



# STATE OF THE REGION

DECEMBER 2016





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## INTRODUCTION

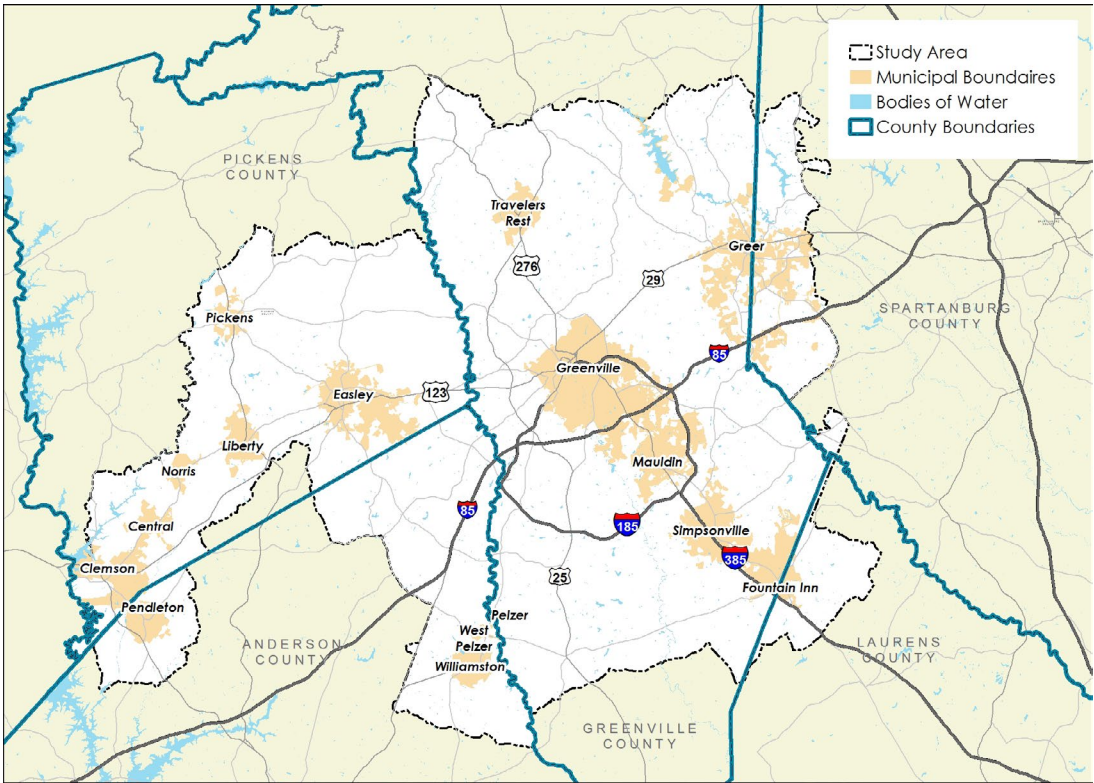
Transportation is not only a critical component of our daily life, but it also represents a crucial part of a region's social fabric and man-made infrastructure. Residents rely on transportation to access education, health care, and jobs, while cities and industries rely on a functioning system to keep the region moving. The Horizon 2040 Long-Range Transportation Plan (LRTP), sponsored by the Greenville-Pickens Area Transportation Study (GPATS), defines the Upstate community's strategy for creating a regional transportation system that accommodates the current mobility needs of residents and looks to the future to anticipate where new needs may arise.

## STATE OF THE REGION

The Horizon 2040 State of the Region highlights and assesses demographics, economics, and transportation elements in the GPATS study area. The report also includes a review of previous plans, policies, and regulations that are related to the future growth and transportation of communities in the Upstate. The existing conditions highlighted in this report will inform the creation of regional transportation strategies as the planning process advances.

## STUDY AREA

The GPATS study area is approximately 900 square miles and incorporates parts of Greenville, Pickens, Anderson, Laurens and Spartanburg Counties in Upstate South Carolina. It contains 16 municipalities and is home to more than 500,000 people. In 2013, the study area expanded its boundaries, incorporating the communities of Central, Clemson, Norris, Pelzer, Pendleton, West Pelzer, and Williamston.





# PEOPLE

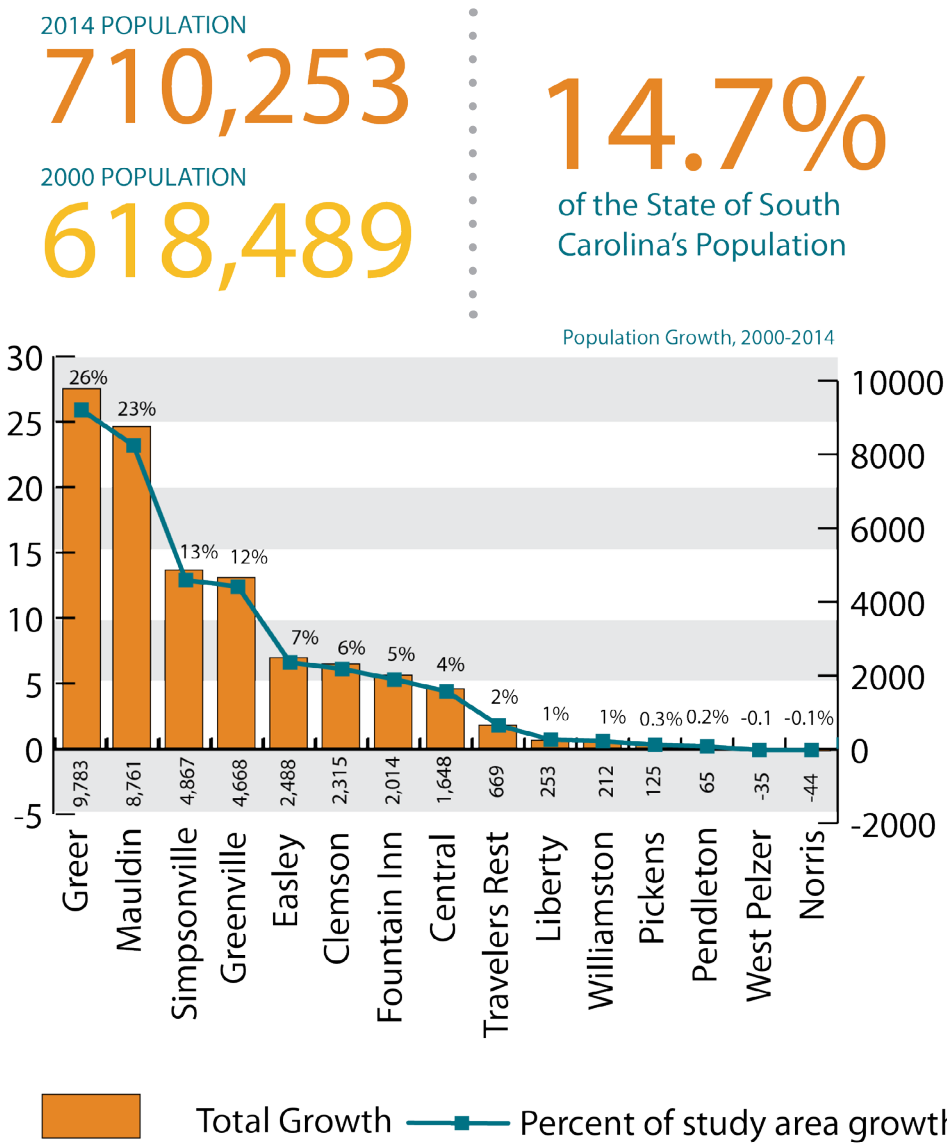
Community members use the transportation system every day to connect to education, jobs, cultural resources, recreational activities, and more. Making sure population trends are reflected in the transportation plan allows the system to adjust to anticipated changes and accommodate future demand and different lifestyles.



POPULATION TRENDS

POPULATION GROWTH

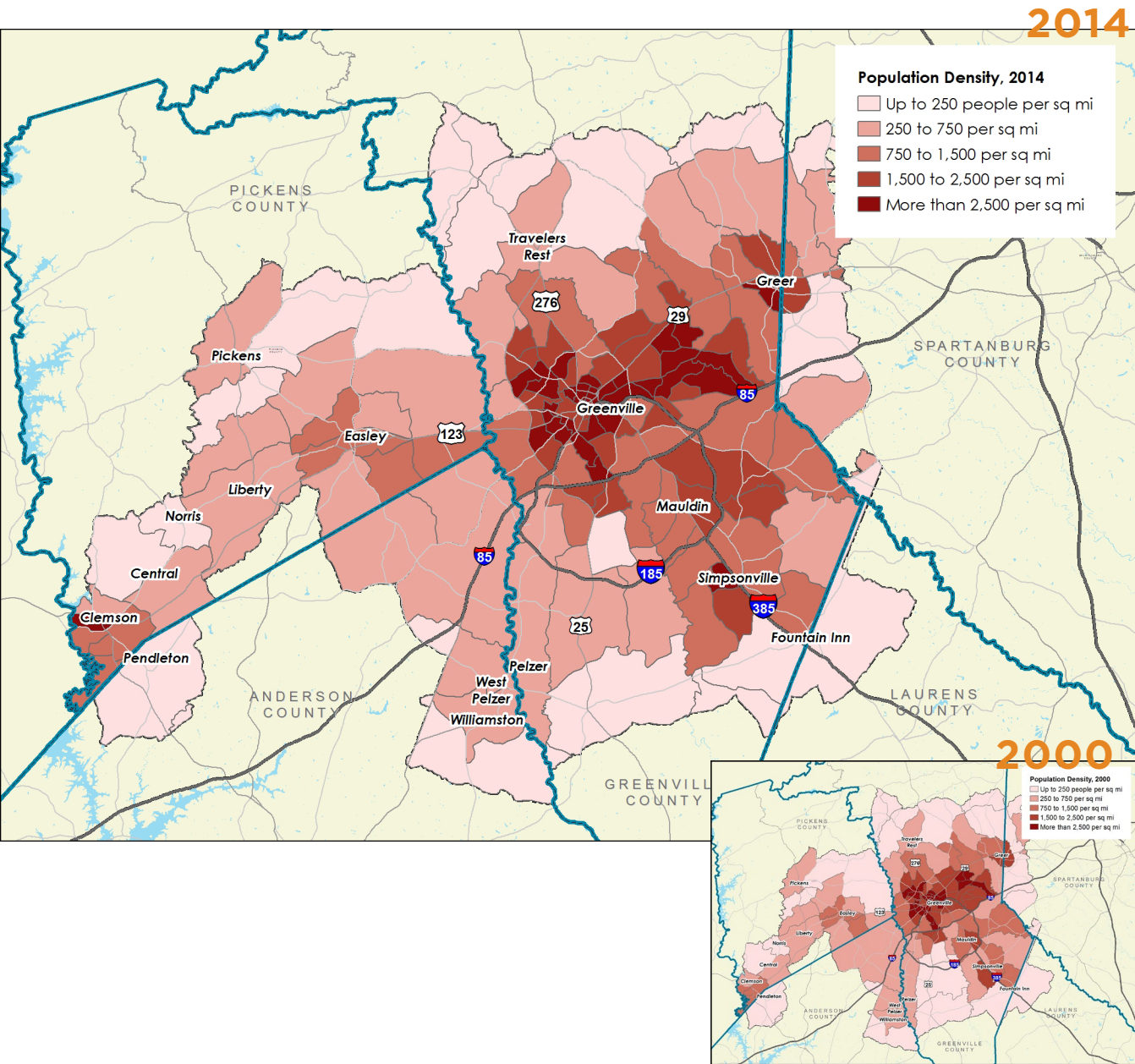
With an increase of nearly 92,000 people between 2000 and 2014, the Upstate grew approximately 15% during that time period. While slightly less than the state's growth rate of 20% during that time period, this influx of people has affected the transportation network. This growth was not evenly distributed across the study area, with the cities of Greer and Mauldin both experiencing more than a 50% population increase from 2000 to 2014. West Pelzer and Norris saw their populations decline. Greer added the most people overall, with an increase of 9,783 (a 58% increase.) In addition, the GPATS area's minority population increased faster than the white population, at 23% growth compared to 13%.





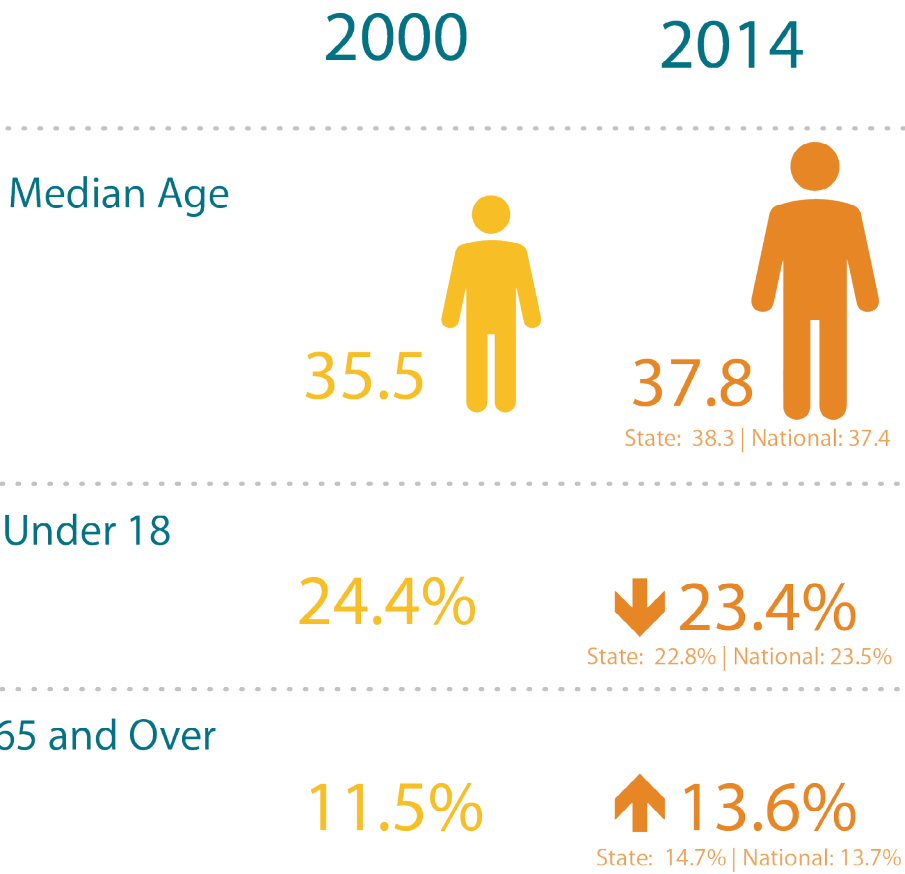
POPULATION DENSITY

Population density varies greatly throughout the study area, from a high of more than 6,200 people per square mile in Greenville near Bob Jones University to just over 17 people per square mile on the northern edge of the GPATS area near Travelers Rest. The densest areas of the region surround downtown Greenville, Greer, and Clemson, where the built environment takes on a more urban development pattern. Rural, undeveloped areas around the edges of the study area are predictably those that are unincorporated and lack most urban services.



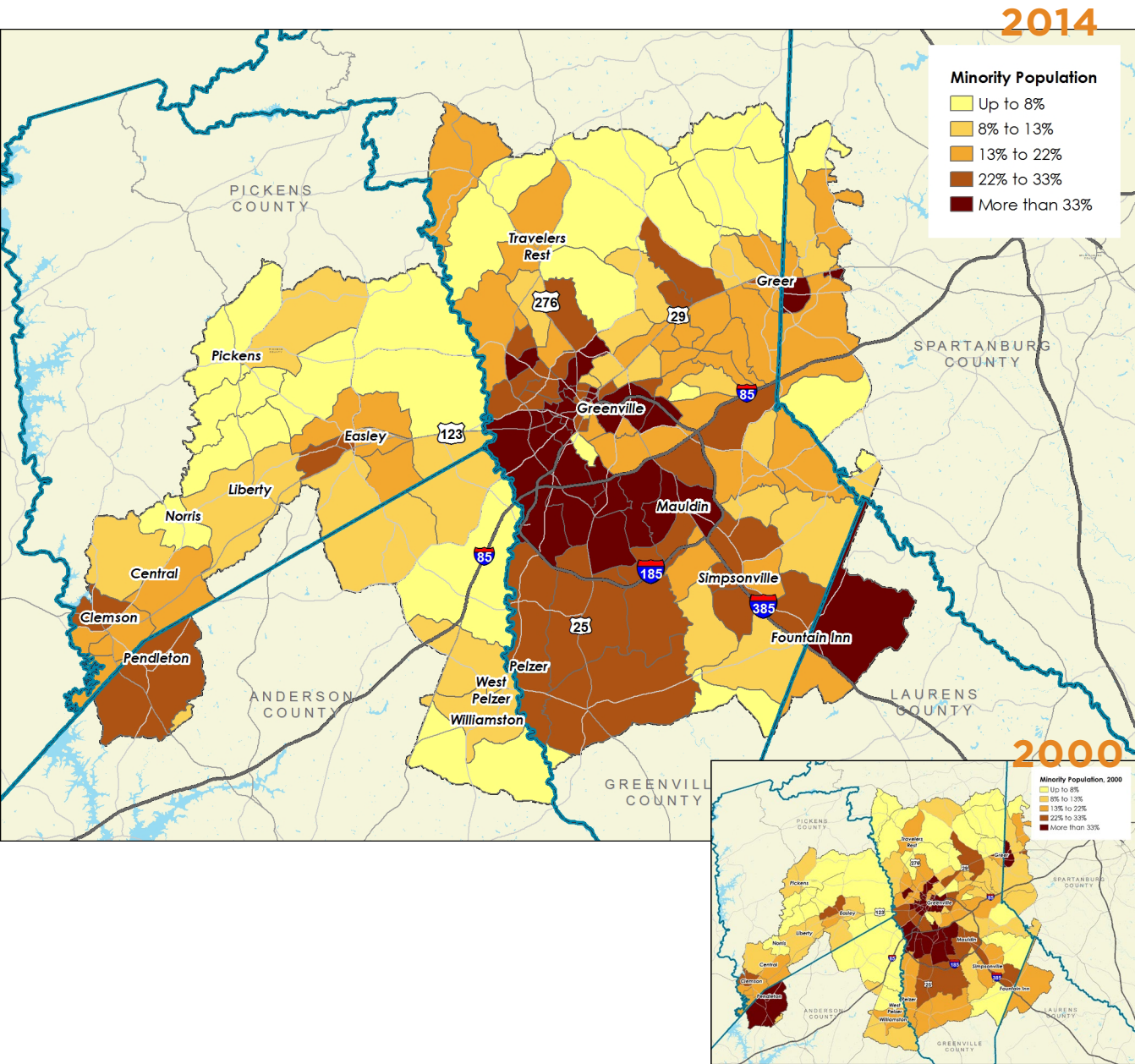
AGING POPULATION

Reflecting state and national trends, the GPATS community is aging. The study area's median age has increased from 35.5 in 2000 to 37.8 in 2014, reflecting an increased proportion of the population that is now retirement age or older. While the study area's population distribution is largely in balance with South Carolina and the United States as a whole, aging communities always present significant mobility challenges in comparison with younger populations. Nearly 75% of older persons across the nation live in areas that require a high-level of vehicular dependency, which requires the transportation system to be responsive to the needs of older residents, particularly if residents choose to age in place. Maintaining the flexibility and foresight to accommodate a variety of lifestyles and ensuring that viable multimodal options exist for residents will be extremely important moving forward.



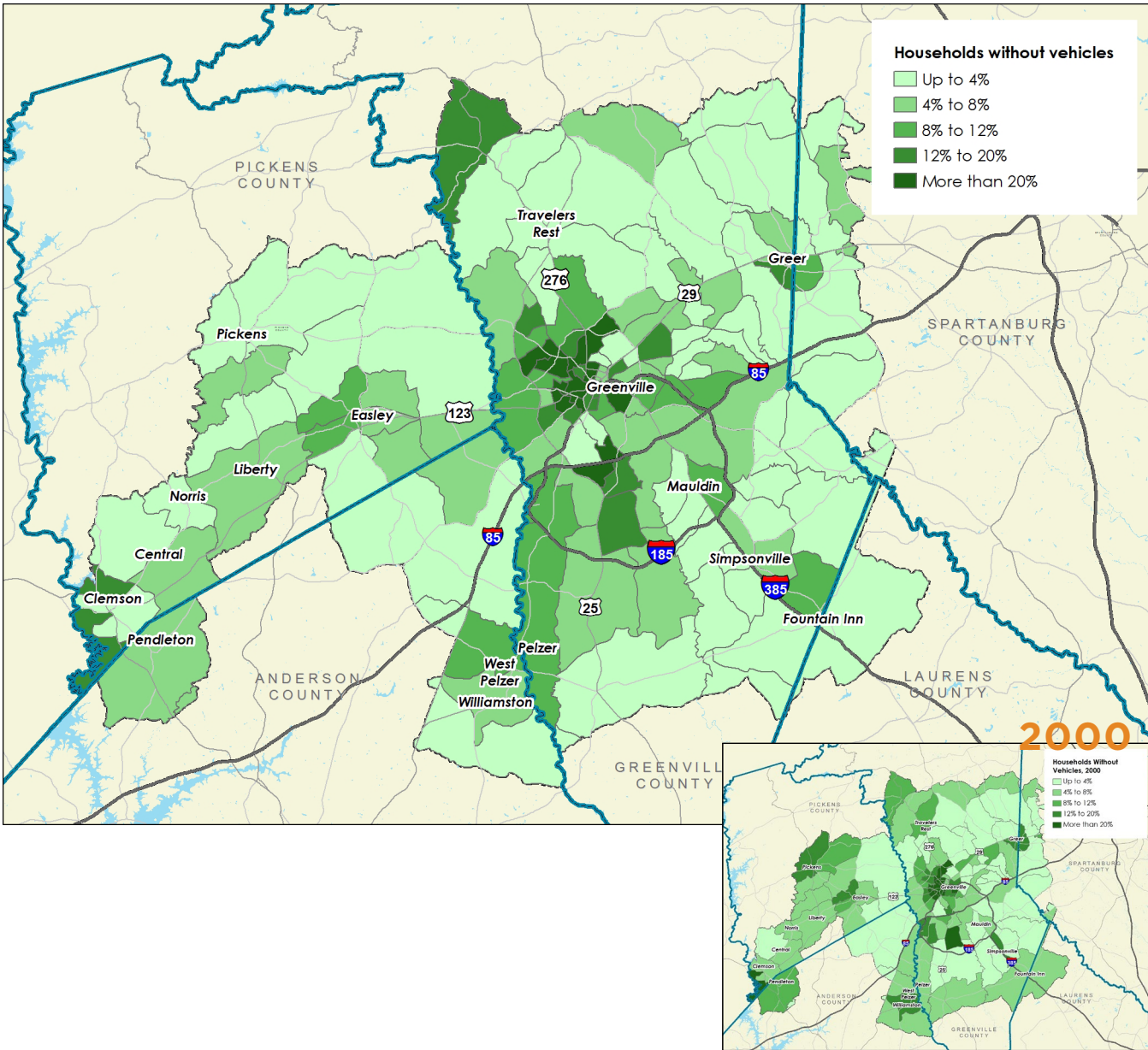
MINORITY POPULATION

The GPATS study area is growing increasingly more diverse. In 2014, approximately 23% of the region’s population was from a minority group, defined as any race or ethnicity besides “white alone” in the U.S. Census. This represents an increase from 19% in 2000. The minority population is not evenly distributed throughout the area, with heavy concentrations centered to the south of Greenville and in the Laurens County section of the study area.



HOUSEHOLDS WITHOUT A VEHICLE

Approximately 20% of households in the GPATS study area do not have vehicles available to them. These households tend to be clustered around Greenville, in the center of the metro area, with other concentrations near Clemson University and the far northern edge of the study area. It is important to know the location of these households to provide adequate services, as these households are more likely to rely on walking, biking, and public transit as their primary means of transportation.





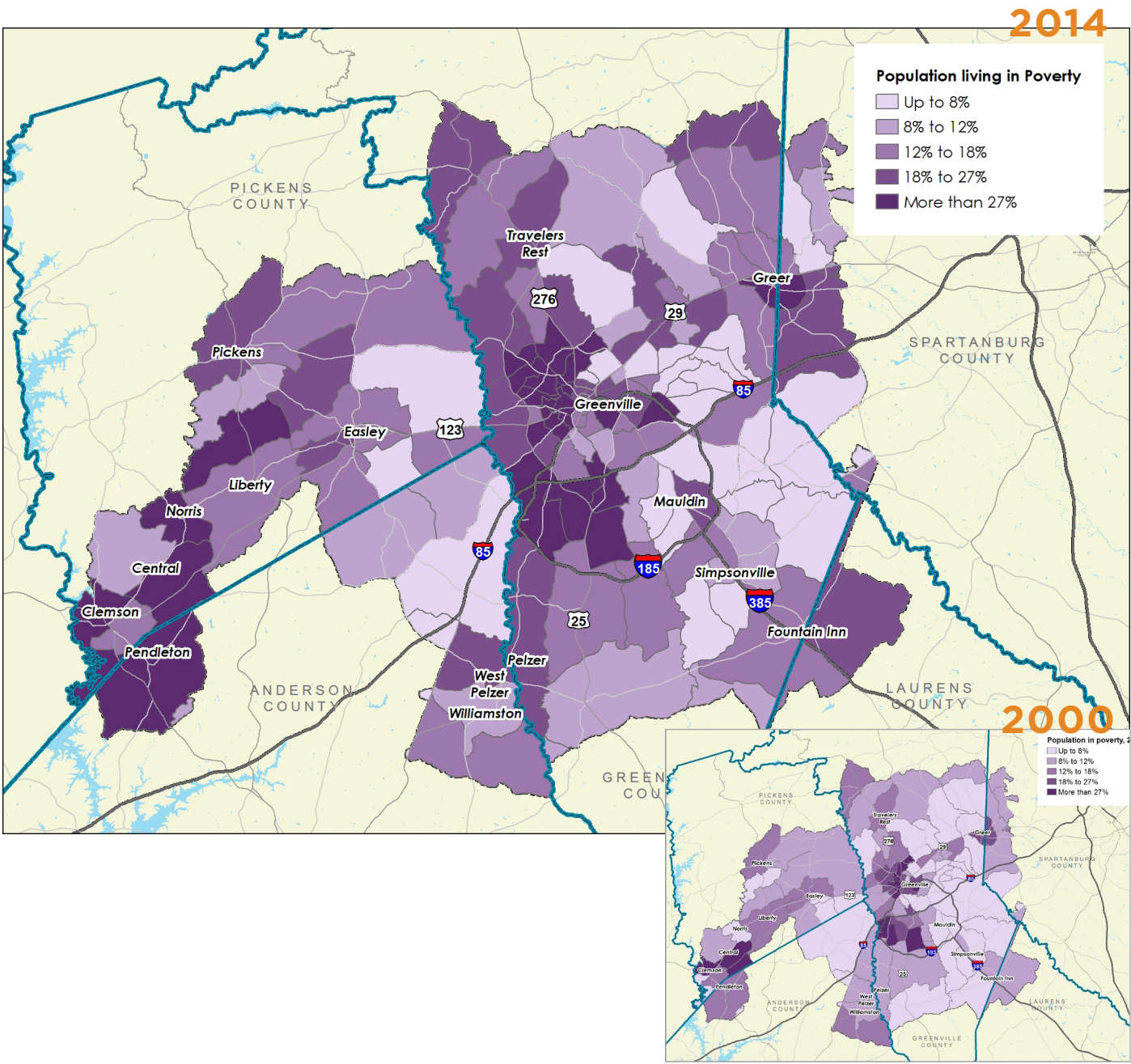


Transportation provides a foundation for the development of communities by providing access to employment, thereby providing a stepping stone for economic growth. Taking a closer look at employment hubs within the region allows for a better understanding of opportunities for multimodal connections.



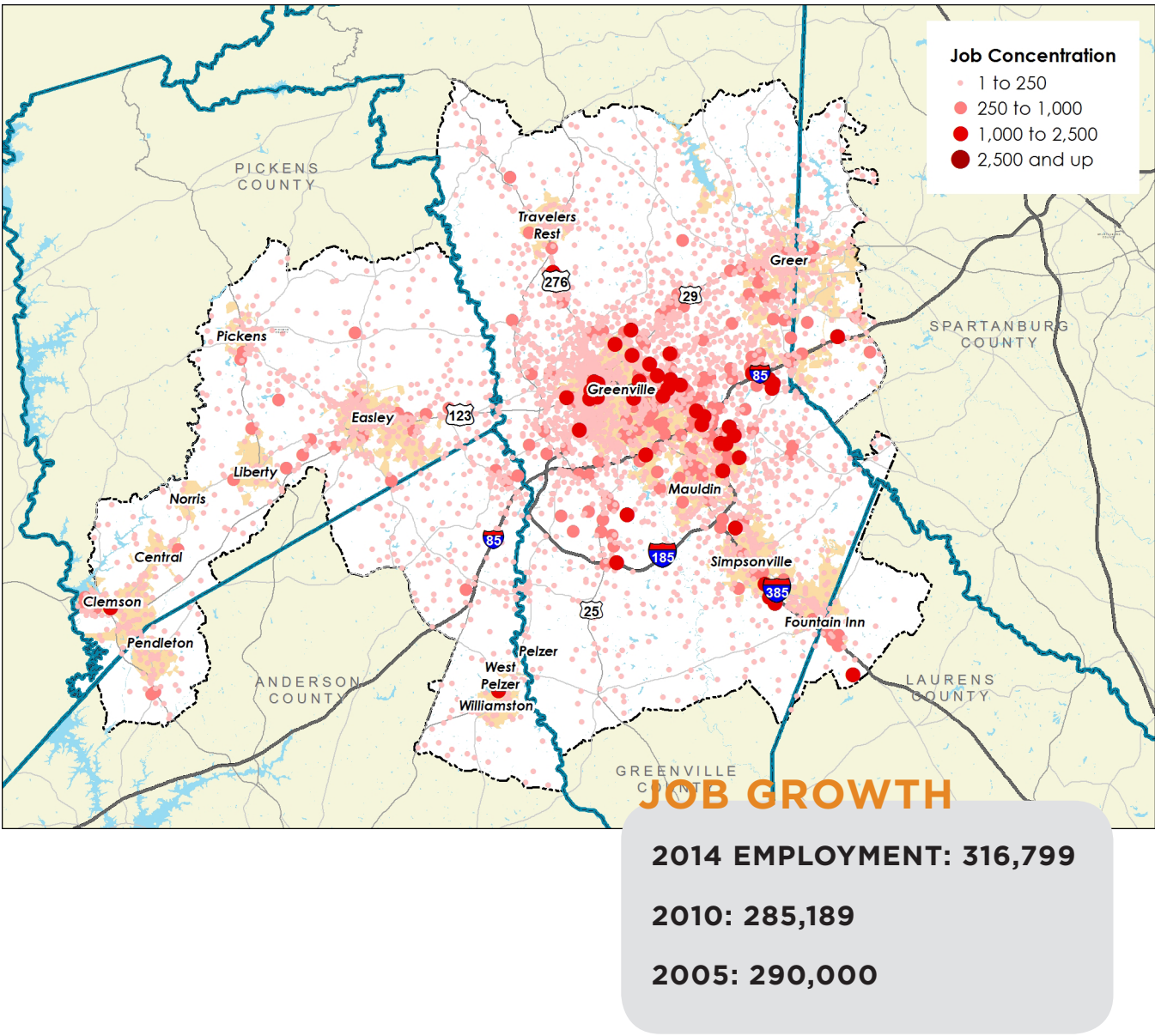
POVERTY

In 2014, 16.6% of the study area's population was living below the poverty line. This represents a 50% increase from 2000, when only 11% of the population was living in poverty. Poverty has especially increased in the areas surrounding the City of Greenville and in the far west in the areas around Norris, Central, and Pendleton. The highest levels of poverty can be found bordering Lake Hartwell between Clemson and Pendleton (76%). This area also saw the greatest increase in poverty between 2000 and 2014.



EMPLOYMENT

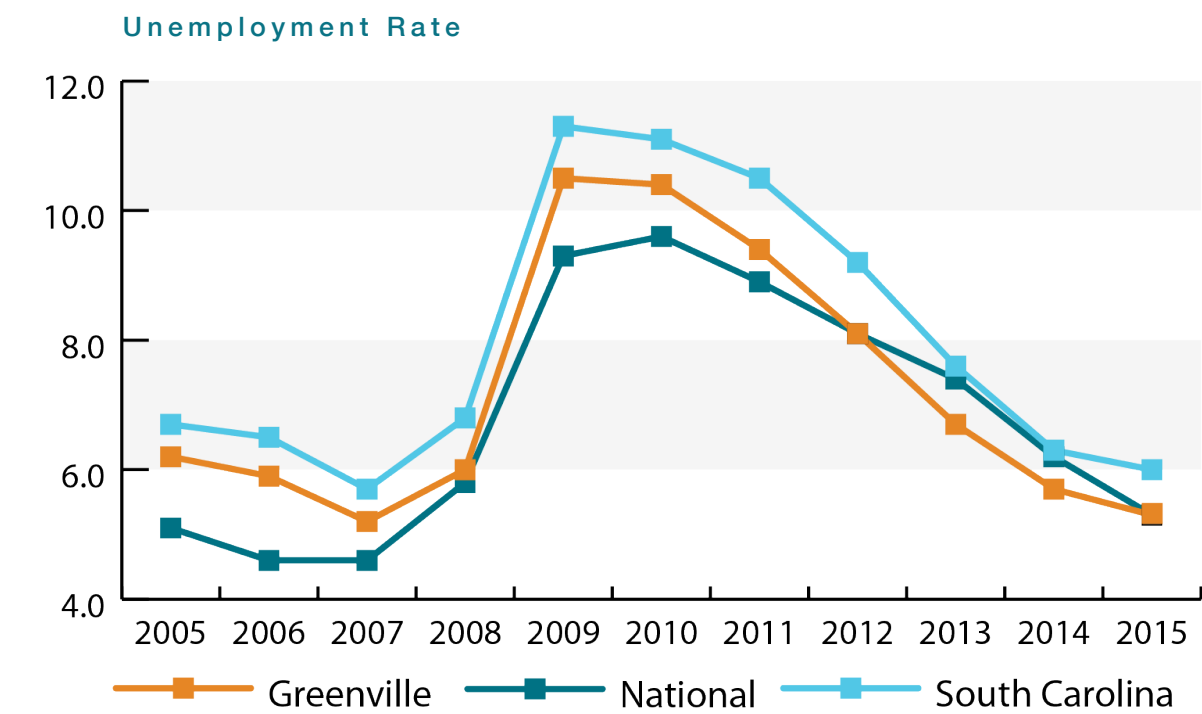
Though the GPATS study area represents only 14.7% of the state's population, it hosts 16.7% of the state's jobs — a proportion that has increased during the past decade. Employment in the area has followed national trends during the past decade, decreasing during the recession and steadily increasing since 2010. Though jobs are located throughout the study area, the heaviest employment concentration is located near Greenville surrounding the I-385 corridor.





UNEMPLOYMENT

Over the past decade, the rise and fall of the Greenville metro area’s local unemployment rate has generally followed state and national trends. The local unemployment rate has remained below the state's, peaking at 10.5% in 2009 compared to a statewide unemployment rate of 11.3% in the same year. However, unemployment was above the national average until 2012. In 2015, the local unemployment rate of 5.3% was equal to the national unemployment rate.



ECONOMIC DRIVERS

According to U.S. Census Bureau data, the area’s top industry sectors are manufacturing, administration and support, health care & social assistance, and retail. Together, these four industries account for 49.6% of the employment in the study area. Of these industries, administration and health care have increased their share of local employment since 2004, while manufacturing and retail have each decreased.

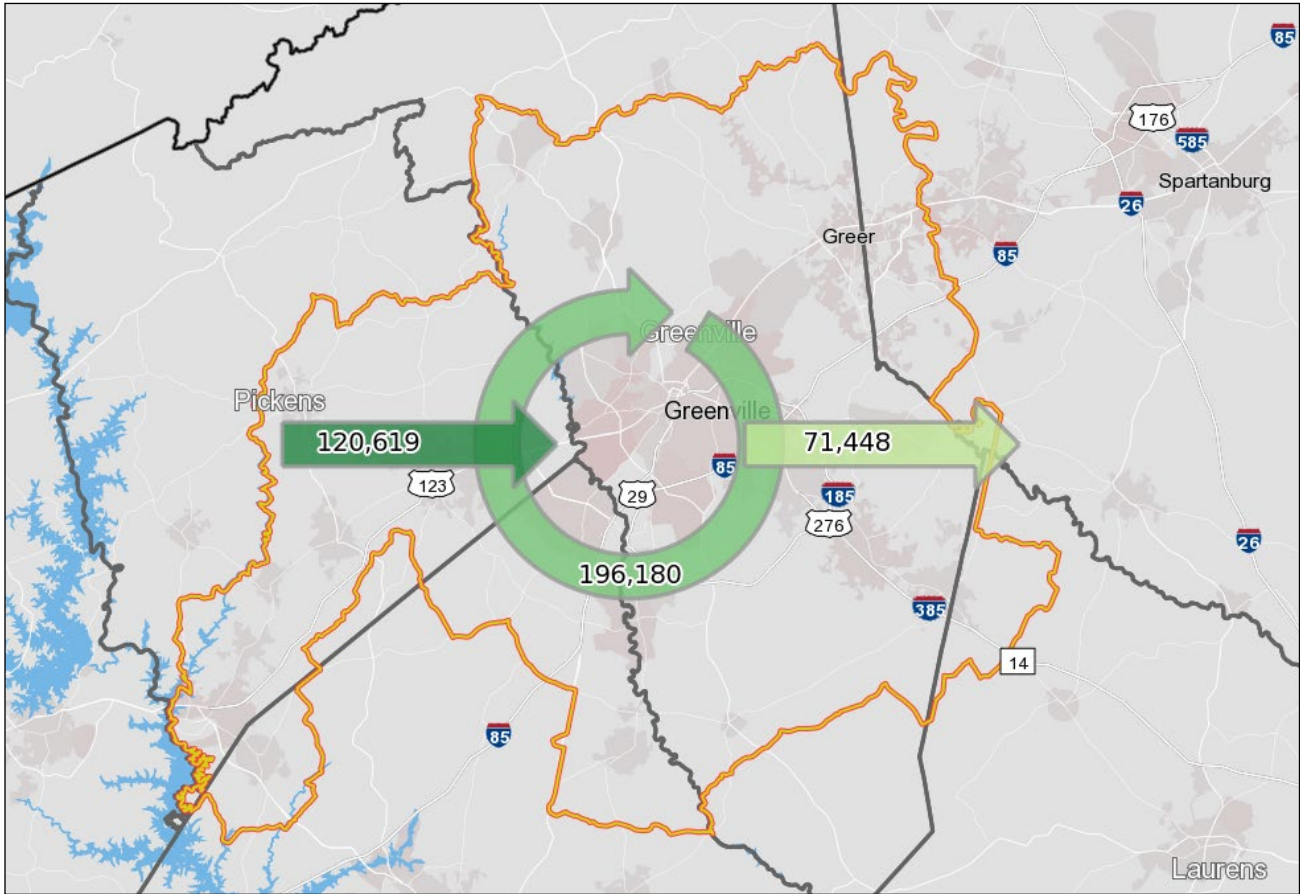
Top 5 Industries	2004 (Employees)	2014 (Employees)
Manufacturing	51,036 (18.2%)	44,768 (14.1%)
Administration & Support	25,286 (9.0%)	37,908 (12.0%)
Health Care & Social Assistance	25,959 (9.2%)	37,629 (11.9%)
Retail Trade	35,120 (12.5%)	36,658 (11.6%)
Educational Services	24,877 (8.9%)	28,949 (9.1%)

Major Employers	Location	Employees
Greenville Health System	Greenville	14,931
State of South Carolina	Upstate Combined	11,836
Greenville County Schools	Greenville	9,550
BMW Manufacturing Corp.	Greer	8,000
Michelin North America	Greenville	7,120
Bi-LO, LLC	Greenville	4,600
BonSecours St. Francis Health System	Greenville	3,985
Clemson University	Clemson	3,814
Duke Energy	Greenville	3,300
GE Power & Water	Greenville	3,200

Source: Upstate SC Alliance, 2016

COMMUTING PATTERNS

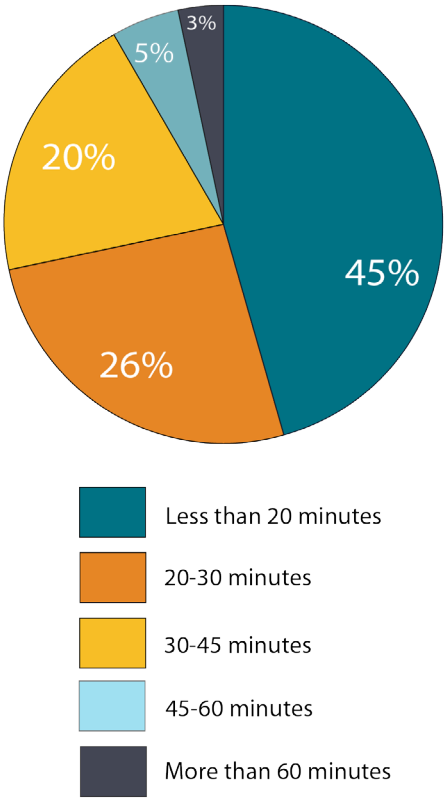
Of the 316,799 jobs hosted within the study area in 2014, 62% of them were filled by residents who also lived within the study area (196,000). Approximately 120,000 commuters travel into the area from outside the area to work in the region — a total of 38% of the daily workforce. Of residents who live within the study area, 73% are also employed in the area, with 27% commuting outside. This makes for a total outflow of approximately 71,000 residents leaving the area every day for employment. These numbers suggest the Upstate is a regional employment center, drawing workers from nearby areas with employment opportunities. Future transportation improvements should take into account the commuters who travel along the region's main commuting corridors daily.



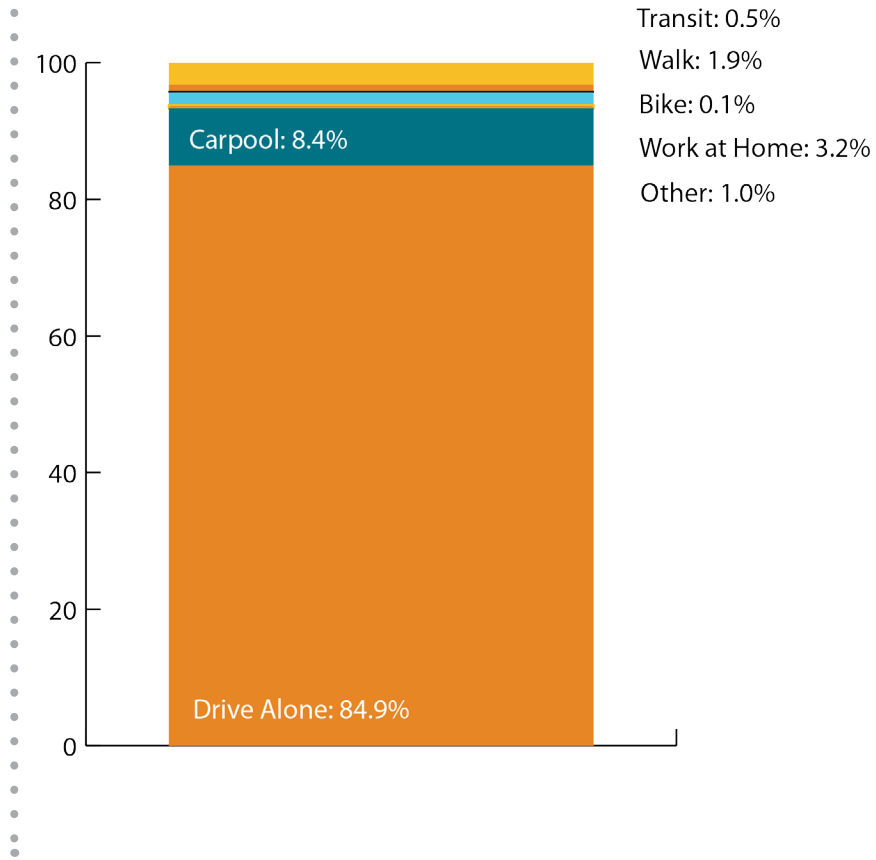
GETTING TO WORK

Residents of the Upstate typically choose to commute by driving alone, doing so at a higher rate than the state or national averages. Currently, very few commuters take advantage of alternative commute options, such as walking, biking, or public transit. However, 45% of Upstate workers currently have less than a 20-minute commute to work, indicating a good balance between home and work locations.

Travel Time to Work



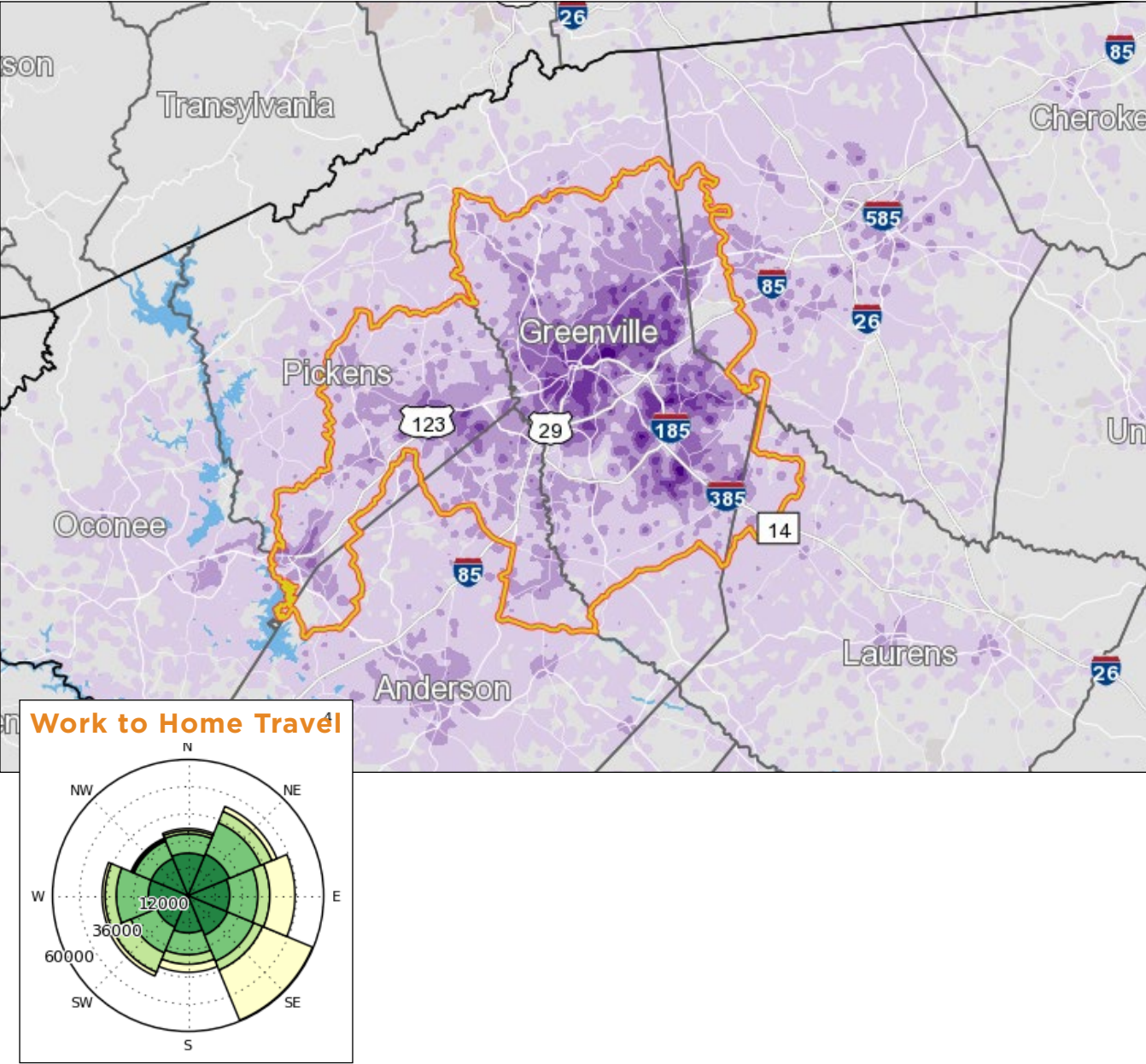
Commute Mode Share





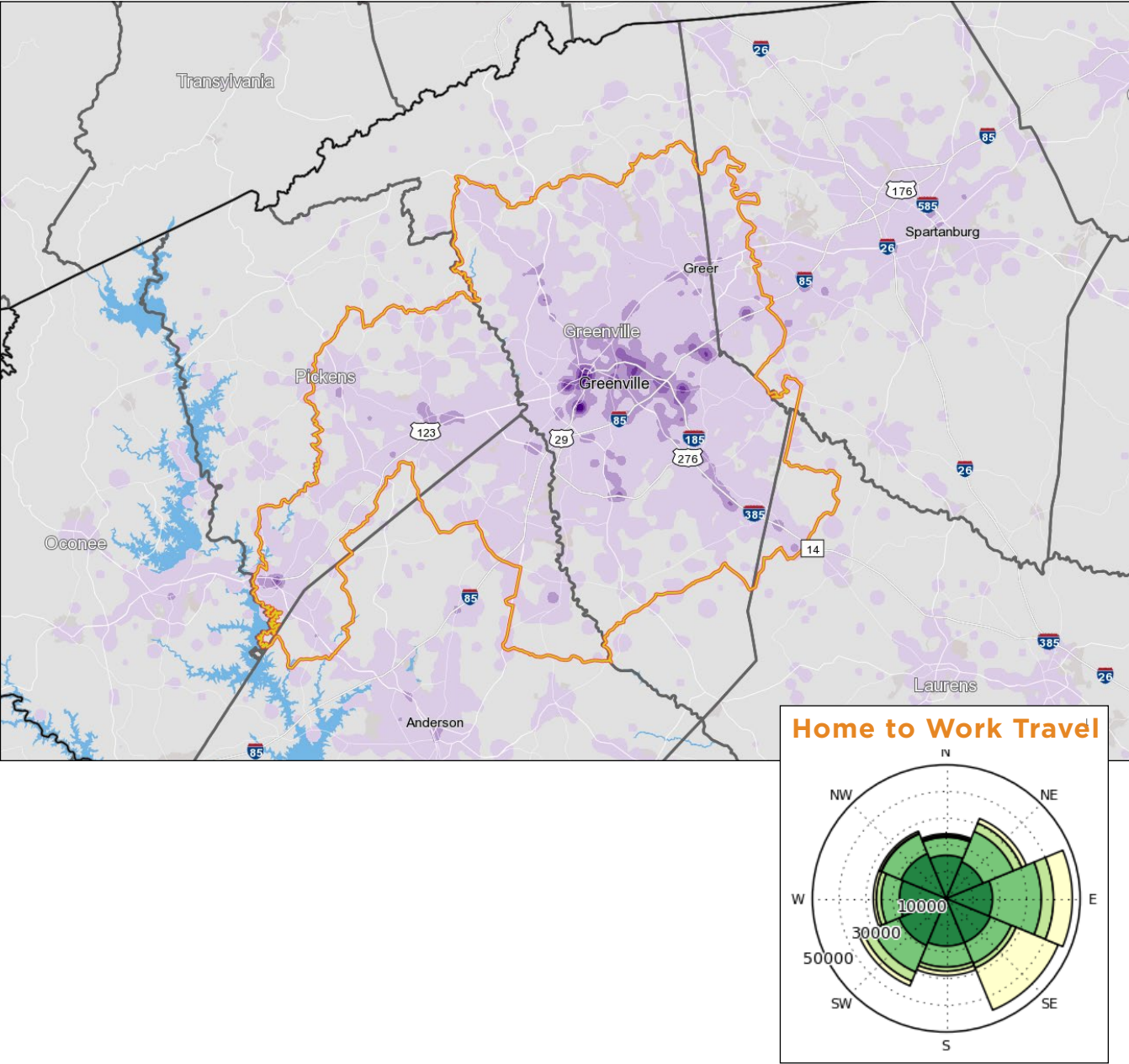
WHERE UPSTATE WORKERS LIVE

Workers who are employed in the Upstate largely live within the region, with many also traveling from outside the study area's borders. Though residential development is clustered around Greenville, Mauldin, and Easley, many workers live in a dispersed pattern throughout the area. The greatest number of those who work in the area travel southeast from their job to their home, with 14% traveling farther than 50 miles.



WHERE UPSTATE RESIDENTS WORK

Upstate residents who live and work in the region have the largest concentration of employment opportunities in Downtown Greenville and along the I-385 corridor. These two areas host a wide variety of employment sectors, including manufacturing, retail, and health care. As shown in the radial chart, most residents travel southeast or east from their home to reach their workplace.

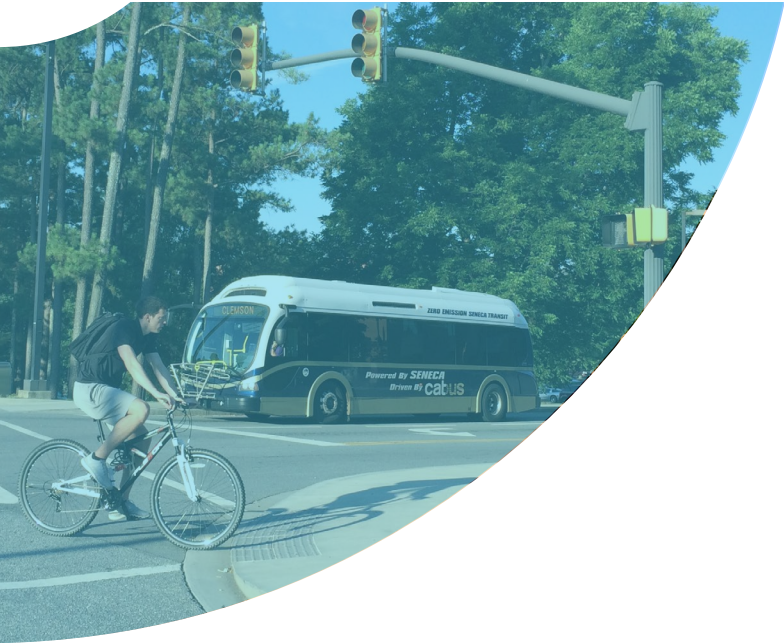
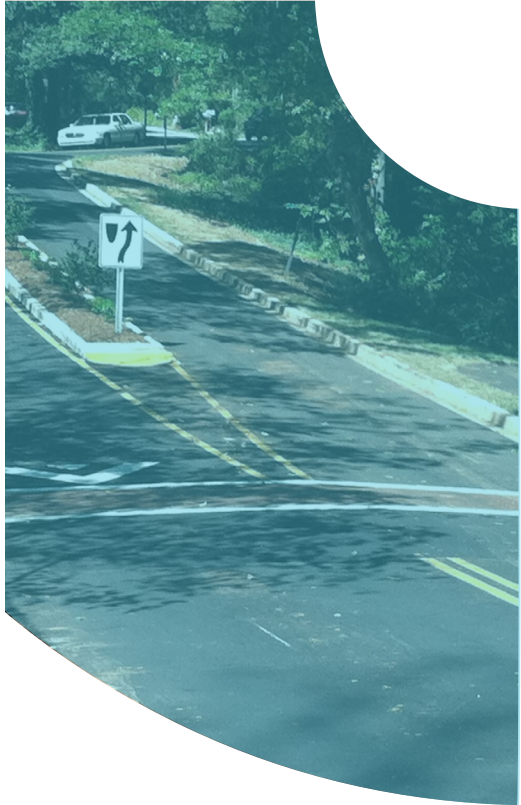






# MOBILITY

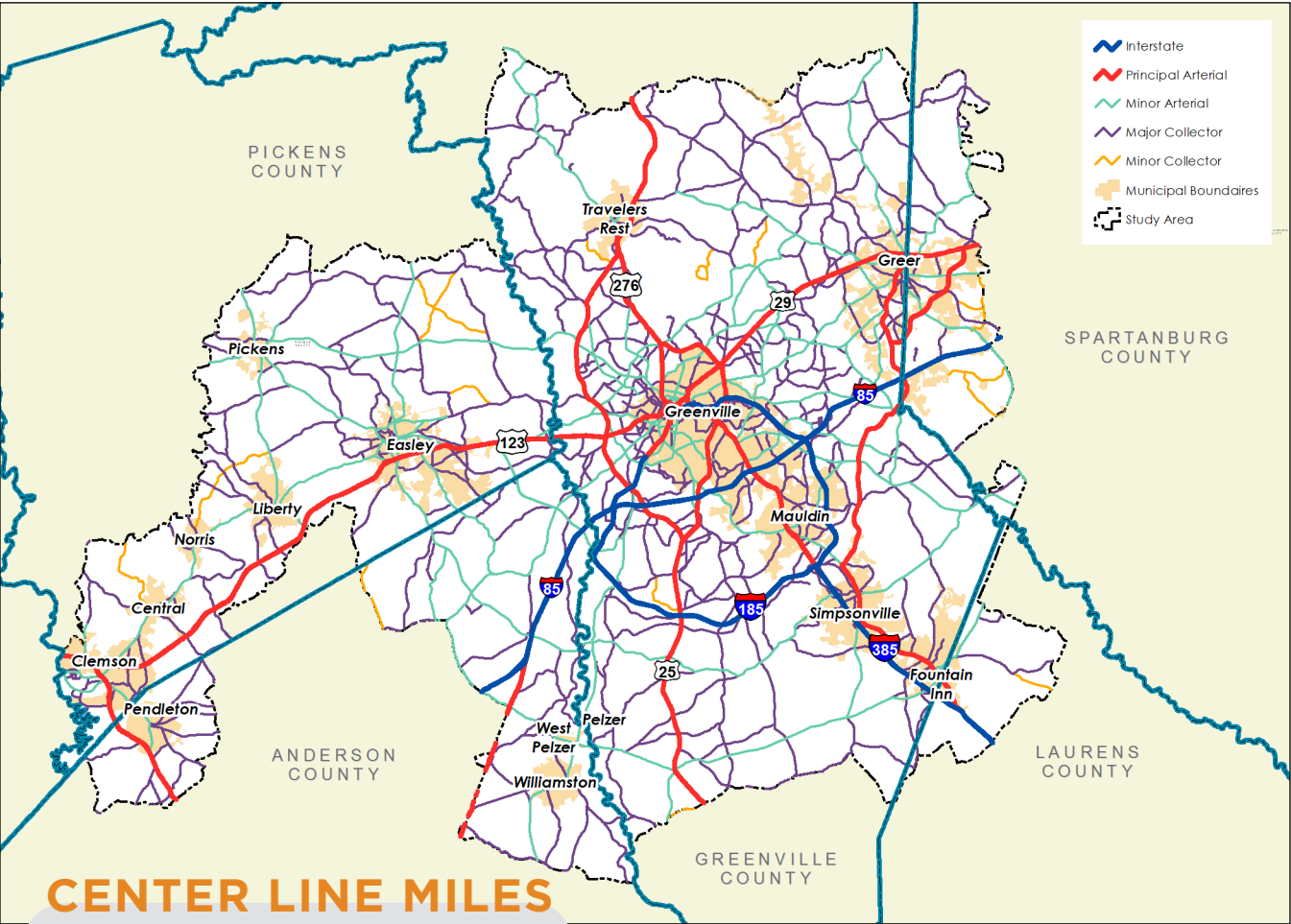
The Upstate's transportation system must strike a balance between serving the needs of existing residents, the local workforce, and visitors. The region needs viable accessibility and connections to regional infrastructure for economic vitality and to sustain its quality of life. Taking a closer look at existing infrastructure allows for better planning and the ability to be better stewards of resources.





FUNCTIONAL CLASSIFICATION

Functional classifications are defined by the Federal Highway Administration (FHWA) and used by policy makers, planners, engineers, and citizens to designate the characteristics and purposes of the roadways in a system. The functional classification system categorizes streets along a general hierarchy that is used to identify each roadway's importance to the overall transportation system for planning purposes. The study area has 5,955 center line miles of functionally classified public roads.

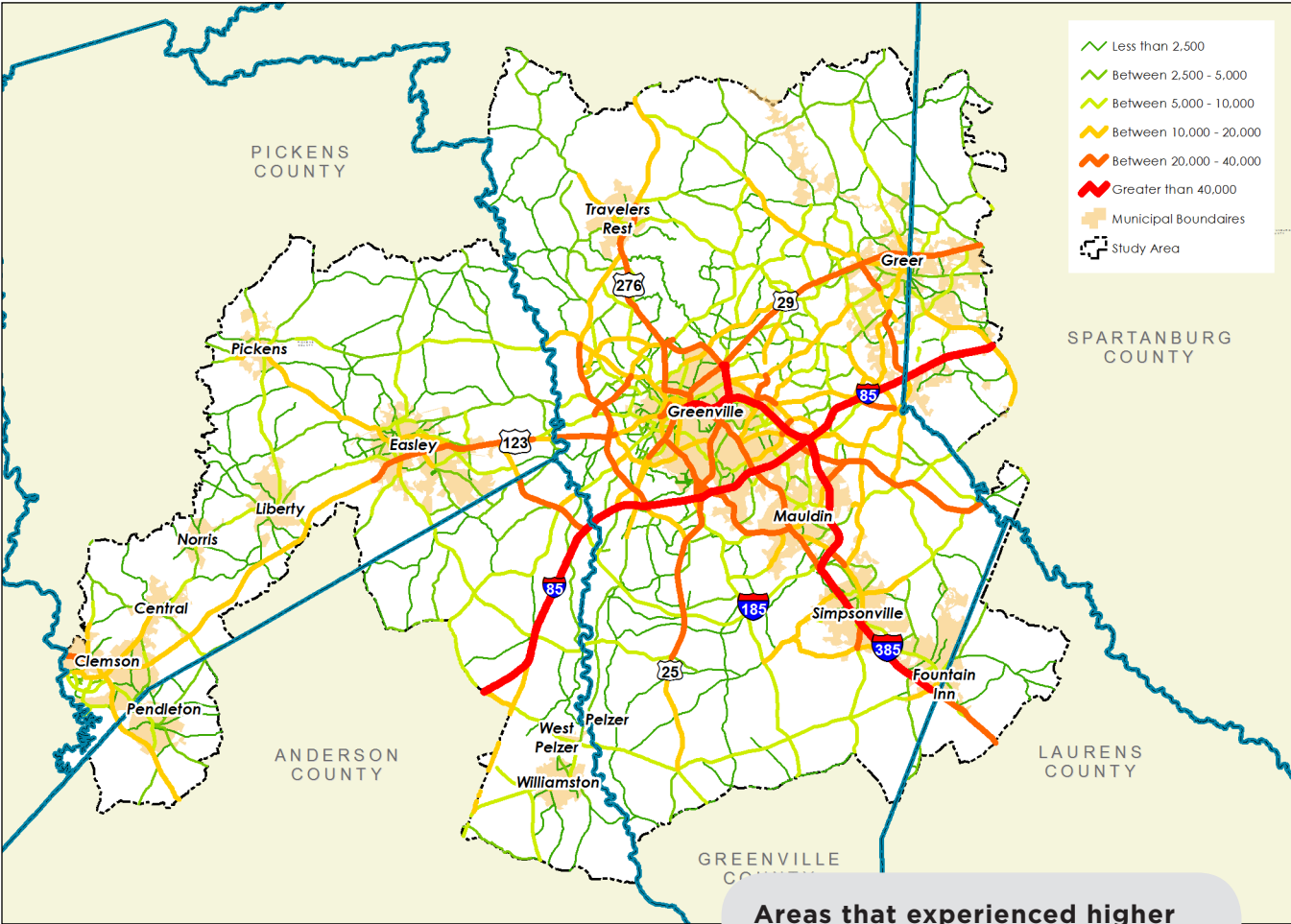


CENTER LINE MILES

- Interstate: 136 (2%)
- Principal Arterial: 215 (4%)
- Minor Arterial: 406 (7%)
- Major Collector: 798 (13%)
- Minor Collector: 42 (1%)
- Local: 4359 (73%)

ANNUAL AVERAGE DAILY TRAFFIC (AADT)

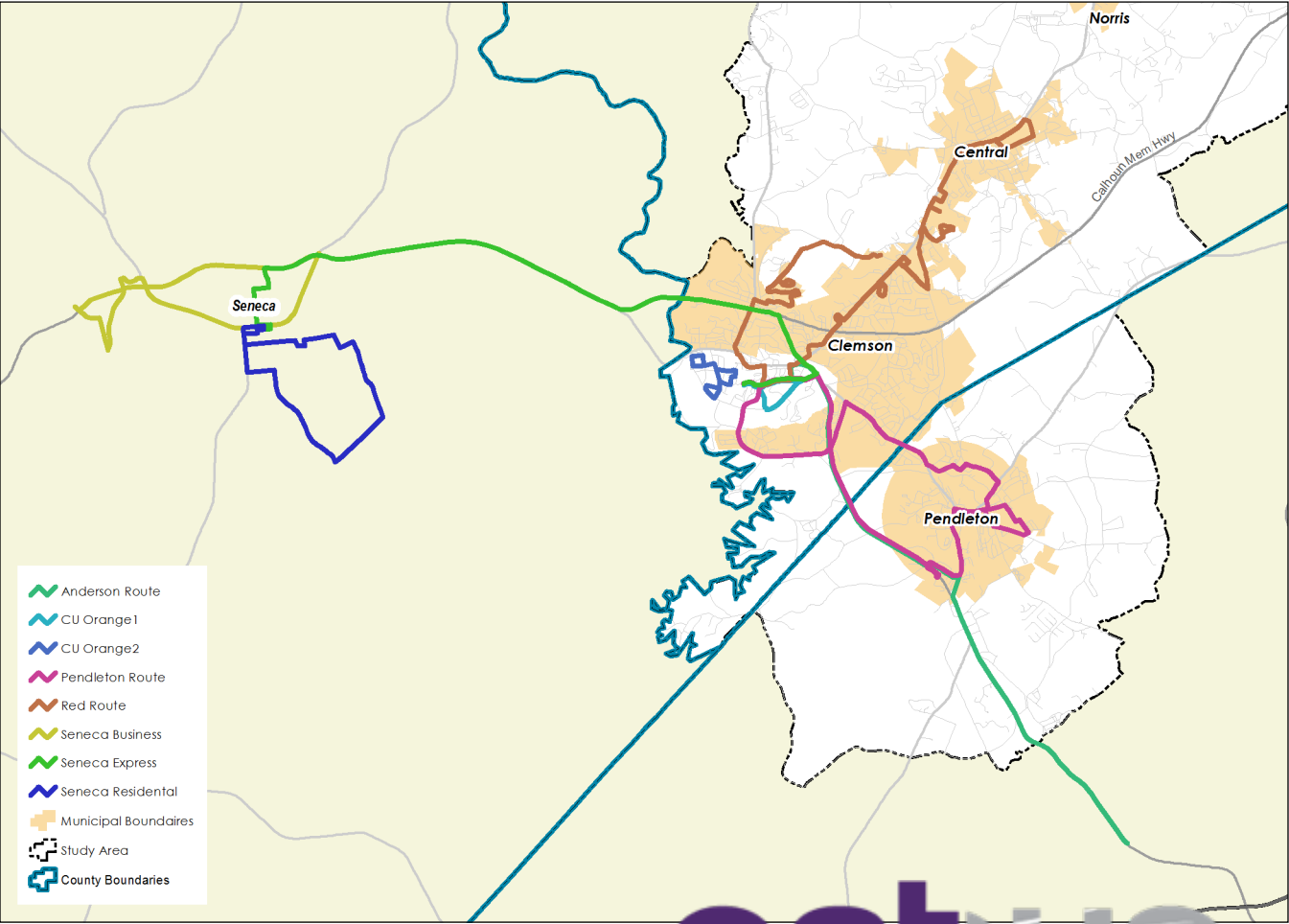
Traffic volumes typically correlate with the purpose and function of each roadway's design and location. Annual average daily traffic indicates traffic volumes for each corridor in 2015 based on information provided by South Carolina Department of Transportation. AADT is one way to identify the region's most heavily traveled roadways and less congested local thoroughfares.



Areas that experienced higher average daily traffic volumes in 2015 include the central areas of the study area around the City of Greenville and along the area's major highways.

TRANSIT

The GPATS study area is served by two principal transit systems, the Greenlink bus system in the Greenville area, and Clemson Area Transit (CAT).

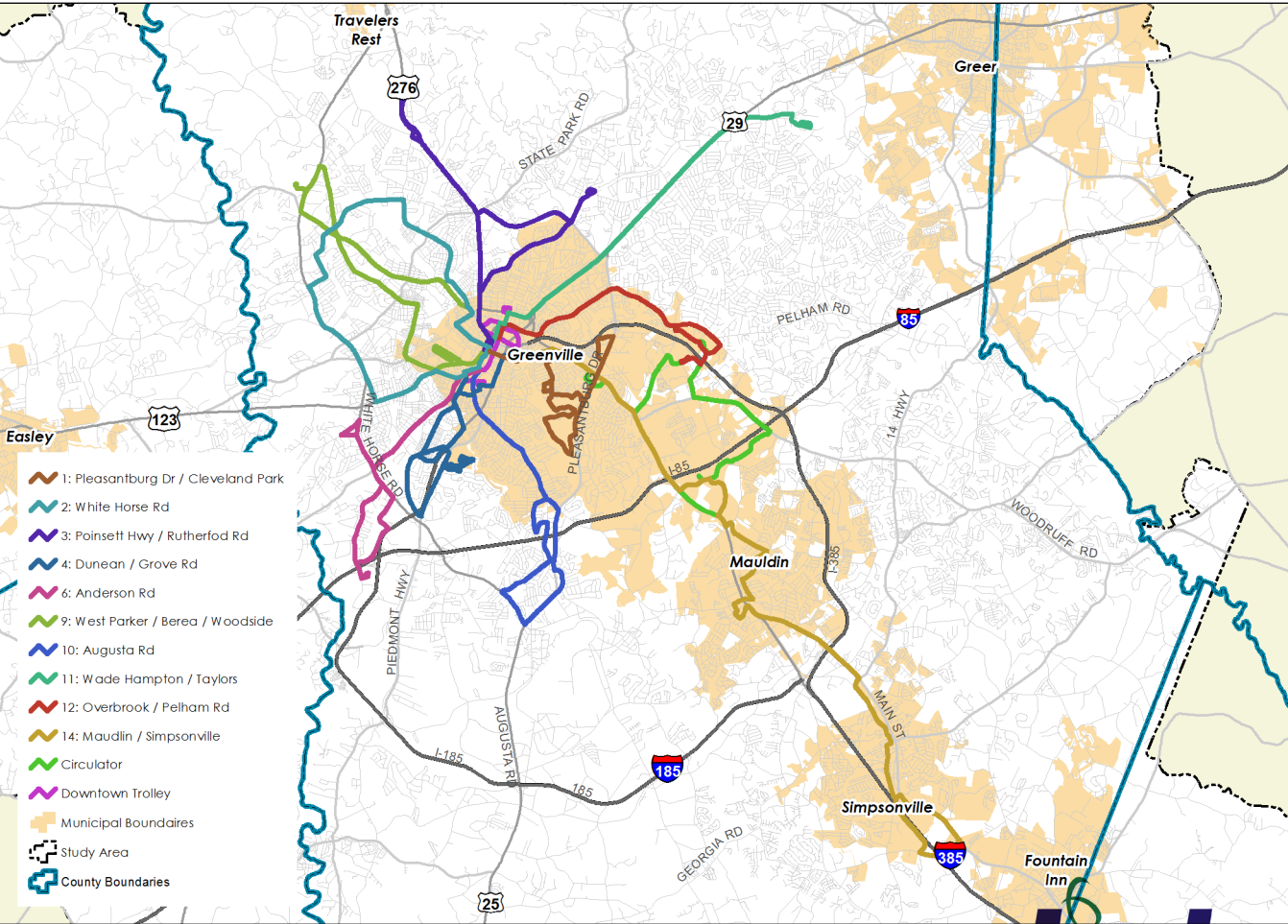


The Clemson Area Transit system has eight routes that serve the City of Clemson and Clemson University campus, and provide service to Central, Pendleton and Seneca. Different routes operate various schedules from approximately 7 a.m. to 3 a.m., based on the university's academic schedule. The fleet currently includes six all-electric buses that operate in the City of Seneca, the country's first all-electric bus system.

Greenlink operates 12 routes in a hub-and-spoke system. Most routes originate in Downtown Greenville at the Transit Center, with service provided to destinations in the outlying areas as well as Mauldin and Simpsonville. The system includes 623 stops, 88 of which have shelters.

Routes 1-14 operate from 5:30 a.m. to 7:30 p.m., Monday through Friday on 60 minute headways, and 8:30 a.m. to 6:30 p.m. Saturday. The Route 16 circulator operates until 9:00 p.m. Monday through Friday. No service is provided on Sunday or holidays. A one-way trip on the Greenlink system costs \$1.50, with various discounts and passes available.

Greenlink also operates a free Downtown Trolley, which circulates downtown on Thursday and Friday evenings as well as weekend afternoons.



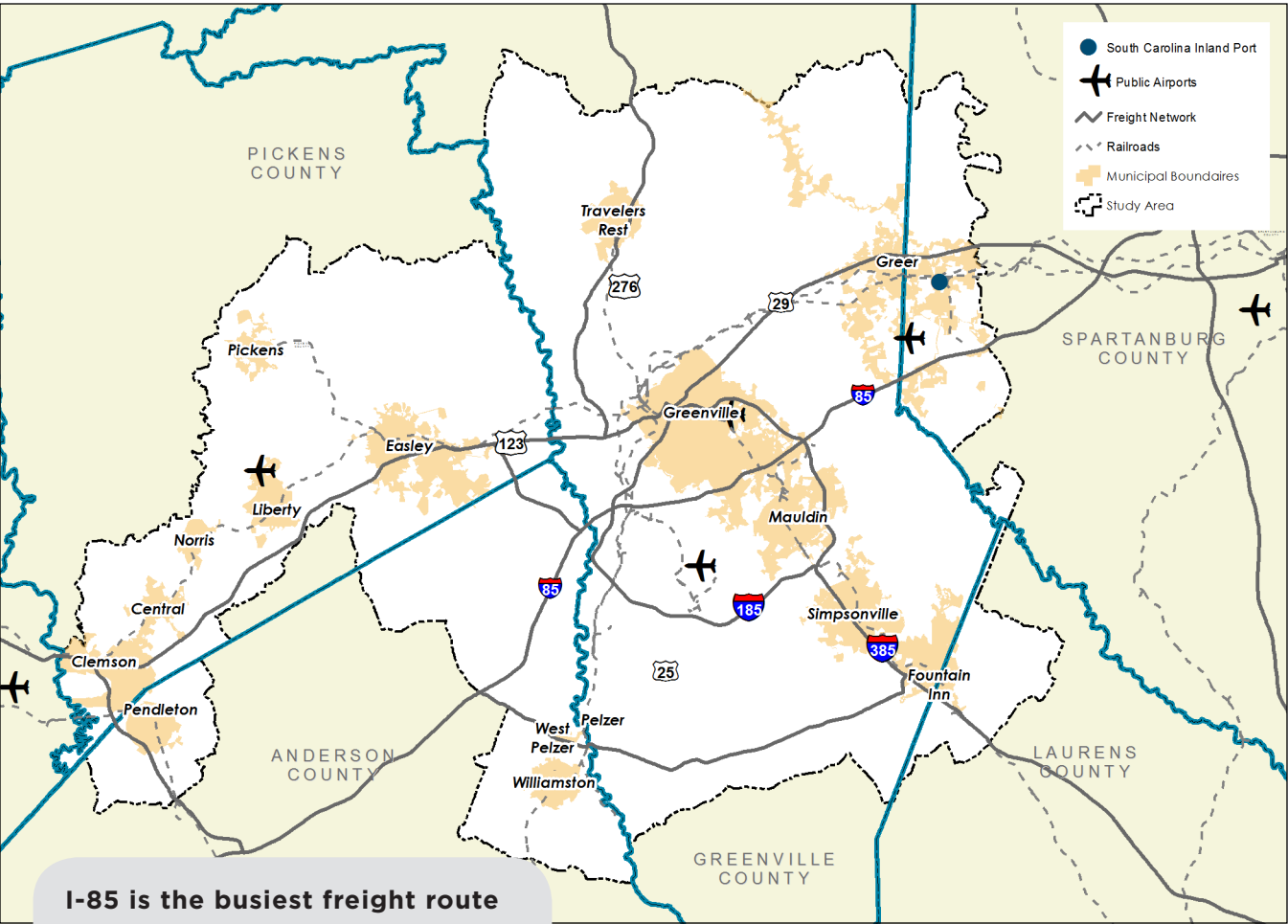


FREIGHT

The efficient movement of goods is one of the keys to effective competition in a global economy. Regions that provide efficient systems for moving goods will have a competitive advantage at the local, regional, and state level.

Truck

As the number of trucks on local roadways increases, it becomes more important to guide trucks to appropriate routes. Several routes through the GPATS study area are identified by SCDOT as part of the state's primary freight network.



I-85 is the busiest freight route in the state of South Carolina. More than 16,000 trucks traveled the route per day in 2010, more than twice the volume of the next-busiest route — I-95.

Rail

The GPATS area includes 135 miles of in-use rail. The rail connects the City of Greenville with Charlotte and Atlanta via Amtrak and serves as a major piece of the southeast freight network. The region also is home to the South Carolina Inland Port. The facility opened in 2013 and acts as a major connection point between truck, rail, and air freight shipments due to its proximity to the Greenville-Spartanburg Regional Airport and I-85. Rail service at the Inland Port is provided exclusively by Norfolk Southern.



The South Carolina Ports Authority projects a 23% increase in container volume for the 2016 fiscal year and says it has reduced interstate traffic by an estimated 75,000 truck loads.

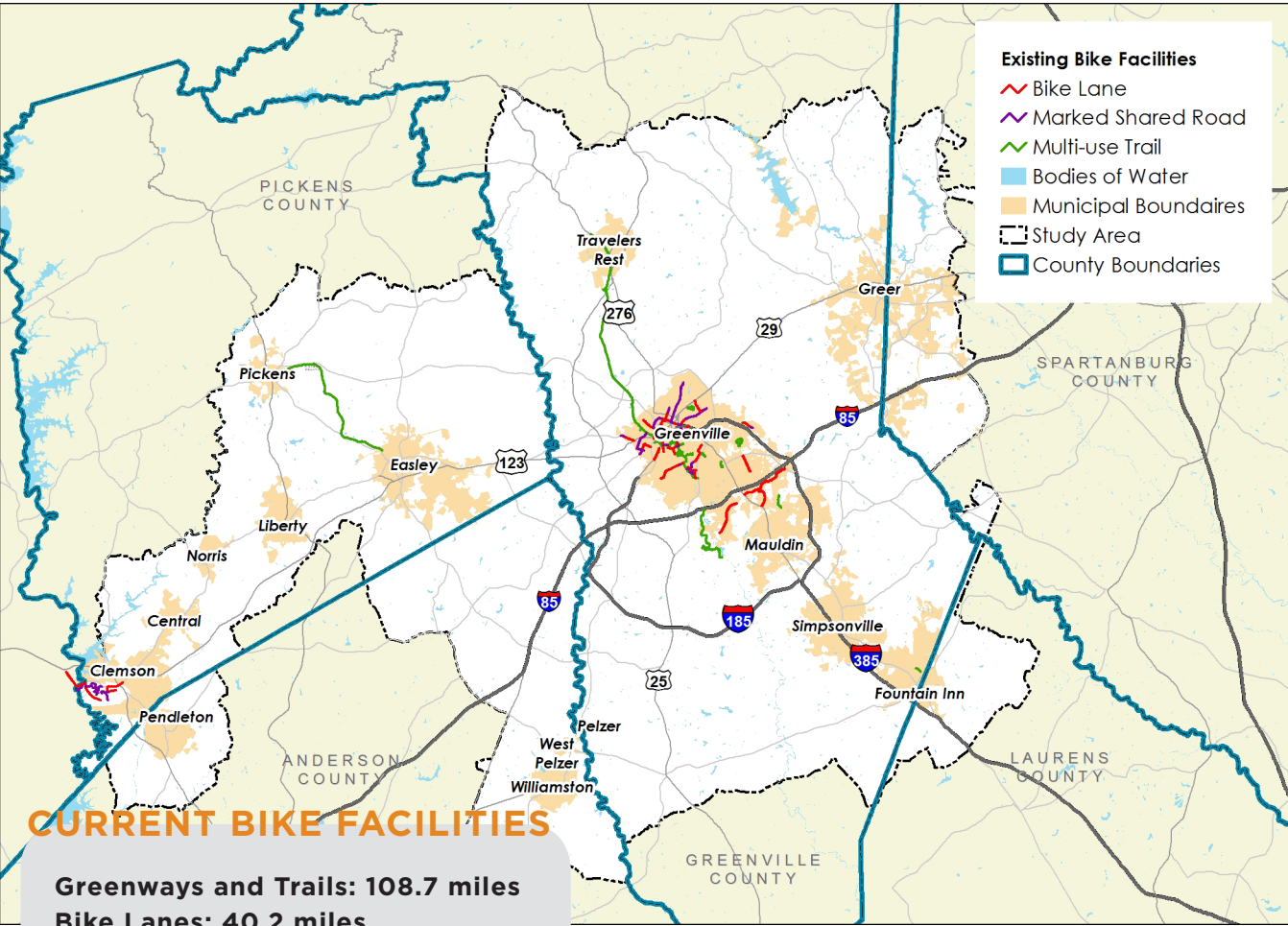


ACTIVE TRANSPORTATION

Active transportation facilities are an important part of a region's transportation network. Bike lanes, sidewalks, trails, and other shared-use facilities provide recreational opportunities, but also practical and healthy ways to move around the region and link destinations. The GPATS study area currently contains approximately 1,049 total miles of bicycle and pedestrian facilities, most of which are sidewalks in the most populous communities.

Bicycle

Bike facilities in the region account for only 2.8% of the regions entire infrastructure network, with the local trail system being the most developed. An examination of gaps in the existing network will allow for future improvements to address the system as an inclusive multimodal network linking recreational opportunities, economic nodes, and residential areas.

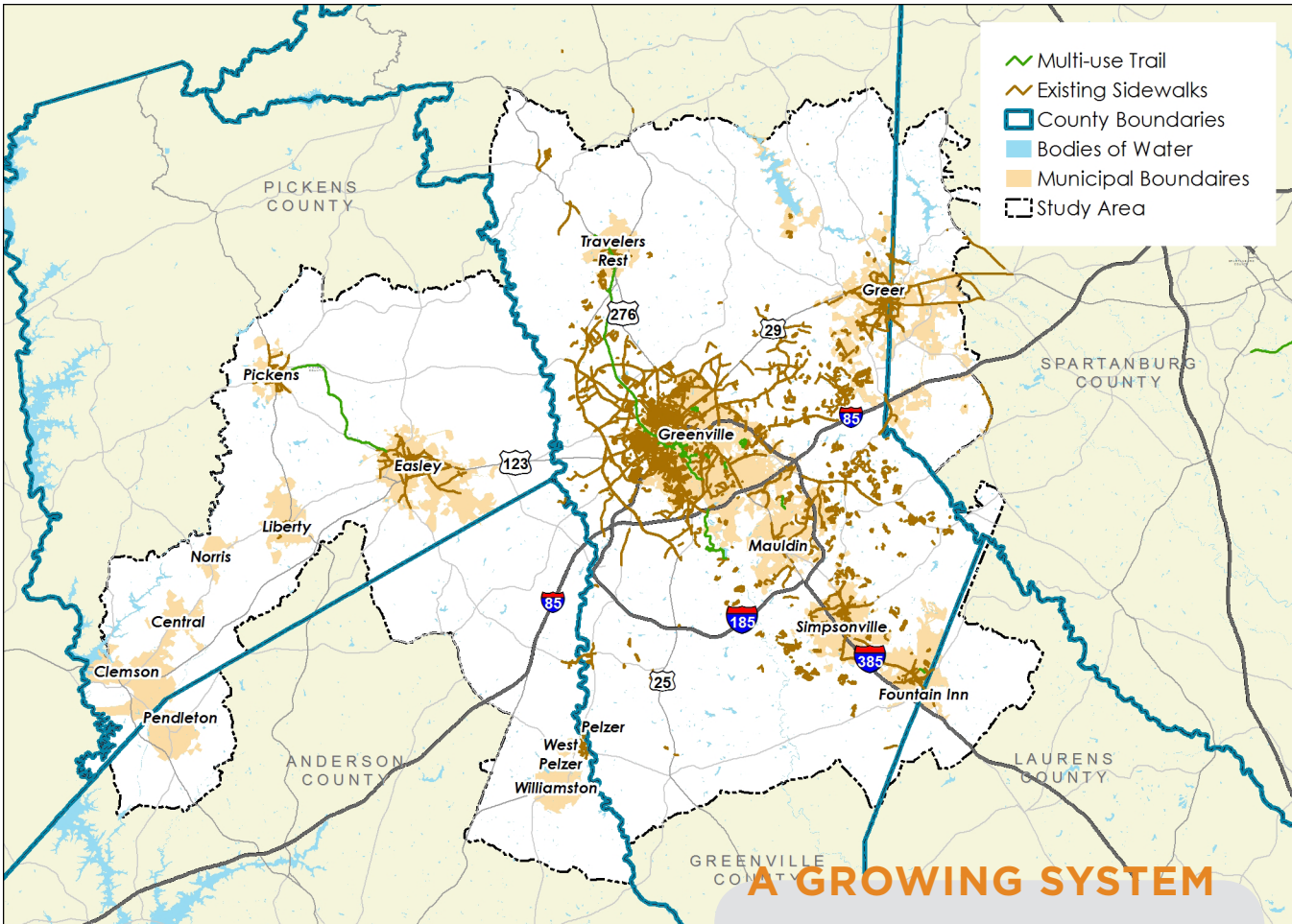


CURRENT BIKE FACILITIES

Greenways and Trails: 108.7 miles  
Bike Lanes: 40.2 miles  
Marked Shared Routes: 19.2 miles  
Secondary Routes: 1.5 miles

Pedestrian

While sidewalks largely are used in more urban areas to provide safe ways to walk between destinations, greenways, trails and shared-use facilities can also provide recreational opportunities and functional transportation, especially in rural areas. The sidewalk network throughout the region is the most comprehensive of all facility types, with 889 miles total. These facilities again are largely centered in the most populous areas, and typically cover municipal boundaries. However, the dataset used for this analysis is not complete, and does not include data for the cities of Central, Clemson, Pendleton, West Pelzer or Williamston.



A GROWING SYSTEM

More than 235 miles of facilities are proposed throughout the region, including 22 miles of shared bike routes, 63 miles of bike lanes, and 102 miles of new trails.





# PREVIOUS

The Horizon 2040 Long-Range Transportation Plan builds on recommendations from previous land use and transportation plans. This section highlights selected plans reviewed to help inform the development of the LRTP.

# PLANS

REVIEW OF PREVIOUS PLANS

TRANSPORTATION AND COMPREHENSIVE PLANS

The Horizon 2040 LRTP will build on previous planning efforts completed in the GPATS area. The many municipalities involved in this region have completed a wide range of planning efforts that will affect future transportation recommendations, including comprehensive plans, long range transportation plans, corridor studies, and transit plans. The table below is chronologically organized and summarizes planning efforts as far back as 1999. It is by no means all-inclusive, but captures some of the most recent and more major studies.

Name	Date	Plan Type	Relevant Recommendations
Anderson County Comprehensive Plan 2016	2016	Comprehensive Plan	<ul style="list-style-type: none"><li>• Continue improvements and prepare for emerging demands</li><li>• Link transportation with housing, economic development, and land use strategies</li><li>• Enhance capacity through access management and connectivity measures</li></ul>
SCDOT Regional Transit and Coordination Plan: Appalachian Region	2014	Transportation Plan	<ul style="list-style-type: none"><li>• Support changes to local funding restrictions and greater participation at the local and state level</li><li>• Provide expanded services connecting to rural commerce centers</li><li>• Create avenues for cooperation between local and state agencies on transportation and land use issues</li></ul>
City of Clemson Comprehensive Plan 2024	2014	Comprehensive Plan	<ul style="list-style-type: none"><li>• Improve cyclist safety throughout the city</li><li>• Continue to support and expand CAT</li><li>• Improve traffic flow by reducing congestion on major corridors and discouraging through traffic on neighborhood roads</li></ul>
South Carolina 2040 Strategic Corridors Plan	2014	Transportation Plan	<ul style="list-style-type: none"><li>• Widen US123 to 6 lanes with median</li><li>• Rehabilitate US25</li></ul>
Pickens County Comprehensive Plan 2030	2010	Comprehensive Plan	<ul style="list-style-type: none"><li>• Establish and fund a transportation planning function of the Pickens County Government</li><li>• Continue implementation of a maintenance schedule for county roadways</li><li>• Upgrade and maintain the county road system to meet the needs of the growing population while providing safe and efficient routes through the county</li></ul>

Name	Date	Plan Type	Relevant Recommendations
Greenlink Transit Vision and Master Plan	2010	Transit Plan	<ul style="list-style-type: none"><li>• Fund regional BRT lines and Express Services</li><li>• Implement a TDM program throughout the region</li><li>• Upgrade existing fleet and technology</li></ul>
Plan-it Greenville	2009	Comprehensive Plan	<ul style="list-style-type: none"><li>• Fund regional transportation projects on regional arterial streets</li><li>• Consider local-option sales tax initiative to properly fund long term improvements</li><li>• Reduce speeds and implement context-sensitive design standards on regional arterials</li></ul>
Imagine Greenville County	2009	Comprehensive Plan	<ul style="list-style-type: none"><li>• Identifies strategic corridors for investment and improvements based on future land use</li></ul>
GPATS 2035 Long Range Transportation Plan	2007	Long-Range Transportation Plan	<ul style="list-style-type: none"><li>• Implement fiscally constrained bicycle, pedestrian, transit, freight, and roadway projects</li></ul>
Woodruff Road Corridor Study	2007	Transportation Plan	<ul style="list-style-type: none"><li>• Improve access management and ITS along the corridor</li><li>• Reconfigure I-85/Woodruff Road interchange and I-85/Laurens Road</li></ul>
Travelers Rest Comprehensive Plan	2006	Comprehensive Plan	<ul style="list-style-type: none"><li>• Utilize transportation control measures to reduce congestion</li><li>• Improve pedestrian and bicycle safety in the city by installing crosswalks, ramps, and crossings</li><li>• Control commercial and residential development so that transportation facilities are not overloaded</li></ul>
City of Mauldin Comprehensive Plan	1999	Comprehensive Plan	<ul style="list-style-type: none"><li>• Improve local street network connectivity in the Center City area where congestion is most severe</li><li>• Adopt land use policies that encourage walkable communities</li><li>• Develop regional connections to adjacent cities and provide a local mobility option for Mauldin residents</li></ul>



BICYCLE/PEDESTRIAN PLANS

Within the region, many municipalities have completed bicycle, pedestrian, and/or trail master plans or studies which the LRTP process will look to for guidance in building a set of recommendations. These plans include detailed recommendations on facility improvements throughout the region, as well as long-term recommendations to improve the overall environment for active transportation. The table below is not all-inclusive, but captures some of the most recent and more major studies.

Name	Date	Plan Type
Green Crescent Trail Feasibility Study	2016	Bike/Ped Plan
<b>Relevant Recommendations:</b> <ul style="list-style-type: none"><li>• City of Central’s Downtown Business District to Southern Wesleyan University (SWU)</li><li>• SWU to Wal-Mart by way of SWU forest land and Road 18/Church Street</li><li>• City of Central’s Downtown Business District along Highway 93 toward the City of Clemson</li><li>• City of Clemson along 18-Mile-Creek (Nettles Park to Pendleton Road)</li><li>• Pendleton Road (Highway 93 to Pacolet Milliken Property)</li><li>• Berkeley Drive Corridor (Clemson Elementary, Countrywalk, Camelot, and the Downs)</li><li>• Downtown Clemson/College Avenue to North Experimental Forest</li></ul>		
Town of Pendleton Bike/Pedestrian Plan	2016	Bike/Ped Plan
<b>Relevant Recommendations:</b> <ul style="list-style-type: none"><li>• North Mechanic Street bike lanes, sidewalks, and intersection improvements</li><li>• West Queen Street sidewalk repair and bike lane</li><li>• Shared-use path along existing sewer easement to connect downtown, schools, residential areas, and Green Crescent Trail</li><li>• Intersection improvements on US 76</li><li>• Shared-use path along South Mechanic Street</li></ul>		
City of Travelers Rest Bike Master Plan	2015	Bicycle Plan
<b>Relevant Recommendations:</b> <ul style="list-style-type: none"><li>• Wilhelm Winter Rd cycle track/shared-use path</li><li>• Roe Rd bike bikes/buffered bike lanes</li><li>• US 25 intersection improvements</li><li>• McElhaney Rd bike lanes</li><li>• Center St/Poinsett Hwy cycle track</li><li>• Gateway Elementary greenway/sidepath</li><li>• Roe Center Rd bike boulevard</li></ul>		

Name	Date	Plan Type
Town of Williamston Bike/Pedestrian Master Plan	2015	Bike/Ped Plan
<b>Relevant Recommendations:</b> <ul style="list-style-type: none"><li>• Highway 20 sidewalks</li><li>• Academy Street sidewalk and bicycle boulevard</li><li>• Minor Street sidewalk improvements and shared-use path</li><li>• East Main Street bike lane and road diet</li><li>• Mineral Springs Park shared-use path</li><li>• Anderson Drive sidewalks, bike lanes, and buffered bike lanes</li><li>• Several key intersection improvements</li></ul>		
Greenville County Safe Routes to School	2013	Pedstrian Plan
<b>Relevant Recommendations:</b> <ul style="list-style-type: none"><li>• 30 Safe Routes to Schools, Recreation, and Work projects throughout Greenville County.</li></ul>		
City of Greenville Bicycle Master Plan	2011	Bicycle Plan
<b>Relevant Recommendations:</b> <ul style="list-style-type: none"><li>• Hire or formally appoint a City staff person as bicycle coordinator</li><li>• Fund capital projects related to bikeways</li><li>• Grow the population of bicyclists</li><li>• Expand the Swamp Rabbit Trail and continue to improve the trail’s safety and appeal where needed</li><li>• Create a robust encouragement program of Safe Routes to School</li><li>• Engage residents on proposed projects at a community and neighborhood level</li><li>• Open a bike station and launch a bike share system</li><li>• Implement the highest priority items within each of the six E’s.</li></ul>		
Greenville County Greenways Master Plan	2010	Bike/Ped Plan
<b>Relevant Recommendations:</b> <ul style="list-style-type: none"><li>• Proposed greenway network across Greenville County that includes the following study areas: Upper Reedy River; Lower Reedy River; Upper Saluda River; Lower Saluda River; Upper Enoree River; and Lower Enoree River.</li></ul>		
City of Easley Bike Master Plan	2010	Bicycle Plan
<b>Relevant Recommendations:</b> <ul style="list-style-type: none"><li>• SC 93/Main Street safety and complete streets improvements</li><li>• Brushy Creek Greenway</li><li>• Safe Routes to School program</li><li>• Wayfinding/signage program</li></ul>		

