Introduction

The JUMPO 2050 MTP's active transportation focus demonstrates how local decisions can enhance mobility and safety for cyclists and pedestrians. The recommended plan incorporates information from previous plans (including the 2045 MTP), discussions with stakeholders, and feedback from the community (See Chapter 2). These sources indicate a growing demand for bicycle and pedestrian facilities for users of all levels and types in the region. Underlying concepts of modal integration, livability, and connectivity are consistent themes in the following active transportation strategies.

Relevant Planning Efforts

The MPO should consider the following planning efforts as it continues to invest in the active transportation network. These foundational plans act as the baseline for active transportation improvements throughout the region.

East Coast Greenway

The East Coast Greenway connects fifteen states across 3,000 miles from Maine to Florida. The goal of the greenway is to provide a dedicated, separated route for people of all ages and abilities to walk and bike along the East Coast.[1] The East Coast Greenway Alliance is a non-profit organization coordinating efforts to promote and complete the greenway. In North Carolina, there are over 360 miles of the greenway spine network anticipated to be built. Of the 360 miles, 100 miles will be or are protected greenways.

In JUMPO, a complementary route that runs parallel to the East Coast Greenway spine network. This complementary route provides additional options for safe walking and biking. In the MPO area there are a combination of trails and on-road facilities.

[1] https://greenway.org/

WalkBikeNC

WalkBikeNC is North Carolina's Bicycle and Pedestrian Plan, adopted by the NCDOT Board of Transportation in December 2013.[2] It is organized around five pillars: safety, health, economy, mobility, and environment. The five pillars support the vision to promote safe access, improve health, retain and attract economic development, and conserve the environment. WalkBikeNC is the statewide blueprint for improving walking and biking in North Carolina.

Benefits of Active Transportation

By establishing a high-quality bicycle and pedestrian network, residents and visitors gain an alternative to driving. Creating a well-connected network fosters a safer, healthier, and more dynamic community for living, working, and visiting. The 2050 MTP highlights six key benefits from a robust active transportation network. These benefits align with the core principles outlined in North Carolina's Bicycle and Pedestrian Plan:

Economy

When safe facilities are available for pedestrians and bicyclists, individuals can reduce their spending on motorized transportation and allocate more money toward goods and services. Enhancing the active transportation network can also boost tourism, property values, retail sales, and job creation.

Environment

Being an environmental steward involves safeguarding natural resources and implementing strategies to enhance the environment. Increased use of active transportation modes reduces noise pollution, lowers vehicle emissions, cleans the air, and helps maintain healthier ecosystems.

Health

Walking and biking are physical activities that significantly benefit both residents and visitors. Regularly engaging in these exercises can help reduce the risk of obesity, heart disease, diabetes, and mental health issues.

Mobility

Mobility refers to the equitable and safe access to transportation options for everyone. By investing in diverse facility types, communities can enable residents and visitors to travel as they prefer. A robust active transportation network can offer more choices and enhance recreational opportunities.

Quality of Life

The bikeability and walkability of a community are key indicators of its livability. In areas where residents frequently bike or walk, there is a perception that the community is friendly and safe to live in and visit. Suitable facilities can enhance community connections, support the link between transportation and housing, and foster a sense of place.

Safety

Safe travel conditions stem from effective design, enforcement, and education. While some residents may already feel safe biking or walking, there are opportunities to further enhance safety for the entire community. People of all ages and abilities should be able to bike and walk around the region safely.

[2] https://www.ncdot.gov/bikeped/walkbikenc/about/default.aspx

The E's of Bicycle and Pedestrian Planning

Successful bicycle and pedestrian planning requires considering five interrelated components: Engineering, Education, Encouragement, Enforcement, and Evaluation/Planning.

Engineering

This refers to on-road and off-road facilities that must be planned and designed. To create a successful, well-integrated pathway network, design and route choices must be established and properly implemented.

Education

This refers to the resources available for all network users, including cyclists and motorists. Cyclists and motorists, new and experienced, need to know how to ride safely in different networks (from off-road multi-use paths to congested arterials) as well as how to share multimodal facilities with other pedestrians, cyclists, and/or motorists.

Encouragement

This refers to various ways to promote bicycling and walking. Cyclists and pedestrians need access to programs and a cycling or walking culture that comes from focusing planning efforts on specific facilities suitable for cyclists or pedestrians. This can be as simple as providing a means for desirable, attractive destinations that people want to visit.

Enforcement

This refers to intentional actions that protect the safety of all users, including the cycling and pedestrian communities. Targeted enforcement can encourage cyclists and motorists to use multimodal facilities more safely.

Evaluation/Planning

This refers to the periodic review of existing and planned facilities. The friendliest communities for cyclists and pedestrians have a system to assess existing programs and outline steps for future expansion. The facilities recommended as part of the 2050 MTP should be supplemented with coordinated programs and policies that instruct and encourage cyclists and pedestrians to fully and properly use the non-motorized transportation network.

Planning Considerations

Types of Users

The types and users and facilities must be understood to integrate the bicycle and pedestrian network into the overarching vision for the transportation system. Different reasons for traveling by bike or foot, combined with varying skill levels, require a flexible and responsive approach to bicycle and pedestrian planning.

Trip Purpose

Utilitarian

- Non-discretionary travel where the user is traveling to a specific destination such as work, school, grocery store, or home.
- Those without access to or ability to drive motor vehicles.
- Often includes the elderly, children, and persons with disabilities.
- Varying skill level.

Recreational

- Discretionary travel where the user employs alternative modes (e.g., biking, walking) to travel just for fun.
- Those who prefer a healthy, active lifestyle regardless of access to personal vehicles.
- Typically includes persons of all ages and abilities.
- Varying skill level.

Skill Level

Both trip purposes require a complete network of bicycle and pedestrian facilities and programs that educate and encourage current and future users. Bicyclists can be further grouped by skill level.

Advanced Cyclists

- Typically, the most experienced on the road.
- Can safely ride on typical arterials with higher traffic volumes and speeds.
- Most prefer shared roadways in lieu of striped bike lanes and paths.
- Represent about 20% of adult cyclists but account for nearly 80% of annual bicycle miles traveled.

Basic Adult Cyclists

- Less experience on the road.
- Less secure in their ability to ride in traffic without special accommodations.
- Casual or new adult and teenage riders.
- Typically prefer multi-use paths or bike lanes that reduce their exposure to fast-moving and heavy traffic.
- Represent approximately 80% of adult cyclists.

Child Cyclists

- Little to no experience on the road.
- Limited field of vision while riding.
- Generally, keep to neighborhood streets and greenways.
- Likely will ride on sidewalks along busier streets.

Types of Facilities

Each facility type must be given careful attention, particularly to how each type and its users fit into the overall system-wide multimodal transportation network. The costs displayed in Table 20 were calculated using NCDOT's SPOT 7.0 Cost Estimation Tool.

TABLE 20 - BICYCLE & PEDESTRIAN FACILITY TYPES

Striped Bike Lane

- Exclusive-use area adjacent to the outermost travel lane.
- Typical width: 4- to 5 feet (preferred).

Target User: Basic and Intermediate
Estimated Cost: $3,500 per mile (striping only)

Wide Outside Lane

- Extra width in the outermost travel lane
- Best on roadways with 35 mph or higher speed limits and moderate to high daily traffic volumes.
- Typical width: 14-foot outside lane preferred.

Target User: Intermediate and Advanced
Estimated Cost: N/A – included with roadway construction cost

Shared Lane Markings (Sharrows)

- Pavement markings on lanes to indicate shared space for bicyclists and motorists.
- Should be used on road where bicycle lanes are desirable but impossible due to pre-existing constraints.
- Typical spacing: 100-250 feet along the corridor.

Target User: Intermediate and Advanced
Estimated Cost: $16,000 per mile

Sidewalk

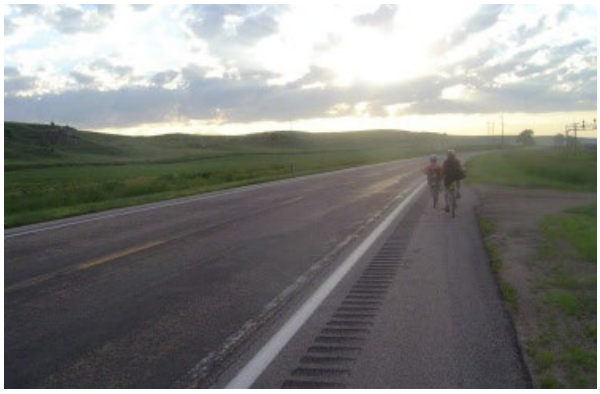
- Dedicated space within right-of-way for pedestrians.
- Should include a landscaped buffer from the roadway.
- Typical width: 5’ preferred (ADA Compliant).

Target User: Pedestrians
Estimated Cost: $1,254,000 per mile

Paved Shoulder

- Additional pavement adjacent to the travel lane.
- Extends service life of the road and provides greater safety and comfort for bicyclists.
- Typical width: 4’ (no minimum width required).

Target User: Advanced
Estimated Cost: $783,000 per mile (assumes 4 feet)



Multi-use Path

- Separated from traffic and located in an open space (greenway) or adjacent to a road with more setback and width than sidewalks (side path).
- Typical width: 10-14’ preferred.

Target User: All Cyclists; Pedestrians
Estimated Cost: $2,687,000 per mile

Programmed Projects

Currently, 90% of all SPOT funds are dedicated exclusively to roadway projects, with the remaining 10% allocated between roadway and all other modes. It should be noted that multimodal improvements can be included as part of roadway improvements. As a result, there is limited funding for standalone bicycle and pedestrian projects. Installing bicycle and pedestrian improvements with corresponding roadway projects is key to acquiring the necessary funding. Two independent pedestrian and bicycle projects are scheduled and funded within the JUMPO MPO area in the 2024-2033 STIP. These projects are shown below in Table 21.

TABLE 21 – STIP BICYCLE AND PEDESTRIAN PROJECTS

STIP No	Project Name	Funding Year
BL-0073	Construct pedestrian improvements along Gum Branch Rd from Onsville Dr to Onsville Dr.	2024
EB-6012	Chaney Ave to Wardola Dr in Jacksonville. Construct a multi-use path.	Completed

Future Bicycle Network

The recommended bicycle network for the JUMPO 2050 MTP includes a coordinated group of on- and off-street facilities. Connectivity was an important consideration as recommendations were developed. The planning process also emphasized vetting previous plans with the updated roadway recommendations. Given the limited funds available for standalone bicycle and pedestrian projects, this emphasis was necessary. The facility recommendations shown in Figure 33 and Figure 34 are coordinated with the roadway recommendations provided in Chapter 3.

Figure 33 - Bicycle Recommendations

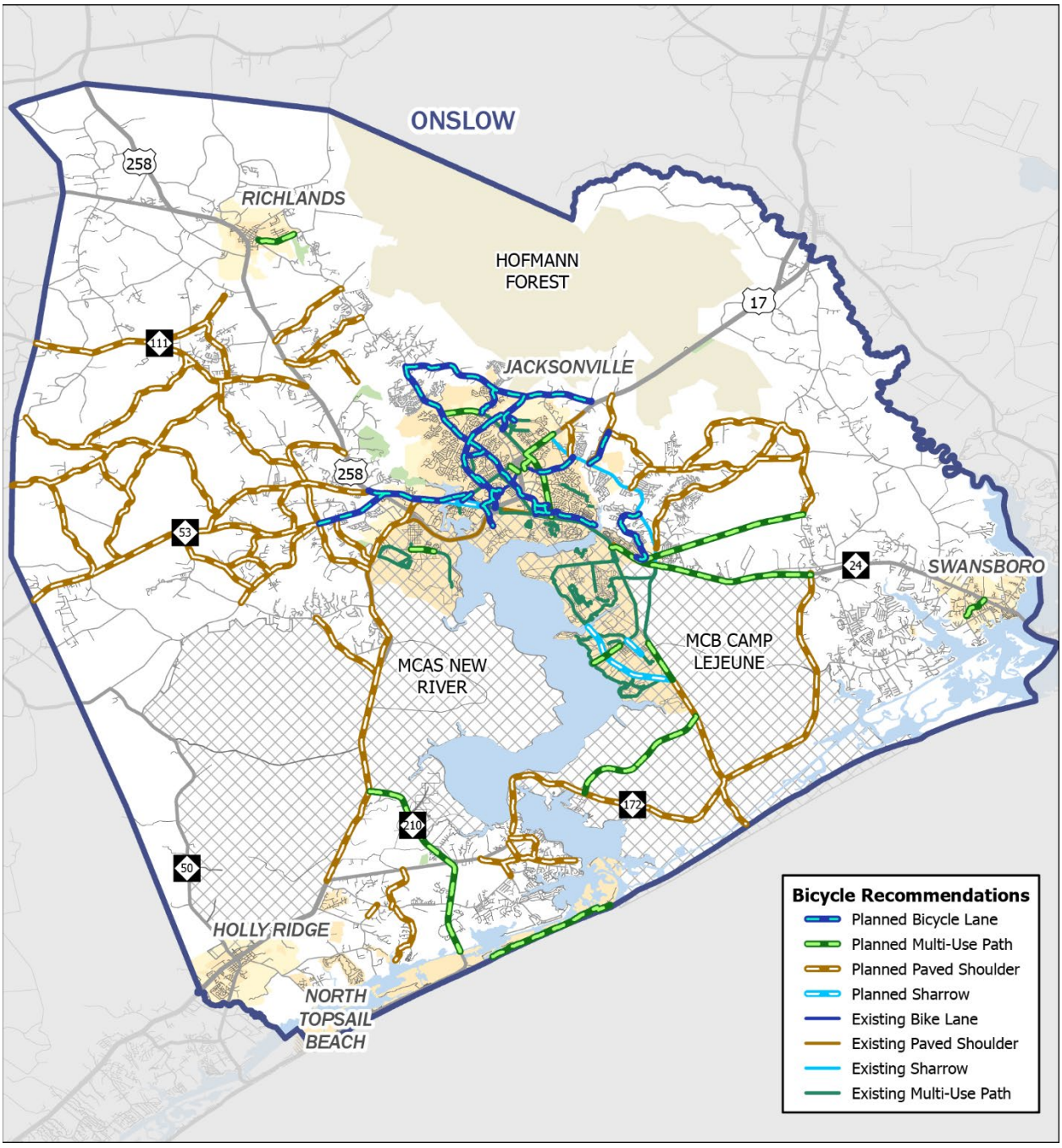
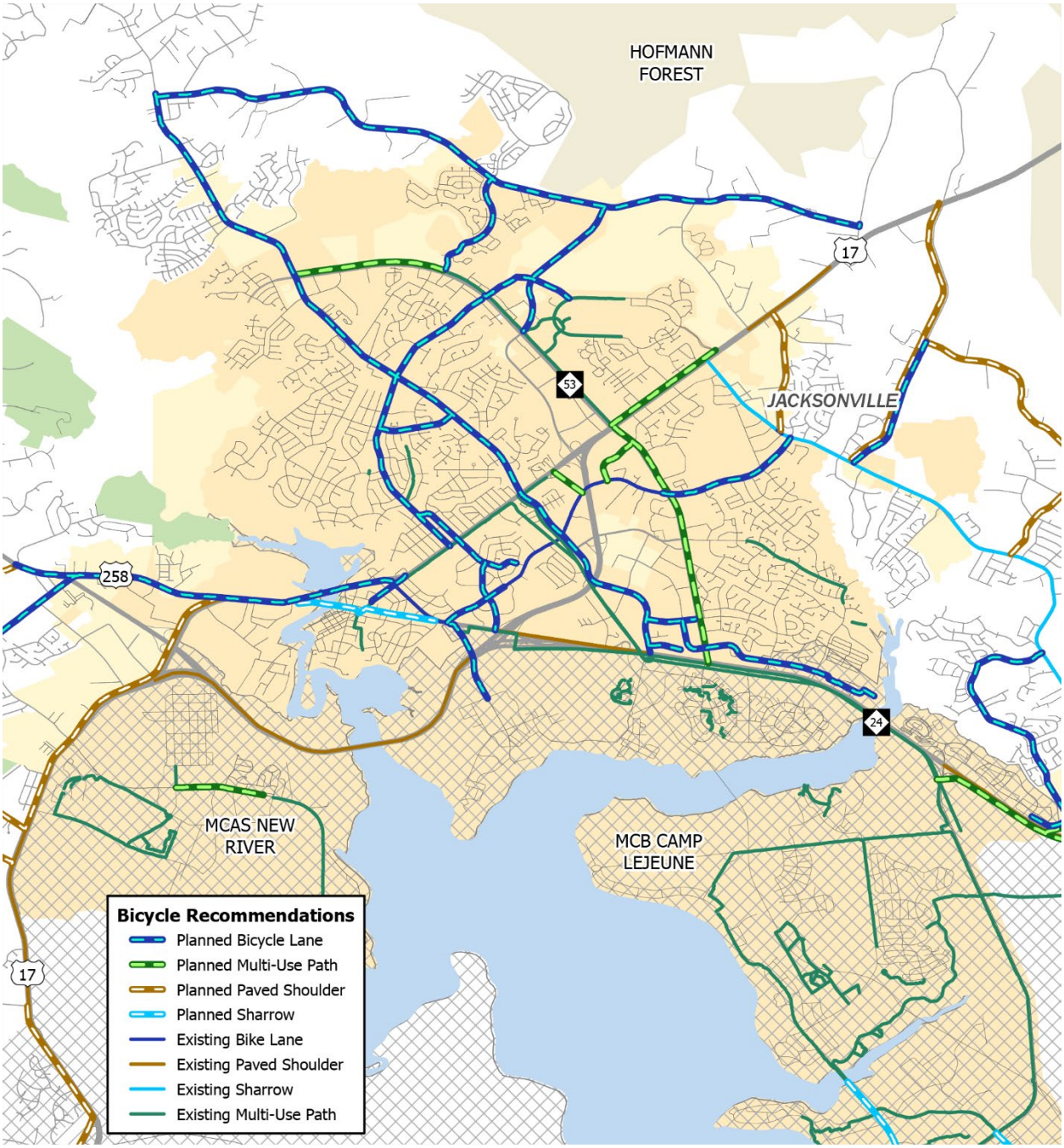
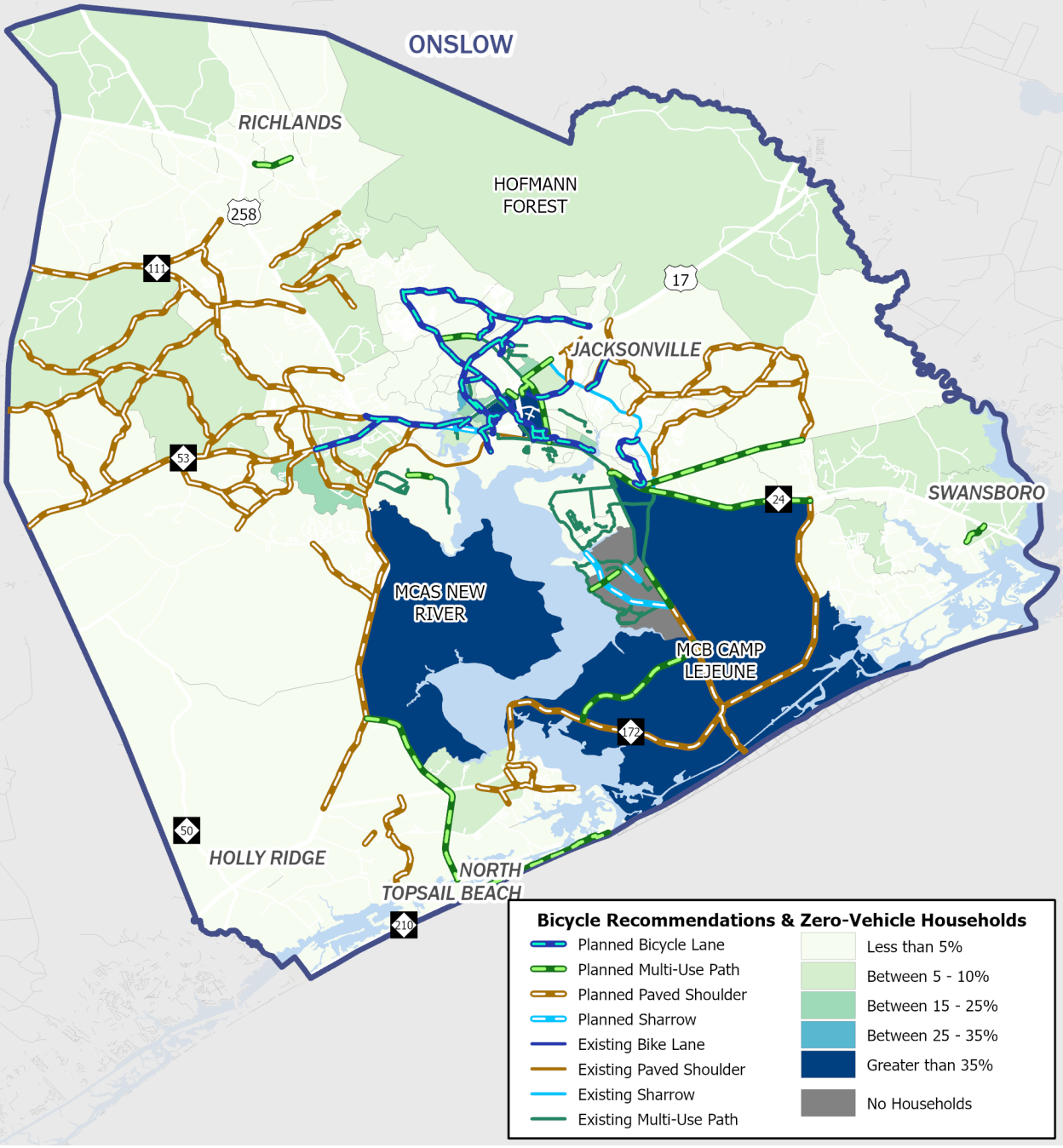


Figure 34 - Inset Map of Bicycle Recommendations



The recommended bicycle network in Figure 35 includes projects in every block group where over 35% of households do not have access to a vehicle. These projects will enhance access to existing bicycle infrastructure and improve county-wide mobility. By prioritizing bicycle projects in areas with a high number of zero-vehicle households, JUMPO can create a more inclusive, healthy, and sustainable transportation system.

FIGURE 35 - BICYCLE RECOMMENDATIONS & ZERO-VEHICLES HOUSEHOLDS BY BLOCK GROUP



Data sourced from 2022 ACS-5-year estimates

Future Pedestrian Network

The recommended pedestrian network in Figure 36 and Figure 37 includes sidewalks and multi-use paths. Developing the recommended pedestrian network involved reviewing recommendations from previous planning efforts. Feedback from the steering committee and public also informed the recommendations. Approximately 65.4 miles of new sidewalks and 40.8 miles of side paths are recommended. The recommended network assumes pedestrians will be served by paved shoulders in unincorporated rural areas where construction and maintenance funds for sidewalks are unavailable.

Figure 36 - Pedestrian Recommendations

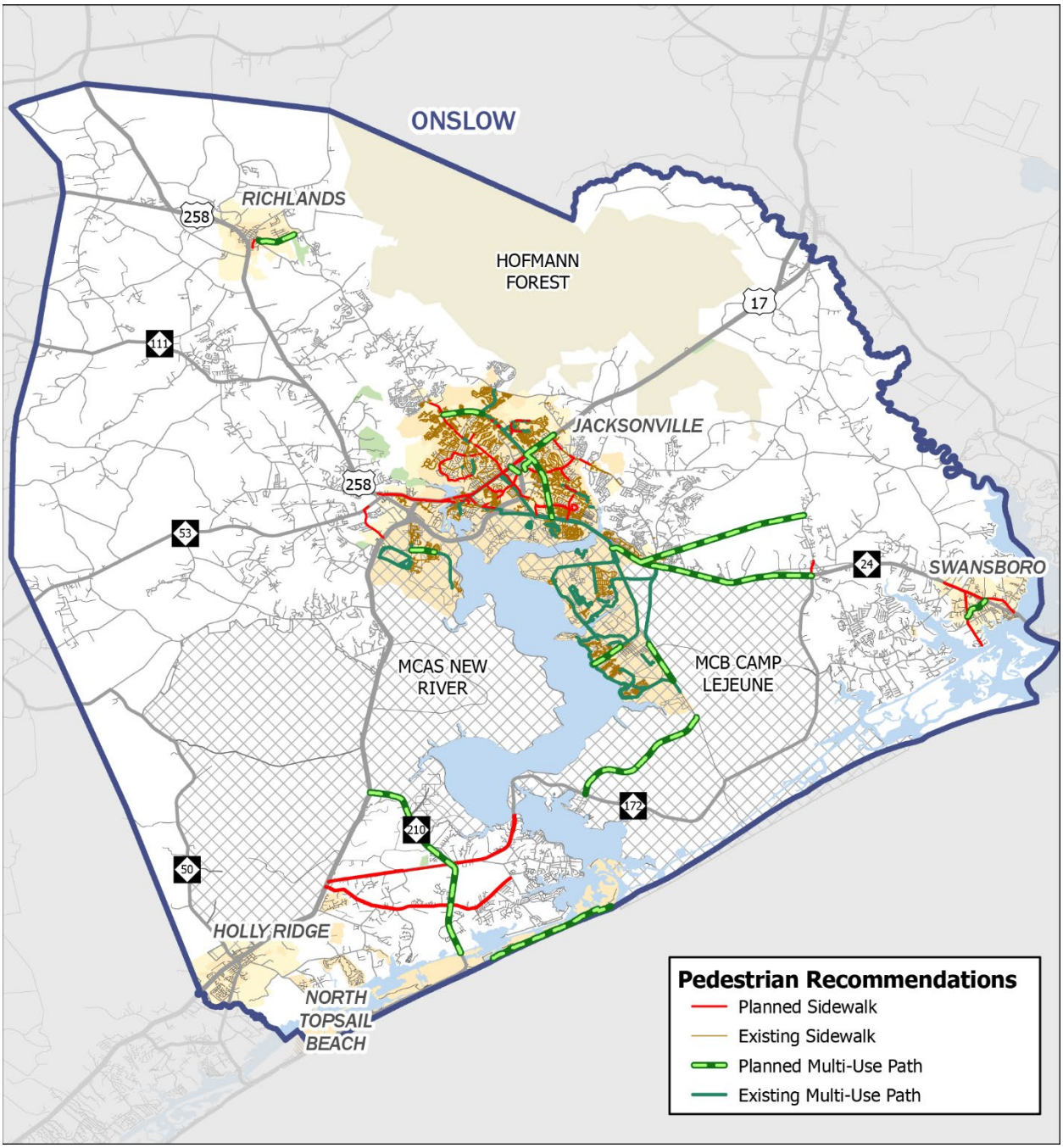
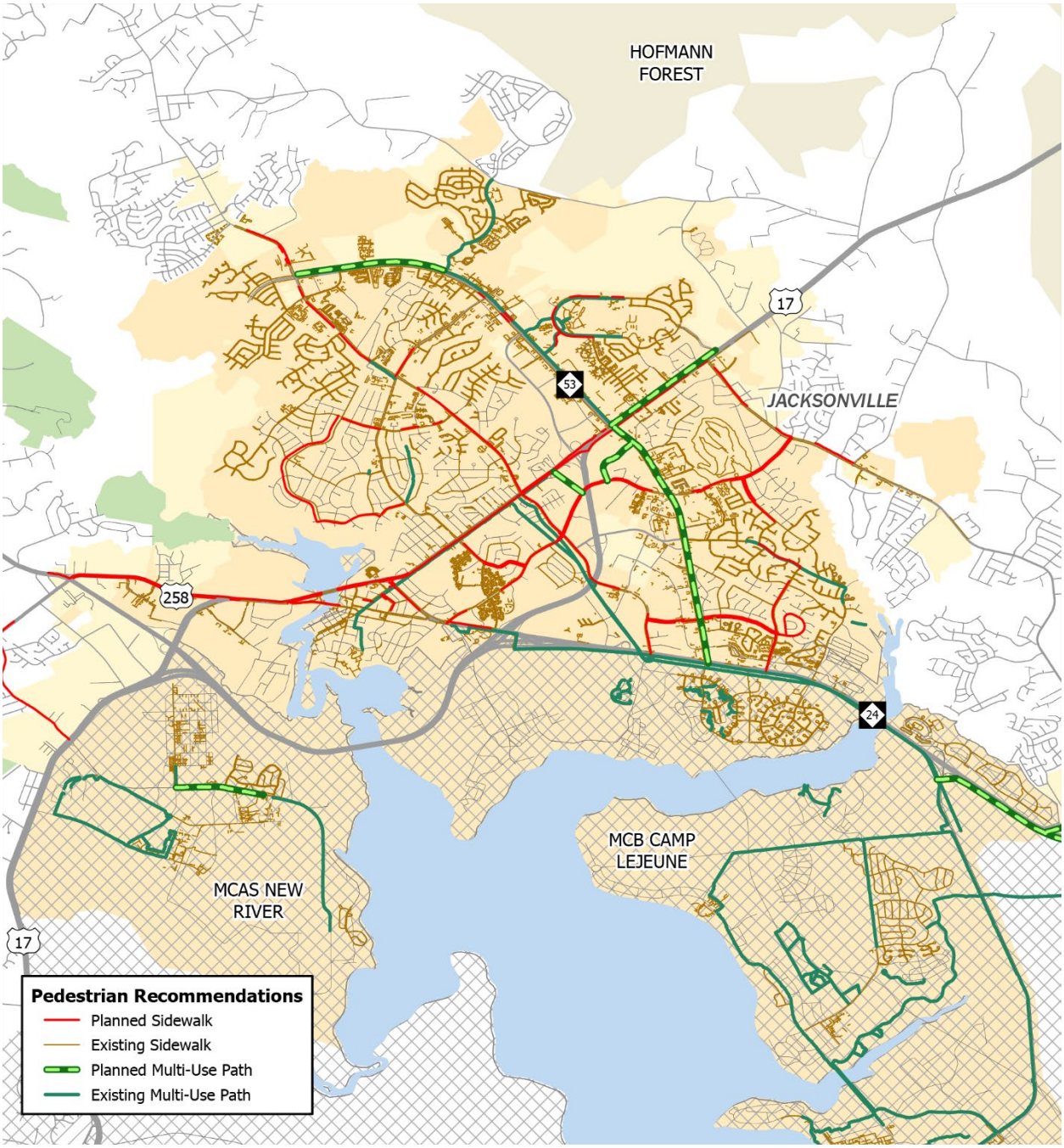
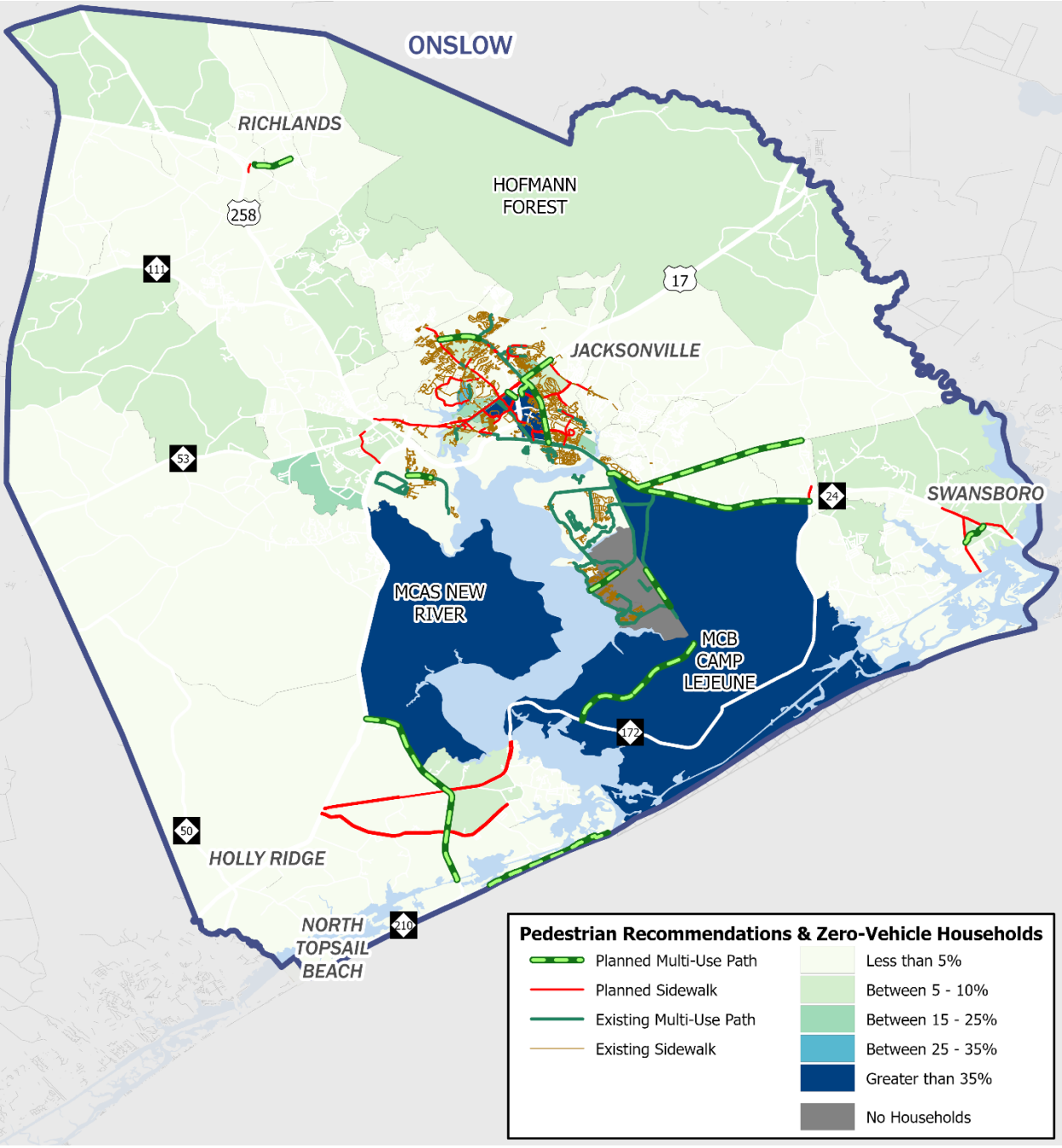


Figure 37 - Inset Map of Pedestrian Recommendations



The recommended pedestrian network in Figure 38 includes projects in most block groups where over 35% of households do not have access to a vehicle. These projects will enhance connections to existing pedestrian infrastructure and expand walkability in various locations, including Jacksonville, MCB Camp Lejeune, and North Topsail Beach. Implementing pedestrian projects in areas with high rates of zero-vehicle households provides community members with greater access to transportation options, regardless of their vehicle ownership status.

FIGURE 38 - PEDESTRIAN RECOMMENDATIONS & ZERO-VEHICLE HOUSEHOLDS BY BLOCK GROUP



Data sourced from 2022 ACS-5-year estimates