

305 Chestnut Street PO Box 1810 Wilmington, NC 28402 Ph: (910) 341-3258 Fax: (910) 341-7801 www.wmpo.org

# WMPO Bicycle and Pedestrian Advisory Committee Meeting Agenda

TO:WMPO Bicycle and Pedestrian Advisory Committee MembersFROM:Abby Lorenzo, Senior Transportation PlannerDATE:June 28<sup>th</sup>, 2018SUBJECT:July 10<sup>th</sup>, 2018 Meeting

A meeting of the WMPO Bicycle and Pedestrian Advisory Committee will take place on Tuesday, July 10<sup>th</sup>, 2018 at 3pm. The meeting will held on the 6<sup>th</sup> floor in Room 611 at 320 Chestnut St. The following is the agenda for the meeting:

- Call to Order
- Approval of the Agenda
- Public Comment Period
- Approval of minutes from June 12<sup>th</sup>, 2018
- Old Business
  - Cape Fear Moving Forward 2045 Bicycle and Pedestrian Element Goals, Objectives & Vision Development
- Announcements
  - Cape Fear Cyclists
  - WMPO Technical Coordinating Committee, Wednesday, July 11<sup>th</sup> at 10am
  - WMPO Board Meeting, Wednesday, July 25<sup>th</sup> at 3pm
  - WMPO Project Update June 2018 Updates
- Next Meeting
  - August 14<sup>th</sup>, 2018 at 3PM
- Adjournment

#### Attachments:

• Minutes from the April 10<sup>th</sup>, 2018 BPAC Meeting

#### Wilmington Urban Area Metropolitan Planning Organization

- Transportation 2040 Bicycle and Pedestrian Goals and Objectives
- Cape Fear Commutes 2035 Bicycle Appendix
- Cape Fear Commutes 2035 Pedestrian Appendix

#### Meeting Minutes Wilmington Urban Area Metropolitan Planning Organization Bicycle and Pedestrian Advisory Committee Date: June 12, 2018

#### Members Present:

Shawn Spencer, New Hanover County John Williams, Cape Fear Public Transportation Authority John Carter, Town of Leland John Sneed, Wilmington and Beaches Convention and Visitors Bureau Nick Cannon, WMPO Katie Ryan, Town of Wrightsville Beach Jonathan Perrotto, Town of Kure Beach Stephen Whitney, Brunswick County Neal Andrew, NC DOT Carol Stein, Pender County Joe Boyd, Town of Bellville Banes Sutton, Town of Navassa David Beauregard, Disability Services

#### Additional Guests:

Andy Johnson, NHC Parks and Recreation Tara Duckworth, NHC Parks and Recreation Gedaliah Dzey Russ, Kittleson and Associates Inc Bastian Schroeder, Kittleson and Associates, Inc Travis Hanley, Pender County Planning Sam Spicer

- 1. Introductions
  - a. Shawn Spencer suggested introductions
  - b. Committee members and guests introduced themselves
- 2. Call to order
  - a. Shawn Spencer called the meeting to order
- 3. Approval of the Agenda and Minutes from the April 10<sup>th</sup>, 2018 meeting
  - a. K. Ryan requested a change to add her name to the list of attendees from last meeting and made a motion to approve as corrected.
  - b. Seconded by C. Stein.
  - c. All were in favor
- 4. Public Comment Period
  - a. There were not public comments
- 5. Old business
  - a. Model bike parking ordinance
    - i. A. Lorenzo explained that a footnote as added to the ordinance for any member jurisdiction who chooses to adopt the ordinance can choose what it applies to.

- ii. No other changes or suggestions were received
  - 1. S. Spencer moved to vote on the ordinance
  - 2. C. Stein made a motion to approve
  - 3. S. Whitney seconded the motion
  - 4. The motion passed unanimously
- b. River to Sea Bike Recap
  - i. N. Cannon gave a brief presentation on the feedback received via a Survey Monkey survey on the 2018 River to Sea Bike Ride. There was discussion on to keep in mind changing the route in the future to avoid the crosswalk at the intersection of Anne Street and 4<sup>th</sup> Street.
- c. Bike to Work Week Number Recap
  - i. N. Cannon gave a brief presentation on the results from the 2018 Bike to Work Week. It was explained to the committee that all information is self-reported by participants.
- d. Bike Share Selection Memo
  - i. N. Cannon presented the Memo written to the WMPO Board from the Bike Share Selection Committee. The committee selected Pace as the recommended vendor for any bike share program(s) in the WMPO region.
  - ii. N. Cannon answered questions on the types of bike share systems and the vendors that presented to the Bike Share Selection Committee.
- 6. New Business
  - a. A. Lorenzo gave a presentation which reviewed the purpose and responsibilities of the WMPO Bicycle and Pedestrian Advisory Committee.
    - 1. Overview of WMPO and bicycle and pedestrian committee
    - 2. Process of the MTP and Cape Fear 2040 (current 25 year plan)
    - 3. Overview of plan development
    - 4. Overview of three pillar approach for project prioritization
    - 5. Map of bicycle and pedestrian facilities in the region
    - 6. Setting goals Discussion
- 7. Discussion
  - a. Discussion on how to prioritize criteria for project scoring. Questions about crash data in the area. A. Lorenzo will look into if updated crash data is available.
  - b. A. Lorenzo will share the goals, objectives, and criteria used to create the 2035 and 2040 MTP's and project list with the committee.
  - c. At the next meeting goals and objectives will further be discussed working off of Transportation 2040 goals and objectives.
- 8. Announcements
  - a. CFC Tour de Blueberry Saturday 6/15
  - b. TCC Meeting Wednesday June 13 at 10am in the New Hanover County Library
  - c. WMPO Board meeting on Wednesday June 27 at 3pm in 6<sup>th</sup> floor conference room at 320 Chestnut.
  - d. A. Lorenzo mentioned that WMPO project updates were included in their packets.
- 9. Next meeting

- a. Motion to meet on July 10, 2018 by S. Spencer
- b. Second by K. Ryan

#### 10. Adjournment

- a. Motion to adjourn made by S. Spencer.
- b. Motion seconded by A. Schroetel.
- c. All in favor.



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### **MEMORANDUM**

Subject:	Cape Fear Transportation 2040 Bicycle and Pedestrian Goals, Objectives, and Criteria
Date:	June 8, 2018
	Jason O'Brien, Associate Transportation Planner
From:	Abby Lorenzo, Senior Transportation Planner
То:	Bicycle and Pedestrian Modal Subcommittee Members

The following are the goals and objectives developed for Cape Fear Transportation 2040, the currently adopted Metropolitan Transportation Plan. From these goals and objectives, scoring criteria were developed (pgs. 4-7).

#### <u>Bicycle</u>

#### Goal A: Safety, Education, Awareness, and Enforcement

Objectives:

- 1. Support a campaign to educate motorists, bicyclists and pedestrians on etiquette & laws of sharing the road
- 2. Support law enforcement efforts to create a safer environment for cyclists
- 3. Bicycle facility prioritization should consider the nature of adjacent traffic

#### Goal B: Transportation Choice

Objectives:

- 1. Increase the ease of transitioning between bicycling & other modes of transportation (mass transportation& ferries) through prioritization of bicycle projects
- Support programmatic elements (such as increasing the capacity of bicycles on busses & the creation of bicycle amenities at bus stops) to ease the transition between bicycling & mass transportation
- 3. Prioritize projects that overcome socioeconomic barriers
- 4. Support the creation of a bike share program that is integrated with the fixed-route mass transportation network

Wilmington Urban Area Metropolitan Planning Organization

- 5. Support the installation of visual cues that prioritize bike users through facilities, amenities and traffic engineering solutions
- 6. Support the consideration of bicycle needs when looking at intermodal intercity connections

### Goal C: Built Environment, Land use, and Connectivity

Objectives:

- 1. Prioritize bicycle facilities in areas with high employment density
- 2. Prioritize bicycling facilities that fall within 1/4 miles of school campuses
- 3. Prioritize bicycle connections between parks & residential areas
- 4. Prioritize removal of barriers to bicycle around medical campuses
- 5. Prioritize bicycle facility connections around grocery stores/farmers markets
- 6. Prioritize connections to existing bicycling facilities
- 7. Prioritize bicycling connections between school campuses
- 8. Support accommodation of the elderly, disabled and low-income populations during the design of bicycle facilities
- 9. Prioritize bicycle facilities that allow safe usage of bridges, overpasses, tunnels & viaducts
- 10. Prioritize short trail connections (under 1,000 feet) that fill gaps in the roadway system that will allow bicycle use of these roadways

#### Goal D: Health

Objectives:

- 1. Support the provision of health indicators and data along branded trails
- 2. Support the promotion of bicycling in wellness programs through biking events
- 3. Support the designation of exercise loops for bicycling in areas that have high daytime populations
- 4. Support the utilization of health impact assessments where appropriate

#### Goal E: Economic Development

Objectives:

- 1. Support bicycle tourism in our region
- 2. Support the incentivization of public/private development around biking
- 3. Support the creation of sponsorship policies
- 4. Support the development of a program to recognize bicycle friendly businesses
- 5. Support the incorporation of mobile technology into the trail system
- 6. Support the accommodation of major events (triathlons) in facility design

#### Pedestrian 1997

Goal A: Safety, Education, Awareness, and Enforcement

Objectives:

- 1. Prioritize crosswalks at existing signals
- 2. Support the installation of audible pedestrian signals

- 3. Support driver education specifically related to turning movements and crosswalk compliance
- 4. Support law enforcement efforts to increase pedestrian safety
- 5. Support the creation of a comprehensive, integrated, and validated reporting system for documenting bicycle and pedestrian crash data

## Goal B: Transportation Choice

Objectives:

- 1. Sidewalk and crosswalk prioritization should consider nature of adjacent traffic
- 2. Prioritize sidewalks and crosswalks based on residential and employment density
- 3. Support the installation of visual cues that prioritize pedestrians (traffic calming, etc.)
- 4. Support design of roadways and sidewalks to enhance pedestrian safety (medians, street trees, brick crossings, etc.)

## Goal C: Built Environment, Land use, and Connectivity

Objectives:

- 1. Prioritize pedestrian facilities that fall within 1/4 miles of school campuses
- 2. Prioritize pedestrian connections between parks & residential areas
- 3. Prioritize removal of barriers to pedestrians around medical campuses
- 4. Prioritize pedestrian facilities around libraries, community centers/senior centers, courthouses, local government centers
- 5. Prioritize pedestrian facility connections around grocery stores/farmers markets
- 6. Prioritize connections to existing pedestrian facilities
- 7. Prioritize direct connections to transit stops
- 8. Support the use of traffic impact analyses (TIAs) to create pedestrian connectivity
- 9. Support the use of mass transportation to mitigate gaps in the pedestrian network
- 10. Support the installation of pedestrian facilities with the installation and upgrade of other transportation facilities
- 11. Prioritize short trail links (under 1,000 feet) that fill gaps between low traffic roadways to allow for pedestrian use while continuing to preserve the low traffic status of those roadways.

# Goal D: Health

Objectives:

- 1. Support the incorporation of health statistics and case studies in the promotion of transportation demand management (TDM) programs and wellness programs
- 2. Support the designation of exercise loops for walking in areas that have high daytime populations
- 3. Prioritize sidewalk and crosswalk connections between transit facilities and medical services
- 4. Support the utilization of health impact assessments when appropriate

#### Goal E: Economic Development

Objectives:

- 1. Support initiatives to create and promote walking tours in our region
- 2. Support the inclusion of pedestrian facility design in new developments
- 3. Support the creation of sponsorship policies for walking trails
- 4. Support the development of a program to recognize pedestrian friendly development
- 5. Support the incorporation of mobile technology into the trail system
- 6. Support the accommodation of major events (triathlons) in facility design

# **Developed Scoring Criteria**

# **Bicycle**

# Safety, Education, Awareness & Enforcement – 10 points

Bicycle facility prioritization should consider the nature of adjacent traffic

Arterial = 10 Collector = 6 Local = 2

# Transportation Choice – 20 points

Increase the ease of transitioning between bicycling & other modes of transportation (mass transportation & ferries) through prioritization of bicycle projects

6 key WAVE Transit stops and NCDOT ferry terminal Directly connects to Wave's top 6 stops – 3 Within 1/4 mile – 1

Transit stops Within 1/4 mile of a transit stop – 7 Within 1/2 mile of a transit stop – 3

Prioritize projects that overcome socioeconomic barriers

Census data – Income Low income– 7 Middle income– 5 High income - 2

Census Data - Age Medium median age – 3 Low median age – 2 High median age – 1

#### Built Environment, Land Use, and Connectivity – 70 points

Prioritize bicycle facilities in areas with high employment density High employment density – 8 Medium employment density – 5 Low employment density – 2

Prioritize bicycling facilities that fall within 1/4 mile of school campuses Within 1/8 mile of a school – 13 Within 1/4 mile of a school – 8 Within 1/2 mile of a school – 3

Prioritize bicycle connections between parks & residential areas

Within 1/8 mile of a public park and/or recreation facility - 8Within 1/4 mile of a public park and/or recreation facility - 5Within 1/2 mile of a public park and/or recreation facility - 2

Prioritize removal of barriers to bicycle around medical campuses

Within 1/8 mile – 3 Within 1/4 mile – 2 Within 1/2 mile – 1

Prioritize bicycle facility connections around grocery stores/farmers markets Within 1/8 mile – 5 Within 1/4 mile – 2

Prioritize connections to existing bicycling facilities

'Fills a gap', connecting on both sides to an existing facility that with project is +2 miles = 15

'Fills a gap', connecting on both sides to an existing facility that with project is less than 2 miles = 10

Connects to an existing facility on one side, and with project the facility is +2 miles = 7 Connects to an existing facility on one side, and with project the facility is less than 2 miles = 4

Prioritize bicycling connections between school campuses Project connects 2 or more school campuses = 3

Prioritize bicycle facilities that allow safe usage of bridges, overpasses, tunnels & viaducts Project traverses a bridge, overpass, tunnel, or viaduct = 5 Prioritize short trail connections (under 2,000 feet) that fill gaps in the roadway system that will allow bicycle use of these roadways

Project is a short trail connection that extends bicycle use of the existing roadway system = 10

# <u>Pedestrian</u>

# Safety, Education, Awareness & Enforcement – 10 points

Prioritize crosswalks at existing signals Existing signal – 10 points

#### Transportation Choice – 20 points

Sidewalk and crosswalk prioritization should consider nature of adjacent traffic Arterial – 8 Collector – 5 Local - 2

Prioritize sidewalks and crosswalks based on residential and employment density

Census data - Population Density

High – 6 Medium – 3 Low – 1

Census data - Employment Density High – 6 Medium – 3 Low – 1

# Built Environment, Land Use, and Connectivity – 65 points

Prioritize pedestrian facilities that fall within 1/4 mile of school campuses Within 1/8 mile of a school – 15 Within 1/4 mile of a school – 10 Within 1/2 mile of a school – 8

Prioritize pedestrian connections between parks & residential areas Within 1/8 mile of a public park and/or recreation facility – 5

Within 1/4 mile of a public park and/or recreation facility – 3 Within 1/4 mile of a public park and/or recreation facility – 3

Within 1/2 mile of a public park and/or recreation facility – 2

Prioritize removal of barriers to pedestrians around medical campuses Within 1/8 mile – 2 Within 1/4 mile – 1

Prioritize pedestrian facilities around libraries, community centers/senior centers, courthouses, local government centers

Within 1/8 mile - 5 Within 1/4 mile - 3 Within 1/2 mile - 1

Prioritize pedestrian facility connections around grocery stores/farmers markets

Within 1/8 mile – 3 Within 1/4 mile – 2 Within 1/2 mile – 1

#### Prioritize connections to existing pedestrian facilities

'Fills a gap', connecting on both sides to an existing facility that with project is +2 miles = 15

'Fills a gap', connecting on both sides to an existing facility that with project is less than 2 miles = 10

Connects to an existing facility on one side, and with project the facility is +2 miles = 7 Connects to an existing facility on one side, and with project the facility is less than 2 miles = 4

Prioritize connections to transit stops

Within 1/8 mile of a transit stop -10Within 1/4 mile of a transit stop -7Within 1/2 mile of a transit stop -4

Prioritize short trail links (under 1,000 feet) that fill gaps between low traffic roadways to allow for pedestrian use while continuing to preserve the low traffic status of those roadways

Project is a short trail connection that extends pedestrian use of the existing roadway system = 10

#### <u>Health – 5 points</u>

Prioritize sidewalk and crosswalk connections using Health and Wellness Gap Analysis report High Health Priority – 5 Medium Health Priority – 3 Low Health Priority – 1

# 4. BICYCLE

## INTRODUCTION

### Purpose of Chapter

This chapter provides the bicycle element of the *Cape Fear Commutes 2035 Transportation Plan*. It describes the relevance of the bicycle facilities to the transportation system, existing facility conditions and trends, and current and future issues.

## Relevance to the Transportation System and the Plan

The Wilmington Urban Area is ideal for bicycle commuting, offering flat topography, a mild climate, and a compact geographic footprint. However, greater Wilmington's existing bicycle transportation system presents many challenges, as most of the roadway corridors lack even the most basic bicycle accommodations (i.e., marked crosswalks, sidewalks, bike lanes, and multi-use paths), and where they do exist are inconsistent and disconnected. This fact alone presents the Cape Fear Region with numerous challenges and problems that adversely impact the economically disadvantaged, the economic competitiveness of the region, the health and well-being of area residents, the integrity and sustainability of regional natural resources and the ability of residents and visitors to enjoy an existence filled with a safe and secure non-motorized means of moving from one regional location to another.

Once implemented, this plan will address the needs of the urban area, and in particular economically distressed areas, by connecting beaches, businesses, colleges, community centers, homes, libraries, museums, schools, parks, regional attractions and a university via a non-motorized transportation network. Completion of these bicycle projects will increase transportation efficiency by decreasing traffic congestion and associated delays through the substitution of bicycle trips for auto trips.

A robust non-motorized vehicular transportation network is vital and critical to the health, welfare and sustainability of the Wilmington Urban Area. The comprehensive network of bicycle facilities outlined in this plan will provide a significant and necessary means for ensuring improvements to and enhancement of the existing bicycle facilities in the region, increasing area economically distressed residents' access to not only jobs and employment but other commercial and residential facilities and resources. The network will provide avenues for improving the health and well-being of area residents and visitors through physical activity, protecting the sustainability of regional natural resources, and enhancing and protecting the safety and welfare of the region's residents and visitors.

In short, implementation of this plan will provide an alternative transportation network that works because of its connectivity and safety; will build off an existing infrastructure to speed construction and reduce costs; will accomplish great improvements to health and recreation opportunities and experiences in an integrated fashion; will improve livability in the region by connecting residential areas to employment opportunities and jobs, commercial businesses and other community services and resources; and, will be a model for cooperation and coordination by crossing local government boundaries allowing persons from a wide variety of regional areas to utilize services and access jobs by connecting area resources, including several university campuses, via a non-motorized vehicular transportation network.

The Bicycle Appendix includes:

- existing bicycle facilities in the Wilmington Urban Area;
- an estimation of the transportation demand for bicycle facilities;
- development of the Universe of Bicycle Projects and the evaluation and ranking of projects;
- recommended bicycle facilities needed to improve the regional transportation system; and
- recommended policy changes needed to improve the regional transportation system.

# **Existing Facilities**

#### Types of Facilities:

- **On-road wide outside lane:** right-most lane of roadway is 14 feet wide or more in order to accommodate motor vehicles and bicycles in the same shared travel lane; this type of facility is standard on North Carolina Department of Transportation roadways within urban areas. Example: Market Street between Colonial Drive and New Centre Drive.
- **On-road paved shoulder:** additional paved area to the right of the travel lanes delineated by a solid white line; this type of facility is not specifically for the use of bicycles but it provides a paved area outside of the travel lanes for the use of bicyclists; the use of paved shoulders by bicyclists can create conflicts with right-turning motor vehicles at driveways and side streets. Example: Randall Parkway between Independence Boulevard and South College Road.
- **On-road bicycle lane:** marked travel lane designed specifically for the use of bicyclists; bicycle lanes are a minimum of four feet wide and do not include the concrete gutter; bicycle lanes should be a minimum of six feet wide when adjacent to on-street parking or on a roadway without curb and gutter; bicycle lanes are designed to limit conflicts between bicyclists and motor vehicles at driveways and side streets. Example: MacMillan Avenue between Hamilton Drive and Cedar Avenue.
- **Bicycle boulevard:** a local, low-speed, low-volume roadway that has been optimized for use by bicyclists; bicycle boulevards typically include bicycle parking, bicyclist wayfinding signage, improved pedestrian and bicycle crossings at major roadways, shared lane pavement markings, speed limit reductions, traffic calming devices, and through-traffic diversion. Example: Ann Street between South Front Street and South 15<sup>th</sup> Street.
- Off-road multi-use path: an eight- to twelve-foot-wide paved asphalt path for use by pedestrians and bicyclists; multi-use paths can be located within conservation areas,

easements, parks, roadway rights-of-way, and public lands. Example: Military Cutoff Road between Gordon Road and Drysdale Drive.

#### Regional Trails & Corridors:

- **Cross-City Trail:** Planned as an eight- to twelve-foot-wide paved asphalt path for use by pedestrians and bicyclists; the Cross-City Trail is proposed to run from the Heide-Trask Drawbridge to James E.L Wade Park, paralleling Eastwood Road, Mallard Street, Reigel Road, Wagoner Drive, Randall Parkway, Rosemont Avenue, Park Avenue Independence Boulevard, South 17<sup>th</sup> Street, Waltmoor Road and Bethel Road. Existing: Eastwood Road between Cardinal Drive and Military Cutoff Road.
- East Coast Greenway: Planned as an eight- to twelve-foot-wide paved asphalt path for use by pedestrians and bicyclists; the East Coast Greenway is proposed as the urban counterpart to the Appalachian Trail planned to run from Calais, Maine to Key West, Florida. Within the Wilmington Urban Area, the East Coast Greenway Spine Corridor is proposed to follow US 421, Wilmington Riverwalk, Greenfield Lake Trail, South 17<sup>th</sup> Street, Independence Boulevard, River Road, Dow Road, K Avenue, and South Fort Fisher Boulevard to the Fort Fisher-Southport Ferry. The East Coast Greenway Coastal Corridor is proposed to follow the Hampstead Bypass, Military Cutoff Road extension, Military Cutoff Trail, and Cross-City Trail to Cameron Art Museum. Existing: Greenfield Lake Trail in Greenfield Park & Gardens.
- Island Greenway: Planned as an eight- to twelve-foot-wide paved asphalt path for use by pedestrians and bicyclists; the Island Greenway is proposed to run from the Snows Cut Bridge in Carolina Beach to the Fort Fisher Ferry Terminal south of Kure Beach, paralleling Dow Road, K Avenue, and South Fort Fisher Boulevard. Existing: Carolina Beach Greenway between Snows Cut and Harper Avenue.
- North Carolina Bicycling Highway 3 (Ports of Call): North Carolina's coast is long and varied, with two major sounds—the Pamlico and the Albemarle—and a series of barrier islands known as the Outer Banks. This 300-mile route from South Carolina to Virginia takes you to all the major ports of the colonial era—Southport, Wilmington, New Bern, Bath, and Edenton. Other points of interest along this route include Fort Fisher State Historic Site, Carolina Beach State Park, the Croatan National Forest Recreation Areas, Tryon Palace, Goose Creek State Park and Merchants Millpond State Park. In the Cape Fear region, this route follows U.S. 421 on Pleasure Island (on-road bicycle lanes), River Road (on-road bicycle lanes), North and South Front Street, Princess Street, North 23rd Street and Blue Clay Road.
- North Carolina Bicycling Highway 5 (Cape Fear Run): This 160-mile route roughly parallels the course of the Cape Fear River through the southeast coastal plain to the sea. Rolling hills soon give way to flat land in the swamps and Carolina bays typical of this region

of the state. Notable points of interest include Jones Lake State Park, Moore's Creek National Military Park, the USS North Carolina Battleship Memorial, Brunswick Town State Historic Site, Carolina Beach State Park, and Fort Fisher State Historic Site. In the Cape Fear region, this route follows U.S. 421 on Pleasure Island (on-road bicycle lanes), River Road (on-road bicycle lanes), North and South Front Street, Isabel Holmes Bridge and U.S. 421 north of downtown Wilmington.

• **River to the Sea Bikeway:** The River to the Sea Bikeway (WMPO Bicycle Route 1) is an 11-mile, on- and off-road bicycle route that follows the Historic Beach Car Line, which carried vacationers from downtown Wilmington to Wrightsville Beach by trolley. The bikeway is comprised of bicycle boulevards, bicycle lanes, multi-use paths, residential streets, and a few busy arterial roadways with no bicycle facilities. The bikeway follows Market Street, South Front Street, Ann Street, South 15<sup>th</sup> Street, Castle Street, Colwell Avenue, Park Avenue, Greenville Avenue, Wrightsville Avenue, Old Causeway Drive, Pelican Drive and Salisbury Street. Existing: Ann Street Bicycle Boulevard between South Front Street and South Water Street.

These regional trails and corridors are illustrated on Figure 1.

This Plan also recognizes the importance of bicycle connections between Brunswick and New Hanover counties. The Cape Fear Skyway should include an off-road multi-use path with bicycle and pedestrian connections to facilities on either side of the river.



FIGURE 1 REGIONAL TRAILS AND CORRIDORS

### Existing Facilities:

The Wilmington Urban Area has a relatively significant number of bicycle facilities for a metropolitan area its size in North Carolina (see Figure 2). These existing facilities include:

- Ann Street Bicycle Boulevard (1.4 miles)
- Aquarium Trail (0.4 miles)
- Carolina Beach Greenway (0.9 miles)
- Colwell Avenue multi-use path (0.5 miles)
- Cross-City Trail along Eastwood Road (1.8 miles)
- Cross-City Trail along Independence Boulevard (2.8 miles)
- Cross-City Trail along South 17<sup>th</sup> Street (0.8 miles)
- Greenville Loop Road bicycle lanes (2.8 miles)
- Leland multi-use path (0.6 miles)
- MacMillan Avenue bicycle lanes (0.4 miles)
- Military Cutoff Trail (2.0 miles)
- Navassa multi-use path (0.3 miles)
- North Lake Park Boulevard bicycle lanes (0.1 miles)
- Park Avenue bicycle lanes (1.2 miles)
- Park Avenue multi-use path (0.5 miles)
- Pine Grove Drive bicycle lanes (1.2 miles)
- Princess Place Drive bicycle lanes (2.1 miles)
- River Road bicycle lanes (12.0 miles)
- South Front Street bicycle lanes (1.0 miles)
- South Lake Park Boulevard and North Fort Fisher Boulevard bicycle lanes (1.5 miles)
- Wood Dale Drive multi-use path and bicycle lanes (0.6 miles)
- Wrightsville Avenue bicycle lanes (0.9 miles)
- Total existing facilities: 35.8 miles

There are additional bicycle facilities that are in the design phase and should be constructed within the next five years:

- Cross-City Trail along Randall Parkway (1.0 miles)
- Cross-City Trail along Eastwood Road (0.3 miles)
- Cross-City Trail through Autumn Hall (1.4 miles)
- Cross-City Trail through the UNCW campus (2.7 miles)
- North and South 5<sup>th</sup> Avenue bicycle lanes (2.0 miles)
- Randall Parkway bicycle lanes (1.7 miles)
- Total facilities in design: 9.1 miles

There are additional greenways within some of the area's larger parks (i.e. Greenfield Park and Gardens, Halyburton Park, Hugh McRae Park, etc.), but the transportation value of these facilities is rather limited.



FIGURE 2 MAP OF EXISTING BICYCLE FACILITIES

#### Previous Plans:

Several bicycle plans and transportation plans that include recommendations for bicycle facilities have been drafted and adopted by the WMPO since the adoption of the 2030 Long Range Transportation Plan. These include the Coastal Pender Collector Street Plan (2007), River Road Small Area Plan (2007), US 17 Business Corridor Study (2007), Bicycle Facilities Study for the Blue Clay Corridor (2008), Cape Fear Historic Byway Corridor Management Plan (2008), Comprehensive Bicycle Plan for Leland, NC (2008), Corridor Plan for Dow Road (2009), Pelican Drive/Salisbury Street Bicycle Plan for the Town of Wrightsville Beach (2009), Walk Wilmington: A Comprehensive Pedestrian Plan (2009), and Market Street Corridor Study (estimated 2010). Elements of these plans were incorporated into the development of the Cape Fear Commutes 2035 Transportation Plan.

## **Bicycle Facility Demand**

Table 1 shows the transportation priorities of the respondents who completed the *Cape Fear Commutes 2035 Survey* which was administered in 2009. The highest transportation priority according to the survey is "Improving bicycle & pedestrian facilities," while "Improving bicycle & pedestrian safety" ranked fourth out of the eight priorities listed.

Goal	Rank
Improving bicycle & pedestrian facilities	1
Expanding public transit service	2
Improving function of existing roadways	3
Improving bicycle & pedestrian safety	4
Building new roadways	5
Improving safety of existing roadways	6
Building park and ride lots	7
Beautifying existing roadways	8

TABLE 1 REGIONAL TRANSPORTATION PRIORITIES

Source: Cape Fear Commutes 2035 Survey, 2009

Table 2 shows the difference between the desired trips by bicycle and the current trips by bicycle, according to the survey respondents. Over 40% of people who currently make less than ten percent of their trips by bicycle would like to make more. The largest percentage of these respondents would like to make between ten and 50% of their trips by bicycle. Running errands via bicycle is more appealing than commuting to work or school, with a four- to five-percent difference in favor of the former in the 10-25% and 26-50% rows.

DIFFERENCE BETWEEN DESIRED AND CURRENT TRIPS BY BICYCLE							
Percentage of total trips	Commuting to Work or School	Running Errands					
<10%	-43.0%	-49.8%					
10-25%	+15.5%	+19.2%					
26-50%	+14.3%	+18.0%					
51-75%	+6.1%	+5.1%					
>75%	+7.2%	+7.4%					
Sources Cone Foor Commutee 2025 Survey 2000							

# TABLE 2

Source: Cape Fear Commutes 2035 Survey, 2009

Table 3 clearly illustrates where the perceived gaps are in the bicycle transportation system according to the survey. The public is strongly interested in the provision of additional off-road multi-use paths and, to a lesser extend, on-road bicycle lanes. Bicycle parking and shower facilities are far less important according to survey respondents.

HOW DO WE ENCOURAGE PEOPLE TO BIGTCLE MORE OFTEN?						
Strategy	Percentage					
Construct more off-road multi-use paths	71.9%					
Construct more on-road bicycle lanes	68.6%					
Provide better information about safe and comfortable bicycle routes	46.1%					
Provide bicycle parking at workplaces	38.8%					
Provide showers and changing rooms near workplaces	21.2%					
Other	12.7%					

# TABLE 3 HOW DO WE ENCOURAGE DEODIE TO RICYCLE MODE OFTEN?

Source: Cape Fear Commutes 2035 Survey, 2009

#### **RANKING PROJECTS**

#### Universe of Bicycle Projects

Beginning in May 2007, the Wilmington Metropolitan Bicycle and Pedestrian Committee (D/B/A WMPO BikePed Committee) began to populate the WMPO Universe of Bicycle Projects. The universe is a master list of potential bicycle projects throughout the Wilmington Urban Area. The list of projects originated from previous plans, committee members, county and municipal staff and WMPO staff. After the Cape Fear Commutes 2035 Survey closed, bicycle projects identified in the responses were added to the universe. The master list includes: bicycle boulevards, bicycle lanes,

multi-use paths, and wide outside lanes along many of the area's existing and planned roadways, along creeks and through public and private lands.

#### Criteria

Throughout 2008 and 2009, the WMPO BikePed Committee drafted a set of criteria to evaluate the projects in the universe. These criteria are intended to provide a completely objective score for each project based on factors identified as important by the committee members. The committee chose to weight the criteria heavily toward the creation of a trunk network of interconnected facilities that would serve primarily as transportation corridors, with less emphasis placed on recreational facilities.

Criteria	Maximum Points
Average daily traffic on adjacent roadway (>5000=5)	5
Cross-City Trail (connects to=2, part of=5)	5
East Coast Greenway (part of or connects to)	5
Households without access to a motor vehicle (>3.32%=2, >7.94%=5)	5
Island Greenway (connects to=2, part of=5)	5
North Carolina Bicycling Highway (connects to=2, part of=5)	5
Part of adopted plan (yes=5)	5
River to the Sea Bikeway (connects to=2, part of=5)	5
Within public right-of-way (partly=2, yes=4)	4
Adjacent to park (<1/2 mile=2, <1/8 mile=3)	3
Adjacent to school (<1/2 mile=2, <1/8 mile=3)	3
Connects to existing bicycle facility (different type=2, same type=3)	3
Dwelling units per acre (>2.2=2, >6.6=5)	3
Jobs per acre (>4.9=2, >58.6=5)	3
Number of adjacent land uses (>2=2, >3=3)	3
Number of attractions nearby (schools, parks, museums, landmarks, etc.)	Unlimited

#### TABLE 4 CRITERIA USED TO SCORE BICYCLE PROJECTS

#### **RECOMMENDED PROJECTS**

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
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Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
Horizo	on Perio	d 2010-2015					
1	253	Shipyard	River	S College	BL-NP	39	\$941,593
2	100	S 17th	E Lake Shore	Independence	MUP	39	\$1,079,544
3	221	Carolina Bch	Burnett	Shipyard	BL-R(	37	\$16,332
4	163	Peachtree	Park	McMillan	BL-NP	37	\$108,827
5	082	S Front/S 3rd	Wooster	Greenfield Pk	MUP	37	\$572,251
6	206	S Front	Queen	Burnett	BL-R	36	\$10,833
7	201	Ann	S Front	S 22nd	BB	34	\$40,751
8	179	N 23rd	Blue Clay	Market	BL-NP	34	\$584,483
9	105	N & S 5th	Campbell	E Lake Shore	BL-R	33	\$21,293
10	003	Riverwalk S	Nun	Wooster	MUP	33	\$187,543
11	103	Independence	S 17th	Carolina Bch	MUP	33	\$404,229
12	210	Wagoner/Riegel	S College	Autumn Hall	MUP	33	\$1,491,727
13	182	Dow	Harper	К	MUP	33	\$1,866,029
14	147	River	Barnard Cr	Carolina Bch	MUP	33	\$3,280,895
15	200	US 421	Pender Co	Battleship	MUP	33	\$4,166,829
16	167	S Kerr	Randall	Park	BL-R	32	\$13,739
17	196	Princess/Chestnut	N 5th	N 23rd	BB	32	\$31,692
18	204	S 13th	Dock	E Lake Shore	BB	32	\$38,299
19	001	Riverwalk N	E Lee	I Holmes	MUP	32	\$504,837
20	165	Park	Independence	S Kerr	MUP	32	\$593,130

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
21	009	Military Cutoff	Military Cutoff	Plantation	MUP	32	\$2,001,396
22	088	Market	S 17th	Covil	BL-R	31	\$14,107
23	112	McMillan	Wilshire	Oleander	BL-NP	31	\$128,944
24	113	Wilshire	Empie Pk	Dead End	BL-NP	31	\$342,545
25	154	Waltmoor	JD Barry	Wade Pk	MUP	31	\$735,881
26	004	I Holmes	US 421	N 3rd	BL-R	30	\$6,366
27	007	Princess Place	N 18th	Cinema	BL-R	30	\$15,913
28	116	Eastwood	Burke	Heide-Trask	MUP	30	\$158,188
29	260	S College	Randall	Wilshire	BL-NP	30	\$253,770
30	261	S College	Market	Randall	BL-NP	30	\$302,499
31	188	Pelican	Heide-Trask	N Lumina	MUP	30	\$662,280
32	203	Colwell	Castle	Kent	MUP	29	\$137,287
33	262	Wrightsville	Wilshire	S Kerr	BL-NP	29	\$300,441
34	135	Oleander	Greenville	Wrightsville	MUP	29	\$389,987
35	000	Burnt Mill Cr	Stanley	Metts	MUP	29	\$968,740
36	202	S 18th	Ann	Castle	BB	28	\$4,968
37	219	Military Cutoff	Eastwood	Wrightsville	BL-NP	28	\$129,584
38	125	Randall Pond S	Rosemont	Randall	MUP	28	\$302,272
39	164	Park	Peachtree	Wallace	MUP	28	\$322,256

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type	Project Score	Project Estimate
Horizo	n Perio	d 2016-2020					
40	129	Eastwood	Racine	Cardinal	MUP	27	\$134,251
41	181	NC Boat Ramp	Old Causeway	Pelican	MUP	27	\$157,157
42	087	Park	Country Club	Hawthorne	MUP	27	\$285,025
43	240	Cardinal	Market	Clear Run	BL-NP	27	\$338,086
44	162	Old Fayetteville	Basin	Village	BL-NP	27	\$354,100
45	143	Lincoln	Wilshire	Independence	BL-NP	27	\$430,925
46	186	Park	52nd	Hinton	MUP	27	\$504,907
47	248	Oleander	Greenville	Wrightsville	BL-R	26	\$7,155
48	104	Central	Burnett	W Lake Shore	BL-R	26	\$9,539
49	011	Harper	Dow	Carolina Bch	BL-R	26	\$10,170
50	300	41st	Oleander	Shipyard	BL-R	26	\$10,318
51	166	Holly Tree	Shipyard	Pine Grove	BL-R	26	\$15,847
52	176	Greenville Lp	Oleander	Greenville Snd	BL-NP	26	\$67,708
53	111	Mercer	Market	Randall	BL-NP	26	\$198,757
54	235	Market	Eastwood	Gordon	BL-NP	26	\$590,079
55	229	Gordon	N Kerr	Military Cutoff	BL-NP	26	\$935,471
56	197	Lake	41st	S College	BL-NP	25	\$134,175

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
57	146	River	Independence	Motts Cr	MUP	25	\$149,064
58	258	S College	Peachtree	Shipyard	BL-NP	25	\$201,452
59	027	Park	Audubon	S Kerr	MUP	25	\$256,287
60	190	Snows Cut N	Seabreeze	River	MUP	25	\$327,576
61	122	Barclay Pl	Independence	Shipyard	MUP	25	\$339,804
62	099	Medical Cntr	Adams	S 17th	BL-NP	25	\$368,458
63	274	Burnett	S Front	Shipyard	BL-NP	25	\$414,018
64	144	Mallard	Rill	Park	BL-NP	25	\$458,334
65	002	Smith Creek	I Holmes	Stanley	MUP	25	\$826,968
66	093	River (NC133)	US 17-74-76-NC 133	Town Cr	BL-NP	25	\$2,092,755
67	136	Blue Clay	Castle Hayne	Castle Hayne	MUP	25	\$2,825,691
68	205	Greenfield	S Front	S 17th	BL-R	24	\$12,919
69	110	Mercer	Dead End	Randall	MUP	24	\$87,377
70	185	Military Cutoff	Drysdale	Eastwood	MUP	24	\$147,538
71	211	Mallard	Rill	Autumn Hall	MUP	24	\$190,080
72	187	Park	Hinton	Greenville	MUP	24	\$352,686
73	092	Village	Lanvale	Old Fayetteville	BL-NP	24	\$917,152
74	232	Heide-Trask	Airlie	Keel	BL-R	23	\$2,706
75	109	Mercer	Dead End	Park	BL-R	23	\$5,911
76	156	G Anderson	Echo Farms	S 17th	BL-R	23	\$10,593
77	157	St Andrews	Carolina Bch	S 17th	BL-R	23	\$14,849

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
78	255	Snows Cut	River	Lewis	MUP	23	\$488,974
79	239	New Centre	N Kerr	College Acres	BL-NP	23	\$515,611
80	102	Independence	Carolina Bch	River Road	MUP	23	\$651,804
81	224	Carolina Bch	Independence	S College	BL-NP	23	\$805,143
82	061	Murrayville	Castle Hayne	Military Cutoff	BL-NP	23	\$1,589,325
Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
Horizo	n Perio	d 2021-2025			1		
83	223	Carolina Bch	Shipyard	Independence	BL-R	22	\$12,949
84	217	Racine	Eastwood	Randall	BL-R	22	\$13,009
85	233	Market	Covil	Cinema	BL-NP	22	\$169,322
86	180	Wrightsville	Greenville	Oleander	BL-NP	22	\$306,611
87	265	Wrightsville	Wooddale	Greenville	BL-NP	22	\$375,770
88	127	Covil Farm	Military Cutoff	Middle Sound Lp	BL-NP	22	\$384,453
89	273	Airlie	Wrightsville	Wrightsville	BL-NP	22	\$398,620
90	230	Greenville Lp	Pine Grove	Park	MUP	22	\$1,573,415
91	114	Wilshire	Dead End	McMillan	MUP	21	\$87,694
92	287	Wallace	Wrightsville	Pine Grove	BL-NP	21	\$123,851
93	189	Summers Rest	Eastwood	Dead End	MUP	21	\$204,089
94	264	Wrightsville	S Kerr	Wooddale	BL-NP	21	\$222,243

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
95	137	McRae/C Harnett	Bess	Castle Hayne	BL-NP	21	\$272,448
96	272	St Nicholas	Blair School	Military Cutoff	MUP	21	\$490,497
97	271	Inland Greens	Elisha	Eastwood	MUP	21	\$556,864
98	192	Randall/Hooker	Racine	Mallard	MUP	21	\$616,230
99	231	Halyburton Mem	River	Carolina Bch	MUP	21	\$899,474
100	012	NC 210	Hampstead Byp	US 17	BL-NP	21	\$911,372
101	228	Dow	К	Fort Fisher	MUP	21	\$1,050,183
102	013	US 17	Plantation	Kiwanis Pk	BL-NP	21	\$2,933,653
103	062	Hampstead Byp	Plantation	Saps	MUP	21	\$5,508,211
104	263	Wrightsville	Castle	Wilshire	BL-R	20	\$12,018
105	297	St Nicholas	Elisha	Blair Sch	BL-NR	20	\$12,785
106	059	Kinston	Princess Place	Van Campen	BL-NR	20	\$38,778
107	074	Wolf Pond	Hoover	US 17	BL-NR	20	\$79,354
108	194	N College	Northchase	New Village	MUP	20	\$214,841
109	291	RE Lee/JD Barry	S College	S 17th	BL-NP	20	\$313,021
110	234	Market	Cinema	Eastwood	BL-NP	20	\$463,319
111	257	S College	Shipyard	S 17th	BL-NP	20	\$469,032
112	266	Island Greenway	Sumter	к	MUP	20	\$602,647
113	244	N College	Kings Grant	Market	MUP	20	\$818,292
114	073	Hoover	Dead End	US 17	BL-NP	20	\$904,490
115	094	Village	Old Fayetteville	US 17-74-76-NC 133	BL-NR	19	\$17,292

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
116	106	Silver Stream	W Lake Shore	Silver Stream	MUP	19	\$66,327
117	288	Hawthorne	Wrightsville	Oleander	BL-NP	19	\$69,487
118	207	Greenville	Wrightsville	Oleander	BL-NP	19	\$224,938
119	267	Smith Cr	Love Grove	N 23rd	MUP	19	\$299,253
120	175	Carolina Bch	Myrtle Grove	Snows Cut	BL-NP	19	\$452,909
121	133	Blue Clay	Old Mill	Dairy Farm	BL-NP	19	\$782,219
122	226	Castle Hayne	Riverside	Division	BL-NP	19	\$1,878,350

\*Facility Type: BB=Bicycle Boulevard; BL-NP=on-road bicycle lanes-new pavement; BL-NR=on-road bicycle lanes-new roadway; BL-R=on-road bicycle lanes-restriping; MUP=off-road multi-use path

Horizon Period 2026-2030							
123	068	Island Creek	New Hanover	Hampstead Byp	BL-NP	18	\$840,091
124	177	Masonboro Lp	Pine Grove	Myrtle Grove	BL-NP	18	\$926,243
125	225	Carolina Bch	S College	Myrtle Grove	BL-NP	18	\$953,115
126	098	Navassa S	Broadway	Village	MUP	18	\$977,071
127	005	Lanvale	Village	US 17	BL-NP	18	\$1,043,821
128	132	McClelland	Cobblestone	New Centre	MUP	17	\$48,738
129	078	Collector G	US 17	Belvedere	BL-NR	17	\$57,419
130	259	S College	Wilshire	Peachtree	BL-NP	17	\$115,907
131	285	Winston/Hoggard	Rosemont	S College	BL-NP	17	\$143,943
132	277	Olsen Pk	N College	Olsen Pk	MUP	17	\$229,298
133	301	N Kerr	ML King Jr	Bavarian	BL-NP	17	\$758,997
134	058	Peele	Bragg	S 17th	BL-NR	16	\$9,857

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
135	064	W Backage	Collector C	Wolf Pond	BL-NR	16	\$182,300
136	218	Hooker	Mallard	Wrightsville	BL-NP	16	\$202,260
137	283	Gillette/Halifax	Fordham	Lake	BL-NP	16	\$219,316
138	091	Pine Grove	Holly Tree	Masonboro Lp	BL-NP	16	\$232,456
139	249	Piner	S College	Myrtle Grove	BL-NP	16	\$276,983
140	251	Rogersville	Eastwood	Wrightsville	MUP	16	\$422,965
141	160	Old Mill	Village	Main	BL-NP	16	\$677,012
142	236	Market	Gordon	Porters Neck	BL-NP	16	\$921,618
143	183	Masonboro Lp	Pine Grove	Whiskey Cr	MUP	16	\$924,534
144	220	Cape Fear Mem	Village	S Front	MUP	16	\$1,499,553
145	302	Cape Fear Skyway	Powerline	Carolina Bch	MUP	16	Incidental
146	130	Cobblestone	McClelland	Market	BL-NP	15	\$71,715
147	010	Northwest Pk	Northwest Pk	Fletcher	MUP	15	\$112,990
148	284	Independence Mall	Canterbury	Fordham	MUP	15	\$116,668
149	296	Long Leaf Acres	Eastwood	Elisha	BL-NP	15	\$155,435
150	178	Myrtle Grove	Masonboro Lp	Carolina Bch	BL-NP	15	\$949,250
151	238	Middle Sound Lp	Darden	Darden	MUP	15	\$2,572,982
152	077	Dan Owen	US 17	Grandview	BL-NR	14	\$44,350
153	107	Savannah	S 17th	Dead End	BL-NP	14	\$53,543
154	060	Plantation	Military Cutoff	Market	BL-NR	14	\$57,549
155	292	Green Meadows	Strawfield	St Nicholas	BL-NP	14	\$241,526

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
156	252	St Joseph	N Lake Park	N Lake Park	BL-NP	14	\$369,620
157	149	Silver Lake	River	Carolina Bch	BL-NP	14	\$374,849
158	134	N Lumina	Lagoon	Sand Dollar	MUP	14	\$429,062
159	096	Navassa Central	Davis Cr	Main	MUP	14	\$657,536
160	199	Old Mill	Magnolia	Main	MUP	14	\$876,144
161	280	Little John	Robin Hood	Little John	MUP	13	\$21,070
162	150	Hewletts Cr	Cascade	Holly Tree	MUP	13	\$62,681
163	198	Magnolia	Lincoln School	Dorsey	MUP	13	\$78,280
164	227	Clear Run	College Acres	Mallard	MUP	13	\$459,039
165	089	Holly Shelter	Blue Clay	Pender Co	BL-NP	13	\$852,830
166	250	Porters Neck	Market	Bald Eagle	MUP	13	\$1,247,557
Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
Horizo	n Perio	d 2031-2035					
167	294	Bethel	Pine Valley	Wade Pk	BL-R	12	\$2,525
168	290	Kirby Smith	Braemar	Waltmoor	BL-R	12	\$12,329
169	108	Savannah	Dead End	Graymont	MUP	12	\$28,546
170	289	Dogwood	Wrightsville	Oleander	BL-NP	12	\$89,940
171	281	Raleigh	Vance	Newkirk	BL-NP	12	\$384,606
172	237	Middle Sound Lp	Demarest Landing	Anaca Point	BL-NP	12	\$753,899

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
173	076	Saps	NC 210	Hoover	BL-NR	11	\$102,800
174	282	Newkirk	Shipyard	Hallandale	BL-NP	11	\$120,544
175	075	Collector A	NC 210	Dogwood	BL-NR	11	\$122,647
176	070	Dairy Farm	Blue Clay	Sidbury	BL-NP	11	\$172,441
177	298	Tanbridge	Camberly	End	BL-NP	11	\$229,234
178	268	Maides	Maides	N Kerr	MUP	11	\$470,037
179	209	Powerline	Smith Creek Pk	Ogden Pk	MUP	11	\$778,355
180	195	Greentree	S Kerr	Dead End	BL-R	10	\$4,735
181	279	Gillette	NHMP	Gillette	MUP	10	\$101,367
182	158	Motts Cr	Carolina Bch	Linden Ridge	MUP	10	\$179,138
183	269	Scientific Park	N 23rd	N 26th	MUP	10	\$273,062
184	286	Beasley	Pine Grove	Masonboro Lp	BL-NP	10	\$392,316
185	254	Sidbury	Old Dairy	Market	BL-NP	10	\$1,724,603
186	295	Elisha	Saint Nicholas	Tanbridge	BL-NP	9	\$165,182
187	270	Maides	N 26th	Maides	MUP	9	\$339,925
188	063	Blue Clay	Holly Shelter	Dairy Farm	BL-NP	9	\$395,155
189	095	Navassa N	Mt Misery	Davis Creek	MUP	9	\$2,189,732
190	169	Autumn-Englewood	Autumn	Englewood	MUP	8	\$19,444
191	168	Arbor-Pasha	Arbor	Pasha	MUP	8	\$26,629
192	171	Brenda	Patricia	Greenville Lp	MUP	8	\$39,235
193	072	Huggins	Island Cr	Sidbury	BL-NR	8	\$105,773

Project Ranking	Project Number (see map)	Project Location	Between	And	Facility Type*	Project Score	Project Estimate
194	161	Royal	Wayne	Royal	MUP	8	\$108,052
195	278	Newkirk	Hillandale	Independence	MUP	8	\$166,091
196	006	Powerline	US 17	Brunswick Nature Pk	MUP	8	\$2,484,464
197	299	Wells	Tanbridge	Monument	BL-NP	7	\$41,587
198	208	Smith Creek Pk	Dead End	Shenandoah	MUP	7	\$797,243
199	066	Scotts Hill Lp	US 17	Dogwood	BL-NP	7	\$845,040
200	097	Navassa West	Timour	Royster	MUP	7	\$2,116,686
201	067	Griffith	W Backage	US 17	BL-NR	6	\$12,695
202	069	Sidbury	Sidbury	US 17	BL-NR	6	\$15,285
203	079	Washington Acres	US 17	Dogwood	BL-NP	6	\$477,693
204	222	CSX Railroad	Navassa	US 421	MUP	6	\$1,207,520
205	128	Thais	Wayneridge	Bright Leaf	MUP	4	\$19,642
206	065	Collector C	Huggins	W Backage	BL-NR	4	\$21,006
207	275	Timber	Grandiflora	Timber	MUP	4	\$36,682
208	071	Dogwood	Scotts Hill Lp	Washington Acres	BL-NR	4	\$59,438
209	170	Shuney	Hillwood	Greenville Lp	MUP	4	\$171,039
210	293	Pine Valley	S College	Beasley	BL-NP	4	\$317,465
211	159	Night Harbor	Coral Stone	N Olde Towne	MUP	2	\$64,404
212	276	Sturgeon	Sturgeon	Holly Hills	MUP	2	\$127,672
*Facil lanes-	ity Type -new ro	: BB=Bicycle Boulevar adway; BL-R=on-road	d; BL-NP=on-road bicyc bicycle lanes-restriping	le lanes–new pavement g; MUP=off-road multi-us	; BL-NR= se path	on-roa	d bicycle



FIGURE 3 MAP OF RECOMMENDED BICYCLE PROJECTS



FIGURE 4 MAP OF RECOMMENDED BICYCLE PROJECTS (WILMINGTON INSET)

#### **RECOMMENDED POLICIES**

- The WMPO will collaborate with Brunswick County Public Schools, New Hanover County Public Schools, Pender County Public Schools and all member counties and municipalities to improve school siting, bicycle connections to existing schools and encouragement of bicycle to school programs.
- The WMPO will coordinate with local agencies, organizations and all member counties and municipalities to improve bicycle access to all public facilities (i.e. courthouses, offices, parks, police stations, etc.).
- The WMPO will encourage all member counties and municipalities to require the construction of bicycle facilities as part of subdivision and/or site development.

- The WMPO will encourage all member counties and municipalities to seek planning and infrastructure grants to improve the bicycle transportation system within the Wilmington Urban Area.
- The WMPO will support comprehensive bicycle plans for municipalities within the Wilmington Urban Area to identify additional bicycle projects for funding.
- The WMPO supports the inclusion of bicycle facilities in all new roadway and bridge projects within the Wilmington Urban Area.
- The WMPO supports the coordination and linkage of the bicycle transportation and mass transportation systems within the Wilmington Urban Area.
- The WMPO will work to ensure that transportation projects within the Wilmington Urban Area do not disrupt existing or planned bicycle routes or facilities
- The WMPO will work to construct the bicycle projects and implement the policies identified in the Coastal Pender Collector Street Plan (2007), Dawson & Wooster Corridor Plan (2007), River Road Small Area Plan (2007), US 17 Business Corridor Study (2007), Bicycle Facilities Study for the Blue Clay Corridor (2008), Cape Fear Historic Byway Corridor Management Plan (2008), Comprehensive Bicycle Plan for Leland, NC (2008), Corridor Plan for Dow Road (2009), Pelican Drive/Salisbury Street Bicycle Plan for the Town of Wrightsville Beach (2009), Walk Wilmington: A Comprehensive Pedestrian Plan (2009), Market Street Corridor Study (estimated 2010), and all other adopted transportation plans.
- The WMPO will work to implement the complete streets policies adopted by the WMPO and the North Carolina Board of Transportation.
- The WMPO will work to promote bicycling as a viable and safe mode of transportation throughout the Wilmington Urban Area.

#### SAFETEA-LU PLANNING FACTORS

The Bicycle element of *Cape Fear Commutes 2035* addresses the SAFETEA-LU Planning Factors in the following ways:

# A) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.

This planning factor is achieved by identifying existing and future bicycle needs and prioritizing those needs. The results of this process are shown in this Plan. Improved bicycle travel in the region will likely result in improved economic vitality and efficiency through providing access to jobs and commerce by alternate means.

#### (B) Increase the safety of the transportation system for motorized and non-motorized users.

As described in this Plan, member jurisdictions have adopted plans and policies that will increase the extent of fit-for-purpose facilities for bicyclists and pedestrians. This will improve safety by reducing the potential conflicts with motor vehicles. Considerable planning efforts have been made to develop these plans and policies, and the growth of the bicycle and sidewalk networks in recent years confirms a degree of success.

# (C) Increase the security of the transportation system for motorized and non-motorized users.

Bicycling improvements will continue to increase security for non-motorized users by offering choice in commuting options.

#### (D) Increase the accessibility and mobility of people and for freight.

This planning factor is achieved by identifying existing and future transportation needs and prioritizing those needs. The results of this process are shown in this Plan. The planning process has recognized that increasing mobility and accessibility does not necessarily mean by highway alone. This is shown in the continuing attention to bicycle planning and improvements to other alternative modes of travel.

# (E) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

The WMPO project development process ensures that potential social and environmental conflicts are identified very early in a project's development. This assists in the selection of the most appropriate alignment, is beneficial to the public's quality of life, and helps to preserve the natural environment.

# (F) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

The WMPO has supported continuous planning efforts to achieve an efficient multi-modal plan. The existing bicycle facilities will be greatly improved and extended through past and current planning efforts. Connecting to other modes is also an emphasis of this Plan.

#### (G) Promote efficient system management and operation.

Development of the bicycle facilities and programs in this Plan will add efficiency to the existing transportation system and improve general operations.

#### (H) Emphasize the preservation of the existing transportation system.

This planning factor is achieved by recognizing the importance of system maintenance and completing missing links in the existing system to complete the network.

# 7. PEDESTRIAN

#### INTRODUCTION

#### **Purpose of Chapter**

This chapter provides the pedestrian element of the *Cape Fear Commutes 2035 Transportation Plan.* It describes the relevance of pedestrian facilities to the transportation system, existing facility conditions and trends, and current and future issues.

#### Relevance to the Transportation System and the Plan

Going for a stroll along the Riverwalk on a summer evening is a favorite pastime of many Wilmington Urban Area residents and visitors (see *Walk Wilmington: A Comprehensive Pedestrian Plan*). This part of the region has been walkable from its founding days in the mid-eighteenth century and has a lively street life year-round. Outside of the historic core of the region, the walking environment changes from a traditional compact grid network of streets with sidewalks to a loosely connected network of neighborhood streets, sidewalks, trails, and informal paths separated by arterial roadways with multiple lanes of traffic in each direction.

The pedestrian experience varies dramatically in different parts of the Wilmington Urban Area. The historic downtown area has a rich system of sidewalks, marked crosswalks, signalized intersections, and other accommodations for walkers. Within residential neighborhoods, there are many areas with low traffic volumes and low vehicle speeds, so walking on the side of road is fairly pleasant. However, along many of the city's major arterials, people must walk along busy roadways, and there are many areas where there are no sidewalks or crosswalks, resulting in a relatively unpleasant pedestrian environment.

WMPO members understand the importance of creating a region where streets, sidewalks and other pedestrian accommodations are designed to make pedestrians feel safe and comfortable. Several initiatives and projects are underway to support pedestrians and bicyclists including the NCDOT Safe Routes to School program, City of Wilmington Neighborhood Traffic Management Program, Cross-City Trail, Military Cutoff Trail, River to the Sea Bikeway improvements, and sidewalk construction program. The Military Cutoff Trail is a popular route for leisure walking and bicycling which connects the neighborhood of Ogden with the Mayfaire development. The Cross-City Trail, which will eventually span over twenty miles, will connect key destinations such as Wrightsville Beach, University of North Carolina Wilmington, McCrary Park, Empie Park, Cameron Art Museum, Halyburton Park and James E. L. Wade Park. The existing and planned improvements that are part of the East Coast Greenway will also enhance the pedestrian environment.

The walking environment is the base from which all residents, employees and visitors experience the Wilmington Urban Area. The region's pedestrian system is vital to everyone, regardless of his or her transportation choice. Everyone who travels in the city is a pedestrian at some point during their journey. This includes walking to and from bus stops and parking facilities.

However, it takes more than sidewalks to ensure an effective and appealing pedestrian transportation system—it requires attention to elements both inside and outside of the right-of-way. These elements can include landscaping, lighting, building design, building orientation, access to transit, and the presence of street crossings.

The Wilmington Urban Area needs to build upon its current strategies for constructing, improving, and maintaining the pedestrian facilities throughout the city. This will help address problems such as gaps in the pedestrian system, inadequate maintenance and repair, and hazardous conditions. A key component to developing a walkable region is effective and sustained public education and involvement. Opportunities for education exist with relation to the laws governing our roads and sidewalks, the availability of city programs for pedestrians, as well as communicating the societal need for transportation choices.

The *Cape Fear Commutes 2035 Transportation Plan* recommends the implementation of new policies, guidelines and design standards that ensure pedestrians are provided an adequate and safe transportation system. The plan also focuses on program development to expand education, encouragement and awareness campaigns and programs, which in turn helps to enhance safety and enforcement initiatives.

The *Cape Fear Commutes 2035 Transportation Plan* encourages pedestrian activity by working toward creating a safe and inviting environment for walking. The plan expands upon the foundation created by the *2030 Long Range Transportation Plan* and other adopted studies and plans.

The Pedestrian Appendix includes:

- existing pedestrian facilities in the Wilmington Urban Area;
- an estimation of the transportation demand for pedestrian facilities;
- recommended pedestrian facilities needed to improve the regional transportation system; and
- recommended policy changes needed to improve the regional transportation system.

#### **Existing Facilities**

Types of Facilities:

- Sidewalk: a five- to eight-foot-wide concrete walkway adjacent to a roadway for use by pedestrians. Example: South 3<sup>rd</sup> Street (US 17 Business) between Market Street and Willard Street.
- **Multi-use path:** an eight- to twelve-foot-wide paved asphalt path for use by pedestrians and bicyclists; multi-use paths can be located within conservation areas, easements, parks, roadway rights-of-way, and public lands. Example: Military Cutoff Road between Gordon Road and Drysdale Drive.
- Signalized pedestrian crossing: a marked crosswalk with pedestrian signal heads located at an intersection with a traffic control signal. Signalized pedestrian crossings may be

actuated with push-buttons or concurrent with the parallel green phase during every signal cycle. Example: Oleander Drive (US 76) at Independence Boulevard.

• Mid-block pedestrian crossing: a marked crosswalk at a location other than an intersection with a traffic control signal. Mid-block pedestrian crossings may or may not have warning lights or other devices. Example: South 3<sup>rd</sup> Street (US 17 Business) at Ann Street.

#### **Existing Facilities:**

Pedestrian transportation systems cannot be properly evaluated in the context of the region as a whole. Different areas of the region serve different roles and therefore have different needs regarding pedestrian transportation and recreation. Development patterns in the Wilmington Urban Area and the corresponding character of the pedestrian transportation system can be divided into four general zones: Central Business District and Urban Core, Traditional Suburban Zone, and Automobile-Oriented Suburban Zone (see Figure 1).

Within each of these zones, arterials, collector streets and local streets fulfill a critical role in the region's transportation network and provide varying levels of accommodation for pedestrians. These streets serve unique purposes and support differing volumes of traffic and therefore they should be assessed separately.

Much of the discussion and many of the recommendations in this plan are structured around these character zones. In this section, each area will be evaluated on the following aspects:

• **Connectivity:** does the pedestrian system provide convenient connections for non-vehicular travel? When viewed from the perspective of a pedestrian, connectivity refers to the completeness of the walking network. In other words, are there facilities that get the pedestrian where they want to go? In order to serve as a viable option for even short trips, the pedestrian network should be comfortable and easy to use, and should provide direct connections to destinations. Most pedestrian trips are to and from schools, shopping areas, libraries and community centers, work places, recreational opportunities and transit. Sidewalks and street crossings should be designed so people can easily and comfortably find a direct route to a destination, and delays are minimized. Connectivity is one of the most difficult and yet most important elements of transportation planning. People need to be able to access their destinations directly and safely. Missing sidewalks or crossing facilities may make walking trips difficult and deter people from choosing this transportation mode. In the Wilmington Urban Area, the pedestrian system generally provides good connectivity, but outside of the Central Business District and Urban Core, sidewalks, trails, and other walking facilities provide inconsistent functionality. This challenge can be observed in neighborhoods where residents may be able to walk to parks, schools and other institutions within the neighborhood, but may not be able to walk to other neighborhoods and destinations. Along the region's commercial arterials there are many areas that have decent sidewalk systems but provide poor crossing opportunities due to either long separations between crossings or the absence of marked crosswalks and pedestrian signals at intersections. As a consequence, many trips that could be taken on foot are done in motor



Figure 1 Map of WMPO Context Zones

vehicles. These short car trips add congestion on the region's roads and contribute emissions into the air.

- Street crossings: does the crossing provide appropriate accommodations for pedestrians? Street crossings present one of the greatest safety hazards for pedestrian travel. When crossing the street, pedestrians are entering into the realm of motor vehicle traffic and are most exposed to danger. Pedestrians must contend not only with cross traffic (cars and trucks passing along the cross street) but must also be aware of vehicles turning left or right across their path. Street crossings should be designed to provide maximum protection to the pedestrian through clear markings, appropriate signage or signalization, and adequate crossing time, pedestrian refuges (in certain cases) and other important elements. Signage and markings should provide clear guidance to both pedestrians and motorists as to their respective responsibilities at the crossing. Street crossing issues include:
  - <u>Crossing distance</u>: Multi-lane arterials carry substantial vehicle traffic and create wide intersections and long crossings for pedestrians. For example, at the main entrance of UNCW, pedestrians crossing South College Road must cross eight lanes (approx. 100').
  - <u>Jaywalking</u>: Pedestrians often fail to use legal crossings, cross against the light, or step into the roadway without checking for oncoming traffic. These behaviors put pedestrians at risk of being struck by motor vehicles.
  - <u>Marked crosswalk</u>: many signalized intersections do not have pedestrian signals or marked crosswalks. Where present, the crosswalks may not be on all 'legs' (sides) of the intersection. This is most prevalent on multi-lane arterials.
  - <u>Motorist behaviors</u>: stopping within the crosswalk or pedestrian crossing area, failing to stop or yield for pedestrians, running red lights and exceeding posted speed limits significantly increase safety hazards for pedestrians. Turning motorists are often in conflict with pedestrians crossing major arterials.
  - <u>Signal spacing</u>: long distances between signalized intersections on major arterials (up to one mile separation) either discourages crossing or promotes crossing away from an intersection. Crossing treatments that improve functionality and pedestrian comfort, such as high visibility crosswalks, median refuge islands, and curb ramps that meet ADA requirements are lacking in many locations.
  - <u>Signal timing</u>: typical signal timing assumes that pedestrians walk between 3.5 and 4.0 feet per second. However, this may be inadequate for people do not enter the crossing at the beginning of the WALK signal or slower pedestrians (including people with strollers or small children, or wheelchair or other assistive device users).
  - <u>Stop bar location</u>: throughout the region, stop bars at major signalized intersections appeared to be located within the legal pedestrian crossing area between the two sidewalk approached and/or wheelchair ramps.

- <u>Wait time</u>: many pedestrian signals have a long delay (over 60 seconds) between the time the push button is depressed and the WALK signal is displayed This delay can lead to a lack of compliance.
- Quality of facility: generally, do pedestrian facilities look well maintained or is it in a state of disrepair? The quality of walking facilities relates to the condition and functionality of sidewalks, curb ramps and crosswalks. Sidewalks that are too narrow or are in poor condition are less comfortable for pedestrians to use, and may discourage walking in that area. Conversely, a well designed and maintained sidewalk allows pedestrians to walk where they want to go in a comfortable setting. Pedestrian facilities that are in very poor condition, with large cracks, uneven surfaces, or under designed pathways may be inaccessible for pedestrians with certain disabilities. For example, a curb ramp that is too steep may not be mountable by a wheelchair user.
- Accessibility: how easy is it for pedestrians with physical disabilities to use? Accessibility refers to the suitability of the walking network for people with disabilities. The availability, design and condition of a particular sidewalk or curb ramp is important for any person but it is critical for a person with a disability who may need more time crossing a street or is in a wheelchair. The following two sections describe some of the issues specific to two categories of pedestrians with disabilities.
  - <u>Walking-aid users</u>: people who employ walking aids include those who use canes, crutches, or walkers to ease their ability to travel. Surface quality significantly affects ease of travel for walking-aid users. Grates and cracks wide enough to catch the tip of a cane can be potentially dangerous for walking-aid users. Uneven surfaces can also be hazardous because they further reduce the already precarious stability of walking-aid users. Additionally, people who use walking aids tend to travel more slowly than other pedestrians. As a result, they benefit from longer pedestrian signal cycles at intersections and the presence of passing spaces to allow others to travel around them. A rapid change in cross-slope can also cause people with walkers to stumble.
  - O <u>Wheelchair users</u>: wheelchair and scooter users often travel much faster than walking pedestrians, especially on level surfaces or downgrades, but they can be much slower when traveling uphill. In addition, their stability and control can be affected by surfaces with cross-slopes, grades, or rough terrain. Wheelchair and scooter users require a wider path of travel than ambulatory pedestrians. Because wheels are difficult to propel over uneven or soft surfaces, wheelchair and scooter users need firm, stable surfaces and structures such as ramps or beveled edges to negotiate changes in level. Curb ramps allow wheelchair users to negotiate curbs more easily. Because cross-slopes tend to cause wheelchairs and scooters to veer downhill, manual wheelchair users must perform additional work to continue traveling in a straight line over areas such as driveway crossings. Severe cross-slopes can cause wheelchairs to tip over sideways, especially during a turn.

• Streetscape design: does the surrounding area feel safe and welcoming for pedestrians? Streetscape refers to roadway design and condition as it impacts street users and nearby residents. Generally, the streetscape is considered to be the aesthetic quality of the public space, between building fronts. The streetscape includes building placement and façade design, street plantings and street furniture, parking location and design and the design of the roadway. Because pedestrians move so much more slowly than cars, they are very aware of the surrounding environment. People tend to want to walk in settings that are attractive and visually interesting. Conversely, areas that are unattractive or are designed without consideration for the person walking by are unappealing and may make people feel unsafe. Streetscaping recognizes that streets are places where people engage in various activities, including walking, bicycling and driving. Streetscapes are an important component of the public realm (public spaces where people interact), which help defines a community's aesthetic quality, identity, economic activity, health, social cohesion and opportunity, not just its mobility.

#### Previous Plans:

Several transportation plans that include recommendations for pedestrian facilities have been drafted and adopted by the WMPO since the adoption of the 2030 Long Range Transportation Plan. These include the Coastal Pender Collector Street Plan (2007), River Road Small Area Plan (2007), US 17 Business Corridor Study (2007), Bicycle Facilities Study for the Blue Clay Corridor (2008), Cape Fear Historic Bynay Corridor Management Plan (2008), Comprehensive Bicycle Plan for Leland, NC (2008), Corridor Plan for Dow Road (2009), Pelican Drive/Salisbury Street Bicycle Plan for the Town of Wrightsville Beach (2009), Walk Wilmington: A Comprehensive Pedestrian Plan (2009), and Market Street Corridor Study (estimated 2010). Elements of these plans were incorporated into the development of the Cape Fear Commutes 2035 Transportation Plan.

#### Pedestrian Facility Demand

Table 1 shows the transportation priorities of the respondents who completed the *Cape Fear Commutes 2035 Survey* which was administered in 2009. The highest transportation priority according to the survey is "Improving bicycle & pedestrian facilities," while "Improving bicycle & pedestrian safety" ranked fourth out of the eight priorities listed.

Table 1   Regional Transportation Priorities				
Goal	Rank			
Improving bicycle & pedestrian facilities	1			
Expanding public transit service	2			
Improving function of existing roadways	3			

Improving bicycle & pedestrian safety	4
Building new roadways	5
Improving safety of existing roadways	6
Building park and ride lots	7
Beautifying existing roadways	8

#### SOURCE: CAPE FEAR COMMUTES 2035 SURVEY, 2009

Table 2 shows the difference between the desired trips by walking and the current trips by walking. Over 34% of people who currently make less than ten percent of their trips by walking would like to make more. Most would like to make between ten percent and 50% of their trips using this mode. Running errands via walking is more appealing than commuting to work or school, with a two- to four-percent difference in favor of the former in the 10-25% and 26-50% rows.

DITERENCE DETWEEN DESIRED AND CORRENT TRIPS DT WAERING								
Percentage of total trips	Commuting to Work or School	Running Errands						
<10%	-34.0%	-40.2%						
10-25%	+18.1%	+20.0%						
26-50%	+8.1%	+12.2%						
51-75%	+3.3%	+3.3%						
>75%	+4.4%	+4.6%						

#### TABLE 2 DIFFERENCE BETWEEN DESIRED AND CURRENT TRIPS BY WALKING

#### SOURCE: CAPE FEAR COMMUTES 2035 SURVEY, 2009

Table 3 clearly illustrates where the perceived gaps are in the pedestrian transportation system according to the survey. The public is strongly interested in the provision of additional sidewalks and multi-use paths and, to a lesser extent, improving safety of roadway crossing and connections between nearby homes, stores and offices.

#### TABLE 3 HOW DO WE ENCOURAGE PEOPLE TO WALK MORE OFTEN?

Strategy	Percentage
Construct more sidewalks and multi-use paths	81.3%
Improve safety of roadway crossings	62.5%
Improve connections between nearby homes, stores and offices	58.0%

Provide better information about safe walking routes	40.8%
Provide showers and changing rooms near workplaces	13.3%
Other	10.1%
SOURCE: CAPE FEAR COMMUTES 2035 SURVEY, 2009	

#### **RECOMMENDED PROJECTS**

- Construct new or improved pedestrian facilities as part of all transportation projects within the Wilmington Urban Area (with the exception of new freeways and limited-access roadways).
- Include marked crosswalks and pedestrian signal heads at all new traffic signals within the Wilmington Urban Area (with the exception of new freeways and limited-access roadways).

#### **RECOMMENDED POLICIES**

- The WMPO supports the coordination and linkage of the pedestrian transportation and mass transportation systems within the Wilmington Urban Area.
- The WMPO supports the inclusion of pedestrian facilities in all new roadway and bridge projects within the Wilmington Urban Area.
- The WMPO will collaborate with Brunswick County Public Schools, New Hanover County Public Schools, Pender County Public Schools and all member counties and municipalities to improve school siting, pedestrian connections to existing schools and encouragement of walk to school programs.
- The WMPO will coordinate with local agencies, organizations and all member counties and municipalities to improve pedestrian access to all public facilities (i.e. courthouses, offices, parks, police stations, etc.).
- The WMPO will encourage all member counties and municipalities to require the construction of pedestrian facilities as part of subdivision and/or site development.
- The WMPO will encourage all member counties and municipalities to seek planning and infrastructure grants to improve the pedestrian transportation system within the Wilmington Urban Area.
- The WMPO will support comprehensive pedestrian plans for municipalities within the Wilmington Urban Area to identify additional pedestrian projects for funding.
- The WMPO will work to construct the pedestrian projects and implement the policies identified in the Leland Collector Street Plan (2005), US 17/NC 133 Collector Street Plan (2005), Coastal Pender Collector Street Plan (2007), Dawson & Wooster Corridor Plan (2007), River Road Small Area Plan (2007), US 17 Business Corridor Study (2007), Bicycle Facilities Study for the Blue Clay Corridor (2008), Cape Fear Historic Byway Corridor Management Plan (2008), Comprehensive

Bicycle Plan for Leland, NC (2008), Corridor Plan for Dow Road (2009), Pelican Drive/Salisbury Street Bicycle Plan for the Town of Wrightsville Beach (2009), Walk Wilmington: A Comprehensive Pedestrian Plan (2009), and Market Street Corridor Study (estimated 2010).

- The WMPO will work to ensure that transportation projects within the Wilmington Urban Area do not disrupt existing or planned pedestrian routes or facilities.
- The WMPO will work to implement the complete streets policies adopted by the WMPO and the North Carolina Board of Transportation.
- The WMPO will work to promote walking as a viable and safe mode of transportation throughout the Wilmington Urban Area.

#### SAFETEA-LU PLANNING FACTORS

The Pedestrian element of *Cape Fear Commutes 2035* addresses the SAFETEA-LU Planning Factors in the following ways:

# A) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.

This planning factor is achieved by identifying existing and future bicycle needs and prioritizing those needs. The results of this process are shown in this Plan. Improved pedestrian travel in the region will likely result in improved economic vitality and efficiency through providing access to jobs and commerce by alternate means.

#### (B) Increase the safety of the transportation system for motorized and non-motorized users.

As described in this Plan, member jurisdictions have adopted plans and policies that will increase the extent of fit-for-purpose facilities for bicyclists and pedestrians. This will improve safety by reducing the potential conflicts with motor vehicles. Considerable planning efforts have been made to develop these plans and policies, and the growth of the bicycle and sidewalk networks in recent years confirms a degree of success.

# (C) Increase the security of the transportation system for motorized and non-motorized users.

Pedestrian improvements will continue to increase security for non-motorized users by offering choice in commuting options.

#### (D) Increase the accessibility and mobility of people and for freight.

This planning factor is achieved by identifying existing and future transportation needs and prioritizing those needs. The results of this process are shown in this Plan. The planning process has recognized that increasing mobility and accessibility does not necessarily mean by highway alone. This is shown in the continuing attention to pedestrian planning and improvements to other alternative modes of travel.

# (E) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

The WMPO project development process ensures that potential social and environmental conflicts are identified very early in a project's development. This assists in the selection of the most appropriate alignment, is beneficial to the public's quality of life, and helps to preserve the natural environment.

# (F) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

The WMPO has supported continuous planning efforts to achieve an efficient multi-modal plan. The existing pedestrian facilities will be greatly improved and extended through past and current planning efforts. Connecting to other modes is also an emphasis of this Plan.

#### (G) Promote efficient system management and operation.

Development of the pedestrian facilities and programs in this Plan will add efficiency to the existing transportation system and improve general operations.

#### (H) Emphasize the preservation of the existing transportation system.

This planning factor is achieved by recognizing the importance of system maintenance and completing missing links in the existing system to complete the network.