2 About our Region

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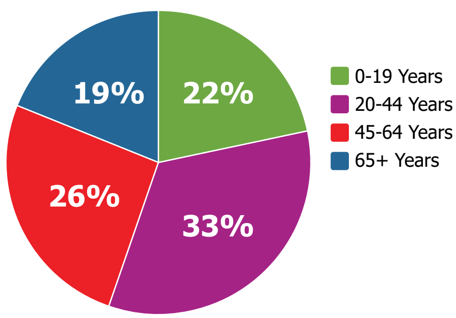
Demographic Trends

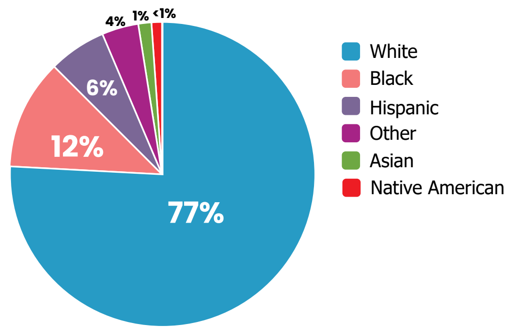
The Wilmington Urban Area Metropolitan Planning Organization (WMPO) planning area is approximately 494 square miles, encompassing all of New Hanover County and portions of Brunswick and Pender Counties. Municipalities within the boundary include the City of Wilmington, the Town of Belville, the Town of Carolina Beach, the Town of Kure Beach, the Town of Leland, the Town of Navassa, and the Town of Wrightsville Beach. The WMPO boundary area population is estimated at 300,000 residents, and the area is impacted significantly by non-resident populations of students and visitors seasonally. Population density for the area is 282 persons per square mile.

According to the 2021 American Community Survey (ACS), the median household income for the WMPO area is $72,951. Forty-two percent (42%) of the residents within the WMPO boundary hold a bachelor's degree or higher. Thirteen percent (13%) of households in the region fall below the poverty line. Less than two percent (2%) of households do not own a vehicle. The Wilmington Regional Travel Demand Model (WRTDM) predicts a population of 606,399 residents by the year 2050. The model analyzes over 700 Traffic Analysis Zones (TAZs) and 11 data points to predict population, household, and employment growth in the region.

Age Breakdown



Race Breakdown



DEMOGRAPHIC TREND MAPS:

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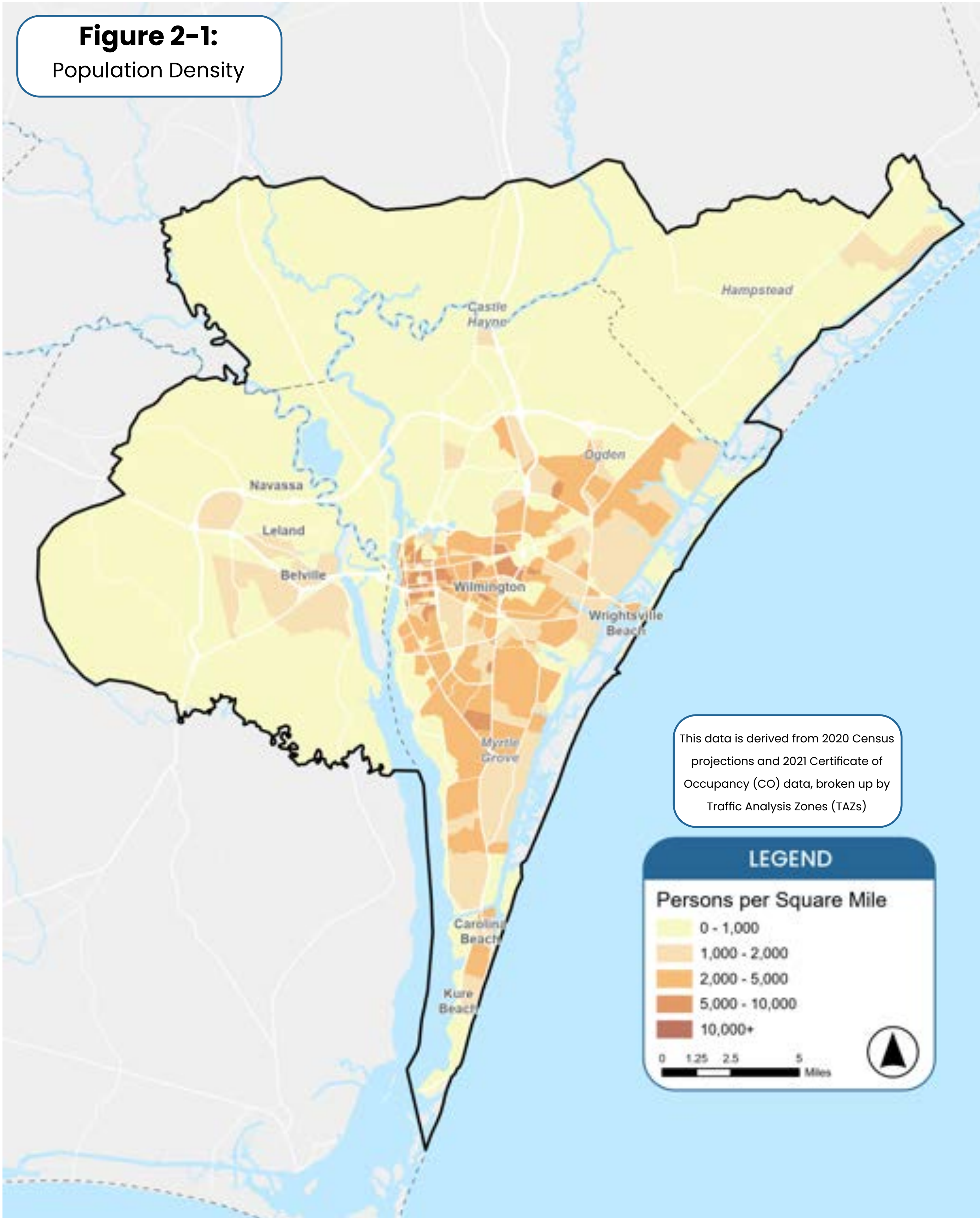
Figure 2-1:
Population Density



This data is derived from 2020 Census projections and 2021 Certificate of Occupancy (CO) data, broken up by Traffic Analysis Zones (TAZs)

Figure 2-2:
Household Density

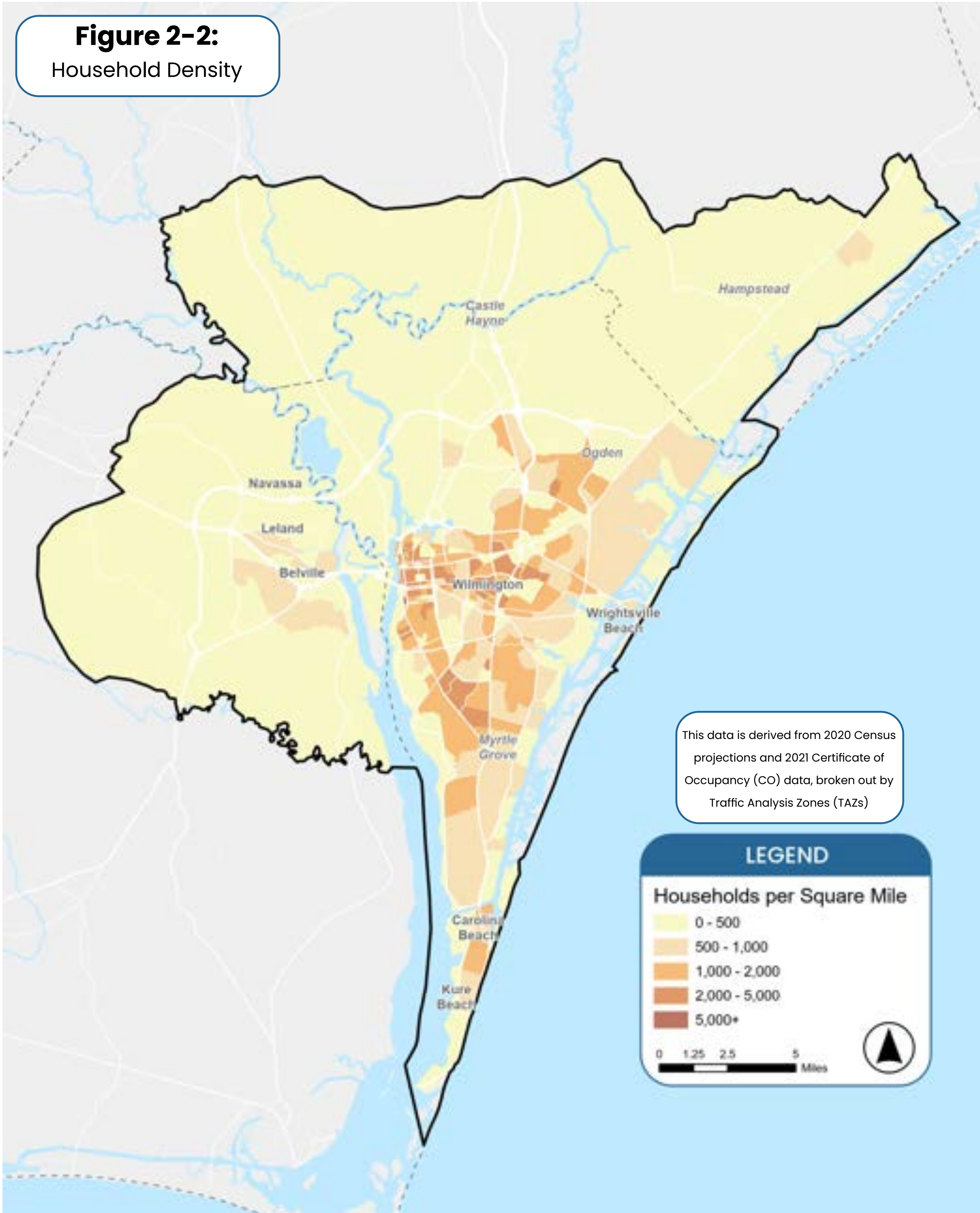


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Figure 2-3:
Employment Density

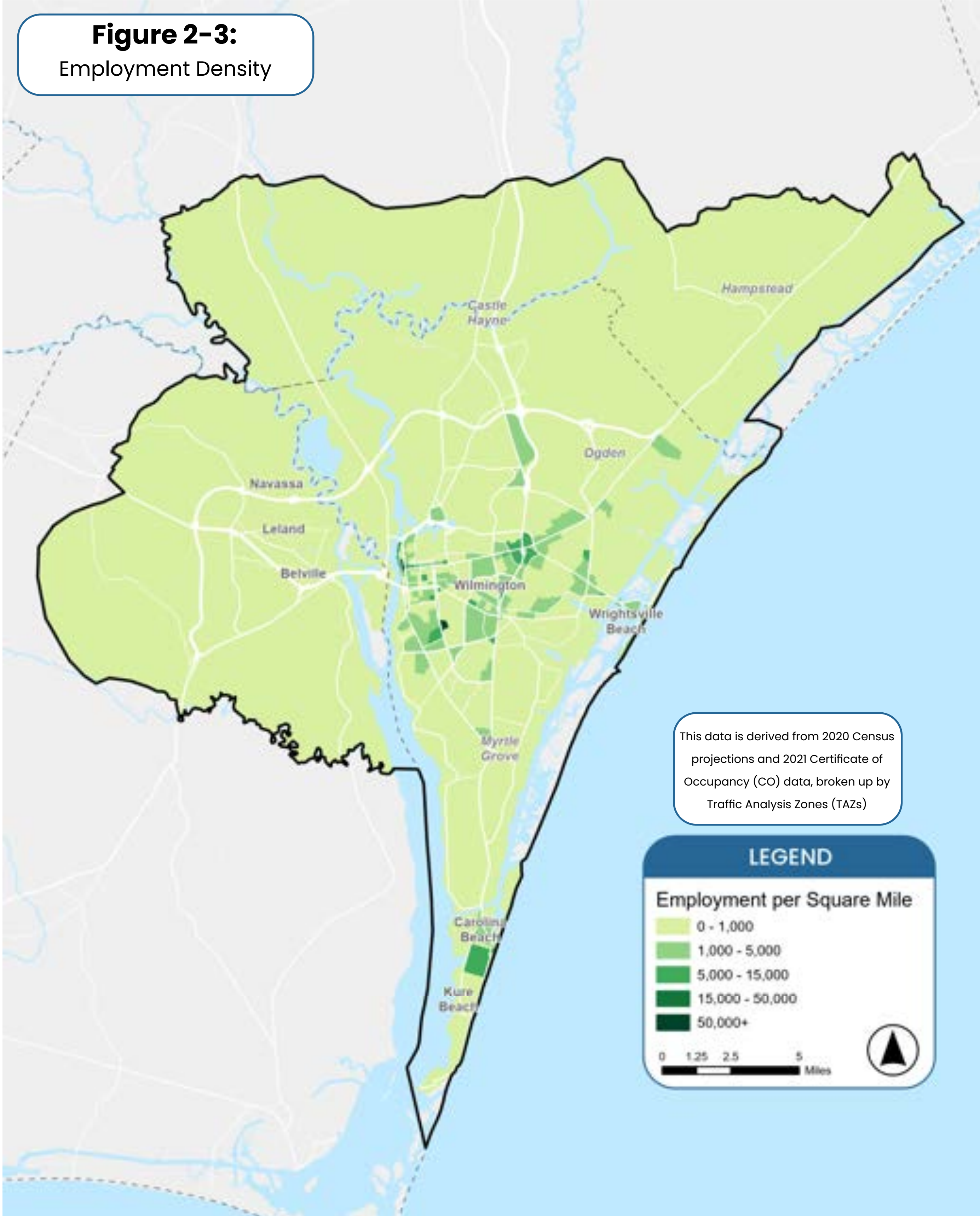

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Figure 2-4:
Median Household Income

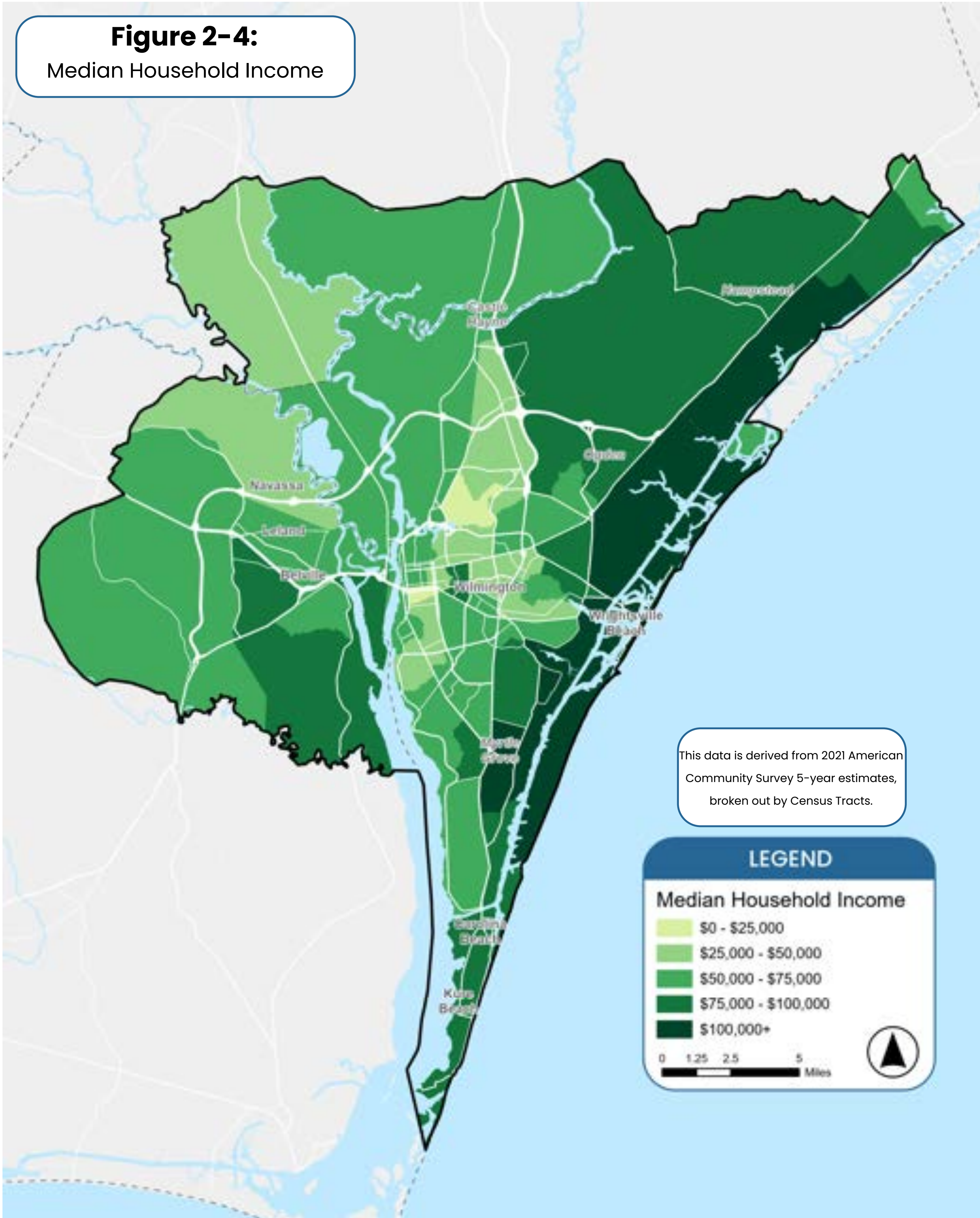
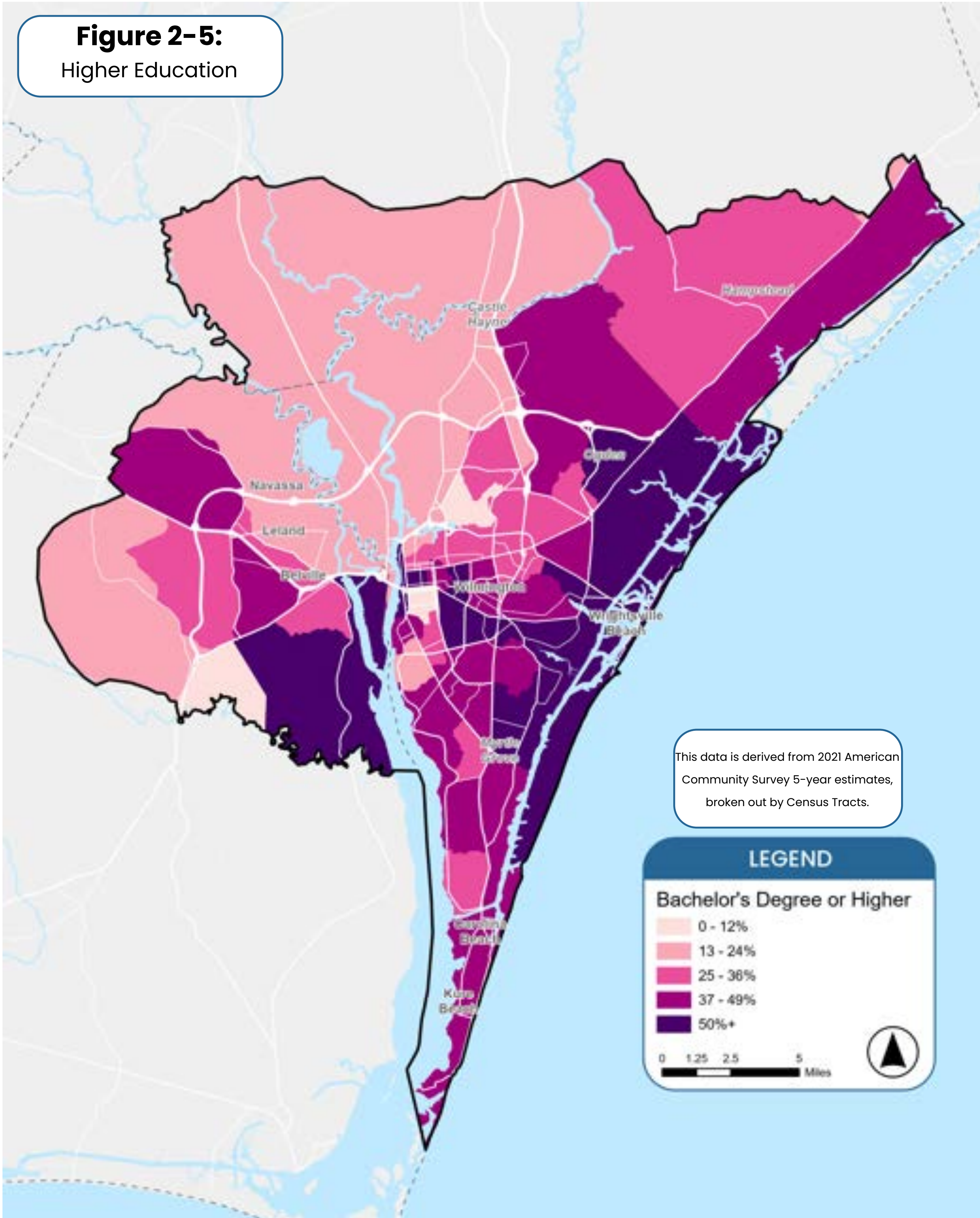


Figure 2-5:
Higher Education



This data is derived from 2021 American Community Survey 5-year estimates, broken out by Census Tracts.

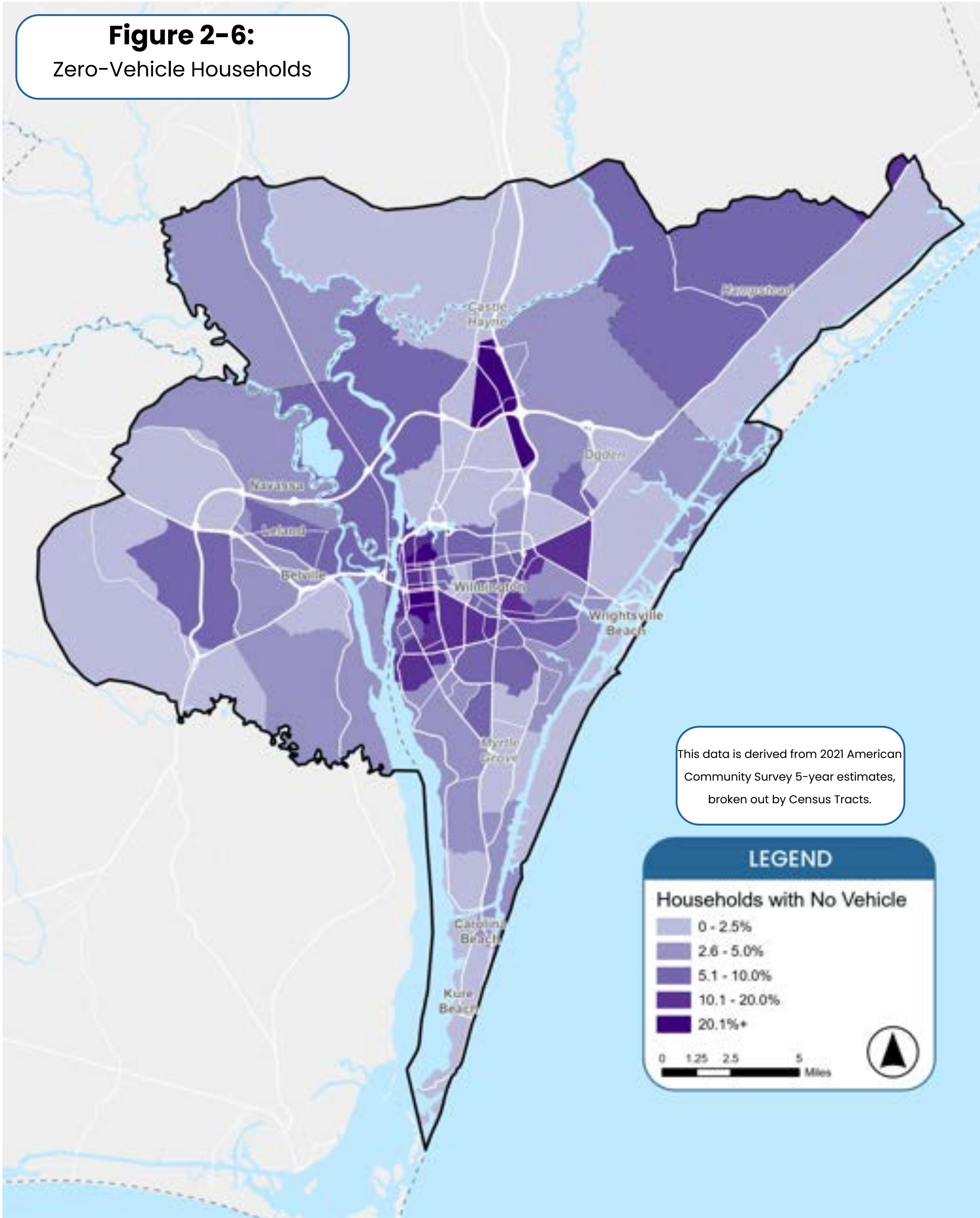


Figure 2-6:
Zero-Vehicle Households

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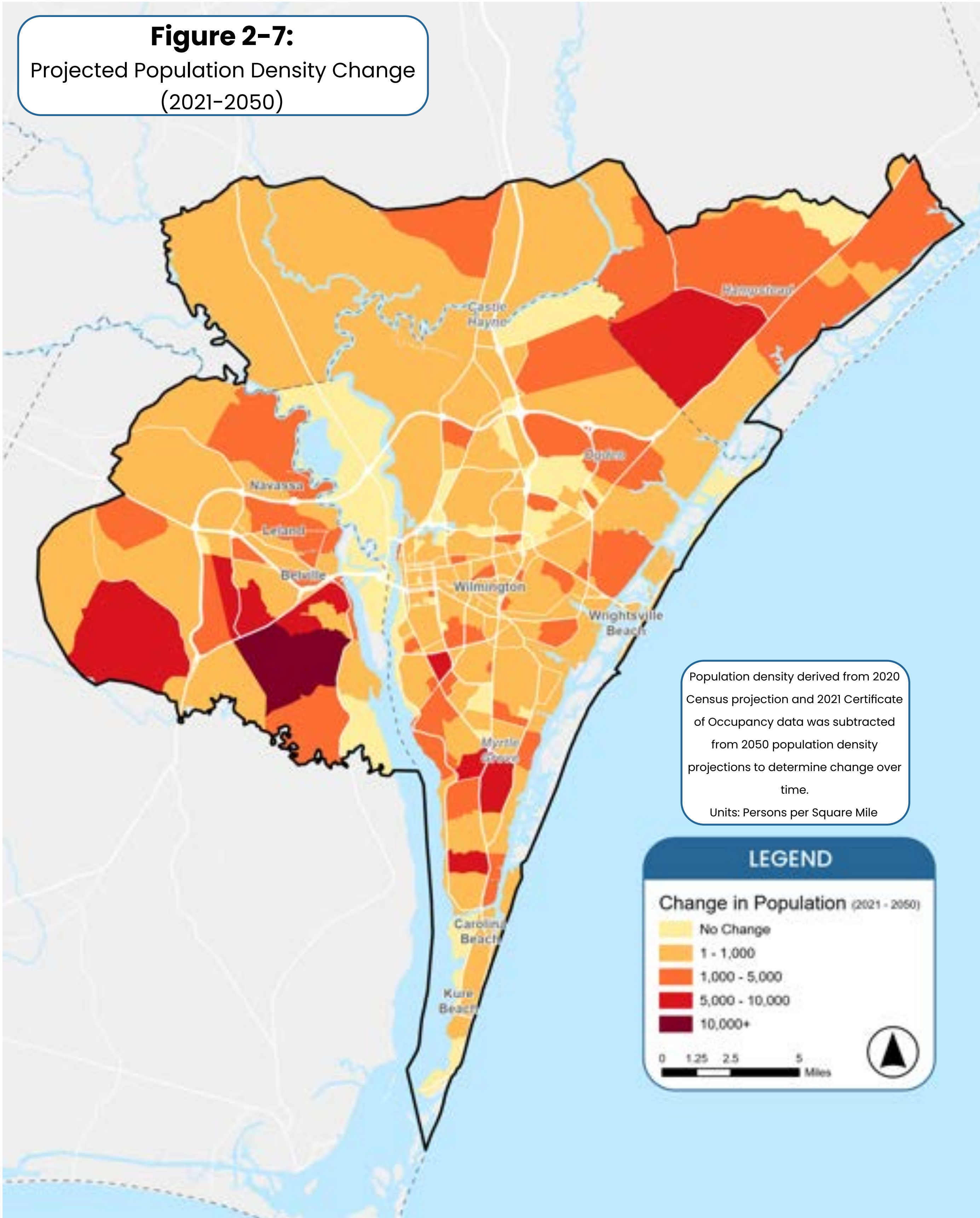
Figure 2-7:
Projected Population Density Change (2021-2050)



Transportation Modes and Existing Conditions

Cape Fear Moving Forward 2050 is a multimodal, long-range plan that considers the future of all transportation modes, and how they interact, in the region. These modes are Aviation, Bicycle and Pedestrian, Ferry and Water Transportation, Rail, Public Transportation, and Roadway. Descriptions of each are included in this chapter. During the development of the plan, regionally significant projects for each mode were identified through several sources, analyzed, scored, and ranked based on expert-derived, publicly-vetted, quantifiable factors. This process is further outlined in Chapter 4 and the modal appendices.

FOR MORE INFORMATION ON EACH MODE, REFER TO THE FOLLOWING APPENDICES:					
AVIATION	BICYCLE & PEDESTRIAN	FERRY & WATER TRANSPORTATION	RAIL	PUBLIC TRANSPORTATION	ROADWAY
E	F	G	H	I	J

Aviation

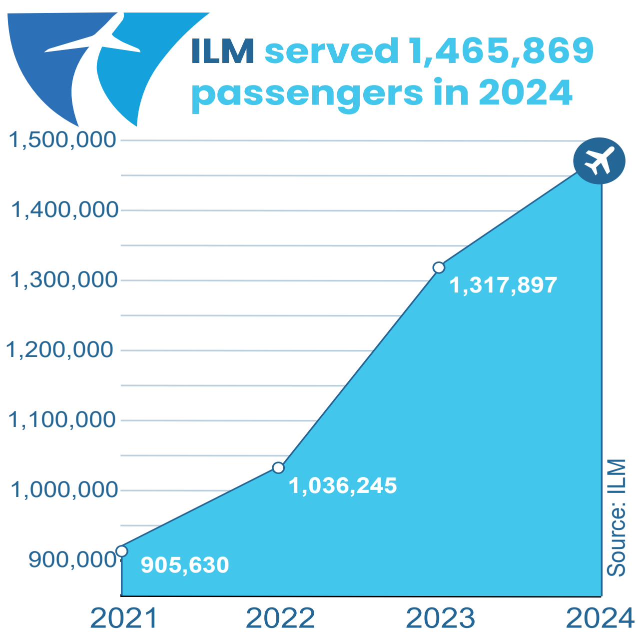
Aviation operations are a critical component of the movement of people and goods within the Wilmington region’s transportation network. Wilmington International Airport (ILM), founded in the 1920s, is the WMPO’s only public airport and supports three types of aviation operations: commercial (travel and cargo), general (private), and military. ILM currently provides 31 nonstop flights that connect to over 500 destinations worldwide, doubling the number of nonstop flight offerings from 2022. From 2022 to 2025 ILM added four new airlines: Avelo Airlines, Sun Country Airlines, Breeze Airways, and JetBlue Airlines, resulting in a total of seven airlines operating out of the airport. ILM's first nonstop international route was announced in Summer 2025 to Punta Cana, Dominican Republic. Commercial aviation makes up most of the airport’s operations, while general aviation supports business travel and recreational flying. Additionally, military procedures at ILM account for approximately 13.2% of aircraft operations.

ILM has maintained a focus on development and growth in recent years, highlighted by the increase in nonstop flight offerings and a $60 million terminal expansion, completed in 2023. As demand for commercial flights and cargo capacity increases, ILM continues to accommodate growth through the expansion of their airside and landside facilities and business park.

Map comparing the number of direct flights out of ILM airport from 2022 to August of 2025.

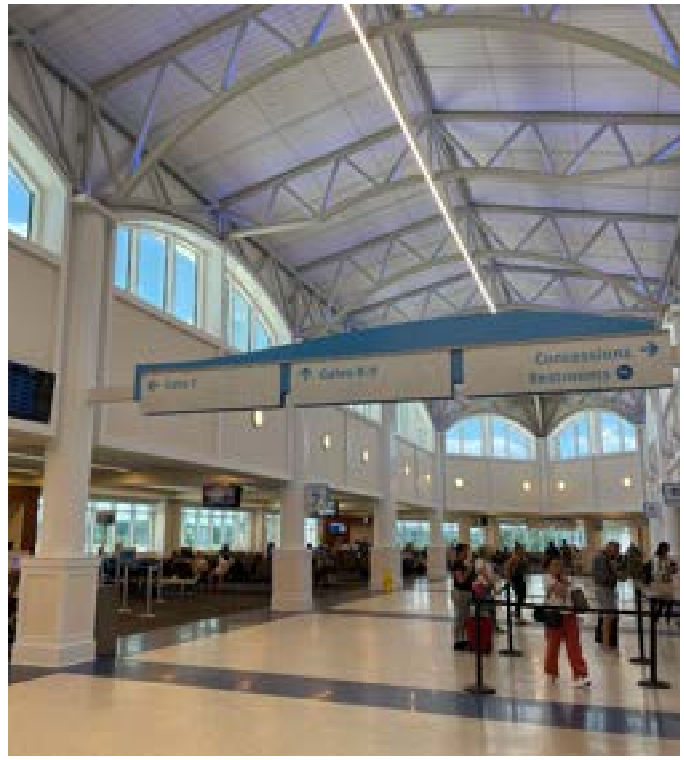
Airside facilities that support airport operations include runways, taxiways, and aprons. ILM has two runways and a taxiway system with two full parallel taxiways and several stub or connecting taxiways that serve the primary and secondary runways. ILM has several aircraft aprons utilized for aircraft movement and parking along with navigational aids for pilots. Landside facilities at the airport complement the airside facilities and include passenger terminals, aircraft hangars, fuel storage facilities, airport access roads, and automobile parking.

The ILM Vision Plan 2023-2027 outlines complete and upcoming developments in the Business Park, including Aero Center Wilmington, investments for storage and distribution facilities, and plans for an on-airport hotel.



In July 2025, ILM was ranked first in growth over the last three years among major airports across the United States. Since 2022, ILM has reported a 66 percent increase in seat capacity growth and added 20 new nonstop flights. ILM has grown from its foundational roots to become a crucial regional transportation hub with ongoing growth and development aimed at expanding its services, infrastructure, and economic impact for the future.

Photo by Avelo Airlines



Clockwise from top left: Front exterior of Wilmington International Airport (ILM); Gate area in ILM, photo by ILM; Plane on a runway, photo by ILM; Aerial view of ILM gates and terminals, photo by ILM.

Bicycle and Pedestrian

Bicycle and pedestrian facilities are essential components of a transportation system and often serve as primary transportation modes or vital connections between other modes, while also supporting recreational exercise.

Bicycle and pedestrian improvements have been a high priority within the Wilmington region and have seen continued support from citizens and stakeholders. The success of the 2014 Wilmington Transportation Bond shows the financial commitment that citizens have made to improving the safety and connectivity of these facilities, with many roadway projects including bicycle and pedestrian elements in their design. WMPO member jurisdictions have also taken advantage of Surface Transportation Block Grant (STBG) funds. Member jurisdictions may apply to fund their projects this way through a competitive process, which requires a twenty percent local match in funding. Examples of projects completed in recent years that have utilized STBG funds include the Old Fayetteville Loop Road Pedestrian Loop and Leland Middle School Sidewalk in Leland, Park Avenue MUP Phase II in Wilmington, and S Lake Park Boulevard/Hamlet Avenue Intersection Improvements in Carolina Beach.

North Carolina's first statewide bicycle and pedestrian plan, Bicycling and Walking in North Carolina: A Long-Range Transportation Plan, was completed in 1996. WalkBikeNC, an update to the 1996 plan, was adopted by the NC Board of Transportation in 2013. Since 2013, many of the WMPO's member jurisdictions have also adopted plans to address the bicycle and pedestrian needs of their communities, including:

- Wilmington-New Hanover County Comprehensive Greenway Plan (adopted in 2013)
- Leland Pedestrian Plan (adopted in 2016)
- Town of Navassa Comprehensive Bicycle and Pedestrian Plan (adopted in 2022)
- Kure Beach Bicycle and Pedestrian Plan (adopted in 2022)
- Pender County Bicycle and Pedestrian Plan (adopted in 2023)
- Walk Wilmington Comprehensive Pedestrian Plan update (originally adopted in 2009, updated in 2023)
- Wrightsville Beach Bicycle and Pedestrian Plan (adopted in 2024)
- Carolina Beach Bicycle and Pedestrian Plan (adopted in 2025)
- Town of Leland Integrated Mobility Plan (adopted in 2025)

One concept central to bicycle and pedestrian infrastructure is complete streets. Complete streets is an approach to planning, designing, building, and maintaining streets that enables safe access for all people who need to use them, including pedestrians, bicyclists, and others of all abilities. NCDOT's "Complete Streets" policy, updated in 2019, mandates the incorporation of multimodal facilities in both new transportation projects and upgrades to existing infrastructure. Similarly, the WMPO Board's 2009 policy requires that all projects within its planning boundary be designed to support bicyclists, public transit, and pedestrians of all ages and abilities.

Bicycle and pedestrian infrastructure includes multiuse paths (MUPs), sidewalks, pedestrian crossings, bicycle lanes, and sharrows. Within the WMPO area, there are approximately 57 miles of MUPs, 865 miles of sidewalks, 1,900+ marked crosswalks, 74 miles of dedicated bike lanes, and eight miles of sharrows. The maps on pages 25 through 28 illustrate the current bicycle and pedestrian infrastructure within the region.




Clockwise from top left: New HAWK signal at Market and 21st streets in Wilmington, photo by City of Wilmington; Multiuse path (MUP) on the Park Avenue Trail / River to Sea Bikeway; Sharrows on Ann St. in Wilmington; Bike lane on Dow Rd.

Technology is changing the bicycle and pedestrian landscape through shared micromobility, the emergence of electric-assisted bicycles, and easier access through the use of smartphones. Shared micromobility is the shared-use of small, fully or partially human-powered single-person vehicles such as bikes, e-bikes, and e-scooters. Shared micromobility in gaining in popularity and usage throughout urban areas in the US largely due to its convenience and accessibility, cost-effectiveness for users, and an increase in supportive infrastructure. These transportation options are accessed through smartphone apps and can be used with a few taps. Though not established in the Wilmington region, pockets of shared micromobility are cropping up. For example, the University of North Carolina Wilmington offers a fleet of e-bikes and e-scooters for students and staff to use through the Bird Bike Share Program.

E-bikes are gaining popularity due to their lower environmental impact compared to cars and their appeal to users who may prefer them over traditional bicycles. As their benefits become more recognized, e-bikes are helping to reduce urban congestion and carbon footprints, though challenges such as battery life and charging infrastructure remain. High purchase costs and the need for new legislation and enforcement around e-bike use could act as barriers to further growth. The WMPO Board adopted a model e-bike policy in 2020, and have since advocated for legislation defining e-bike classes and the ability for local jurisdictions to regulate. While technology continues to reshape the bicycle and pedestrian transportation landscape, challenges such as enforcement, safety concerns, and infrastructure limitations remain. Through coordinated efforts, these micromobility and active transportation solutions may help create more sustainable, accessible, and connected transportation networks in the WMPO region.

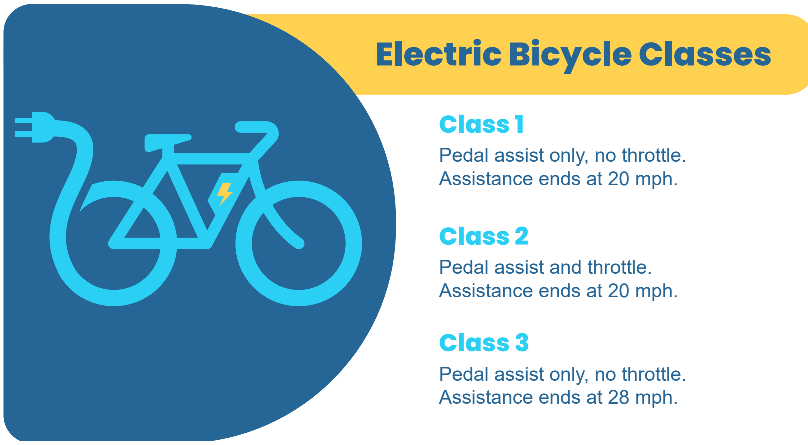


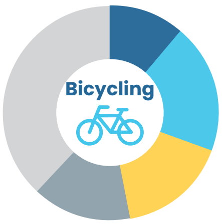
Photo by: UNCW

Another challenge regarding bicycle and pedestrian transportation is safety. Within the Wilmington region, there is an average of 72 pedestrians and 57 bicyclist involved in crashes annually. The WMPO's Be A Looker education campaign seeks to address this problem, providing safety tips for drivers, pedestrians, and bicyclists. Additionally, the WMPO was awarded a USDOT Safe Streets and Roads for all (SS4A) grant to develop a Safety Action Plan for the WMPO region. This plan will identify safety issues and provide project and policy recommendations to improve roadway safety for all users, including pedestrians, bicyclists, and drivers. The plan also incorporates the Safe Systems Approach, which is a comprehensive, proactive way of thinking about roadway safety. This approach focuses on designing a transportation system that protects everyone, even when people make mistakes. Core principles of Safe Systems include safer people, safer roads, safer speeds, safer vehicles, and better post-crash care. The WMPO Safety Action Plan is currently in development and is expected to be completed in Fall 2026.

WMPO
Safe Streets for All

As part of the planning process for *Cape Fear Navigating Change 2050*, public outreach was conducted through open houses and marketing campaigns to gather feedback from citizens. The responses revealed a desire for a variety of transportation options within the region, with bicycle and pedestrian facilities identified as one of the top three funding priorities. In fact, more than 60% of survey respondents indicated they would like to walk or bicycle more often, while 66% of survey respondents indicated they had walked at least once per week within the last 30 days of taking the survey, and 30.7% indicated they have biked at least once per week. The graphics below highlight respondents' current travel behavior, future travel preferences, and the factors that would encourage them to walk or bike more in our region.

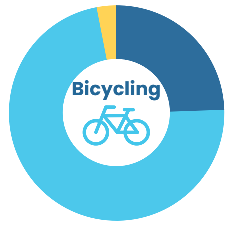
Current Travel Behavior



- 4+ days/week (11%)
- 1-3 days/week (20%)
- 1-3 days/month (16%)
- Less than 1 day/month (15%)
- Never (38%)

- 4+ days/week (40%)
- 1-3 days/week (26%)
- 1-3 days/month (13%)
- Less than 1 day/month (9%)
- Never (12%)

Preferences for Future Travel



- The same (25%)
- More often (73%)
- Less often (2%)

- The same (26%)
- More often (69%)
- Less often (5%)

Factors That Would Increase Travel by Walking or Biking

Bicycling

- More off-road multi-use paths (35%)
- More on-road bicycle lanes (24%)
- More information about bike routes (15%)
- Bike share / bike rental (8%)
- Showers and changing rooms at work (4%)

Walking

- More sidewalks and multi-use paths (30%)
- Safe intersection crossings (27%)
- Safe connections from homes to stores, etc (24%)
- Information about walking routes (9%)
- Showers and changing rooms at work (3%)

Figure 2-8:
Existing Bicycle Facilities
Central New Hanover County

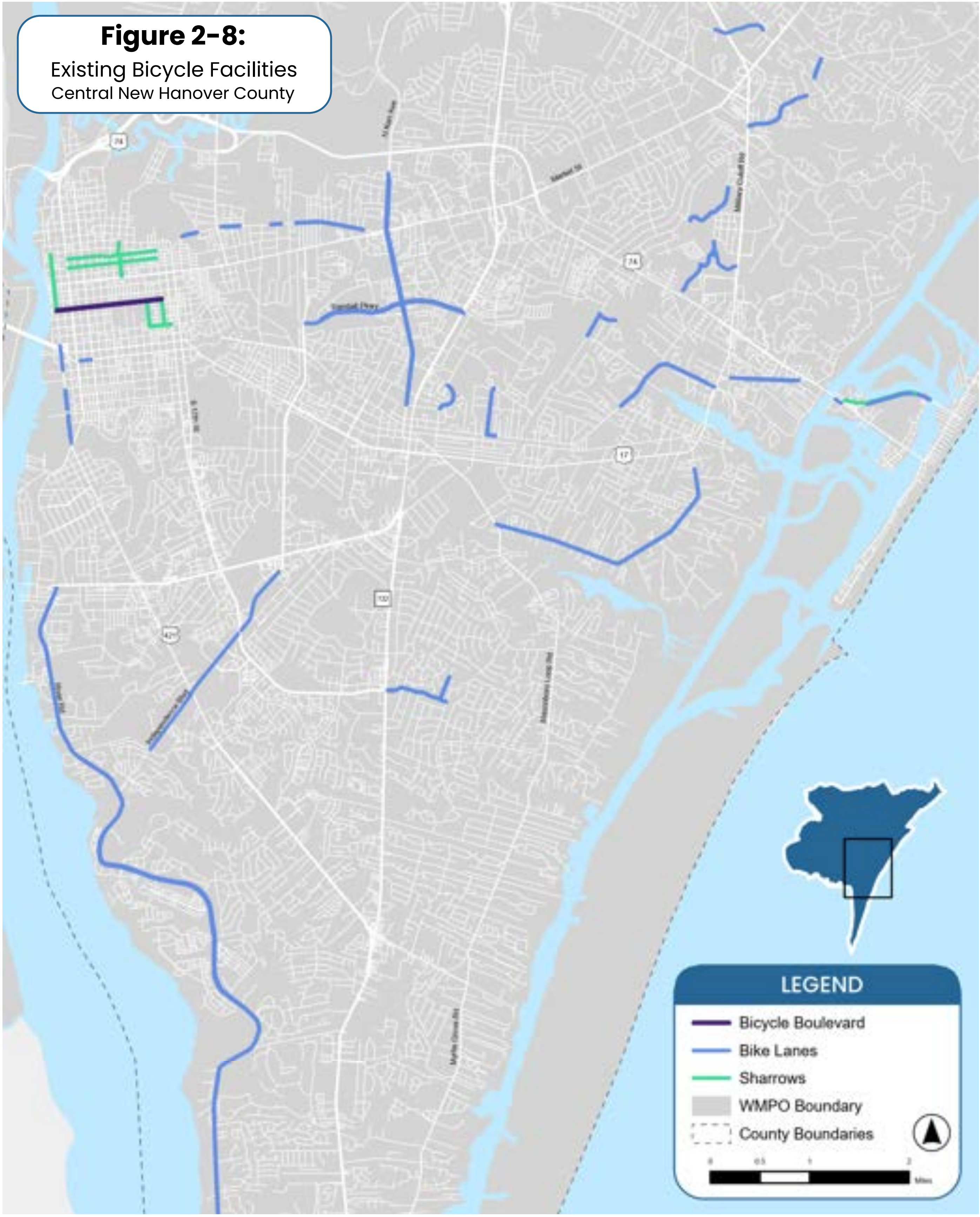


Figure 2-9:
Existing Pedestrian Facilities
Central New Hanover County

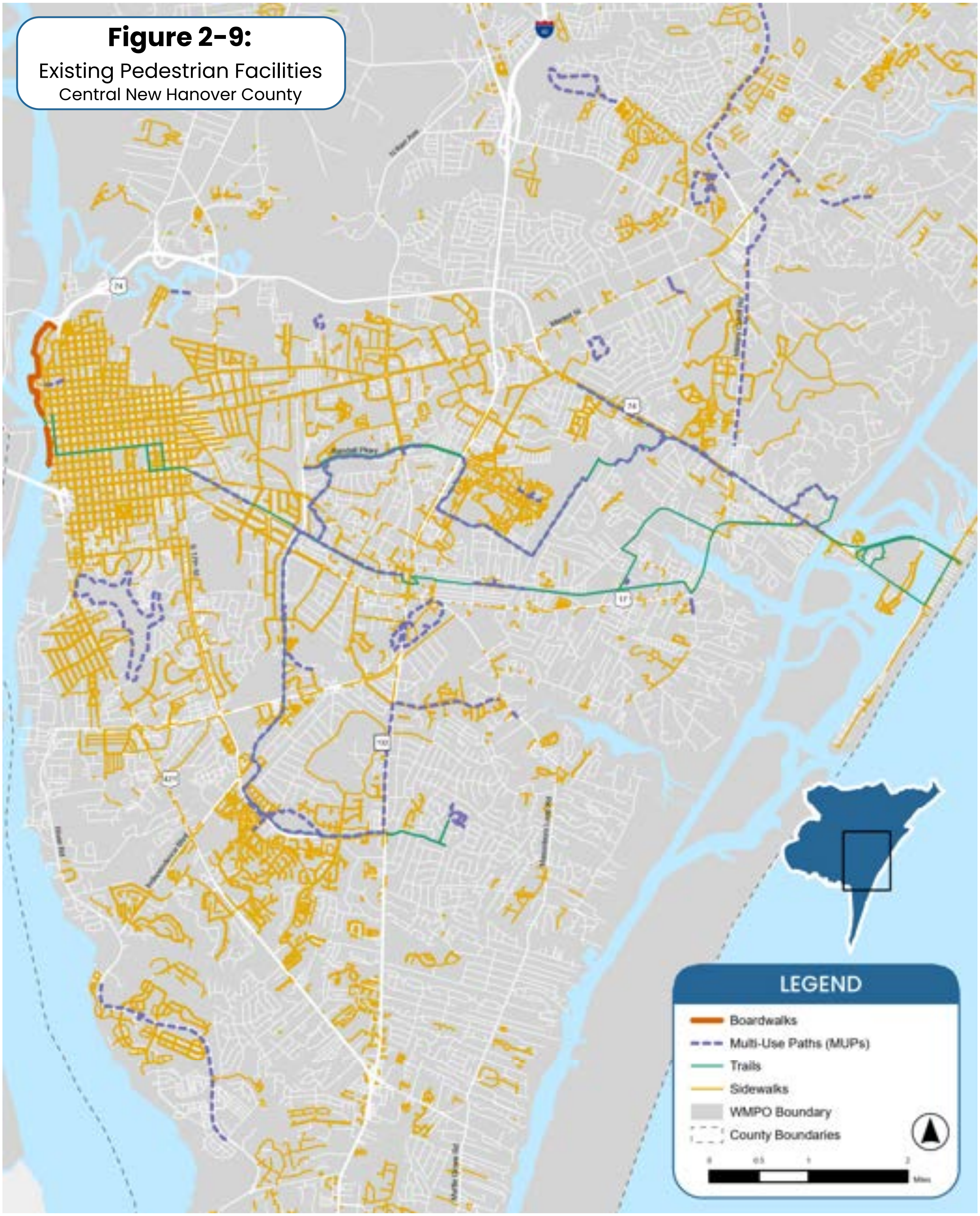


Figure 2-10:
Existing Pedestrian Facilities
Brunswick County

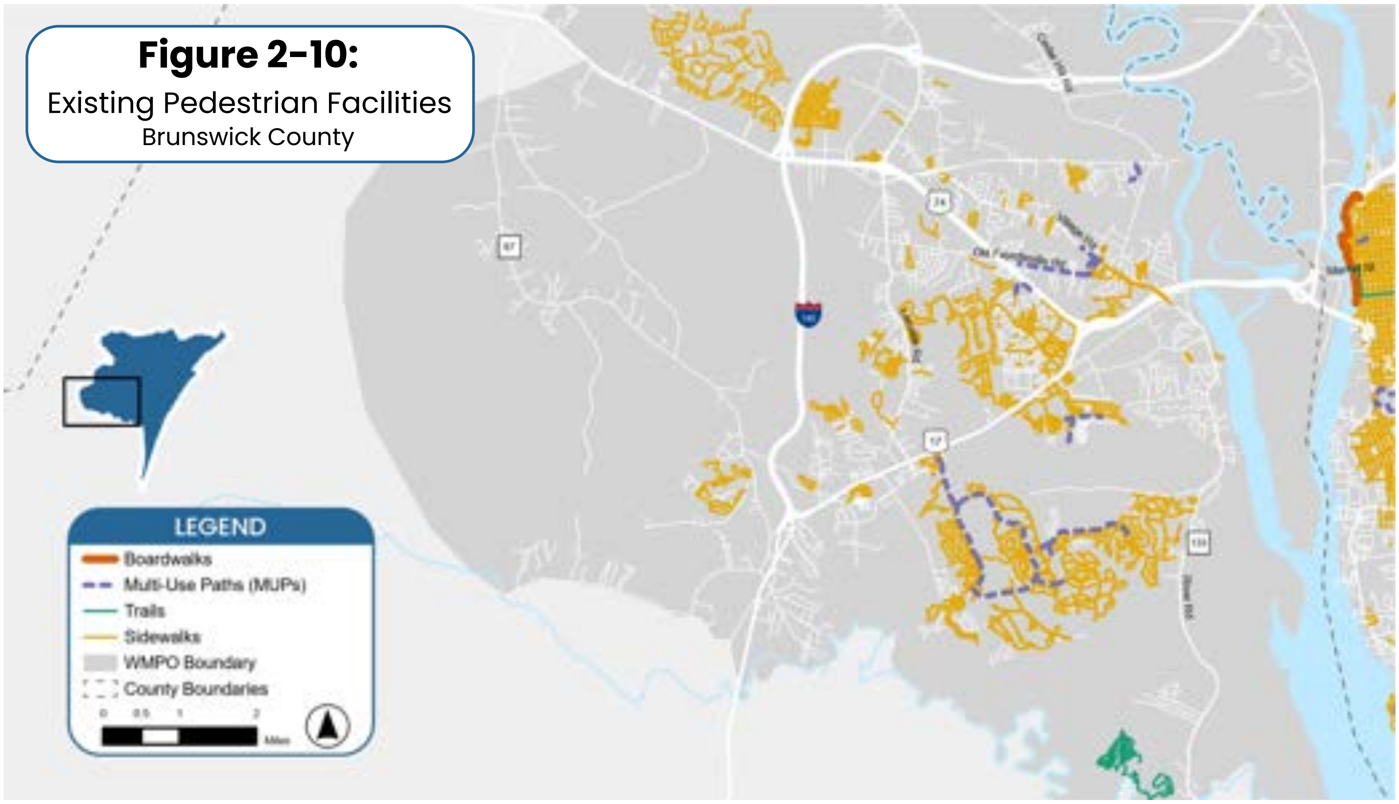
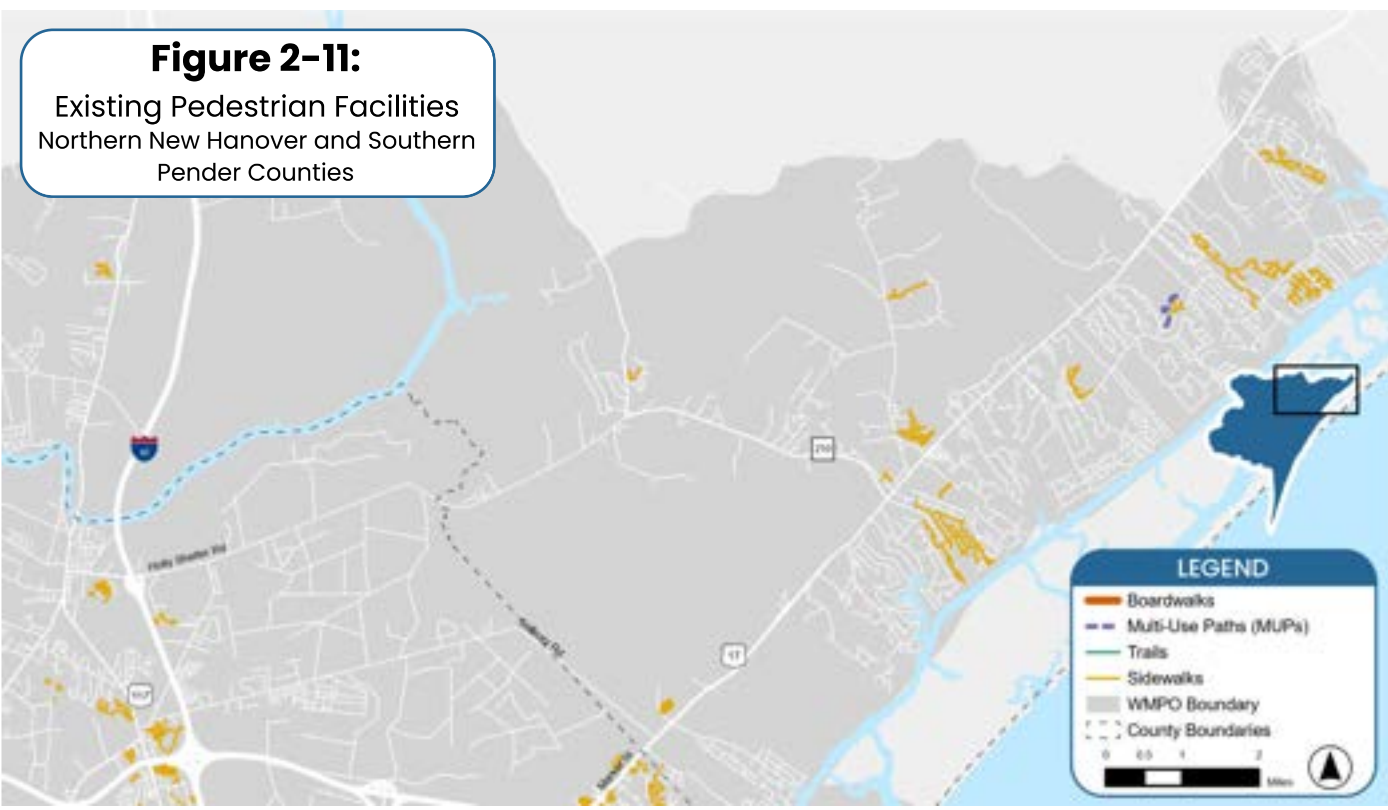


Figure 2-11:
Existing Pedestrian Facilities
Northern New Hanover and Southern Pender Counties



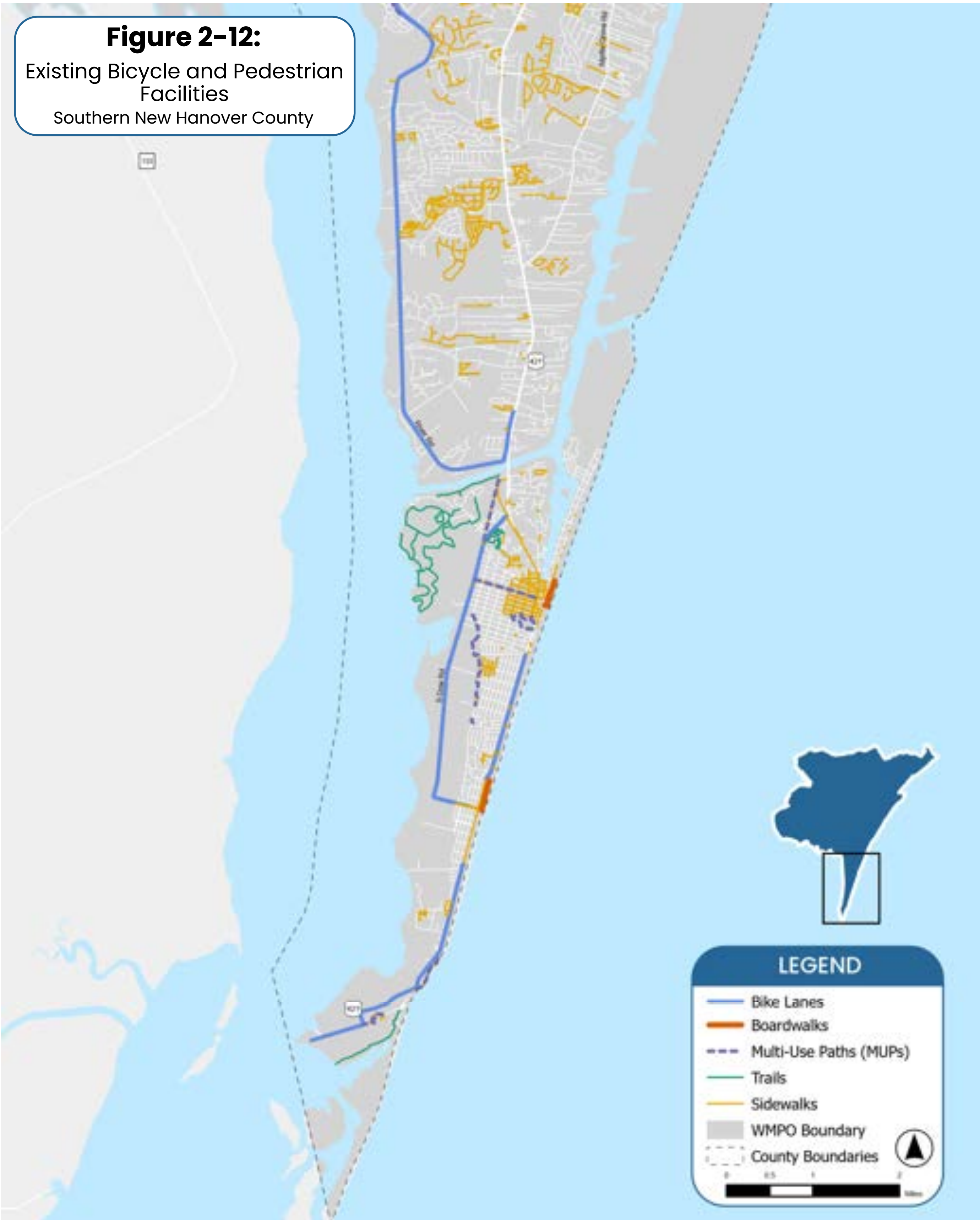


Figure 2-12:
Existing Bicycle and Pedestrian Facilities
Southern New Hanover County

Ferry and Water Transportation

Ferries and water transportation provide an alternative mode of travel in coastal and river areas, potentially reducing trip distances. Ferry systems also play a critical role in community service and public safety, assisting in water rescue or emergency evacuation efforts. North Carolina has the second-largest state-operated ferry system in the United States. The NCDOT Ferry Division operates 23 ferries on eight routes, transporting approximately 1.5 million passengers in 2024. The expected growth of the tourism industry and new developments in the area are driving conversations about improvements to, and the expansion of, the current ferry system. As roadways in the region become increasingly congested, the ferry system may provide an alternative to vehicular travel, especially if connections are established with transportation networks such as bus routes and greenways. Regional leaders are also interested in exploring the expansion of existing water transportation.

Public ferry and water transport facilities in the Wilmington region include the North Carolina Ferry System landings at Southport (Brunswick County, outside of WMPO boundary) and Fort Fisher (New Hanover County), the Port of Wilmington, and locally managed water transportation infrastructure primarily serving recreational boaters. According to the NCDOT Ferry Division, the Southport to Fort Fisher ferry transported 448,856 passengers in 2024, or 30% of all riders on its eight routes.

The North Carolina Ferry System

Consists of 23 ferries on 8 regular routes

Transported 694,585 vehicles in 2024

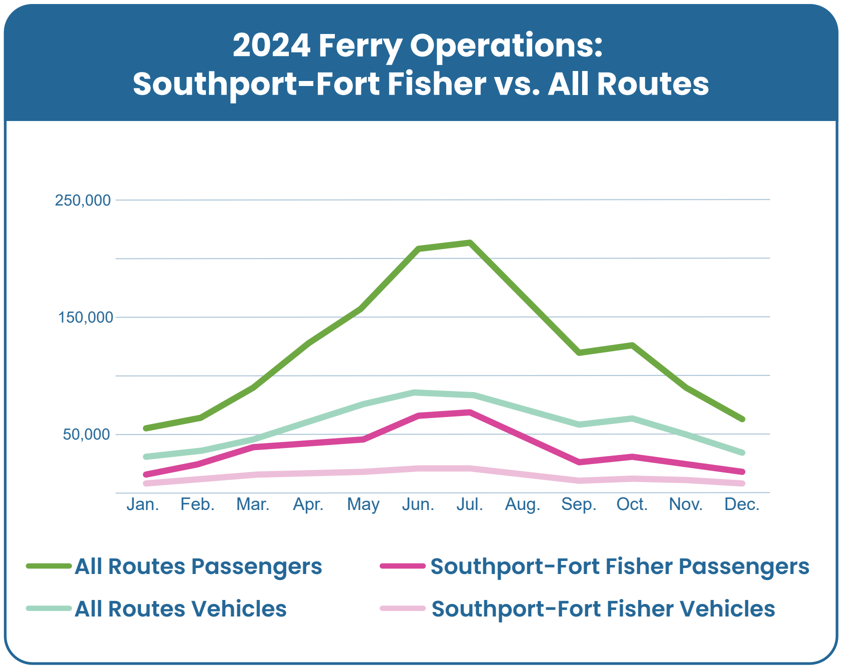
25% of which were on the Southport - Fort Fisher route

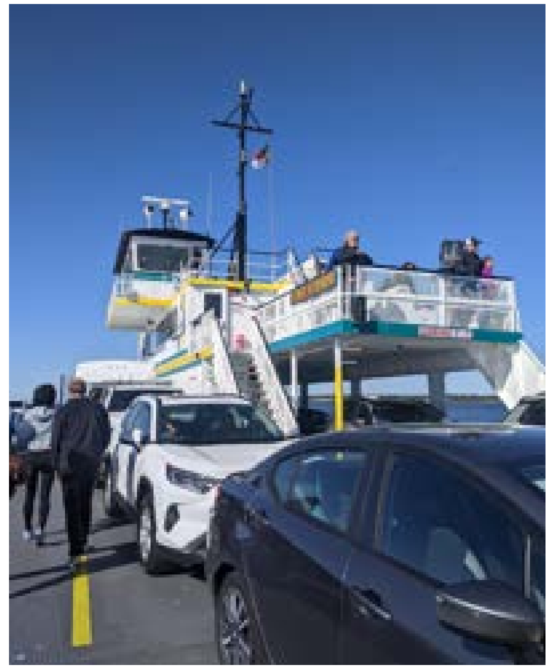
Transported 1,485,328 passengers in 2024

30% of which were on the Southport - Fort Fisher route

L to R: Boat traveling north on the Cape Fear River; Dock in Belville with the NC Port visible in the background.

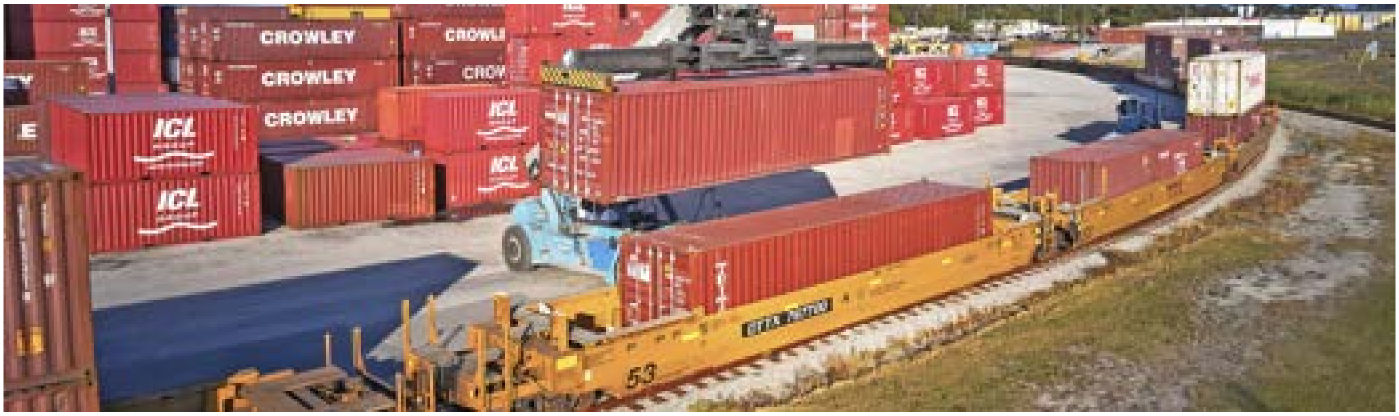
In 2024, 51% of the Southport-Fort Fisher ferry ridership were residents, with 8% being seasonal residents and 41% being visitors to the region. Additionally, private boat operators offering taxi services and tourist vessels for hire may utilize public facilities for launching and mooring.





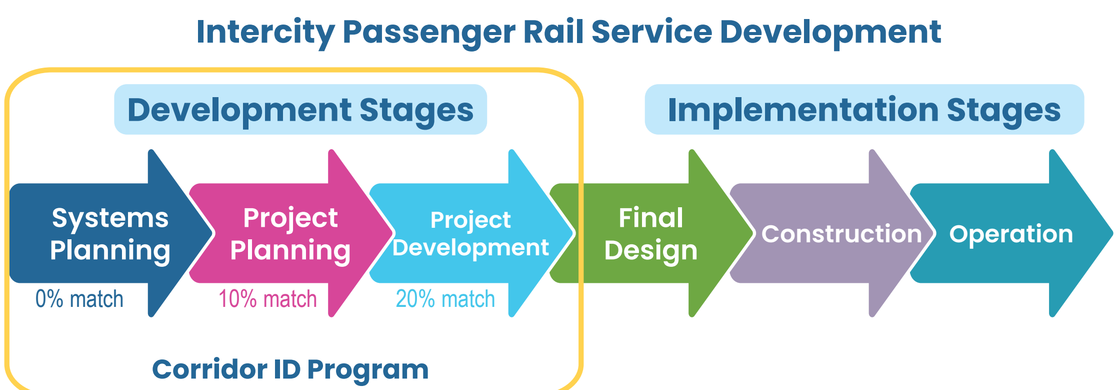
Clockwise from top left: graph showing ferry operations for the Southport - Fort Fisher ferry compared to all NC Ferry routes. Top right: On board the Southport - Fort Fisher Ferry in April 2025. Bottom right: Ferry approaching the Fort Fisher terminal. Bottom left: Map of existing ferry routes within/near the WMPO boundary.

Installing facilities and operating services at the shoreline of waterways requires plans, permits, and maintenance similar to surface transportation projects. Expanding water transportation in the region would likely require strong local support and funding to succeed.



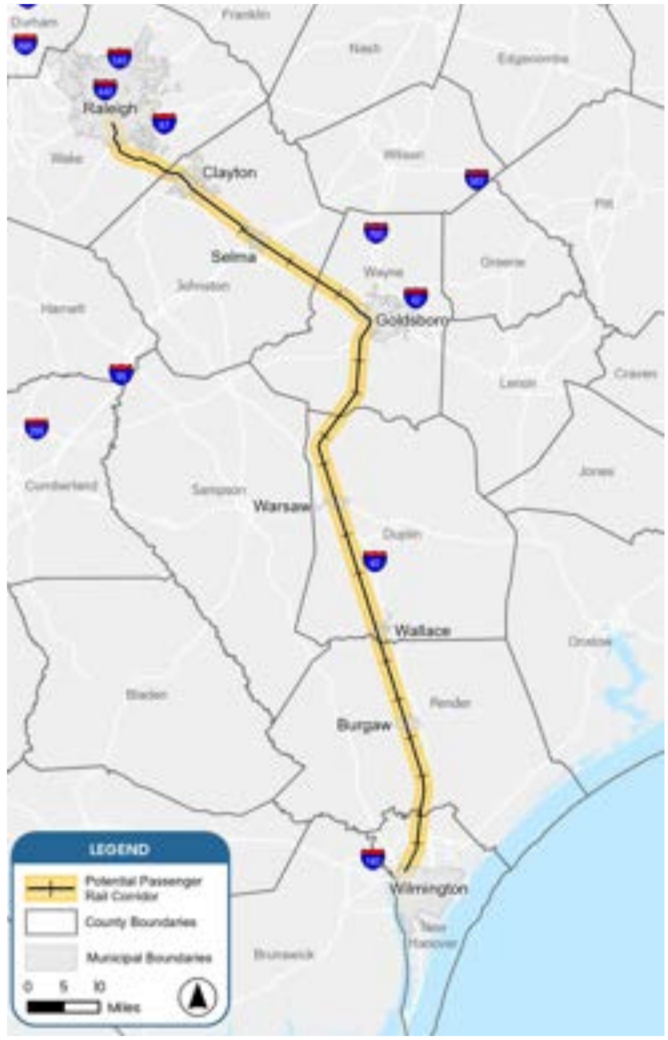
Rail (Passenger and Freight)

The future of rail is shifting in the Wilmington region from primarily being focused on freight to the potential resurgence of passenger rail. While there are currently no passenger rail services within the WMPO boundary, continued efforts by various agencies such as NCDOT have created more momentum for the transportation option. In September 2024, NCDOT also completed the update to the Southeastern North Carolina Passenger Rail Feasibility Study, which evaluated potential routes, costs, ridership, and infrastructure needs to reestablish a passenger rail connection between Wilmington and Raleigh. The study recommended an eastern route via Goldsboro and serves as the foundation for future intercity rail planning in the region. While the feasibility study was ongoing, NCDOT secured up to $500,000 from the Federal Railroad Administration's Corridor Identification and Development (CID) program to begin the scoping process for a passenger rail service between Wilmington and Raleigh. The Federal Railroad Administration's (FRA) Corridor Identification and Development (CID) Program is a national initiative established under the Infrastructure Investment and Jobs Act (IIJA) to support the development of intercity passenger rail service across the country. The program identifies viable corridors and provides funding and technical support to guide them through early planning phases, helping to create a pipeline of future passenger rail projects. This funding enables NCDOT to begin Step 1 of the Service Development Plan (SDP), which outlines the scope, timeline, and costs necessary to advance the project.



Freight rail remains an important aspect of the transportation network, providing efficient and more direct access to important freight destinations within and outside of the Cape Fear region. A key focus of this plan is improving freight movement within the region by promoting intermodal connections for ports, rail terminals, military bases, and major logistics and manufacturing sites. The North Carolina Port Authority's Port of Wilmington, an important intermodal connection and destination for freight, has been experiencing steady growth. The Port predicts it will see a 90% and 53% increase in imports and exports, respectively, in 2045 from their 2015 totals.

The Port relies heavily on rail service to support its growing intermodal operations. CSX Transportation, through the Wilmington Terminal Railroad (WTRY), provides daily service, connecting the Port and other freight-generating facilities to broader national and global supply chains. In addition, a rail storage project is underway, adding 6,000 feet of track near the North Gate entrance to increase storage capacity. Key projects like the Wilmington Rail Realignment and the restoration of rail service between Wallace and Castle Hayne further support the Port's growth and freight operations and help improve traffic flow and safety on local roadways. Identifying and securing new funding sources will be critical to the development and construction of these regionally significant, large-scale projects.

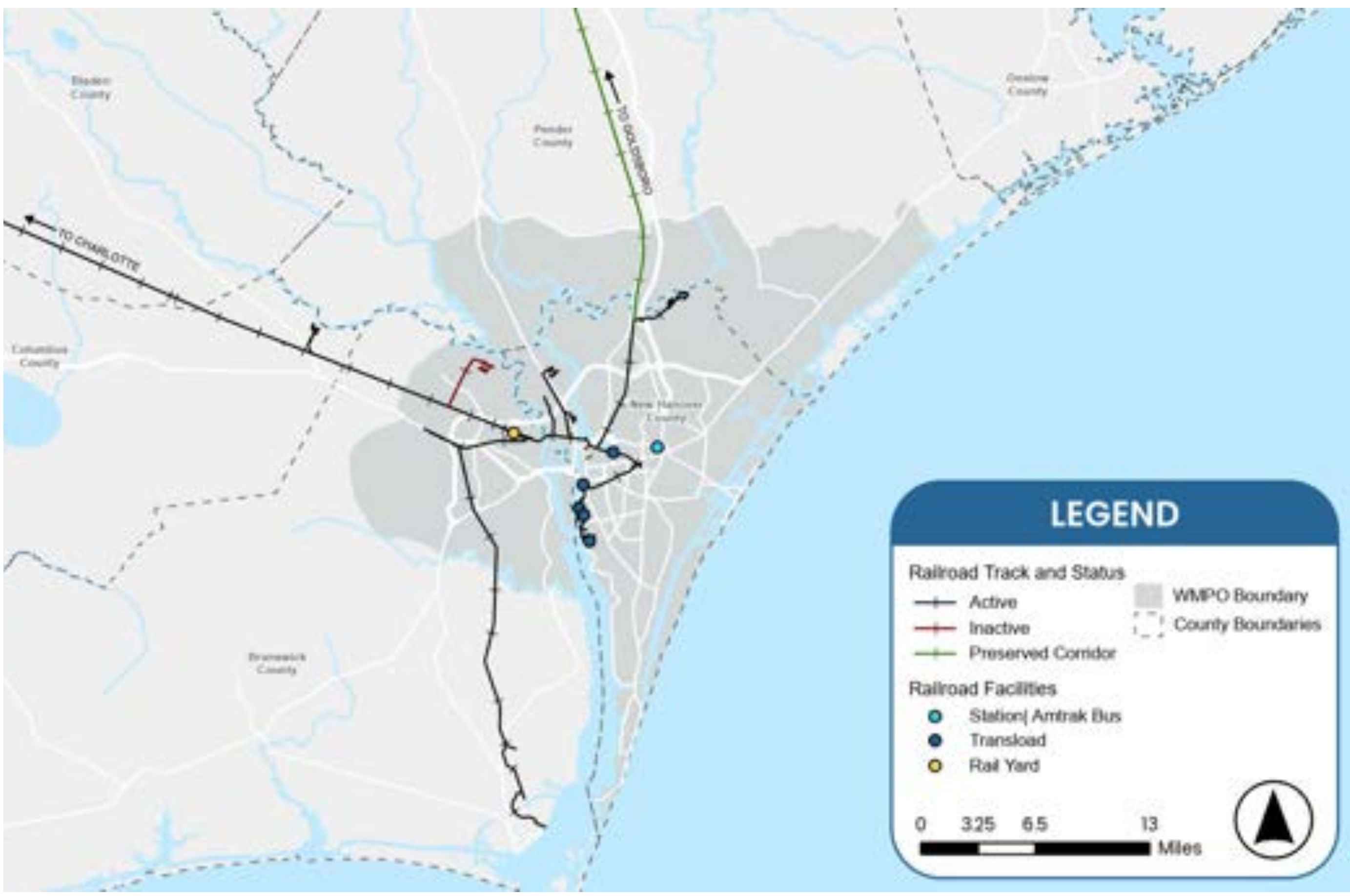


A vital freight rail facility in the transportation network of southeast North Carolina is Davis Yard, which is situated in the Town of Navassa in Brunswick County. The yard is run by CSX Transportation and acts as a hub for the staging, sorting, and assembly of railcars to support both long-distance and local freight operations. Effective connections between industrial users, regional corridors, and the larger national rail network are made possible by its advantageous location. Although the yard is crucial to the flow of goods to and from the Port of Wilmington, its use is not just restricted to port-related activities. Davis Yard serves a variety of freight requirements throughout the area, enhancing supply chain efficiency, lowering traffic on the highways, and boosting economic competitiveness. Additionally, the US Army operates a rail connection to Military Ocean Terminal Sunny Point (MOTSU). Although MOTSU is not within the WMPO planning area, the rail line is partially located within the planning area boundary and the activities at MOTSU, and on the rail line, could have significant impacts on large portions of the Wilmington region.

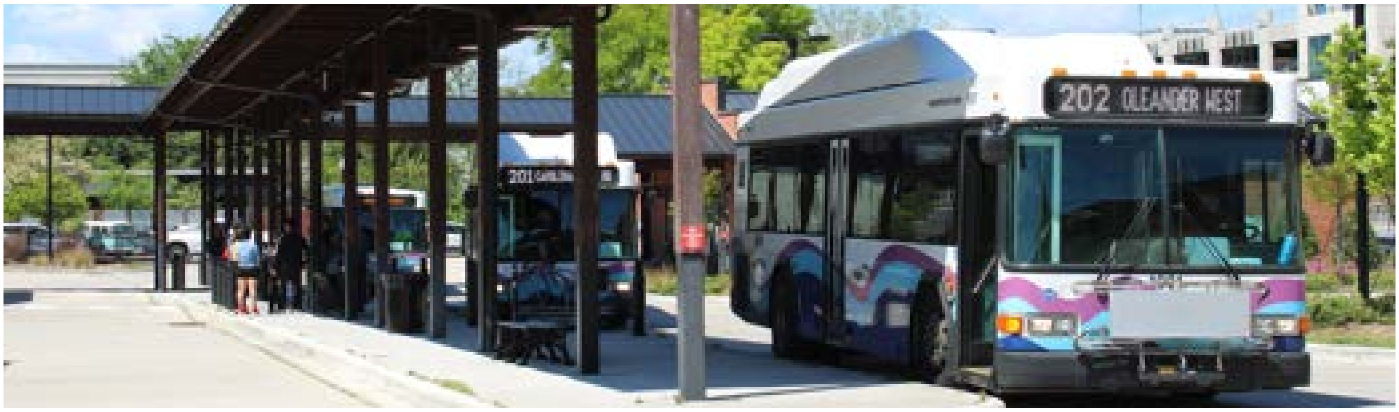
L to R: Aerial view of the future passenger rail corridor; Rail tracks near S. 2nd and S. 3rd Streets.

The Wilmington Beltline (P-5740) project, funded by NCDOT and Consolidated Rail Infrastructure and Safety Improvements (CRISI) program, represents a key step in addressing longstanding freight and roadway interaction challenges in the Wilmington region. The project is comprised of a series of infrastructure upgrades along approximately 13 miles of the CSX Southeast Line, commonly referred to as the Wilmington Beltline, stretching from CSX's Davis Yard in Navassa to S 2nd Street in Wilmington. This corridor currently serves as the only active freight rail route through Wilmington and provides direct access to the Port of Wilmington. The project includes track rehabilitation, curve realignments, upgrades to switch operations, and safety and surface enhancements at roadway crossings, including selective roadway closures. These enhancements aim to improve safety, increase rail efficiency, and reduce driver delays at crossings throughout the city.

The Wilmington Beltline project complements the larger, long-term vision of the Wilmington Rail Realignment Project, which proposes rerouting freight rail traffic from the existing Beltline to a new four-mile alignment with new crossings over the Cape Fear River. Currently, freight traffic traveling between the Port of Wilmington and the Davis Yard must traverse the full length of the Beltline, including many at-grade crossings that disrupt local mobility and pose safety risks. While freight demand and movement patterns fluctuate, daily operations result in recurring conflicts with vehicular traffic along South Front Street and other city roadways. By improving existing rail infrastructure and advancing the long-term goal of realignment, the Wilmington Beltline project helps lay the groundwork for a safer, more efficient freight network in southeastern North Carolina.



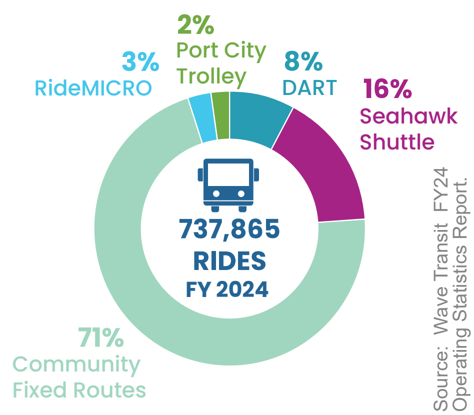
Existing rail facilities in southeastern North Carolina.



Public Transportation

As growth of communities within the WMPO planning boundary outpaces the capacity of the existing roadway network, public transportation will serve an increasingly vital role in meeting the transportation needs of the region. The benefits of a robust public transportation network include reduced traffic congestion, and increased mobility for customers with limited transportation options. The Public Transportation element of *Cape Fear Navigating Change 2050* strives to address both the current and future needs of the region.

Cape Fear Public Transportation Authority (CFPTA), also known as Wave Transit, is the WMPO's only public transportation provider. Wave Transit currently offers a fixed route coverage model for its community routes, Seahawk Shuttle routes serving UNCW, and seasonal downtown trolley. Wave also offers Demand-Responsive Transit (DRT) in its RideMICRO microtransit service and its DART (Dial-A-Ride Transportation) System for eligible riders. Wave Transit's funding is provided through federal (nearly half), state (less than 10%), and local (approximately 30%) sources.

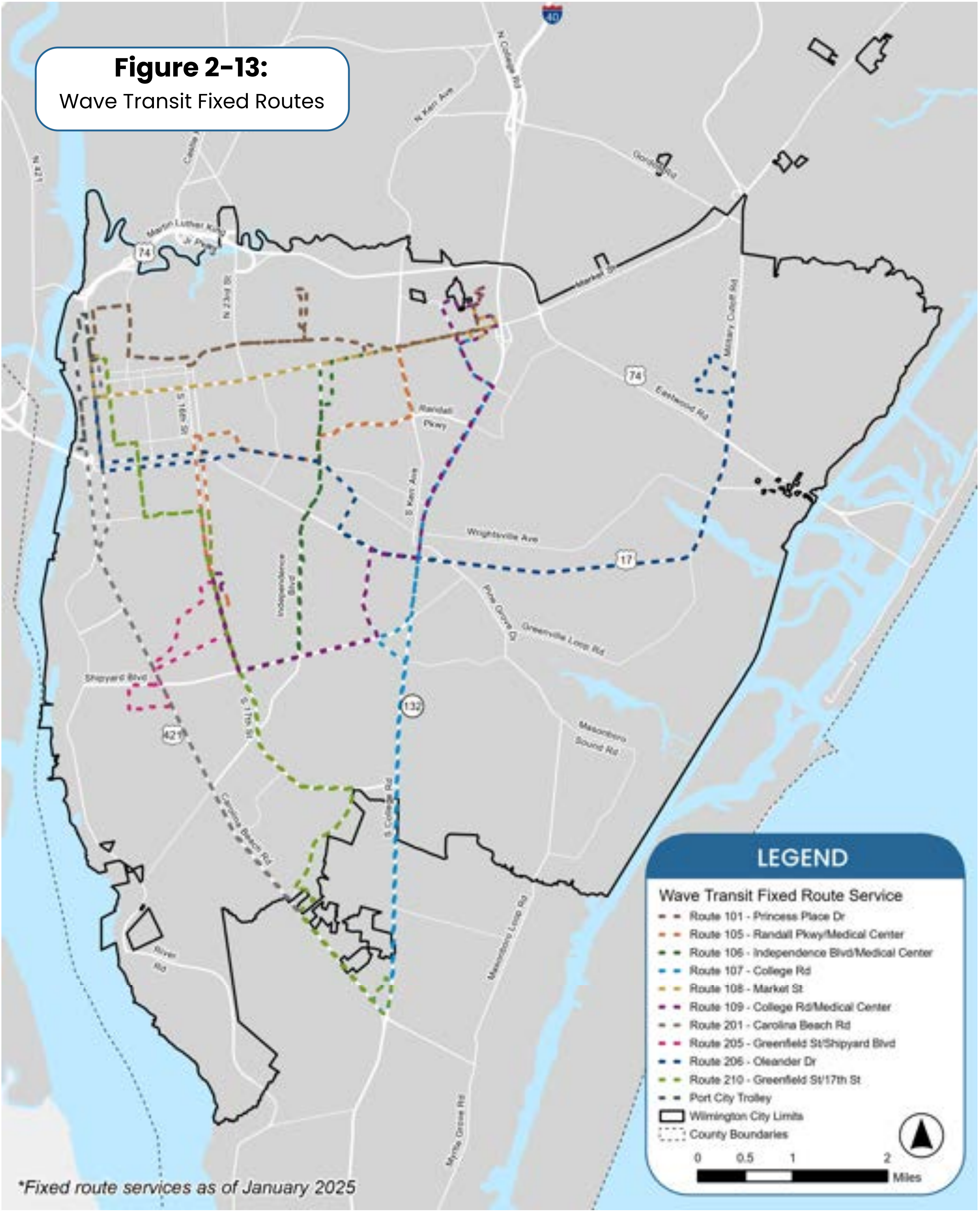


Wave Transit's fixed-route system has historically favored a model which prioritized geographic coverage over frequency to reach the greatest number of riders, the system was re-evaluated with the development and adoption of Reimagine Wave Transit Short-Range Transportation Plan. The planning effort was launched in 2024 and was implemented in January 2025. System changes from the plan's recommendations were implemented in 2025 and include improvements to shorten wait time for passengers between buses, including 15-minute service between Padgett Station and the New Hanover Regional Medical Center. Other changes include additional frequency offerings, increased service hours for several routes, new bus stops along important routes and more. Figure 2-13 on page 35 depicts Wave's current fixed route system.

Transit represents a convenient, affordable option for many passengers. According to the Reimagine Wave Transit Plan, traveling by bus in the region costs riders less than $1,000 a year. This contrasts with automobile ownership and gas costs that average $10,237 per year for New Hanover County residents. Despite this significant difference in cost to travel, other factors influence the market for transit ridership and can shift mode choice.

See Appendix I for more information on Wave's services and funding.

Figure 2-13:
Wave Transit Fixed Routes



*Fixed route services as of January 2025

These factors include population density, economic characteristics, job types and job density, major activity centers, and travel patterns. How residents perceive the attractiveness of using transit as a means of transport over other options is also a factor. The attractiveness of transit relies on the service quality. Service quality considers the entire transit system, including first- and last-mile connections, reliable and frequent service, amenities at bus stops, and increased infrastructure for vulnerable road users.

Public-Identified Factors to Increase Transit Usage

1. Better access to bus stops (sidewalks, etc.) (18%)
2. More frequent bus service (18%)
3. Express routes along major roads (17%)
4. Amenities (benches, shelters, etc.) (10%)
5. Park and Ride availability (11%)
6. Free or lower cost transit (8%)

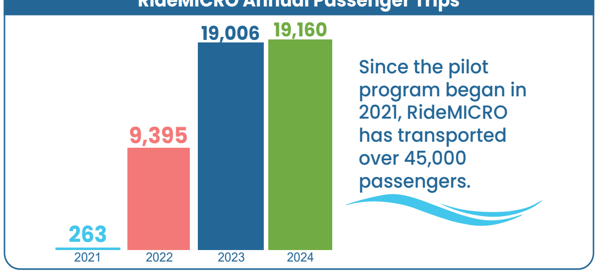
Phase I of public outreach for *Cape Fear Navigating Change 2050* revealed that Wilmington region residents identified safety, travel time, and convenience as their top three travel priorities. While nearly half of survey respondents indicated that they would like to use transit more often, only around eight percent of respondents selected public transit as their preferred method of transportation. Those surveyed during the development of Reimagine Wave Transit shared similar sentiments, stating that increased funding would allow more frequent and reliable service and could perhaps attract a wider ridership base.

RideMICRO is a point-to-point service available to anyone who is traveling within the designated service zones. The microtransit service, which started in October 2021 as a pilot program, allows users to schedule rides to destinations within the service network. Passengers can book an on-demand ride from a virtual stop within the service zone and be connected to fixed-route service or brought directly to a destination with a zone. The benefit of this service is that it provides greater flexibility, decreases wait times, and increases stop locations relative to a traditional fixed-route bus. Since the pilot program began in fall 2021, RideMICRO has transported over 45,000 passengers throughout the WMPO region.

There are currently four service zones, with two in portions of northern and southern New Hanover County, one serving a portion of Brunswick County, and one serving a portion of southeast Pender County. All zones connect to the fixed-route service area, allowing those who live outside of that area to connect to other Wave services.

Programs	Cost to Ride (One way)
Fixed Route 11 routes	Fixed Route $2.00
Dial-a-Ride (DART) Van service	DART $4.00
RideMICRO Point-to-point	RideMICRO $2.00

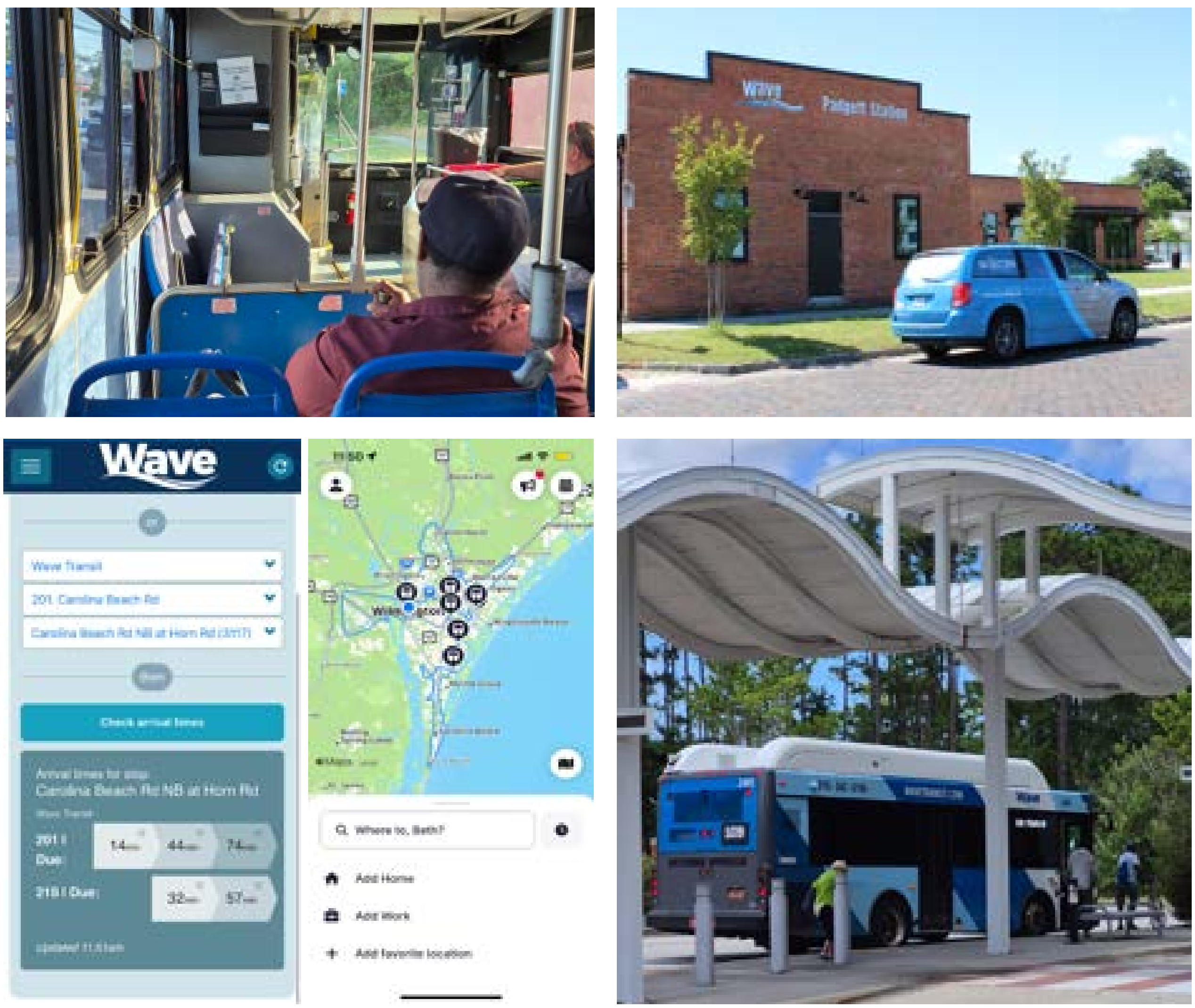
RideMICRO Annual Passenger Trips



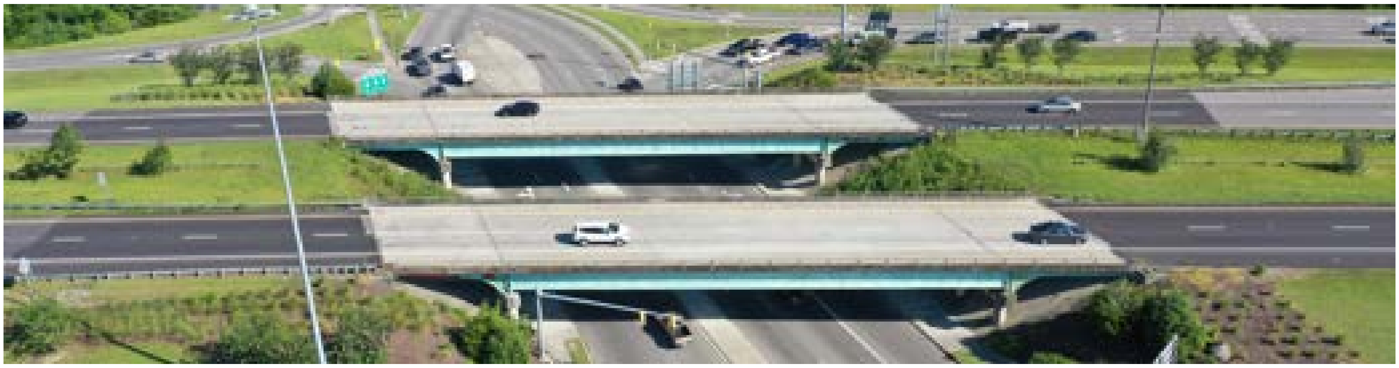
RideMICRO Zones as of January 2025

Wilmington is served by intercity bus providers such as Greyhound Lines and Amtrak Thruway, which offer regional and national connections to major cities such as Charlotte, Raleigh, and Charleston across the Southeast and beyond. These services are based out of Forden Station, one of the two transit stations managed by Wave Transit, which serves as Wilmington's main hub for intercity bus operations. Greyhound Lines operates a comprehensive network of regional and long-distance routes, providing critical connectivity between Wilmington and numerous metropolitan centers across the Southeast and the broader United States. Meanwhile, Amtrak Thruway offers scheduled bus service linking Wilmington to the Amtrak rail station in Wilson, North Carolina.

Technology will continue to shape public transportation, serving to make it more efficient and economical. Technologies already being implemented in the Wilmington urban area include alternative energy fuel sources such as compressed natural gas (CNG) and electric vehicles (EV); alternative fare payment options including cellular devices; apps communicating and monitoring real-time arrivals, departures, and delays; and on-demand service (also known as microtransit). Wave has already transitioned some of its vehicles to CNG. Wave's RideMICRO service has passengers pay through the app. The development of autonomous vehicles could have a significant impact on public transportation, while the combination of EVs, autonomous vehicles, mobile connectivity and route planning has the potential to revolutionize transportation. In addition, the introduction of these technologies provides opportunity for future implementation of services such as Bus Rapid Transit.



Clockwise from top left: People riding Wave Transit route 210; RideMICRO; Route 109 at Forden Station waits for people to board; RideMICRO App.

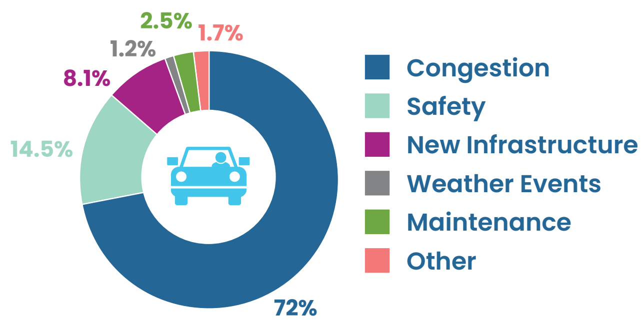


Roadway

While the WMPO is dedicated to developing a balanced, multimodal transportation system, automobile travel remains the primary mode of transportation for many. Land use patterns play a critical role in shaping travel demand and influencing roadway capacity needs. Changes to road infrastructure, whether through widening, bypass construction, or context-sensitive street design, are often driven by adjacent land uses.

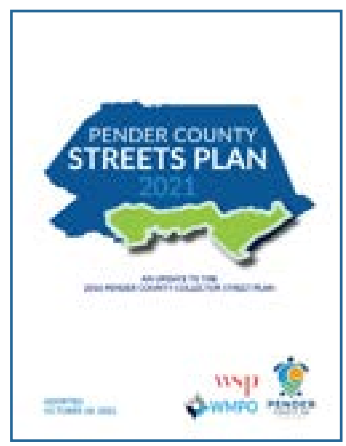
Major Roadway Concerns

CFNC 2050 Public Survey Responses



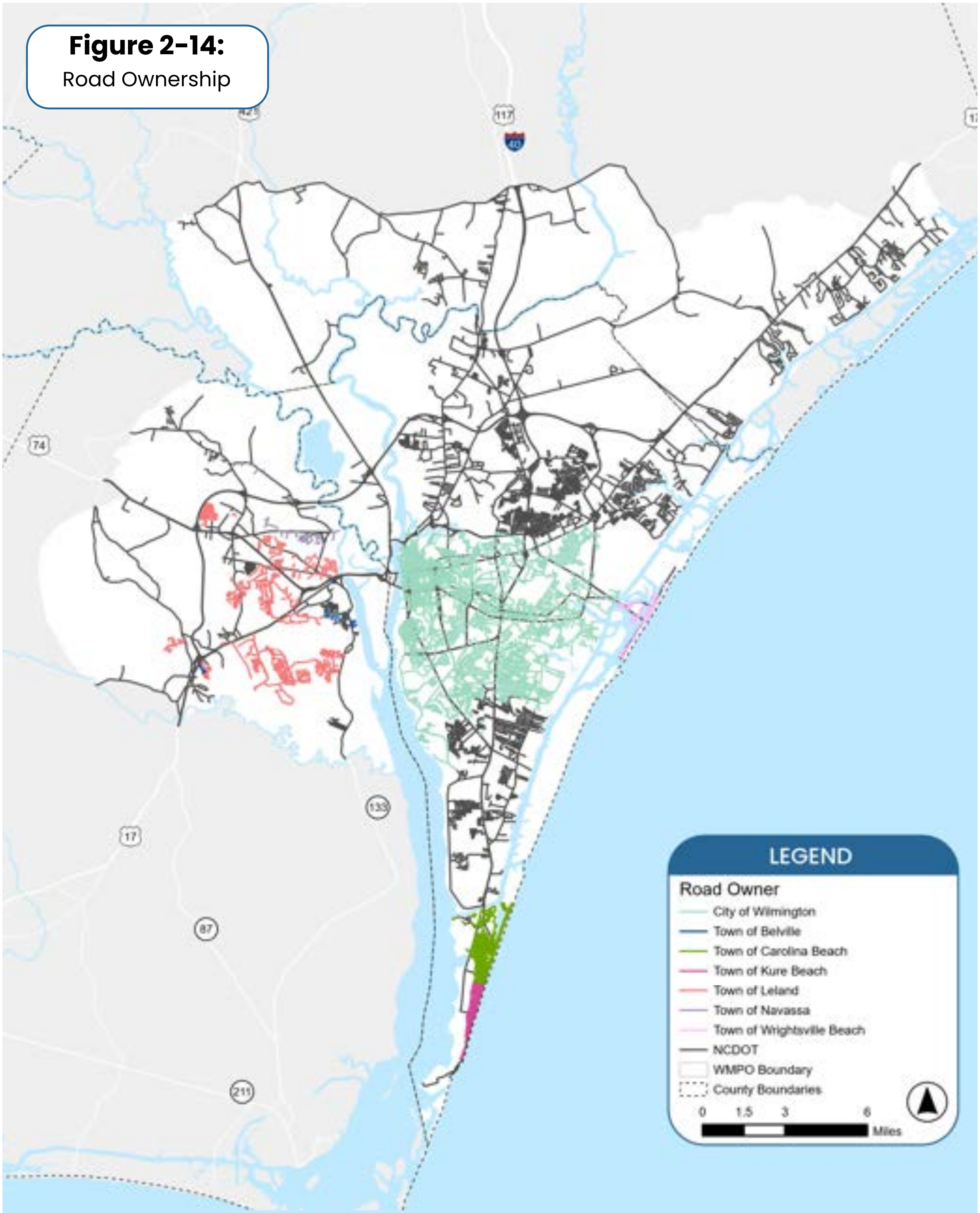
The region continues to experience rapid population growth, particularly in Brunswick and Pender counties, alongside steady expansion in residential and commercial development. The WMPO has worked with member jurisdictions in these rapidly growing areas to develop Collector Street Plans to guide the expansion of the roadway network to accommodate the greater demand. Additionally, recently adopted land use plans across the WMPO's planning area emphasize higher residential densities and mixed-use development in key areas, fostering conditions that support the operation of public transportation services. While presenting the potential for reducing vehicle miles traveled (VMT) by shifting travel demand needs, these land use recommendations also underscore the need for a connected and efficient roadway network.

Above: Navassa Collector Street Plan (2022). Right: Pender County Streets Plan (2021)



The roadway system in the Wilmington region relies on a combination of NCDOT and locally maintained roadways and faces unique geographic challenges that limit connectivity within the transportation network. Towns and counties are often separated by waterways such as the Cape Fear River and the Intracoastal Waterway, which create barriers to efficient travel and infrastructure expansion. To address these limitations, the region is prioritizing efforts to enhance mobility, modernize transportation assets, and implement strategic plans and programs to meet future needs. Additionally, the region is working to implement smart transportation technologies to optimize traffic flow and reduce congestion. The emergence of rapidly advancing autonomous vehicle (AV) technology confirms the need for a well-maintained roadway network as well as the potential for additional capacity. While full autonomy is still decades in the future, AVs will likely increase the efficiency and travel time reliability of vehicles on the roadway network.

Figure 2-14:
Road Ownership



Existing Roadway Infrastructure

Ownership of Local Roads

- 70% City of Wilmington
- 16% Town of Leland
- 7% Town of Carolina Beach
- 2% Town of Kure Beach
- 2% Town of Wrightsville Beach
- 1% Town of Navassa
- <1% Town of Belville

1,000 NCDOT Center-Line Miles

1,728 Local Center-Line Miles

247 Traffic Signals Operated by the City of Wilmington

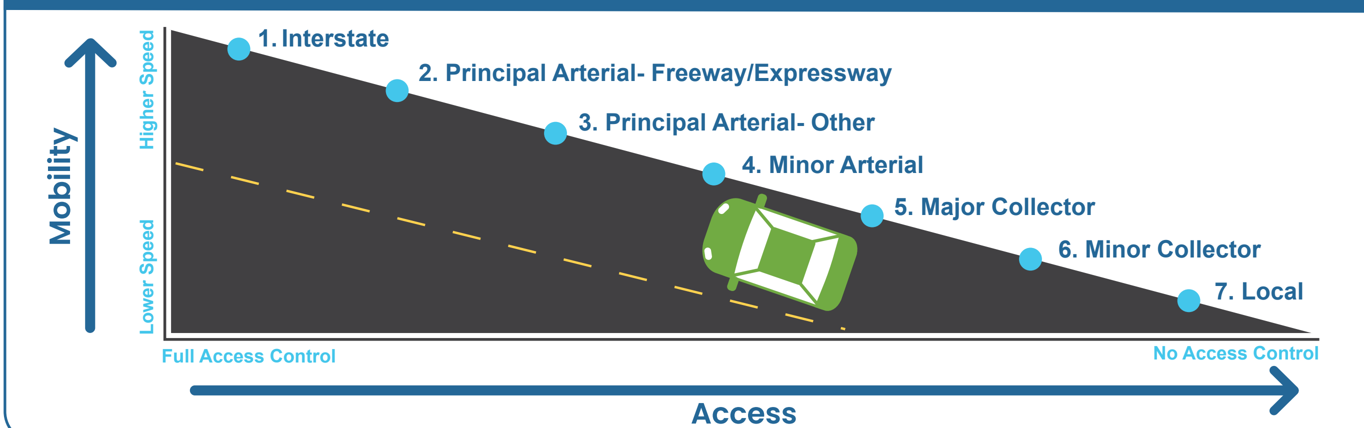
148 NCDOT Maintained Bridges

Cities and towns typically utilize property and sales tax revenues as well as Powell Bill funding for building and maintaining the local roadway network. A Capital Improvement Program (CIP) is developed by a local jurisdiction to prioritize project needs. The process for developing these plans varies for each jurisdiction. These localities also have the option of enacting and collecting a motor vehicle license fee or a bond referendum (by voter approval) to supplement typical capital revenue sources. In the WMPO region, the City of Wilmington and the Town of Leland have both implemented a motor vehicle license fee.

NCDOT is responsible for and maintains the second largest highway system in the country. US and NC routes make up nearly 81,000 miles of roadway, reaching every corner of the state. The Department's Asset Management Unit develops and implements a comprehensive strategy for keeping North Carolina's transportation system in a good working order, while making the most efficient use of taxpayer dollars. Examples of NCDOT's assets include highways, bridges, equipment, and rest areas. Maintenance investments comprise 27% of NCDOT's budget and includes resurfacing highways, bridge replacement, and paving unpaved secondary roads. Funds are programmed within the STIP and distributed across the state based on need.

Significant improvements, such as widenings and interchanges, on NCDOT-maintained roadways are programmed and funded through the State/MPO Transportation Improvement Program (State/MPO TIP). A roadway capital project's eligibility for State/MPO TIP funding is based on the roadway's federal functional classification. Functional classification is a system that organizes roadways based on the type of service they provide, ranging from major arterials that carry large volumes of traffic over long distances to local roads that primarily provide access to individual properties. Only roads designated in the Federal-aid Highway System, primarily arterials and collectors, are eligible for federal

Functional Classification



The WMPO began working on the review and update for the functional classification in early spring 2025. Changes to the region's functional classification will be accepted by FHWA by the end of 2025.

funding. The WMPO, through coordination with NCDOT, is responsible for reviewing and updating the regional roadway network's functional classifications after each decennial census.

The State/MPO TIP is a 10-year program of projects and funding that is updated every two years. The State/MPO TIP is developed through NCDOT's Prioritization Process, which is based on the 2013 Strategic Transportation Investments Law.

The law outlines a statewide funding plan for transportation investments, requiring NCDOT to develop a quantitative method to evaluate and prioritize transportation projects. The highest-scoring projects are programmed into the State/MPO TIP based on projected revenues. The WMPO works collaboratively with NCDOT during the Prioritization Process, submitting regional priority projects; developing a local input point methodology and assigning regional impact and division needs local input points; and adopting the WMPO's portion of the State TIP.

Strategic Transportation Investment Law Funding Tiers

40% of Funds — Statewide Mobility

Focus: Address significant congestion and bottlenecks

- Selection based on **100% data**
- Projects programmed prior to local input ranking

30% of Funds — Regional Impact

Focus: Improve connectivity within regions

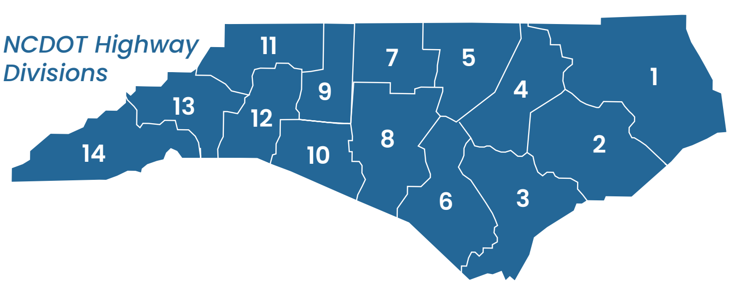
- Selection based on **70% data and 30% local input**
- Funding based on population within region

30% of Funds — Division Needs

Focus: Address local needs

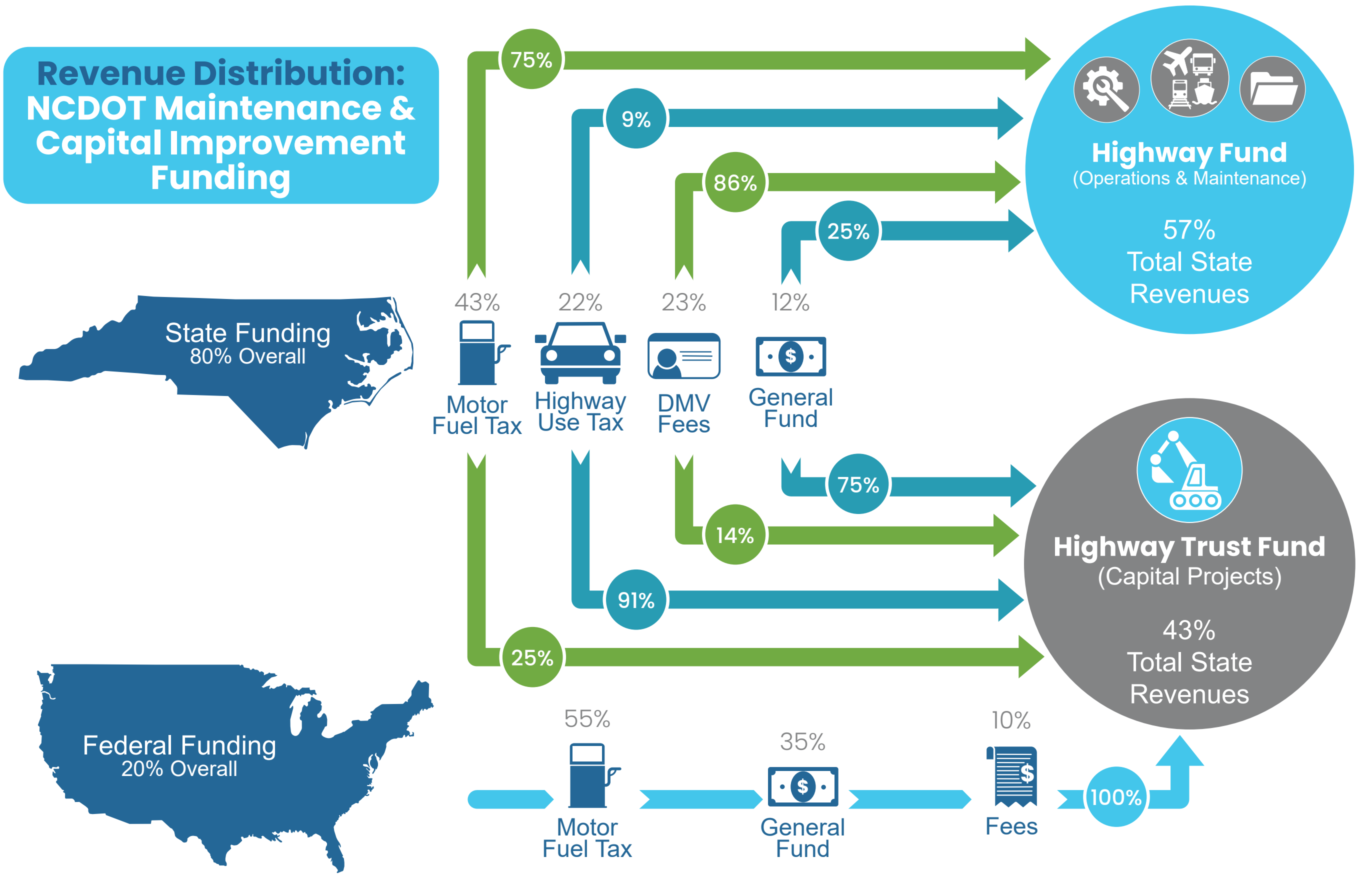
- Selection based on **50% data and 50% local input**
- Funding based on equal share for each NCDOT Division

NCDOT Highway Divisions



NCDOT has implemented specific vehicle registration for EVs. Starting in January 2024, plug-in hybrid vehicles will incur an additional $107.25 fee, while EVs will be charged $214.50, in addition to the standard vehicle registration fee.

The State/MPO TIP's projected revenues are sourced from Federal Funding and the State Highway Trust Fund. Both of these funding sources are dependent upon motor fuel taxes (federal and state), highway use taxes and fees, and general funds (federal and state).



Source: NCDOT, FY 2024-25

With the rise in vehicle fuel efficiency and the growing utilization of alternative fuel vehicles, gas tax revenues are anticipated to begin declining. Additionally, construction costs have grown exponentially during and since the Covid-19 pandemic. While a national trend, and North Carolina will need to identify new ways to compensate for this decrease in revenue. One potential solution could be a tax on vehicle miles traveled (VMT), which is anticipated to grow faster than gasoline consumption and continue to grow throughout the lifetime of this plan.

Recognizing stagnant revenues and increasing costs will impact the region's transportation initiatives prior to 2050, the WMPO Board has taken actions to confirm the region's top project priorities and created an Alternative Funding Subcommittee in 2025 tasked with pursuing alternative funding opportunities to advance these priorities. The WMPO has also continued to work closely with NCDOT and support their efforts to advance regional priorities. This has included coordination and cooperation on State/MPO TIP project schedules to ensure priority roadway projects, such as the Hampstead Bypass, have remained on schedule for delivery.

Alternative Funding Subcommittee meeting

The WMPO continues to support NCDOT in applications for several USDOT discretionary grant programs available through the 2021 Bipartisan Infrastructure Law (BIL) to secure funding for the replacement of the Cape Fear Memorial Bridge. The WMPO Board passed a resolution in February 2022 urging NCDOT to evaluate and consider all options for funding the replacement of the Cape Fear Memorial Bridge, to include traditional funding methods, the pursuit of discretionary grants, considerations for tolling, and Public-Private-Partnerships (P3). In July 2024, NCDOT was awarded a $242 million grant from the USDOT Bridge Investment Program (BIP), the largest federal discretionary grant award ever awarded to North Carolina. An additional $85 million in funding was programmed for the project in the 2026-2035 State/MPO Transportation Improvement Program that was adopted in July 2025. While a significant funding gap remains, the WMPO Board continues coordinated efforts to pursue all options for the remaining funding, including tolling.

WMPO Board's Project Priorities (2022-2026 Strategic Plan):

- Hampstead Bypass
- Military Cutoff Road at Eastwood Road Interchange
- Independence Blvd Extension
- Martin Luther King Jr Blvd at Kerr Ave Interchange
- Martin Luther King Jr Blvd at Market Street and Eastwood Road Interchange
- Cape Fear Memorial Bridge Replacement

With daily volumes on the region's existing roadway network increasing due to ongoing and anticipated population growth, the need to maximize the efficiency of the existing network is critical. In January 2025, the WMPO partnered with NCDOT to develop a Wilmington Regional Intelligent Transportation Systems (ITS) Deployment Plan to guide the implementation of Transportation Systems Management and Operations (TSMO) strategies throughout its planning area. Intelligent Transportation Systems apply technology and communications to improve the safety, efficiency, and monitoring of the existing roadway network. Examples of ITS include real-time vehicle and freight navigation, coordinated signal systems, and emergency management and evacuation planning. These systems can include a number of various TSMO and other strategies, including dynamic messaging signs to communicate real-time hazards or delays to drivers; emergency vehicle preemption; and freight-specific navigation. The Wilmington Regional ITS Plan will provide guidance to local and state stakeholders for implementing and investing in ITS technologies and strategies best suited for the unique needs of the region.

Left: Elected officials and other guests at the NCDOT press conference following the completion of the Cape Fear Memorial Bridge Preservation Project in 2024. Right: FHWA administrator Shailen Bhatt, center, announcing $242 million in federal funds towards the replacement of the Cape Fear Memorial Bridge; seated nearby are Wilmington Mayor Bill Saffo, left, and former NC Governor Roy Cooper, right. Source: NCDOT

See Appendix K for more on TSMO.

Economic Conditions

Tourism

Since 2021, the Cape Fear region has experienced steady and meaningful growth in travel and tourism. The most recent data available from 2023 shows continued increases in visitor spending, tourism-related employment, and state and local tax revenues across New Hanover, Pender, and Brunswick counties. While the industry began to recover in the years following the pandemic, recent trends reflect ongoing momentum and the region's strong appeal as a destination for recreation, culture, and coastal experiences. Tourism remains a major contributor to the local economy and community well-being.

Tourism in the WMPO Region (2023)

New Hanover County	Brunswick County	Pender County
$1.17 BILLION in visitor spending	**$1.12 BILLION** in visitor spending	**$199 MILLION** in visitor spending
7.5% INCREASE in visitor spending from 2022	**5.9% INCREASE** in visitor spending from 2022	**5% INCREASE** in visitor spending from 2022

Tourism supports:

- Jobs, including lodging, dining, recreation, and film
- Visitor facilities and the convention center in Wilmington
- Beach renourishment
- Ocean safety initiatives


Left: Live Oak Bank Pavilion in downtown Wilmington. Right: Wrightsville Beach. Photos courtesy Wilmington and Beaches CVB.

Industry

From 2021 to 2025, the greater Wilmington area experienced significant industrial and economic growth, supported by public-private investments, targeted incentive programs, and expanding infrastructure. New Hanover County played a central role with major developments like the Wilmington Trade Center, a Class-A industrial park along U.S. 421 that received over $3 million in public investment to unlock up to 3.2 million square feet of space, supporting an estimated 1,500 new jobs. In nearby Leland, the town advanced its first-ever economic incentive policy in 2023 to attract industries such as life sciences, advanced manufacturing, and renewable energy. These efforts were aimed at guiding future growth in strategic areas like Leland Innovation Park and the Gateway District. Industrial demand remained strong across the region, evidenced by speculative development in locations such as the Pender Commerce Park and Brunswick County's International Commerce Center. Several major employers expanded into the region, including Amazon with its first robotics fulfillment center, and FedUp Foods, a national beverage manufacturer that opened a Wilmington facility in 2025. Technology firms like Protocase/45Drives also established operations in the region, while GE Vernova invested over $50 million in upgrades to its local nuclear fuel plant.

Top Industries

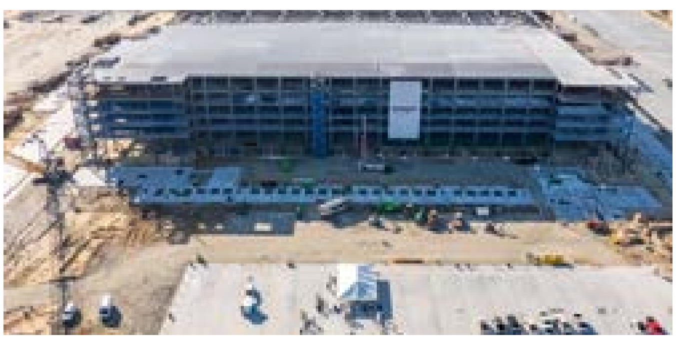
WMPO Counties

Management & Business
Including management, education, and finance occupations.

Sales & Office
Including sales, office, and administrative support occupations.

Service
Including food, cleaning, healthcare, and law enforcement occupations.

Economic development also extended to workforce initiatives. New Hanover County adopted a five-year strategic plan focused on increasing wages, maintaining low unemployment, and investing in infrastructure with measurable returns. Cape Fear Community College expanded its allied health training capacity, while local partners secured funding to grow workforce pipelines in health care and the film industry. Overall, the Wilmington area emerged as a hub for industrial innovation, logistics, and advanced manufacturing, while leveraging regional coordination and investment tools to promote long-term, inclusive economic growth.

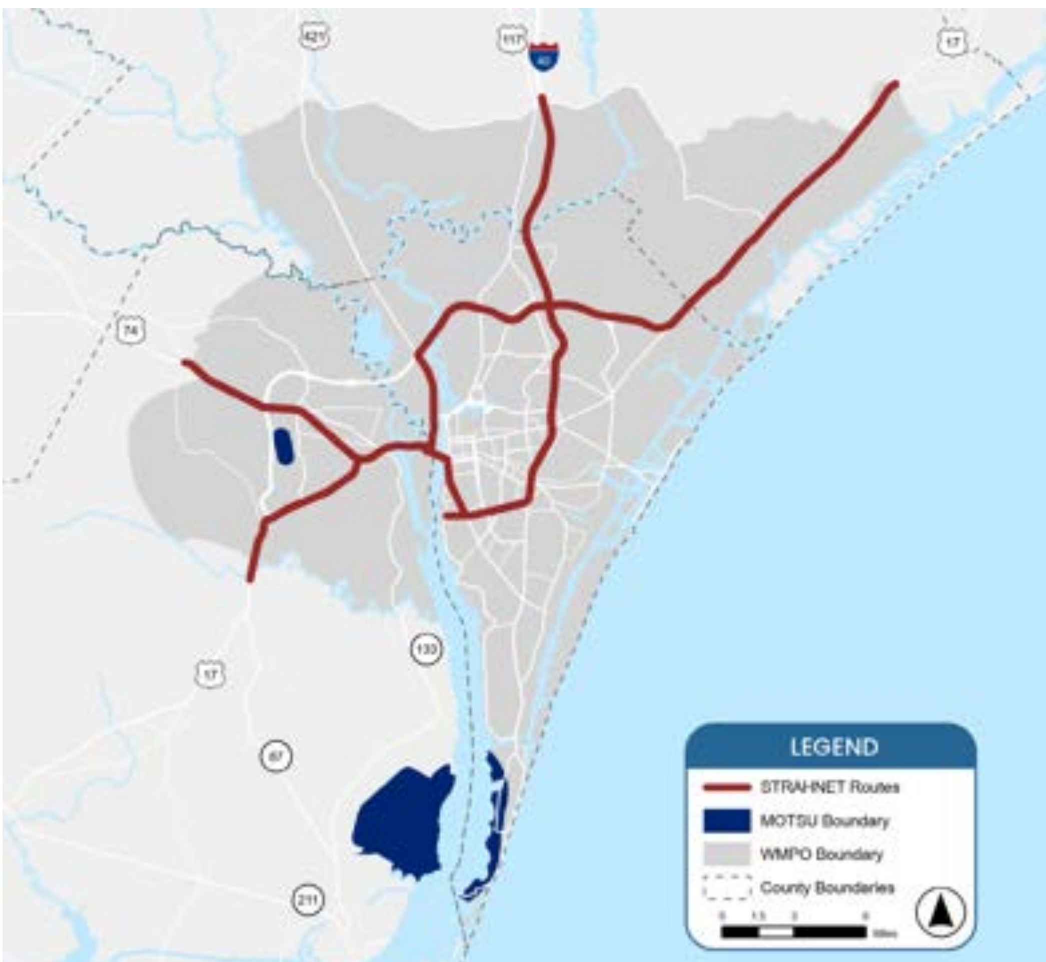



Clockwise from top left: Amazon robotics fulfillment center at Pender Commerce Park, photo by WECT; Leland Innovation Park, photo by Town of Leland; GE-Hitachi in New Hanover County, photo by WHQR; FedUp Foods in Wilmington, photo by FedUp Foods

Military

Wilmington serves as a key logistical hub supporting state and national military operations through its strategic transportation infrastructure. Just south of the WMPO planning area in Brunswick County lies Military Ocean Terminal Sunny Point (MOTSU), one of the most critical defense shipping facilities in the country. Operated by the U.S. Army and managed by the 596th Transportation Brigade, MOTSU spans more than 16,000 acres and includes three deepwater berths, over 60 miles of internal rail, and secure access to road and rail networks. The facility is exclusively used for the transport of arms, ammunition, and explosives, playing a vital role in supporting military missions worldwide, including contingency and humanitarian operations.

Complementing the maritime capabilities of MOTSU, the region is integrated into the Strategic Highway Network (STRAHNET), a federally designated system of highways essential for moving military equipment and personnel. STRAHNET routes in southeastern North Carolina connect MOTSU and other defense-supportive facilities to inland military bases and national deployment corridors. Although Wilmington itself does not host an active-duty military installation, its transportation infrastructure plays a crucial supporting role by enabling secure and efficient multimodal movement for military logistics across the state and the nation. A 2020 United State Department of Transportation (USDOT) and Department of Defense (DoD) Power Projection Platform (PPP) Route Study evaluating the 5,000-mile Fort Bragg–Port of Wilmington STRAHNET corridor further emphasized this role, identifying key infrastructure needs to maintain rapid deployment readiness along the route.



STRAHNET routes and military bases in the WMPO region.

The Port of Wilmington

The North Carolin State Port's Authority's (NCSPA) Port of Wilmington is North Carolina's primary deepwater port for all types of cargo, including container, bulk, breakbulk, and roll on roll off shipments, serving both local and global markets. The Port of Wilmington is designated as a Foreign Trade Zone 214, along with Wilmington International Airport (ILM). Primary Highway Freight System (PHFS) routes, North Carolina Priority Highway Freight Network (NCPHFN) routes, Critical Rural Freight Corridors (CRFCs), Critical Urban Freight Corridors (CUFCs), and local truck routes are all found adjacent to the Port of Wilmington and are heavily utilized by freight traffic. The Port of Wilmington is one of 15 Strategic Seaports as designated by the U.S. Department of Defense, and as such must maintain the capability and capacity to meet the national security needs of the nation. This role is critical to Army and Marine Corps Power Projection Platforms (PPPs), which facilitate the rapid, strategic deployment of troops and equipment to assist in various domestic or global crises.

It has nine active berths and approximately 6,800 feet of wharf space along a 42-foot-deep channel to accommodate large ships, whether they're for containers, bulk, breakbulk, or roll on roll off cargo. The container terminal has seven ship-to-shore cranes, including post-Panamax and neo-Panamax models, with productivity rates of over 40 moves per hour and quick vessel turnaround times. Specialized berths support roll on roll off operations for vehicles and equipment, while multipurpose cranes handle heavy lifting and project cargo right next to the quay. The Port of Wilmington has also been expanding its cold chain cargo capabilities by adding more refrigerated container plugs and nearby storage locations to support growing volumes of temperature sensitive cargos.

Clockwise from top left: Cranes at the Port of Wilmington, photo by NC Ports; Port of Wilmington, photo by NC Ports; Container ship docked at the Port, photo by WECT; Cold storage facility in Port of Wilmington, photo by Port City Daily

See Appendix H for more information on the Port of Wilmington.

The Port of Wilmington currently maintains a competitive edge over its neighboring facilities in terms of efficiency. One measure of this efficiency is the average truck turn times. A truck turn is the amount of time it takes for a freight truck to enter the facility, conduct its business, and leave the port. The average single and double (import/export) truck turns at the Port of Wilmington are 20 minutes and 30 minutes, respectively, which is several minutes less than Norfolk, Charleston, and Savannah. Container throughput has also continued to steadily grow, surpassing 320,000 TEUs by the end of fiscal year 2021 and increasing by an average rate of seven percent annually through fiscal year 2023. General cargo, including bulk and breakbulk, climbed from 2.8 million short tons in 2020 to nearly 4.6 million short tons by 2023. Investments in channel deepening and berth enhancements continue to position the Port of Wilmington to handle larger vessels and an increasingly diverse cargo portfolio. The NCSPA also received nearly $11 million from the USDOT to support the relocation of the North Gate, easing congestion on residential streets and providing trucks an entrance closer to the Cape Fear Memorial Bridge. Other ongoing improvements to the Port of Wilmington include a new intermodal rail yard that will provide four new working tracks totaling 5,000 linear feet. This facility will help divert more than 250,000 container boxes from trucks to rail over the next decade and will expand intermodal rail capacity to more than 50,000 container movements by rail annually. A separate rail storage project will also add 6,000 feet of track near the new North Gate entrance for increased storage capacity. These investments align with the NCSPA's goal to provide safe and efficient access to the Port of Wilmington to enable continued port growth.

The rapid growth and successes of North Carolina Ports has also spurred positive economic and jobs growth. The NCSPA's 2021 Economic Contribution Study reported that North Carolina Ports contribute an estimated $16.1 billion in economic output, including 88,200 jobs and $660 million in local and state tax revenue.

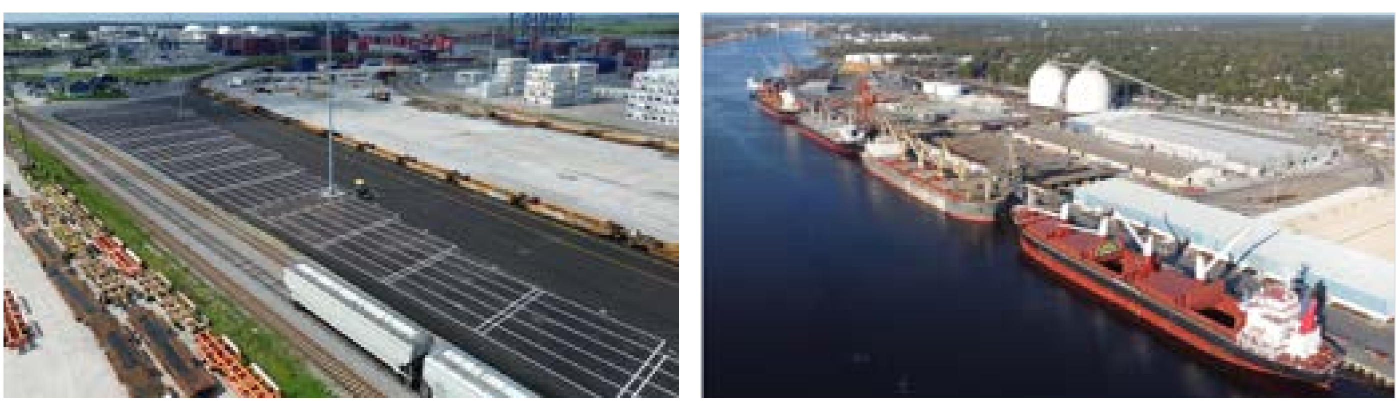
Port of Wilmington Top Imports and Exports

Top Imports

- Lumber
- Produce
- Textiles
- Furniture
- Machinery

Top Exports

- Pork
- Chemicals
- Paper
- Poultry
- Produce
- Lumber



Left: Intermodal Rail Yard courtesy NC Ports. Right: General cargo terminal courtesy NC Ports.

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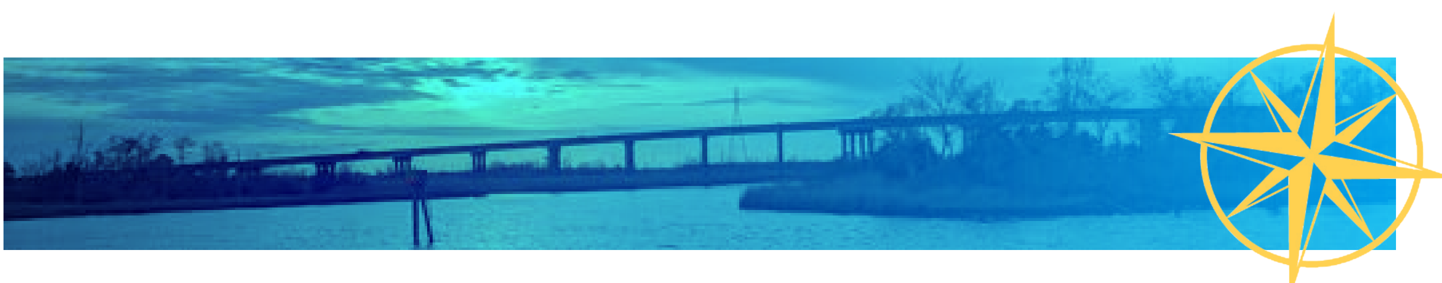

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