

# Walk Wilmington: A COMPREHENSIVE PEDESTRIAN PLAN

Adopted by Wilmington City Council on August 4, 2009



prepared by:

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# Executive Summary

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Walk Wilmington- A Comprehensive Pedestrian Plan is a coordinated and strategic effort to develop a safe, accessible and comfortable pedestrian system throughout Wilmington.

This Plan builds on existing assets in the City, including active and engaged City staff, a rich network of sidewalks and trails in many neighborhoods, and a commitment to better accommodating pedestrian travel. It attempts to address challenges that pedestrians face, such as access, connectivity and safety. It strives to improve pedestrian conditions on all roads, including large commercial arterial roads, through specific sidewalk, trail and road crossing recommendations, policy recommendations and changes to the way streets and intersections are designed and built.

## VISION AND GOALS

The planning process for this Plan included extensive public participation, including outreach at community events, an online questionnaire and a Steering Committee comprised of local stakeholders. Out of this public process, a vision was articulated stating that *“The City of Wilmington will become a pedestrian-friendly environment, where citizens and visitors have safe and attractive alternatives for walking in and around the city.”* The following goals were established to help the City achieve its vision:



Figure 1 Public Outreach Table- Riverfront Farmers Market

### **Goal 1: Safety**

*Residents and visitors of all physical abilities will be able to travel safely on foot along and across the city’s roadways, trails, and sidewalks.*

### **Goal 2: Transportation Choice**

*Pedestrians, regardless of location, mobility level, age or socioeconomic status, will be able to choose a convenient and comfortable mode of travel to reach their desired destination. Pedestrians will be a strong presence on the streets of Wilmington.*

### **Goal 3: Built Environment, Land Use, and Connectivity**

*Land uses in Wilmington will provide pedestrians with walkable destinations and the built environment will enhance the pedestrian experience and encourage walking. Adjacent land uses will be connected by pedestrian facilities such as sidewalks and crosswalks so that pedestrians can safely and conveniently make trips on foot.*

**Goal 4: Education, Awareness and Enforcement**

*People will have access to educational opportunities to learn about the benefits of walking as well as access to walking resources. Wilmington will raise awareness and enforcement of safe walking and driving practices and pedestrian and motorist rights and responsibilities.*

**Goal 5: Health**

*Citizens will be more physically active by walking on a regular basis. Improving their health and reducing their health care costs. Creating more walking opportunities will also improve air quality, which will improve the outdoor environment.*



Figure 2 Pedestrian with Stroller in Forest Hills Neighborhood

**Goal 6: Economic Development**

*Tourists will be drawn to Wilmington for its comfortable walking environment.*

*Among southern coastal cities, Wilmington will stand out because it's walking routes are safe and convenient, as well as aesthetically pleasing.*

The *Walk Wilmington: Comprehensive Pedestrian Plan* encourages pedestrian activity by working toward creating a safe and inviting environment for walking. The plan expands upon the foundation created by *Choices: The City of Wilmington Future Land Use Plan 2004-2025*, the *Wilmington Urban Area Metropolitan Planning Organization (WMPO) 2005-2030 Long Range Transportation Plan*, and several other city planning studies and reports.

## WHY IS THIS IMPORTANT?

According to the North Carolina Department of Transportation (NCDOT) Division of Bicycle and Pedestrian Transportation, Wilmington is number two in the state for large cities with highest numbers of pedestrian crashes, just behind Asheville and just ahead of Gastonia.<sup>1</sup>



Figure 3 Military Cutoff Road at Mayfaire – No pedestrian crossing facilities available.

### Cost of Crashes

In addition to the direct impact to the victims and family of a crash involving a pedestrian, it is eye-opening when the cost to the Wilmington economy is examined. The numbers are telling- between 1997 and 2005, the cumulative impact of pedestrian fatalities to the city's economy was \$84 million and the impact of all pedestrian crash types combined was over \$118 million.<sup>2</sup>

Cost of Wilmington Pedestrian Crashes (1997-2005)

Injury Type	Cumulative Injuries 1997-2005	Cost per Injury <sup>1</sup>	Total
<b>Fatality</b>	20	\$4,200,000	\$ 84,000,000
<b>Disabling event</b>	45	\$240,000	\$ 10,800,000
<b>Evident injury</b>	207	\$71,000	\$ 14,697,000
<b>Possible injury</b>	240	\$35,000	\$ 8,400,000
<b>Property Damage Only</b>	29	\$4,800	\$ 139,200
<b>Totals</b>			<b>\$ 118,036,200</b>

<sup>1</sup> Note: Costs are 2007 estimates. Incidents occurring in earlier years may have different estimated costs.

<sup>1</sup> Source: Table 3. Ten NC cities with highest numbers of pedestrian crashes from 2001-2005, "Pedestrian Crash Facts Summary Report, 2001-2005", NCDOT Division of Bicycle and Pedestrian Transportation, downloaded from: [http://www.pedbikeinfo.org/pbcat/pdf/summary\\_ped\\_facts5yrs.pdf](http://www.pedbikeinfo.org/pbcat/pdf/summary_ped_facts5yrs.pdf), July 8, 2008.

<sup>2</sup> NCDOT Memorandum: 2007 Standardized Crash Cost Estimates for North Carolina. Brian G. Murphy, PE Traffic Safety Project Engineer, September 3, 2008. Obtained from: <http://www.ncdot.org/doh/preconstruct/traffic/Safety/ses/costs/costs.html>, September 6, 2008.

## PLAN ELEMENTS

In order to improve conditions for pedestrian safety and comfort, the Plan provides recommendations for 450 miles of sidewalk projects and 182 traffic signal improvements to be installed over the next 20 years. Signal improvements consist primarily of adding pedestrian signalheads to existing traffic signals, although eight new traffic signals are recommended. The plan also recommends that the City pilot test two innovative approaches to improving road crossing safety and comfort for pedestrians and motorists- *pedestrian hybrid signals (HAWK signals)* and *Rapid Flash Beacons*. A significant portion of the proposed recommendations are located along roads owned and maintained by the North Carolina Department of Transportation (NCDOT). Subsequently, collaboration with NCDOT will be critical to implementing several of the proposed improvements.

**Short Term (1-5 years):** There are 26 miles of high priority sidewalk projects and 90 signal improvement projects that are recommended to be constructed within the next five years. These projects focus primarily on filling in gaps in the sidewalk network and improving road crossings in the downtown area, and improving pedestrian circulation around schools and parks, colleges and universities, and areas near large commercial or multifamily residential development.

**Mid Term (5-10 years):** Approximately 230 miles of sidewalk projects and 50 signal improvements have been identified for the 5-10 year timeframe. These larger scale projects consist of installing relatively long multi-block segments of new sidewalks and pedestrian signal retrofits. They are largely concentrated along the major arterial and collector roadways outside of downtown Wilmington, such as Market Street, College Road, and Shipyard Boulevard.

**Long Term (10-20 years):** Approximately 200 miles of long term sidewalk projects and 28 signal improvement recommendations have been identified in the plan. Sidewalk projects are found along some of the smaller collector and local roadways in the suburban part of Wilmington. Long term signal improvement recommendations are distributed throughout the City and consist primarily of adding pedestrian signalheads to existing traffic signals in areas that are anticipated to experience moderate levels of pedestrian activity.

**Concurrent with Trail Improvement:** A number of signalized road crossing improvements are recommended to be constructed at the same time nearby portions of the Cross-City Trail or other multi-use path improvements are made.

Facility recommendations are shown on the Recommended Sidewalk and Pedestrian Signal Improvements maps on pages 7 through 10.

In addition to the specific facility recommendations, the plan provides an entire chapter on suggestions for modifying City policies relating to zoning code regulations, crosswalk marking, sidewalk installation, pedestrian median refuge islands and other elements that are intended to produce a more hospitable and inviting pedestrian environment. These policy recommendations are supplemented by detailed recommendations for modifications to the city's technical specifications and standards governing road facility design. A series of three case studies illustrating the effects of these recommended policy and design standard changes is included in the plan. These studies focus on the following road intersections:

- Shipyard Boulevard and Carolina Beach Road
- South College Road and New Centre Drive
- Military Cutoff Road and Eastwood Road

The plan also provides a number of programmatic recommendations aimed at encouraging more people to travel as pedestrians, and educating pedestrians, drivers and enforcement personnel about safe behaviors.

## FUNDING AND IMPLEMENTATION

Many actions, such as facility construction, will require funding to implement. Other actions, such as improved interagency coordination, are more procedural in nature and will subsequently have minimal fiscal impact. This plan identifies potential sources, such as NCDOT funding programs, developer contributions, the city budget and municipal bonds

The plan closes with 33 discrete implementation recommendations for the Port City to undertake as it strives to make Wilmington a better place for residents and visitors.

# Walk Wilmington

## Recommended Sidewalk and Pedestrian Signal Improvements

### Quadrant 1

#### Legend

##### Short-Term Signal Improvement

- New Traffic Signal (with Pedestrian Signal)
- New Hybrid Signal
- New Rapid Flash Beacon
- Add Pedestrian Signals To Existing Signal

##### Mid-Term Signal Improvement

- Add Pedestrian Signals To Existing Signal

##### Long-Term Signal Improvement

- Add Pedestrian Signals To Existing Signals

##### Signal Improvement Concurrent with Trail Construction

- Add Pedestrian Signals to Existing Signal
- New Hybrid Signal
- New Rapid Flash Beacon

##### Potential Bicycle and Pedestrian Connections

- Short-term Sidewalk Project
- Mid-term Sidewalk Project
- Long-term Sidewalk Project

##### Cross City Trail

- Existing
- Planned

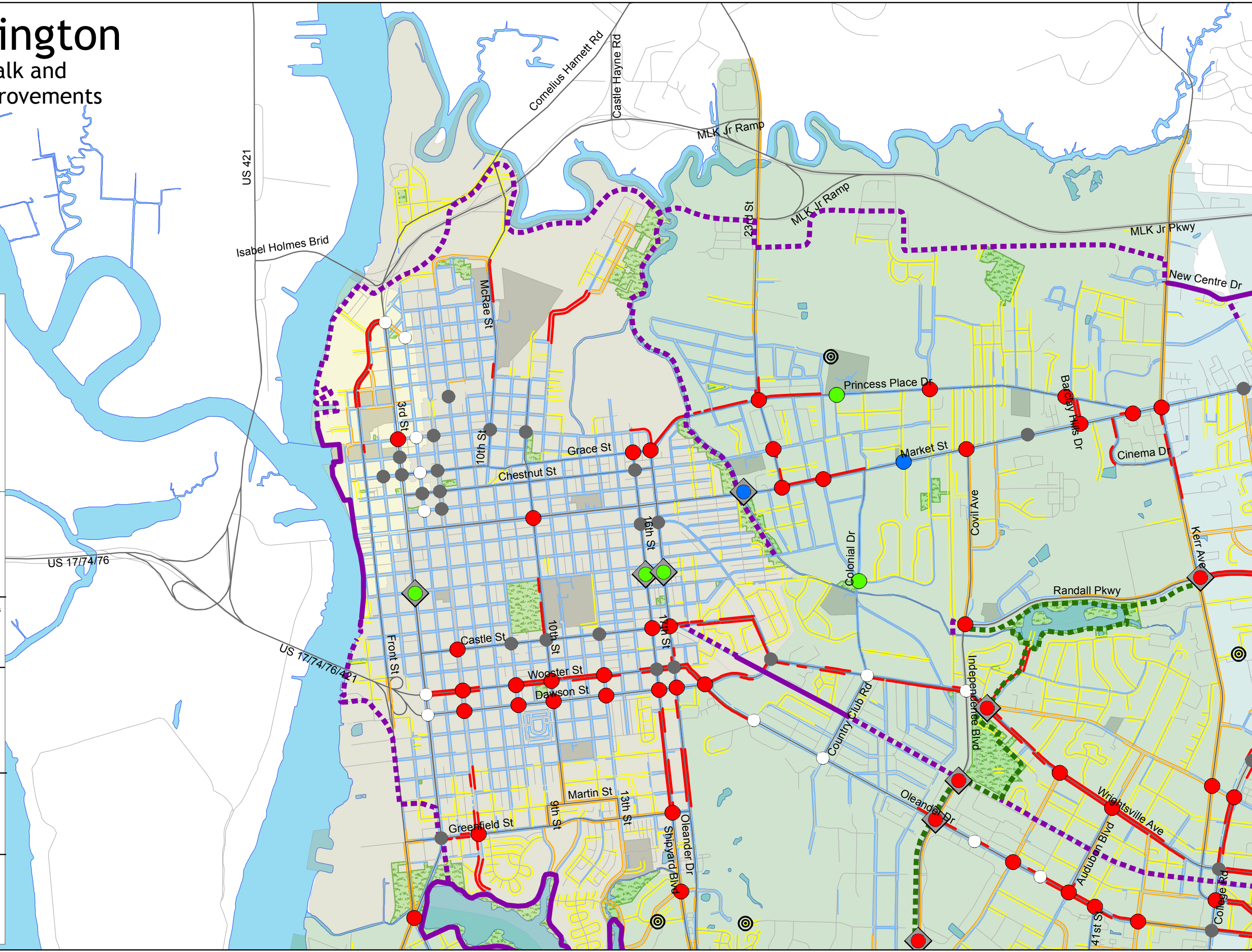
##### Other Multi-Use Path

- Existing
- Planned

- Existing Sidewalk
- Road
- School
- Park

##### Character Zone

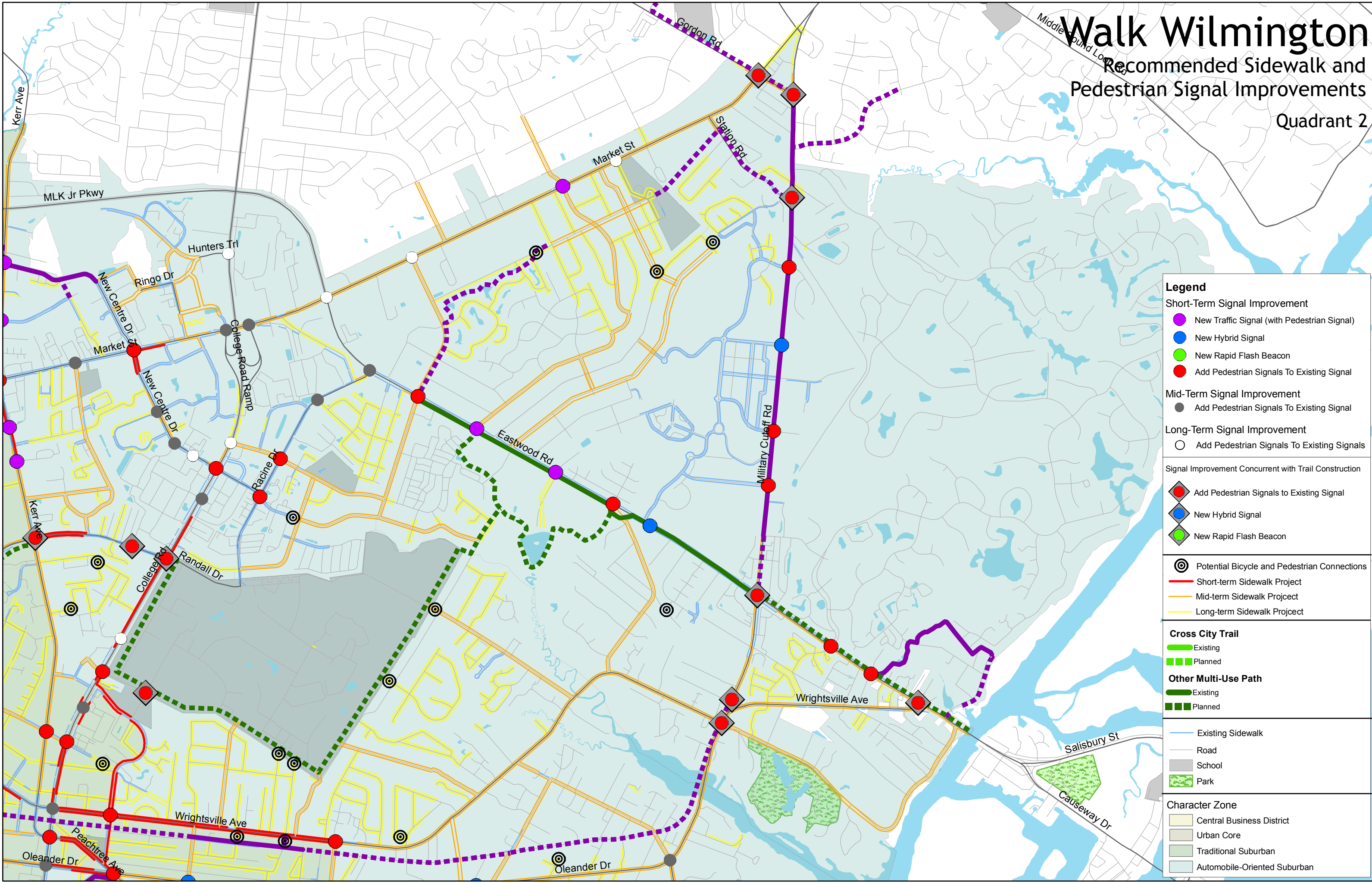
- Central Business District
- Urban Core
- Traditional Suburban
- Automobile-Oriented Suburban



# Walk Wilmington

## Recommended Sidewalk and Pedestrian Signal Improvements

### Quadrant 2



**Legend**

**Short-Term Signal Improvement**

- New Traffic Signal (with Pedestrian Signal)
- New Hybrid Signal
- New Rapid Flash Beacon
- Add Pedestrian Signals To Existing Signal

**Mid-Term Signal Improvement**

- Add Pedestrian Signals To Existing Signal

**Long-Term Signal Improvement**

- Add Pedestrian Signals To Existing Signals

**Signal Improvement Concurrent with Trail Construction**

- Add Pedestrian Signals to Existing Signal
- New Hybrid Signal
- New Rapid Flash Beacon

**Potential Bicycle and Pedestrian Connections**

- Potential Bicycle and Pedestrian Connections

**Short-term Sidewalk Project**

- Short-term Sidewalk Project

**Mid-term Sidewalk Project**

- Mid-term Sidewalk Project

**Long-term Sidewalk Project**

- Long-term Sidewalk Project

**Cross City Trail**

- Existing
- Planned

**Other Multi-Use Path**

- Existing
- Planned

**Existing Sidewalk**

- Existing Sidewalk

**Road**

- Road

**School**

- School

**Park**

- Park

**Character Zone**

- Central Business District
- Urban Core
- Traditional Suburban
- Automobile-Oriented Suburban



# Walk Wilmington

## Recommended Sidewalk and Pedestrian Signal Improvements

### Quadrant 3

#### Legend

##### Short-Term Signal Improvement

- New Traffic Signal (with Pedestrian Signal)
- New Hybrid Signal
- New Rapid Flash Beacon
- Add Pedestrian Signals To Existing Signal

##### Mid-Term Signal Improvement

- Add Pedestrian Signals To Existing Signal

##### Long-Term Signal Improvement

- Add Pedestrian Signals To Existing Signals

##### Signal Improvement Concurrent with Trail Construction

- Add Pedestrian Signals to Existing Signal
- New Hybrid Signal
- New Rapid Flash Beacon

- Potential Bicycle and Pedestrian Connections

- Short-term Sidewalk Project
- Mid-term Sidewalk Project
- Long-term Sidewalk Project

##### Cross City Trail

- Existing
- Planned

##### Other Multi-Use Path

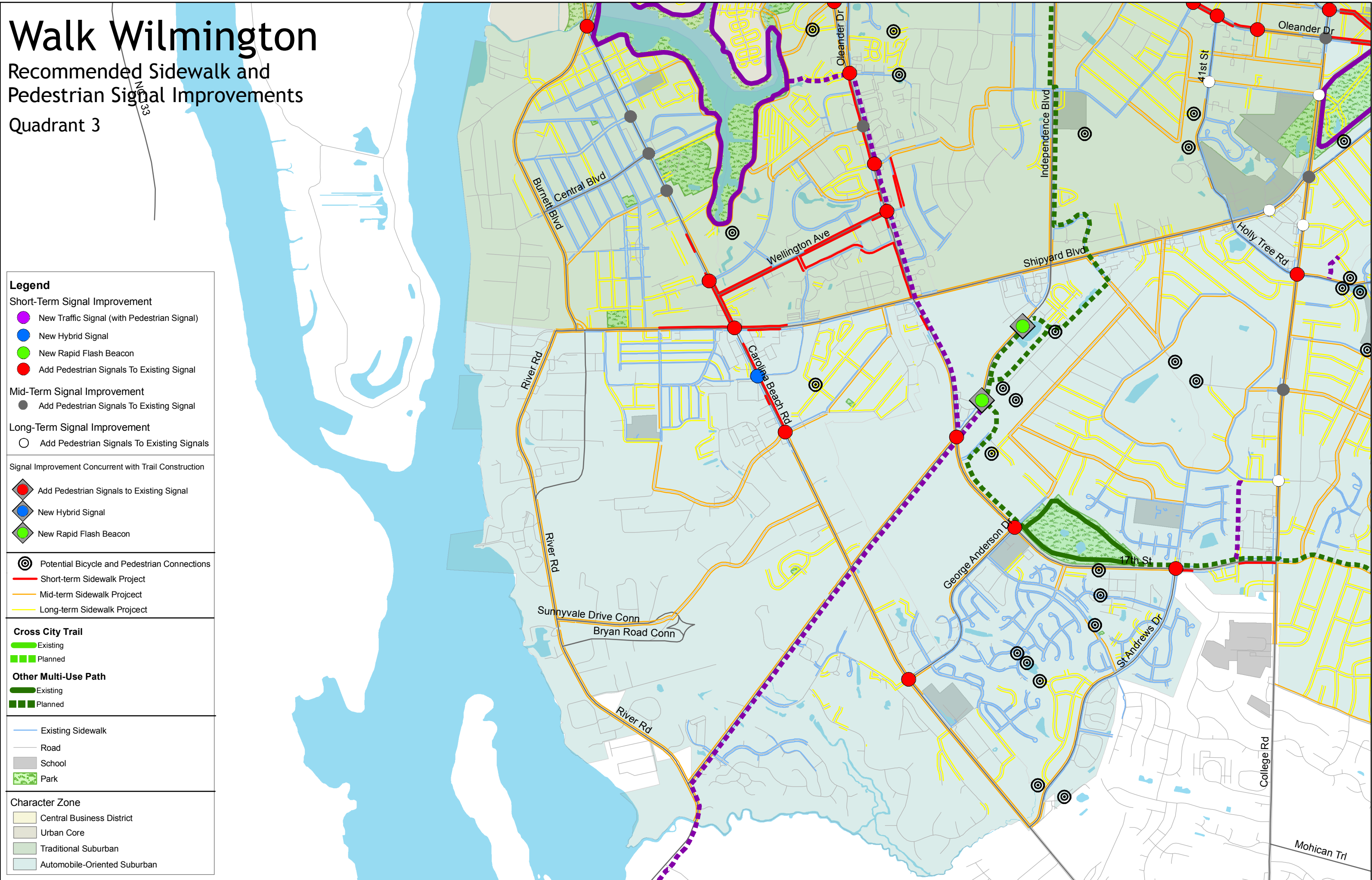
- Existing
- Planned

- Existing Sidewalk

- Road
- School
- Park

##### Character Zone

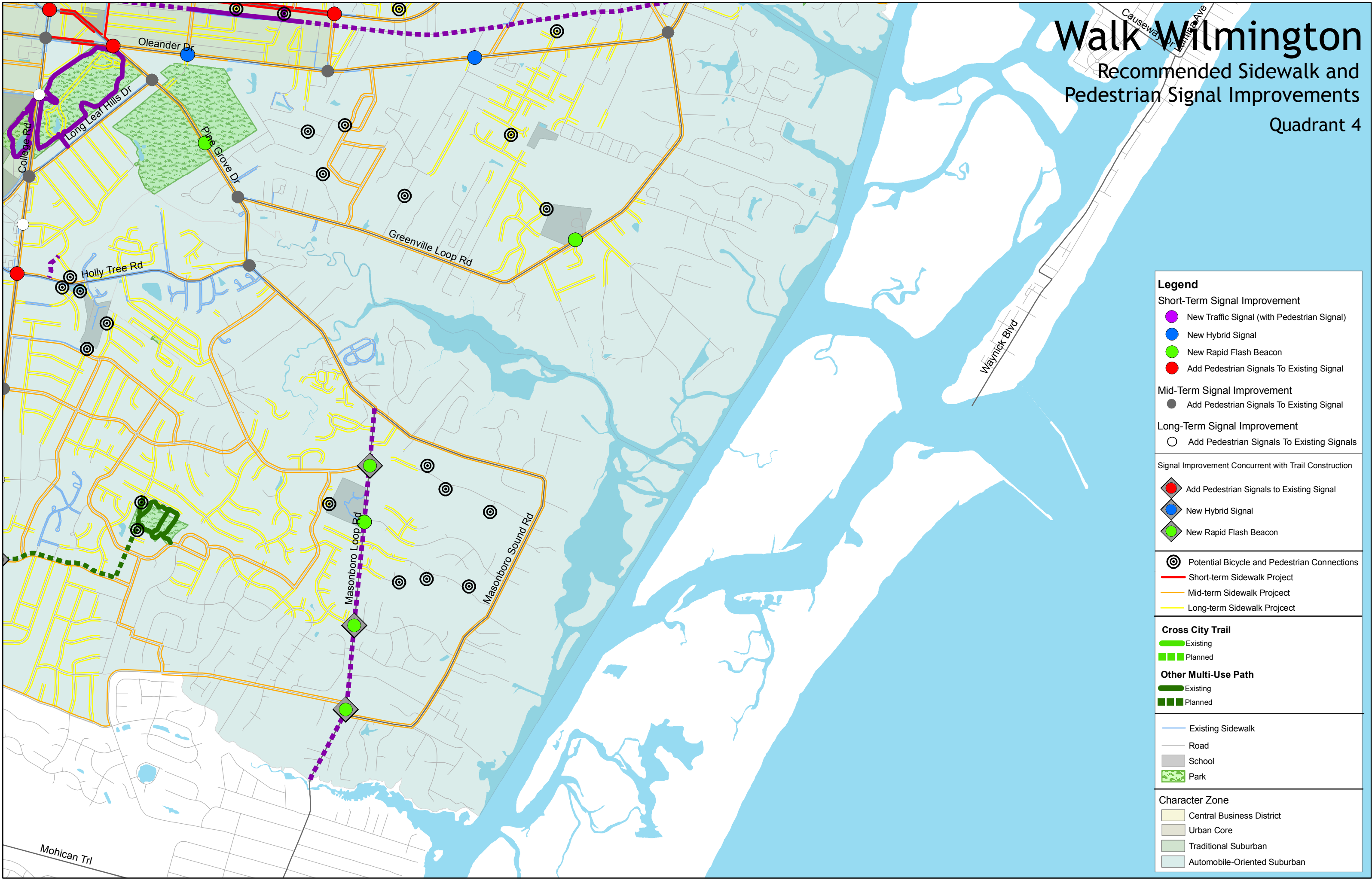
- Central Business District
- Urban Core
- Traditional Suburban
- Automobile-Oriented Suburban



# Walk Wilmington

## Recommended Sidewalk and Pedestrian Signal Improvements

Quadrant 4



**Legend**

**Short-Term Signal Improvement**

- New Traffic Signal (with Pedestrian Signal)
- New Hybrid Signal
- New Rapid Flash Beacon
- Add Pedestrian Signals To Existing Signal

**Mid-Term Signal Improvement**

- Add Pedestrian Signals To Existing Signal

**Long-Term Signal Improvement**

- Add Pedestrian Signals To Existing Signals

**Signal Improvement Concurrent with Trail Construction**

- Add Pedestrian Signals to Existing Signal
- New Hybrid Signal
- New Rapid Flash Beacon

**Potential Bicycle and Pedestrian Connections**

- Short-term Sidewalk Project
- Mid-term Sidewalk Project
- Long-term Sidewalk Project

**Cross City Trail**

- Existing
- Planned

**Other Multi-Use Path**

- Existing
- Planned

**Existing Sidewalk**

- Existing Sidewalk

**Road**

- Road

**School**

- School

**Park**

- Park

**Character Zone**

- Central Business District
- Urban Core
- Traditional Suburban
- Automobile-Oriented Suburban