C Street to D Street)
- Crossings improved as shown in map and Table 3.1 (24th/C Street, 24th/D Street). Crossing of C Street to at least include high-visibility marked crosswalks and signage.
- Crossing of D Street and 24th Street: Consider four-way stop or raised crosswalks across D Street to slow traffic and make safer for pedestrians.
- Seek SRTS enhancement monies from Division 5 for this project.



Photo visualization of crossing improvement at D Street and 24th Street. This is a common crossing point for schoolchildren, parents, and all residents due to the adjacent points of interest (schools, sports field, Sports Arena). The crossing should stand out more clearly to motorists with highly-visible marked crosswalks and signage.



Priority Project #5: 24th Street



Sidewalk should continue to E Street to complete continuous pedestrian facility that provides key connection from residential areas to the two schools.

A raised, mid-block crossing should be added for pedestrians crossing from the parking lot to the ballfield. In-roadway pedestrian crossing signs should be considered.

Marked crosswalk should be enhanced to high-visibility thermoplastic, crosswalk. Additional traffic calming measures such as a four-way stop and/or raised crosswalk should be considered.

Sidewalk should be installed on one side of 24th Street. At the time of this study, the sidewalk appeared more feasible on the west side. Further study and work with homeowners may be necessary.

Intersection does not feature a stoplight but crossings are often made by residents of multi-family and trailer park housing. Highly-visible marked crosswalks and signage should be installed. A crossing guard should be considered during school hours. See Table 3.1 for more details.

Sidewalk should continue along 24th Street to provide safe space for pedestrians.

— — — Proposed Sidewalk
— — — Town Planned Sidewalks
 Schools
 Parks

0 250 500 Feet

PROJECT #6 - SPORTS ARENA/SCHOOLS GREENWAY TRAILS

There is opportunity for greenway trails in and around Butner Stem Elementary/Butner Stem Middle and the Sports Arena. With the existing paved trail connecting both school buildings, spur trails would connect to the park on Central Avenue, E Street, and 24th Street for easier walking connectivity. Existing, cleared easements behind the Sports Arena also provide opportunity for walking connectivity and recreation.

For each individual greenway recommendation on school property, the Town of Butner should provide separate easement requests to the School Board.

Key Recommendations

- Greenway trail spurs on school property to E Street/18th Street, 24th Street from Middle School, and the park on Central Avenue. In the short term, make trails more accessible at low cost, by clearing better-defined pathways.
- Greenway trails should be considered behind Sports Arena.
- Roadway crossings should be improved where greenways intersect Central Avenue, 24th Street, and the school bus entranceway on campus.
- Bike racks should be provided near both the elementary and middle school.
- Provide signage with hours and consider using Spanish language as well.



Above: Easement from 24th Street to Butner Stem Middle. This should be formalized as a paved trail and designed for safety. In the short term, the Town should work with the schools to make the path more accessible without pavement (temporary low cost solution). Top right: Cleared and graded easement adjacent to Sports Arena; Bottom right: Existing on-campus pathway, near 24th and D Street intersection.

Priority Project #6: Sports Arena/Schools



PROJECT #7 - E STREET (CENTRAL AVENUE TO 31ST ST.)

E Street parallels D Street on the north side of the Butner Stem Middle and Butner Stem Elementary School properties. This roadway connects dozens of residences in the NE quadrant of Butner to Central Avenue and the two schools. Pedestrian enhancements are recommended.

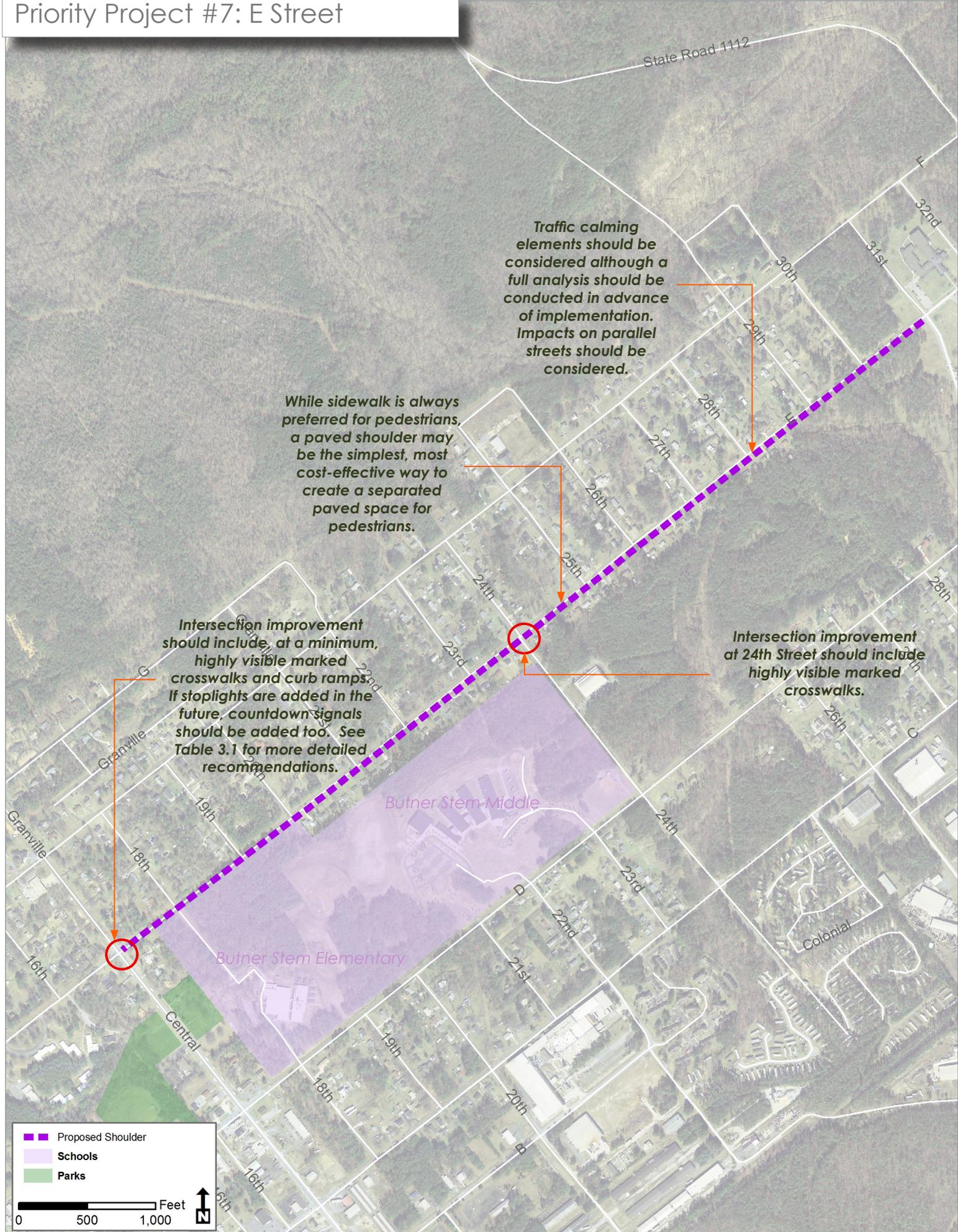
Key Recommendations

- Paved shoulders both sides or sidewalk on one side for length of corridor from Central Avenue to 31st Street.
- Traffic calming elements such as speed humps (or tables) and/or staggered stop signs should be considered but analysis should be conducted before implementation.



E Street, near 31st Street. This is characteristic of this roadway segment. A paved shoulder on both sides or sidewalk on one side would create a safe haven for pedestrians.

Priority Project #7: E Street



State Road 1112

Traffic calming elements should be considered although a full analysis should be conducted in advance of implementation. Impacts on parallel streets should be considered.

While sidewalk is always preferred for pedestrians, a paved shoulder may be the simplest, most cost-effective way to create a separated paved space for pedestrians.

Intersection improvement should include, at a minimum, highly visible marked crosswalks and curb ramps. If stoplights are added in the future, countdown signals should be added too. See Table 3.1 for more detailed recommendations.

Intersection improvement at 24th Street should include highly visible marked crosswalks.

Butner Stem Middle

Butner Stem Elementary

Colonial

- Proposed Shoulder
- Schools
- Parks

0 500 1,000 Feet



PROJECT #8 - B STREET (CENTRAL AVENUE TO NEW PARK/8TH STREET)

B Street is a three-lane roadway exhibiting rural roadway characteristics and a speed limit of 45mph. This roadway is a critical link to the new park at B Street and 8th Street. This roadway provides an opportunity for a recreational sidepath. Central Avenue/B Street and B Street/New Park crossings need significant pedestrian improvements.

Key Recommendations

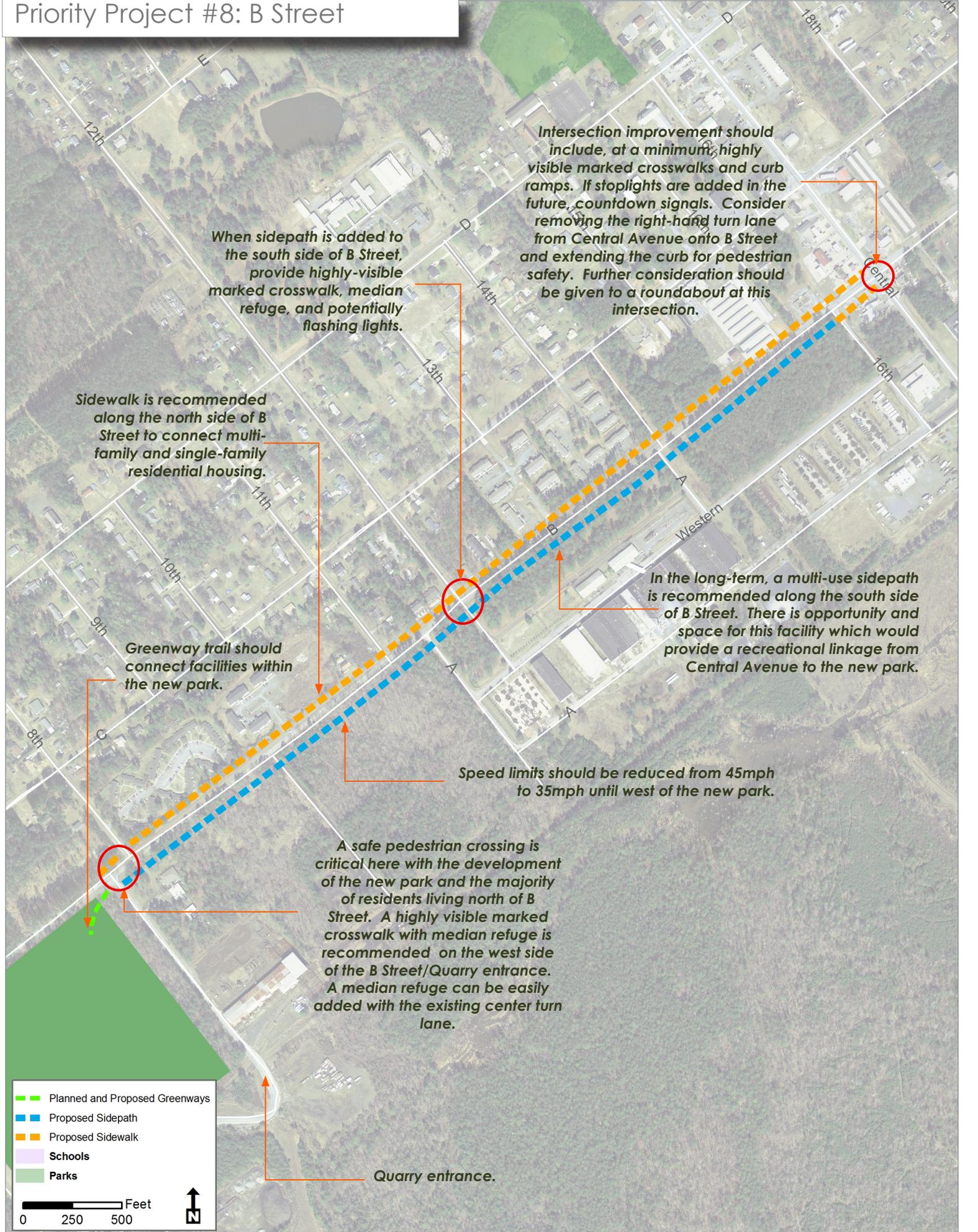
- Sidewalk along north side; Sidepath along south side (long-term recreational concept).
- Reduce speed limit from 45mph to 35mph near park area
- Crossings improved as shown in Table 3.1 and map on following page (Central/B, New Park/8th Street/B Street)
- Greenway path continuing into facilities at new park



Above: B Street, at the Quarry entrance/8th Street. When the park is developed, a safe pedestrian crossing will be needed across B Street. Right: Characteristic photo of B Street with ample space for sidepath development. The Town should also work with NCDOT to lower speed limit along B Street near the new park.



Priority Project #8: B Street



When sidepath is added to the south side of B Street, provide highly-visible marked crosswalk, median refuge, and potentially flashing lights.

Intersection improvement should include, at a minimum, highly visible marked crosswalks and curb ramps. If stoplights are added in the future, countdown signals. Consider removing the right-hand turn lane from Central Avenue onto B Street and extending the curb for pedestrian safety. Further consideration should be given to a roundabout at this intersection.

Sidewalk is recommended along the north side of B Street to connect multi-family and single-family residential housing.

In the long-term, a multi-use sidepath is recommended along the south side of B Street. There is opportunity and space for this facility which would provide a recreational linkage from Central Avenue to the new park.

Greenway trail should connect facilities within the new park.

Speed limits should be reduced from 45mph to 35mph until west of the new park.

A safe pedestrian crossing is critical here with the development of the new park and the majority of residents living north of B Street. A highly visible marked crosswalk with median refuge is recommended on the west side of the B Street/Quarry entrance. A median refuge can be easily added with the existing center turn lane.

Quarry entrance.

- Planned and Proposed Greenways
- Proposed Sidepath
- Proposed Sidewalk
- Schools
- Parks

0 250 500 Feet

PRIORITY PROJECT COST ESTIMATES

The following table provides cost estimates for the key elements of the priority projects. These are estimates only and are meant to provide a preliminary idea of funding required.

Priority Project #	Road Name	Roadway Crossings or End Points	5'-Wide Sidewalk (\$75 per linear foot)	Total Distance (Ft)	10'-Wide Multi Use Trail (\$133 per linear foot)	Total Distance (Ft)	High Visibility Thermoplastic Crosswalks (\$1500 for each ladder style crosswalk)	Curb Ramp with Truncated Dome (\$800 each for new, \$1500 retrofitted)	Special Features/Notes	Est. Additional Cost for Special Features	Total Cost
#1	Central Ave	A Street to G Street	\$489,000.00	6520			\$30,000.00	\$16,000.00	Pedestrian countdown signals, landscaping and street trees and driveway management	\$25,000.00	\$560,000.00
#2	C Street	Lyon Station Rd to Central Ave	\$421,500.00	5620	\$784,700.00	5900	\$24,000.00	\$12,800.00	School zone signage and flashing lights	\$5,000.00	\$1,248,000.00
#3	NC 56 (East of I-85)	I-85 to Washington	\$771,000.00	10280			\$15,000.00	\$8,000.00	Pedestrian count down signals and driveway management	\$16,000.00	\$810,000.00
#4	D Street	Central Ave to 31st St	\$301,500.00	4020			\$24,000.00	\$12,800.00	Paved shoulder, pedestrian signage, and bulb-outs	\$30,000.00	\$368,300.00
#5	24th St	Colonial Trailer Park to 29th St	\$229,500.00	3060			\$12,000.00	\$6,400.00			\$247,900.00
#6	Sports Arena/Schools	Greenways			\$812,896.00	6112	\$6,000.00	\$3,200.00			\$822,096.00
#7	E Street	Central Ave to 31st St	\$371,000.00	7420 Ft of Paved Shoulder @ \$50 per linear foot			\$6,000.00	\$3,200.00			\$380,200.00
#8	B Street	Central Ave to New Park/8th Street	\$397,500.00	5300	\$651,700.00	4900	\$6,000.00	\$3,200.00			\$1,058,400.00

**CHAPTER OUTLINE:****OVERVIEW****PROGRAM
RECOMMENDATIONS
AND RESOURCES****EDUCATION****ENCOURAGEMENT****ENFORCEMENT****PEDESTRIAN POLICIES****OVERVIEW**

Meeting the goals of this Plan will not only require new facilities; it also requires implementation of pedestrian-related programs and policies. A comprehensive approach is necessary to create a pedestrian-friendly community. The approach must focus on overall livability and walkability in all planning decisions involving land use, growth, and transportation. Programs that encourage walking, educate about safety, and enforce safe behavior are also key components. This chapter outlines recommended programs, policies, and in some cases, policy changes for the Town of Butner to meet the needs of pedestrians that cannot be met through facility construction alone.

PROGRAM RECOMMENDATIONS AND RESOURCES

Pedestrian-related programs fall into three main categories: education, encouragement, and enforcement. The programs listed below are provided to demonstrate the variety of opportunities that exist for promoting walking and active lifestyles in Butner. The Town should work with local volunteers and local community organizations to initiate at least one of the following programs or events (whichever are deemed the most appropriate and/or feasible to those organizing) within the first year of adopting this plan.

EDUCATION***BICYCLE AND PEDESTRIAN ADVOCACY GROUP***

The Town of Butner should support the creation of a local bicycle and pedestrian advocacy group. Even though this is a pedestrian plan, the needs and objectives of bicycle and pedestrian advocates are closely related, and stand to benefit mutually from their combined efforts. Local advocacy groups are beneficial resources for promoting safety, providing feedback on opportunities and obstacles within

the bicycle and pedestrian system, and coordinating events and outreach campaigns (such as the programs outlined throughout this section). Advocacy groups also play a critical role in encouraging and evaluating the progress of overall plan implementation.

PUBLIC EDUCATION

Educational materials can focus on safe behaviors, rules, and responsibilities. Information may include important pedestrian laws, bulleted keys for safe pedestrian travel, safe motor vehicle operation around pedestrians, and general facility rules and regulations. This safety information is often available for download from national pedestrian advocacy organizations, such as the Pedestrian and Bicycle Information Center website, www.walkinginfo.org.



Safety information is available for download from the Pedestrian and Bicycle Information Center website. Additional safety and education information can be found at the Granville County Greenways website (<http://www.granvillegreenways.org>).

Information can be distributed through brochures, newsletters, newspapers, bumper stickers, and other print media that can be inserted into routine mailings. It can also be posted on municipal websites. Local events should be utilized to distribute information and a representative from the pedestrian advocacy group can answer questions related to pedestrian safety. A booth could also be used to display safety information at various community events.



INTERNAL EDUCATION

'Internal' education refers to the training of all people who are involved in the actual implementation of the Pedestrian Transportation Plan. Internal training will be essential to institutionalizing pedestrian issues into the everyday operations of engineering, planning, and parks and recreation departments. Key Town staff, members of the local planning board, RPO, NCDOT Division 5 staff, and Granville County staff should all be included in training sessions whenever possible. This training should cover all aspects of the transportation and development process, including planning, design, development review, construction, and maintenance. This type of 'inreach' can be in the form of brown bag lunches, professional certification programs and attendance at special sessions or conferences. Even simple meetings to go over the Pedestrian Plan and communicate its strategies and objectives can prove useful for staff and newly elected officials that may not have otherwise learned about the plan. Guidance and materials for internal education methods is available from the NCDOT Bicycle and Pedestrian Division and the Institute for Transportation Research and Education (ITRE).

INTERPRETIVE TRAILS/GUIDED TOURS

An educational component to the pedestrian network could be added by developing historical, cultural, and environmental themes for the facilities. This idea can be adapted to create walking tours throughout the Town, using signage to identify the events, architecture, and culture that make the Town of Butner unique, such as the historic features of the WWII training camp. These tours should be simple to navigate and should stand alone as an amenity. However, brochures can be used to supplement signage with more detailed information and a map of the tour. Other ideas to supplement the signage could be organized “talks” or lectures by local experts.

EDUCATION ACTIONS

- The Town of Butner should support the creation of local bicycle and pedestrian advocacy group.
- The Town of Butner should consider sponsoring a training session for pedestrian design/review
- Create a self-guided walking tour of historical/cultural sites
- Establish outdoor classrooms utilizing interpretative signage in open space, parks, and on future trails.
- Download a variety of safety materials for distribution to various age groups and at multiple events and locations

EDUCATION RESOURCES

America Walks is a national coalition of local advocacy groups dedicated to promoting walkable communities. Their mission is to foster the development of community-based pedestrian advocacy groups, to educate the public about the benefits of walking, and, when appropriate, to act as a collective voice for walking advocates. They provide a support network for local pedestrian advocacy groups. <http://americawalks.org>

Safe Communities is a project of the National Highway Traffic Safety Administration (NHTSA). Nine agencies within the U.S. Department of Transportation are working together to promote and implement a safer national transportation system by combining the best injury prevention practices into the Safe Communities approach to serve as a model throughout the nation. <http://www.nhtsa.dot.gov/safecommunities>



Speed Campaign Tool Kit. The intent of this National Highway Traffic Safety Administration (NHTSA) tool kit is to provide marketing materials, earned media tools, and marketing ideas for communities to distribute to fit local needs and objectives while at the same time partnering with other states, communities, and organizations all across the country on a speed management program. It includes messaging and templates you may choose from to support your speed management initiatives. Free TV and radio materials, posters, billboards, and other media materials can be downloaded here: <http://www.nhtsa.gov/speed/toolkit/index.cfm> Example posters below:



Stepping Out is an online resource for mature adults to learn about ways to be healthy by walking more often, and walking safely. www.nhtsa.dot.gov/people/injury/olddrive/SteppingOut/index.html

'Pedestrian Fatalities Related to School Travel' is a fact sheet pertaining to school age children (NHTSA). <http://www.nhtsa.gov/gtss/kit/pedestrian.html>

Safe Kids Worldwide is a global network of organizations whose mission is to prevent accidental childhood injury, a leading killer of children 14 and under. More than 450 coalitions in 15 countries bring together health and safety experts, educators, corporations, foundations, governments and volunteers to educate and protect families. Visit their website to receive information about programs, involving media events, device distribution and hands-on educational activities for kids and their families.

<http://www.safekids.org/>



Rules of the Road for Grandchildren: Safety Tips is an information website for grand parenting. If you are a grandparent, you can play an important role in teaching your grandchildren the "rules of the road." AARP.

<http://www.aarp.org/confacts/grandparents/rulesroad.html>



'Streets in America are Unsafe and Unforgiving for Kids'. Article by the Pedestrian Safety Roadshow. U.S. Department of Transportation. Federal Highway Administration.

<http://www.fhrc.gov/safety/pedbike/articles/unsafe.htm>



'Focusing on the Child Pedestrian.' Pedestrian information related to children from the FHWA. <http://safety.fhwa.dot.gov/roaduser/pdf/PedFacts.pdf>



Eat Smart, Move More is a statewide movement that promotes increased opportunities for healthy eating and physical activity wherever people live, learn, earn, play and pray. <http://www.eatsmartmovemorenc.com/>



NCDOT Division of Bicycle and Pedestrian Transportation provides significant information related to pedestrian programming.

<http://www.ncdot.org/transit/bicycle/>



ENCOURAGEMENT

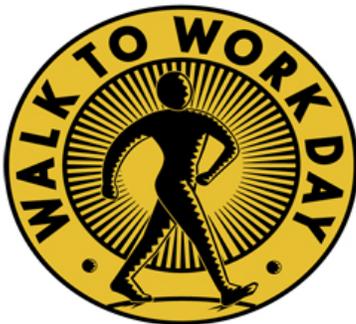
SCHOOL PROGRAMS

Many programs focus on developing safer pedestrian facilities around schools. Programs can be adopted by parents and schools to provide initiatives for walking.

Community leaders, parents and schools across the U.S. are using Safe Routes to School programs to encourage and enable more children to safely walk and bike to school. The National Center for Safe Routes to School aims to assist these communities in developing successful Safe Routes programs and strategies. The Center offers a centralized resource of information on how to start and sustain a Safe Routes to School program, case studies of successful programs as well as many other resources for training and technical assistance. For more information on Safe Routes to School, refer to the 'Encouragement Resources' section below.

AWARENESS DAYS/EVENTS

A specific day of the year can be devoted to a theme to raise awareness and celebrate issues relating to that theme. A greenway and its amenities can serve as a venue for events that will put the greenway on display for the community. Major holidays, such as July 4th, and popular local events serve as excellent opportunities to include pedestrian information distribution. The following are examples of other national events that can be used to increase use of pedestrian facilities:

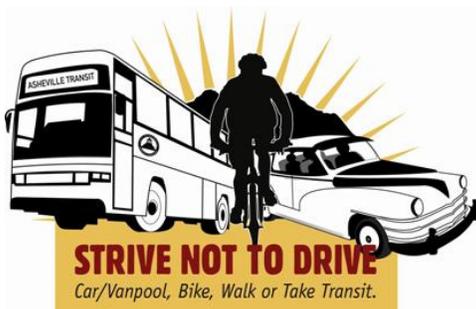


WALK TO WORK DAY/INTERNATIONAL CAR FREE DAY

(September 22) Designate one day a year for people to walk to work to help advance programs, promote active living, and raise awareness for environmental issues. Walk to Work Day can be at the end of an entire week or month of pedestrian promotional activities, including fitness expos, walking and jogging group activities, running and bicycling races and rides, etc.

"STRIVE NOT TO DRIVE DAY"

This event example, from the Town of Black Mountain, NC, is an annual event to celebrate and promote the Town's pedestrian achievements for the year throughout their region. Awards for pedestrian commuters, as well as booths, contests, and other events are organized through their local MPO Bicycle and Pedestrian Task Force and the Land-of-Sky Regional Council. A similar event could be held in Butner, as the Pedestrian Plan is implemented.



INTERNATIONAL WALK TO SCHOOL MONTH

This month-long event is held each October. It gives children, parents, teachers, and community leaders the opportunity to be part of a global event. Granville County and the Town of Butner have designated October as International Walk to School Month. For more information, visit www.iwalktoschool.org.

NATIONAL TRAILS DAY

This event is held every year in June. Other events, competitions, races, and tours can be held simultaneously to promote trails in Butner. The Annual Chicken Pickin' takes place near this date every year.

EARTH DAY

Earth Day is April 22nd every year and offers an opportunity to focus on helping the environment. Efforts can be made to encourage people to help the environment by walking to destinations and staying out of their vehicles. This provides an excellent opportunity to educate people of all ages.

USE FACILITIES TO PROMOTE OTHER CAUSES

Pedestrian facilities, especially trails, could be used for events that promote other causes, such as health awareness. Not only does the event raise money/publicity for a specific cause, but it encourages and promotes healthy living and an active lifestyle, while raising awareness for pedestrian activities. Non-profit organizations such as the American Cancer Society, American Heart Association, and the Red Cross sponsor events such as Breast Cancer Walk, Diabetes Walk, etc.

PEDESTRIAN ACTIVITIES/ PROMOTION WITHIN LOCAL ORGANIZATIONS

The Town of Butner has numerous organizations that could help to promote pedestrian activities (e.g. the local Chamber of Commerce, local schools/PTAs, etc). Education, enforcement, and encouragement programs can be advertised and discussed in local organization newsletters, seminars, and meetings. Such organizations could even organize their own group walks, trail clean-ups, and other activities listed in this section.

ART IN THE LANDSCAPE

The inclusion of art along pedestrian corridors and future trails would encourage use of facilities and provide a place for artwork and healthy expression to occur. Artwork could be displayed in a variety of ways and through an assortment of materials. Sculpture gardens could be arranged as an outdoor museum. Art through movement and expression could be displayed during certain hours during the day or during seasonal



events. An “Art Walk” could be established as an event featuring destinations throughout the Town that display local art. Artwork can be provided by local schools, special interest clubs and organizations, or donated in honor or memory of someone.

WALKING/RUNNING CLUBS

Neighborhoods, local groups, or businesses could promote walking or running clubs for local residents or employees to meet at a designated area and exercise on certain days before or after work, during lunch breaks, or anytime that works for the group. This informal group could be advertised on local bulletin or information boards. These clubs could be specialized to attract different interest groups. Examples include:

- Relay for Life (cancer support)
- Mother’s Morning Club (mom’s with strollers)
- Walking Wednesdays (senior groups)
- Lunch Bunch (workers who run during their lunch hour)

ADOPT-A-TRAIL

Local clubs and organizations provide great volunteer services for maintaining and patrolling trails. This idea could be extended to follow tour routes or specified streets/sidewalks. A sign to recognize the club or organization could be posted as an incentive to sustain high quality volunteer service. The Boy Scouts of America serve as a good model for participation in this type of program.

REVENUE GENERATING EVENTS

The Town of Butner should consider holding events that can help fund future facilities. Program and event ideas that could be used to generate revenue in Butner include:

- Races/triathlons (fees and/or donations)
- Educational walks/Nature walks/Historic walks (fees and/or donations)
- Fund-raisers including dinners/galas
- Concerts (fees and/or donations)
- Events coincident with other local events such as fairs, festivals, historic/folk events, etc.

ENCOURAGEMENT ACTIONS

- Encourage children to walk to school, safely, through a combination of programs, listed under encouragement resources
- Establish awareness days and promote International Walk to School Month
- Encourage the establishment of walking clubs
- Use pedestrian facilities, particularly trails, to promote causes and hold special events for causes
- Utilize future greenways for artwork and plantings



ENCOURAGEMENT RESOURCES

Safe Routes to School is a national program with \$612 million dedicated from Congress from 2005 to 2009. Local Safe Routes to School programs are sustained by parents, community leaders, and citizens to improve the health and well-being of children by enabling and encouraging them to walk and bicycle to school. Recently, the state of North Carolina has started the NC Safe Routes to School Program based off of the national program. The state has funding for infrastructure improvements within 2 miles of schools. This funding can also be used towards the development of school related programs to improve safety and walkability initiatives. The state requires the completion of a competitive application to apply for funding and a workshop at the school to determine what improvements are needed. <http://www.saferoutesinfo.org>



National Walk our Children to School Day is usually held in October with the objective to encourage adults to teach children to practice safe pedestrian behavior, to identify safe routes to school, and to remind everyone of the health benefits of walking. To register walking events in Butner, go to the main webpage, and follow the International Walk to School links: www.walktoschool-usa.org



Walk a Child to School in North Carolina. A growing number of community groups throughout the nation, such as health professionals, 'Smart Growth' advocates, traffic safety groups, local PTAs, and elected officials, are promoting walking to school initiatives. In North Carolina, Walk a Child to School Programs have gained a foothold and are growing each year. To date more than 5,000 students in 12 communities in the state have participated. <http://www.walktoschool.org>

'Preventing Pedestrian Crashes: Preschool/Elementary School Children' provides information to parents on pedestrian risks for preschool and elementary school children. Information about the Safe and Sober Campaign is available on the NHTSA website. www.nhtsa.dot.gov/people/outreach/safesobr/15qp/web/sbprevent.html



Kidswalk-to-School is a resource guide to help communities develop and implement a year-long walk-to-school initiative; sponsored by the Centers for Disease Control and Prevention. <http://www.cdc.gov/nccdphp/dnpa/kidswalk/>



ENFORCEMENT

MOTORIST ENFORCEMENT

Based on crash data analysis and observed patterns of behavior, local police can use targeted enforcement to focus on key issues such as motorists speeding, not yielding to pedestrians in crosswalks, parking on sidewalks, etc. Sidewalk parking, for example, is often not enforced but should be in order to maintain pedestrian accessibility, avoid maintenance issues, and comply with local ordinances. All of these key issues should be targeted and enforced consistently. The goal is for pedestrians and motorists to recognize and respect each other's rights on the roadway.

The NCDOT Division of Bicycle and Pedestrian Transportation funded a study on pedestrian issues, including school zone safety, and decided to establish a consistent training program for law enforcement officers responsible for school crossing guards. According to the office of the North Carolina Attorney General, school crossing guards may be considered traffic control officers when proper training is provided as specified in GS20-114.1.

PEDESTRIAN ENFORCEMENT

Observations made by local trail and pedestrian facility users can help to identify conflicts or issues that require attention. To maintain proper use of trail facilities, volunteers could patrol trails, particularly on the most popular trails and on days of heavy use. The volunteer patrol can report suspicious or unlawful activity, as well as answer any questions a trail user may have. The volunteer patrol could be a responsibility of a pedestrian advocacy group or a neighborhood crime watch group.

ENFORCEMENT ACTIONS

- Local police should use targeted enforcement to focus on key issues such as motorists speeding, not yielding to pedestrians in crosswalks, parking on sidewalks, etc.
- Establish a crossing guard program for peak school hours and for peak tourist pedestrian activity near beach access areas.
- Require all crossing guards to complete an NCDOT Crossing Guard Training Program

- Develop a simple brochure that outlines local leash laws, to be distributed as warnings from police officers and as education tools at pet stores and veterinarian offices. This may help to decrease incidents where pedestrians are intimidated or even harmed by unleashed dogs.

ENFORCEMENT RESOURCES

NCDOT School Crossing Guard Program

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

NCDOT's A Guide to North Carolina Bicycle and Pedestrian Laws. For an online resource guide on laws related to pedestrian and bicycle safety (provided by the National Highway Traffic Safety Administration), visit

www.nhtsa.dot.gov/people/injury/pedbimot/bike/resourceguide/index.html

PEDESTRIAN POLICIES*

While the physical recommendations described in this Plan represent an overall pedestrian network, strong pedestrian-oriented policies and regulations are also necessary to ensure these facilities are developed, especially when new development takes place. These recommended policy statements would help the Town of Butner achieve its vision of becoming a pedestrian-friendly community. Town planning staff should become familiar with these policies and regulations to ensure the full suite of policy tools are used and enforced.

Walkability should be an item considered with all future development and growth decisions. More people will walk when their proximity to key destinations is reasonable. For example, a mixed use development will engage more walking while the development of a school at the outskirts of town will promote less walking and more driving.

This section is divided into two main components: 1) Strategic policy categories and statements, and 2) Table of pedestrian-related policies and recommended updates.

**Policy statements that require pedestrian facilities with development must be somewhat flexible and practical within regulations for physical restrictions. All decisions need to be environmentally sensitive. Sidewalk locations and widths may need to be modified on a case-by-case basis. There must be a proven environmental constraint for pedestrian modifications.*

STRATEGIC POLICY RECOMMENDATIONS

Recommended policy statements and paragraphs by category are provided below that facilitate specific changes. The categories include “Complete Streets,” pedestrian network and connectivity, safety, aesthetics, land use and development, and greenways.

Complete Streets

Goal: Adopt a “Complete Streets” approach and philosophy that all streets and development on streets be designed and operated to enable safe access for all users, ages, and abilities.

- Ensure that transportation agencies, planners, engineers, and developers design and operate the entire right of way to enable safe access for all users including transit users, drivers, pedestrians, bicyclists, as well as for older people, children, and people with disabilities.
- Educate leaders, business owners, residents, and all stakeholders of the benefits of Complete Streets including: livability, safety, increased social interaction, increased economic activity, attractiveness, healthier living, less pollution, and increased access.

Pedestrian Network and Connectivity

Goal: Create and maintain a pedestrian route network that provides direct connections between downtown, trip attractors, schools, and residential/commercial areas.

- To the maximum extent possible, make walkways accessible to people with physical disabilities.
- Develop a system of informational and directional signage for pedestrian facilities and greenways.
- Provide sidewalks on all roads surrounding schools with safe crosswalks.
- Provide pedestrian access through cul-de-sacs and large parking lots, which are typical obstacles to pedestrian connectivity.
- Accommodate pedestrians and bicyclists on roadway bridges, underpasses, and interchanges and on any other roadways that are impacted by a bridge, underpass, or interchange project (except on roadways where they are prohibited by law). All new bridges should be constructed with bicycle lanes and wide sidewalks.

Safety

Goal: Strive to maintain a complete, safe sidewalk network free of broken or missing sidewalks, curb cuts, or curb ramps and that include safety features such as traffic calming, lighting, and sidewalk repairs.

- Provide raised medians or pedestrian refuge islands where practical, at crosswalks on streets with more than three lanes, especially on streets with high volumes of traffic. They should be six- to ten-feet wide.
- Monitor and identify pedestrian facilities that are not ADA-compliant including missing, damaged, or non-compliant curb ramps, stairs, or sidewalk segments of inadequate width and create a plan for improving them.
- Develop a traffic calming program to slow traffic through downtown and on major residential corridors, making them aware that they share the corridors with pedestrians.
- Make pedestrian crossings a priority and initiate improvements recommended in Chapter 3. Consider variations in pavement texture and clear delineation of crosswalks. Also, ensure that crosswalks are properly lit at night.
- Implement pedestrian-scale lighting at regular intervals in areas of high pedestrian activity to promote pedestrian safety and discourage criminal activity.
- Develop and expand the City's maintenance program of sidewalk repairs, debris removal, and trimming of encroaching vegetation.
- Follow design guidelines in Chapter 6 to the maximum extent possible. For example, the buffer space between the sidewalk and the curb and gutter should be maximized within the available right-of-way.

Aesthetics, Comfort, and Enjoyment

Goal: Encourage the inclusion of art, historic, and nature elements along with street furniture and landscaping in pedestrian improvement projects.

- Require street trees and planting buffers between the sidewalk and the street along all new roadways and sidewalk

construction. Keep all vegetation trimmed.

- Encourage and/or require private owners (of residences and businesses) to keep their area in and around the sidewalk free of debris and litter.
- Require benches, shelters, sheltered transit stops, trees, and other features to facilitate the convenience and comfort of pedestrians.

Land Use and Development

Goal: Promote land uses and site designs that make walking convenient, safe, and enjoyable.

- Encourage a mix of uses through building, zoning, and development codes to connect entrances and exits to sidewalks, and eliminate “blank walls” to promote street level activity.
- Sidewalks should have a minimum width of five feet but should be wider where pedestrian traffic is higher, including near schools, senior centers, and commercial areas or where sidewalks connect or overlap with recommended on-road greenway connections.
- Require applicable buildings to build to the sidewalk. Also, prohibit parking lots from being developed in front of buildings where possible to develop pedestrian oriented areas.
- Promote parking and development policies that encourage multiple destinations within an area to be connected by pedestrian trips. Specifically, promote the connectivity of parking lots between businesses for increased safety and avoidance of roadway traffic.
- Disallow parked vehicles from blocking pedestrian walkways.

Greenways

Goal: Establish greenways as part of the Town of Butner's public infrastructure

- Define 'Greenways' as part of the Town of Butner's public infrastructure. Greenways are public infrastructure that provide important functions to not only offer transportation alternatives, but to protect public health safety and welfare. Within flood prone landscapes, greenways offer the highest and best use of

floodplain land, mitigate the impacts from frequent flooding and offer public utility agencies access to floodplains for inspection, monitoring and management. Greenways filter pollutants from stormwater and provide an essential habitat for native vegetation that serves to cleanse water of sediment. Greenway trails provide viable routes of travel for cyclists and pedestrians and serve as alternative transportation corridors for urban and suburban commuters. Greenways serve the health and wellness needs of our community, providing close-to-home and close-to-work access to quality outdoor environments where residents can participate in doctor prescribed or self-initiated health and wellness programs. All of these functions make greenways a vital part of community infrastructure.

- Require subdividers to provide natural buffers along both sides of all perennial streams. Public greenway trails with limited disturbance along perennial and intermittent streams are excellent uses for these spaces and should be dedicated during the subdivision process.
- Encourage utility corridor development practices that allow for maximum compatibility with pedestrian and bikeway corridors. Land and easements purchased for the purpose of providing utilities (such as water and sewer) can serve a greater community benefit if developed to accommodate a multi-use trail.

EXISTING POLICIES AND RECOMMENDED UPDATES TABLE

See following pages...

Source Document	Reference	Existing Text	Recommended Change
Land Development Ordinance	Article 6 Zoning; 6.2 Base Zoning Districts; 6.2.1 Purpose and Intent		Include sentences on ped/bike connections/facilities such as providing adequate facilities for all types of traffic, including motorists, pedestrians, bicyclists, and transit users, and including of all levels of ability, such as those in wheelchairs, the elderly and the young.
Land Development Ordinance	Article 6 Zoning; 6.2 Base Zoning Districts; 6.2.2 Residential Zoning Districts		Include sentences on ped/bike connections/facilities such as providing adequate facilities for all types of traffic, including motorists, pedestrians, bicyclists, and transit users, and including of all levels of ability, such as those in wheelchairs, the elderly and the young.
Land Development Ordinance	Article 6 Zoning; 6.2 Base Zoning Districts; 6.2.3 Non residential Zoning Districts		Include sentences on ped/bike connections/facilities such as providing adequate facilities for all types of traffic, including motorists, pedestrians, bicyclists, and transit users, and including of all levels of ability, such as those in wheelchairs, the elderly and the young.
Land Development Ordinance	Article 6 Zoning; 6.3 Conditional Zoning Districts; 6.3.6 Planned Unit Development District; B Planned Unit Development Standards; 12 Street Design	Streets must be designed and located so that they are integrated into and provide continuation of the surrounding street network. A minimum street connectivity index score of 1.5, as outlined in Section 14.3.4(B) shall be maintained throughout the development.	Include sentences on ped/bike connections/facilities such as providing adequate facilities for all types of traffic, including motorists, pedestrians, bicyclists, and transit users, and including of all levels of ability, such as those in wheelchairs, the elderly and the young.
Land Development Ordinance	Article 13 Off Street Parking, Loading, and Stacking Req; 13.3 General Requirements of Off Street Parking, Loading and Stacking		[Add] Curb cuts and driveway openings should be used only when absolutely necessary in order to minimize potential conflict points with pedestrians and bicyclists. Clearly designated visible pedestrian crosswalks shall be provided across all curb cuts and driveway openings. Parking and loading activities shall not be permitted on sidewalks or crosswalks.
Land Development Ordinance	Article 13 Off Street Parking, Loading, and Stacking Req; 13.7 Pedestrian and Bicycle Facilities; 13.7.1 Pedestrian Circulation	Off-street parking lots with 25 or more spaces shall include pedestrian corridors through parking areas and sidewalks along building facades to accommodate safe pedestrian travel. Pedestrian corridors shall be demarcated by painting, material changes, or differing heights where they cross vehicular travelways.	No Change
Land Development Ordinance	Article 13 Off Street Parking, Loading, and Stacking Req; 13.7 Pedestrian and Bicycle Facilities; 13.7.3 Bicycle Parking	All development with parking areas with 25 or more spaces shall provide bicycle parking facilities, which shall comply with the following standards: (A) Bicycle parking spaces shall be conveniently located, but in no case shall such facilities be located farther than 100 linear feet from the primary building entrance;	[Change]: 100 linear feet to 50 linear feet to encourage bicycling and walking as forms of transportation
Land Development Ordinance	Article 14 Subdivision Standards; 14.3 Streets; 14.3.8 Public Street Design Criteria	Public streets shall be constructed in accordance with the standards contained in the NCDOT Roadway Design Manual or the NCDOT Subdivision Roads Minimum Construction Standards as appropriate.	[Revise to]: The design and construction of all public streets and roads, including the grading, roadbed, shoulders, slopes, medians, ditches, right-of-ways and pavement widths, grades, curves, intersections, pedestrian facilities and other proposed features shall conform the respective current standards of the North Carolina Department of Transportation Division of Highways, the Town of Butner Subdivision Regulations, and the Town of Butner Pedestrian Transportation Plan.

Source Document	Reference	Existing Text	Recommended Change
Land Development Ordinance	Article 14 Subdivision Standards; 14.3 Streets; 14.3.10 Street Intersections	Streets shall be designed to intersect each other at angles as close to 90 degrees as possible. Property lines at street intersections shall be a tangent connecting points on each right-of-way line, which are located a minimum distance of 20 feet back from the intersection of the 2 right-of-way lines in residentially zoned areas and 50 feet in non-residentially zoned areas.	[Add]: Add language about crosswalks, pedestrian count down signals, and pedestrian signage shall be installed at all major and minor thoroughfares
Land Development Ordinance	Article 14 Subdivision Standards; 14.3 Streets; 14.3.13 Maximum Length of Cul-De Sacs	The maximum distance from an intersecting through street to the end of a cul-de-sac shall be 1,000 feet, except in the Watershed Critical Area, where a maximum length of 1,600 feet is allowed.	[Replace 'Culs-de-sac' paragraph with]: Culs-de-sac may be permitted only where topographic conditions and/or exterior lot line configurations offer no practical alternatives for connection or through traffic. Culs-de-sac, if permitted, shall not exceed 250 ft in length from the nearest intersection with a street providing through access (not a cul-de-sac). A close is preferred over a cul-de-sac.
Land Development Ordinance	Article 14 Subdivision Standards; 14.4 Sidewalks; 14.4.1 General	Sidewalks shall be installed on public and private streets that are within or abut a subdivision in accordance with the following standards.	[Add]: Add language about sidewalks must be built in location and design set forth in the Butner Comprehensive Pedestrian Plan
Land Development Ordinance	Article 14 Subdivision Standards; 14.4 Sidewalks; 14.4.3 Exempt Locations	(A) Along new and existing local and sub-collector residential streets where, upon review by the approving body, the following conditions are found to exist: (1) The proposed development is within an area consisting predominantly of existing single-family residential development, where no sidewalks are present;	[Delete]: Consider deleting condition (1) to better serve existing neighborhood pedestrian connections
Land Development Ordinance	Article 14 Subdivision Standards; 14.4 Sidewalks; 14.4.5 Construction Standards	All sidewalks, whether required by this Ordinance or installed voluntarily, shall be constructed to the Town's standard specification for sidewalks and have a minimum width of 5 feet and a minimum thickness of 4 inches of concrete.	[Change]: Residential side-walks shall be a minimum of 5 ft in width. Sidewalks serving mixed use and commercial areas shall be a minimum of 8 ft in width (12–15 feet is required in front of retail storefronts). The design standards for all pedestrian facilities in the Town of Butner Pedestrian Transportation Plan shall be adhered to for new streets and modifications to existing streets.
Land Development Ordinance	Article 17 Definitions		[Add]: Crosswalks Shall mean a right-of-way, publicly owned, ten (10) feet or more in width, which cuts across a block for the purpose of improving pedestrian access to adjacent streets or properties. The use of traffic calming devices such as raised intersections, lateral shifts, and roundabouts are encouraged as alternatives to conventional traffic control measures with approval of the Planning Board. a pedestrian crosswalk at least ten feet in width may be required to provide convenient public access to a public area such as a park, greenway, or school, or to a water area such as a stream, river, or lake. Sidewalks and crosswalks must be ADA compliant and shall be installed in accordance to the Butner Comprehensive Pedestrian Plan.

Source Document	Reference	Existing Text	Recommended Change
Land Development Ordinance	Article 17 Definitions	CUL-DE-SAC STREET A short local street having one end open to traffic and the other end permanently terminated by a vehicular turnaround.	[Add]: Pedestrian and bicycle connections at the ends of cul-de-sacs will be provided to provide connectivity out of cul-de-sac streets
Land Development Ordinance	Article 17 Definitions	EASEMENT A grant by the property owner of a strip of land for a specified purposes and use by the public, a corporation, or persons, such as for utilities.	[Add]: Pedestrian Easements: In such cases and at such locations as the Planning Board deems advisable, easements alongside or near lot lines not exceeding twenty (20) feet in width may be required for pedestrian or bicycle traffic to and from schools, neighborhood parks, and other places that may attract or generate such traffic.
Land Development Ordinance	Article 17 Definitions		[Add New Definition] <i>Greenway</i> : A linear park network left in its natural state, except for the introduction of trails to be used by pedestrians and bicyclists.
Land Development Ordinance	Article 17 Definitions	Any Street and Alley Definition...	[Add]: Regardless of classification, the design and construction of streets and intersections in the Town of Butner should aim to serve all types of users, including pedestrians, bicyclists, and motorists, and should be inclusive of all levels of ability, such as those in wheelchairs, the elderly and the young.
Land Development Ordinance	Article 17 Definitions	CONNECTIVITY The relative degree of connection between streets, sidewalks, or other means of travel.	[Add]: Regardless of classification, the design and construction of streets and intersections in the Town of Butner should aim to serve all types of users, including pedestrians, bicyclists, and motorists, and should be inclusive of all levels of ability, such as those in wheelchairs, the elderly and the young.
Land Development Ordinance	Article 17 Definitions		[Add New Definition] <i>Traffic</i> : Pedestrians and vehicles including bicycles, automobiles and other conveyances either singly or together while using streets for the purposes of travel.
Land Development Ordinance	Entire Ordinance		[Add]: Need to add pedestrian, bicycle, and alternative non-motorized transportation language and guidelines throughout the entire Land Development Ordinance. These modes and facilities need to be stressed as equally if not more important than automobile provisions and facilities. Sidewalks, bicycle lanes, pedestrian facilities, and bicycle racks need to be required with all new development and should follow the recommendations and design guidelines set forth in the Butner Comprehensive Pedestrian Plan.

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CHAPTER OUTLINE:

OVERVIEW

KEY ACTION STEPS

- 1) *Adopt this Plan*
- 2) *Begin Top Priority Projects*
- 3) *Improve and Enforce Town Regulations*
- 4) *Create a Bicycle and Pedestrian Sub-Committee*
- 5) *Take Advantage of All Opportunities*
- 6) *Seek Multiple Funding Sources and Facility Development Options*
- 7) *Develop Pedestrian Programming*
- 8) *Ensure Planning Efforts Are Integrated Regionally*

STAFFING

PERFORMANCE MEASURES (EVALUATION AND MONITORING)

PEDESTRIAN FACILITY DEVELOPMENT

GREENWAY ACQUISITION

ACTION STEPS TABLE

OVERVIEW

The primary barrier to pedestrian facilities in Butner—such as sidewalks, safe intersections, and greenways—is funding. Butner is a small town with a small tax base. This financial barrier is precisely the rationale to prioritize the pedestrian improvements with the greatest impact for the fewest dollars.

Successful implementation will also require the dedication of Town staff, the creation of a Bicycle and Pedestrian Sub-Committee, and the continued support of local advocates. This chapter will serve as a simple guide with key action steps, staffing recommendations, an evaluation and monitoring process, methods of pedestrian facility development and greenway acquisition.

KEY ACTION STEPS

These following steps are integral to achieving the goals and vision of this Plan. As guiding recommendations and the clearest representation of specific items to accomplish, they should be referred to often. With the exception of the first step, there is no particular order in which these should be addressed. For additional action steps, see Table 5.1 at the end of this chapter.

ADOPT THIS PLAN.

Through adoption, the Plan becomes a legitimate planning document of the Town. Adoption shows that the Town of Butner has undergone a successful, supported planning process. The Town can then use this document to improve its chances in receiving funding through NCDOT and other resources. The Town Board and Planning Board should become knowledgeable of this Plan and support pedestrian-related policies. Finally, this Plan should also be integrated into future Town of Butner planning documents.

BEGIN TOP PRIORITY PROJECTS.

Steering Committee input, public input, and criteria such as sidewalk gap closure and proximity to schools and other trip attractors were used to develop the priority projects (see Chapter 3). These high priority projects should be supported by a combination of grants, local funding, and the local Capital Improvement Program (CIP).

IMPROVE AND ENFORCE TOWN REGULATIONS.

To ensure future development provides pedestrian facilities and improves pedestrian friendliness, regulations should be updated and enforced. These policy recommendations are provided in more detail at the end of Chapter 4. It should be the goal of the Town to update zoning and subdivision regulations as soon as possible and to enforce these. All pedestrian-related regulations should be subject to case-by-case environmental evaluation.

CREATE A BICYCLE AND PEDESTRIAN ADVOCACY GROUP

Many communities across the State have committees or groups who advocate for the needs of local bicyclists and pedestrians. The Town of Butner should create an advocacy group committee to embrace an advocacy role for bicycle and pedestrian issues. The committee should help coordinate the implementation of this Plan, develop programs, listen to community needs, promote the pedestrian network, and keep positive momentum going. Consider planning board members, Town staff, Pedestrian Plan Steering Committee members, and Granville County representatives for advocacy group members. There are a few optional structures for this group:

- A Town-appointed group/committee that reports to the Town Council
- A standalone advocacy group that provides support to the Town and community
- A subcommittee of the Town Planning Board or the Granville Greenways group.

The committee can also help monitor the progress of the Town and NCDOT as they develop new facilities and programs. This group can assist in researching and applying for trail and pedestrian-related construction grants. Coordination with NCDOT, specifically the Division of Bicycle and Pedestrian Transportation and the local Division 5 office, will prove critical if this plan is to be implemented successfully.

TAKE ADVANTAGE OF ALL OPPORTUNITIES

While it is ideal to develop pedestrian facilities in order of priority, it is wise to also create facilities when opportunity arises. Some of the most cost-effective opportunities to provide pedestrian facilities are during routine roadway construction, reconstruction, and repaving projects. A new commercial development or a roadway widening project, for instance, would provide the means to stripe crosswalks, build sidewalks or trails as a component of an existing effort, saving costs.

SEEK MULTIPLE FUNDING SOURCES AND FACILITY DEVELOPMENT OPTIONS

Multiple approaches should be taken to support pedestrian facility development and programming. It is important to secure the funding necessary to undertake the short-term, top priority projects but also to develop a long term funding strategy to allow continued development of the overall system. Capital and Powell Bill funds for sidewalk, crosswalk, and greenway construction should be set aside every year, *even if only for a small amount* (small amounts of local funding can be matched to outside funding sources). A variety of local, state, and federal options and sources exist and should be pursued. These funding options are described in Appendix B of this plan. Other methods of pedestrian facility development and greenway acquisition that are efficient and cost-effective are described later in this chapter.

DEVELOP PEDESTRIAN PROGRAMMING.

Programming such as Safe Routes to School and others described in Chapter 4 can help educate and encourage users. Safe Routes to School offers a number of school workshop opportunities and construction funding for improvements around schools. Public events and media involvement should also be considered when announcing new walkways and upcoming projects.

ENSURE PLANNING EFFORTS ARE INTEGRATED REGIONALLY.

Combining resources and efforts for pedestrian planning and trail planning with surrounding municipalities, regional entities, and stakeholders is mutually beneficial to all parties involved. Regional, long-distance trails often spark the most excitement, use, and tourism. The Town should remain coordinated with Granville County and neighboring municipalities on regional trail initiatives. It is important to stay aware and communicative with other municipal, county, state, and NCDOT efforts to ensure the Town takes advantage of funding opportunities and support. A Bicycle and Pedestrian Sub-Committee member, for example, could have the responsibility of staying in tune and updating the Town on regional trail initiatives.

STAFFING

TOWN OF BUTNER

The Town's Planner and Town Manager are responsible for the implementation of pedestrian planning in Butner. The Town will continue to spearhead initiatives to manifest tangible, on the ground results, based on the recommendations of this plan.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

NCDOT Division 5 maintains the state-owned roads in Butner, affecting the pedestrian facilities (or lack thereof) on much of Butner's roadway environment. Recommendations for pedestrian facilities on NCDOT roads will have to be carried out through a coordinated effort between the Town of Butner and NCDOT Division 5. Some technical assistance could also be provided through NCDOT's Division of Bicycle and Pedestrian Transportation (the Town should be proactive in seeking such assistance, and should refer the departments back to this plan whenever possible).

POLICE DEPARTMENT

The Butner Police Department plays a vital role in pedestrian safety. All local police officers should be educated about North Carolina's pedestrian laws to promote positive interactions between pedestrians and motorists. The Guide to North Carolina Bicycle and Pedestrian Laws, written by the NCDOT Division of Bicycle and Pedestrian Transportation, should be distributed to local law enforcement. The Police Department should continue to specifically target know areas of high pedestrian traffic during peak times of the tourist season.

VOLUNTEERS

Services from volunteers, student labor, and seniors, or donations of material and equipment may be provided in-kind, to offset construction and maintenance costs. Formalized maintenance agreements, such as adopt-a-trail/greenway or adopt-a-highway can be used to provide a regulated service agreement with volunteers. Other efforts and projects can be coordinated as needed with senior class projects, scout projects, interested organizations, clubs or a neighborhood's community service to provide for many of the program ideas outlined in Chapter 4 of this plan. Advantages of utilizing volunteers include reduced or donated planning and construction costs, community pride and personal connections to the Town's greenway and pedestrian networks.

PERFORMANCE MEASURES (EVALUATION AND MONITORING)

The Town of Butner should establish performance measures to benchmark progress towards achieving the vision of this Plan. These performance measures should be stated in an official report within two years after the Plan is adopted. Performance measures could address the following aspects of pedestrian transportation and recreation in Butner:

- *Safety.* Measures of pedestrian crashes and injuries or speeding in Town.
- *Facilities.* Measures of how many pedestrian facilities have been funded and constructed since the Plan's adoption.
- *Maintenance.* Measures of existing sidewalk/crosswalk deficiency or maintenance needs
- *Education, Encouragement and Enforcement.* Measures of the number of people who have participated in part of a pedestrian program since the Plan's adoption.

PEDESTRIAN FACILITY DEVELOPMENT

This section describes different construction methods for the proposed pedestrian facilities outlined in Chapter 3. Note that many types of transportation facility construction and maintenance projects can be used to create new pedestrian facilities. It is much more cost-effective to provide pedestrian facilities during roadway construction and re-construction projects than to initiate the improvements later as “retrofit” projects.

To take advantage of upcoming opportunities and to incorporate pedestrian facilities into routine transportation and utility projects, the Town should keep track of NCDOT's projects and any other local transportation improvements. While doing this, s/he should be aware of the different procedures for state and local roads and interstates.

NCDOT TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROCESS

The Transportation Improvement Program (TIP) is an ongoing program at NCDOT which includes a process asking localities to present their transportation needs to state government. Pedestrian facility and safety needs are an important part of this process. Every other year, a series of TIP meetings are scheduled around the state. Following the conclusion

of these meetings, all requests are evaluated. Pedestrian improvement requests, which meet project selection criteria, are then scheduled into a four-year program as part of the state's long-term transportation program.

There are two types of projects in the TIP: incidental and independent. Incidental projects are those that can be incorporated into a scheduled roadway improvement project. Independent are those that can stand alone such as a greenway, not related to a particular roadway.

The Town of Butner, guided by the priority projects within this plan, should present pedestrian projects along State roads to the Kerr-Tar RPO and State. Local requests for small pedestrian projects, such as crosswalks and smaller segments of sidewalk, can be directed to the MPO or the local NCDOT Division 5 office. Further information, including the criteria evaluated can be found at: http://www.ncdot.org/transit/bicycle/funding/funding_TIP.html

LOCAL ROADWAY CONSTRUCTION AND RECONSTRUCTION

Pedestrians should be accommodated any time a new road is constructed or an existing road is reconstructed. All new roads with moderate to heavy motor vehicle traffic should have sidewalks and safe intersections. The Town of Butner should take advantage of any upcoming construction projects, including roadway projects outlined in local comprehensive and transportation plans. Also, case law surrounding the ADA has found that roadway resurfacing constitutes an alteration, which requires the addition of curb ramps at intersections where they do not yet exist.

RESIDENTIAL AND COMMERCIAL DEVELOPMENT

As detailed in Chapter 4, the construction of sidewalks and safe crosswalks should be required during development. Construction of pedestrian facilities that corresponds with site construction is more cost-effective than retro-fitting. In commercial development, emphasis should also be focused on safe pedestrian access into, within, and through large parking lots. This ensures the future growth of the pedestrian network and the development of safe communities.

RETROFIT ROADWAYS WITH NEW PEDESTRIAN FACILITIES

For priority pedestrian projects, it may be necessary to add new facilities before a roadway is scheduled to be reconstructed. In some places, it may be relatively easy to add sidewalk segments to fill gaps, but other segments may require removing trees, relocating landscaping or fences, re-grading ditches or cut and fill sections.

BRIDGE CONSTRUCTION OR REPLACEMENT

Provisions should always be made to include a walking facility as a part of vehicular bridges, underpasses, or tunnels, especially if the facility is part of the Pedestrian Network. All new or replacement bridges should accommodate pedestrians with wide sidewalks on both sides of the bridge. Even though bridge construction and replacement does not occur regularly (especially in Butner) it is important to consider these policies for long-term pedestrian planning. NCDOT bridge policy states that sidewalks shall be included on new NCDOT road bridges with curb and gutter approach roadways. A determination of providing sidewalks on one or both sides is made during the planning process. Sidewalks across a new bridge shall be a minimum of five to six feet wide with a minimum handrail height of 42".

SIGNAGE AND WAYFINDING PROJECTS

When more pedestrian facilities are constructed, the Town should consider developing and adopting a signage style policy and procedure, to be applied throughout the entire community, to make it easier for people to find destinations. Mile markers or signs for the future trail loop are one example of these wayfinding signs, and they can be installed along routes as a part of a comprehensive wayfinding improvement project. For a step-by-step guide to help non-professionals participate in the process of developing and designing a signage system, as well as information on the range of signage types, visit the Project for Public Places website: www.pps.org/info/amenities_bb/signage_guide

EXISTING TOWN EASEMENTS

The Town may have several existing easements offering an opportunity for greenway facilities. Sewer easements are very commonly used for this purpose; offering cleared and graded corridors that easily accommodate trails. This approach avoids the difficulties associated with acquiring land, and it utilizes the Town's existing resources. Refer to the appendix for an example sewer-greenway trail easement.

GREENWAY ACQUISITION

Since not all greenways can be built on existing Town easements, land acquisition is an important component of greenway development. It will be necessary to work with landowners and future development projects. Land acquisition and resource protection methods should be strategic, efficient, and respectful. Non-profit land protection agencies, land trusts, and/or environmental organizations can assist when

attempting to acquire or manage property. These entities often have a great deal of experience selling the greenway benefits of conservation. Because these types of organizations do not have the power to condemn land or the power to tax, they often have excellent personal and professional relations with local landowners. Many options are available to obtain different degrees of control and different ownership relationships to regulate resource use. Providing educational material to local landowners and developers about the benefits of greenways and land/easement donations is an excellent means to stimulate greenway acquisition. The following is a list of potential conservation tools, developing partnerships, development regulations, land management techniques, and acquisition/donation. A more detailed look at each of these tools is provided in this Plan's appendix.

PARTNERSHIPS

Partnerships with land trusts, local developers, economic groups, and private land managers can assist the Town of Butner in developing greenway facilities.

- Land Trusts
- Private Land Managers
- Granville Economic Development Commission

REGULATORY METHODS

This type of resource protection is used to shape the use and development of the land without transferring or selling the land. The rules for this type of tool are established and enforced by a governing body.

- Exactions (Development/Impact Fee, Mandatory Dedications, Fee in Lieu)
- Growth Management Measures (Adequate Public Facilities Ordinances/Concurrency)
- Performance Zoning
- Incentive Zoning (Dedication or Density Transfers)
- Conservation Zoning (Buffer or Transition Zones)
- Overlay Zoning
- Negotiated Dedications
- Planned Unit Development
- Cluster Development
- Shared-use agreements

LAND MANAGEMENT

This type of resource protection refers to developing agreements and/or management plans for public use and greenway easements through private property. This method helps conserve the resources of an open space or greenway parcel or easement.

- Management Plans
- Conservation Easement
- Preservation Easement
- Public Use Easement

ACQUISITION

Land acquisition is a method used to acquire property rights to protect resources or to allow access and free movement of users on a property. This type of method is permanent. Acquisition methods can be divided into two categories: 1) landowners retain ownership of the land and preserve a resource through an easement or other mutual agreement, or 2) land ownership and management is transferred or donated from a landowner to a conservation agency (local government, land trust, or other preservation organization.)

- Donation (Tax Incentives)
- Fee Simple Purchase
- Easement Purchase
- Lease Back Purchase
- Bargain Sale
- Installment Sale
- Right of First Refusal
- Purchase of Development Rights
- Land Banking
- Condemnation

ACTION STEPS TABLE

Task	Lead Agency	Support	Details	Phase
Approve and Adopt this Plan	Town of Butner	Butner Planner/Project Consultant	Official letter of approval expected by Early 2010. Through adoption, the Plan becomes a legitimate planning document. Adoption shows that the plan has been a successful, supported planning process.	Short Term (2010)
Complete Top Priority, Phase 1 Projects	Town of Butner Planning and Public Works	Bicycle/Pedestrian Subcommittee and NCDOT	The priority cutsheets of pedestrian facility development includes the most important projects to improve connectivity and safety. Immediate attention to these high priorities will instantly have a large impact on walking conditions in Butner. First phase work that can be done at a low cost includes the intersection improvements projects and all project cutsheets shown in Chapter 3.	Short-Medium Term (2011-2015)
Seek funding from Division 5 Safe Routes to School (SRTS) enhancement monies	Town of Butner Planning	NCDOT	During a meeting with NCDOT Division 5 staff during this process, it was discovered that additional SRTS monies were available at the division. The Town of Butner should apply for that funding for the 24th Street project (from D Street across C Street) by generating a preliminary design, estimate, and ROW documentation (showing ROW is secured).	Short Term (2010)
Improve and Enforce Town of Butner Regulations	Town of Butner Planning	Bicycle/Pedestrian Subcommittee and NCDOT	Revisions and additions to the Land Development Ordinance: The changes suggested in Chapter 4 serve as recommendations for the ordinance, reflecting the findings and recommendations of this Pedestrian Plan, and clarify some basic policy positions regarding future development and the provision of pedestrian facilities. Some edits are also suggested for consistency in terminology. Also, key additional policy recommendations found in Chapter 4, including Complete Streets, should be implemented. Future development should have pedestrian connectivity and be connected to the rest of Butner.	Short Term (2011-2012)
Create official Butner Bicycle and Pedestrian Advocacy Group	Town of Butner, Pedestrian Plan Steering Committee	Town of Butner Planning and Public Works, Granville County, Granville County Greenways Advisory Committee, Kerr-Tar RPO	This committee will be instrumental in promoting bicycling/walking and championing implementation of this plan. The group would play a strong role in assisting Butner with fundraising, and establishing programs and activities.	Short Term (2011-2012)
Address driveway access management needs, especially along Central Avenue, NC 56, and future development.	Town of Butner Planning	Town of Butner Public Works	The reduction of driveway entrances and the size of entrances creates less conflict points for pedestrians. It will be important not only to ensure new development practices healthy driveway access management, but also to retrofit areas that need improvement.	Short Term (2011-2012) and continuous
Begin Biannual Project Development Meeting With Project Partners	Town of Butner	Town of Butner Planning and Public Works, Granville County, NCDOT, Granville County Greenways Advisory Committee, Kerr-Tar RPO	These meetings will help establish a process of incorporating bicycle and pedestrian improvements into upcoming roadway projects. Many pedestrian projects recommended in this Plan could be developed as part of a roadway reconstruction, widening, or resurfacing project. Also, recommended projects can become part of TIP project lists. Coordination between all appropriate government agencies will ensure that recommendations in this Plan are implemented.	Short Term (2011-2012) and continuous
Ensure recommendations from this Plan become part of regional Comprehensive Transportation Plan (CTP)	Town of Butner Planning	Kerr-Tar RPO, Granville County	Comprehensive Transportation Plans for regions/counties in the Kerr-Tar RPO are updated regularly. The recommendations from this Plan should be submitted for CTP update	Short Term (2011-2012)
Identify and Secure Specific Funding Sources for Project Implementation	Town of Butner	Town of Butner Planning and Public Works, Bicycle/Pedestrian Subcommittee, Granville County, Kerr-Tar RPO, and NCDOT	Appendix B contains funding opportunities. The Town of Butner should also remain updated with the changing funding landscape. Stimulus funding and the transportation bill reauthorization are upcoming at the time of this study.	Short Term (2011-2012) and continuous

Task	Lead Agency	Support	Details	Phase
Develop a Long Term Funding Strategy	Town of Butner	Town of Butner Planning and Public Works, Bicycle/Pedestrian Subcommittee, Granville County, Kerr-Tar RPO, and NCDOT	To allow continued development of the overall system, capital funds for bicycle and pedestrian facility construction should be set aside every year, even if only for a small amount (small amounts of local funding can be matched to outside funding sources). Funding for an ongoing maintenance program should also be included in the town operating budgets. Finally, federal legislation and funding should be monitored as a new transportation bill is likely in the near future.	Short Term (2011-2012) and continuous
Work with Granville County Greenways to ensure common trail design and development practice	Town of Butner Planning	Granville County	The Granville County Greenways design guidelines should be updated to recommend a minimum 10 foot width for the Type IV multi-use paved trail to match the Design Guidelines of this Plan. The Town of Butner should work with Granville County when designing/constructing trails so there is consistency in standards such as width, type, and signage.	Short Term (2011-2012)
Continually evaluate implementation of this plan through monthly progress reports and an annual work plan	Town of Butner Planning	Bicycle/Pedestrian Subcommittee	The Town of Butner should evaluate the progress of this Plan and set measurable goals within an annual work plan.	Continuous/Ongoing
Be open to creative solutions.	Town of Butner Planning	Bicycle/Pedestrian Subcommittee, Town of Butner Public Works, NCDOT	In many cases, the most ideal pedestrian scenario (such as a complete street of bicycle lanes and sidewalks) will not be achievable because of ROW issues, homeowners issues, etc. Consider alternative, creative means such as traffic calming techniques (speed humps, chicanes, bulb-outs, and speed limit reductions).	Continuous/Ongoing
Develop Butner Bicycle/Walking Map	Town of Butner	Bicycle/Pedestrian Subcommittee	A hardcopy and online map will display bicycle and pedestrian facilities, destinations, and educational materials. A map or series of maps would be developed for Butner residents and visitors. These maps should be updated every 3-5 years.	Medium Term (2012-2015)
Enforce both illegal pedestrian and motorist behaviors in Butner.	Town of Butner/Granville County Police Department	Town of Butner Planning, Bicycle/Pedestrian Subcommittee	Central Avenue, C Street, D Street, and NC 56 contain numerous pedestrians and motorists on a daily basis. Enforcement should be increased on motorist speed limits and proper use of crosswalk by pedestrians through education, warnings, and if necessary tickets.	Short Term (2011-2012) and continuous
Begin education and encouragement programs	Town of Butner, Bicycle/Pedestrian Subcommittee, Granville District Health Department	Granville County Economic Development	Education and encouragement programs are an essential component of a comprehensive approach that doesn't just include new infrastructure. Programs can have several goals: safety, healthy living, encouragement incentives, pollution reduction, etc. Once safe pedestrian infrastructure is implemented, existing senior walking clubs should utilize facilities.	Short Term (2011-2012) and continuous
Apply for NCDOT Bicycle Master Plan Grant Opportunity.	Town of Butner Planning	Bicycle/Pedestrian Subcommittee	Consider applying for a bicycle planning grant through NCDOT. Similar to the pedestrian planning grant that the Town of Butner received, this grant would provide funding for bicycle planning activities.	Short Term (2011-2012)
Continually Support and Evaluate Implementation of this Plan	Town of Butner Planning	Bicycle/Pedestrian Subcommittee, Town of Butner Public Works, NCDOT, Kerr-Tar RPO	The different Butner departments and boards and Bike/Ped Subcommittee representatives should meet quarterly to assess implementation and evaluate progress.	Continuous/Ongoing
Use Updated AASHTO Bicycle and Pedestrian Design Guides	Town of Butner Planning and Public Works	Bicycle/Pedestrian Subcommittee	Adopting and implementing the Design Guidelines (Chapter 6) is integral for the development of high-standard pedestrian facilities. It will also be important to obtain new published AASHTO bicycle and pedestrian guidelines when published in 2010-2013. The updated bicycle guidelines are expected in 2010, while pedestrian guidelines will come 1-2 years later. Consider utilization of these new guidelines for facilities recommended in this Plan.	Short-Medium Term (2011-2015)

Task	Lead Agency	Support	Details	Phase
Improve school bus stop (dropoff) locations	Town of Butner Planning and Public Works	Bicycle/Pedestrian Subcommittee, NCDOT, Kerr-Tar RPO	A number of unofficial pickup/dropoff locations can be found throughout Butner. These locations should feature an adequately sized shelter with benches and clearly designated spaces for pedestrians.	Short-Medium Term (2011-2015)
Record All Bicycle and Pedestrian Accidents and Incidents	Town of Butner/Granville County Police Department	Town of Butner Planning, Bicycle/Pedestrian Subcommittee	The Police Department should begin recording all bicycle and pedestrian accidents and incidents within the town. They should be recorded with a date, time, location, and details.	Short Term (2011-2012)
Maintain GIS pedestrian facility database	Town of Butner Planning	Granville County	Continuously update the pedestrian facility database as new facilities come online and new crash data is published. The Town of Butner should lead this effort, but should be coordinated with Granville County as they maintain numerous countywide GIS data sets.	Continuous/Ongoing
Ensure Greenways are Developed as Part of Sewer Line/Easement Construction	Town of Butner Planning and Public Works	Bicycle/Pedestrian Subcommittee	As new development occurs, it is possible that sewer lines will be added. When sewer is installed along local creeks, greenways should be developed along the easements. These greenways can serve both a transportation and recreation function while also providing easy access for sewer maintenance crews.	Short Term (2011-2012) and continuous
Staffing/Training	Town of Butner	Town of Butner Planning and Public Works, Granville County, Granville County Greenways Advisory Committee, Kerr-Tar RPO	Staff from the Town of Butner, NCDOT, and Public Works departments should maintain their knowledge with the latest bicycle/pedestrian design guidelines and facility improvements through classes and training sessions.	Medium Term (2012-2015) and continuous
Online Form for Bicycle/Pedestrian Facility Request	Town of Butner	Town of Butner Planning and Public Works, Bicycle/Pedestrian Subcommittee	Provide a service that allows residents to request bicycle/pedestrian facilities.	Short Term (2011-2012) and continuous
Develop a maintenance strategy. Require that businesses maintain and upkeep their storefronts and sidewalks	Town of Butner Planning and Public Works	Bicycle/Pedestrian Subcommittee	A sidewalk and greenway maintenance plan ensures that all existing features be improved and updated when safety is a concern. Part of this maintenance plan should detail the responsibilities of homeowners and business owners to maintain their storefront and sidewalk areas to improve appearance and safety.	Medium Term (2012-2015) and continuous
Ensure Planning Efforts are Integrated Regionally	Town of Butner Planning	Bicycle/Pedestrian Subcommittee, Granville County, Granville County Greenways Advisory Committee, Kerr-Tar RPO, NCDOT	Combining resources and efforts with surrounding municipalities, regional entities, and stakeholders is mutually beneficial. Communicate and coordinate with neighboring municipalities/counties on regional greenway corridors; partner for joint-funding opportunities. After adoption by the Town, this document should also be recognized in regional transportation plans. Examples of regional projects are connections to Creedmoor, Durham, American Tobacco Trail, and the East Coast Greenway.	Short Term (2011-2012) and continuous
Continue to apply for Safe Routes to School (SRTS) Funding and expand SRTS programs	Town of Butner Planning	Bicycle/Pedestrian Subcommittee, Granville County	Apply for Safe Routes to School funding for planning and implementation. Establish 'walk-to-school' groups and regular walking activities for children through the Safe Routes to School Programs.	Short Term (2011-2012) and continuous
Pedestrian/Bicycle Encouragement	Bicycle/Pedestrian Subcommittee	Town of Butner Planning	Develop programs and incentives for employers to bicycle or walk to work. Work with local employers to accomplish this goal. Promote and expand Bike to Work Month and Bike to Work Day.	Medium Term (2012-2015)
Define and complete Phase 2 Projects	Town of Butner Planning and Public Works	Bicycle/Pedestrian Subcommittee, NCDOT, Kerr-Tar RPO	In 2012, reevaluate priorities based on what has been completed thus far by creating a new agenda of "Phase 2" projects. Consider including priority projects that were not completed and consider updating certain aspects of the plan's design standards, programs, and policies based on innovations and new ideas since 2010.	Medium Term (2012-2015)
Define and complete Phase 3 Projects	Town of Butner Planning and Public Works	Bicycle/Pedestrian Subcommittee, NCDOT, Kerr-Tar RPO	In 2015, reassess projects and reevaluate priorities and phases. Consider updating the entire plan.	Long Term (2015-2019)
Ensure pedestrian connectivity and access to future development, including possible future rail transit	Town of Butner Planning and Public Works	Bicycle/Pedestrian Subcommittee, Granville County	At the time of this study, it is possible that high-speed rail service could come through Butner (Washington DC to Raleigh service). Stay informed about this project's progress and work to establish a Butner stop and pedestrian-friendly hub.	Long Term (2015-2019)



CHAPTER OUTLINE:

OVERVIEW

In order to gain local knowledge and input, a public outreach component was included as an integral part of planning efforts for the Butner Pedestrian Transportation Plan. Public input was gathered through several different means including the following: Steering Committee meetings, a booth at the Chicken Pickin' Festival, a public meeting at a Granville County Greenways Advisory Group meeting, and public comment forms. This offered the representatives and citizens of Butner opportunity to contribute to the Plan's development.

Steering Committee meetings were held throughout the planning process with representatives from Butner and the community. These took place to establish visions and goals for this effort. Committee members also identified key opportunities and strategies for the pedestrian system.

CITIZEN AND STAFF-BASED STEERING COMMITTEE

This committee, composed of citizens, Town staff, Granville County Staff, and school representatives met four times during the planning process. The group established visions and goals for the Plan, identified areas of need in the Butner area, and reviewed the Plan. Members of the Committee marked up maps and identified pedestrian problem areas and possible solutions. The goals are listed in Chapter 1 and input from the Committee is reflected throughout the recommendations of this planning document.

The Steering Committee also provided comment on the Draft Plan. These comments led to revisions made by the Consultant in the development of the Final Plan.

PUBLIC WORKSHOPS

Two public input workshops were conducted during the planning process. The first opportunity was during a Granville County Greenways Advisory Group meeting at the

Sports Arena in April 2010. A presentation was given to this committee and the general public. This initial public input session sought to gather preliminary input from citizens to assist in the development of draft recommendations for the plan. The second public workshop presented draft recommendations and solicited public comment during a the 17th Annual Chicken Pickin' Festival on Central Avenue. Preliminary recommendations were presented in map form at this meeting. Citizens responded to these draft recommendations by providing feedback and discussion of proposed pedestrian facilities.



The Chicken Pickin' Festival provided a unique opportunity to outreach to citizens of Butner.

At both workshop sessions, public input was taken in the form of map markups, written comments, question and answer sessions, and through discussions between citizens, consultant staff from Greenways Incorporated and Town staff. In addition, a hardcopy public comment form was developed and distributed for hand written responses during each meeting.

Goals and ideas that were voiced most consistently were:

- Add sidewalk along Central Avenue, C Street, D Street, and NC 56.
- Improve pedestrian crossings, especially along Central Avenue.
- Connect residences south of I-85, including the Wingate subdivision, to town along Central Avenue.
- Create a sidewalk/trail loop around school properties (D Street, 24th Street, E Street, Central Avenue).
- Repair existing sidewalks and fill sidewalk gaps (Example: 12th Street).
- Slow traffic - speeding is an issue.
- Provide sidewalk connections to schools and grocery.

Map markups from public workshop #2



COMMENT FORM

A comment form was developed for Butner during this process and made available in both hardcopy and online form. The comment form was available online for four months. To maximize the responses to the online form, the web address was distributed at the public meeting, to local interest groups, in newsletters, and on flyers throughout the Town. 67 persons completed the comment form.

The comment form results shown on the following pages have been tabulated by Greenways Incorporated to provide insight into local residents' opinions and values.

1. How do you rate present pedestrian conditions in the Butner area? (select one)			
		Response Percent	Response Count
Excellent		3.0%	2
Fair		41.8%	28
Poor		55.2%	37
answered question			67
skipped question			0

2. How important to you is improving walking conditions in the Butner area? (select one)			
		Response Percent	Response Count
Very important		79.1%	53
Somewhat important		19.4%	13
Not important		1.5%	1
answered question			67
skipped question			0

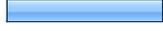
3. Do you feel that the Town should consider non-automobile transportation (i.e. pedestrian and bicycle) as a priority? (select one)			
		Response Percent	Response Count
Yes		75.0%	48
No		9.4%	6
Doesn't matter		15.6%	10
answered question			64
skipped question			3

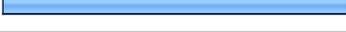
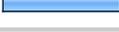
4. How often do you walk now? (select one)			
		Response Percent	Response Count
never		7.5%	5
few times per month		34.3%	23
few times per week		34.3%	23
5+ times per week		23.9%	16
answered question			67
skipped question			0

5. Would you walk more often if more sidewalks, trails, and safe roadway crossings were provided for pedestrians?			
		Response Percent	Response Count
Yes		91.0%	61
No		9.0%	6
answered question			67
skipped question			0

6. Should public funds be used to improve pedestrian options and facilities?			
		Response Percent	Response Count
Yes		92.1%	58
No		7.9%	5
answered question			63
skipped question			4

7. What types of funds should be used? (Choose all that apply)			
		Response Percent	Response Count
Capital improvements bond or other financing strategy		44.3%	27
Existing local taxes		31.1%	19
New local taxes		11.5%	7
State and federal grants		73.8%	45
Other (please specify)		4.9%	3
answered question			61
skipped question			6

8. For what purposes do you walk most now and/or would you want to walk for in the future? Select all that apply.			
		Response Percent	Response Count
Fitness or recreation		92.4%	61
Transportation to some destination		30.3%	20
Social visits		28.8%	19
Walking the dog		31.8%	21
Walking the baby / pushing a stroller		19.7%	13
answered question			66
skipped question			1

9. What walking destinations would you most like to get to? Select all that apply.			
		Response Percent	Response Count
Place of work		15.4%	10
School		23.1%	15
Restaurants		30.8%	20
Shopping		33.8%	22
Parks		55.4%	36
Entertainment		20.0%	13
Trails and greenways		64.6%	42
Libraries or recreation centers		21.5%	14
answered question			65
skipped question			2

10. What factors discourage walking? Select all that apply.			
		Response Percent	Response Count
Lack of sidewalks and trails		82.8%	53
Lack of crosswalks at traffic signals		35.9%	23
Lack of pedestrian signals at intersections		20.3%	13
Automobile traffic and speed		60.9%	39
Pedestrian unfriendly streets and land uses		43.8%	28
Lack of interest		6.3%	4
Lack of time		14.1%	9
Aggressive motorist behavior		26.6%	17
Sidewalks in need of repair		31.3%	20
Lack of nearby destinations		18.8%	12
Criminal activity		14.1%	9
Level of street lighting		21.9%	14
Lack of landscaping and/or buffer between sidewalks and road		10.9%	7
answered question			64
skipped question			3

11. What do you think are the top roadway corridors most needing sidewalk or pedestrian crossing improvements?	
Roadway	Number of Responses
Central Avenue	35
D Street	15
C Street	12
B Street	8
NC 56	5

12. What is your zip code?	
Roadway	Number of Responses
27509	45
27522	14
27565	3
Other	3

13. What is your gender?			
		Response Percent	Response Count
M		32.3%	20
F		67.7%	42
answered question			62
skipped question			5

14. What is your age?			
		Response Percent	Response Count
0-18		0.0%	0
19-25		1.5%	1
26-35		16.9%	11
36-45		18.5%	12
46-55		29.2%	19
56-65		21.5%	14
65 and older		12.3%	8
answered question			65
skipped question			2

15. Where do you live?			
		Response Percent	Response Count
Butner		69.2%	45
Creedmoor		16.9%	11
Granville County		9.2%	6
Other		4.6%	3
answered question			65
skipped question			2



CHAPTER OUTLINE:

OVERVIEW

STATE AND FEDERAL

LOCAL GOVERNMENT

PRIVATE SECTOR

OVERVIEW

When considering possible funding sources for the Town of Butner's pedestrian projects, it is important to consider that it is highly unlikely that all construction activities will be accomplished from a single funding source since these projects are expected to be in the millions of dollars. It will be necessary to consider several sources of funding, that when combined, would support full project construction. This paper outlines the most likely sources of funding for the projects at the federal, state, local government level and from the private sector.

STATE AND FEDERAL

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

DEPARTMENT OF ENERGY (DOE)

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

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

NC DEPARTMENT OF TRANSPORTATION AND SAFETEA-LU

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

- **State Transportation Improvement Program (STIP):** The STIP contains funding for various transportation divisions of NCDOT including: highways, aviation, enhancements, public transportation, rail, bicycle and pedestrians, and the Governor's Highway Safety Program. STIP is the largest single source of funding within SAFETEA-LU and NCDOT.
- **NCDOT Discretionary Funds:** The Statewide Discretionary Fund consists of \$10 million and is administered by the Secretary of the Department of Transportation. This fund can be used on any project at any location within the State. Primary, urban, secondary, industrial access, and spot safety projects are eligible for this funding. The Town would have to make a direct appeal to the Secretary of NCDOT to access these funds.
- **NCDOT Contingency Fund:** The Statewide Contingency Fund is a \$10 million fund administered by the Secretary of Transportation. Again, the Town would have to appeal directly to the Secretary.
- **NCDOT Enhancement Funding:** Federal Transportation Enhancement funding is administered by NCDOT and serves to strengthen the cultural, aesthetic, and environmental aspects of the State's intermodal transportation system. Transportation Enhancement (TE) funding is awarded through NCDOT. The State typically will make a Call for Projects, and each project must benefit the traveling public and help communities increase transportation choices and access, enhance the built or natural environment and create a sense of place.
- **NCDOT Bicycle and Pedestrian Project:** Funds for bicycle and pedestrian projects come from several different sources. Allocation of funds depends on the type of project/program and other criteria. Projects can include independent and incidental projects.

NC DEPARTMENT OF ENVIRONMENT – RECREATIONAL TRAILS AND ADOPT-A-TRAIL GRANTS

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

POWELL BILL FUNDS

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

COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS

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

LAND AND WATER CONSERVATION TRUST FUND

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

N.C. PARKS AND RECREATION TRUST FUND (PARTF)

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

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

SAFE ROUTES TO SCHOOL PROGRAM (MANAGED BY NCDOT, DBPT)

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

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

LOCAL GOVERNMENT

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

LOCAL AREA RURAL PLANNING ORGANIZATION

The Kerr-Tar Rural Planning Organization (RPO) manages the transportation planning process required by Federal law. The RPO plans for the area's surface transportation needs, including highways, transit, bicycle, and pedestrian facilities. There are two subcommittees

of the RPO: the Technical Advisory Committee and the Technical Coordinating Committee. An important part of the transportation planning process is to identify transportation needs and to explore feasible alternatives to meet those needs. Plans and programs are often conducted in partnership with the NC Department of Transportation to identify needs and projects to enhance Butner's transportation infrastructure.

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

TOWN OF BUTNER CAPITAL IMPROVEMENT PROGRAMMING AND RESERVE FUNDS

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

OTHER LOCAL FUNDING OPTIONS

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

PRIVATE SECTOR

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

LAND FOR TOMORROW CAMPAIGN

Land for Tomorrow is a diverse partnership of businesses, conservationists, farmers, environmental groups, health professionals and community groups committed to securing support from the public and General Assembly for protecting land, water and historic places. The campaign is asking the North Carolina General Assembly to support issuance of a bond for \$200 million a year for five years to preserve and protect its special land and water resources. Land for Tomorrow will enable North Carolina to reach a goal of ensuring that working farms and forests; sanctuaries for wildlife; land bordering streams, parks and greenways; land that helps strengthen communities

and promotes job growth; historic downtowns and neighborhoods; and more, will be there to enhance the quality of life for generations to come. Website: <http://www.landfortomorrow.org/>

THE ROBERT WOOD JOHNSON FOUNDATION

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

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

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

NORTH CAROLINA COMMUNITY FOUNDATION

The North Carolina Community Foundation, established in 1988, is a statewide foundation seeking gifts from individuals, corporations, and other foundations to build endowments and ensure financial security for nonprofit organizations and institutions throughout the state. Based in Raleigh, North Carolina, the foundation also manages a number of community affiliates throughout North Carolina, that make grants in the areas of human services, education, health, arts, religion, civic affairs, and the conservation and preservation of historical, cultural, and environmental resources. The foundation also manages various scholarship programs statewide. Web site: <http://nccommunityfoundation.org/>

Z. SMITH REYNOLDS FOUNDATION

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

BANK OF AMERICA CHARITABLE FOUNDATION, INC.

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

DUKE ENERGY FOUNDATION

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

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

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

AMERICAN GREENWAYS EASTMAN KODAK AWARDS

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

NATIONAL TRAILS FUND

American Hiking Society created the National Trails Fund in 1998, the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America. 73 million people enjoy foot trails annually, yet many of our favorite trails need major repairs due to a \$200 million backlog of badly needed maintenance. National Trails Fund grants help give local organizations the resources they need to secure access, volunteers, tools and materials to protect America’s cherished public trails. To date, American Hiking has granted more

than \$240,000 to 56 different trail projects across the U.S. for land acquisition, constituency building campaigns, and traditional trail work projects. Awards range from \$500 to \$10,000 per project.

Projects the American Hiking Society will consider include:

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

THE CONSERVATION ALLIANCE

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

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

Management, this industry has clout - an important tool that small advocacy groups can wield.

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

Web site: www.conservationalliance.com/index.m.

E-mail: john@conservationalliance.com.

NATIONAL FISH AND WILDLIFE FOUNDATION (NFWF)

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

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

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

THE TRUST FOR PUBLIC LAND

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

- Create urban parks, gardens, greenways, and riverways
- Build livable communities by setting aside open space in the path of growth
- Conserve land for watershed protection, scenic beauty, and close-to home recreation safeguard the character of communities by preserving historic landmarks and landscapes.

The following are TPL's Conservation Services:

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

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

BLUECROSS BLUESHIELD OF NORTH CAROLINA FOUNDATION (BCBS)

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

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

LOCAL TRAIL SPONSORS

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

VOLUNTEER WORK

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

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Potential trail ROW
along NC 56

ACQUISITION STRATEGIES

CHAPTER OUTLINE:

OVERVIEW

PARTNERSHIPS

GREENWAY
ACQUISITION TOOLS

EXAMPLE SEWER/GREENWAY
EASEMENT

OVERVIEW

There are many different ways to secure trail right-of-way for greenway systems. It will be necessary to work with some landowners to secure trail right-of-way when it does not exist. The following text provides a list of options that should be considered. Funding sources for acquiring right-of-way and trail development are described and provided in Appendix B.

The following sections detail a list of specific strategies including the formation of partnerships and a toolbox of acquisition options.

PARTNERSHIPS

The Town of Butner should pursue partnerships with land trusts and land managers to make more effective use of their land acquisition funds and strategies. The following offers recommendations on how these partnerships could be strengthened

LAND TRUSTS

*See the North Carolina
Coastal Land Trust website
for more info:
www.coastallandtrust.org*

Land trust organizations are valuable partners when it comes to acquiring land and rights-of-way for greenways. These groups can work directly with landowners and conduct their business in private so that sensitive land transactions are handled in an appropriate manner. Once the transaction has occurred, the land trust will usually convey the acquired land or easement to a public agency, such as a town or county for permanent stewardship and ownership.

PRIVATE LAND MANAGERS

Another possible partnership that could be strengthened would be with the utility companies that manage land throughout the region. Trails and greenways can be built on rights-of-ways that are either owned or leased by electric and natural gas companies. Electric utility companies have long recognized

the value of partnering with local communities, non-profit trail organizations, and private land owners to permit their rights-of-ways to be used for trail development. This has occurred all over the United States and throughout North Carolina.

The Town of Butner should actively update and maintain relationships with private utility and land managers to ensure that community wide bicycle, pedestrian and greenway system can be accommodated within these rights-of-way. The respective municipalities will need to demonstrate to these companies that maintenance will be addressed, liability will be reduced and minimized and access to utility needs will be provided.

GREENWAY ACQUISITION TOOLS

The following menu of tools describe various methods of acquisition that can be used by landowners, land conservation organizations, the Town of Butner, Granville County, and other surrounding municipalities to acquire greenway lands.

GOVERNMENT REGULATION

Regulation is defined as the government's ability to control the use and development of land through legislative powers. Regulatory methods help shape the use of land without transferring or selling the land. The following types of development ordinances are regulatory tools that can meet the challenges of projected suburban growth and development as well as conserve and protect greenway resources.

GROWTH MANAGEMENT MEASURES (CONCURRENCY):

Concurrency-based development approaches to growth management simply limit development to areas with adequate public infrastructure. This helps regulate urban sprawl, provides for quality of life in new development, and can help protect open space. In the famous case with the Town of Ramapo (1972), the Town initiated a zoning ordinance making the issue of a development permit contingent on the presence of public facilities such as utilities and parks. This was upheld in Court and initiated a wave of slow-growth management programs nationwide. This type of growth management can take the form of an adequate public facilities ordinance.

PERFORMANCE ZONING: Performance zoning is zoning based on standards that establish minimum requirements or maximum limits on the effects or characteristics of a use. This is often used for the mixing of different uses to minimize incompatibility and improve the quality of development. For example, how a

commercial use is designed and functions determines whether it could be allowed next to a residential area or connected to a greenway.

INCENTIVE ZONING (DEDICATION/DENSITY TRANSFERS): Also known as incentive zoning, this mechanism allows greenways to be dedicated for density transfers on development of a property. The potential for improving or subdividing part or all of a parcel can be expressed in dwelling unit equivalents or other measures of development density or intensity. Known as density transfers, these dwelling unit equivalents may be relocated to other portions of the same parcel or to contiguous land that is part of a common development plan. Dedicated density transfers can also be conveyed to subsequent holders if properly noted as transfer deeds.

CONSERVATION ZONING: This mechanism recognizes the problem of reconciling different, potentially incompatible land uses by preserving natural areas, open spaces, waterways, and/or greenways that function as buffers or transition zones. It can also be called buffer or transition zoning. This type of zoning, for example, can protect waterways by creating buffer zones where no development can take place. Care must be taken to ensure that the use of this mechanism is reasonable and will not destroy the value of a property.

OVERLAY ZONING: An overlay zone and its regulations are established in addition to the zoning classification and regulations already in place. These are commonly used to protect natural or cultural features such as historic areas, unique terrain features, scenic vistas, agricultural areas, wetlands, stream corridors, and wildlife areas.

NEGOTIATED DEDICATIONS: This type of mechanism allows municipalities to negotiate with landowners for certain parcels of land that are deemed beneficial to the protection and preservation of specific stream corridors. This type of mechanism can also be exercised through dedication of greenway lands when a parcel is subdivided. Such dedications would be proportionate to the relationship between the impact of the subdivision on community services and the percentage of land required for dedication-as defined by the US Supreme Court in *Dolan v Tigar*d.

RESERVATION OF LAND: This type of mechanism does not involve any transfer of property rights but simply constitutes an obligation to keep property free from development for a stated period of time. Reservations are normally subject to a specified period of time, such as 6 or 12 months. At the end of this period, if an agreement has not already been reached to transfer certain property rights, the reservation expires.

PLANNED UNIT DEVELOPMENT: A planned unit development allows a mixture of uses. It also allows for flexibility in density and dimensional requirements, making clustered housing and common open space along with addressing environmental conditions a possibility. It emphasizes more planning and can allow for open space and greenway development and connectivity.

CLUSTER DEVELOPMENT: Cluster development refers to a type of development with generally smaller lots and homes close to one another. Clustering can allow for more units on smaller acreages of land, allowing for larger percentages of the property to be used for open space and greenways.

LAND MANAGEMENT

Management is a method of conserving the resources of a specific greenway parcel by an established set of policies called management plans for publicly owned greenway land or through easements with private property owners. Property owners who grant easements retain all rights to the property except those which have been described in the terms of the easement. The property owner is responsible for all taxes associated with the property, less the value of the easement granted. Easements are generally restricted to certain portions of the property, although in certain cases an easement can be applied to an entire parcel of land. Easements are transferable through title transactions, thus the easement remains in effect perpetually.

MANAGEMENT PLANS: The purpose of a management plan is to establish legally binding contracts which define the specific use, treatment, and protection for publicly owned greenway lands. Management plans should identify valuable resources; determine compatible uses for the parcel; determine administrative needs of the parcel, such as maintenance, security, and funding requirements; and recommend short-term and long-term action plans for the treatment and protection of greenway lands.

CONSERVATION EASEMENT: This type of easement generally establishes permanent limits on the use and development of land to protect the natural resources of that land. When public access to the easement is desired, a clause defining the conditions of public access can be added to the terms of the easement. Dedicated conservation easements can qualify for both federal income tax deductions and state tax credits. Tax deductions are allowed by the Federal government for donations of certain conservation easements. The donation may reduce the donor's taxable income.

PRESERVATION EASEMENT: This type of easement is intended to protect the historical integrity of a structure or important elements in the landscape by sound management practices. When public access to the easement is desired, a clause defining the conditions of public access can be added to the terms of the easement. Preservation easements may qualify for the same federal income tax deductions and state tax credits as conservation easements.

PUBLIC ACCESS EASEMENTS: This type of easement grants public access to a specific parcel of property when a conservation or preservation easement is not necessary. The conditions of use are defined in the terms of the public access easement.

ACQUISITION

Acquisition requires land to be donated or purchased by a government body, public agency, greenway manager, or qualified conservation organization.

DONATION OR TAX INCENTIVES: In this type of acquisition, a government body, public agency, or qualified conservation organization agrees to receive the full title or a conservation easement to a parcel of land at no cost or at a "bargain sale" rate. The donor is then eligible to receive a federal tax deduction of up to 30 to 50 percent of their adjusted gross income. Additionally, North Carolina offers a tax credit of up to 25 percent of the property's fair market value (up to \$5000). Any portion of the fair market value not used for tax credits may be deducted as a charitable contribution. Also, property owners may be able to avoid any inheritance taxes, capital gains taxes, and recurring property taxes.

FEE SIMPLE PURCHASE: This is a common method of acquisition where a local government agency or private greenway manager purchases property outright. Fee simple ownership

conveys full title to the land and the entire “bundle” of property rights including the right to possess land, to exclude others, to use land, and to alienate or sell land.

EASEMENT PURCHASE: This type of acquisition is the fee simple purchase of an easement. Full title to the land is not purchased, only those rights granted in the easement agreement. Therefore the easement purchase price is less than the full title value.

PURCHASE / LEASE BACK: A local government agency or private greenway organization can purchase a piece of land and then lease it back to the seller for a specified period of time. This lease may contain restrictions regarding the development and use of the property.

BARGAIN SALE: A property owner can sell property at a price less than the appraised fair market value of the land. Sometimes the seller can derive the same benefits as if the property were donated. Bargain Sale is attractive to sellers when the seller wants cash for the property, the seller paid a low cash price and thus is not liable for high capital gains tax, and/or the seller has a fairly high current income and could benefit from the donation of the property as an income tax deduction.

INSTALLMENT SALE: An installment sale is a sale of property at a gain where at least one payment is to be received after the tax year in which the sale occurs. These are valuable tools to help sellers defer capital gains tax. This provides a potentially attractive option when purchasing land for open space from a possible seller.

OPTION / FIRST RIGHT OF REFUSAL: A local government agency or private organization establishes an agreement with a public agency or private property owner to provide the right of first refusal on a parcel of land that is scheduled to be sold. This form of agreement can be used in conjunction with other techniques, such as an easement to protect the land in the short-term. An option would provide the agency with sufficient time to obtain capital to purchase the property or successfully negotiate some other means of conserving the greenway resource.

PURCHASE OF DEVELOPMENT RIGHTS: A voluntary purchase of development rights involves purchasing the development rights from a private property owner at a fair market value. The landowner retains all ownership rights under current use, but exchanges the rights to develop the property for cash payment.

LAND BANKING: Land banking involves land acquisition in advance of expanding urbanization. The price of an open space parcel prior to development pressures is more affordable to a jurisdiction seeking to preserve open space. A municipality or county might use this technique to develop a greenbelt or preserve key open space or agricultural tracts. The jurisdiction should have a definite public purpose for a land banking project.

CONDEMNATION: The practice of condemning private land for use as a greenway is viewed as a last resort policy. Using condemnation to acquire property or property rights can be avoided if private and public support for the greenway program is present. Condemnation is seldom used for the purpose of dealing with an unwilling property owner. In most cases, condemnation has been exercised when there has been an absentee property ownership, when the title of the property is not clear, or when it becomes apparent that obtaining the consent for purchase would be difficult because there are numerous heirs located in other parts of the United States or different countries.

EMINENT DOMAIN: The right of exercising eminent domain should be done so with caution by the community and only if the following conditions exist: 1) the property is valued by the community as an environmentally sensitive parcel of land, significant natural resource, or critical parcel of land, and as such has been defined by the community as irreplaceable property; 2) written scientific justification for the community's claim about the property's value has been prepared and offered to the property owner; 3) all efforts to negotiate with the property owner for the management, regulation, and acquisition of the property have been exhausted and that the property owner has been given reasonable and fair offers of compensation and has rejected all offers; and 4) due to the ownership of the property, the timeframe for negotiating the acquisition of the property will be unreasonable, and in the interest of pursuing a cost effective method for acquiring the property, the community has deemed it necessary to exercise eminent domain.

EXAMPLE SEWER/GREENWAY EASEMENT (CONTINUED)

TO HAVE AND TO HOLD the aforesaid easement interest and all privileges and rights thereunto belonging to the City of Raleigh, its successors and assigns forever.

THE FURTHER TERMS AND CONDITIONS of the easement interest herein conveyed are as follows:

1. The City is authorized hereunder to remove and keep removed from the easement all trees, shrubs, underbrush, and part thereof, or other obstructions as necessary to maintain, repair or protect said greenway and sanitary sewer lines and appurtenances or as necessary for the prevention or treatment of disease and for other good husbandry practices. Except as hereinabove allowed there shall be no other removal, destruction or cutting of trees, shrubs or other vegetation from the easement interest herein described and conveyed by any person or entity.

2. Nothing herein shall be construed to grant to the City of Raleigh or the general public any right of access through or over any property of the Grantors except that lying within the easement interest herein described and conveyed.

3. Following the installation of a sanitary sewer main and appurtenant facilities within the permanent easement hereinabove referenced and described, any and all temporary construction easement interest conveyed herein to the City shall terminate; and further, the City shall regrade, mulch, and reseed all damaged lands lying with the permanent and temporary easements, to the end that the same shall be restored to a condition as good as or better than that before construction.

4. Except as herein authorized, no building, fence, sign, or other structure nor any vehicular surface area shall be erected within the easement interest herein described and conveyed.

5. There shall be no dumping of ashes, garbage, waste, or other unsightly or offensive material on the easement interest herein described and conveyed.

6. There shall be no excavation, dredging, removal of loam, rock, sand, gravel or other material, nor any building of roads or other change in the natural topography of the easement interest herein described and conveyed, excepting for the construction and maintenance of the greenway and the sanitary sewer system undertaken by the City of Raleigh or its agents.

7. The City of Raleigh shall have the right and duty to maintain this Greenway Easement in a clean, natural, and undisturbed state, consistent with the City's master Greenway Plan.

EXAMPLE SEWER/GREENWAY EASEMENT (CONTINUED)

8. The City agrees to hold Grantors harmless from liability for personal injury or property damage arising out of the use of the easement for greenway purposes; provided Grantors shall not be held harmless from liability caused by the active conduct or instrumentalities of the Grantors, their agents, invitees, or contractors; or by acts of Grantors, their agents, invitees or contractors which violate the terms and conditions of this Deed of Easement.

The City does not waive or forfeit the right to take action to insure compliance with the terms, conditions and purposes of this easement by a prior failure to act.

The City reserves the right to enter the subject property at reasonable times in order to monitor compliance with the terms, conditions, restrictions, and purposes of this easement.

The Grantors expressly reserve the right to continue the use of the property for all purposes not inconsistent with this easement.

The Grantors agree that the terms, conditions and restrictions of this easement will be inserted by them in any subsequent deed or other legal instrument by which they divest themselves of either the fee simple title to, or of their possessory interest in, the subject property.

TO HAVE AND TO HOLD the said right, privilege and easement herein granted to the City of Raleigh, its successors and assigns forever. The covenants agreed to and the terms, conditions and restrictions imposed herein shall be binding upon the said Grantors and their agents, personal representatives, heirs and assigns, and all other successors to them in interest and shall continue as a servitude running in perpetuity with the above described land.

AND the said Grantors covenant that they are vested of the premises in fee and have the right to convey the same in fee simple; that the same are free from encumbrances except as hereinafter stated; and that they will warrant and defend title to the same against the claims of all persons whomsoever, subject only to the following exceptions:

IN WITNESS WHEREOF, the said Grantors have hereunto set their hand and seals the day and year first above written.

WITNESS:

_____	_____ (SEAL)
	_____ (SEAL)
Approved as to Form:	_____ (SEAL)
_____ (Deputy) City Attorney	_____ (SEAL)

EXAMPLE SEWER/GREENWAY EASEMENT (CONTINUED)

STATE OF NORTH CAROLINA

INDIVIDUAL

COUNTY OF _____

I, _____, a Notary Public do hereby certify that _____, personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

This the _____ day of _____, 19____.

(SEAL)

Notary Public

My Commission Expires: _____

STATE OF NORTH CAROLINA

PARTNERSHIP
(INDIVIDUAL)

COUNTY OF _____

I, _____, a Notary Public do hereby certify that _____, general partner of _____, personally appeared before me this day and acknowledged the execution, with proper authorization, of the foregoing instrument, all in accordance with partnership instruments recorded in Book _____ Page _____ in the _____ County Registry and that the instrument is the act and deed of the partnership.

This the _____ day of _____ 19____.

(SEAL)

Notary Public

My Commission Expires: _____

NORTH CAROLINA

CORPORATE

COUNTY OF _____

This is to certify that on the _____ day of _____, 19____, before me personally came _____, with whom I am personally acquainted, who, being by me duly sworn, says that (s)he is the (assistant) secretary, and _____ is the (vice) president of _____, the corporation described in and which executed the foregoing instrument; that (s)he knows the common seal of said corporation; that the seal affixed to the foregoing instrument is said common seal, and the name of the corporation was subscribed thereto by the said (assistant) secretary, and that the said (assistant) secretary and (vice) president subscribed their names thereto, and said common seal was affixed, all by order of the Board of Directors of said corporation, and that the said instrument is the act and deed of said corporation.

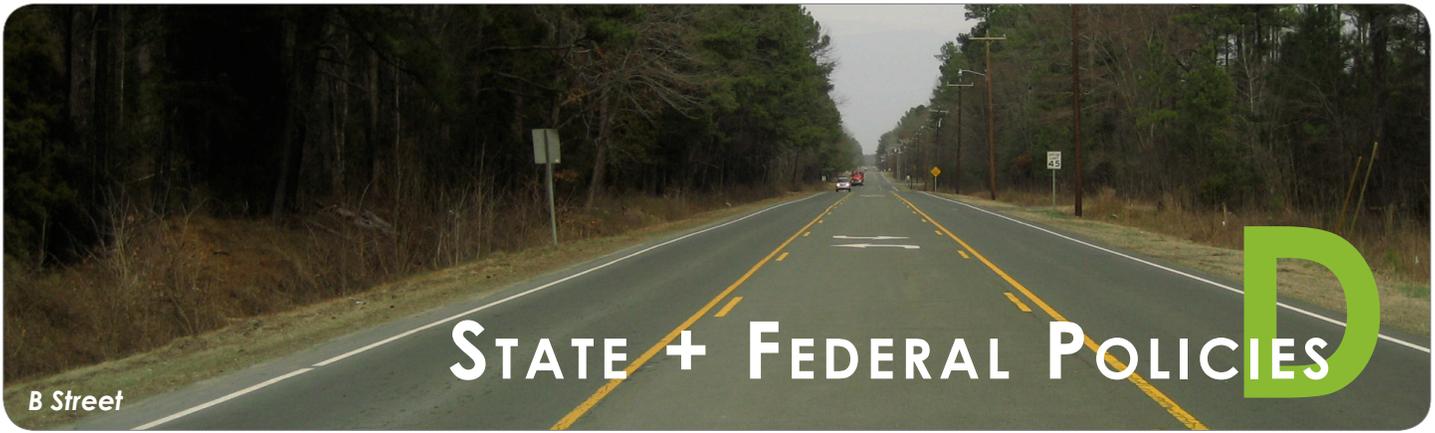
WITNESS my hand and official seal this the _____ day of _____ 19____.

(SEAL)

Notary Public

My Commission Expires: _____

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**CHAPTER OUTLINE:****OVERVIEW****US DEPARTMENT OF
TRANSPORTATION
BICYCLE AND PEDESTRIAN
POLICY****UNITED STATES DEPARTMENT
OF TRANSPORTATION
POLICY STATEMENT ON
BICYCLE AND PEDESTRIAN
ACCOMMODATION
REGULATIONS AND
RECOMMENDATIONS (2010)****NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
COMPETE STREETS POLICY****FHWA MEMORANDUM ON
MAINSTREAMING
BICYCLE AND PEDESTRIAN
PROJECTS****NCDOT BOARD OF
TRANSPORTATION RESOLUTION****NCDOT ADMINISTRATIVE
ACTION TO INCLUDE LOCAL
ADOPTED GREENWAYS PLANS
IN THE NCDOT HIGHWAY
PLANNING PROCESS****NCDOT PEDESTRIAN POLICY
GUIDELINES****NCDOT ONLINE PEDESTRIAN
PLANNING AND
DESIGN RESOURCES LIST****OVERVIEW**

A number of federal and state pedestrian policies have been developed in recent years. This appendix covers a number of these policies that are intended to better integrate walking and bicycling into transportation infrastructure.

**UNITED STATES DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN POLICY**

A United States Department of Transportation (US DOT) policy statement regarding the integration of bicycling and walking into transportation infrastructure recommends that, “bicycling and walking facilities will be incorporated into all transportation projects” unless exceptional circumstances exist. The Policy Statement was drafted by the U.S. Department of Transportation in response to Section 1202 (b) of the Transportation Equity Act for the 21st Century (TEA-21) with the input and assistance of public agencies, professional associations and advocacy groups. USDOT hopes that public agencies, professional associations, advocacy groups, and others adopt this approach as a way of committing themselves to integrating bicycling and walking into the transportation mainstream. The full statement reads as follows, with some minor adjustments for applicability in Butner:

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more of three conditions are met:

- Bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.
- The cost of establishing bikeways or walkways would be excessively disproportionate to the need or

probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.

- Where sparsity of population or other factors indicate an absence of need. For example, on low volume, low speed residential streets, or streets with severe topographic or natural resource constraints.

2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate. Rumble strips are not recommended where shoulders are used by bicyclists unless there is a minimum clear path of four feet in which a bicycle may safely operate.

3. Sidewalks, shared use paths, street crossings (including over- and undercrossings), pedestrian signals, signs, street furniture, transit stops and facilities, and all connecting pathways shall be designed, constructed, operated and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.

4. The design and development of the transportation infrastructure shall improve conditions for bicycling and walking through the following additional steps:

- Planning projects for the long-term. Transportation facilities are long-term investments that remain in place for many years. The design and construction of new facilities that meet the criteria in item 1) above should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements. For example, a bridge that is likely to remain in place for 50 years, might be built with sufficient width for safe bicycle and pedestrian use in anticipation that facilities will be available at either end of the bridge even if that is not currently the case.
- Addressing the need for bicyclists and pedestrians to cross corridors as well as travel along them. Even where bicyclists and pedestrians may not commonly use a particular travel corridor that is being improved or constructed, they will likely need to be able to cross that corridor safely and conveniently. Therefore, the design of intersections and interchanges shall

accommodate bicyclists and pedestrians in a manner that is safe, accessible and convenient.

- Getting exceptions approved at a senior level. Exceptions for the non-inclusion of bikeways and walkways shall be approved by a senior manager and be documented with supporting data that indicates the basis for the decision.
- Designing facilities to the best currently available standards and guidelines. The design of facilities for bicyclists and pedestrians should follow design guidelines and standards that are commonly used, such as the AASHTO Guide for the Development of Bicycle Facilities, AASHTO's A Policy on Geometric Design of Highways and Streets, and the ITE Recommended Practice "Design and Safety of Pedestrian Facilities. (Many of these guidelines are summarized in Chapter 4: Bicycle Facility Standards)

(Retrieved from <http://www.fhwa.dot.gov/environment/bikeped/design.htm> on 5/6/2008)

UNITED STATES DEPARTMENT OF TRANSPORTATION POLICY STATEMENT ON BICYCLE AND PEDESTRIAN ACCOMMODATION REGULATIONS AND RECOMMENDATIONS (MARCH 2010)

Purpose

The United States Department of Transportation (DOT) is providing this Policy Statement to reflect the Department's support for the development of fully integrated active transportation networks. The establishment of well-connected walking and bicycling networks is an important component for livable communities, and their design should be a part of Federal-aid project developments. Walking and bicycling foster safer, more livable, family-friendly communities; promote physical activity and health; and reduce vehicle emissions and fuel use. Legislation and regulations exist that require inclusion of bicycle and pedestrian policies and projects into transportation plans and project development. Accordingly, transportation agencies should plan, fund, and implement improvements to their walking and bicycling networks, including linkages to transit. In addition, DOT encourages transportation agencies to go beyond the minimum requirements, and proactively provide convenient, safe, and context-sensitive facilities that foster increased use by bicyclists and pedestrians of all ages and abilities, and utilize universal design characteristics when

appropriate. Transportation programs and facilities should accommodate people of all ages and abilities, including people too young to drive, people who cannot drive, and people who choose not to drive.

Policy Statement

The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide — including health, safety, environmental, transportation, and quality of life — transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes.

Authority

This policy is based on various sections in the United States Code (U.S.C.) and the Code of Federal Regulations (CFR) in Title 23—Highways, Title 49—Transportation, and Title 42—The Public Health and Welfare. These sections, provided in the Appendix, describe how bicyclists and pedestrians of all abilities should be involved throughout the planning process, should not be adversely affected by other transportation projects, and should be able to track annual obligations and expenditures on nonmotorized transportation facilities.

Recommended Actions

The DOT encourages States, local governments, professional associations, community organizations, public transportation agencies, and other government agencies, to adopt similar policy statements on bicycle and pedestrian accommodation as an indication of their commitment to accommodating bicyclists and pedestrians as an integral element of the transportation system. In support of this commitment, transportation agencies and local communities should go beyond minimum design standards and requirements to create safe, attractive, sustainable, accessible, and convenient bicycling and walking networks. Such actions should include:

- Considering walking and bicycling as equals with other transportation modes: The primary goal of a transportation system is to safely and efficiently move people and goods. Walking and bicycling are efficient transportation modes for most short trips and, where convenient intermodal systems exist, these nonmotorized trips can easily be linked with transit to significantly increase trip distance. Because of the benefits they

provide, transportation agencies should give the same priority to walking and bicycling as is given to other transportation modes. Walking and bicycling should not be an afterthought in roadway design.

- Ensuring that there are transportation choices for people of all ages and abilities, especially children: Pedestrian and bicycle facilities should meet accessibility requirements and provide safe, convenient, and interconnected transportation networks. For example, children should have safe and convenient options for walking or bicycling to school and parks. People who cannot or prefer not to drive should have safe and efficient transportation choices.

- Going beyond minimum design standards: Transportation agencies are encouraged, when possible, to avoid designing walking and bicycling facilities to the minimum standards. For example, shared-use paths that have been designed to minimum width requirements will need retrofits as more people use them. It is more effective to plan for increased usage than to retrofit an older facility. Planning projects for the long-term should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.

- Integrating bicycle and pedestrian accommodation on new, rehabilitated, and limited-access bridges: DOT encourages bicycle and pedestrian accommodation on bridge projects including facilities on limited-access bridges with connections to streets or paths.

- Collecting data on walking and biking trips: The best way to improve transportation networks for any mode is to collect and analyze trip data to optimize investments. Walking and bicycling trip data for many communities are lacking. This data gap can be overcome by establishing routine collection of nonmotorized trip information. Communities that routinely collect walking and bicycling data are able to track trends and prioritize investments to ensure the success of new facilities. These data are also valuable in linking walking and bicycling with transit.

- Setting mode share targets for walking and bicycling and tracking them over time: A byproduct of improved data collection is that communities can establish targets for increasing the percentage of trips made by walking and bicycling. Removing snow from sidewalks and shared-use paths: Current maintenance provisions require pedestrian facilities built with Federal funds to be maintained in the same manner as other

roadway assets. State Agencies have generally established levels of service on various routes especially as related to snow and ice events.

Improving nonmotorized facilities during maintenance projects: Many transportation agencies spend most of their transportation funding on maintenance rather than on constructing new facilities. Transportation agencies should find ways to make facility improvements for pedestrians and bicyclists during resurfacing and other maintenance projects.

Conclusion

Increased commitment to and investment in bicycle facilities and walking networks can help meet goals for cleaner, healthier air; less congested roadways; and more livable, safe, cost-efficient communities. Walking and bicycling provide low-cost mobility options that place fewer demands on local roads and highways. DOT recognizes that safe and convenient walking and bicycling facilities may look different depending on the context — appropriate facilities in a rural community may be different from a dense, urban area. However, regardless of regional, climate, and population density differences, it is important that pedestrian and bicycle facilities be integrated into transportation systems. While DOT leads the effort to provide safe and convenient accommodations for pedestrians and bicyclists, success will ultimately depend on transportation agencies across the country embracing and implementing this policy.

Ray LaHood, United States Secretary of Transportation

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION COMPLETE STREETS POLICY

In 2009, NCDOT unveiled its efforts to routinely provide for all users of the roads - pedestrians, bicyclists, public transportation users, and motorists of all ages and abilities. The new document:

- Explains the scope and applicability of the policy ("all transportation facilities within a growth area of a town or city funded by or through NCDOT, and planned, designed, or constructed on state maintained facilities, must adhere to this policy");
- Asserts the Department's role as a partner to local communities in transportation projects;
- Addresses the need for context-sensitivity;

- Sets exceptions (where specific travelers are prohibited and where there is a lack of current or future need) and a clear process for granting them (approval by the Chief Deputy Secretary); and
- Establishes a stakeholders group, including transportation professionals and interest groups, tasked to create comprehensive planning and design guidelines in support of the policy.

Visit www.ncdot.gov for the full document.

FHWA MEMORANDUM ON MAINSTREAMING BICYCLE AND PEDESTRIAN PROJECTS

(See pages D-8 through D-10)

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**U.S. Department of
Transportation
Federal Highway Administration**

Memorandum

Subject: ACTION: Transmittal of Guidance on Bicycle and Pedestrian Provisions of the Federal-aid Program

Date: February
24, 1999

From: Kenneth R. Wykle
Federal Highway Administrator

**In reply, HEPH-30
refer to:**

To:
Division Administrators
Federal Lands Highway Division Engineers

This memorandum transmits the Federal Highway Administration's (FHWA) Guidance on the Bicycle and Pedestrian Provisions of the Federal-aid Program and reaffirms our strong commitment to improving conditions for bicycling and walking. The nonmotorized modes are an integral part of the mission of FHWA and a critical element of the local, regional, and national transportation system. Bicycle and pedestrian projects and programs are eligible for but not guaranteed funding from almost all of the major Federal-aid funding programs. We expect every transportation agency to make accommodation for bicycling and walking a routine part of their planning, design, construction, operations and maintenance activities.

The Transportation Equity Act for the 21st Century (TEA-21) continues the call for the mainstreaming of bicycle and pedestrian projects into the planning, design, and operation of our Nation's transportation system. Under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Federal spending on bicycle and pedestrian improvements increased from \$4 million annually to an average of \$160 million annually. Nevertheless, the level of commitment to addressing the needs of bicyclists and pedestrians varies greatly from State to State.

The attached guidance explains how bicycle and pedestrian improvements can be routinely included in federally funded transportation projects and programs. I would ask each division office to pass along this guidance to the State DOT and to meet with them to discuss ways of expediting the implementation of bicycle and pedestrian projects. With the guidance as a basis for action, States can then decide the most appropriate ways of mainstreaming the inclusion of bicycle and pedestrian projects and programs.

Bicycling and walking contribute to many of the goals for our transportation system we have at FHWA and at the State and local levels. Increasing bicycling and walking offers the potential for cleaner air, healthier people, reduced congestion, more liveable communities, and more efficient use of precious road space and resources. That is why funds in programs such as Congestion Mitigation and Air Quality Improvement, Transportation Enhancements, and the National Highway System, are eligible to be used for bicycling and

walking improvements that will encourage use of the two modes.

We also have a responsibility to improve the safety of bicycling and walking as the two modes represent more than 14 percent of the 41,000 traffic fatalities the nation endures each year. Pedestrian and bicycle safety is one of FHWA's top priorities and this is reflected in our 1999 Safety Action Plan. As the attached guidance details, TEA-21 has opened up the Hazard Elimination Program to a broader array of bicycle, pedestrian, and traffic calming projects that will improve dangerous locations. The legislation also continues funding for critical safety education and enforcement activities under the leadership of the National Highway Traffic Safety Administration. If we are successful in improving the real and perceived safety of bicyclists and pedestrians, we will also increase use.

You will see from the attached guidance that the Federal-aid Program, as amended by TEA-21, offers an extraordinary range of opportunities to improve conditions for bicycling and walking. Initiatives such as the Transportation and Community and System Preservation Pilot Program and the Access to Jobs program offer exciting new avenues to explore.

Bicycling and walking ought to be accommodated, as an element of good planning, design, and operation, in all new transportation projects unless there are substantial safety or cost reasons for not doing so. Later this year (1999), FHWA will issue design guidance language on approaches to accommodating bicycling and pedestrian travel that will, with the cooperation of AASHTO, ITE, and other interested parties, spell out ways to build bicycle and pedestrian facilities into the fabric of our transportation infrastructure from the outset. We can no longer afford to treat the two modes as an afterthought or luxury.

The TEA-21 makes a great deal possible. However, in the area of bicycling and walking in particular, we must work hard to ensure good intentions and fine policies translate quickly and directly into better conditions for bicycling and walking. While FHWA has limited ability to mandate specific outcomes, I am committed to ensuring that we provide national leadership in three critical areas.

- The FHWA will encourage the development and implementation of bicycle and pedestrian plans as part of the overall transportation planning process. Every statewide and metropolitan transportation plan should address bicycling and walking as an integral part of the overall system, either through the development of a separate bicycle and pedestrian element or by incorporating bicycling and walking provisions throughout the plan. Further, I am instructing each FHWA division office to closely monitor the progress of projects from the long-range transportation plans to the STIPs and TIPs. In the coming months, FHWA will disseminate exemplary projects, programs, and plans, and we will conduct evaluations in selected States and MPOs to determine the effectiveness of the planning process.
- The FHWA will promote the availability and use of the full range of streamlining mechanisms to increase project delivery. The tools are in place for States and local government agencies to speed up the delivery of bicycle and pedestrian projects - it makes no sense to treat installation of a bicycle rack or curb cut the same way we treat a new Interstate highway project - and our division offices must take a lead in promoting and administering these procedures.
- The FHWA will help coordinate the efforts of Federal, State, metropolitan, and other relevant agencies to improve conditions for bicycling and walking. Once again, our division offices must ensure that those involved in implementing bicycle and pedestrian projects at the State and local level are given maximum opportunity to get their job done, unimpeded by regulations and red tape from the Federal level. I am asking each of our division offices to facilitate a dialogue among each State's bicycle and pedestrian coordinator, Transportation Enhancements program manager, Recreational Trails Program administrator, and their local and FHWA counterparts to identify and remove obstacles to the implementation of bicycle and pedestrian projects and programs.

In less than a decade, bicycling and walking have gone from being described by my predecessor Tom Larson as "the forgotten modes" to becoming a serious part of our national transportation system. The growing acceptance of bicycling and walking as modes to be included as part of the transportation mainstream started with passage of ISTEA in 1991 and was given a considerable boost by the Congressionally-mandated National Bicycling and Walking Study. That study, released in 1994, challenges the U.S. Department of Transportation to double the percentage of trips made by foot and bicycle while simultaneously reducing fatalities and injuries suffered by these modes by 10 percent - and we remain committed to achieving these goals.

The impetus of ISTEA and the National Bicycling and Walking Study is clearly reinforced by the bicycle and pedestrian provisions of the TEA-21. The legislation confirms the vital role bicycling and walking must play in creating a balanced, accessible, and safe transportation system for all Americans.

[FHWA Guidance \(1999\)](#) - **Bicycle and Pedestrian Provisions of Federal Transportation Legislation**

To provide Feedback, Suggestions, or Comments for this page contact Gabe Rousseau at gabe.rousseau@dot.gov.



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United States Department of Transportation - **Federal Highway Administration**

NCDOT BOARD OF TRANSPORTATION RESOLUTION: BICYCLING AND WALKING IN NORTH CAROLINA: A CRITICAL PART OF THE TRANSPORTATION SYSTEM

(ADOPTED BY THE BOARD OF TRANSPORTATION ON SEPTEMBER 8, 2000)

The North Carolina Board of Transportation strongly reaffirms its commitment to improving conditions for bicycling and walking, and recognizes nonmotorized modes of transportation as critical elements of the local, regional, and national transportation system.

WHEREAS, increasing bicycling and walking offers the potential for cleaner air, healthier people, reduced congestion, more liveable communities, and more efficient use of road space and resources; and

WHEREAS, crashes involving bicyclists and pedestrians represent more than 14 percent of the nation's traffic fatalities; and

WHEREAS, the Federal Highway Administration (FHWA) in its policy statement "Guidance on the Bicycle and Pedestrian Provisions of the Federal-Aid Program" urges states to include bicycle and pedestrian accommodations in its programmed highway projects; and

WHEREAS, bicycle and pedestrian projects and programs are eligible for funding from almost all of the major Federal-aid funding programs; and

WHEREAS, the Transportation Equity Act for the 21st Century (TEA-21) calls for the mainstreaming of bicycle and pedestrian projects into the planning, design and operation of our Nation's transportation system;

NOW, THEREFORE, BE IT RESOLVED, the North Carolina Board of Transportation concurs that bicycling and walking accommodations shall be a routine part of the North Carolina Department of Transportation's planning, design, construction, and operations activities and supports the Department's study and consideration of methods of improving the inclusion of these modes into the everyday operations of North Carolina's transportation system; and

BE IT FURTHER RESOLVED, North Carolina cities and towns are encouraged to make bicycling and pedestrian improvements an integral part of their transportation planning and programming.

NCDOT ADMINISTRATIVE ACTION TO INCLUDE LOCAL ADOPTED GREENWAYS PLANS IN THE NCDOT HIGHWAY PLANNING PROCESS

(ADOPTED JANUARY 1994)

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

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

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

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

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

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

GUIDELINES FOR NCDOT TO COMPLY WITH ADMINISTRATIVE DECISION TO INCORPORATE LOCAL GREENWAYS INTO HIGHWAY PLANNING PROCESS

- Thoroughfare plans will address the existence of greenways planning activity, which has been submitted by local areas. Documentation of mutually agreed upon interface points between the thoroughfare plan and a greenway plan will be kept, and this information will become a part of project files.
- Project Planning Reports will address the existence of locally adopted greenways segment plans, which may affect the corridor being planned for a highway improvement. It is, however, the responsibility of the locality to notify the Department of the adopted greenways plans (or changes to its previous plans) through its current local transportation plan, as well as its implementation programs.
- Where local greenways plans have not been formally adopted or certain portions of the greenways plans have not been adopted, the Department may note this greenway planning activity but is not required to incorporate this information into its planning reports.
- Where the locality has included adopted greenways plans as a part of its local transportation plan and a segment (or segments) of these greenways fall within the corridor of new highway construction or a highway improvement project, the feasibility study and/or project planning report for this highway improvement will consider the effects of the proposed highway improvement upon the greenway in the same manner as it considers other planning characteristics of the project corridor, such as archeological features or land use.
- Where the locality has justified the transportation versus the leisure use importance of a greenway segment and there is no greenway alternative of equal importance nearby, the project planning report will suggest inclusion of the greenway crossing, or appropriate greenway element, as an incidental part of the highway expenditure.
- Where the locality has not justified the transportation importance of a greenway segment, the greenway crossing, or appropriate greenway element, may be included as a part of the highway improvement plan if the local government covers the cost.
- A locality may add any appropriate/acceptable greenway crossing or greenway element at their own expense to any highway improvement project as long as it meets the design standards of the NCDOT.

- The NCDOT will consider funding for greenway crossings, and other appropriate greenway elements only if the localities guarantee the construction of and/or connection with other greenway segments. This guarantee should be in the form of inclusion in the local capital improvements program or NCDOT/municipal agreement.
- If the state pays for the construction of a greenway incidental to a highway improvement and the locality either removes the connecting greenway segments from its adopted greenways plans or decides not to construct its agreed upon greenway segment, the locality will reimburse the state for the cost of the greenway incidental feature. These details will be handled through a municipal agreement.
- Locality must accept maintenance responsibilities for state-built greenways, or portions thereof. Details will be handled through a municipal agreement.

NCDOT PEDESTRIAN POLICY GUIDELINES

(See pages D-15 through D-16)

NCDOT ONLINE PEDESTRIAN PLANNING AND DESIGN RESOURCES LIST

(See pages D-17 through D-18)

DEPARTMENT OF TRANSPORTATION PEDESTRIAN POLICY GUIDELINES EFFECTIVE OCTOBER 1, 2000

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

REQUIREMENTS FOR DOT FUNDING:

REPLACEMENT OF EXISTING SIDEWALKS:

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

TIP INCIDENTAL PROJECTS:

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

REQUIREMENTS:

1. The municipality and/or county notifies the Department in writing of its desire for the Department to incorporate pedestrian facilities into project planning and design. Notification states the party's commitment to participate in the cost of the facility as well as being responsible for all maintenance and liability. Responsibilities are defined by agreement. Execution is required prior to contract let.

The municipality is responsible for evaluating the need for the facility (ie: generators, safety, continuity, integration, existing or projected traffic) and public involvement.

2. Written notification must be received by the **Project Final Field Inspection (FFI) date**. Notification should be sent to the Deputy Highway Administrator - Preconstruction with a copy to the Project Engineer and the Agreements Section of the Program Development Branch. Requests received after the project FFI date will be incorporated into the TIP project, if feasible, and only if the requesting party commits by agreement to pay 100% of the cost of the facility.
3. The Department will review the feasibility of including the facility in our project and will try to accommodate all requests where the Department has acquired appropriate right of way on curb and gutter sections and the facility can be installed in the current project berm width. The standard project section is a 10-ft berm (3.0-meter) that accommodates a 5-ft sidewalk. In accordance with

AASHTO standards, the Department will construct 5-ft sidewalks with wheelchair ramps. Betterment cost (ie: decorative pavers) will be a Municipal responsibility.

4. If the facility is not contained within the project berm width, the Municipality is responsible for providing the right of way and/or construction easements as well as utility relocations, at no cost to the Department. This provision is applicable to all pedestrian facilities including multi-use trails and greenways.
5. A cost sharing approach is used to demonstrate the Department’s and the municipality’s/county’s commitment to pedestrian transportation (sidewalks, multi-use trails and greenways). The matching share is a sliding scale based on population as follows:

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

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

6. For bridges on streets with curb and gutter approaches, the Department will fund and construct sidewalks on both sides of the bridge facility if the bridge is less than 200 feet in length. If the bridge is greater than 200 feet in length, the Department will fund and construct a sidewalk on one side of the bridge structure. The bridge will also be studied to determine the costs and benefits of constructing sidewalks on both sides of the structure. If in the judgement of the Department sidewalks are justified, funding will be provided for installation. The above provision is also applicable to dual bridge structures. For dual bridges greater than 200 ft in length, a sidewalk will be constructed on the outside of one bridge structure. The bridges will also be studied to determine if sidewalks on the outside of both structures are justified.
7. FUNDING CAPS are no longer applicable.
8. This policy does not commit the Department to the installation of facilities in the Department’s TIP projects where the pedestrian facility causes an unpractical design modification, is not in accordance with AASHTO standards, creates an unsafe situation, or in the judgement of the Department is not practical to program.

INDEPENDENT PROJECTS

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

Useful On-Line Pedestrian Planning and Design Resources

NCDOT Division of Bicycle & Pedestrian Transportation	http://www.ncdot.org/transit/bicycle/
Board of Transportation Resolution on Mainstreaming	http://www.ncdot.org/transit/bicycle/laws/laws_resolution.html
NCDOT Pedestrian Policy Guidelines	http://www.ncdot.org/transit/bicycle/laws/ped_guide.pdf
NCDOT Greenways - Administrative Process	http://www.ncdot.org/transit/bicycle/laws/laws_greenway_admin.html
Funding	http://www.ncdot.org/transit/bicycle/funding/funding_intro.html
Project Types	http://www.ncdot.org/transit/bicycle/projects/project_types/bpt_intro.html
Crash Data	http://www.ncdot.org/transit/bicycle/safety/safety_crashdata.html
DBPT Long Range Plan	http://www.ncdot.org/transit/bicycle/projects/intro/projects_long_range.html
Safe Routes to School Program	http://www.ncdot.org/transit/bicycle/saferoutes/SafeRoutes.html
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NCDOT Division of Highways	http://www.ncdot.org/doh/
Alternative Delivery Unit – Publications for Download	http://www.ncdot.org/doh/preconstruct/altern/value/manuals/
Bridge Policy 2000	http://www.ncdot.org/doh/preconstruct/altern/value/manuals/bpe2000.doc
Curb Cuts & Ramps for Disabled Persons	http://www.ncdot.org/doh/preconstruct/altern/value/manuals/handi.pdf
Traditional Neighborhood Development Manual	http://www.ncdot.org/doh/preconstruct/altern/value/manuals/tnd.pdf
ADA – Detectable Warnings	http://www.ncdot.org/doh/preconstruct/ps/std_draw/06english/08/default.html
Highway Design Branch – Design Manual	http://www.ncdot.org/doh/preconstruct/altern/value/manuals/designmanual.html
Policy and Procedure Manual (See Section 28)	http://www.ncdot.org/doh/preconstruct/altern/value/manuals/ppm/
Policy on Street & Driveway Access	http://www.ncdot.org/doh/preconstruct/altern/value/manuals/pos.pdf
Traffic Engineering and Safety Systems Branch	http://www.ncdot.org/doh/preconstruct/traffic/
NC Supplement to the Manual on Uniform Traffic Control Devices	http://www.ncdot.org/doh/preconstruct/traffic/MUTCD/
Crosswalks/Mid-Block Signing and Pavement Markings	http://www.ncdot.org/doh/preconstruct/traffic/tepl/Topics/C-36/C-36.html

UNC Highway Safety Research Center <http://www.hsrc.unc.edu>

Pedestrian & Bicycle Information Center <http://www.pedbikeinfo.org/index.htm>

Walking <http://www.walkinginfo.org/>

Engineer Pedestrian Facilities <http://www.walkinginfo.org/engineering>

Pedestrian Safety Guide & Countermeasure Selection System (PEDSAFE) <http://www.walkinginfo.org/pedsafe/>

Develop Plans and Policies <http://www.walkinginfo.org/develop>

National Center for Safe Routes to School <http://www.saferoutesinfo.org>

Federal Highway Administration Bicycle & Pedestrian Program <http://www.fhwa.dot.gov/environment/bikeped/>

Bicycle and Pedestrian Provisions of Federal Transportation Legislation <http://www.fhwa.dot.gov/environment/bikeped/bp-guid.htm>

Bicycle & Pedestrian Programs <http://www.fhwa.dot.gov/environment/bikeped/overview.htm>

Program & Design Guidance <http://www.fhwa.dot.gov/environment/bikeped/guidance.htm>

Links to Other Resources <http://www.fhwa.dot.gov/environment/bikeped/bipedlnk.htm>

Publications <http://www.fhwa.dot.gov/environment/bikeped/publications.htm>

Pedestrian Safety http://safety.fhwa.dot.gov/ped_bike/ped/index.htm

Pedestrian & Bicycle Safety Research Page <http://www.tfsrc.gov/safety/pedbike/index.htm>

National Highway Traffic Safety Administration – Traffic Safety: Pedestrians <http://www.nhtsa.gov/portal/site/nhtsa/menuitem.dfedd570f698cabbf30811060008a0c/>

National Center for Bicycling & Walking <http://www.bikewalk.org/>