Greenville-Pickens Area
Transportation Study

HORIZON 2050 LONG RANGE TRANSPORTATION PLAN

OCTOBER 2026



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CHAPTER 1
Overview

CHAPTER 1: OVERVIEW

The Greenville-Pickens Area Transportation Study (GPATS) serves as the federally designated Metropolitan Planning Organization (MPO) for the Greenville and Mauldin-Simpsonville urbanized areas. Through a continuing, cooperative, and comprehensive planning process, GPATS works with local governments, transportation providers, state and federal agencies, and community stakeholders to guide transportation investment decisions across the region. These efforts help ensure that transportation improvements support mobility, economic competitiveness, safety, system preservation, and quality of life for current and future residents.

The *Horizon 2050 Long-Range Transportation Plan (LRTP)* establishes a transportation vision for the region through the year 2050. The plan evaluates existing transportation conditions, forecasts future growth and travel demand, and identifies a fiscally constrained program of multimodal transportation investments. The LRTP serves as the foundation for future transportation decision-making and provides the framework for prioritizing transportation projects eligible for federal funding.

As the Upstate continues to experience significant population and employment growth, GPATS must balance increasing transportation demand with the need to maintain and improve the existing transportation system. The *Horizon 2050 LRTP* addresses these challenges by emphasizing performance-based planning, public engagement, interagency coordination, and fiscally responsible investment strategies. The resulting plan supports a transportation network that is safe, reliable, connected, and responsive to the region's evolving needs.

About GPATS

The GPATS is the federally designated MPO responsible for transportation planning and programming within the greater Greenville urbanized area. The planning area includes jurisdictions located within Greenville and Pickens counties, as well as portions of Anderson, Laurens, and Spartanburg counties (**Figure 1**). As the region's MPO, GPATS provides a collaborative forum through which local governments, transportation providers, state and federal agencies, and community stakeholders work together to address regional transportation needs.

Federal law requires MPOs to maintain a continuing, cooperative, and comprehensive transportation planning process. In fulfilling this responsibility, GPATS develops plans and programs that guide the investment of federal transportation funds and establish priorities for the region's transportation system. These efforts help ensure that transportation investments are coordinated across jurisdictional boundaries and support regional goals related to mobility, economic development, environmental stewardship, and quality of life.

GPATS oversees a multimodal transportation system that includes roadways, transit services, bicycle and pedestrian facilities, freight corridors, and emerging transportation technologies. Through ongoing coordination with the South Carolina Department of Transportation (SCDOT), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), local governments, and other partners, GPATS works to develop transportation solutions that address both current needs and future growth.

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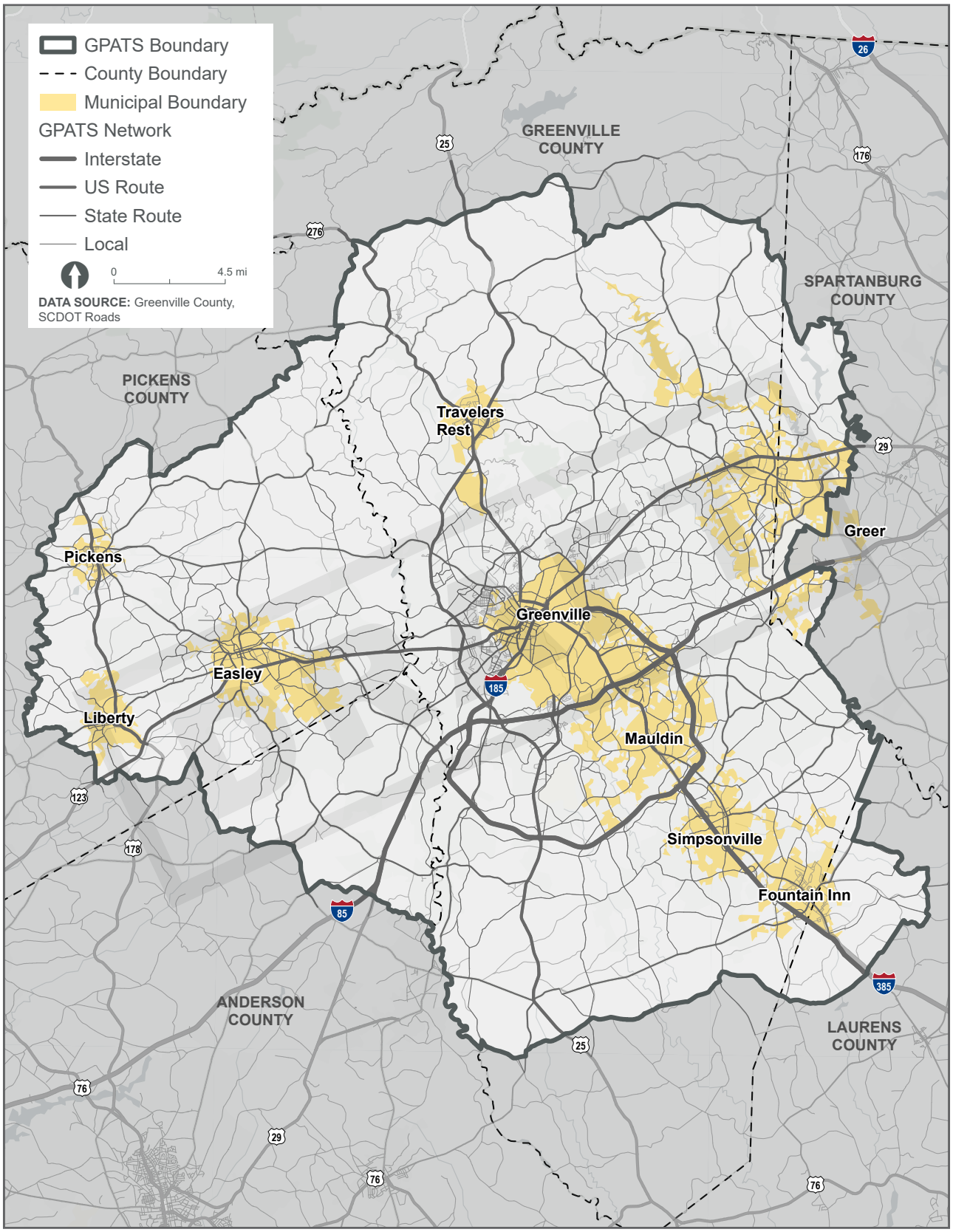


Figure 1 | GPATS Study Area

GPATS Organizational Structure

GPATS conducts its planning activities through a committee structure that provides both technical expertise and policy direction. This structure ensures that transportation decisions are informed by data, regional coordination, and public interests.

POLICY COMMITTEE

The Policy Committee serves as the primary decision-making body for GPATS. The committee is composed of elected officials and senior agency representatives from member jurisdictions and partner agencies. The Policy Committee reviews and adopts major transportation plans, funding programs, and policy recommendations. Guided by technical analysis and stakeholder input, the committee establishes transportation priorities that shape future regional investments.

STUDY TEAM

The Study Team functions as the technical advisory body for GPATS. Comprised of planners, engineers, transportation professionals, and staff from member agencies, the Study Team evaluates transportation system performance, reviews technical analyses, develops project recommendations, and ensures consistency with regional planning objectives. The Study Team's work provides the technical foundation for Policy Committee decisions.

BICYCLE & PEDESTRIAN COORDINATING COMMITTEE

The Bicycle and Pedestrian Coordinating Committee provides guidance on transportation issues related to walking, bicycling, and other active transportation modes. The committee reviews plans, studies, and projects involving sidewalks, bicycle facilities, greenways, trails, and safety improvements. Through its recommendations, the committee helps support a more connected, accessible, and multimodal transportation network throughout the GPATS region.

GPATS Roles & Responsibilities

As the region's MPO, GPATS is responsible for coordinating transportation planning and programming activities across the federal-aid eligible transportation network. Through collaboration with local, state, and federal partners, GPATS ensures that transportation investments are aligned with regional priorities, federal requirements, and available funding resources.

GPATS fulfills these responsibilities through the development and maintenance of several key planning documents and processes that collectively guide transportation decision-making across the region.

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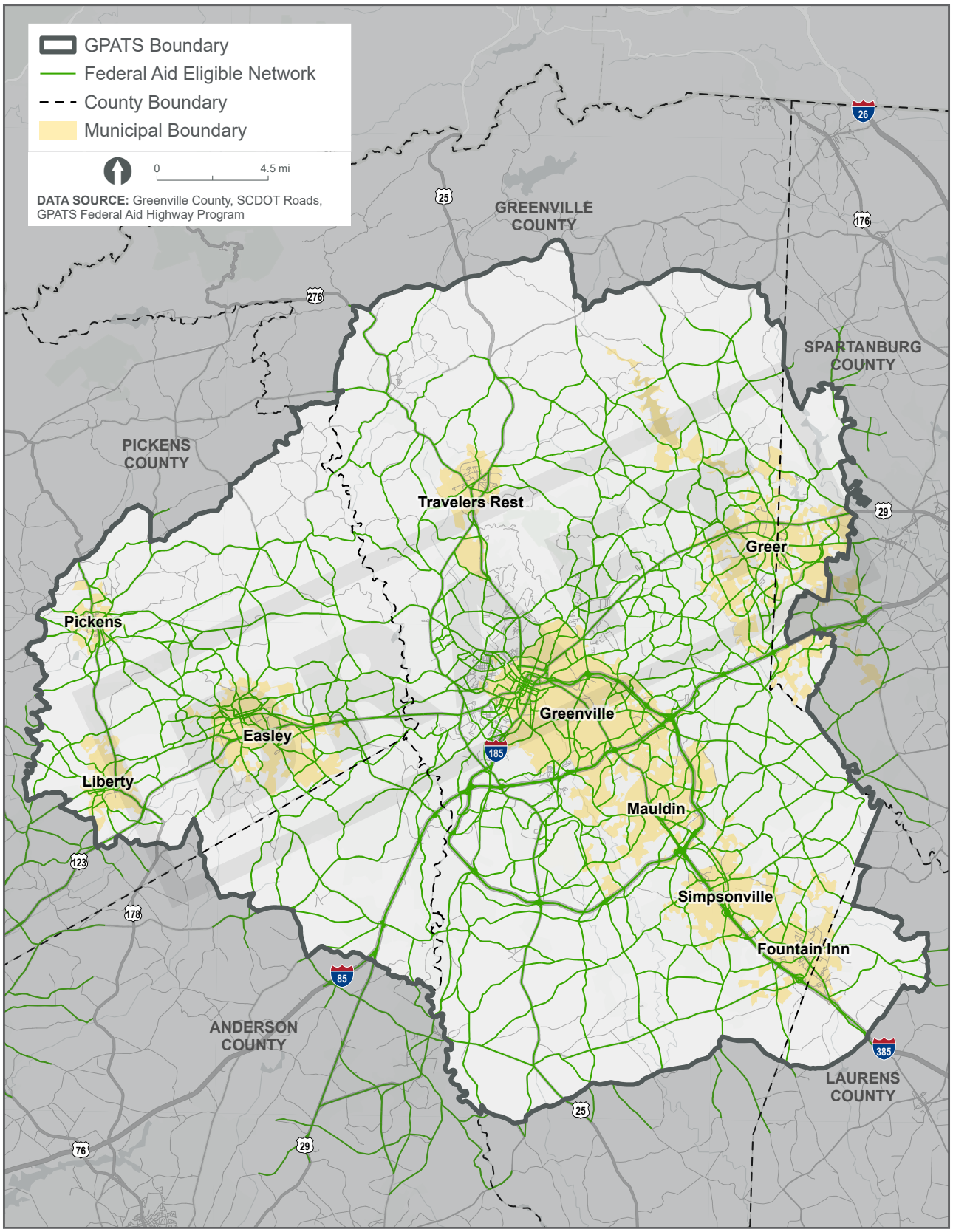


Figure 2 | GPATS Federal Aid Eligible Network

LONG-RANGE TRANSPORTATION PLAN (LRTP)

The Long-Range Transportation Plan establishes the region's long-term transportation vision and identifies transportation investments needed over a planning horizon of at least 20 years. The LRTP evaluates future transportation needs, forecasts growth and travel demand, establishes goals and performance measures, and identifies a fiscally constrained list of transportation projects and strategies. Projects included in the LRTP are eligible for future federal funding consideration.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

The Transportation Improvement Program is a short-range, fiscally constrained program that identifies transportation projects scheduled for implementation over ten years. The TIP includes project descriptions, costs, funding sources, and implementation schedules. It serves as the critical link between long-range planning and project delivery by identifying those projects that will advance toward construction and implementation.

UNIFIED PLANNING WORK PROGRAM (UPWP)

The Unified Planning Work Program defines the transportation planning activities undertaken by GPATS and its partner agencies during a fiscal year. The UPWP identifies planning studies, technical analyses, public engagement activities, data collection efforts, and coordination tasks necessary to support informed transportation decision-making. It also identifies funding sources, responsible agencies, and expected deliverables for each activity.

CONGESTION MANAGEMENT PROCESS (CMP)

The Congestion Management Process provides a systematic, performance-based approach for monitoring transportation system operations and identifying strategies to improve mobility. Through the CMP, GPATS evaluates traffic conditions, travel reliability, safety trends, and system performance to identify effective congestion management strategies. These strategies may include operational improvements, intelligent transportation systems, transit enhancements, bicycle and pedestrian investments, and transportation demand management initiatives.

PUBLIC PARTICIPATION PLAN (PPP)

Meaningful public involvement is essential to successful transportation planning. The Public Participation Plan establishes the policies and procedures GPATS uses to engage residents, businesses, community organizations, and public agencies throughout the planning process. Public engagement activities include public meetings, workshops, surveys, stakeholder coordination, digital engagement tools, and targeted outreach efforts designed to ensure broad participation and transparent decision-making.

Together, these plans and programs provide the framework through which GPATS evaluates transportation needs, prioritizes investments, coordinates funding decisions, and advances a safe, efficient, and multimodal transportation system for the region.

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LRTP Planning Process

The *Horizon 2050 LRTP* reflects a comprehensive, performance-driven planning process that integrates technical analysis, stakeholder collaboration, and robust public engagement. Building on prior efforts, the planning process includes evaluation of existing conditions, identification of future transportation needs, and development of a financially constrained program of multimodal improvements that aligns with federal requirements and regional priorities.

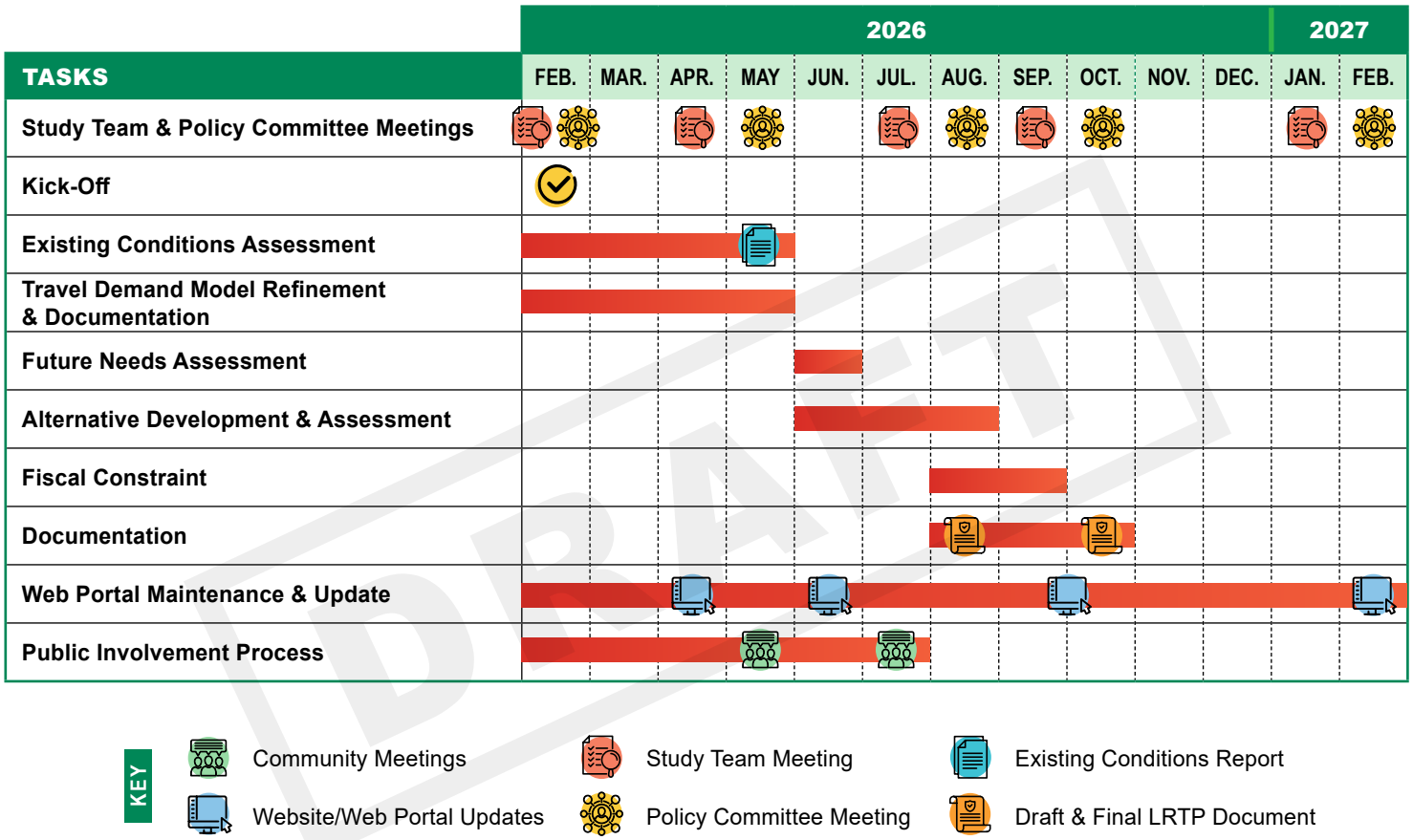


Figure 3 | Project Process & Schedule

The process incorporates detailed assessments of socioeconomic trends, land use patterns, system performance, and travel demand to inform investment strategies across roadways, transit, bicycle, pedestrian, freight, and emerging mobility systems. Public and stakeholder input remains central, with engagement activities (including surveys, workshops, meetings, and targeted outreach) providing critical insight into community priorities such as safety, congestion relief, system preservation, and expanded transportation choices.

Guiding principles and performance measures are used to evaluate and prioritize projects, ensuring that recommended investments support regional goals related to mobility, accessibility, safety, economic competitiveness, and environmental sustainability. The resulting LRTP is fiscally constrained, meaning that projects are phased and programmed based on anticipated revenues, and only those included in the plan are eligible for federal funding.

The *Horizon 2050 LRTP* reflects an evolving transportation landscape by incorporating strategies such as Transportation Demand Management (TDM), Transportation Systems Management and Operations (TSMO), and emerging technologies. Ongoing coordination with local jurisdictions, partner agencies, and regional planning entities ensures that the plan remains responsive to growth and adaptable to changing conditions over the planning horizon.

LRTP Requirements

Federal transportation regulations require metropolitan planning organizations to develop long-range transportation plans using a performance-based and outcome-oriented framework. Under 23 CFR Part 450, LRTPs must support a continuing, cooperative, and comprehensive planning process and address regional transportation needs over a planning horizon of at least 20 years.

To satisfy federal requirements, the *Horizon 2050 LRTP:*

- Establishes a long-term vision for the regional transportation system.
- Defines goals and objectives that guide transportation decision-making.
- Incorporates performance measures and performance targets.
- Considers federal metropolitan transportation planning factors.
- Identifies a fiscally constrained program of projects and strategies.
- Addresses all modes of transportation, including roadway, transit, bicycle, pedestrian, and freight systems.

By integrating these requirements throughout the planning process, GPATS ensures that Horizon 2050 supports regional priorities while remaining consistent with federal transportation planning regulations.

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Related Planning Efforts

The *Horizon 2050 LRTP* was developed in coordination with a broad range of local, regional, and statewide planning initiatives. Coordination with these efforts helps ensure consistency across planning programs, avoids duplication of work, and leverages previous investments in transportation planning and analysis.

The plan builds upon findings and recommendations from previous GPATS Long-Range Transportation Plans, municipal and county comprehensive plans, transit development plans, bicycle and pedestrian plans, freight studies, corridor studies, and special transportation analyses conducted throughout the region. These documents provide valuable information on system needs, community priorities, growth trends, and transportation investment opportunities.

GPATS also coordinates with neighboring planning organizations and regional agencies, including the Spartanburg Area Transportation Study (SPATS), Anderson-Clemson Area Transportation Study (ACATS), and the Appalachian Council of Governments (ACOG). This coordination supports a regional approach to addressing transportation issues that extend beyond jurisdictional boundaries, including commuter travel, freight movement, economic development, and system connectivity.

Together, these planning efforts provide a comprehensive foundation for Horizon 2050 and help ensure that transportation investments support both local priorities and broader regional transportation objectives.

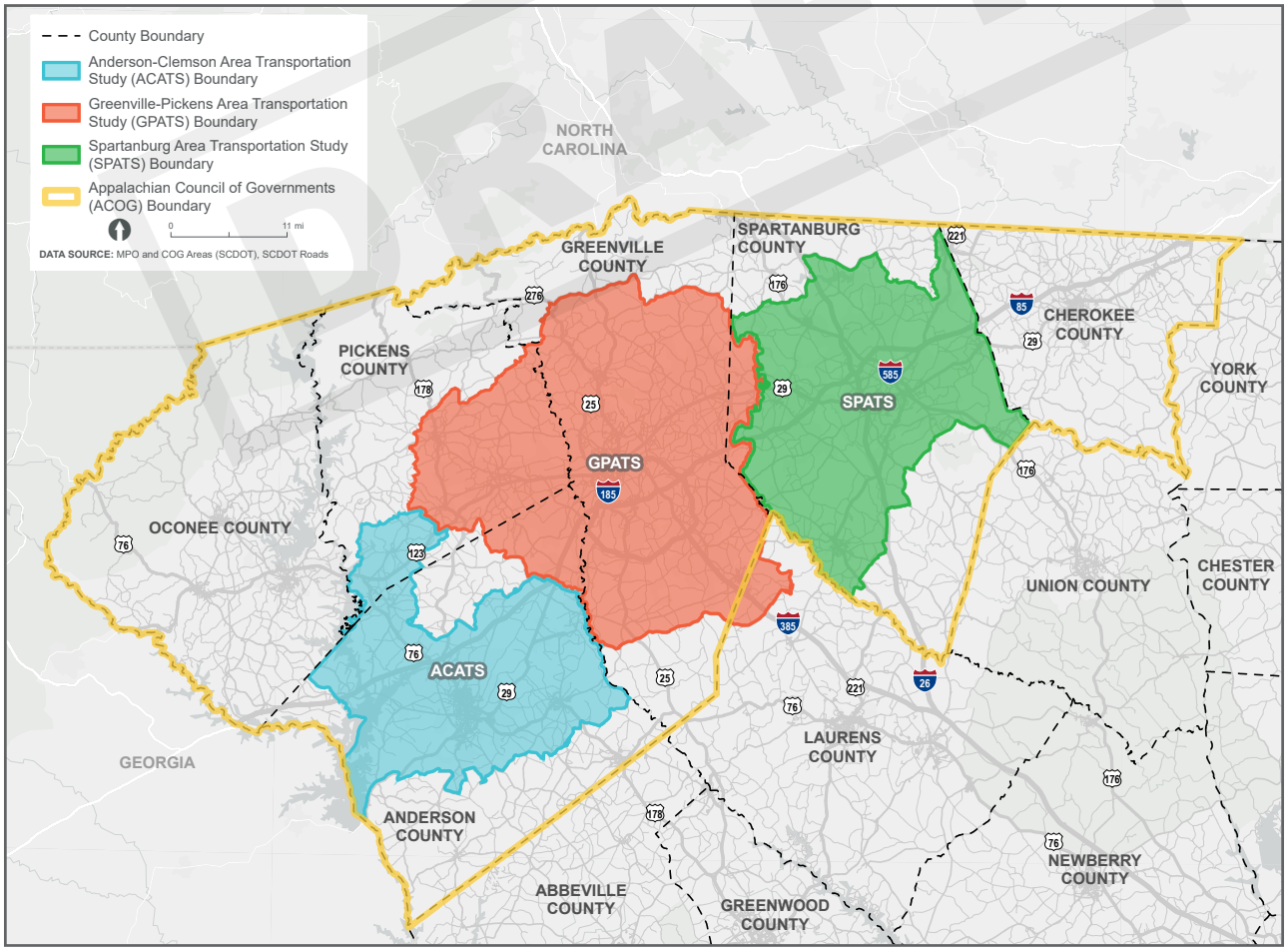


Figure 4 | Regional Planning Agencies

CHAPTER 2
Community Engagement

CHAPTER 2: COMMUNITY ENGAGEMENT

Meaningful public engagement is a cornerstone of the metropolitan transportation planning process and a critical component of the LRTP. Transportation investments affect residents, businesses, visitors, and communities throughout the GPATS region. As a result, GPATS placed a strong emphasis on gathering public input throughout plan development to ensure that the LRTP reflects local priorities, community values, and regional transportation needs.

Public involvement occurred throughout each phase of the planning process and was designed to be accessible, transparent, and inclusive. GPATS employed a variety of outreach methods to engage stakeholders, collect feedback, share project information, and demonstrate how public input influenced plan development. Through this collaborative approach, GPATS developed a transportation vision that balances technical analysis with community priorities and regional goals.



Attendee participating in meeting feedback activity



Meeting boards on display

The engagement process focused on three primary objectives:

01 Educating the public about the LRTP and its purpose

02 Identifying transportation needs, challenges, and opportunities throughout the region.

03 Incorporating public and stakeholder input into transportation investment decisions.

By maintaining an open and inclusive planning process, GPATS helped ensure that the *Horizon 2050 LRTP* reflects the diverse perspectives of the communities it serves.

Communication Tools & Tactics

To reach a broad audience across the GPATS planning area, the project team implemented a comprehensive engagement strategy that combined traditional outreach methods with modern digital communication tools. This approach provided multiple opportunities for residents, stakeholders, elected officials, businesses, transportation partners, and community organizations to participate in the planning process.

Recognizing that no single outreach method reaches every audience, GPATS used a variety of engagement techniques to encourage participation and collect meaningful feedback. These activities were designed to meet residents where they live, work, and travel while providing accessible opportunities for involvement both in person and online. A Public Engagement Plan (PEP) was developed to help outline and guide public involvement activities through the LRTP Planning process.

Consistent with the procedures and principles outlined in the GPATS Public Participation Plan (PPP) and federal public involvement requirements, the outreach program emphasized early, continuous, and meaningful public engagement. The project team employed a range of tools identified in the PPP, including public meetings, stakeholder coordination, agency consultation, online engagement platforms, surveys, project website updates, social media outreach, and targeted communications. This multi-faceted approach helped ensure that planning information was widely available, participation opportunities were accessible to all interested parties, and public input was considered throughout the development of the LRTP in accordance with the federally approved planning process.

Together, these communication methods helped create a well-rounded and inclusive public engagement program that reached a diverse cross-section of the GPATS region.

ENGAGEMENT TOOLKIT

Digital Engagement

Digital tools allowed GPATS to share information and gather feedback from residents who may not have been able to attend traditional public meetings. Digital engagement activities included:

- Project web portal with updates and materials
- Two digital stakeholder meetings
- Online survey, questionnaire, and virtual public meetings
- Interactive mapping applications
- Social media outreach

In-Person Engagement

Face-to-face engagement remained an important element of the planning process and provided opportunities for direct dialogue between the public and the project team. Activities included:

- One public workshop
- 12 public information meetings
- One pop-up event at the Simpsonville Farmers Market
- Study Team and Policy Committee meeting updates

Targeted Outreach

Special emphasis was placed on engaging community groups and populations that have historically been underrepresented in transportation planning processes. Targeted outreach efforts included:

- Community-based organizations
- Underserved and underrepresented populations
- Partner agency coordination

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Meeting staff interacting with an attendee

LRTP Engagement Milestones

The development of the *Horizon 2050 LRTP* followed a structured engagement process that aligned with key planning milestones. Public input was collected throughout each phase of the project and used to inform technical analyses, evaluate alternatives, and develop final recommendations.

This phased approach allowed community feedback to evolve alongside the planning process, ensuring that stakeholder perspectives remained central to decision-making.

PHASE 1: VISIONING & NEEDS ASSESSMENT

The first phase of engagement focused on understanding how residents and stakeholders view the existing transportation system. Outreach activities were designed to identify transportation challenges, opportunities, and priorities that would ultimately guide development of the plan's vision and goals.

WHAT WE HEARD

- **Poor signal timing and overloaded intersections due to area growth**
- **Older, poorly configured or maintained roads are causing issues for all users**
- **Connectivity issues are making it harder to use alternative forms or transportation**
- **A need for system-level planning and regional connectivity**

Stakeholders and the public were provided with the opportunity to weigh in on transportation needs in an interactive mapping feature that allowed people to draw points, lines, and polygons to identify concerns and potential solutions.

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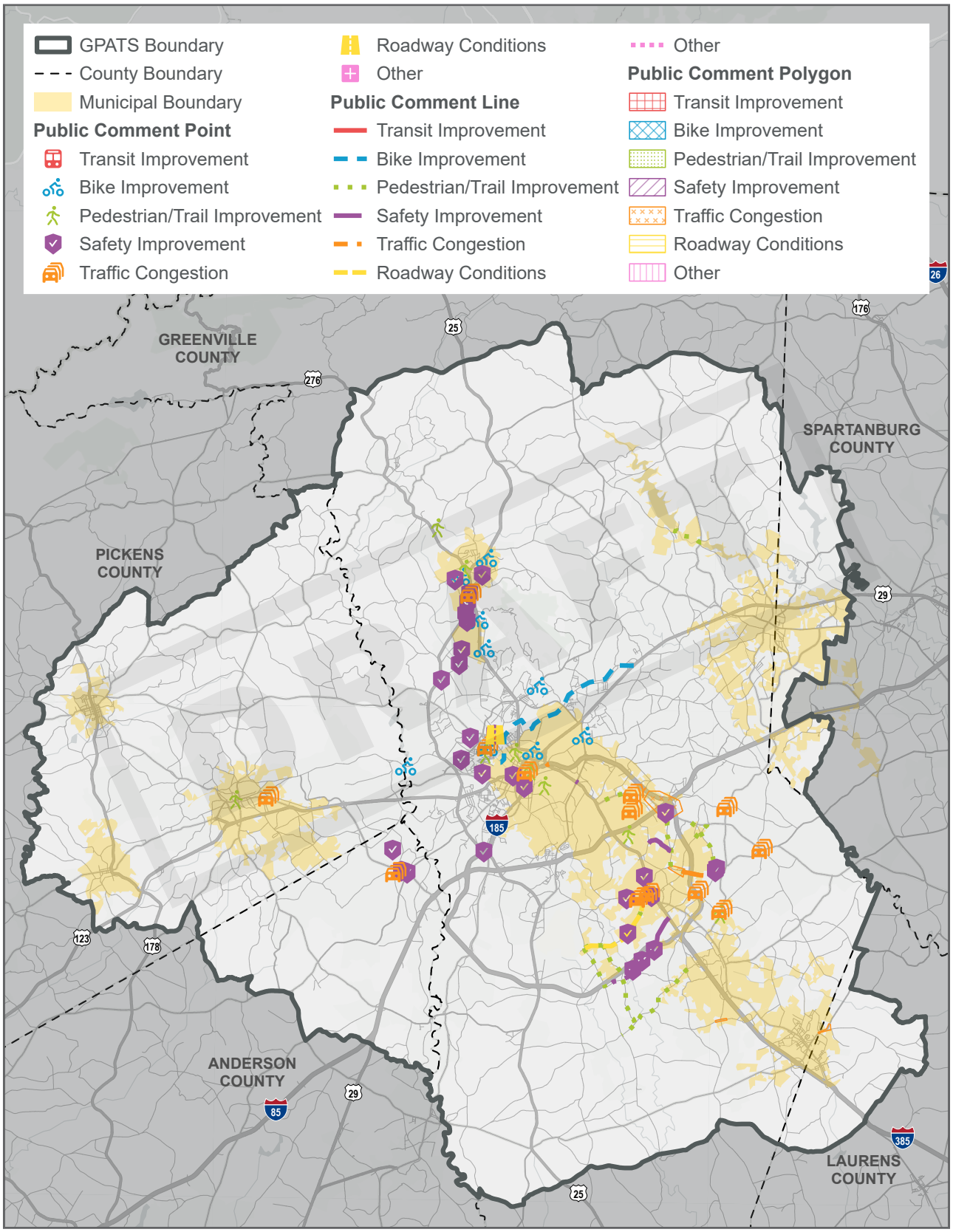


Figure 5 | Interactive Comment Map as of June 21, 2026

Feedback collected during this phase helped establish the foundation for the LRTP's guiding principles, goals, and performance measures. Some of top concerns identified using the interactive comment map included:

Safety concerns at specific intersections or along roadways

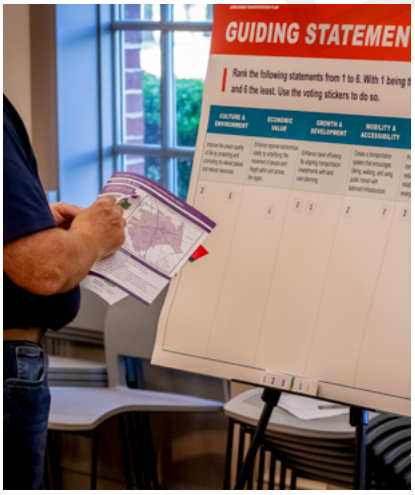
Traffic congestion during peak hours near schools or along major corridors

The need for more connected walking and biking infrastructure

The comments on this map were reviewed regularly and combined together to help develop some of the projects included in the draft project list used during Phase 2 outreach.









Various photos from Phase 1 of engagement

PHASE 2: ALTERNATIVES DEVELOPMENT & ASSESSMENT

During the second phase, GPATS translated identified needs into potential transportation strategies and improvement concepts. Public outreach focused on reviewing possible approaches for addressing regional transportation challenges and understanding community preferences regarding future transportation investments.

Public Input Focus

- Evaluating different transportation strategies
- Identifying priorities and tradeoffs
- Responding to emerging trends such as technology and travel behavior
- Refinement of project lists

WHAT WE HEARD



Interest in expanding the draft project list



Support for multimodal transportation and connectivity improvements



Emphasis on projects that address future growth and transportation needs



Community support for the Calhoun Memorial Highway, Faris Road, and Highway 153 projects

Feedback gathered during this phase helped refine transportation strategies and ensure that proposed improvements were consistent with community priorities and regional goals.



Community member reviewing meeting materials at the Simpsonville Farmers Market

Draft Plan & Project Development

The final step of engagement focused on presenting draft fiscally constrained recommendations and obtaining feedback on the proposed list of transportation investments and priorities. The public was given an opportunity to review the draft plan and provide comments before final adoption.

How Input Was Used

- Refinement of project lists
- Prioritization of investment categories
- Consideration of geographic distribution
- Adjustment of funding allocations

Input received during this phase helped shape the financially constrained project list and contributed directly to development of the final *Horizon 2050 LRTP*.

Throughout all phases of plan development, GPATS maintained ongoing communication with residents and stakeholders through project updates, presentations, digital engagement tools, and committee meetings. This transparent process demonstrated how community feedback informed transportation decisions and strengthened public confidence in the planning process.

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GPATS Committee Presentations

Ongoing coordination with GPATS committees and partner organizations was a key part of the planning process. The Policy Committee, Study Team, and other advisory groups were involved throughout plan development and provided technical guidance, policy direction, and regional insight.

The Policy Committee provided overall leadership and decision-making authority. The committee reviewed major milestones, including the existing conditions assessment, alternatives assessment, draft recommendations, and final plan adoption. Their input helped ensure that the plan reflected local priorities and regional policy goals.

The Study Team, which includes SCDOT, transit providers, and partner agencies, played an important role in reviewing data, evaluating alternatives, and refining recommendations. Study Team meetings created opportunities for detailed discussion of technical analysis, modeling results, and implementation considerations.

In addition to these formal meetings, GPATS staff provided briefings to local governments, stakeholder groups, and regional partners. These presentations offered updates on plan progress, gathered input, and supported consensus around key recommendations. Continued coordination with committees and stakeholders ensured that the plan reflects a unified regional perspective supported by both technical analysis and policy direction.

Project Milestone Presentations

- Existing Conditions Assessment – May 18, 2026
- Alternative Development and Assessment Workshop – July 9, 2026
- Prioritization Process and Draft Horizon 2050 Unranked Project List – August 10, 2026
- Horizon 2050 Plan – October 12, 2026



Project team members working with stakeholders during the prioritization workshop

CHAPTER 3
Goals, Objectives, & Performance Measures

CHAPTER 3: GOALS, OBJECTIVES, & PERFORMANCE MEASURES

The *Horizon 2050 LRTP* establishes a framework to guide transportation investment decisions through clearly defined goals, objectives, and performance measures. This framework supports a performance-based planning approach, ensuring that transportation strategies and projects align with regional priorities and produce measurable outcomes over time. Goals provide broad direction, objectives define specific outcomes, and performance measures are used to track progress and evaluate success.

This structure reflects both federal requirements and local priorities, allowing GPATS to balance national policy expectations with the unique needs and values of the region.



Attendees viewing GPATS meeting boards

OUR GUIDING STATEMENTS

Culture & Environment
Improve the area's quality of life by protecting and promoting its valued places and natural resources.

Growth & Development
Enhance travel efficiency by aligning transportation investments with land use planning.

Safety & Security
Promote a safe transportation system by reducing crashes, increasing reliability, and enhancing emergency response.

Economic Value
Enhance regional economical vitality by simplifying the movement of people and freight within and across the region.

Mobility & Accessibility
Create a transportation system that encourages biking, walking, and using public transit with balanced infrastructure.

Systems Preservation & Efficiency
Extend the lifespans of the transportation systems by promoting fiscal responsibility and prioritizing maintenance and operational efficiency.

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2050 LRTP Goals & Objectives

GUIDING STATEMENTS	OBJECTIVES INCLUDE LOOKING FOR PROJECTS THAT...
CULTURE & ENVIRONMENT	■ Create transportation connections that improve access for low-income populations. ■ Promote transportation improvements that minimize impacts to floodplains and wetlands.
GROWTH & DEVELOPMENT	■ Plan and implement transportation infrastructure that fits within neighborhood and business district context.
SAFETY & SECURITY	■ Support user safety.
ECONOMIC VALUE	■ Support freight movement along primary freight corridors. ■ Financially viable.
MOBILITY & ACCESSIBILITY	■ Limit peak hour congestion through strategies that reflect corridor function and land use context. ■ Improve the reliability of the multimodal transportation system so people and goods can reach key destinations predictably, without prioritizing roadway expansion as the primary congestion solution. ■ Promote projects listed in the CMP or Regional Mobility Program (RMP). ■ Improve the safety, comfort, and connectivity of bicycle and pedestrian networks. ■ Improve transit reliability and service frequency.
SYSTEMS PRESERVATION & EFFICIENCY	■ Maintain functionally classified pavement in Fair or Good condition. ■ Use TSMO strategies and improvements to improve system efficiency and reliability.

Table 1 | LRTP Objectives

ALIGNMENT WITH STATE GOALS

Horizon 2050's goals and objectives have been designed to harmonize with SCDOT goal areas and SCDOT's Planning Directive 15.[1]

SCDOT's Momentum 2050 highlights the following Statewide goals and objectives:

- Continue system recovery
- Support freight movement
- Address urban and rural mobility
- Deepen multimodal partnerships

Additionally, SCDOT's Planning Directive 15 (PD 15) states that MPOs and COGs must consider the following:

- Financial viability
- Public safety
- Potential for economic development
- Traffic volume and congestion
- Truck traffic
- The pavement quality index
- Environmental impact
- Alternative transportation solutions
- Consistency with local land use plans

[1] MPO-COG_Score_Ranking_Directive.pdf

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GPATS utilized performance metrics outlined in SC Act 114 and PD 15 when evaluating whether a project successfully moved the needle towards goals outlined by both GPATS and the state (**See Table 3**).

It is important to note that GPATS held robust public engagement surrounding this plan's goal areas, including having the public identify which Goals/Guiding Statements were most important to them. Stakeholders and the public were asked to rank GPATS Guiding Statements from one to six, with one being the most important to them and six being the least important to them. As shown in **Figure 10**, when all participants were considered across the GPATS Study Area, the overall ranking of importance was identified in the following order:

SAFETY & SECURITY | GROWTH & DEVELOPMENT | MOBILITY & ACCESSIBILITY | CULTURE & ENVIRONMENT | SYSTEMS PRESERVATION & EFFICIENCY | ECONOMIC VALUE

(1= MOST IMPORTANT; 6= LEAST IMPORTANT)	1	2	3	4	5	6
GREER						
GREENVILLE						
TRAVELERS REST						
SIMPSONVILLE						
EASLEY						
POWDERSVILLE						
VIRTUAL						
OVERALL RANKING						

Table 2 | Guiding Statement Ranking Activity Results

These results drove GPATS to weight prioritization in concurrence with these scores, resulting with performance measures in the Safety and Security, Growth and Development, and Mobility and Accessibility categories carrying the most weight. This resulted in some weights not directly matching up with those outlined in PD 15.

Performance metrics used in the *Horizon 2050 LRTP* are included below, and more on prioritization can be found in **Appendix B: Project Prioritization & Scoring Tool**. These weights were then run by SCDOT for their approval, which resulted in adjustments being made at SCDOT's request. Once a weights supported by SCDOT were identified, the projects were prioritized against the criteria.

HORIZON 2050 LRTP PERFORMANCE METRICS

GUIDING STATEMENTS	PERFORMANCE METRIC
CULTURE & ENVIRONMENT	■ Project is located in a **low-income census tract.** ■ Project impacts a **floodplain or wetland.**
GROWTH & DEVELOPMENT	■ **Impacts to Built Environment** for neighborhoods and business districts.
SAFETY & SECURITY	■ Safety is the **purpose** of the project. ■ Project Includes **Safety Improvements.** ■ Project is in a **High Crash location.**
ECONOMIC VALUE	■ Percentage of traffic in corridor that is **Truck traffic.** ■ **Overall project cost.**
MOBILITY & ACCESSIBILITY	■ **Existing/Future estimate of Level of Service (LOS)** based on V/C ratio. ■ **Travel Reliability** on the National Highway System (NHS). ■ **Project is identified in the CMP.** ■ **Project is located on a RMP corridor.** ■ **Bicycle and pedestrian infrastructure** included in project. ■ Presence of an **existing bus route.** ■ **Route frequency** in project area.
SYSTEMS PRESERVATION & EFFICIENCY	■ Project would improve **Pavement Condition.** ■ Project improves **TSMO infrastructure.**

Table 3 | LRTP Performance Metrics

PD 15 included the consideration of a financial viability criterion. The *Horizon 2050 LRTP* considered if a project was anticipated to cost more than one year of a particular mode's allocated funding and awarded points accordingly. Financial constraint was then considered the plan's final financial viability screening process. Projects that were not ranked high enough to be included within the fiscally constrained plan were added to the vision list. More information about prioritization and financial constraint can be found in **Chapters 7–9**.

CHAPTER 4
Regional Profile

CHAPTER 4: REGIONAL PROFILE

The GPATS region encompasses a diverse mix of urban, suburban, and rural environments, including the municipalities of Greenville, Greer, Mauldin, Simpsonville, Easley, Travelers Rest, Pickens, Liberty, and Fountain Inn. These communities collectively form a regional system of activity centers, employment hubs, and residential areas that generate significant daily travel demand.

The City of Greenville functions as the primary urban core, serving as a regional hub for employment, commerce, healthcare, and tourism. Surrounding municipalities have smaller urban cores offering neighborhood scale employment, commerce, and health care and have experienced rapid suburban growth and increasing development intensity. Greer plays a critical role as a logistics and industrial hub, anchored by the Greenville-Spartanburg International Airport and the Inland Port, while the outlying communities (Mauldin, Simpsonville, and Fountain Inn) continue to absorb substantial residential and commercial growth.

The region's transportation network is anchored by I-85, a major freight and commuter corridor connecting the area to Atlanta, Charlotte, and the broader Southeast. Additional regional connectivity is provided by I-385 and a network of US and state highways that support intercity and intra-regional travel.

Land use patterns across the GPATS region reflect a typical metropolitan structure characterized by a dense urban core transitioning outward to suburban development and lower-density rural areas. These patterns significantly influence travel behavior, trip length, and modal choice, reinforcing a strong reliance on automobiles while also creating opportunities for multimodal investment in higher-density areas.

Population Trends

The GPATS region has a population of approximately 665,366 and has experienced sustained population growth over the past two decades, driven by strong economic conditions, employment opportunities, and quality of life factors. Municipal-level trends indicate particularly rapid growth in suburban communities such as Fountain Inn, Simpsonville, Greer, and Travelers Rest, where residential development has expanded in response to regional demand.

Easley and Travelers Rest have also experienced notable population increases tied to housing development, downtown revitalization, and proximity to major employment centers. Conversely, some smaller municipalities, such as Liberty, have experienced more stable or modest growth patterns.

Population growth has primarily occurred along major transportation corridors, particularly I-85, I-385, and US 123, reinforcing corridor-based development patterns and increasing pressure on the regional transportation system. The GPATS region grew by approximately **85,000 residents over the past decade**. This represents ~14–15% total growth, or about 1.3–1.5% annually. For more information, please reference the Existing Conditions Assessment.

YEAR	EST. POPULATION	CHANGE	% GROWTH
2013	~580,000	-	-
2018	~625,000	+45,000	+7.8%
2023	~665,366	+40,000	+6.5%
2013–2023	-	+85,000	+14.5%

Table 4 | Regional Growth Summary (ACS)

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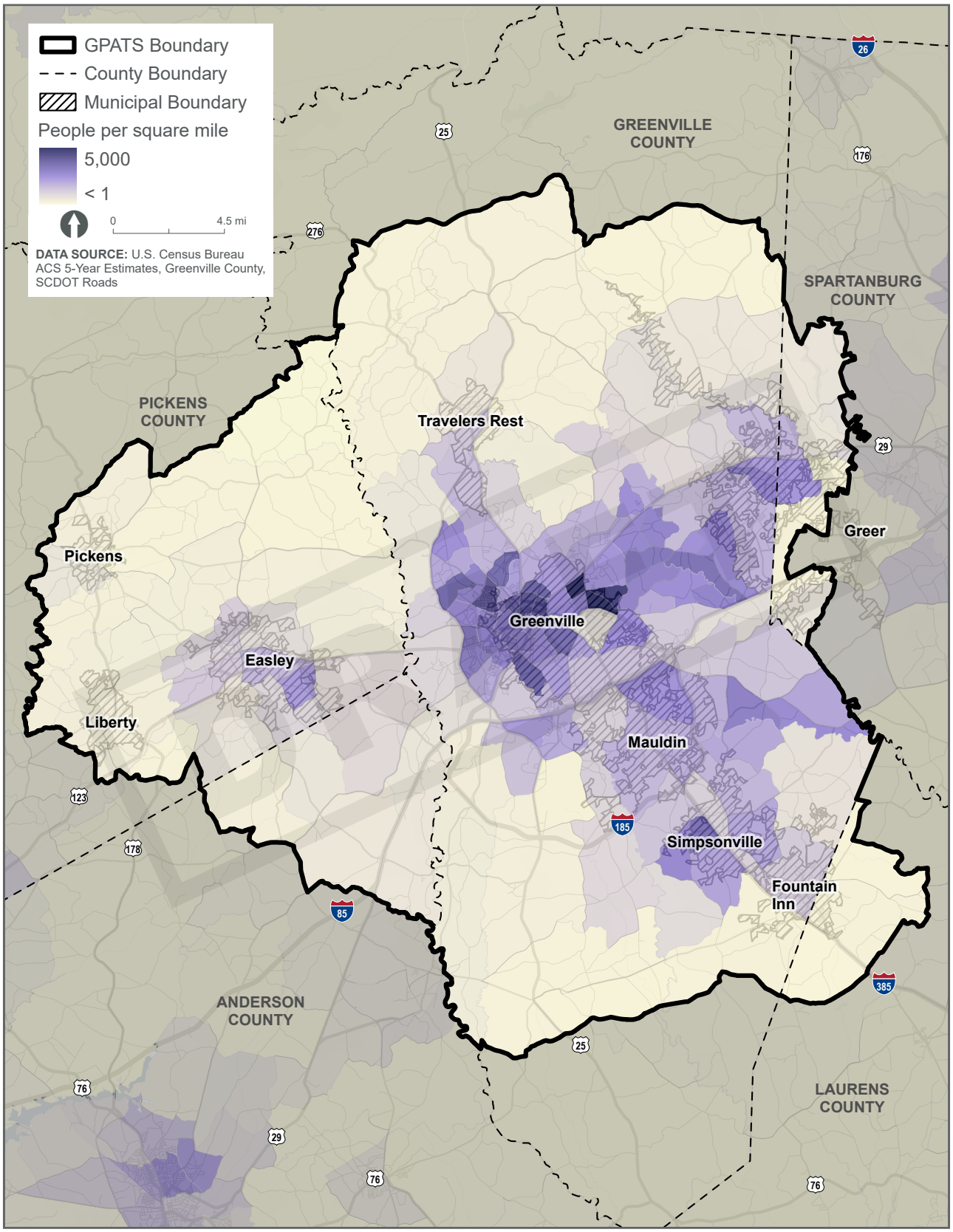


Figure 6 | Population Density (2024 ACS)

Age & Household Characteristics

The GPATS study area's population is relatively young and economically active, with strong representation across working-age cohorts. Millennials (27–44) and Generation Z (9–26) together make up nearly 47% of the population.

At the same time, the region has a growing older adult population, with approximately 18% of residents age 65 or older, contributing to an increasing demand for accessible infrastructure, healthcare access, and specialized transportation services.

The population is evenly split by gender (approximately 51.2% female and 48.8% male), reflecting balanced demographic conditions. For more information, please reference the Existing Conditions Assessment.

These characteristics have important implications for transportation planning, particularly in:

- Accommodating commuters and workforce travel
- Expanding age-friendly and accessible mobility options
- Supporting multimodal travel choices for different life stages

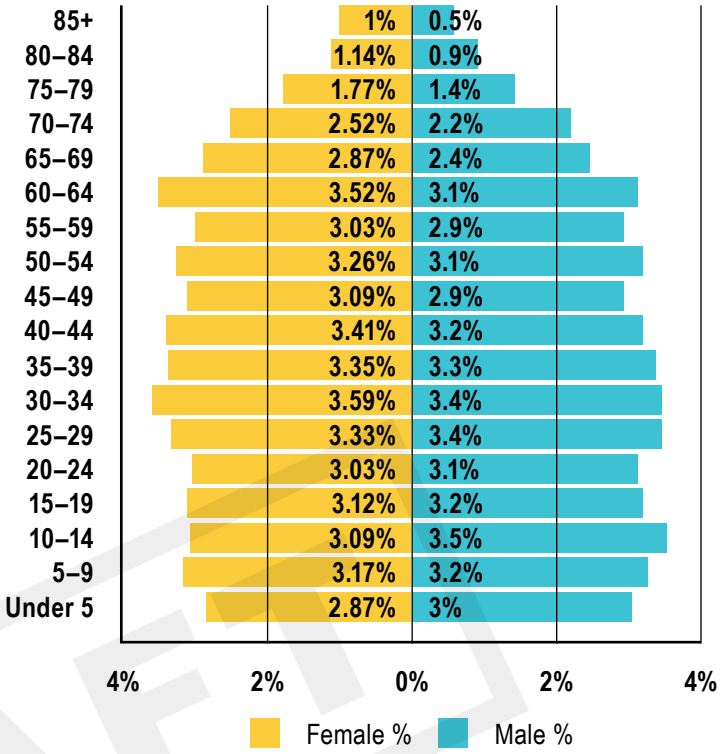


Figure 7 | GPATS Population by Age & Gender (2024 ACS)

GENERATION	AGES	%
Alpha	0–8	10.7%
Generation Z	9–26	22.5%
Millennials	27–44	24.3%
Generation X	45–60	19.4%
Baby Boomers	61–79	18.9%
Greatest Generation	80+	4.2%

Table 5 | Age Breakdown (2025 Esri)

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Economic & Employment Context

The GPATS region serves as a major economic hub within the Upstate, supporting approximately 350,580 jobs across a diverse mix of industries. Key sectors include healthcare, manufacturing, retail, and professional services, reflecting both a strong service economy and a significant industrial base.

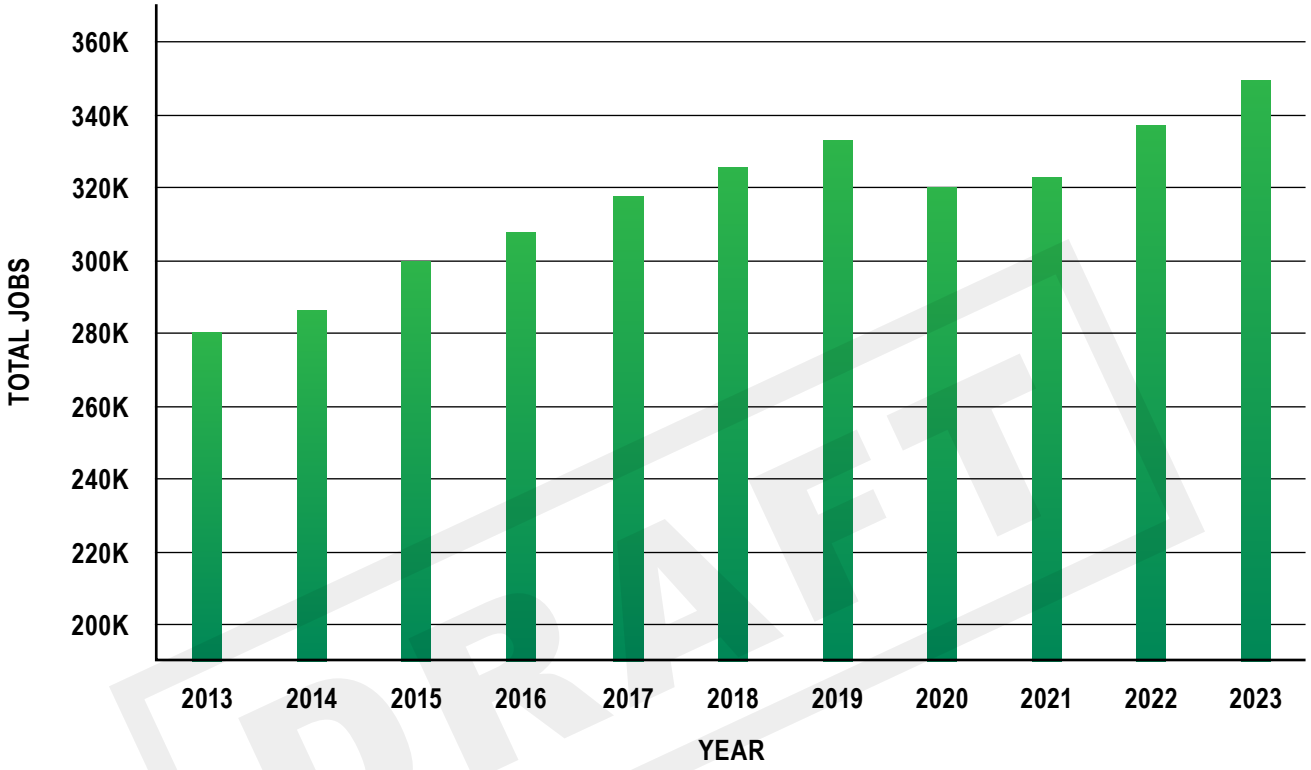


Figure 8 | Employment Growth (2024 ACS)

The region is a net employment center, with more jobs than resident workers and a daily inflow of approximately 51,500 commuters from surrounding areas. This pattern highlights the importance of regional connectivity and reinforces the need for efficient transportation corridors. Major employers such as BMW, Prisma Health, Michelin, and regional educational institutions anchor the local economy and generate substantial travel demand.

The combination of strong employment growth, significant inbound commuting, and high single-occupancy vehicle travel indicates that continued roadway expansion alone may not be sufficient to meet future mobility needs. Increasing opportunities for mode shift through transit, bicycle and pedestrian infrastructure, transportation demand management programs, and employer-supported commuting initiatives can help reduce congestion and improve system resiliency. Additionally, the growing share of white-collar and professional occupations may create opportunities for remote and hybrid work arrangements, providing another tool to manage travel demand and support long-term mobility goals.

For more information, please reference the Existing Conditions Assessment.

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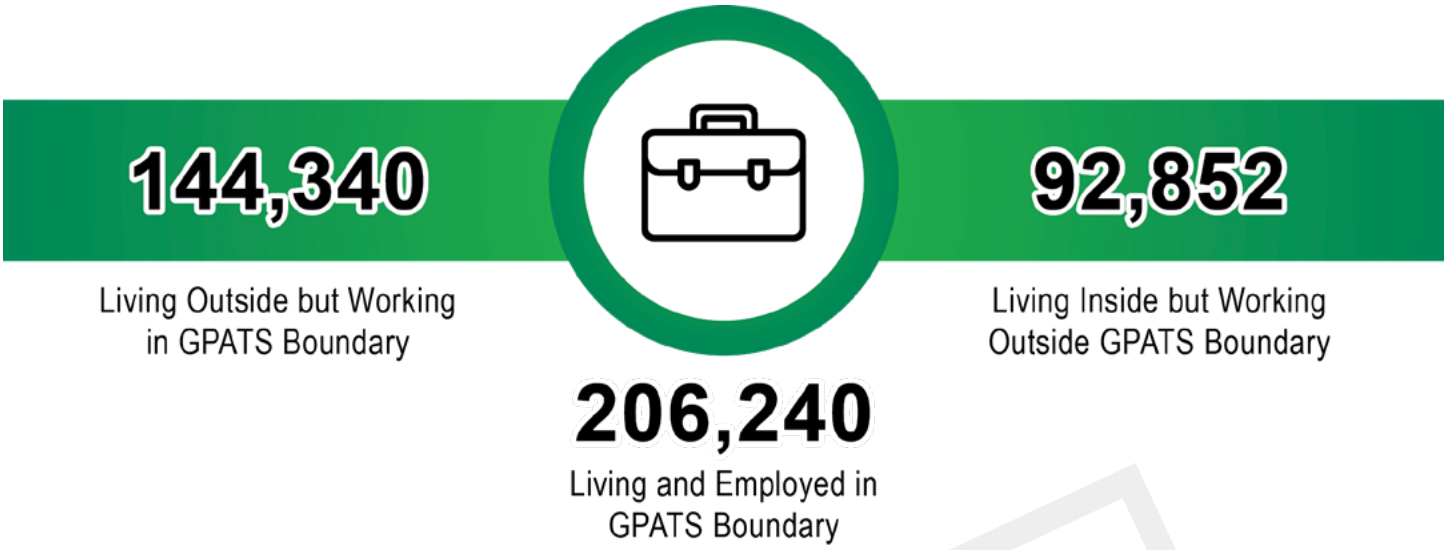


Figure 9 | Commute Trends (US Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002–2023))

The GPATS Study Area's median household income is approximately $65,844, with about 12% of households living below the poverty line, underscoring the need for affordable and equitable transportation options. **Figure 10** shows a clear geographic variation in income levels throughout the region. Higher-income areas are concentrated around portions of Mauldin, Simpsonville, Greer, and southeastern Greenville County, where many census tracts are shaded dark blue or purple. In contrast, lower-income areas are more prevalent in parts of central Greenville, Easley, Pickens, and rural portions of the study area, where lighter colors are more common.

The income patterns revealed by the map can help understand socioeconomic differences across the region and support equitable transportation investment, accessibility planning, and community engagement efforts.

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COMMUTING TRENDS (2024 ACS)

76% Drove Alone

14% Worked at Home

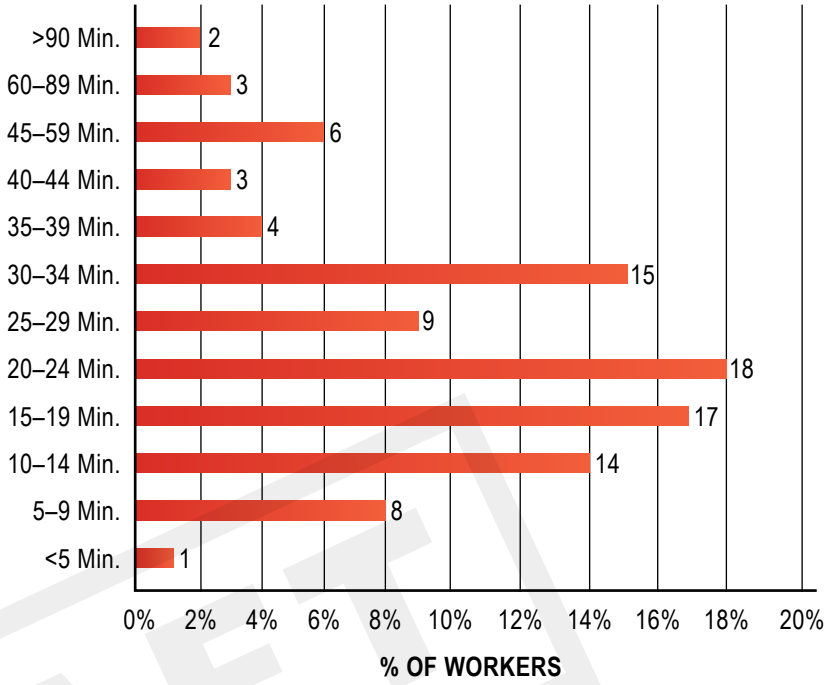
8% Carpooled

1% Walked

0.2% Public Transportation

0.1% Biked

TRAVEL TIME TO WORK (2024 ACS)



EDUCATION (2024 ACS)

10% Pop. Age 25+: 9th–12th No Diploma

24% Pop. Age 25+: High School Diploma

18% Pop. Age 25+: Some College/ No Degree

10% Pop. Age 25+: Associate's Degree

38% Pop. Age 25+: Bachelor's Degree+

EMPLOYMENT (2025 ESRI)

66% White Collar

22% Blue Collar

12% Services

4.3% Unemployment Rate

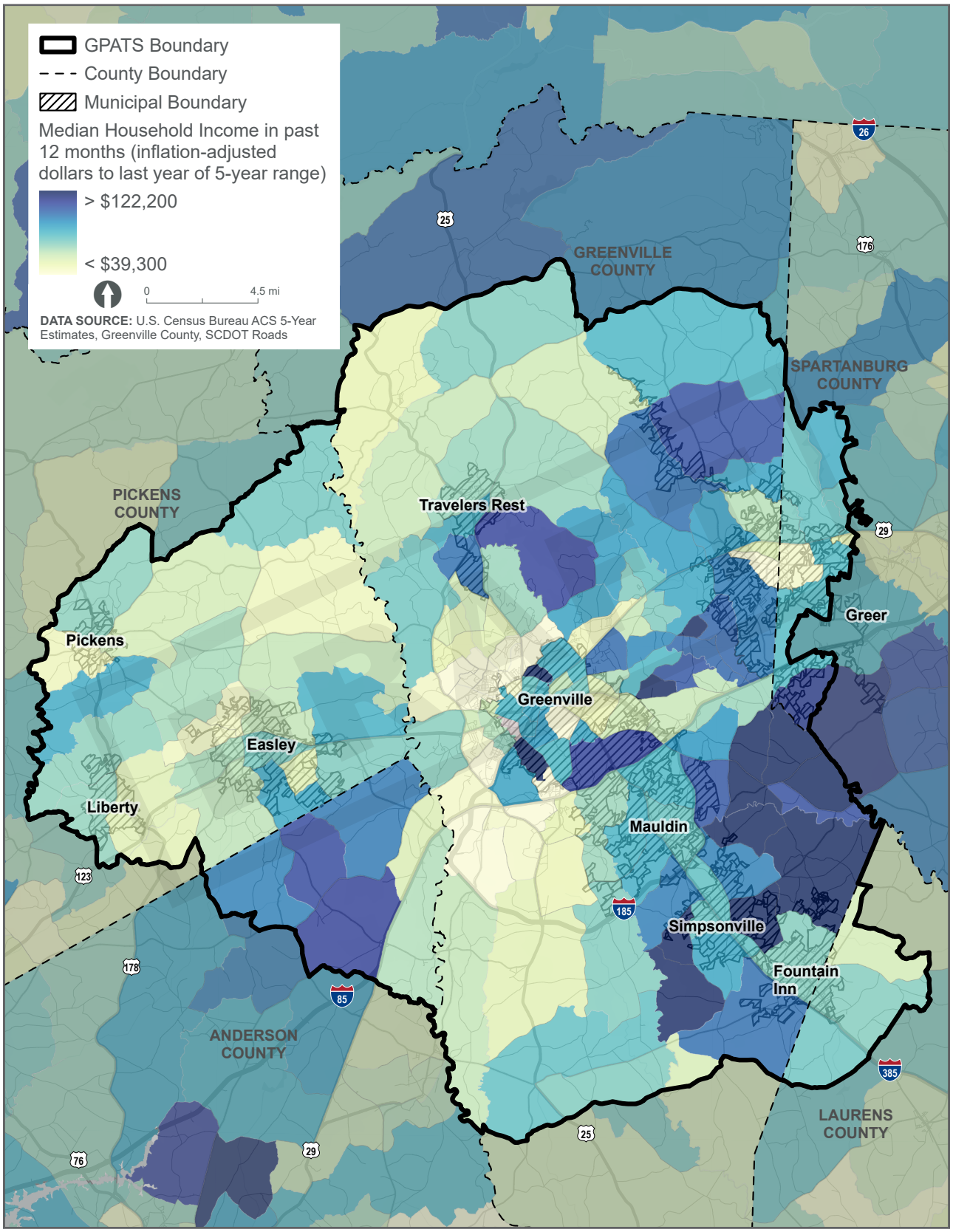


Figure 10 | Median Household Income

CHAPTER 5
Current System Performance

CHAPTER 5: CURRENT SYSTEM PERFORMANCE

Understanding current system performance is a critical step in developing the *Horizon 2050 LRTP.* This section provides a snapshot of how the existing multimodal transportation system is functioning today across the GPATS area. It establishes a baseline against which future needs, trends, and investments can be evaluated.

Transportation Network

The GPATS transportation network consists of an interconnected system of roadways, transit services, bicycle and pedestrian facilities, freight corridors, and supporting infrastructure that collectively serve the region's mobility needs. The roadway system includes approximately 309 centerline miles, spanning interstates, principal arterials, minor arterials, collectors, and local roads. Key facilities such as I-85, I-385, US 25, and US 29 serve as regional mobility spines, accommodating both passenger and freight travel.

FUNCTIONAL CLASSIFICATION	DESCRIPTION
Interstates	Designed to provide high mobility across regions of the country.
Principal Arterials	Designed to provide high mobility to major metropolitan areas, provide intra-area travel, and allow for mobility to adjacent land uses.
Minor Arterials	Designed for moderate length trips, serve geographies smaller than principal arterials, and provide direct connections to the higher arterial system.
Major/Minor Collectors	Designed to collect traffic from local roads and deliver it to the nearest arterial. Collectors do not accommodate long-distance travel. Collector roads outside urban areas are further classified into "major collector" and "minor collector" designations.
Local Roads	Designed to provide access to neighborhoods, farms, residences, businesses and abutting properties in an area.

Table 6 | Functional Classifications (SC Roadway Design Manual, 2021)

The National Highway System (NHS) is a network of roadways designated by the Federal Highway Administration as critical to the nation's economy, mobility, and defense. Within the GPATS region, the NHS includes Interstate facilities and other principal arterial roadways that provide regional and interstate connectivity, facilitate freight movement, and connect major activity centers. These corridors carry a significant share of passenger and commercial traffic and are essential to supporting economic development, emergency response, and access to key destinations. Because of their importance, NHS routes are subject to federal performance monitoring requirements and are eligible for specialized federal funding programs that support the preservation and improvement of critical transportation infrastructure.

Traffic demand across the network continues to reflect the region's growth patterns, with higher volumes concentrated in urbanized areas and along major commuting corridors. Current Annual Average Daily Traffic (AADT) volumes range up to 142,800 with the highest volumes observed along I-85. This pattern highlights the importance of maintaining capacity and reliability along critical corridors.

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In addition to roadway infrastructure, the multimodal network includes 204 miles of bicycle facilities, 1,119 miles of sidewalks and shared-use paths, and transit services operated by Greenlink covering almost 3,000 daily fixed route revenue miles.[2] The network's overall connectivity varies by geography, with more robust multimodal options in urban centers and more limited access in rural areas.

Overall, the GPATS transportation network remains heavily oriented around the interstate and arterial roadway system, reflecting the region's historic growth and travel patterns. Interstate facilities comprise approximately 126 of the network's 309 centerline miles, underscoring the critical role of I-85 and I-385 in supporting regional mobility, commuting, and freight movement. While the region has expanded its multimodal infrastructure through investments in bicycle, pedestrian, and transit facilities, travel demand remains concentrated along major highway corridors, indicating a continued reliance on automobile travel for most trips.

FACILITY TYPE	EXTENT
Roadway Centerline	183 Miles
Interstate	126 Miles
Bicycle Facilities	204 Miles
Sidewalk & Shared Use Path	1,119 Miles
Transit Routes	12 Routes

Table 7 | Transportation Network Inventory (SCDOT Road Data)

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[2] City of Greenville. Quantity of Service. 2026. https://www.greenvillesc.gov/2722/Quantity-of-Service

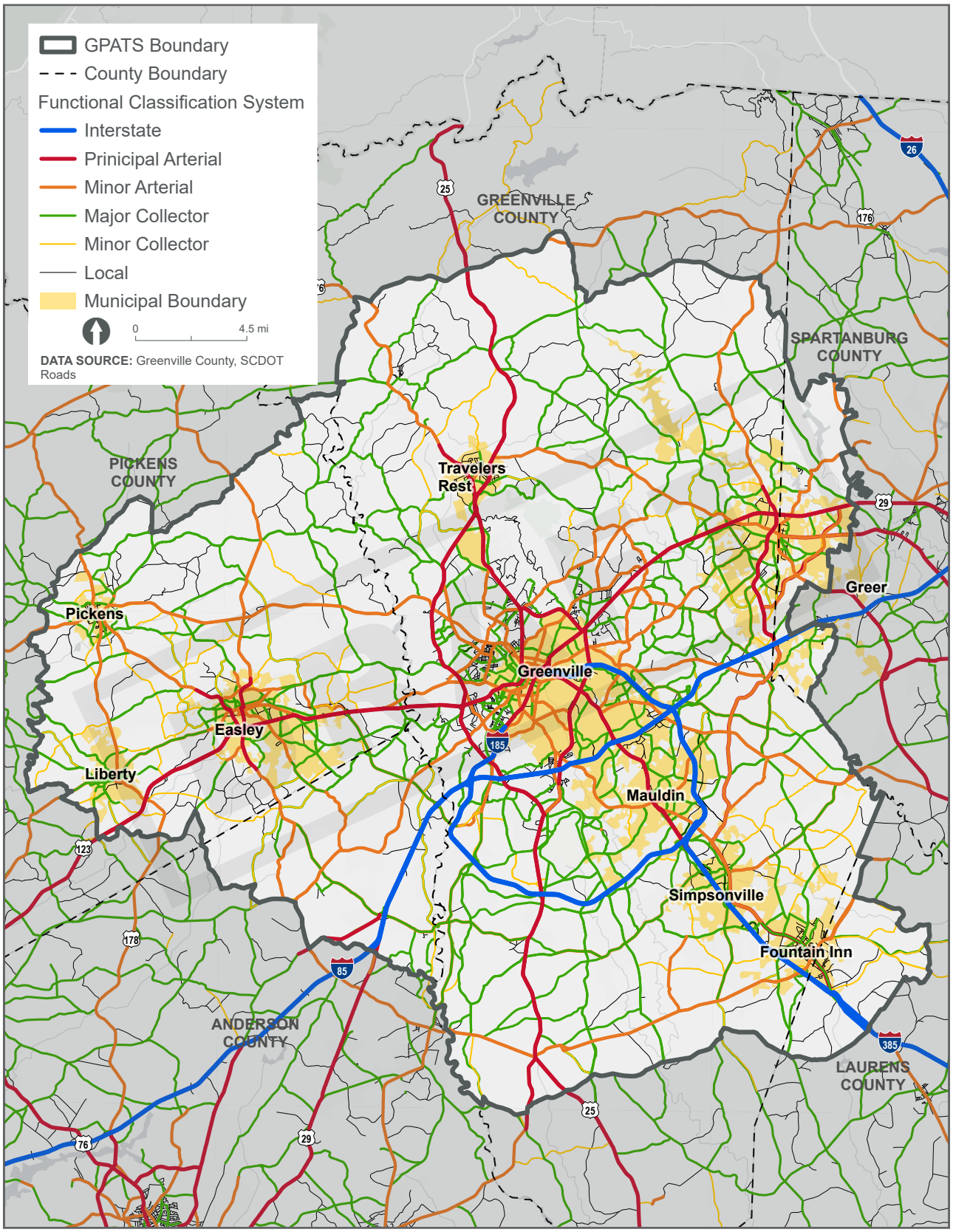


Figure 11 | GPATS Network Functional Classification

BIKE & PEDESTRIAN

Bicycle and pedestrian infrastructure in the region include sidewalk networks, on-street bicycle lanes, greenways, and shared-use trails designed to improve safety and provide alternatives to automobile travel. Many of these facilities are concentrated in urban areas such as Greenville, Travelers Rest, Easley, and Pickens where higher population densities support walking and cycling. Trails and multi-use paths often connect residential neighborhoods with parks, schools, and downtown areas. Some corridors include wide shared-use paths that accommodate both cyclists and pedestrians, while others provide striped or protected bicycle lanes along major streets.

In addition to building new infrastructure, GPATS works with local governments to conduct planning studies and develop bicycle and pedestrian master plans for individual communities. These plans identify gaps in existing networks and recommend improvements such as safer intersections, improved crosswalks, and better connectivity between neighborhoods and activity centers.

Overall, bicycle and pedestrian facilities in the GPATS region are still developing but are becoming a larger focus of regional transportation planning. The region's continued growth, increasing travel demand, and reliance on single-occupancy vehicle travel highlight the need for a more balanced transportation system that provides safe and convenient travel options for people of all ages and abilities. Investments in bicycle and pedestrian infrastructure can help reduce pressure on congested roadways, support first- and last-mile connections to transit, and create more livable and vibrant communities. As communities throughout the region continue to expand, establishing a connected active transportation network will be critical to meeting future mobility needs, improving safety outcomes, and providing residents with additional transportation choices beyond the automobile.

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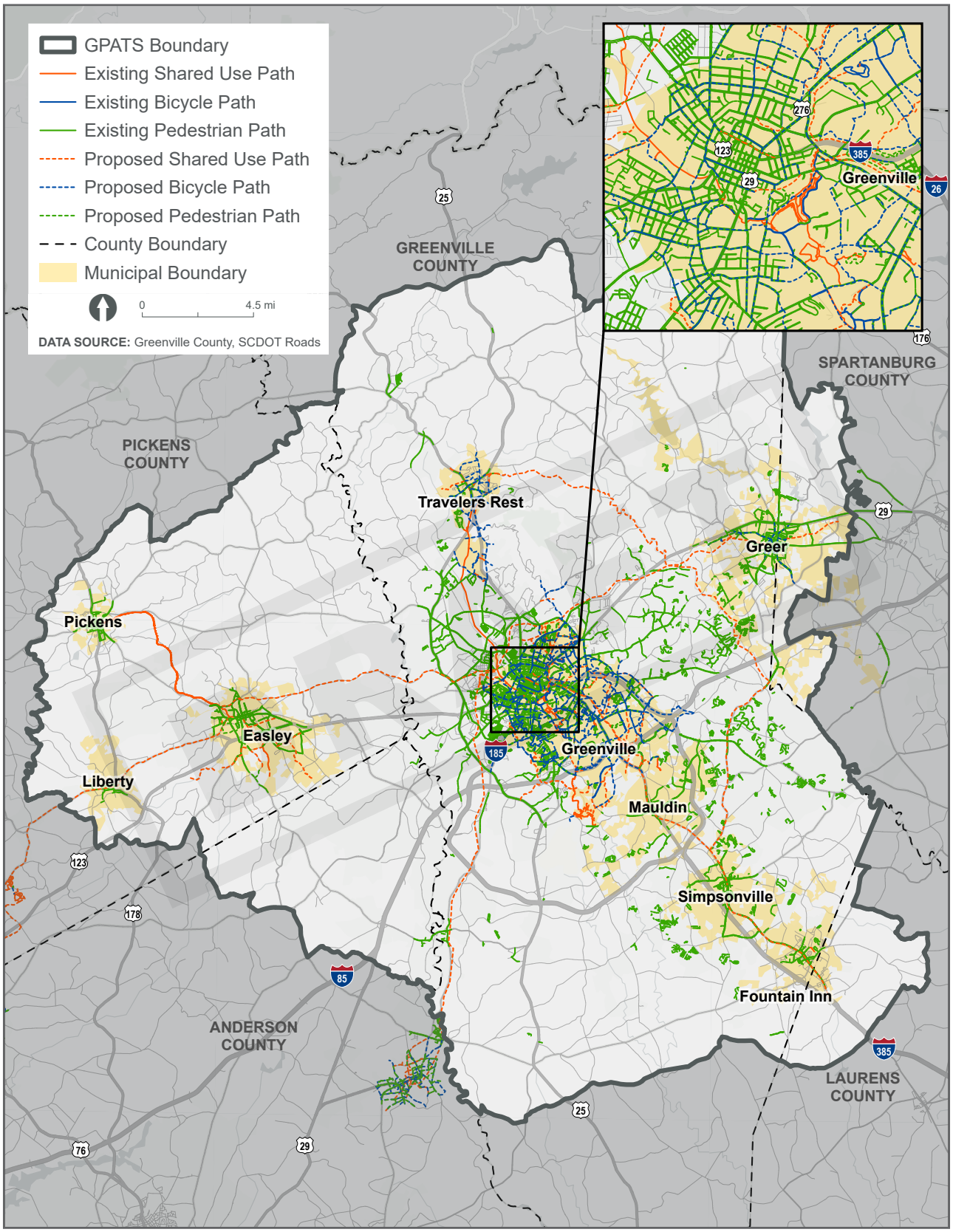


Figure 12 | Existing and Proposed Bicycle & Pedestrian Projects within GPATS Study Area

PUBLIC TRANSPORTATION

Public transportation is expanding in the GPATS region. It currently operates as a local bus service, with service between Greenville-Spartanburg International Airport (GSP) Airport and downtown Greenville scheduled to begin in 2028.

The primary transit provider in the GPATS area is the Greenville Transit Authority (GTA), commonly known as Greenlink, which operates a network of fixed-route buses and accompanying paratransit service throughout much of the City of Greenville and into Greenville County and the Golden Strip. Buses typically radiate from a central hub in downtown Greenville, connecting residential neighborhoods to employment centers, shopping areas, and medical facilities. Two additional transfer stops are located at Haywood Mall and in Mauldin to support transfers from the connector routes to main routes leading to downtown. Service operates Monday to Saturday from 5:30 a.m. to 10:30 p.m., with buses arriving every 60 to 70 minutes. Six routes operate every 30 to 35 minutes during peak hours, with two additional routes added in 2027. While service is not currently offered on Sundays, Greenlink continues to evaluate future opportunities based on community demand.

Although not within the GPATS region, Clemson Area Transit (CATbus) and Clemson University (Tiger Transit) operate near the region. Clemson's Tiger Transit links the university, City of Clemson, and City of Easley to the City of Greenville. CATbus provides bus service linking the City of Clemson, nearby towns, and Clemson University. CATbus was in the GPATS study area until 2023, when, in response to the 2020 census, it became part of the Anderson-Clemson Area Transportation Study (ACATS), previously known as Anderson Area Transportation Study (ANATS). CATbus will remain in the GPATS TIP until all previously programmed GPATS funding is fully spent, at which time it will no longer receive funding from GPATS.

The existing transit network provides an important mobility option for residents, students, older adults, and individuals who may not have access to a personal vehicle. Greenlink is working to reduce the region's reliance on automobile travel by improving service frequencies during peak travel times and expanding geographic coverage, as stated in the Greenlink 2026 Transit Development Plan. The integration of modern technology — such as accurate GPS bus tracking, digital arrival-time displays at stops, and transit signal priority within the City of Greenville — strengthens service reliability, improves communication with riders, and enhances on-time performance across the system. As these tools expand in Greenville County and other municipalities, they will help build a more dependable system, increase public trust, and encourage greater transit use. Investment in public transportation is needed to accommodate future travel demand driven by strong population growth, increasing employment concentrations, and high automobile dependence.

Looking forward, enhancing public transportation will play an important role in providing additional travel choices, improving access to jobs and services, and reducing congestion on key commuter corridors. Opportunities may include expanding service coverage, increasing service frequency on high-demand routes, offering varied service options such as Park-N-Rides, improving connections between residential areas and major employment centers, and strengthening links among transit, walking, and bicycling networks. As the Upstate continues to grow and diversify, investments in transit will help support a more balanced and resilient transportation system while improving mobility for both existing and future residents.

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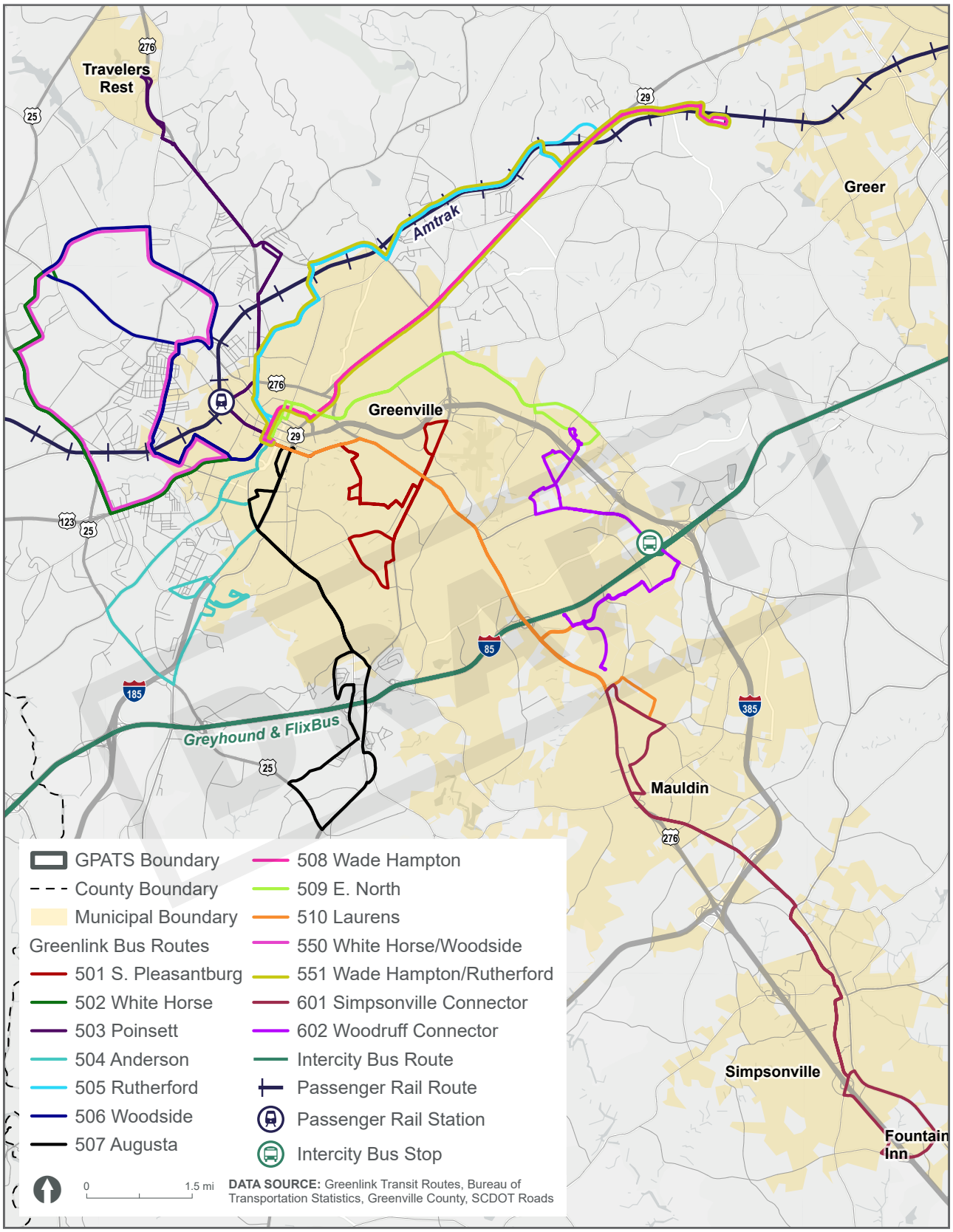


Figure 13 | Greenlink Transit Routes

FREIGHT

Freight transportation is a critical component of the GPATS transportation system and serves as a foundation of the region's economic competitiveness. The movement of goods supports major employment sectors including advanced manufacturing, logistics, warehousing, distribution, and retail trade. The GPATS region benefits from its strategic location within the Upstate of South Carolina, providing access to national markets through an extensive network of highways, rail corridors, airports, and intermodal freight facilities.

The GPATS area is located within the Greenville-Spartanburg Freight Analysis Framework (FAF) district, which encompasses much of the Upstate region. The FAF is used by the US Department of Transportation to analyze freight flows, estimate commodity movements, and forecast future freight demand across all major transportation modes. As a result, the freight system in the GPATS region plays an important role not only in serving local businesses but also in supporting statewide, national, and international supply chains.

Highway Freight Network

Trucking is the dominant mode of freight transportation within the GPATS region. Interstate 85 serves as the region's primary freight corridor and is part of the National Highway Freight Network (NHFN), connecting the Upstate to major markets throughout the Southeast, including Atlanta, Charlotte, and the Port of Charleston. Other important freight routes include I-385, US 25, US 276, and US 29, which provide access to industrial centers, distribution facilities, and regional commercial areas.

The National Highway Freight Network within the GPATS region includes designated Primary Highway Freight System (PHFS) routes, Non-PHFS routes, and Critical Urban Freight Corridors (CUFCs) and Critical Rural Freight Corridors (CRFCs) that provide first- and last-mile connections between freight generators and the broader interstate system. These facilities carry significant volumes of truck traffic and are essential to maintaining efficient freight movement throughout the region. The freight network map illustrates how these corridors connect major employment centers, industrial parks, and freight facilities across Greenville County and the surrounding area.

Rail & Intermodal Freight

Rail freight continues to play an important role in supporting the region's manufacturing and logistics industries. Norfolk Southern operates the primary freight rail corridor through the GPATS region, providing connections to national rail networks and major freight markets. The rail corridor serves several industrial customers and supports the movement of raw materials, finished goods, and bulk commodities.

A key regional freight asset is the South Carolina Inland Port Greer, located just east of the GPATS planning area. The inland port provides a direct rail connection to the Port of Charleston, allowing shippers to transfer containers between rail and truck modes efficiently. This facility has become a major economic driver for the Upstate and has strengthened the region's role as a logistics and distribution hub by expanding access to global markets.

Air Cargo & Freight Support Facilities

The region is also supported by GSP, which serves as a significant air cargo facility for the Upstate. GSP accommodates air freight operations that support advanced manufacturing, automotive production, and time-sensitive shipments. In addition to GSP, several public and private airports located throughout the GPATS region provide access for corporate aviation, specialized freight operations, and business travel.

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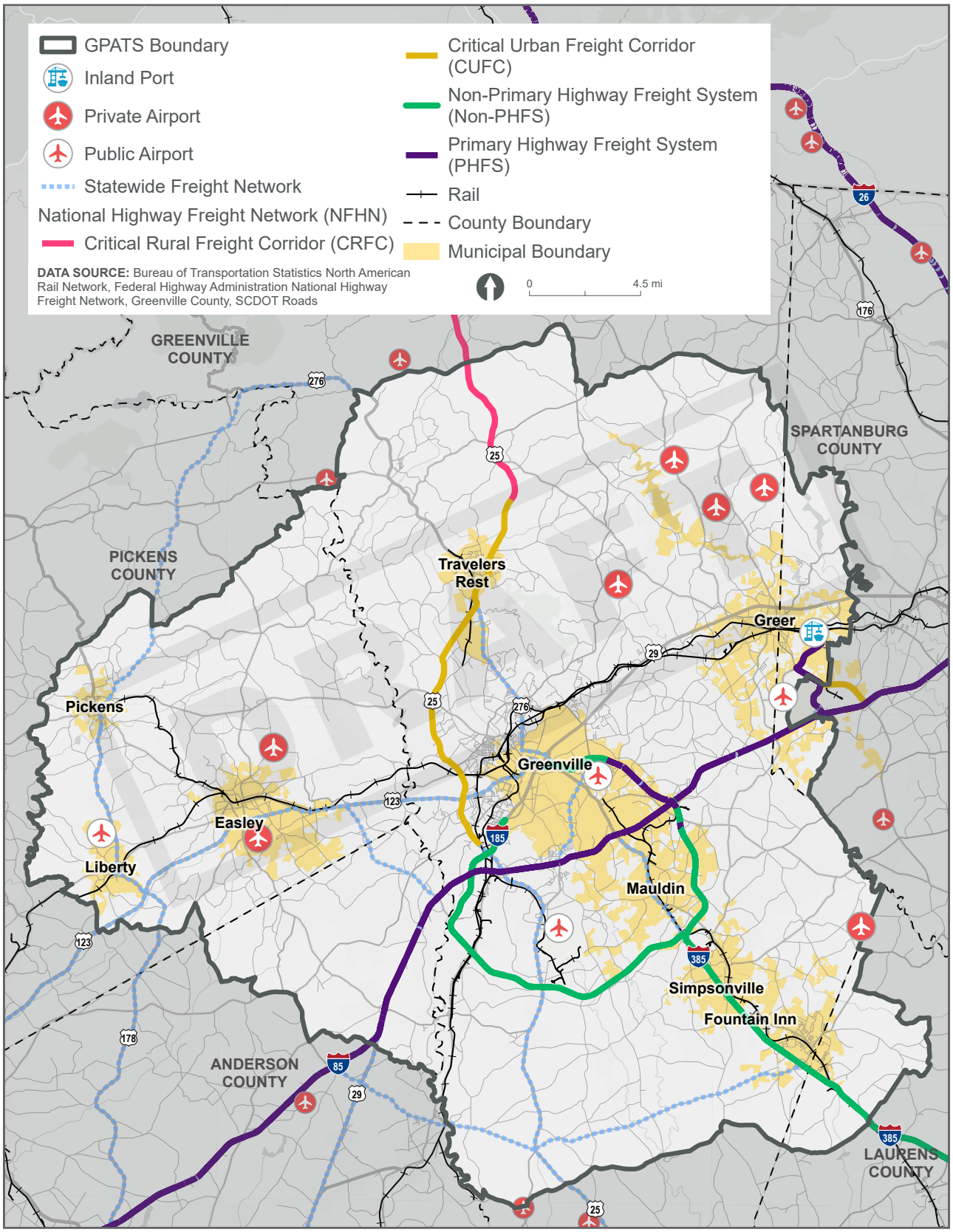


Figure 14 | GPATS Freight Network

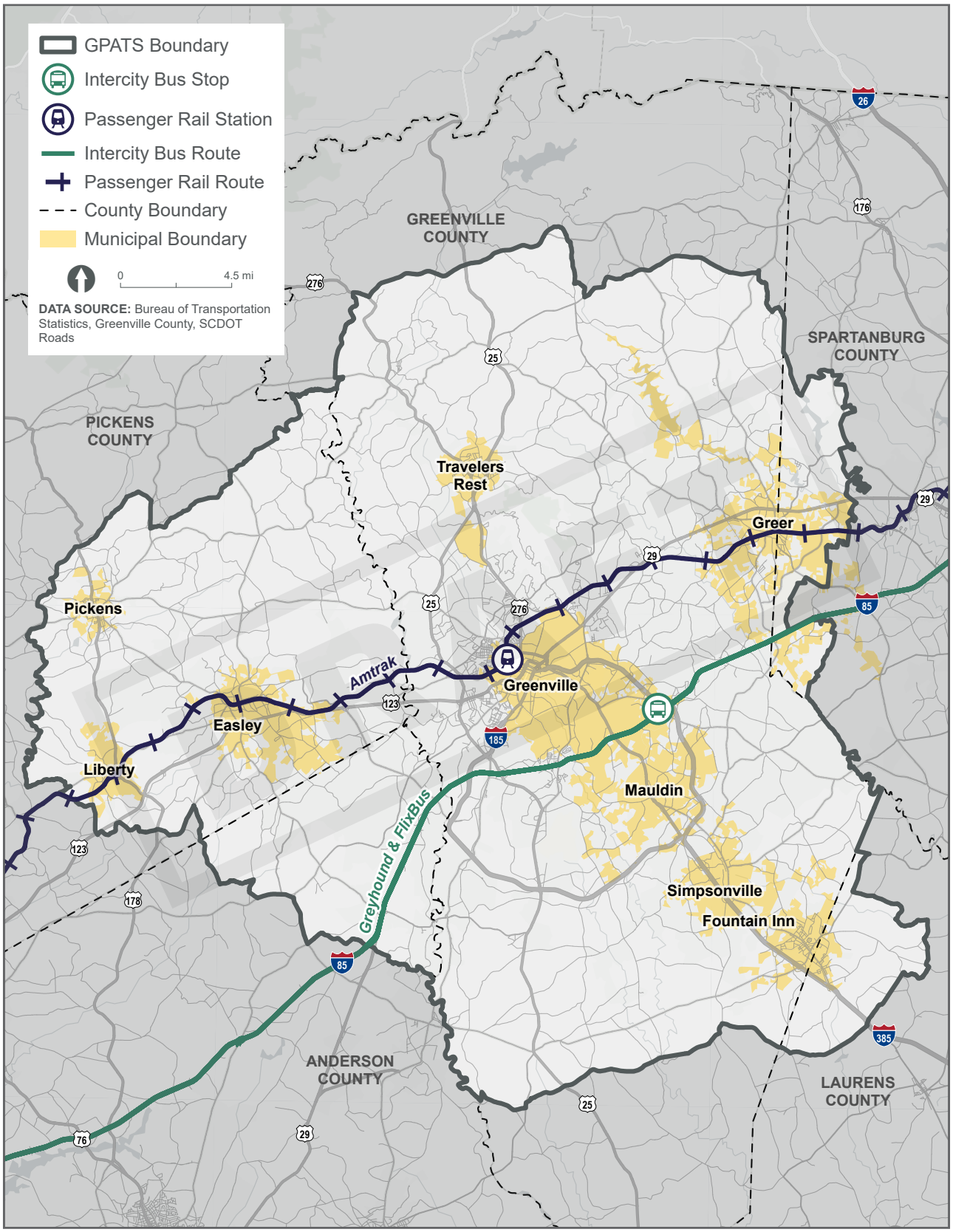


Figure 15 | Interregional Passenger Travel

System Safety

Safety remains a top priority for the GPATS region, with ongoing efforts focused on reducing fatalities and serious injuries for all transportation users. Based on recent data from the South Carolina Department of Public Safety (SCDPS), the region experiences approximately 18,700 crashes annually, including 101 fatalities and 284 serious injuries.

Figure 16 shows annual fatal injuries and suspected serious injuries in the GPATS area from 2020 to 2025, highlighting notable fluctuations over time. Fatal injuries increased from 100 in 2020 to a peak of 122 in 2021, then generally declined, reaching a low of 68 in 2025. In contrast, suspected serious injuries remained consistently higher, peaking at 304 in 2021, dropping to 266 in 2022, and then rising slightly again before settling at 283 in 2025.

Overall, both metrics show a spike in 2021 followed by some variation, but the long-term trend suggests a reduction in fatalities, while serious injuries remain relatively stable with moderate fluctuations.

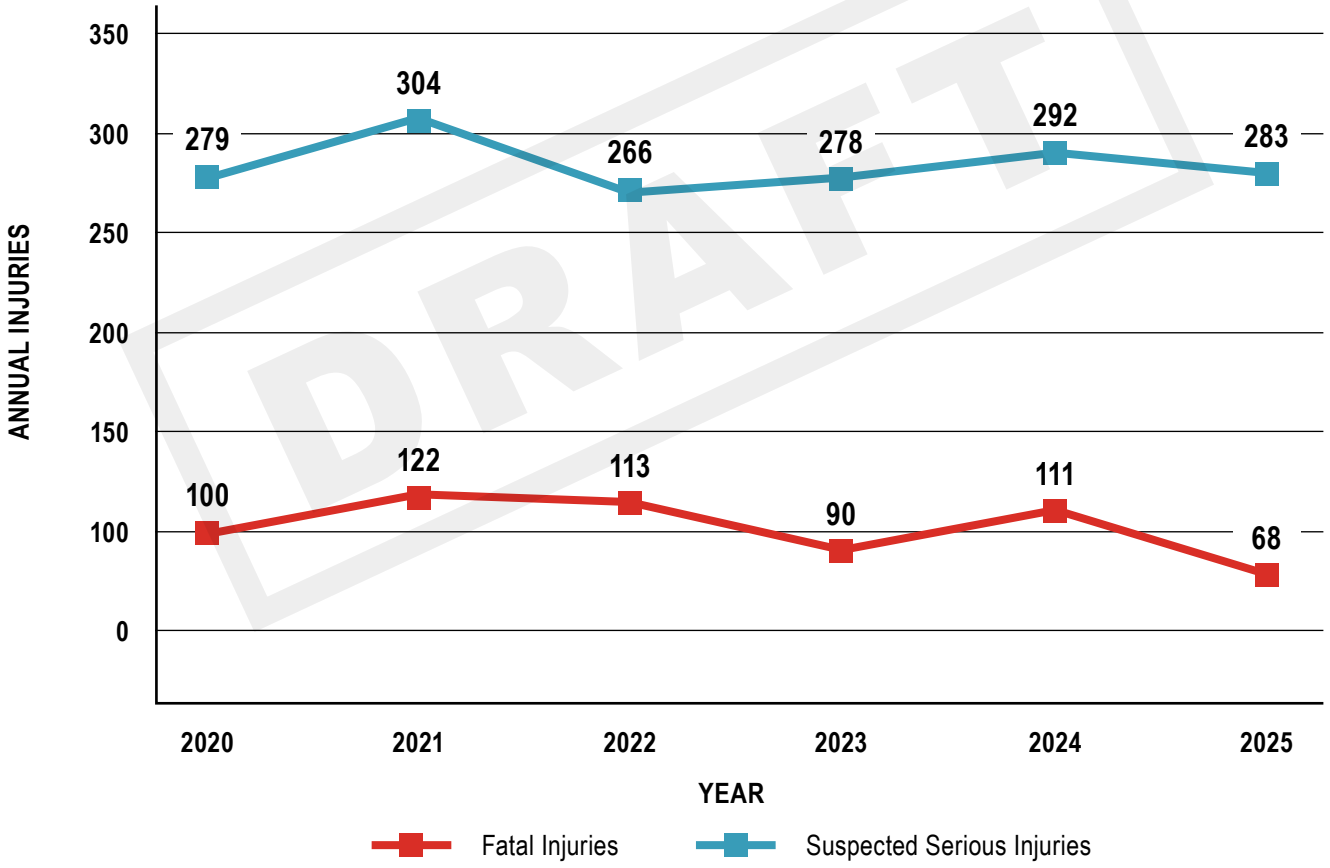


Figure 16 | Annual Fatal & Serious Injuries

Figure 17 illustrates annual non-motorized fatal and suspected serious injuries from 2020 to 2025, showing noticeable fluctuations over time. Fatal injuries increased from 13 in 2020 to a peak of 27 in 2024. Suspected serious injuries followed a somewhat different pattern, decreasing from 28 in 2020 to 20 in 2023 and back up to 31 in 2035. Overall, suspected serious injuries remain consistently higher than fatal injuries across all years.

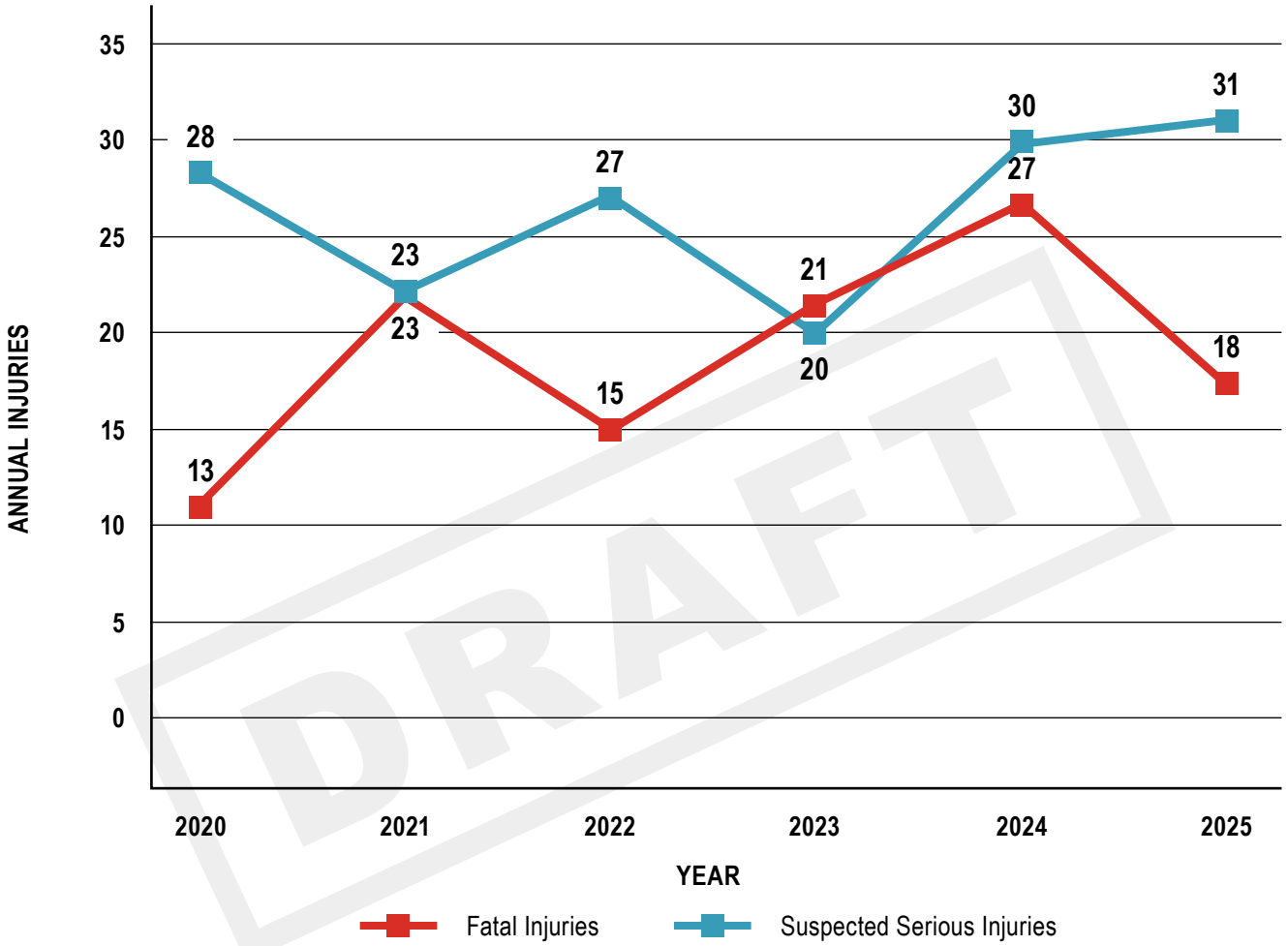


Figure 17 | Annual Non-Motorized Fatal & Serious Injuries

Figure 18 shows the highest crash concentrations clustered in and around central Greenville, particularly along the I-85 corridor and major arterial roadways extending toward Mauldin and Greer. The inset maps reinforce that crashes are heavily concentrated along major intersections and highway interchanges, where there is a dense mix of all crash severities.

Figure 19 focuses only on fatal and serious injury crashes, revealing a more concentrated and targeted pattern. While Greenville remains the primary hotspot, high-severity crashes are more tightly clustered along key corridors such as I-85 and major connecting routes, with fewer dispersed incidents across the broader network. Secondary clusters are visible near Greer, Mauldin, Simpsonville, and Fountain Inn, but they are less extensive than in the full crash dataset.

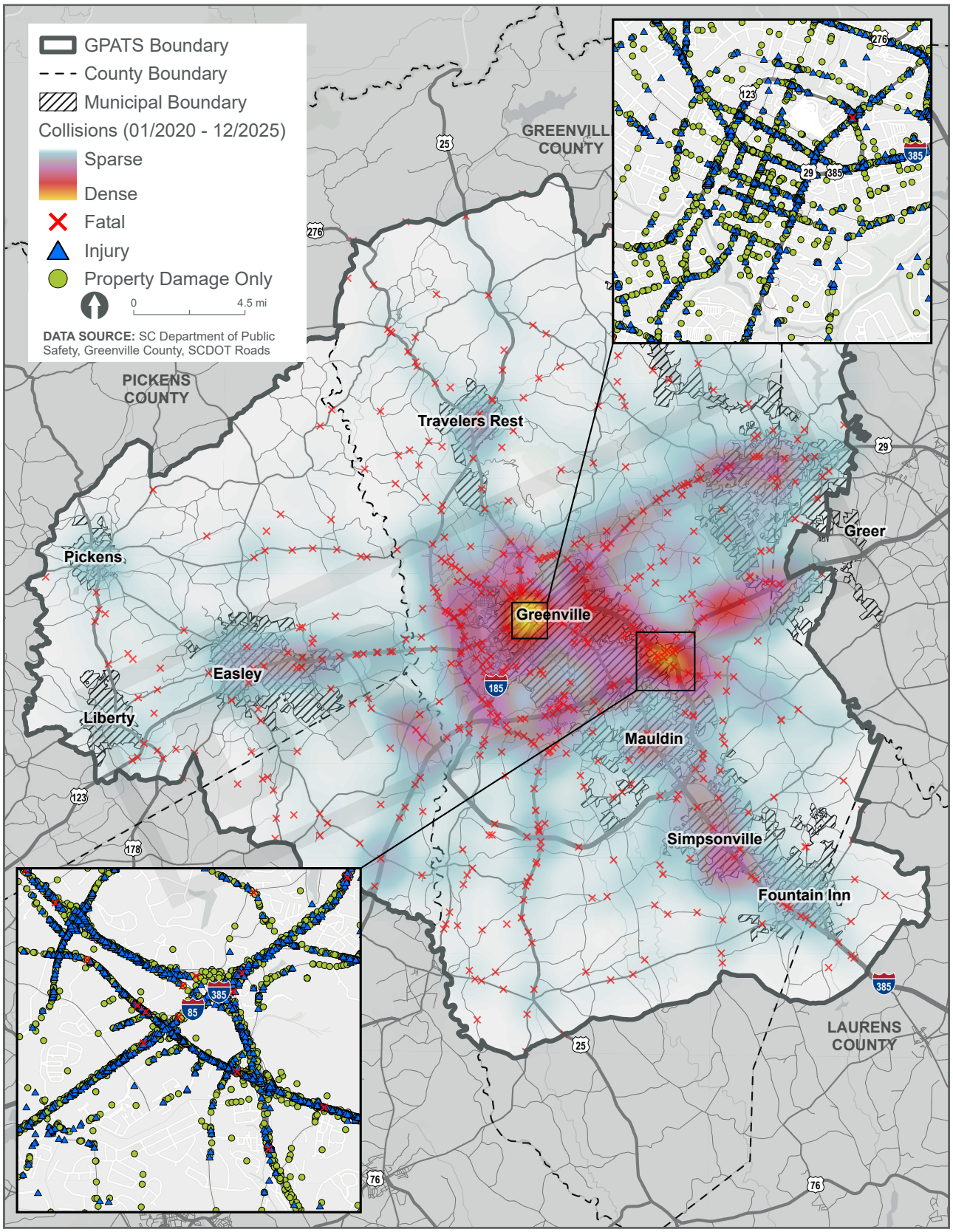


Figure 18 | GPATS Collision Heat Map

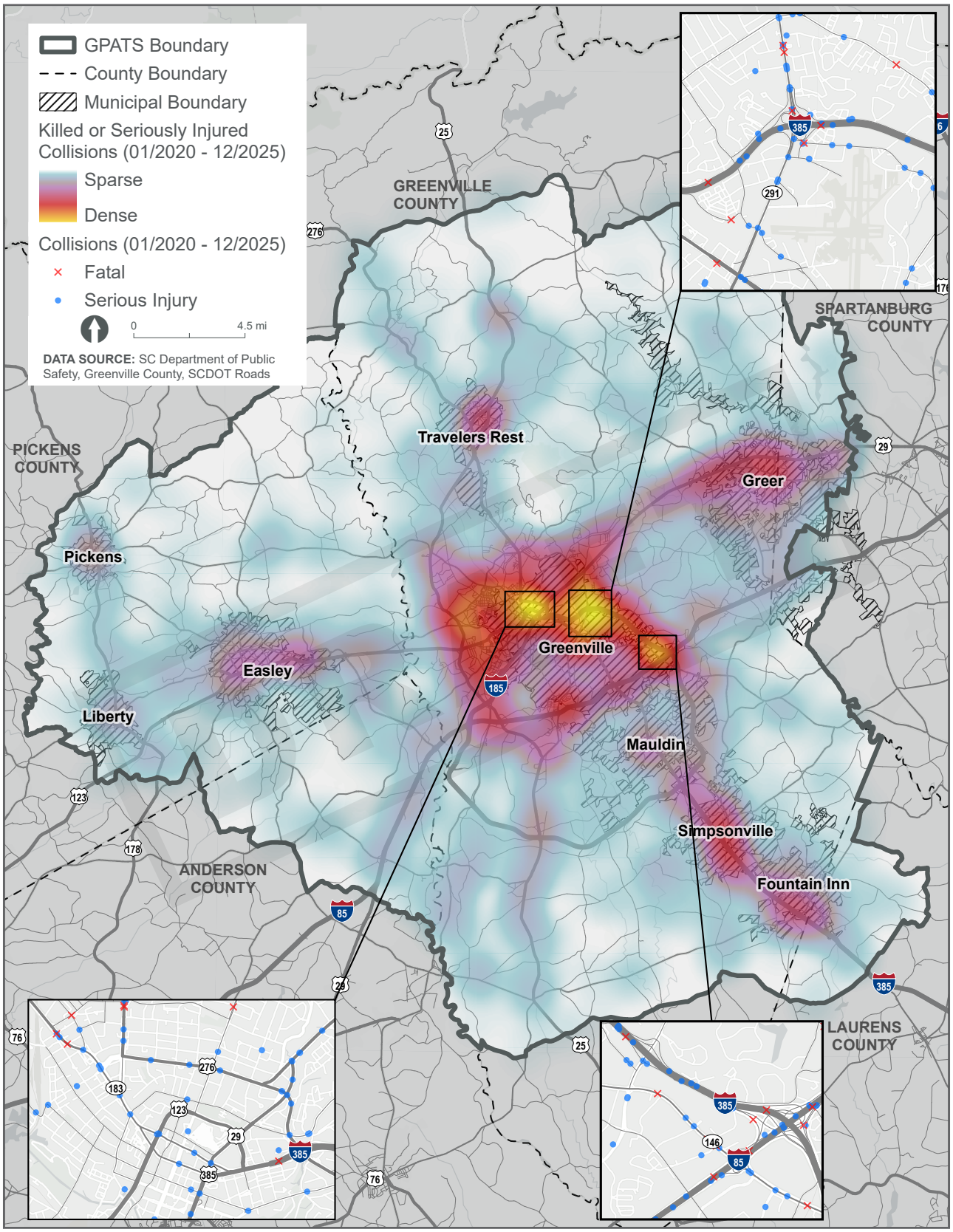


Figure 19 | GPATS Fatalities & Serious Injuries Heat Map

Traffic Operations

Traffic operations reflect how efficiently the transportation system moves people and goods. In the GPATS region, congestion is most pronounced along major corridors and during peak commuting periods. **Figure 20** highlights where the highest travel demand occurs across the GPATS region using average annual daily traffic counts. The most intense concentrations (shown in red and yellow) follow the I-85 and I-385 corridors through Greenville, extending east toward Greer and south toward Mauldin and Simpsonville, with volumes exceeding 100,000 vehicles per day in several segments. These corridors function as the primary regional mobility spine, carrying both commuter and through traffic. Secondary activity centers such as Easley, Travelers Rest, and Greer show moderate volumes, indicating localized circulation patterns feeding into the interstate network.

A common measure of roadway performance is Level of Service (LOS), which describes traffic operating conditions on a scale from A to F. LOS A represents free-flowing conditions with minimal delay, while LOS F indicates heavily congested conditions with significant delays and recurring queuing. As traffic volumes increase, roadway segments and intersections may experience lower levels of service, reflecting reduced mobility and travel reliability. Monitoring LOS helps transportation agencies identify locations where operational improvements or capacity enhancements may be needed to maintain efficient movement throughout the network.

Figure 21 illustrates how well the roadway network accommodates demand, with green representing uncongested conditions and orange and red indicating segments approaching or exceeding capacity. While much of the GPATS network operates efficiently, several key corridors, particularly around Greenville's urban core and along I-85, I-385, and major arterials connecting Greer, Mauldin, and Simpsonville, show elevated volume to capacity ratios. These conditions point to recurring congestion, bottlenecks, and reduced reliability during peak periods. The pattern reinforces that operational challenges are concentrated along the same high volume corridors identified in **Figure 20** and highlights where targeted capacity improvements, operational strategies, or multimodal investments may be needed. More information can be found in the Existing Conditions Assessment.

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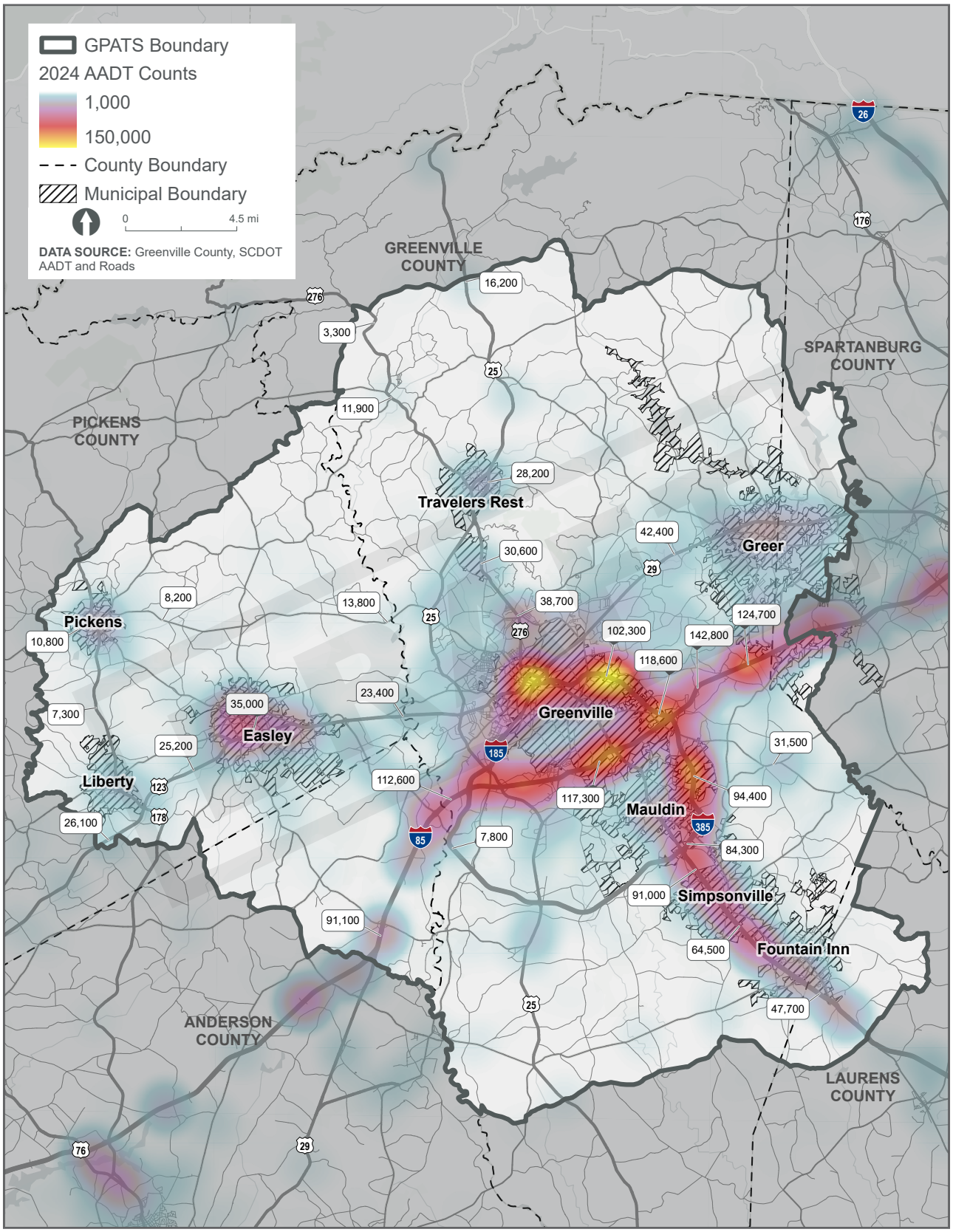


Figure 20 | AADT Heat Map

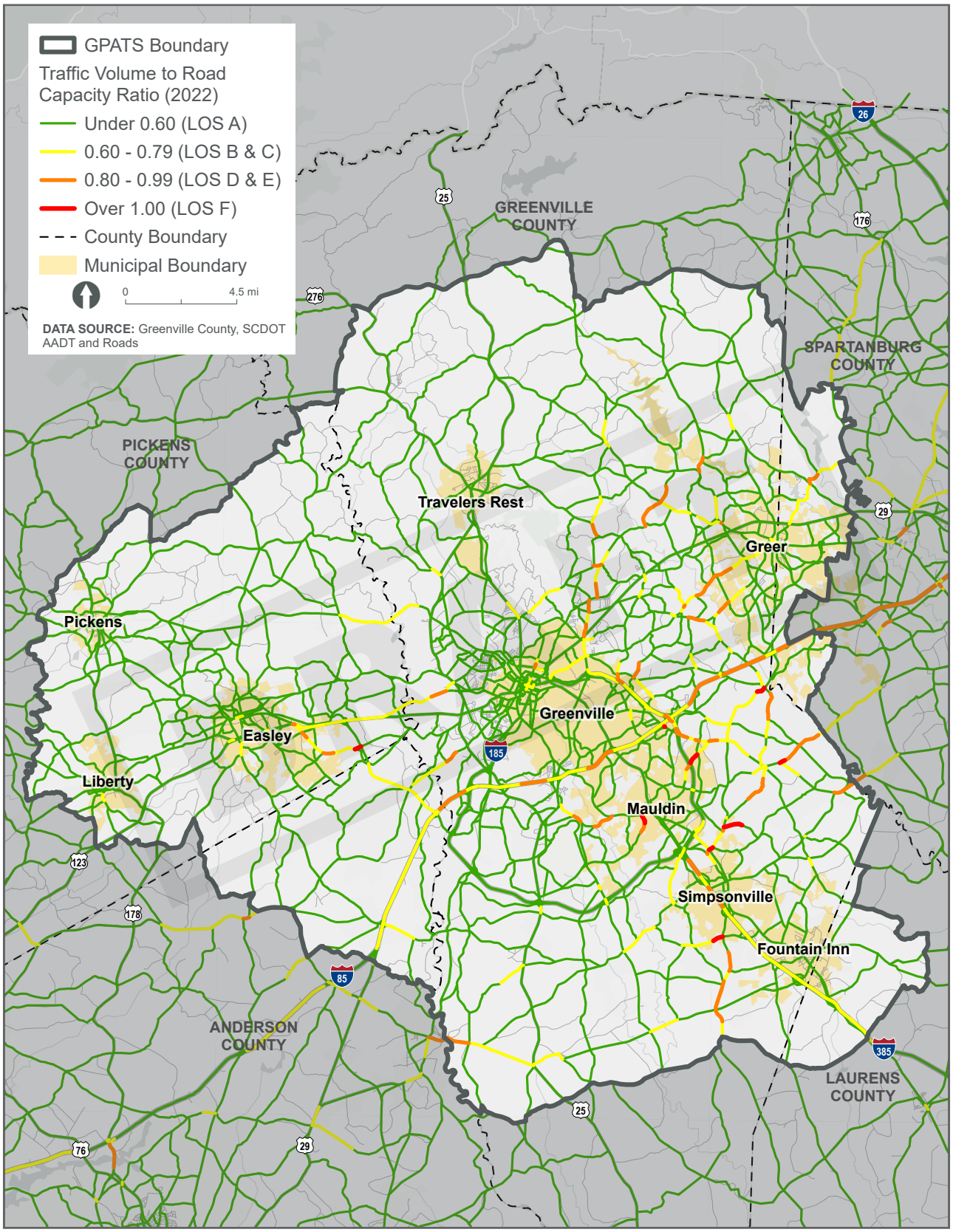


Figure 21 | Estimated Volume to Capacity Ratio (2022)

TRAVEL RELIABILITY

Travel reliability is a measure used to evaluate the predictability of passenger vehicle and freight truck travel times across a corridor or entire transportation network. While a corridor may experience recurring peak hour congestion and travel delays, the consistent occurrence of these delays provides a predictable condition that travelers can account for when planning trips and travel conditions along the corridor. In this case, these corridors would be considered "reliable." Passenger vehicle travel reliability is described using a metric referred to as Level of Travel Time Reliability (LOTTR) while freight truck travel reliability is described using a metric referred to as Truck Travel Time Reliability Index (TTTR). State transportation agencies and MPOs are required to establish performance measure targets and report LOTTR, described as the percentage of person-miles traveled that are reliable, on Interstate and Non-Interstate NHS routes and TTTR on Interstate routes as part of federal transportation planning requirements.

Figure 22 and **Figure 23** show monthly LOTTR results for GPATS' Interstate and Non-Interstate NHS routes that were calculated using data sourced from the National Performance Management Research Dataset for the year 2025; the figures include GPATS performance baseline for Interstate and Non-Interstate NHS reliability that were adopted in May 2023.

Monthly LOTTR results for GPATS Interstate routes for the year 2025 exceeded GPATS' baseline of 85.2% of all person-miles traveled on Interstate routes that are reliable during each month during this year. The month of January demonstrated the highest percentage of Interstate person-miles that were reliable, 92.8%, while the month of November recorded the lowest percentage of Interstate person-miles traveled that were reliable at 85.8%.

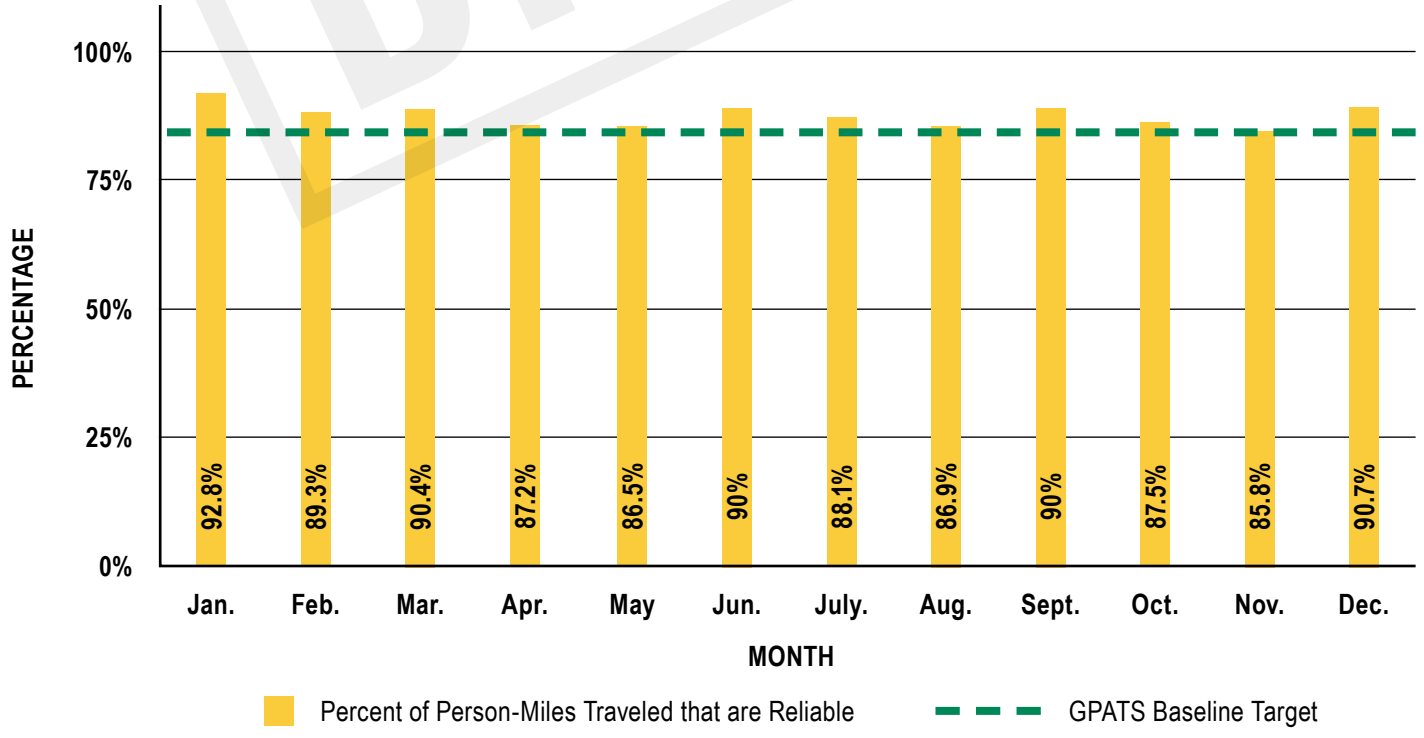


Figure 22 | Monthly Percentage of Person-Miles Traveled on Interstate Routes that were Reliable, 2025

Reliability conditions on GPATS non-Interstate NHS routes demonstrated similar results as the region's Interstate routes, but each month during the year 2025 failed to meet GPATS' non-Interstate NHS reliability baseline of 93.9% of person-miles traveled on non-Interstate NHS routes being reliable. The month of July exhibited the highest percentage of reliable non-Interstate NHS person-miles traveled at 91.5% while the months of January and February both exhibited the lowest percentages of reliable person-miles traveled at 88%.

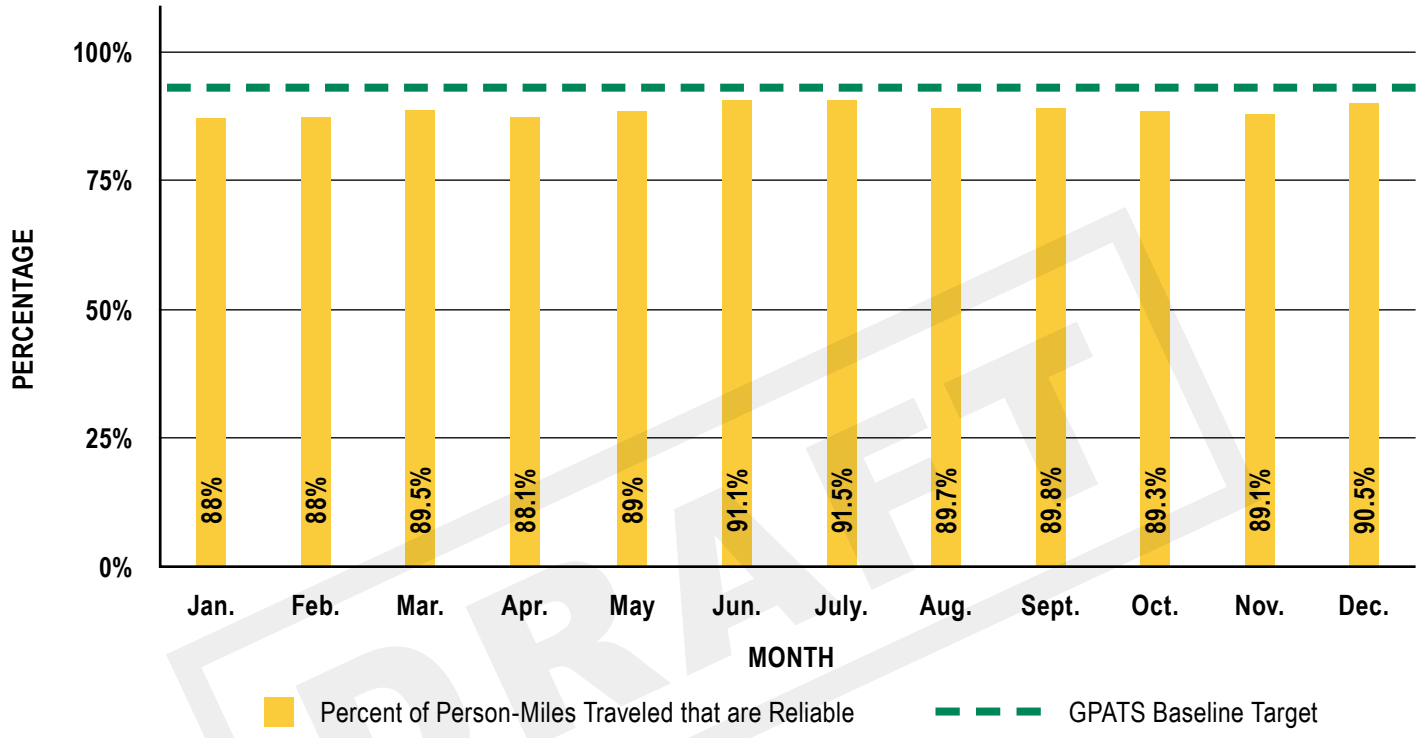


Figure 23 | Monthly Percentage of Person-Miles Traveled on Non-Interstate NHS Routes that were Reliable, 2025

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Figure 24 shows monthly TTTR results for GPATS Interstate routes for the year 2025. GPATS' current baseline for TTTR is 1.57, and the monthly TTTR results did meet this baseline during the year 2025. Monthly TTTR results demonstrate a degree of variation, with the month of March recording the highest TTTR of 1.52 while the month of June recorded the lowest TTTR of 1.35.

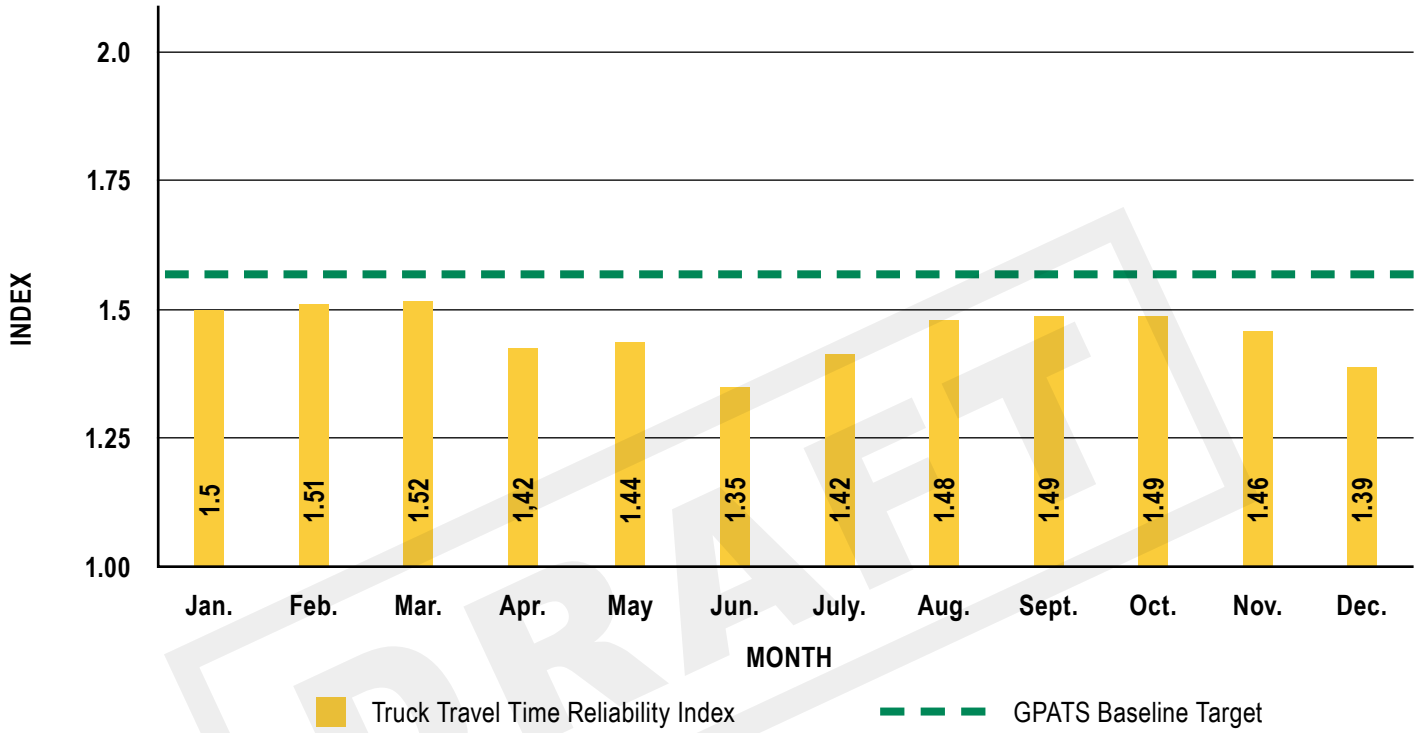


Figure 24 | Monthly Truck Travel Time Reliability Index on Interstate Routes (2025)

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Asset Conditions

Maintaining the condition of transportation assets is essential for system reliability, safety, and long-term cost efficiency. The GPATS region's transportation assets include pavements, transit vehicles, and supporting infrastructure.

Pavement conditions are assessed using measures such as the Pavement Quality Index (PQI). Interstate routes show stronger overall pavement conditions, with about 63% of centerline miles rated in good condition and only about 25% in poor condition. In contrast, non-interstate NHS routes have a smaller share in good condition, roughly 48%, and a higher proportion in poor condition at about 36%.

This pattern suggests that interstates are generally maintained at a higher standard, likely due to their critical role in regional and national mobility, while non-interstate NHS routes may require more focused investment and maintenance to improve overall pavement quality.

The condition of bridges found on the NHS within the GPATS region were analyzed using National Bridge Inventory (NBI) data for the year 2025 for the purpose of summarizing bridge conditions by deck area. The NBI data indicates a total of 156 bridge structures are found on the NHS within the region; of these 156 bridges, 90 are classified as being in Good condition, 57 in Fair condition, and 9 in Poor condition. To better reflect how bridge condition performance is reported in the region, condition ratings by bridge deck area were calculated as shown on the following page.

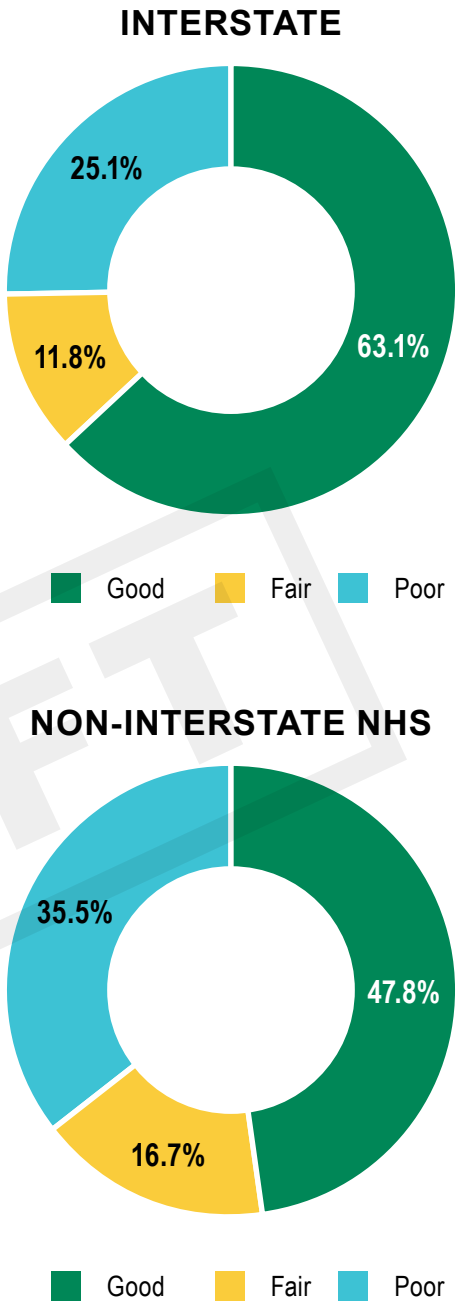


Figure 25 | Pavement Conditions

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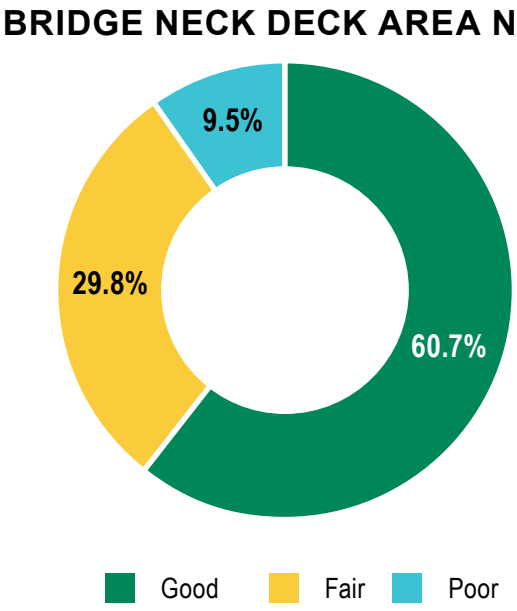


Figure 26 | NHS Bridge Deck Area Conditions (2025)

Transit asset conditions vary by fleet age and facility condition. The average age of transit vehicles is 7.3 years.[3]

Proactive maintenance and preservation strategies are critical to extending asset life and reducing lifecycle costs.

Multimodal System Performance

The GPATS region continues to advance toward a more balanced multimodal transportation system; however, gaps in access and performance remain. Mode share data indicates that the majority of trips 76% are made by single-occupancy vehicles, while transit, walking, and bicycling account for 1.3% of trips.

Transit performance measures, including ridership and on-time performance, indicate that 704,200 trips are provided annually, with an average on-time performance of 74%.[4]

Bicycle and pedestrian activity has increased, supported by investments in trails and sidewalks. However, gaps in connectivity remain.

Accessibility considerations are also central to multimodal performance, as transportation options are critical for households without access to a vehicle, which represent approximately 2% of households in the region.

What this Means for the Needs Assessment

The current system performance assessment shows that the GPATS transportation network generally functions as expected, moving people and goods through the study area, and continues to support the region's growing population, workforce, and economy. However, the analysis also highlights several challenges, including increasing congestion along key interstate and arterial corridors, continued reliance on single-occupancy vehicle travel, safety concerns in high-crash locations, and gaps in transit, bicycle, and pedestrian connectivity. As growth continues, these trends suggest that maintaining mobility will require a balanced approach that includes roadway improvements, system preservation, operational strategies, and expanded multimodal transportation options.

The findings in this chapter provide the foundation for the Needs Assessment by identifying where existing transportation deficiencies and performance gaps occur today. When combined with future forecasts of population, employment, and travel demand, these results will help GPATS determine where capacity constraints, safety issues, asset management needs, and multimodal investment opportunities are most likely to emerge. This information will guide the development of strategies, projects, and priorities for the *Horizon 2050 LRTP*.

[3] Department of Transportation. 2022 Annual Agency Profile. 2022. https://www.transit.dot.gov/sites/fta.dot.gov/files/transit_agency_profile_doc/2022/40053.pdf

[4] City of Greenville. Quantity of Service. 2026. https://www.greenvillesc.gov/2722/Quantity-of-Service

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CHAPTER 6
Future Conditions Assessment

CHAPTER 6: FUTURE CONDITIONS ASSESSMENT

An assessment of the future conditions of the GPATS region's multimodal transportation system has been conducted to understand how growth in the area is anticipated to impact the region's population. This included looking at the projected future number of households and jobs across both the Appalachian Regional Model (ARM) area and the GPATS Study Area to see how they could impact travel demand throughout the GPATS Study Area under existing conditions plus any already committee projects (E+C Scenario).

GPATS Forecasted Future Growth

HOUSEHOLDS

Regional growth related to the ARM and GPATS region's population and households were forecasted based on historical growth rates, anticipated future development, and land use plans. A comparison was made to the previous ARM model and Census American Community Survey data. **Figure 27** summarizes resulting growth forecasts. This review found household growth is widely dispersed but more heavily concentrated outside of the I-185 I-385 loops and near the periphery of the GPATS boundary.

EMPLOYMENT

Regional growth related to the ARM and GPATS region's employment were forecasted based on historical growth rates and GPATS' member jurisdictions' future land use and development plans. Employment growth is widely dispersed throughout the GPATS boundary but is more heavily concentrated along interstate corridors. **Figure 28** illustrates where future employment growth is anticipated to occur within the region.

As mentioned previously, household and employment growth across the full ACOG region and GPATS region was compared to the previous iteration of the ARM to identify changes in trends across the region. According to this review, forecasted household growth is more conservative than the previous model while employment growth is more aggressive. Household growth forecasted in the MPO Study Area is higher than the average for the entire model compared to employment growth, which is lower.

Overall, forecasted household growth in the model is more conservative than recent growth in the GPATS area according to Census data, suggesting that growth may moderate compared to the rapid pace experienced over the past decade. However, employment growth is projected to exceed that of the previous model, indicating that the region is expected to remain a strong economic center. This trend could result in continued increases in commuter travel and transportation demand, particularly along major regional corridors, even if population growth occurs at a slower rate. **Table 8** further illustrates these comparisons.

	GPATS AREA ONLY	PREVIOUS MODEL (GPATS AREA ONLY)	GPATS AREA CENSUS DATA
Households	1.02%	1.18%	1.53%
Employment	1.22%	1.14%	-

Table 8 | Compound Annual Growth Rate (CAGR) for full ARM (2022–2050) & GPATS Study Area & Previous (2010–2045) Models & Census Data (2014–2025)

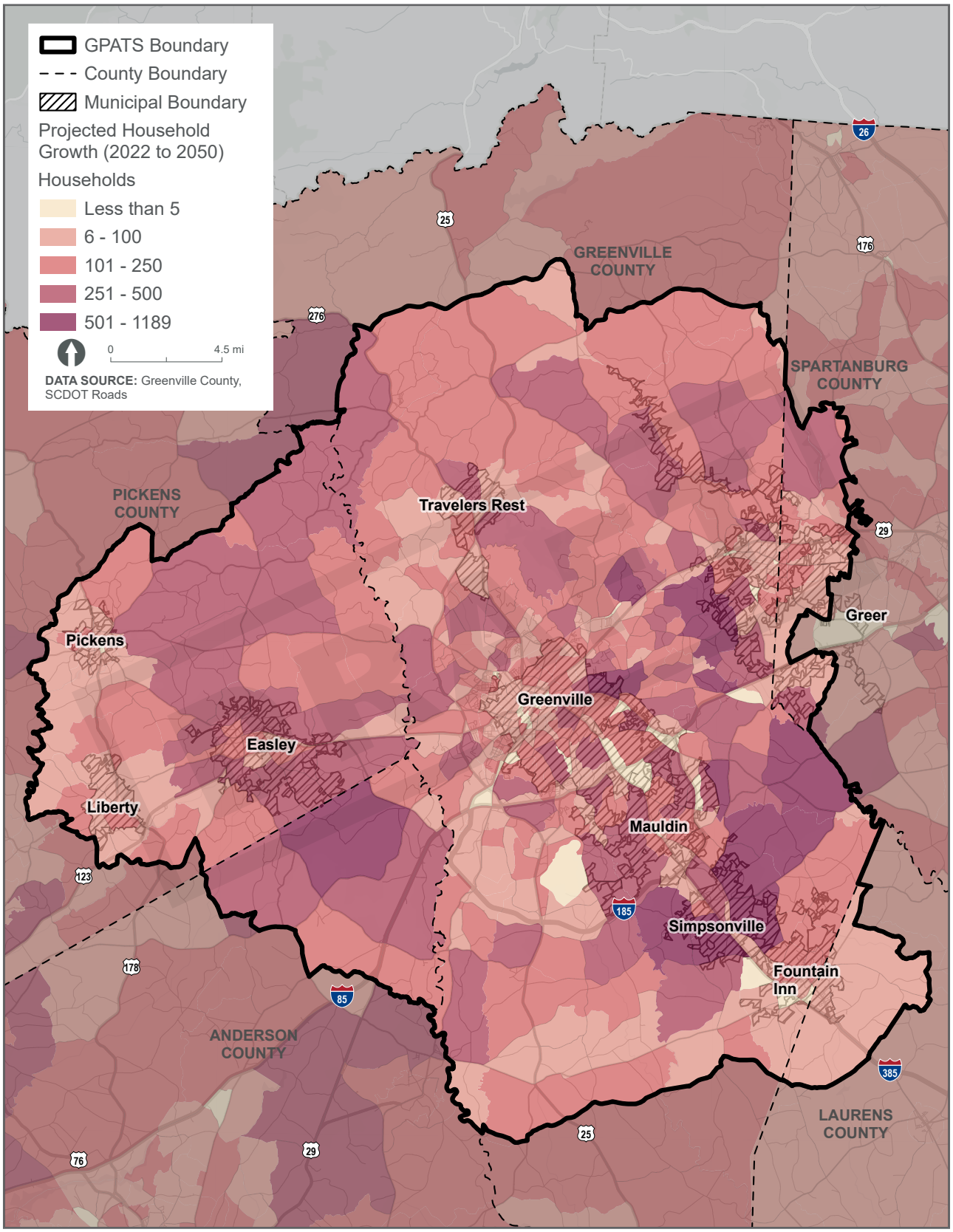


Figure 27 | Household Growth (2022–2050)

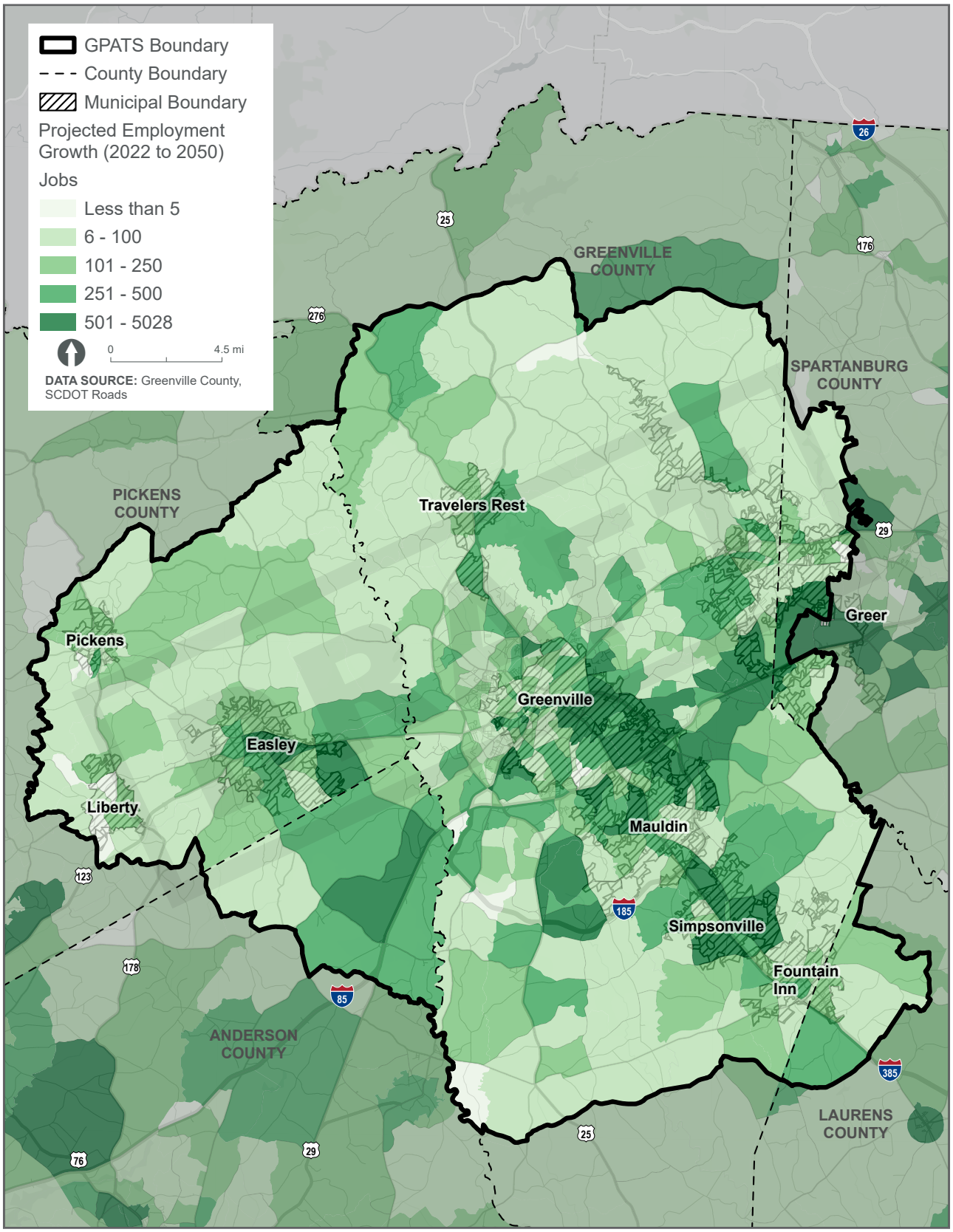


Figure 28 | Employment Growth (2022–2050)

Future Transportation System Performance

This assessment included identifying how these growth projections are anticipated to impact the future conditions of GPATS' streets and roads network and served as inputs within the ARM, the serving Travel Demand Model for GPATS' and much of the Upstate region. The ARM is a series of mathematical procedures and parameters that use future socioeconomic growth forecast to estimate future travel demand and to simulate how typical daily trips would travel along the network under these conditions. The ARM is an effective tool for comparing scenarios, including how growth or construction will impact a region's network. Refer to **Appendix C: ACOG Travel Demand Model Review** for more information about the ARM.

For the purposes of this LRTP, the project team looked at the Existing plus Committed (E+C) scenario. This scenario represents the existing GPATS transportation network plus any capital improvements already programmed, or a "business as usual" approach. This can highlight capacity and operational issues that projected growth could create for the region.

GROWTH IN DAILY TRAFFIC

Daily traffic volumes were forecasted through year 2050 based on the socioeconomic growth projections discussed above. These forecasted traffic volumes were compared to observed daily traffic volumes for the year 2022 to evaluate where traffic volumes are anticipated to grow the most. Resulting growth in daily traffic volumes for the GPATS region is shown in **Figure 29**.

According to this forecasted growth, consisting of AADT volumes between 2022–2050, the largest concentration of roads that are expected to see high growth are US Highways and Interstates that move people and goods between municipalities and into and out of the state.

Some examples include:

- US 123
- US 25
- US 29
- I-385
- I-85

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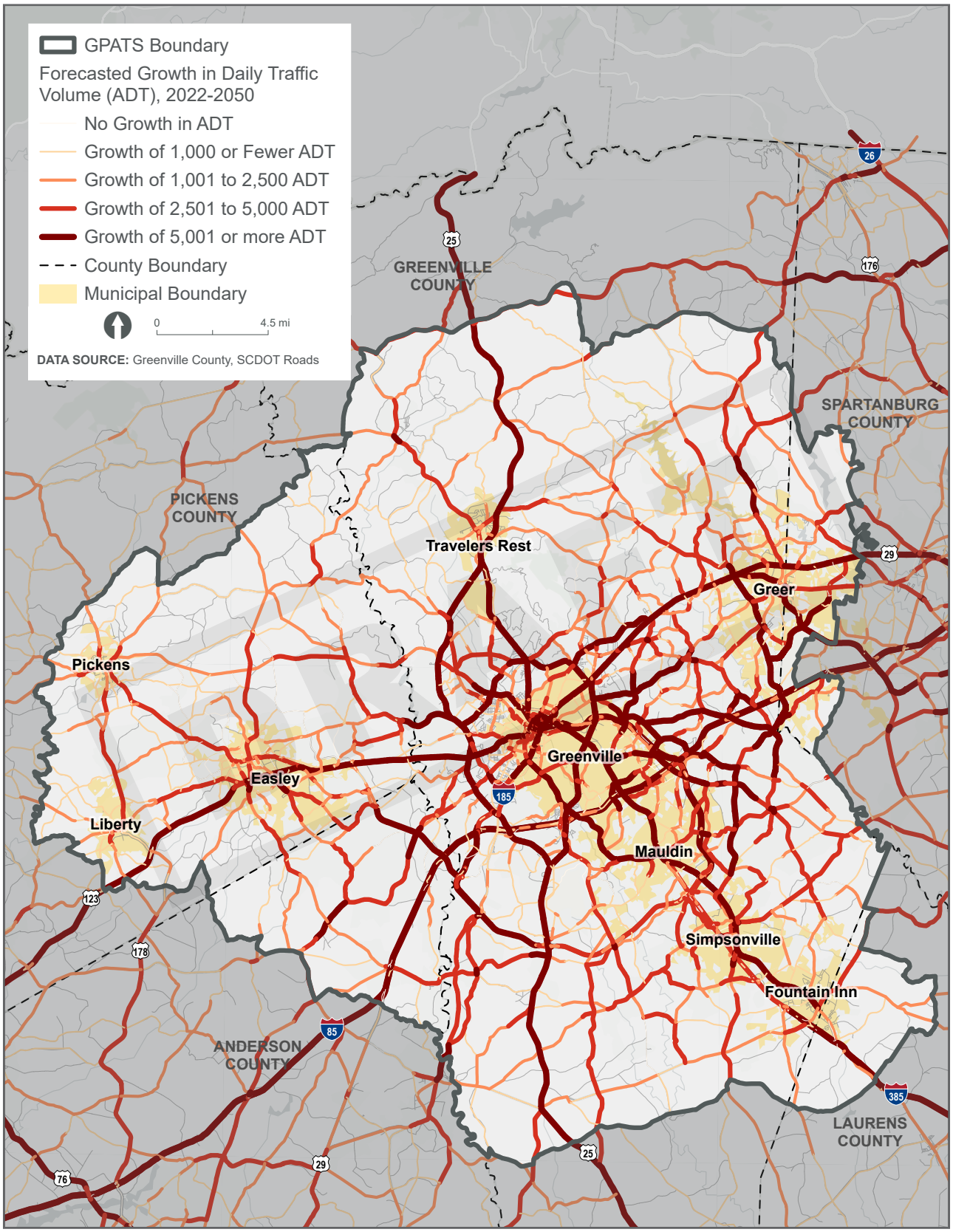


Figure 29 | 2050 Projected Growth

FORECASTED GROWTH IN FREIGHT ACTIVITY

According to the 2022 SCDOT Statewide Freight Plan, freight tonnage and value movement for South Carolina freight is forecasted to grow 84% and 115% respectively from 2019 to 2050. The SC Ports Authority indicated that the State's ports operations have a $87 billion statewide economic impact each year.[5] In the GPATS region, freight activity on non-connector roads is forecasted to grow by 46% between 2022 and 2050.

The SC Ports Authority's Annual Report indicated that 702,998 tons are moved annually across the State. In fact, according to the report the Upstate intermodal hub saw 355% cargo growth between 2014 and 2024. In fiscal year 2025, Inland Port Greer broke 200,000 rail moves, necessitating the need for an expansion. The facility expanded to accommodate 50% more cargo capacity with 9,000 feet of new rail and is anticipated to be capable of 300,000 rail lifts annually.

GPATS should continue to monitor freight growth in the area and any necessary improvements to continue to support necessary freight movements.



SC Ports Authority, Inland Port Greer

FUTURE FORECASTED TRAFFIC OPERATIONS

Further analysis of the GPATS transportation network looked at forecasted traffic operations using a Level of Service approach like the one detailed in **Chapter 5: Current Systems Performance** and the E+C scenario forecasted daily volumes. The projected LOS for the E+C scenario is shown below in **Figure 30**. Under this scenario, growth forecasts are anticipated to degrade peak hour travel conditions in the following areas:

- US 123 between Easley and Greenville
- Powdersville Road in Easley
- I-85 between Anderson County and US 153
- SC 153 between SC 81 and I-85
- I-385 between I-185 and the Southwest end of the GPATS Study Area
- SC 14 near Simpsonville and Mauldin
- Brushy Creek Road and Arlington Road in Greer

[5] *scspa-2025-annual-report-final-web.pdf*

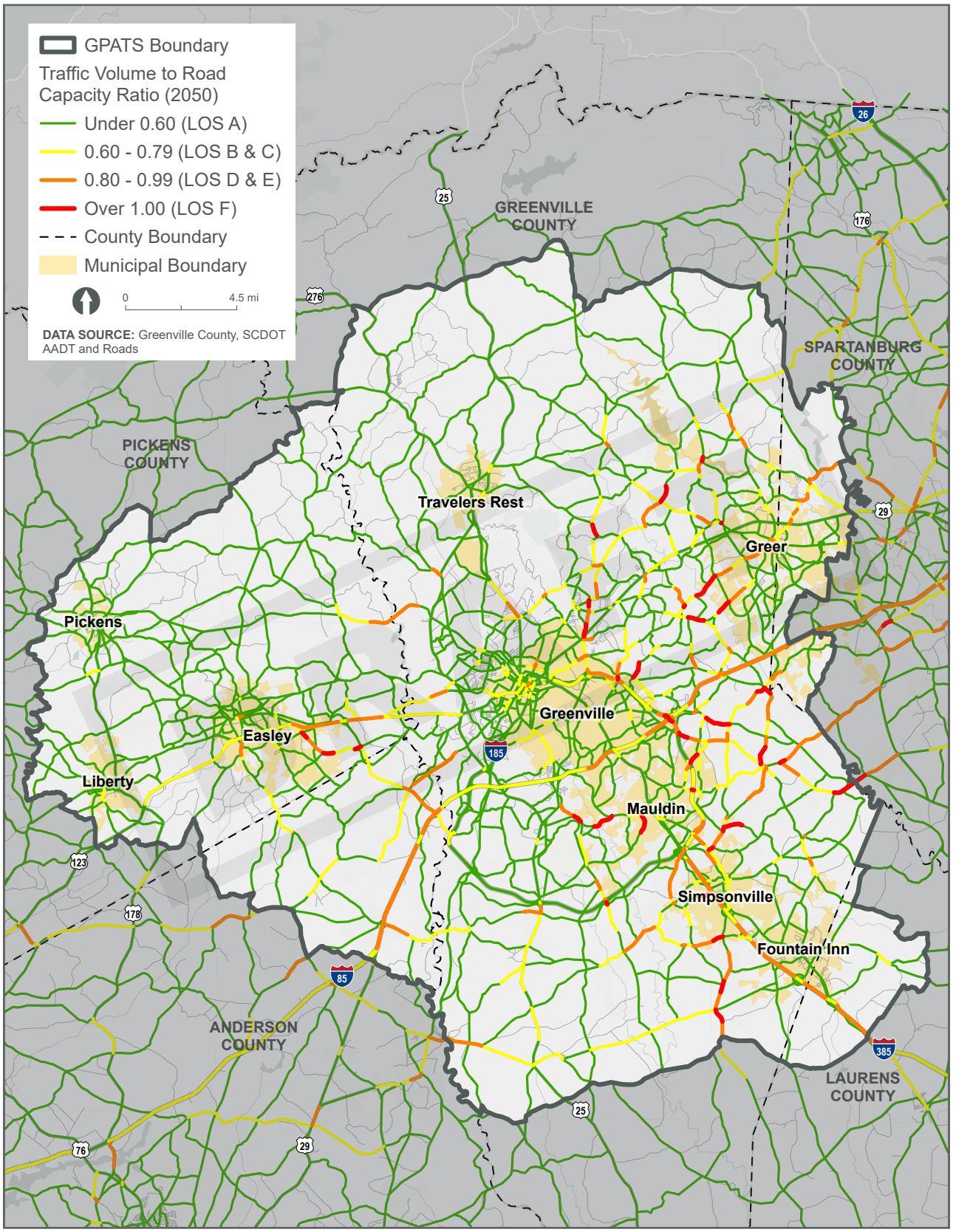


Figure 30 | Volume to Capacity Ratio (2050) Utilizing FDOT's Highway Capacity Manual-based Methodology

SYSTEM LEVEL PERFORMANCE OF THE E+C SCENARIO

Anticipated system-wide impacts of the growth anticipated across the GPATS Study Area is illustrated in the performance statistics from the ARM, which consists of the following indicators:

- **Vehicle Miles Traveled (VMT):** Total distance traveled by vehicle users on the streets and roads network.
- **Vehicle Hours Traveled (VHT):** Total time vehicle users spent traveling during each trip made on the streets and roads network.
- **Daily Trips:** Total number of daily trips made on the streets and roads network.
- **Average Trip Length (in miles):** Average length of daily trips made on the streets and roads network.
- **Average Trip Speed (in MPH):** Average speed traveled during each daily trip made on the streets and roads network.

Table 9 shows the system-wide performance statistics for the base year and future year E+C scenario. As illustrated in the table, VMT, VHT, and number of daily trips are anticipated to grow by 33% while average trip lengths are anticipated to slightly decrease. Average trip speeds under the E+C scenario are expected to slightly decrease between 2022 and 2050.

	ENTIRE MODEL			GPATS AREA ONLY		
	2022	2050 EC+SWM	Growth	2022	2050 EC+SWM	Growth
Population	1,394,097	1,816,155	30%	646,926	859,640	33%
Households	535,852	697,743	30%	249,405	331,465	33%
Total Employment	688,452	1,004,170	46%	334,839	470,252	40%
Balanced Trips	4,899,229	6,424,582	31%	2,402,066	3,200,621	33%
VMT	39,026,614	52,762,590	35%	14,819,006	19,410,730	31%
VHT	835,101	1,178,504	41%	327,996	451,098	38%
Average Household Size	2.60	2.60	-	2.59	2.59	-
Trips per Household	9.14	9.21	-	9.63	9.66	-
Average Trip Speed	46.73	44.77	-	45.18	43.03	-
Average Trip Length	7.97	8.21	-	6.17	6.06	-
Average Trip Time	10.23	11.01	-	8.19	8.46	-

Table 9 | Growth Summary for the Entire Model & the GPATS Area Only

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The relationship between these measures suggests that growth in travel demand is expected to outpace the transportation system's ability to maintain current operating conditions. Average trip speeds are forecasted to decline, while average trip times increase, signaling increased congestion and reduced reliability on key corridors. Although future development patterns may place some destinations closer to homes and activity centers, resulting in shorter trips on average, the overall volume of travelers and vehicle activity is projected to place additional stress on the regional transportation network.

From a planning perspective, these findings indicate that the existing and committed transportation network alone may not be sufficient to maintain current levels of mobility through 2050. Continued investment in roadway capacity, operational improvements, intersection upgrades, freight mobility, transit, and active transportation infrastructure will be important to accommodate future growth. The results also highlight the need to provide transportation options that reduce dependence on single-occupancy vehicles and help manage future travel demand, particularly along the region's most heavily traveled corridors.

Emerging Transportation Trends & Technologies

The GPATS region is experiencing significant growth in population, employment, and travel demand, prompting increased attention to innovative and emerging transportation strategies supporting mobility, sustainability, and economic competitiveness. Trends emerging across the region have included the expansion of electric vehicle infrastructure, increased interest in connected and automated vehicle readiness, and renewed discussion of regional and intercity passenger rail as a long-term mobility option. These trends reflect a shift toward a more multimodal and technology-enabled transportation system that complements traditional roadway investments while addressing evolving travel behaviors and environmental considerations.

CHANGES IN TRAVEL DEMAND

Largely, travel by Americans has increased over time since the introduction of the automobile over 100 years ago. Recently, however, events such as the COVID-19 Pandemic and increased popularity in e-commerce have resulted in travel flattening or in some cases decreasing.

- COVID-19 significantly impacted both vehicle miles traveled (VMT) and the number of trips that individuals were taking at the time. The pandemic resulted in a rise in individuals who were working and taking classes from home, along with an increase in food, grocery, and other delivery services. In fact, the 2022 National Household Travel Survey (NHTS) reported 37% decrease in daily person trips and 32% decrease in daily vehicle trips. Similarly, the Federal Highway Administration (FHWA) reported that they saw a 14% decrease in VMT between 2020 and 2021. As can be seen in **Figure 30**, commuting patterns have only just returned to similar levels seen pre-COVID-19.
- As mentioned above, a rise in e-commerce has resulted in reduced trips associated with shopping as more purchases are made online and often delivered to homes. This is becoming popular in areas beyond traditional retail, such as online grocery shopping with home delivery and ordering food delivery to your home. In these cases, delivery drivers could be delivering to several destinations in one trip, such as several deliveries to one apartment complex or office building.

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CHANGES IN COMMUTE MODE SHARE

There has been a Nationwide decrease in commuting trips as the number of people working from home has increased over time and the corresponding vehicle miles traveled has also been impacted. The biggest dip was seen surrounding the COVID-19 Pandemic, but as can be seen in **Figure 31** below, the number of vehicle miles traveled nation-wide is only just returning to those seen pre-pandemic.

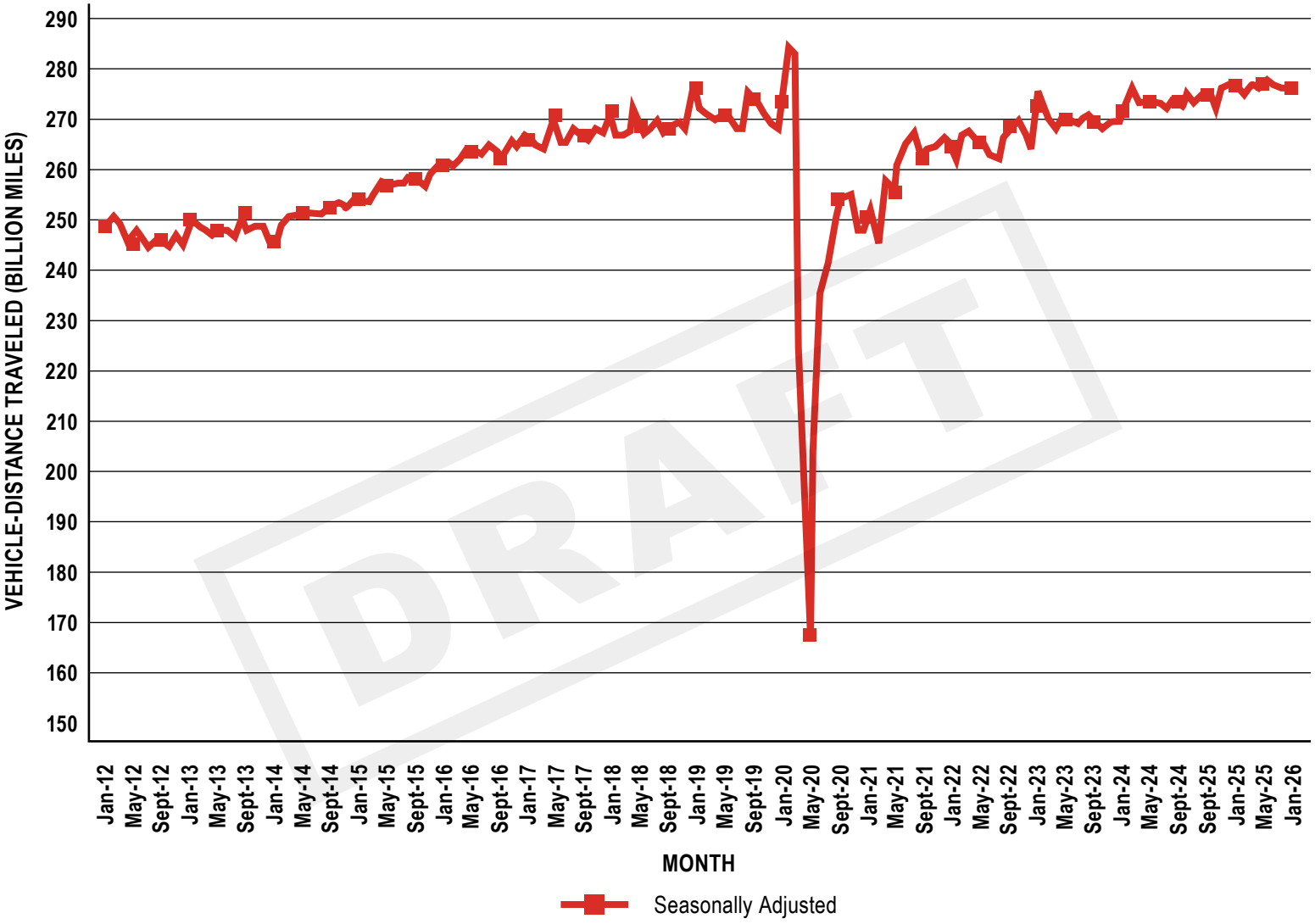


Figure 31 | Seasonally Adjusted Vehicle Miles Traveled by Month

In 2018, only 5.2% of the nation's workers were identified as working from home in comparison to 13.3% by 2024 according to 2024 ACS data. This trend applies to the GPATS region, as 14% of people were identified as working from home according to 2024 ACS data compared to the 3.2% identified in the Horizon 2040 LRTP update process. This signifies that the shift to working from home has continued to impact the nation and GPATS region, indicating a trend that could be here to stay and could impact future travel demand. The main differences between commute mode share trends seen in the GPATS region compared those seen nationally are seen in Table 10.

MEASURE	GPATS	UNITED STATES
Worked from Home (Horizon 2040/2018 Baseline)	3.2%	5.2%
Worked from Home (2024 ACS)	14.0%	13.3%
Change (Percentage Points)	+10.8	+8.1

Table 10 | Commuting Trends Comparison: GPATS & US

AGING POPULATION

The United States is seeing an increase in Americans age 65 and older. The number of residents in the age range was estimated to be over 61.2 million in 2024 or 18% of the population. This is an increase from the 16.5% in 2019.

In comparison, the State of South Carolina consisted of 19.8% of the population age 65 or above in 2024, an increase from 18.2% in 2019. GPATS experienced a similar increase with 17.7% of the population above age 65 in 2024 compared to 15% in 2019. This indicated that the population above the age of 65 in South Carolina and the GPATS region is increasing, though not at as extreme a rate as the US.

	2019			2024		
	Total Population	Population Age 65+	% Population Age 65+	Total Population	Population Age 65+	& Population Age 65+
United States	328,239,523	54,074,028	16.5%	340,110,990	61,245,283	18%
South Carolina	5,148,714	935,538	18.2%	5,478,831	1,082,724	19.8%
GPATS Study Area	608,081	93,824	15%	664,306	110,570	17.7%

Table 11 | Change in Population Age 65+ (2025 Esri)

TRANSPORTATION & LAND USE INTEGRATION

Innovative transportation planning increasingly emphasizes coordination between land use, economic development, and transportation investments. Approaches such as transit oriented development, complete streets, and activity center planning can reduce travel distances, support multimodal access, and improve overall system efficiency. For GPATS, strengthening the link between transportation and land use decisions will continue to be essential to managing growth and limiting future congestion.

ALTERNATIVE FUEL STATIONS

Electric vehicle (EV) adoption is an emerging trend within the GPATS area, supported by the gradual expansion of publicly accessible alternative fuel stations. GPATS has participated in public engagement efforts related to the South Carolina National Electric Vehicle Infrastructure (NEVI) Formula Program, a program set to strengthen charging availability by deploying DC Fast Chargers along Alternative Fuel Corridors across the state and will continue to do so as the program progresses. As shown in **Figure 32**, alternative fuel stations are distributed throughout the GPATS boundary, with concentrations near major municipalities and along key corridors.

EV registrations have been significantly increasing nationwide. In fact, EVs registered in the US rose to 4.5 million in 2024 according to data from the Alternatives Fuel Data Center (**Table 11**) compared to 1.4 million in 2021. Similarly, South Carolina saw an increase in registered EVs during this period. The number of EVs registered in South Carolina was 7,400 in 2021 compared to 26,800 in 2024.

It is also important to note the increasing trend in EV usage in public transportation as well. Transit agencies, both locally and nationally, have been transitioning towards electric or compressed natural gas (CNG) fleet vehicles. In fact, Greenlink has been transitioning its fleet overtime, with 49 new or replacement vehicles identified as CNG vehicles in their 2018 Transit Development Plan.

	2021	2024	% CHANGE
United States	1,454,400	4,503,700	210%
South Carolina	7,400	26,800	262%

Table 12 | Growth in Electric Vehicle Registrations in the US & SC

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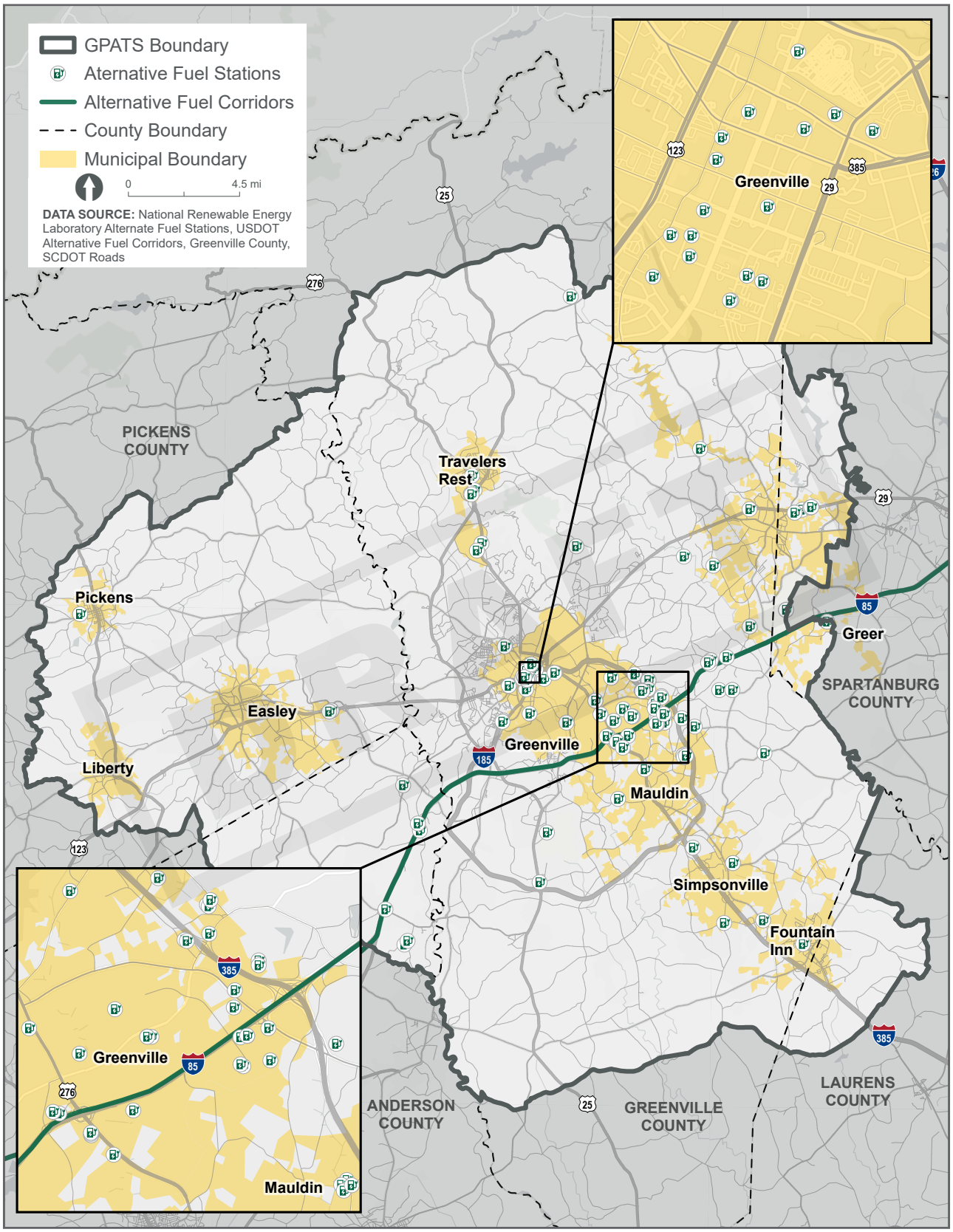


Figure 32 | Alternative Fuel Infrastructure

REGIONAL & HIGH-SPEED RAIL CONSIDERATIONS

Regional and high speed rail has emerged as a longer term mobility concept of interest for the GPATS area, particularly given the region's position within the rapidly growing Upstate and broader Southeast mega-region. Interest in enhanced passenger rail service reflects a desire to improve intercity connectivity, provide alternatives to long distance automobile travel, and support economic development by linking major employment and population centers.

An an analysis for the feasibility of construction of a high-speed rail line between Atlanta and Charlotte was initiated in 2013 when the Federal Rail Administration (FRA) published a Notice of Intent for a Tier 1 EIS in Partnership with the Georgia Department of Transportation (GDOT). It included consideration of six potential routes, including three shared use alternatives:

- The Norfolk Southern (NS) railroad corridor known as the Southern Crescent Corridor route
- CSX Transportation (CSX) right-of-way between Atlanta, GA, and Chester, SC, through Athens, GA and NS right-of-way between Chester, SC, and Charlotte, NC, through Rock Hill, SC
- CSX right-of-way between Atlanta and Augusta, GA, and NS right-of-way between Augusta and Charlotte through Columbia, SC
- The I-85 corridor through Greenville and Spartanburg, SC
- The I-20 and I-77 corridor through Columbia, SC
- A greenfield corridor allowing the project team to define a fully grade-separated route alignment with optimal geometric characteristics for high-speed passenger rail service

The Tier 1 EIS was completed, and the Greenfield Corridor Alternative was identified as the preferred alternative in the final EIS and Record of Decision released in June 2021. This alternative includes one stop in Anderson and one stop within the GPATS Study Area at the Greenville-Spartanburg International Airport. Further environmental review, planning, and engineering is needed to implement this project.

As planning continues for a high-speed route between Charlotte and Atlanta, GPATS is presented with an opportunity to plan local regional rail that could support the region and work in harmony with future high-speed efforts. This will require some extensive coordination with local rail agencies and could be a valuable opportunity for utilization of programs like the Corridor Identification & Development Program through the FRA. Any advancement of passenger rail will require substantial coordination with state and regional partners, careful evaluation of ridership potential, and integration with local transit, bicycle, and pedestrian networks. While rail implementation remains a long-range consideration, continued planning and preservation of potential corridors can help ensure that GPATS remains positioned to participate in future regional rail initiatives as travel demand and funding opportunities evolve.

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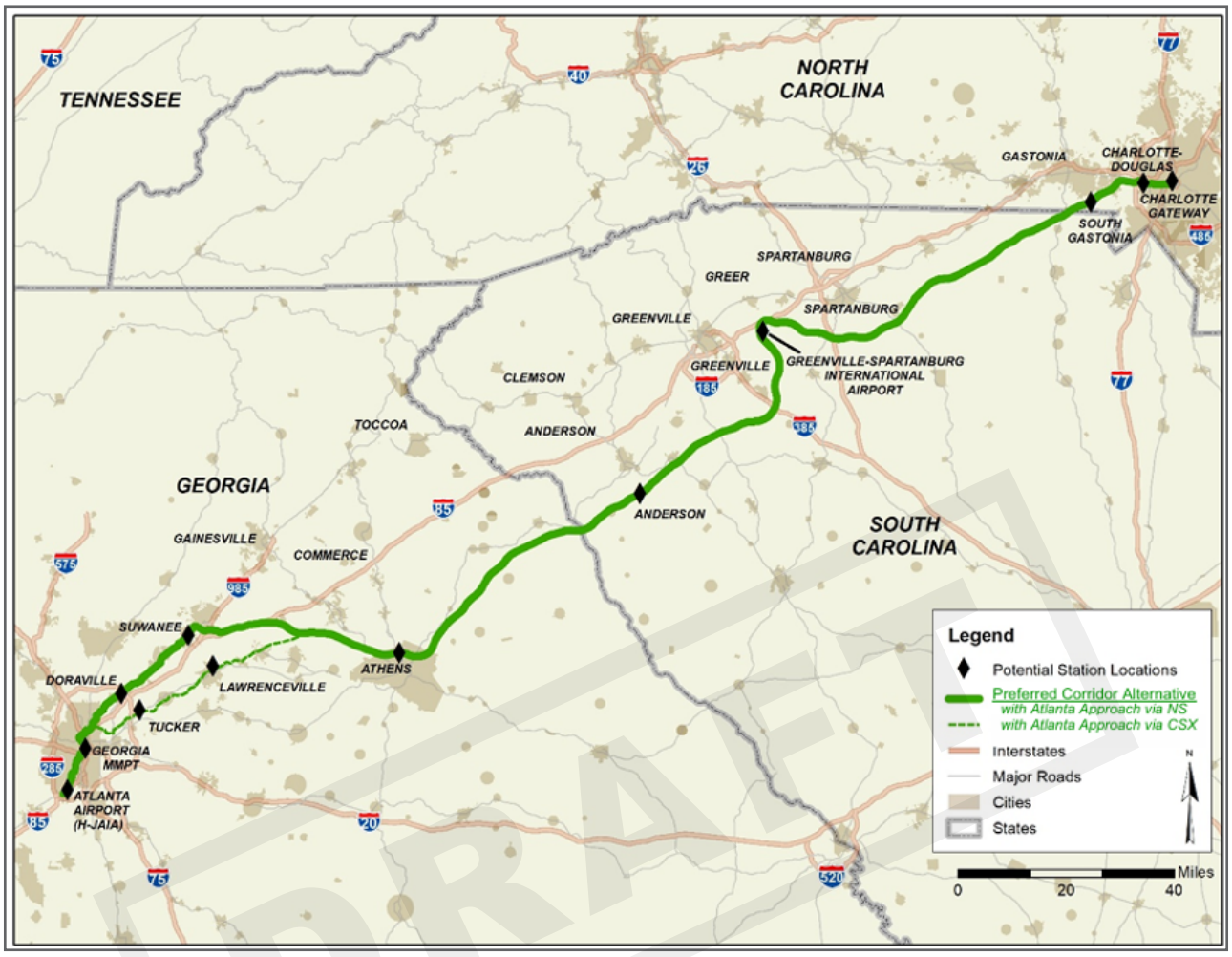


Figure 33 | Charlotte to Atlanta High Speed Rail Preferred Alternative (EIS & Record of Decision)

CONNECTED & AUTOMATED VEHICLE (CAV) READINESS

While widespread deployment of fully autonomous vehicles remains a longer term prospect, incremental advancements in connected vehicle technologies are already influencing roadway operations. CAVs are considered to fall into two groups – connected vehicles (CV) and autonomous vehicles (AV). This technology involves complex connectivity to inform these vehicles about their surroundings including:

- **Vehicle-to-Vehicle (V2V):** Information on speed, location, and heading.
- **Vehicle-to-Infrastructure (V2I):** Information on signal timing, work zones, crashes, congestion, and weather conditions.
- **Vehicle-to-Pedestrian (V2P):** Information between vehicles and non-motorized users on and off crosswalks and bicyclists.
- **Vehicle-to-Everything (V2N to V2E):** Data transmitted to a central location for analysis, including demand management, travel times, and incident response.

These communication tactics help reduce the occurrence of vehicle crashes and improve system operations by analyzing data and sharing it in real time, providing for optimized management of the transportation network. Vehicle to infrastructure (V2I) applications, such as adaptive signal timing, queue warnings, and real time traveler information, can improve safety and reliability on congested corridors.

AVs refer to vehicles that incorporate varying degrees of automated driving technologies and range from blind spot detection to adaptive cruise control. Advances in this technology have led to pilot vehicles that are driven entirely by on-board computer systems and require little to no human intervention. The Society of Automotive Engineers (SAE) identifies six levels of automation further detailed in **Figure 34**. These technologies have been researched and developed for highway freight vehicles as well, such as Aurora Innovation, Inc.'s fully autonomous trucks and driver-less operations along I-45 in Texas. In fact, experts have stated they expect 13% of trucks operating on US roads to be fully autonomous by 2035.[6]

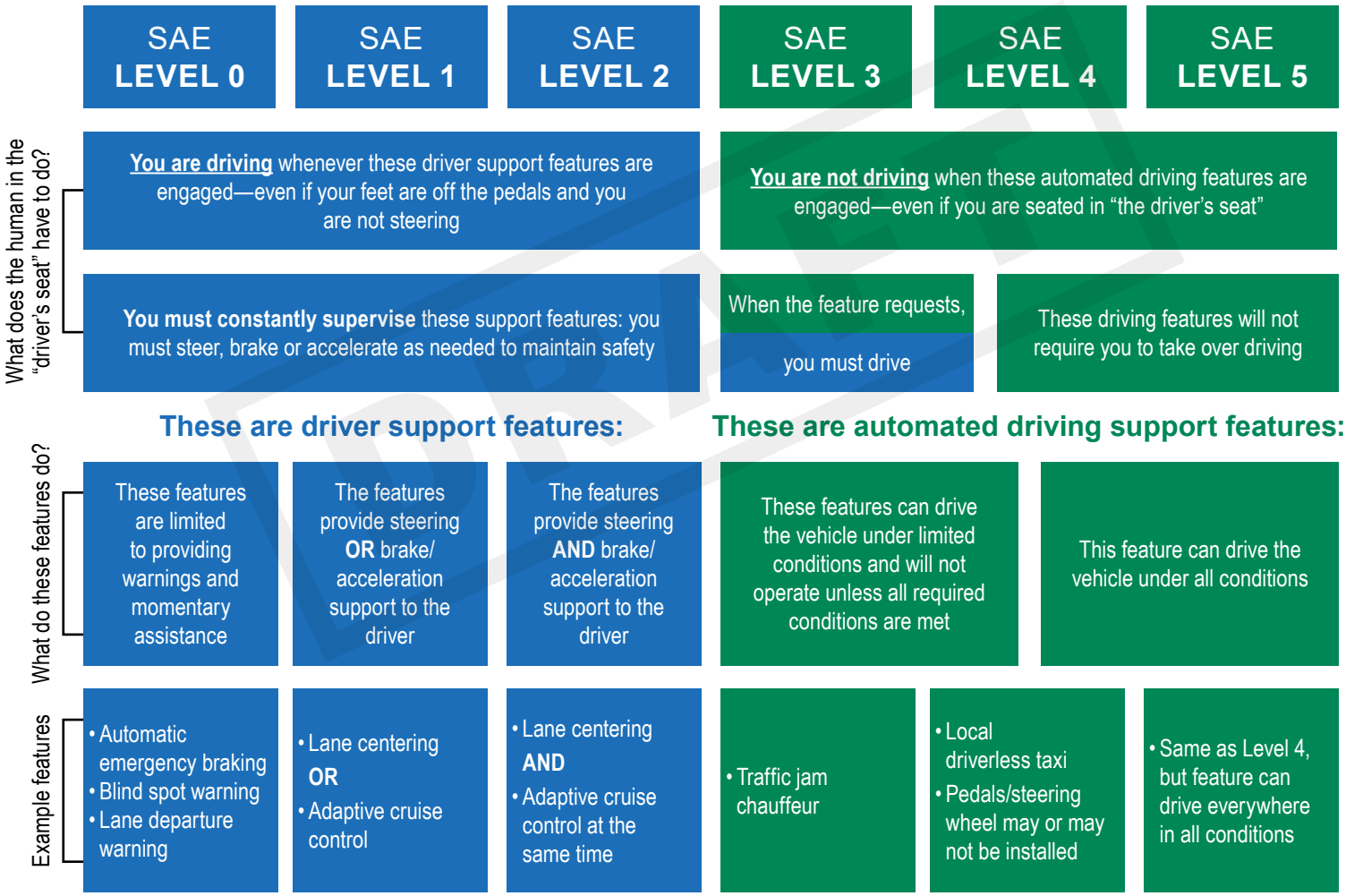


Figure 34 | SAE - Levels of Driving Automation (SAE International)

It is anticipated that automation will continue to advance and new features will become available to consumers over time as safety and reliability testing continues. GPATS can support CAV readiness through consistent roadway markings, communications infrastructure, and policies that allow the region to adapt as automation levels increase over the planning horizon.

[6] *Driverless Trucks are Rolling in Texas, Ushering in New Era, https://www.axios.com/2025/04/23/texas-driverless-trucks*

MICROMOBILITY

Micromobility is defined as "a category of modes of transportation that includes very light, low-occupancy vehicles such as electric scooters (e-scooters), electric skateboards, shared bicycles, and electric pedal assisted bicycles (e-bikes)" by FHWA.[7] It is a common form of transportation in city centers and can be used to increase accessibility to public transportation and to replace short trips often taken by car. In fact, in a 2023 Report on Shared Micromobility, NACTO sited that in 13 years people took 887 million trips on shared bikes and scooters in the US and Canada.[8] While the forms of micromobility currently seen in the GPATS region are limited, this mode of transportation is actively expanding into and impacting the region. **Forms of micromobility seen across the nation include:**

Shared Bicycles & E-Bikes (Station Based)

Station-based bicycles and electric bicycles, or e-bikes, using a system of docking stations across a region allow individuals to rent bicycles at various locations and return them at different stations near their destinations. This is often done through an application on a smart phone. The GPATS region has seen its own introduction of a bike share system, known as BCycle, located in the City of Greenville. There are stations located in several locations around the City, allowing bicycles to be removed and docked from a variety of locations including City Hall, the Greenville Zoo, Unity Park, the Next Innovation Center, and the local YMCA. While not within the GPATS Study Area, Clemson University is also home to its own BCycle bikeshare system. This is evidence that there is demand in the area for alternative forms of mobility separate from the average automobile. In fact, across the US, the number of trips made using shared bicycles and e-bikes totaled 61 million in 2023 with the largest increase in annual trips being for e-bikes with an increase of 40% from 2022 to 2023.

Dockless E-Bikes & E-Scooters

While not currently used in the GPATS region, dockless e-bikes and e-scooters are also becoming more common across the US and refer to fleet systems that do not dock in fixed locations. These fleets often are assigned to geofences that limit where they can be rented and returned. Like their station-based counterpart, these systems often use an application on a smart phone. While jurisdictions within the GPATS region do not offer dockless e-bikes or e-scooters, it has become fairly common to see privately owned e-bikes and e-scooters within the MPO boundary. This aligns with a nationwide increase in the percentage of bicycle riding Americans that use E-bikes. Reports have documented an increase in from 7.8% in 2021 to 19.4% in 2023.[9]

Micromobility as a Service

Mobility as a Service (MaaS) refers to an approach to travel that integrates identification of routes to destinations utilizing several modes of transportation within a single interface and using a single payment mechanism. Users are able to plan entire trips across several modes of transportation and tailor trips to an individual's specific needs.[10]

[7] *Bikeshare and E-scooters in the US | BTS Data Inventory, https://data.bts.gov/stories/s/Bikeshare-and-e-scooters-in-the-U-S-/fwcs-jprj/*

[8] *Shared Micromobility Report: 2023 - NACTO, https://nacto.org/publication/shared-micromobility-report-2023/*

[9] *Electric Bicycle Market Insights From Industry Experts, https://www.peopleforbikes.org/news/electric-bicycle-market-insights-2024*

[10] *Towards the Promise of MaaS in the US (July 2020), https://sharedusemobilitycenter.org/wp-content/uploads/2020/09/Towards-the-Promise-of-MaaS-in-the-US-July-2020-Shared-Use-Mobility-Center.pdf*

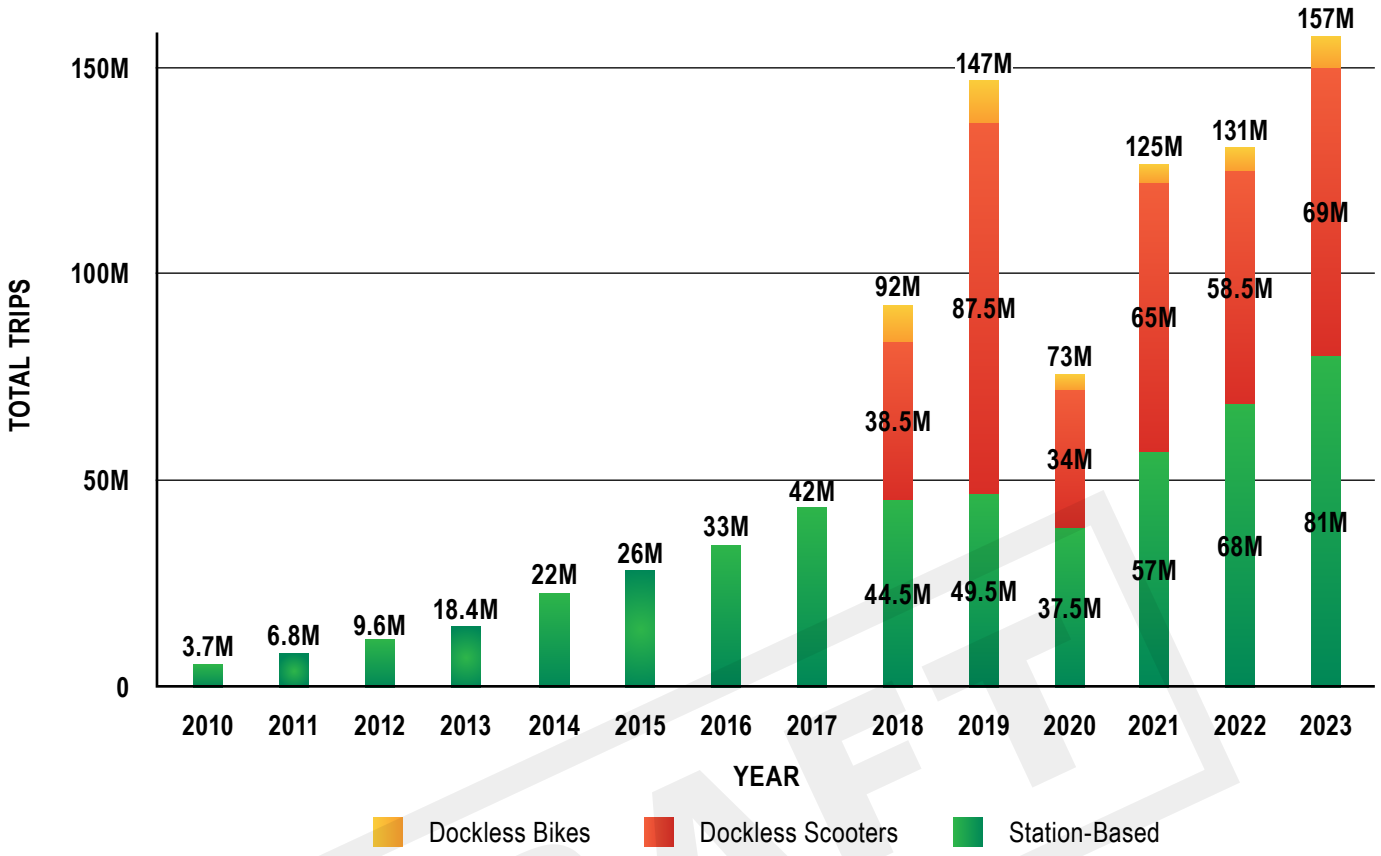


Figure 35 | Shared Micromobility Ridership in the US and Canada, 2010–2023 (NACTO)

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CHAPTER 7
Project Alternatives & Strategies Development

CHAPTER 7: PROJECT ALTERNATIVES & STRATEGIES DEVELOPMENT

Development of the *Horizon 2050 LRTP's* project and policy alternatives was guided by feedback received during round one of public engagement, needs and transportation related issues identified during the existing and future conditions assessment, and recommendations identified in local plans and studies. The plans and studies considered can be found in the Existing Conditions Assessment.

After a list of multimodal project alternatives was developed, the projects were evaluated against a matrix of performance measures to determine how well the projects align with the Horizon 2050 Guiding Statements and objectives. This evaluation determined how well each project helps progress towards GPATS' vision of the future transportation network. Projects ranking the highest were considered "high priority projects."

Horizon 2050 Improvement Strategies

This process began by identifying a toolbox of strategies that could be used to address transportation issues and needs identified during the existing and future conditions assessments and round one of public engagement. This toolbox of strategies (see **Figure 36** to the right) was used as a starting place for the list of multimodal projects later evaluated in the prioritization matrix.

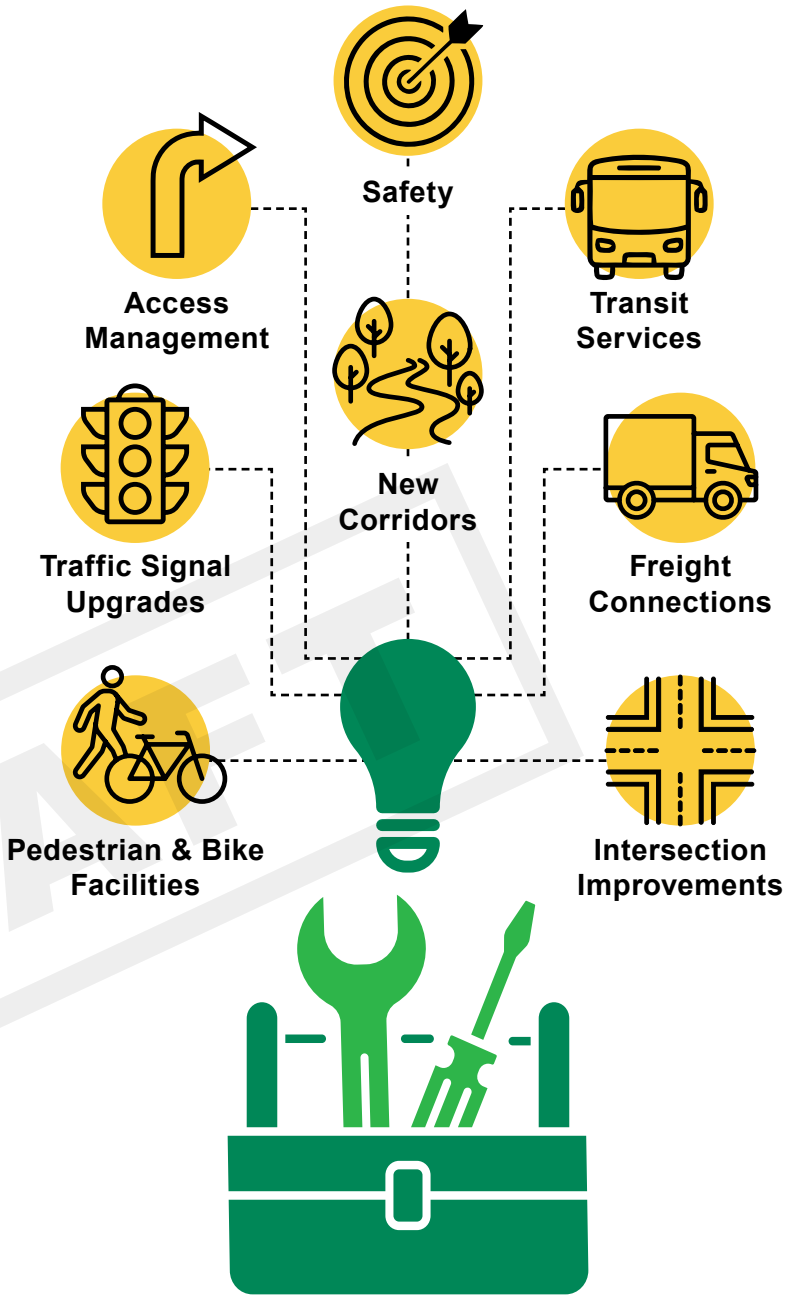


Figure 36 | Improvement Strategy Toolbox

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ROADWAY STRATEGIES



Additional Travel Lanes
Construction of additional through lanes or turn lanes to accommodate additional traffic volume



Corridor Signal Timing/Upgrades
Systematic adjustment of existing traffic signal operations or modernization of existing traffic signal equipment along an entire corridor



Medians
Construction of a separation or barrier between opposing traffic lanes to improve safety and traffic operations



Roadway Reconfiguration
Reconfiguring existing traffic lanes to improve traffic flow and user experience, such as converting a four-lane road to a three-lane road with a center turn lane



Improved Pavement Markings
Adding or upgrading pavement markings to be clearer, highly visible, and reflective



Paved Shoulders/ Improve Existing Shoulders
Adding paved shoulders, or widening existing shoulders, along a roadway



Rumble Strips/ Improve Existing Rumble Strips
Addition or improvement of a textured surface along a roadway to alert a roadway user that they are departing from the travel lane



Driveway & Median Access Management
Restriction of turning movements and access to driveways to specific, well-thought-through locations to improve safety and traffic operations



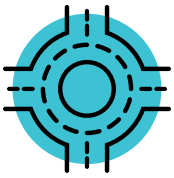
Lighting
Addition of lighting along a corridor to improve visibility for roadway users

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INTERSECTION STRATEGIES



Traffic Signal Timing/Upgrades
Adjustment of existing traffic signal operations or modernization of existing traffic signal equipment



Roundabouts
Alternative design to signalized intersections where traffic circulates in a continuous counterclockwise motion around a center island



Addition of Turn Lanes
Addition of an exclusive lane for right- or left-turn movements that improve traffic flow by reducing delay



Restricted Left Turns
Restriction of left-turn movements to reduce potential collision conflict points within an intersection



Protected Left Turns at Signalized Intersections
Addition of exclusive signal time for left-turn movements to reduce potential collision points within an intersection



Advanced Signage/ Improved Advanced Signage
Addition of or improvement of signage approaching an intersection with limited visibility



Improved Sight Lines
Implementation of improvements at an intersection to improve visibility at an intersection to enhance safety

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BICYCLE & PEDESTRIAN STRATEGIES



Sidewalks/ Improved Sidewalks
Addition or improvement of sidewalks along a corridor to provide clearly delineated space for pedestrians and enhance safety



New or Improved Cycle Tracks/Bike Lanes
Addition or improvement of on-street bicycle infrastructure along a corridor to provide clearly delineated space for cyclists and enhance safety



Multiuse Path
Construction or improvement of off-street and on-street paths that can be used by pedestrians and cyclists, including improved pavement markings at street crossings



Bike & Pedestrian Friendly Signal Timing
Introduction of a leading bicycle/pedestrian interval or a separate interval for bicycles/pedestrians at an intersection to improve safety



New/Improved Crossing Infrastructure
Implementation of clearly delineated crossing infrastructure, such as rectangular rapid flashing beacons (RRFBs) or leading pedestrian intervals, at intersections to improve safety



Grade Separated Crossings
Construction of an overpass or underpass at locations where multiuse paths intersect streets at-grade

TRANSIT STRATEGIES



Increased Service Hours & Weekend Service
Extending current service hours during weekday operations or expanding transit services on weekend days and holidays



Same Day Service
Allowing passengers to book same day transit trips rather than requiring booking 24 hours in advance



Bus Rapid Transit
Improving public transportation service through dedicated lanes, bus pullouts, and transit signal priority to provide faster, more reliable service

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Horizon 2050 Alternatives

Public and stakeholder feedback compiled from the first round of engagement directly influenced the unranked list of projects that was introduced to the public during the second round of engagement. During round two, participants were asked to review the project list and draft evaluation criteria to determine if it was moving in the correct direction and to identify if any projects are missing. Feedback from round two was incorporated into the unranked list of projects shown in **Table 12**. In addition to public and stakeholder feedback, the projects in the list shown below originated from the following sources:

- Existing local and regional plans
- The GPATS Congestion Management Process (CMP)
- The SCDOT RMP
- Technical congestion and safety analysis conducted in the LRTP planning process

ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
1	Local Plans	Pickens	Easley	Bike/Ped	Gilder Creek Multi-Use Trail	East Butler Rd to Corn Rd	New Multiuse Path
2	Stakeholder Feedback	Pickens & Greenville	Easley & Greenville	Bike/Ped	Doodle Trail Extension	Easley to Greenville	New Multiuse Path
3	Interactive Comment Map	Anderson and Pickens	Easley and Powdersville	Bike/Ped	Doodle Trail Extension	Easley to Powdersville	New Multiuse Path
4	Greenville DTMP	Greenville	Greenville	Bike/Ped	Greenline Connection off South Side of Laurens Rd	At Swamp Rabbit Trail	New Multiuse Path
5	Greenville DTMP	Greenville	Greenville	Bike/Ped	McDaniel Ave Trail	McBee Ave to Ridgeland Dr	New Multiuse Path
6	Staff	Greenville	Greenville	Bike/Ped	SRT Blue Line Gap	Cleveland St to Parkins Mill	New Multiuse Path
7	Stakeholder Feedback	Greenville	Greenville	Bike/Ped	Unity Park Connector	Unity Park to Village of West Greenville	New Multiuse Path
8	Local Plans	Greenville	Greenville	Bike/Ped	US 276 (Poinsett Hwy)	Rutherford Rd and US 25	Sidewalk and Pedestrian Improvements
9	Interactive Comment Map	Greenville	Greer	Bike/Ped	S Tyger River Greenway Ext	Tyger River Greenway to Downtown Greer & up to Lake Robinson	New Multiuse Path

Table 13 | Unranked Project List

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
10	Local Plans	Greenville	Greer	Bike/Ped	Poinsett St	-	Sidewalk and Pedestrian Improvements
11	Local Plans	Greenville	Greer	Bike/Ped	Pelham St	-	Safety Improvements
12	Interactive Comment Map	Greenville	Mauldin	Bike/Ped	Miller Rd	Bridges Rd to Woodruff Rd	Sidewalk and Pedestrian Improvements
14	Stakeholder Feedback	Greenville	Mauldin and Simpsonville	Bike/Ped	Swamp Rabbit Trail Ext	Bridgeway Station to Simpsonville	New Multiuse path
15	Interactive Comment Map	Greenville	Simpsonville	Bike/Ped	Standing Springs Rd	Ashmore Bridge Rd to W Georgia Rd	Sidewalk and Pedestrian Improvements
16	Staff	Greenville/ Spartanburg	Taylors/ Greer	Bike/Ped	SRT Orange Line	Arcadia Dr to SC-80	New Multiuse Path
17	CMP	Greenville	Travelers Rest	Bike/Ped	Hwy 25	US 276/Poinsett Hwy to Locust Hill Rd	New Multiuse Path
18	Stakeholder Feedback	Greenville	Travelers Rest	Bike/Ped	Pedestrian/ Bicycle Bridge over US 25	Downtown Travelers Rest to Commercial Area Along Benton Rd	Multiuse Path and Bike/ Pedestrian Bridge
19	Interactive Comment Map	Greenville	-	Bike/Ped	Northbound Extension of Swamp Rabbit Trail	Travelers Rest to Marietta	New Multiuse Path
149	Stakeholder Feedback	Greenville	Greenville	Bike/Ped	Brushy Creek Shared Use Path	Pleasant Valley Rd to Blue Line SRT	New Multiuse Path
151	Stakeholder Feedback	Greenville	Taylors	Bike/Ped	Orange Line SUP	Greenlink to Taylors	New Multiuse Path
152	Stakeholder Feedback	Greenville	Traveler's Rest	Bike/Ped	Gold Line SUP	YMCA to Saluda Confluence Park	New Multiuse Path
153	Stakeholder Feedback	Greenville	Greenville	Bike/Ped	Orange Line SUP	Greenline to Whitehorse RD Corridor	New Multiuse Path
154	Stakeholder Feedback	Greenville	Mauldin	Bike/Ped	Greenline SUP	CU-ICAR-Downtown Mauldin	New Multiuse Path

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
155	Stakeholder Feedback	Greenville	Fountain Inn	Bike/Ped	Greenline SUP	Downtown Simpsonville to Dt FI	New Multiuse Path
156	Stakeholder Feedback	Greenville	Simpsonville	Bike/Ped	-	Downtown Mauldin to Simpsonville	New Multiuse Path
157	Stakeholder Feedback	Greenville	Greer	Bike/Ped	Rocky Creek SUP	Pelham Rd at Beacon to Hwy 14	New Multiuse Path
160	Stakeholder Feedback	Greenville	Greer	Bike/Ped	Wade Creek Connector	Connect New Words Creek Greenway to Wade Hampton at Walmart	New Multiuse Path
161	Stakeholder Feedback	Greenville	Unsure	Bike/Ped	Moreview Greenway	Connect Blue Ridge Dr to East Marion With Path along Moreview St	New Multiuse Path
165	Stakeholder Feedback	Greenville	Greenville	Bike/Ped	Textile Crescent	Extend Current TAP Project from Easley Bridge Rd to Anderson Rd	New Multiuse Path
166	Stakeholder Feedback	Greenville	Greenville	Bike/Ped	Pine Knoll Rd	Wade Hampton & Waddel Rd	Sidewalk and Pedestrian Improvements
167	-	Greenville	Greenville	Bike/Ped	Orchard Park	Haywood to Patewood	Sidewalk and Pedestrian Improvements
170	Stakeholder Feedback	Greenville	Fountain Inn	Bike/Ped	Hellams or Duckett to Downtown	SRT Ext	New Multiuse Path
20	CMP	Pickens	Easley	Corridor	Pendleton St	Main St to 5th St/ Walker Ellison Rd	New Multiuse Path
21	CMP	Pickens	Easley	Corridor	Calhoun Memorial Hwy	Brushy Creek Rd to Hwy 153	Traffic Improvements
22	Needs Assessment	Pickens	Easley	Corridor	Old Easley Bridge Rd	SC 153 to US 123	Widening, Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
23	Staff	Pickens	Easley	Corridor	SC-153 Phase 3	Phase 2 to SC-183	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
26	CMP	Anderson and Pickens	Easley and Powdersville	Corridor	Hwy 153	Old Easley Bridge Rd to I-85	Widening Project and Traffic improvements
27	CMP	Greenville	Five Forks	Corridor	Hwy 14	Woodruff Rd to Batesville Rd	Traffic Improvements, Bicycle and Pedestrian improvements
28	CMP	Greenville	Five Forks	Corridor	Woodruff Rd	Hwy 14 to Batesville Rd	Sidewalk and Pedestrian improvements
29	CMP	Greenville	Greenville	Corridor	Laurens Rd/ Main St	Woodruff Rd to Main St	Traffic Improvements, Bicycle and Pedestrain improvements
30	CMP	Greenville	Greenville	Corridor	Academy St	College St to North St	Bicycle and Pedestrian Improvements, Traffic Improvements
31	CMP	Greenville	Greenville	Corridor	Pleasantburg Dr	Faris Rd to Wade Hampton Blvd	Bicycle Improvements, Traffic Improvements
32	CMP	Greenville	Greenville	Corridor	Buncombe/ North St & College St/ Beattie	Butler Ave to Church St	New Multiuse Path
33	CMP	Greenville	Greenville	Corridor	Pendleton St	Lois Ave to Main St	Traffic Improvements
34	CMP	Greenville	Greenville	Corridor	Pelham Rd	North St to Hudson Rd	Sidewalk and Pedestrian Improvements, Traffic Improvements
35	CMP	Greenville	Greenville	Corridor	Haywood Rd	Laurens Rd to North St	Sidewalk and Pedestrian Improvements, Traffic Improvements
36	CMP	Greenville	Greenville	Corridor	Faris Rd/S. Washington Ave	Anderson Rd to Pleasantburg Dr	Sidewalk and Pedestrian Improvements, Traffic Improvements
37	CMP	Greenville	Greenville	Corridor	S-1077 Washington St	Trescott St to Pettigru S	Sidewalk and Pedestrian Improvements, Traffic Improvements
38	CMP	Greenville	Greenville	Corridor	Dairy Dr	Ridge Rd to Confluence Outdoors	Widening Project

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
39	CMP	Greenville	Greenville	Corridor	Mills Ave/ Church St	Henrydale Ave to Academy St	Traffic Improvements
40	CMP	Greenville	Greenville	Corridor	Stone Ave	Rutherford St to North St/I-385	Traffic Improvements, Bicycle improvements
41	CMP	Greenville	Greenville	Corridor	Augusta Rd	Sandy Springs Rd to I-185	New Multiuse Path
42	CMP	Greenville	Greenville	Corridor	Roper Mountain Rd	Woodruff Rd to Hwy 14	Traffic Improvements
43	CMP	Greenville	Greenville	Corridor	Augusta Rd/ Pleasantburg Dr	White Horse Rd to Mauldin Rd	Traffic Improvements
44	CMP	Greenville	Greenville	Corridor	Pleasantburg Dr/State Park Rd	Poinsett Hwy to Wade Hampton Blvd	Traffic Improvements
45	CMP	Greenville	Greenville	Corridor	Augusta St/Rd	Faris Rd to Pleasantburg Dr	Traffic Improvements, Lane Reconfiguration
46	Greenville DTMP	Greenville	Greenville	Corridor	Pete Hollis Blvd/ Buncombe St	Briggs Ave to College St	Lane Reconfiguration
48	Staff	Greenville	Greenville	Corridor	W. Blue Ridge Dr	White Horse Rd to Poinsett Hwy	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
50	CMP	Greenville	Greer	Corridor	Wade Hampton Blvd	Ried School Rd to Buncombe Rd	Traffic Improvements, New Multiuse Path
51	Interactive Comment Map	Greenville	Mauldin	Corridor	Log Shoals Rd	US 276 to Fork Shoals Rd	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
53	Interactive Comment Map	Greenville	Mauldin	Corridor	Hamby Dr	Forrester Dr to Miller Rd	Widening Project
54	Interactive Comment Map	Greenville	Mauldin	Corridor	Bridges Rd	E Butler Rd to Holland Rd	Widening Project
55	Needs Assessment	Greenville	Mauldin	Corridor	Ashmore Bridge Rd	Fork Shoals to W Butler Rd	Widening project, Intersection Improvements

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
56	Needs Assessment	Greenville	Mauldin	Corridor	East Butler Rd	Bridges Rd to Woodruff Rd	Traffic improvements, Sidewalk and pedestrian improvements
58	Stakeholder Feedback	Greenville	Mauldin	Corridor	Bridges Rd	I-385 to Hwy 14	Traffic Improvements, Intersection Improvements
59	Stakeholder Feedback	Pickens	Pickens and Liberty	Corridor	US 178	Pickens to Liberty	Intersection Improvements
60	Staff	Anderson/ Greenville	Piedmont	Corridor	SC-86	SC-81 to SC-20	Intersection Improvements
61	SC 81 Corridor Study	Anderson	Powdersville	Corridor	SC 81	Piedmont Rd to Wren School Rd	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
62	CMP	Greenville	Simpsonville	Corridor	Fairview Rd	Main St to Hwy 418	New Multiuse Path, Traffic Improvements
63	CMP	Greenville	Simpsonville	Corridor	Georgia Rd	Fork Shoals Rd to I-385	Bicycle improvements, Sidewalk and Pedestrian Improvements, Traffic Improvements
64	CMP	Greenville	Simpsonville	Corridor	Main St	Curtis St to Fairview Rd	Traffic Improvements
65	CMP	Greenville	Simpsonville	Corridor	Harrison Bridge Rd	Fairview Rd to Main St	Intersection Improvements
66	Needs Assessment	Greenville	Simpsonville	Corridor	Harrison Bridge Rd	Neely Ferry Rd to Fairview Rd	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
67	Needs Assessment	Greenville	Simpsonville	Corridor	Harts Lane	Hwy 14 to Jonesville Rd	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
68	Needs Assessment	Greenville	Simpsonville	Corridor	SC Hwy 14	E Curtis St to Harts Ln	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
69	Staff	Greenville	Simpsonville	Corridor	Hwy 14	Woodruff Rd to NE Main St (Simpsonville)	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
71	CMP	Greenville	Taylors	Corridor	Main St	Wade Hampton Blvd to Taylors Rd	Traffic Improvements
72	CMP	Greenville	Taylors	Corridor	Howell/ Edwards Rd	E North Street to Wade Hampton Blvd	Traffic Improvements
73	CMP	Greenville	Taylors	Corridor	North St/Old Spartanburg Rd/Brushy Creek Rd	Howell Rd to Taylors Rd	New Multiuse Path, Sidewalks and Pedestrain improvements
74	CMP	Greenville	Taylors	Corridor	Brushy Creek Rd/Old Spartanburg	Cunningham Rd to Batesville Rd	Sidewalk and Pedestrain Improvements
75	Staff	Greenville	Taylors	Corridor	St. Mark Rd	E. Main (Taylors) to Locust Hill Rd	Intersection Improvements
76	CMP	Greenville	-	Corridor	White Horse Rd	Anderson Rd to I-85	Widening Project
78	Staff	Greenville	-	Corridor	Fork Shoals Rd	Conestee Rd to W. Georgia Rd	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
79	Staff	Greenville	-	Corridor	Stallings Rd	Rutherford Rd to Reid School Rd	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
80	Staff	Greenville	-	Corridor	Hudson Rd	Pelham to Brushy Creek	Intersection Improvements
81	Staff	Greenville	-	Corridor	SC-418	Saluda River to Durbin Rd	Intersection Improvements
83	Staff	Greenville	-	Corridor	Woodruff Rd	S. Bennetts Bridge Rd to Enoree River	Intersection Improvements
84	Staff	Greenville	-	Corridor	Scuffletown Rd	Woodruff Rd to SC-418	Intersection Improvements

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
85	Staff	Greenville	-	Corridor	Roper Mountain Rd	Roper Mtn Ext to Woodruff Rd	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
86	Staff	Greenville	-	Corridor	SC-253 (E. Mtn. Crk/Sandy Flat Rds)	State Park Rd to Locust Hill Rd	Intersection Improvements
87	Staff	Pickens	-	Corridor	SC-8	St. Paul Rd to Anderson Hwy (SC-135)	Intersection Improvements
89	CMP	Greenville	Greenville	Corridor	I-385	East North St to I-85 Alternative	Intersection Improvements
90	CMP	Greenville	Greenville	Corridor	I-85	US 25 to Roper Mountain Rd	Widening Project
91	CMP	Greenville	Greer	Corridor	I-85	Pelham Rd to Brockman McClimon Rd	Intersection Improvements
92	CMP	Greenville	-	Corridor	I-85	Roper Mountain Rd to S-12	Widening Project
93	Local Plans	Greenville	Greenville	Corridor	US 123 (Academy St)	Pendleton St & Washington Ave	Safety Improvements, Intersection Improvements, Bicycle and Pedestrian Improvements
94	Interactive Comment Map	Greenville	Greenville	Corridor	I-185	White Horse Rd (US 25)	Intersection Improvements
144	Stakeholder Feedback	Greenville	Greenville	Corridor	Richburg Rd	WHB to E. North St	Sidewalk and Pedestrian Improvements
148	Stakeholder Feedback	Anderson	Piedmont	Corridor	Major Rd/ Moore Rd	From Hwy 86 to Hwy 81	Widening Project, Safety Improvements, Bicycle and Pedestrian Improvements
47	Haynie-Sirrine Neighborhood Plan	Greenville	Greenville	Intersection	Dunbar	At Augusta St	Realignment
95	Interactive Comment Map	Pickens	Easley	Intersection	Fleetwood Dr	Wilbur St	Intersection Improvements
96	Need Assessment	Pickens	Easley	Intersection	Brushy Creek Rd	Peason Rd	Intersection Improvements

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
97	Need Assessment	Pickens	Easley	Intersection	Brushy Creek Rd	Sheriff Mill Rd	Intersection Improvements
98	Need Assessment	Pickens	Easley	Intersection	SC Hwy 8	West End School	Intersection Improvements
99	Need Assessment	Pickens	Easley	Intersection	SC Hwy 8	Pope Field	Intersection Improvements
100	Need Assessment	Pickens	Easley	Intersection	SC Hwy 9	At E 3rd Ave & S C St	Intersection Improvements
101	Need Assessment	Pickens	Easley	Intersection	Saluda Dam Rd	Olive St/Pace Valley Rd	Intersection Improvements
102	Stakeholder Feedback	Pickens	Easley	Intersection	US 123 at Hwy 124	US 123 at Hwy 124	Realignment
103	Stakeholder Feedback	Greenville and Laurens	Fountain Inn	Intersection	SC 418/ Cullivan St	Durbin Rd	Realignment
104	Greenville DTMP	Greenville	Greenville	Intersection	Academy St	Church St	Intersection Improvements
105	Greenville DTMP	Greenville	Greenville	Intersection	Augusta St/ Mills Ave	Church St	Intersection Improvements
106	Greenville DTMP	Greenville	Greenville	Intersection	Church St	E Coffee	Intersection Improvements
107	Greenville DTMP	Greenville	Greenville	Intersection	McDaniel Ave	Woodland Way & Univeristy Ridge	Intersection Improvements
108	Greenville DTMP	Greenville	Greenville	Intersection	Washington St	McBee Ave	Intersection Improvements
109	Haynie-Sirrine Neighborhood Plan	Greenville	Greenville	Intersection	Haynie St	Howe St	Realignment
110	Interactive Comment Map	Greenville	Greer	Intersection	Brushy Creek Rd	Alexander Rd	Intersection Improvements
111	Interactive Comment Map	Greenville	Greer	Intersection	Dillard Rd	Gibbs Shoals Rd	Intersection Improvements
112	Interactive Comment Map	Greenville	Greer	Intersection	Wade Hampton Blvd	W. Pointsett St	Intersection Improvements

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
113	Interactive Comment Map	Greenville	Mauldin	Intersection	W Butler Rd	Fowler Cir at Laurel Meadows Parkway	Intersection Improvements
114	Interactive Comment Map	Greenville	Mauldin	Intersection	Butler Rd	Ashmore Bridge Rd	Intersection Improvements
115	Interactive Comment Map	Greenville	Mauldin	Intersection	US 276 (N Main St)	Owens Ln	Intersection Improvements
116	Interactive Comment Map	Greenville	Mauldin	Intersection	Bethel Rd	Bridges Rd	Intersection Improvements
117	Interactive Comment Map	Greenville	Mauldin	Intersection	Bethel Rd	Tanner Rd	Intersection Improvements
118	Needs Assessment	Pickens	Pickens	Intersection	SC 178	SC 183	Realignment
119	Interactive Comment Map	Anderson	Powdersville	Intersection	SC 81 (Anderson Rd)	SC 153	Intersection Improvement
120	Stakeholder Feedback	Anderson	Powdersville	Intersection	SC 81 at Old Williamston Rd	SC 81 at Old Williamston Rd	Intersection Improvement, Realignment Project
121	Stakeholder Feedback	Anderson	Powdersville	Intersection	Old Mill Rd	Three Bridges Rd/Brushy Creek Rd	Realignment
123	Interactive Comment Map	Greenville	Simpsonville	Intersection	Harrison Bridge Rd	Fairview Road	Intersection Improvement
124	Interactive Comment Map	Greenville	Simpsonville	Intersection	I-385	Old Stage Rd	Intersection Improvement
125	Local Plans	Greenville	Simpsonville	Intersection	West Georgia Rd	East Standing Springs Rd	Intersection Improvement
126	Interactive Comment Map	Greenville	Travelers Rest	Intersection	US 25	Edwards St	Intersection Improvement
127	Interactive Comment Map	Greenville	Travelers Rest	Intersection	US 25	State Park Rd	Intersection Improvement
128	Local Plans	Greenville	-	Intersection	SC 253 (State Park Rd)	Altamont Rd	Intersection Improvement
129	Local Plans	Greenville	Travelers Rest	Intersection	Tigerville Rd	Jackson Grove Rd	Intersection Improvement

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ID	SOURCE	COUNTY	CITY AREA	TYPE	NAME	TERMINI	IMPROVEMENT TYPE
130	Staff	Anderson	-	Intersection	Powdersville Rd	At Three Bridges Rd	Realignment
131	Staff	Greenville	-	Intersection	Augusta	Old Augusta & Fork Shoals	Realignment
132	Local Plans	Anderson	-	Intersection	SC 81 at Dunham Bridge Rd	Dunham Bridge Rd	Intersection Improvements
133	Local Plans	Anderson	-	Intersection	SC 81 at McNeely Rd	McNeely Rd	Intersection Improvements
134	Local Plans	Anderson	-	Intersection	SC 81 at Cely Ln	Cely Lane	Intersection Improvements
143	Stakeholder Feedback	Greenville	Greenville	Intersection	Pleasantburg/ WHB	-	Intersection Improvements
168	Stakeholder Feedback	Greenville	Fountain Inn	Intersection	Exit 24 I-385	Exit 24	Intersection Improvements
171	Stakeholder Feedback	Laurens	Fountain Inn	Intersection	Exit 22 I-385	Exit 22	Intersection Improvements
135	CMP	Pickens	Easley	Signal	Main St	Liberty Dr to Dennis Dr	Traffic Improvements
136	CMP	Greenville	Greenville	Signal	Poinsett Hwy	Stone Ave to Pleasantburg Dr	Traffic Improvements
137	CMP	Greenville	Greenville	Signal	Laurens Rd/ Main St	Pleasantburg Dr to Woodruff Rd	Traffic Improvements
138	CMP	Greenville	Greenville	Signal	Park Ave/North St	Church St to Pleasantburg Dr	Traffic Improvements
139	CMP	Greenville	Greenville	Signal	Washington Ave	White Horse Rd to Easley Bridge Rd	Traffic Improvements
140	CMP	Greenville	Greenville	Signal	Roper Mountain Rd Ext	Pelham Rd to Roper Mountain Rd	Traffic Improvements
141	Needs Assessment	Greenville	Greenville	Signal	Pelham Rd	-	Traffic Improvements
142	CMP	Greenville	Mauldin	Signal	W Butler Rd	Main St to Conestee Rd	Traffic Improvements

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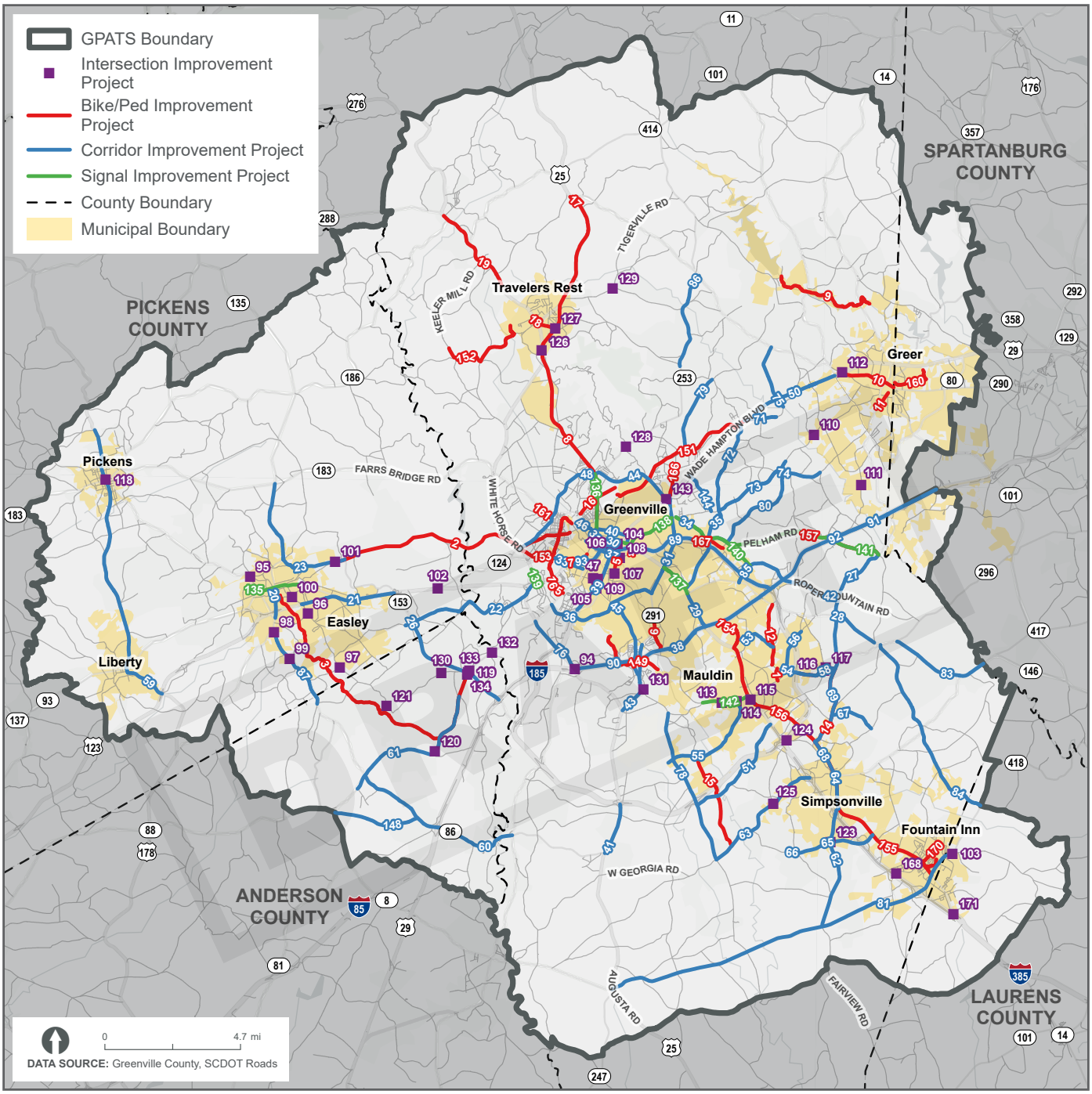


Figure 37 | Map of the Unranked Project List

Prioritization

SAFETY & SECURITY | GROWTH & DEVELOPMENT | MOBILITY & ACCESSIBILITY | CULTURE & ENVIRONMENT | SYSTEMS PRESERVATION & EFFICIENCY | ECONOMIC VALUE

GUIDING STATEMENTS	OBJECTIVES	MEASURE DEFINITIONS	SCORING	WEIGHT (CORRIDOR)	WEIGHT (INTERSECTION)	WEIGHT (BIKE/PED)
Safety & Security: Promote a safe transportation system by reducing crashes, increasing reliability, and enhancing emergency response.	Reduce fatal and serious crashes.	**Safety Improvements:** Projects serves the purpose of improving safety and/or has safety benefits.	■ 5: Project purpose is safety. ■ 3: Project purpose is not primarily safety but would provide safety benefits. ■ 1: Project provides has a neutral safety impact. ■ 0: Project has a negative impact on safety.	13%	13%	18%
	Reduce fatal and serious crashes.	**Traffic Crashes:** Based on the crash severity – including fatal, injurious, and property damaging – and the occurrence of these types of crashes.	■ 5: High density of existing crashes. ■ 3: Medium density of existing crashes. ■ 0: Low density of existing crashes.	13%	13%	18%

Table 14 | Prioritization Guiding Statements Ranked

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GUIDING STATEMENTS	OBJECTIVES	MEASURE DEFINITIONS	SCORING	WEIGHT (CORRIDOR)	WEIGHT (INTERSECTION)	WEIGHT (BIKE/PED)
Systems Preservation & Efficiency: Extend the lifespans of transportation systems by promoting fiscal responsibility and prioritizing maintenance and operational efficiency.	Maintain functionally classified pavement in Fair or Good condition.	**Pavement Condition:** Measure of the quality of roadway asphalt.	■ 5: Poor pavement condition (0–2.64). ■ 3: Fair pavement condition (2.65–3.34). ■ 0: Good pavement condition (3.35–5)/no data available because it's a nonexistent roadway.	5%	5%	0%
	Use TSMO strategies and improvements to improve system efficiency and reliability.	**TSMO:** Project improves system management capabilities.	■ 5: Project includes new TSMO assets. ■ 3: Project upgrades existing TSMO assets. ■ 0: Project includes no TSMO elements.	7%	7%	0%

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GUIDING STATEMENTS	OBJECTIVES	MEASURE DEFINITIONS	SCORING	WEIGHT (CORRIDOR)	WEIGHT (INTERSECTION)	WEIGHT (BIKE/PED)
Mobility & Accessibility: Create a transportation system that encourages biking, walking, and using public transit.	Limit peak hour congestion through strategies that reflect corridor function and land use context.	**LOS:** Existing/ Future estimate of V/C ratio.	Project addresses capacity issues in corridor where: ■ 5: Existing V/C ratio is greater than 1.0. ■ 4: Existing V/C ratio is between 0.8 and 1.0 V/C ratio. ■ 3: No existing V/C over 0.8, but future V/C ratio is 1.0 or higher. ■ 2: No existing V/C over 0.8, but future V/C ratio is between 0.8 and 1.0. ■ 0: Existing and future V/C ratios less than 0.8.	**7%**	**7%**	**0%**
	Improve the reliability of the multimodal transportation system so people and goods can reach key destinations predictably, without prioritizing roadway expansion as the primary congestion solution.	**Travel Reliability on the NHS:** Current NPMRDS estimate of LOTTR.	Project addresses reliability issues in an NHS corridor where: ■ 5: Existing LOTTR is greater than 1.5. ■ 3: Existing LOTTR is between 1.25 and 1.5. ■ 0: Existing LOTTR is less than 1.25.	**7%**	**7%**	**0%**

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GUIDING STATEMENTS	OBJECTIVES	MEASURE DEFINITIONS	SCORING	WEIGHT (CORRIDOR)	WEIGHT (INTERSECTION)	WEIGHT (BIKE/PED)
Mobility & Accessibility: (Continued) Create a transportation system that encourages biking, walking, and using public transit.	Promote projects listed in the CMP or RMP.	**CMP Project:** Project identified in CMP or a RMP Corridor.	■ 5: Project is identified in the CMP or RMP. ■ 0: Project is not Identified in the CMP or RMP.	5%	5%	5%
	Improve the safety, comfort, and connectivity of bicycle and pedestrian networks.	**Bicycle & Pedestrian Connections:** Bicycle and pedestrian infrastructure included in project.	■ 5: Project includes new Bike/Ped infrastructure that closes a system gap. ■ 3: Project upgrades or enhances existing bike/ped assets OR is a new bike/ped asset that does not close a gap. ■ 1: Project includes no Bike/Ped elements. ■ 0: Project removes Bike/Ped elements.	5%	5%	10%
	Improve transit reliability and service frequency.	**Bus Service:** Measure of bus service frequency in project corridor.	■ 5: Project improves transit service or amenities in a high frequency transit service corridor (headways of 30 minutes or less). ■ 3: Project improves transit service in a transit corridor. ■ 1: Project has a neutral impact on transit service. ■ 0: Project has a negative impact on transit service.	5%	5%	10%

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GUIDING STATEMENTS	OBJECTIVES	MEASURE DEFINITIONS	SCORING	WEIGHT (CORRIDOR)	WEIGHT (INTERSECTION)	WEIGHT (BIKE/PED)
 **Economic Value:** Enhance regional economic vitality by simplifying the movement of people and freight within and across the region.	Support freight movement along primary freight corridors.	**Percentage Truck Usage:** Measure the percentage of vehicles that are trucks traversing the roadway.	■ 5: 100th–75th Percentile. ■ 3: 75th–50th Percentile. ■ 0: 50th–0 Percentile.	**10%**	**10%**	**0%**
	Financial viability.	**Cost:** Preliminary cost estimates for projects.	■ 5: Less than or equal to one year of Guideshare funding for a project's particular mode. ■ 0: More than one year of Guideshare Funding for a project's particular mode.	**10%**	**10%**	**10%**
 **Culture & Environment:** Improve the area's quality of life by protecting and promoting its valued places and natural resources.	Create transportation connections that improve access for low-income populations.	**Poverty Measure:** MPO Poverty Measure (was Average Median Income (AMI) $60,040 as of 2020 5-year Est).	■ 5: Project improves access to area that meets threshold for low income. ■ 1: Project does has a neutral impact on access for low income area. ■ 0: Project has a negative impact on access for a low income area.	**3%**	**3%**	**8%**
	Promote transportation improvements that minimize impacts to floodplains and wetlands.	**Floodplain and Wetlands:** Impacts on existing floodplains and wetlands.	■ 5: Project does not touch a floodplain or wetland. ■ 0: Project does touch a floodplain or wetland.	**3%**	**3%**	**8%**

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GUIDING STATEMENTS	OBJECTIVES	MEASURE DEFINITIONS	SCORING	WEIGHT (CORRIDOR)	WEIGHT (INTERSECTION)	WEIGHT (BIKE/PED)
Growth & Development: Enhance travel efficiency by aligning transportation investments with land use planning.	Plan and implement transportation infrastructure that fits within neighborhood and business district context.	**Impacts to Built Environment:** Project compatibility with neighborhoods and business districts.	■ 5: Project enhances compatibility with neighborhoods through reduced speeds, less noise, or improved aesthetics (or other). ■ 1: Project has a neutral impact on compatibility with neighborhoods or there is no data available because no one lives in the census block group. ■ 0: Project has a negative impact on compatibility with neighborhoods.	10%	10%	15%

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CHAPTER 8

Future Transportation Revenues

CHAPTER 8: FUTURE TRANSPORTATION REVENUES

Federal metropolitan transportation planning requirements related to the preparation of LRTPs require the development of a fiscally constrained plan. The fiscally constrained plan serves as the roadmap for the LRTP by identifying the projects and investments, including a timeframe for their implementation, that GPATS can reasonably expect to fund based on anticipated future federal, state, and local transportation revenues.

The process for developing the LRTP's fiscally constrained plan began with a review of GPATS' historic funding documents such as the biennial TIP, which is a short-range program that schedules projects to be funded using federal transportation dollars within the GPATS region over the following 10 years. The TIP serves as the link between GPATS' long-range and short-range planning efforts, as projects included in the TIP must first be identified in the LRTP. **Figure 38** demonstrates the process for how federally funded projects are implemented in the GPATS region.

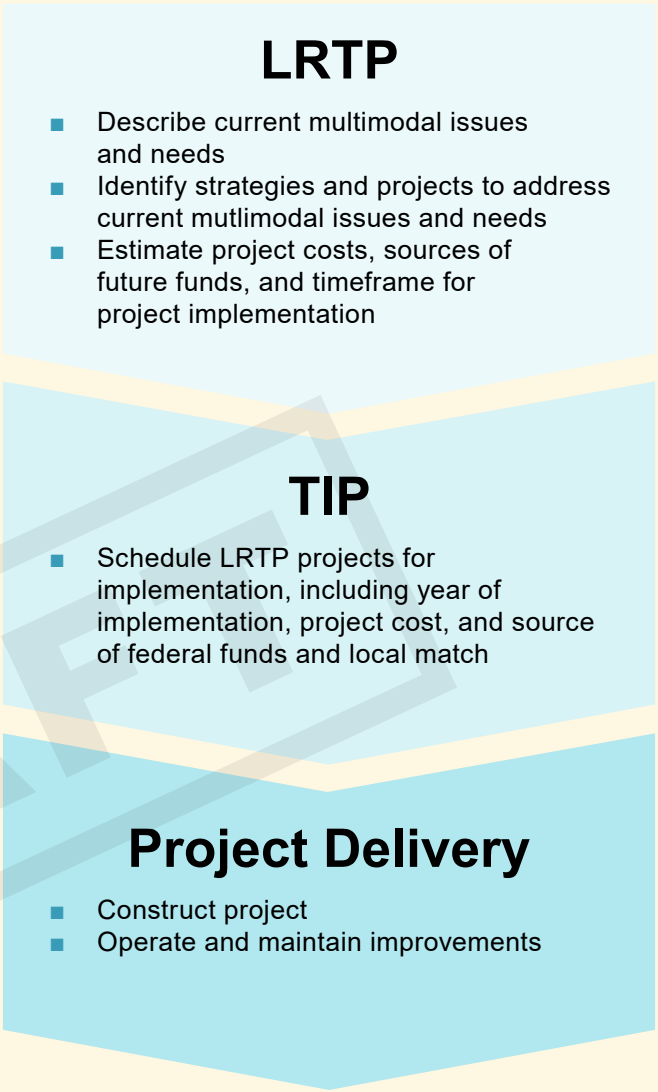


Figure 38 | Development of Federal-Aid Projects in the GPATS Region

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Key Funding Sources

GUIDESHARE PROGRAM

The primary source of funding for multimodal improvements in the GPATS region comes from SCDOT's RMP, often referred to as the Guideshare Program. The RMP allocates annual FHWA and SCDOT funds that are set aside by the SC Transportation Commission for use by the state's MPOs and COG. RMP funds are administered to each MPO and COG via a formula based on population. MPOs are allocated RMP funds based on their urbanized area or urban cluster populations while COGs are allocated RMP funds based on their county populations outside of MPO study areas.

Today, the RMP allocates a total of $238 million, referred to as Guideshare Funding, to the state's MPOs and COGs. This annual funding level reflects a recent increase made by SCDOT that escalated the annual RMP from a 2024 level of $213 million to the current level of $238 million for the year 2025. SCDOT notes that the future RMP funding level will remain at $238 million unless adjusted and approved by the state.

As RMP revenues provide the majority of GPATS annual funds for multimodal transportation improvements, the historic funding trends and projected future revenues that comprise the basis for the LRTP's fiscally constrained plan will focus on the RMP.

OTHER SOURCES OF MULTIMODAL TRANSPORTATION FUNDS

Additional sources of federal and state dollars are used to fund projects in the GPATS region and supplement GPATS' annual RMP Guideshare allocations. The majority of non-Guideshare funded projects are located on the region's Interstate System. SCDOT is responsible for identifying and funding Interstate projects and coordinates with GPATS when Interstate projects are programmed. Additional state programs that fund projects in the region include SCDOT's Pavement Program, Bridge Program, and Safety Program.

The Transportation Alternatives Program (TAP) is a key funding source for non-motorized transportation projects in the GPATS region. **Eligible TAP activities include:**

- On-road and off-road trail facilities for transportation purposes for pedestrians, bicyclists, and other non-motorized forms of transportation
- Projects that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs
- Safe Routes to Schools Infrastructure
- Projects listed in applicable SCDOT, COG/MPO non-motorized transportation, bicycle, or other related plans
- Projects that meet SCDOT's Complete Streets Departmental Directive
- Projects that connect and develop documented regional or statewide non-motorized transportation networks

South Carolina's General Assembly established the South Carolina Transportation Infrastructure Bank (SCTIB) in 1997 to select and assist in financing major qualified projects through the provision of loans and other financial assistance for the purpose of constructing and improving highway and transportation facilities necessary for public purposes such as economic development.

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Historic Funding Trends

Historic Guideshare allocations for GPATS were reviewed to understand recent trends related to annual funding levels and how GPATS programs their annual Guideshare allocations.

Guideshare allocations for the years 2021 through 2025 were obtained from SCDOT and are shown in **Figure 39**. GPATS Guideshare allocation for the year 2021 was just over $18 million and rose to nearly $29.2 million in 2025.

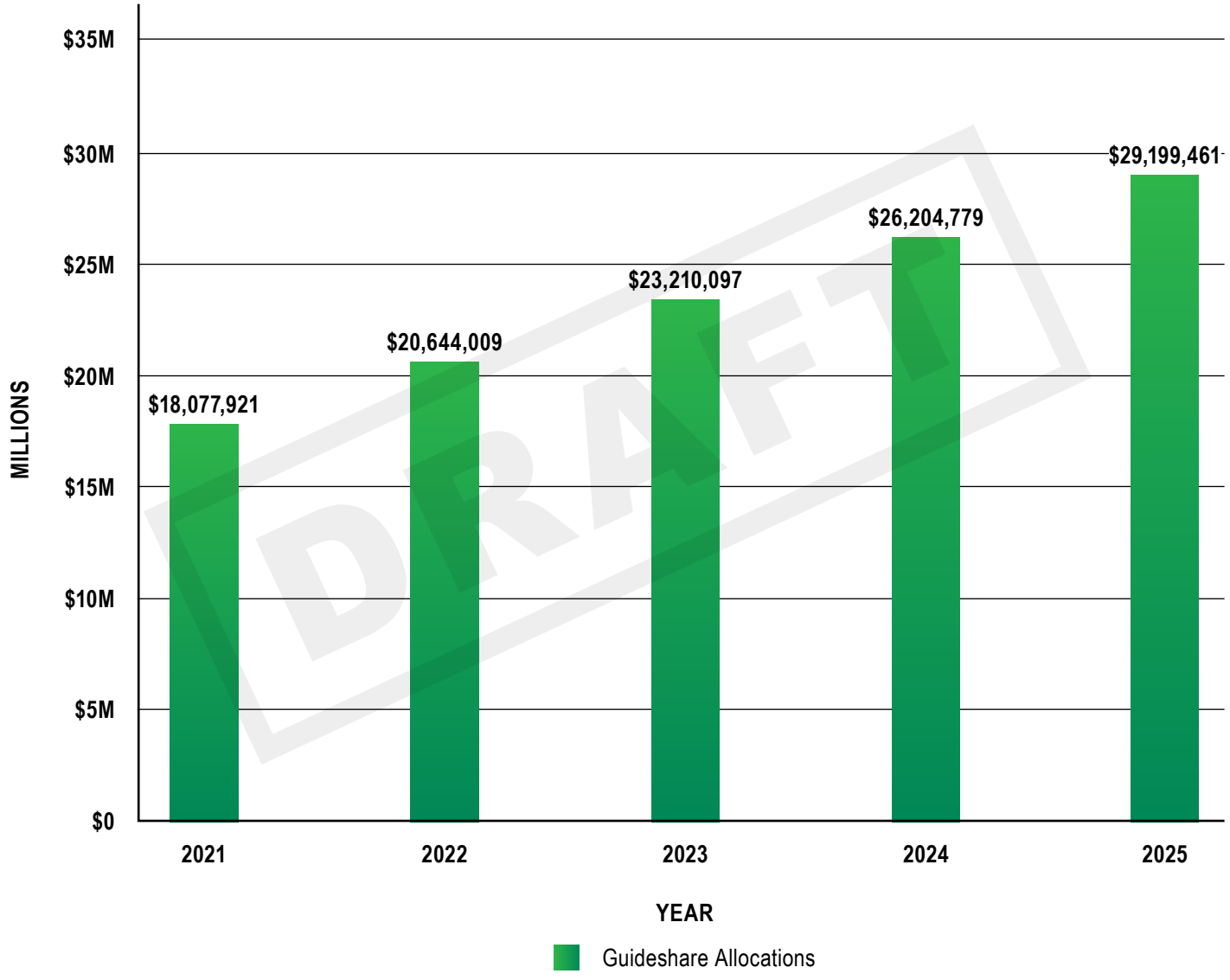


Figure 39 | GPATS Annual Guideshare Program Allocations (SCDOT)

GPATS has established funding targets for the purpose of administering RMP Guideshare funds each year. The funding targets are modal-based and guide how the annual Guideshare allocations are programmed. The amount of annual Guideshare funds allocated to GPATS funding targets are shown in **Figure 40** and include:

- **Roadway Corridors:** Widening projects, new location projects, access management projects, and road diets.
- **Intersections:** Intersection and interchange projects that improve safety or capacity.
- **Bicycle/Pedestrian:** On- or off-street projects independent of other roadway improvements.
- **Transit:** Transit capital projects; this category does not include transit operations or maintenance projects.
- **Signal Upgrades:** Signal installation, signal improvements, signal retiming, and ITS projects.

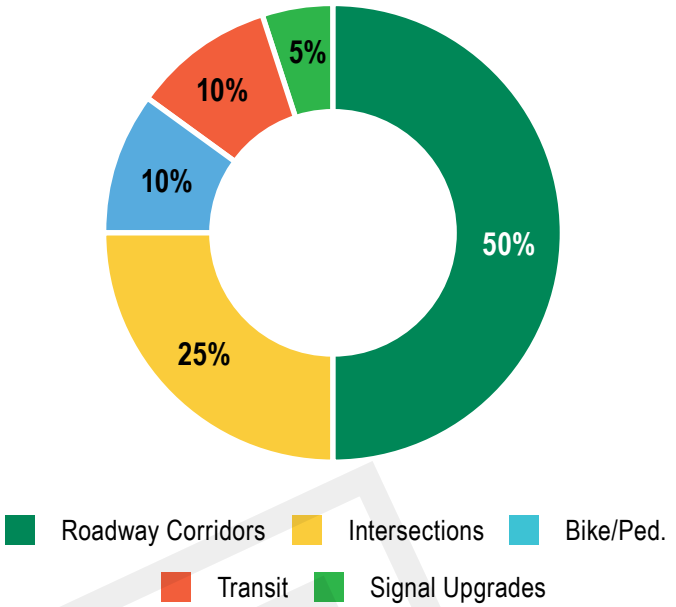


Figure 40 | RMP GPATS Guideshare Funding Targets (GPATS)

Future Year Revenue Forecasts

Reasonably expected future Guideshare revenues were projected through 2050 to establish the LRTP's fiscally constrained plan.

ASSUMPTIONS & APPROACH

The process of projecting future Guideshare revenues for the GPATS region began with the identification of the key assumptions for guiding the process. The LRTP's Guideshare projections assume an annual growth rate of 2%, consistent with SCDOT assumptions for projecting future federal funds availability in the Momentum 2050, the state's 2050 Multimodal Transportation Plan.[11]

Guideshare revenue projections used the 2026 level of $29,199,461 as the baseline year for launching the calculations of reasonably expected future revenues. This revenue level was held constant for each year through 2034 to reflect the region's current GPATS TIP assumptions. The LRTP projections assume that, starting the year 2035, a 2% annual growth rate was applied to project Guideshare revenues for the year 2035 through the year 2050.

The projected Guideshare revenues were organized into LRTP time bands to guide the implementation periods associated with the fiscally constrained plan. The time bands identified are:

- Current TIP: 2026–2032
- Short-term: 2033–2036
- Mid-term: 2037–2043
- Long-term: 2044–2050

[11] *SCDOT, Momentum 2050: Moving South Carolina Forward, https://movingsouthcarolinaforward.com/wp-content/uploads/2025/06/SCDOT-Statewide-Multimodal-Transportation-Plan-Version-16.pdf*

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An additional assumption impacting the forecasted Guideshare revenues was the full dedication of GPATS annual Guideshare revenue allocations for the years 2026 through 2032 towards funding of the Woodruff Road Congestion Relief Program. This assumption results in the removal of Guideshare revenues available to GPATS for other investments during each year of this period. Further detail on the impacts of this assumption are discussed below.

The LRTP time bands are used to direct the fiscally constrained plan and develop future year-of-expenditure (YOE) costs for individual projects included in the fiscally constrained plan.

GPATS PROJECTED REVENUES

The resulting Guideshare revenue projections for the GPATS region for the years 2033 through 2050 are summarized by LRTP time band in **Table 14**. As noted above, the dedication of GPATS full Guideshare Program revenues to the Woodruff Road Congestion Relief Program between 2026 and 2032 removes the amounts available to GPATS for the year 2032, which is reflected in amount of forecasted funds shown in the short-term period. Accounting for this assumed dedication of Guideshare Program funds in 2032, the application of a 2% annual growth rate results in short-term revenues amounting to $118.6 million while mid-term revenue projections are approximately $230.4 million. Long-term revenue projections are approximately $264.5 million. Overall, the reasonably expected amount of Guideshare funding to be available to GPATS over the life of the 2050 LRTP is $613.5 million.

LRTP TIME BAND	FORECASTED GUIDESHARE FUNDING
Short-term (2033–2036)*	$118,561,491
Mid-term (2037–2043)	$230,363,921
Long-term (2044–2050)	$264,615,734
Total	$613,541,147

Forecasted Guideshare Program funds for the short term remove anticipated funds for the year 2032 as these will be dedicated to the Woodruff Road Congestion Relief Program.

Table 15 | Projected Guideshare Revenues for the GPATS Region (2032–2050)

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REASONABLY EXPECTED FUTURE REVENUES FOR FISCAL CONSTRAINT

The final step in the development of the LRTP's fiscally constrained plan was to allocate the projected revenues presented in **Table 14** into the modal breakouts based on the funding splits shown in **Figure 41**. Based on the funding splits, the resulting allocations for roadway corridors, intersections, bicycle/pedestrian, transit, and signal upgrade projects by LRTP time band equal the totals shown in **Figure 41**.

Roadway Corridors

Projected revenues for roadway corridor projects, under a 50% future Guideshare Program funding split, amount to a total of approximately $306.8 million between 2033 and 2050. Short-term roadway corridor revenue projections are approximately $59.3 million while $115.2 million in projected Guideshare Program revenues are anticipated for the mid term. Long-term roadway corridor revenues were projected to equal $132.3 million.

Intersections

Projected revenues for intersection projects, under a 25% future Guideshare Program funding split, amount to a total of approximately $153.4 million between 2033 and 2050. Short-term intersections revenue projections are $29.6 million while nearly $57.6 million in projected Guideshare Program revenues are anticipated for the mid term. Long-term intersections revenues were projected to equal roughly $66.2 million.

Bicycle/Pedestrian

Projected revenues for bicycle/pedestrian projects, under a 10% future Guideshare Program funding split, amount to a total of approximately $61.4 million between 2033 and 2050. Short-term bicycle/pedestrian revenue projections are $11.9 million while $23 million in projected Guideshare Program revenues are anticipated for the mid-term. Long-term bicycle/pedestrian revenues were projected to equal roughly $26.5 million.

Transit

Projected revenues for transit projects, under a 10% future Guideshare Program funding split, amount to a total of approximately $61.4 million between 2033 and 2050. Short-term transit revenue projections are $11.9 million while $23 million in projected Guideshare Program revenues are anticipated for the mid term. Long-term transit revenues were projected to equal roughly $26.5 million.

Signal Upgrades

Projected revenues for signal upgrade projects, under a 5% future Guideshare Program funding split, amount to a total of $30.7 million between 2033 and 2050. Short-term signal upgrades revenue projections are approximately $5.9 million while $11.5 million in projected Guideshare Program revenues are anticipated for the mid term. Long-term signal upgrade revenues were projected to equal $13.2 million.

Operations & Maintenance

SCDOT manages its own resurfacing and bridge program separate from programs conducted by the state's MPOs. Road and bridge repair and maintenance conducted with GPATS funding is generally conducted under a larger corridor or intersection project.

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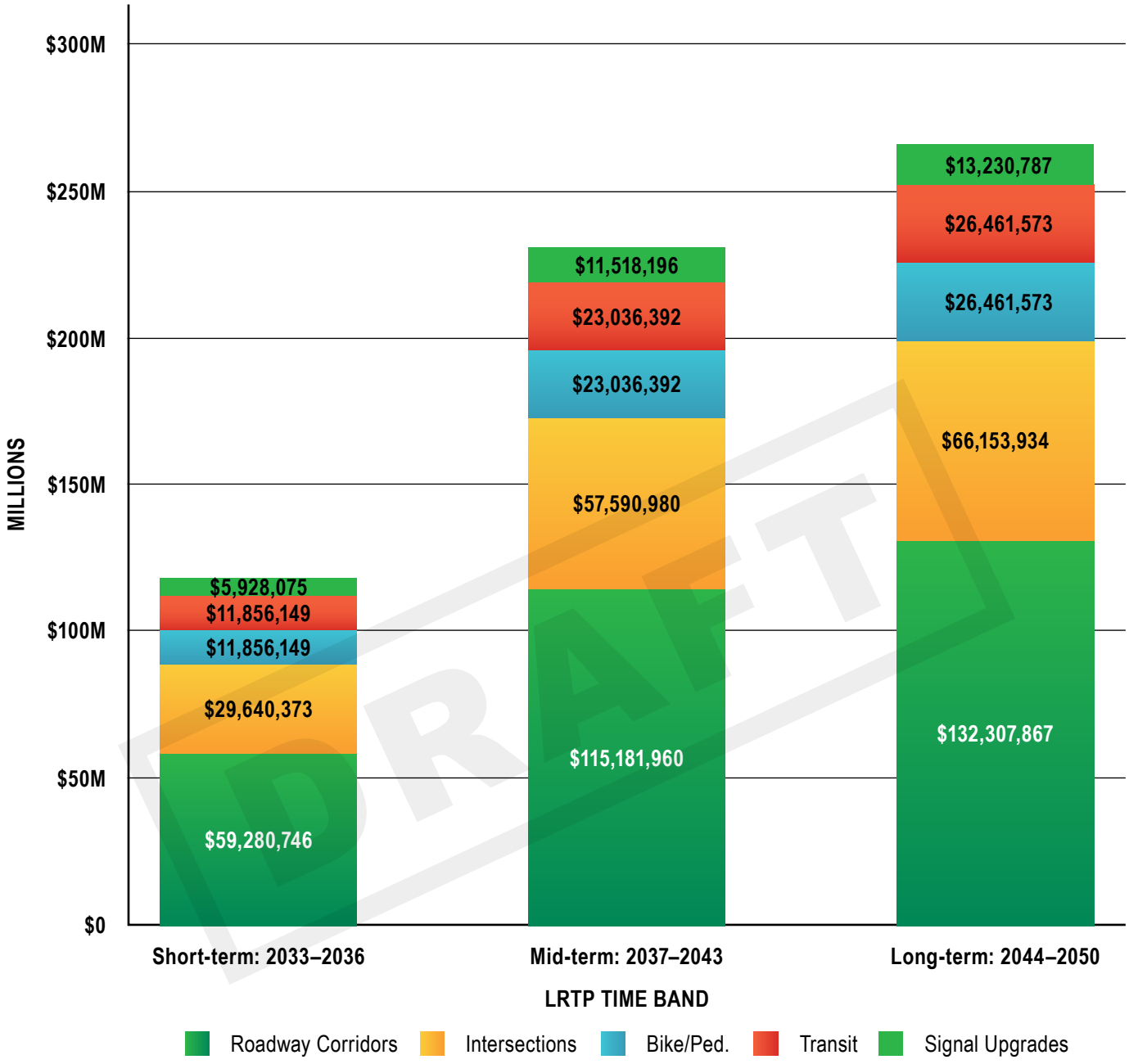


Figure 41 | Projected Guideshare Revenue Funding Splits by LRTP Time Band (2033–2050)

CHAPTER 9
Fiscally Constrained Plan

CHAPTER 9: FISCALLY CONSTRAINED PLAN

The fiscally constrained plan is the cornerstone of Horizon 2050 and provides the roadmap for the GPATS and its member jurisdictions to navigate future multimodal investments. This plan identifies a range of projects anticipated to use federal funds for implementation through 2050, including a general timeframe for their implementation. Fiscal constraint is a core requirement of the federal LRTP process and aims to verify that future investments that leverage federal funds are within reasonably expected future revenue levels.

Selecting Fiscally Constrained Projects

The selection of fiscally constrained projects was driven by the results of the prioritization evaluation detailed in **Chapter 7: Project Alternatives & Strategies Development**. Alternatives determined to be a high or medium priority were first considered for inclusion in the fiscally constrained plan. Projects were then matched with anticipated timing of the need, each project's estimated YOE cost, and available funding by source.

Fiscally Constrained Plan

The summary of Horizon 2050's fiscally constrained plan organizes projects by their anticipated LRTP time band used to identify their implementation timing. **These time bands are:**

- Short-term: 2033–2036
- Mid-term: 2037–2043
- Long-term: 2044–2050

The summary also includes each project's current (2025) estimated project cost, estimated YOE project cost, and anticipated federal and non-federal cost share amounts. Project costs are projected to increase by 4% per year for YOE cost estimation.

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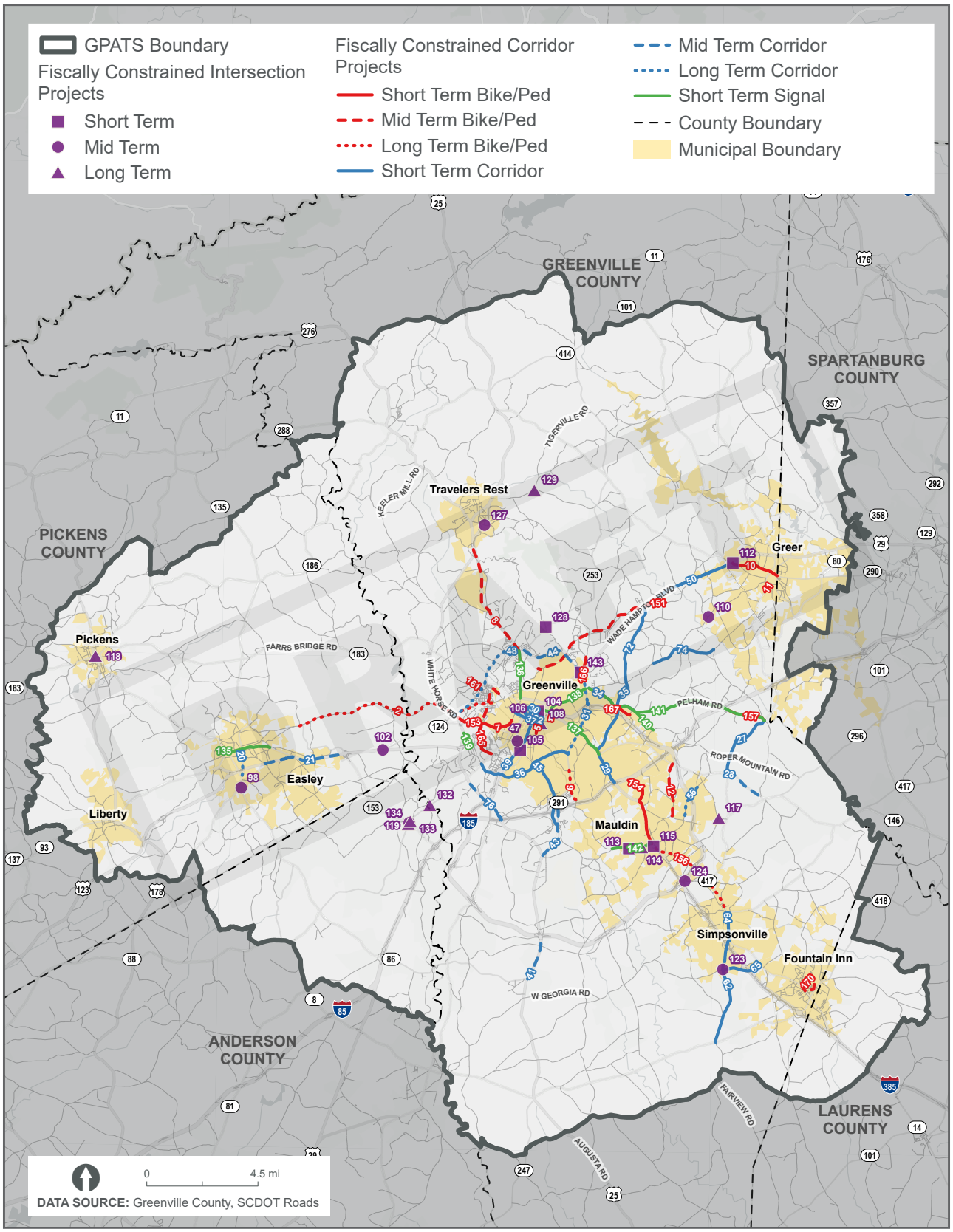


Figure 42 | Fiscally Constrained Projects

Roadway Project Fiscal Constraint

PERIOD	UNIQUE ID	NAME	PROJECT EXTENTS	2026 COST	YOE COST
Short-term (2033–2036)	27	Hwy 14	Woodruff Rd to Batesville Rd	$4,100,000	$5,720,000
Short-term (2033–2036)	39	Mills Ave/Church St	Henrydale Ave to Academy St	$500,000	$700,000
Short-term (2033–2036)	32	Buncombe/North St and College St/ Beattie	Butler Ave to Church St	$652,500	$910,000
Short-term (2033–2036)	35	Haywood Rd	Laurens Rd to North St	$2,095,000	$2,920,000
Short-term (2033–2036)	21	Calhoun Memorial Hwy	Brushy Creek Rd to Hwy 153	$500,000	$700,000
Short-term (2033–2036)	40	Stone Ave	Rutherford St to North St/I-385	$14,465,000	$20,190,000
Short-term (2033–2036)	29	Laurens Rd/Main St	Woodruff Rd to Main St	$2,162,500	$3,020,000
Short-term (2033–2036)	64	Main St	Curtis St to Fairview Rd	$500,000	$700,000
Short-term (2033–2036)	62	Fairview Rd	Main St to Hwy 418	$3,777,500	$5,270,000
Short-term (2033–2036)	37	S-1077 Washington St	Trescott St to Pettigru St	$1,085,000	$1,510,000
Short-term (2033–2036)	36	Faris Rd/S. Washington Ave	Anderson Rd to Pleasantburg Dr	$4,160,000	$5,810,000
Short-term (2033–2036)	65	Harrison Bridge Rd	Fairview Rd to Main St	$3,000,000	$4,190,000
Short-term (2033–2036)	34	Pelham Rd	North St to Hudson Rd	$1,560,000	$2,180,000
Short-term (2033–2036)	72	Howell/Edwards Rd	E North St to Wade Hampton Blvd	$500,000	$700,000
Short-term (2033–2036)	45	Augusta St/Rd	Faris Rd to Pleasantburg Dr	$1,500,000	$2,090,000
Short-term (2033–2036)	74	Brushy Creek Rd/ Old Spartanburg	Cunningham Rd to Batesville Rd	$1,360,000	$1,900,000

Short-term Budget	$59,280,746
Short-term Spent	$58,510,000
Balance	$770,746

Table 16 | Roadway Project Fiscal Constraint List

Short-term (2033–2036) Mid-term (2037–2043) Long-term (2044–2050)

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PERIOD	UNIQUE ID	NAME	PROJECT EXTENTS	2026 COST	YOE COST
Mid-term (2037–2043)	50	Wade Hampton Blvd	Ried School Road to Buncombe Rd	$3,102,500	$5,370,000
Mid-term (2037–2043)	30	Academy St	College St to North St	$1,600,000	$2,770,000
Mid-term (2037–2043)	41	Augusta Rd	Sandy Springs Rd to I-185	$1,372,500	$2,380,000
Mid-term (2037–2043)	43	Augusta Rd/ Pleasantburg Dr	White Horse Rd to Mauldin Rd	$500,000	$870,000
Mid-term (2037–2043)	44	Pleasantburg Dr/ State Park Rd	Poinsett Hwy to Wade Hampton Blvd	$500,000	$870,000
Mid-term (2037–2043)	76	White Horse Rd	Anderson Rd to I-85	$31,200,000	$54,030,000
Mid-term (2037–2043)	28	Woodruff Rd	Hwy 14 to Batesville Rd	$840,000	$1,450,000
Mid-term (2037–2043)	71	Main St	Wade Hampton Blvd to Taylors Rd	$500,000	$870,000
Mid-term (2037–2043)	56	East Butler Road	Bridges Rd to Woodruff Rd	$1,255,000	$2,170,000
Mid-term (2037–2043)	20	Pendleton St	Main St to 5th St/ Walker Ellison Rd	$795,000	$1,380,000
Mid-term (2037–2043)	48	W. Blue Ridge Dr	White Horse Rd to Poinsett Hwy	$8,550,000	$14,810,000
Mid-term (2037–2043)	73	North St/Old Spartanburg Rd/ Brushy Creek Rd	Howell Rd to Taylors Rd	$3,750,000	$6,490,000
Mid-term (2037–2043)	54	Bridges Road	E Butler Road to Holland Rd	$7,455,000	$12,910,000
Mid-term (2037–2043)	46	Pete Hollis Blvd/ Buncombe St	Briggs Avenue to College St	$740,000	$1,280,000
Long-term (2044–2050)	31	Pleasantburg Dr	Faris Rd to Wade Hampton Blvd	$44,105,000	$100,510,000
Long-term (2044–2050)	78	Fork Shoals Rd	Conestee Rd to W. Georgia Rd	$10,400,000	$23,700,000
Long-term (2044–2050)	93	US 123 (Academy Street)	Pendleton Street & Washington Ave	$5,037,500	$11,480,000

Carryover from Short-term	$770,746
Mid-term Budget	$115,181,960
Total Mid-term	$115,952,706
Mid-term Spent	$107,650,000
Balance	$8,302,706

Carryover from Mid-term	$8,302,706
Long-term Budget	$132,307,867
Total Long-term	$140,610,573
Long-term Spent	$135,690,000
Balance	$4,920,573

Short-term (2033–2036) Mid-term (2037–2043) Long-term (2044–2050)

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Intersection Project Fiscal Constraint

PERIOD	UNIQUE ID	NAME	PROJECT EXTENTS	2026 COST	YOE COST
Short-term (2033–2036)	143	Pleasantburg/WHB	Pleasantburg Rd at Wade Hampton Blvd	$3,000,000	$4,190,000
Short-term (2033–2036)	105	Augusta St/ Mills Ave	Church St	$3,000,000	$4,190,000
Short-term (2033–2036)	104	Academy St	Church St	$3,000,000	$4,190,000
Short-term (2033–2036)	115	US 276 (N Main St)	Owens Ln	$3,000,000	$4,190,000
Short-term (2033–2036)	112	Wade Hampton Blvd	W. Pointsett St	$3,000,000	$4,190,000
Short-term (2033–2036)	128	SC 253 (State Park Rd)	Altamont Rd	$3,000,000	$4,190,000
Short-term (2033–2036)	113	W Butler Rd	Fowler Circle at Laurel Meadows Pwy	$3,000,000	$4,190,000
Mid-term (2037–2043)	47	Dunbar	At Augusta St	$6,000,000	$10,390,000
Mid-term (2037–2043)	119	SC 81 (Anderson Rd)	SC 153	$3,000,000	$5,200,000
Mid-term (2037–2043)	102	US 123 at Hwy 124	US 123 at Hwy 124	$6,000,000	$10,390,000
Mid-term (2037–2043)	127	US 25	State Park Rd	$3,000,000	$5,200,000
Mid-term (2037–2043)	110	Brushy Creek Rd	Alexander Rd	$3,000,000	$5,200,000
Mid-term (2037–2043)	98	SC Hwy 8	West End School	$3,000,000	$5,200,000
Mid-term (2037–2043)	124	I-385	Old Stage Rd	$3,000,000	$5,200,000
Mid-term (2037–2043)	123	Harrison Bridge Rd	Fairview Rd	$3,000,000	$5,200,000

Short-term Budget	$29,640,373
Short-term Spent	$29,330,000
Balance	$310,373
Carryover from Short-term	$310,373
Mid-term Budget	$57,590,980
Total Mid-term	$57,901,353
Mid-term Spent	$51,980,000
Balance	$5,921,353

Table 17 | Intersection Project Fiscal Constraint List

Short-term (2033–2036) Mid-term (2037–2043) Long-term (2044–2050)

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PERIOD	UNIQUE ID	NAME	PROJECT EXTENTS	2026 COST	YOE COST
Long-term (2044–2050)	118	SC 178	SC 183	$6,000,000	$13,670,000
Long-term (2044–2050)	108	Washington St	McBee Ave	$3,000,000	$6,840,000
Long-term (2044–2050)	132	SC 81 at Dunham Bridge Rd	Dunham Bridge Rd	$3,000,000	$6,840,000
Long-term (2044–2050)	114	Butler Rd	Ashmore Bridge Rd	$3,000,000	$6,840,000
Long-term (2044–2050)	106	Church St	E Coffee	$3,000,000	$6,840,000
Long-term (2044–2050)	117	Bethel Rd	Tanner Rd	$3,000,000	$6,840,000
Long-term (2044–2050)	129	Tigerville Rd	Jackson Grove Rd	$3,000,000	$6,840,000
Long-term (2044–2050)	133	SC 81 at McNeely Rd	McNeely Rd	$3,000,000	$6,840,000
Long-term (2044–2050)	134	SC 81 at Cely Ln	Cely Ln	$3,000,000	$6,840,000

Short-term (2033–2036) Mid-term (2037–2043) Long-term (2044–2050)

Carryover from Mid-term	$5,921,353
Long-term Budget	$66,153,934
Total Long-term	$72,075,287
Long-term Spent	$68,390,000
Balance	$3,685,287

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Bike & Pedestrian Project Fiscal Constraint

PERIOD	UNIQUE ID	NAME	PROJECT EXTENTS	2026 COST	YOE COST
Short-term (2033–2036)	166	Pine Knoll Rd	Wade Hampton & Waddel Rd	$250,000	$350,000
Short-term (2033–2036)	10	Poinsett St	US 29 to N Line St	$970,000	$1,350,000
Short-term (2033–2036)	167	Orchard Park	Haywood to Patewood	$280,000	$390,000
Short-term (2033–2036)	4	Greenline Connection off South Side of Laurens Rd	At Swamp Rabbit Trail	$52,500	$70,000
Short-term (2033–2036)	154	Greenline SUP	CU-ICAR Downtown Mauldin	$2,340,000	$3,270,000
Short-term (2033–2036)	5	McDaniel Ave Trail	McBee Av to Ridgeland Dr	$517,500	$720,000
Short-term (2033–2036)	165	Textile Cresent	Extend Current TAP Project from Easley Bridge Rd to Anderson Rd	$1,260,000	$1,760,000
Short-term (2033–2036)	7	Unity Park Connector	Unity Park to Village of West Greenville	$1,080,000	$1,510,000
Short-term (2033–2036)	161	Moreview Greenway	Connect Blue Ridge Dr to East Marion with Path Along Moreview St	$247,500	$350,000

Short-term Budget	$11,856,149
Short-term Spent	$9,770,000
Balance	$2,086,149

Table 18 | Bike & Pedestrian Project Fiscal Constraint List

Short-term (2033–2036) Mid-term (2037–2043) Long-term (2044–2050)

PERIOD	UNIQUE ID	NAME	PROJECT EXTENTS	2026 COST	YOE COST
Mid-term (2037–2043)	8	US 276 (Poinsett Hwy)	Rutherford Rd & US 25	$ 3,130,000	$ 5,420,000
Mid-term (2037–2043)	157	Rocky Creek SUP	Pelham Rd at Beacon to Hwy 14	$ 1,822,500	$ 3,160,000
Mid-term (2037–2043)	153	Orange Line SUP	Greenline to Whitehorse Rd Corridor	$ 2,152,500	$ 3,730,000
Mid-term (2037–2043)	12	Miller Rd	Bridges Rd to Woodruff Rd	$ 1,085,000	$ 1,880,000
Mid-term (2037–2043)	151	Orange Line SUP	Greenlink to Taylors	$ 4,755,000	$ 8,230,000
Mid-term (2037–2043)	170	Hellams or Duckett to Downtown	SRT Extension	$ 907,500	$ 1,570,000
Mid-term (2037–2043)	11	Pelham St	Mayfield St to S Main St	$ 500,000	$ 870,000
Long-term (2044–2050)	156	Mauldin to Simpsonville Swamp Rabbit Trail Ext	Downtown Mauldin to Simpsonville	$ 3,285,000	$ 7,490,000
Long-term (2044–2050)	6	SRT Blue Line Gap	Cleveland St to Parkins Mill	$ 1,080,000	$ 2,460,000
Long-term (2044–2050)	2	Doodle Trail Ext	Easley to Greenville	$ 6,547,500	$ 14,920,000

Carryover from Short-term	$2,086,149
Mid-term Budget	$23,036,392
Total Mid-term	$25,122,541
Mid-term Spent	$24,860,000
Balance	$262,541

Carryover from Mid-term	$262,541
Long-term Budget	$26,461,573
Total Long-term	$26,724,115
Long-term Spent	$24,870,000
Balance	$1,854,115

Short-term (2033–2036) Mid-term (2037–2043) Long-term (2044–2050)

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Signal Project Fiscal Constraint

PERIOD	UNIQUE ID	NAME	PROJECT EXTENTS	2026 COST	YOE COST
Short-term (2033–2036)	137	Laurens Rd/Main St	Pleasantburg Dr to Woodruff Rd	$500,000	$700,000
Short-term (2033–2036)	136	Poinsett Hwy	Stone Ave to Pleasantburg Dr	$500,000	$700,000
Short-term (2033–2036)	139	Washington Ave	White Horse Rd to Easley Bridge Rd	$500,000	$700,000
Short-term (2033–2036)	138	Park Ave/North St	Church St to Pleasantburg Dr	$500,000	$700,000
Short-term (2033–2036)	141	Pelham Rd	E North St to Batesville Rd	$500,000	$700,000
Short-term (2033–2036)	142	W Butler Rd	Main St to Conestee Rd	$500,000	$700,000
Short-term (2033–2036)	135	Main St	Liberty Dr to Dennis Dr	$500,000	$700,000
Short-term (2033–2036)	140	Roper Mountain Rd Ext	Pelham Rd to Roper Mountain Rd	$500,000	$700,000
Mid-term (2037–2043)	-	-	-	-	-
Mid-term (2037–2043)	-	-	-	-	-
Mid-term (2037–2043)	-	-	-	-	-
Long-term (2044–2050)	-	-	-	-	-
Long-term (2044–2050)	-	-	-	-	-
Long-term (2044–2050)	-	-	-	-	-

Short-term Budget	$5,928,075
Short-term Spent	$5,600,000
Balance	$328,075
Carryover from Short-term	$328,075
Mid-term Budget	$11,518,196
Total Mid-term	$11,846,271
Mid-term Spent	-
Balance	-
Carryover from Mid-term	-
Long-term Budget	$13,230,787
Total Long-term	-
Long-term Spent	-
Balance	-

Table 19 | Signal Project Fiscal Constraint List

Short-term (2033–2036) Mid-term (2037–2043) Long-term (2044–2050)

CHAPTER 10
Environmental Review & Mitigation

CHAPTER 10: ENVIRONMENTAL REVIEW & MITIGATION

The GPATS study area was evaluated for environmental resources within both the natural and built environments. Federal, state, and tribal agencies with responsibilities related to environmental management, regulation, and wildlife resources were consulted during the draft plan phase of the LRTP update.

In accordance with the National Environmental Policy Act (NEPA) of 1969, federal agencies are required to consider environmental resources and potential impacts during the planning and design phases of projects that receive federal funding. Accordingly, this analysis identifies environmental resources within the GPATS study area that may warrant additional consideration during future project development and implementation.

Environmental Screening & Considerations

HUMAN ENVIRONMENTAL CONSTRAINTS

Environmental resources that could potentially be affected by transportation projects within the Study Area are discussed in this section. **Figures 43–45** show some of the environmentally sensitive natural and human-built areas in the GPATS Study Area. Discussion regarding the resources shown in the figures, such as recreational resources and waters of the United States, are detailed below.

Archaeological & Historic Resources

Consideration of impacts on cultural resources is governed by federal laws, primarily Section 106 of the National Historic Preservation Act. Section 106 requires federal agencies and recipients of federal funds to evaluate the effects of their projects on historic properties—defined as districts, sites, buildings, structures, or objects listed on or eligible for the National Register of Historic Places (NRHP). This evaluation begins early in project planning and involves consultation to identify historic properties within the Area of Potential Effects (APE), assess their NRHP eligibility and significance, and determine project impacts. The goal is to avoid, minimize, or mitigate adverse effects.

Cultural resource data are gathered through records searches and surveys. A GIS-based site search is conducted to identify known historic properties within the APE, which may include structures and districts in the study area. Early in project development, the APE is defined by the sponsoring agencies (e.g., SCDOT and local governments), and inventories of known and potential historic resources are reviewed, including field surveys for NRHP-listed and eligible properties.

While historic resources are scattered across the GPATS region, there is a concentration of historic resources, including historic sites and districts, in the vicinity of Downtown Greenville, Downtown Pickens, Downtown Easley, and Downtown Fountain Inn. Other notable historic resources in the GPATS region include Paris Mountain State Park, Conestee Park and Nature Preserve, and Hopkins Farm.

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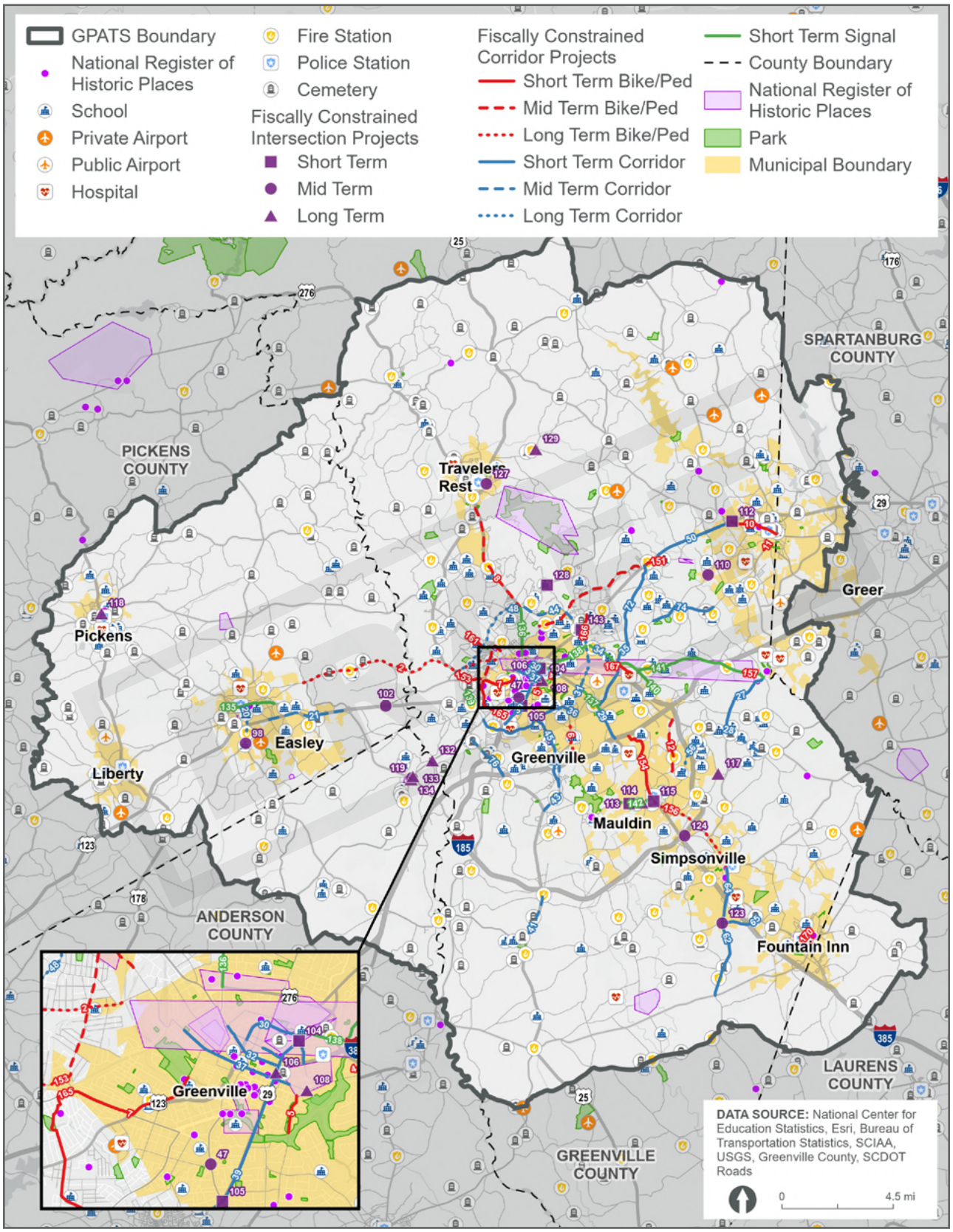


Figure 43 | Human Environmental Constraints

The potential for unknown archaeological resources is evaluated through site-specific surveys. Archaeological data is not publicly available, and therefore GIS data is not assessed in this plan. In consultation with the State Historic Preservation Office (SHPO), project effects are categorized as No Historic Properties Affected, No Adverse Effect, or Adverse Effect. If adverse effects cannot be avoided, the Federal Highway Administration (FHWA) coordinates with the Advisory Council on Historic Preservation and SHPO to develop mitigation measures. These measures are formalized in a Memorandum of Agreement (MOA) among FHWA, SHPO, and the sponsoring agency, completing the Section 106 process unless project changes occur.

Section 4(f) & Section 6(f) Resources

Section 4(f) of the Department of Transportation Act of 1966 protects publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic sites of national, state, or local significance. The U.S. Department of Transportation (USDOT), including FHWA, cannot approve projects using these resources unless there is no feasible and prudent alternative and all possible planning has been undertaken to minimize harm, or the use results in a de minimis impact (i.e., no adverse effect on the resource's protected features or activities).

Section 4(f) use is categorized as exceptions, de minimis use, direct use, or constructive use. Direct use involves permanent incorporation of protected land, while temporary occupancy (a common exception) allows short-term use during construction. Constructive use occurs when project impacts, such as noise or proximity, substantially impair the resource. The Study Area includes parks and other Section 4(f) properties, including, but not limited to, the following list which will be further evaluated during preliminary project planning to determine potential impacts as a result of transportation projects.

Greenville County

- Lake Conestee Park and Nature Preserve
- Cleveland Park
- Falls Park on the Reedy
- Unity Park
- Cancer Survivors Park
- Legacy Park
- Holmes Park
- Timmons Park
- Gower Estates Park
- Runway Park at GMU Airport
- Paris Mountain State Park
- Lake Robinson Park
- Lake Cunningham Recreation Area
- Herdklotz Park
- East Riverside Park
- Greer City Park
- Century Park (Greer)
- Gateway Park (Travelers Rest)
- Trailblazer Park (Travelers Rest)
- Southside Park (Greenville)
- Gary L. Pittman Memorial Park (Mauldin)
- City Park (Mauldin)
- Springfield Park (Mauldin)
- Heritage Park (Simpsonville)
- Alder Park (Simpsonville)
- Southside Regional Park

Pickens County

- Nalley Brown Nature Park (Easley)
- Pope Field Park (Easley)
- J.B. "Red" Owens Recreation Complex (Easley)
- Hagood Park (Pickens)
- Bruce Field (Pickens)
- Jaycee Park (Liberty)
- Pickens County Recreation Complex facilities
- Table Rock State Park
- Keowee-Toxaway State Park

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Regional Trail & Recreation Resources

- Prisma Health Swamp Rabbit Trail
- Doodle Trail
- Lake Hartwell recreation areas within the MPO boundary
- Saluda Lake public access recreation areas

Section 6(f) of the Land and Water Conservation Act protects parks and recreation areas funded through the Land and Water Conservation Fund (LWCF). These lands cannot be converted to non-recreational use without approval from the National Park Service and the South Carolina Department of Parks, Recreation and Tourism. Conversion is allowed only if no practicable alternatives exist and replacement land of equal value and utility is provided. Many parks within the GPATS area have utilized partial State and Local Assistance Funds under the LWCF Grant program. Potential Section 6(f) properties will require specific identification and evaluation during project development.

Regulated & Hazardous Material Sites

Regulated materials are hazardous substances governed by federal, state, or local regulations due to their potential to cause environmental contamination and impact public health. Avoiding highly contaminated sites helps minimize costs, liability, and project delays associated with remediation.

The Study Area was evaluated using Brownfield and Superfund site GIS data from the South Carolina Department of Environmental Services (SCDES). Brownfield and Superfund sites are present within the Study Area, with a large concentration of sites near Downtown Greenville. Smaller concentrations of Brownfield sites are located in Pickens, Liberty, and Easley. More detailed assessments and impacts to SCDES Brownfields and Superfund sites will be required as projects advance through the planning and environmental review process.

PHYSICAL ENVIRONMENTAL CONSTRAINTS

Wetlands & Waters of the United States

Under the Clean Water Act (CWA), “waters of the United States” include navigable waters, interstate waters and wetlands, territorial seas, impoundments, and tributaries. These waters fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE), and a permit is required for projects that discharge dredged or fill material into them, including wetlands.

The Study Area was reviewed using the National Wetlands Inventory (NWI) and aerial imagery to identify potential wetlands and other jurisdictional waters. Such resources are present within the Study Area and are largely evenly distributed throughout the GPATS region. Wetland delineations are recommended early in project development to define boundaries and coordinate with USACE to determine jurisdiction.

Floodplains

Floodplain development is regulated by the Federal Emergency Management Agency (FEMA) and the South Carolina Department of Natural Resources (SCDNR). Projects in floodplains require hydraulic analysis to assess impacts on the 100-year flood elevation, and FEMA prohibits encroachments in floodways unless a no-rise analysis demonstrates no increase in flood levels. Most projects also require a floodplain permit from SCDNR or local authorities.

Review of FEMA Flood Insurance Rate Maps for the GPATS area indicates that portions of the Study Area lie within floodplains and floodways, particularly in areas with major streams, rivers and other bodies of water. Potential impacts from transportation projects in these areas will require further evaluation during project development.

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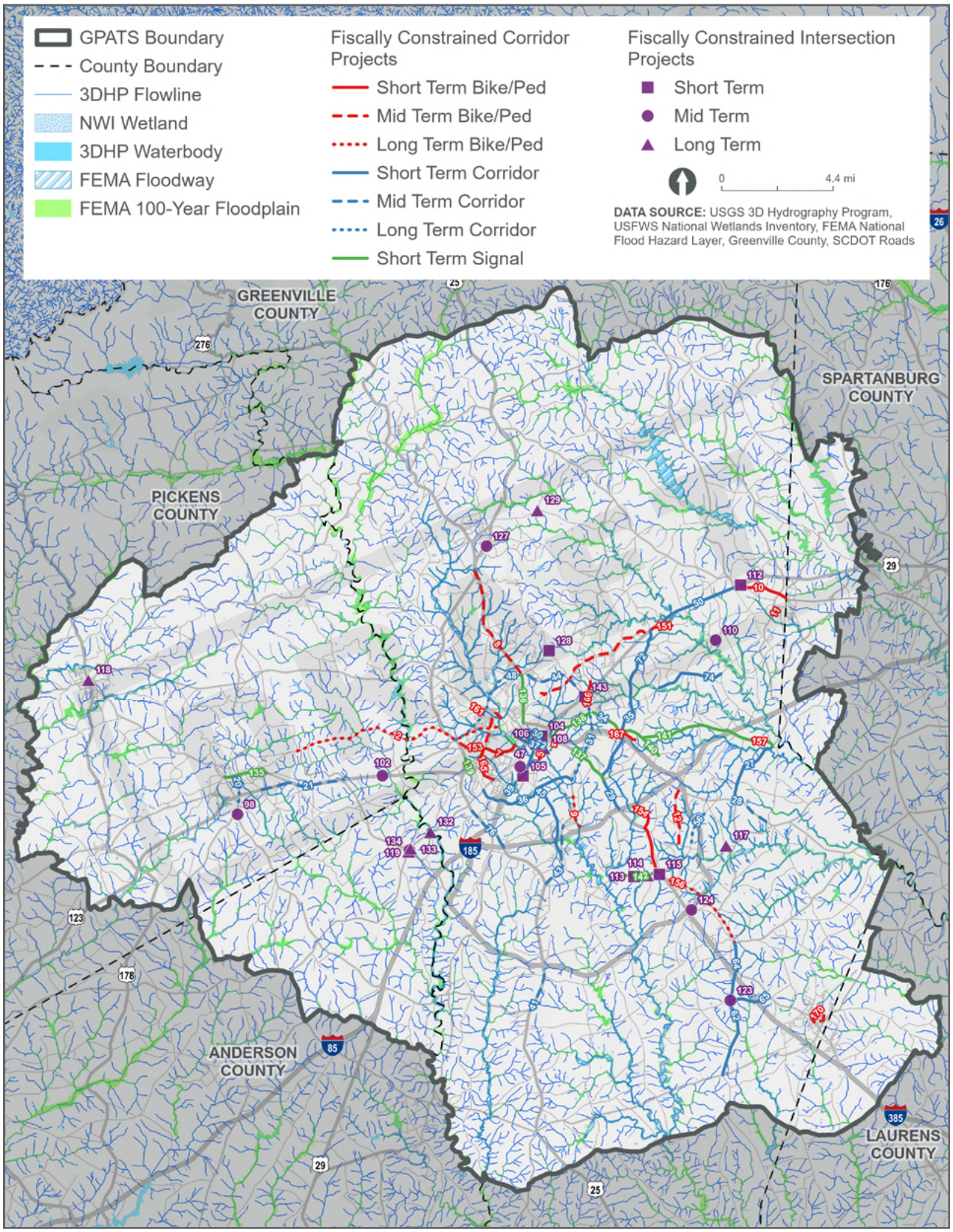


Figure 44 | Physical Environmental Constraints

Threatened & Endangered Species

Threatened and endangered species protected under the federal Endangered Species Act (ESA) and the South Carolina Department of Natural Resources (SCDNR), as well as state-listed species and species of concern, must be considered for each transportation project. Coordination with the U.S. Fish and Wildlife Service (USFWS) and the SCDNR is required to identify species that may occur in the project area and assess potential impacts.

Projects advancing in planning will require further evaluation, including habitat surveys and continued consultation with USFWS and SCDNR, to determine potential effects on listed species.

COMMUNITY IMPACTS

Community Composition

The NEPA requires federal, state, and local agencies receiving federal funding to evaluate the environmental and socioeconomic impacts of proposed projects, including effects on communities and reasonable alternatives to avoid or minimize harm. Special consideration is given to underserved populations, including minority, low-income, and persistently impoverished communities.

The Study Area was reviewed using demographic, income, and linguistic isolation data to identify these populations. As projects advance, detailed analysis will assess potential impacts such as noise, pollution, reduced access to services, and disruption of community cohesion or economic vitality. In locations where impacts are identified, mitigation measures will be developed to minimize harm and enhance benefits, such as improved access to jobs, healthcare, and economic opportunities.

Public involvement is a key component of this process. Affected communities must have opportunities to participate in project evaluation using tools such as the MPO's Public Participation Plan. Input from the public, including vulnerable populations, will inform the analysis, and outcomes—along with any mitigation measures—will be documented in subsequent NEPA reviews.

Community Resources

Community resources are considered as part of a comprehensive evaluation of how a proposed action may affect the human environment. Early in the process, agencies identify relevant community resources—such as neighborhoods, public services, parks, schools, businesses, airports, hospitals, and cultural or historic sites—through scoping and coordination with local stakeholders. According to local and statewide GIS data sets, the GPATS region contains numerous Community Resources. Many of these community resources are concentrated within municipal limits, but generally resources are scattered throughout the GPATS region. Various businesses, such as restaurants, grocery stores, places of worship, and medical facilities are located along major corridors throughout the community.

Community resource considerations also inform the comparison of project alternatives, with preference given to options that minimize disruption and preserve access to essential services. When adverse impacts cannot be avoided, mitigation measures, such as relocation assistance, replacement facilities, or improved connectivity, are developed and documented.

Public involvement plays a central role, as agencies gather input through meetings, comment periods, and outreach to understand community concerns and values. This information helps shape the analysis of direct, indirect, and cumulative impacts on these resources, including potential displacement, changes in access, effects on community cohesion, and economic shifts.

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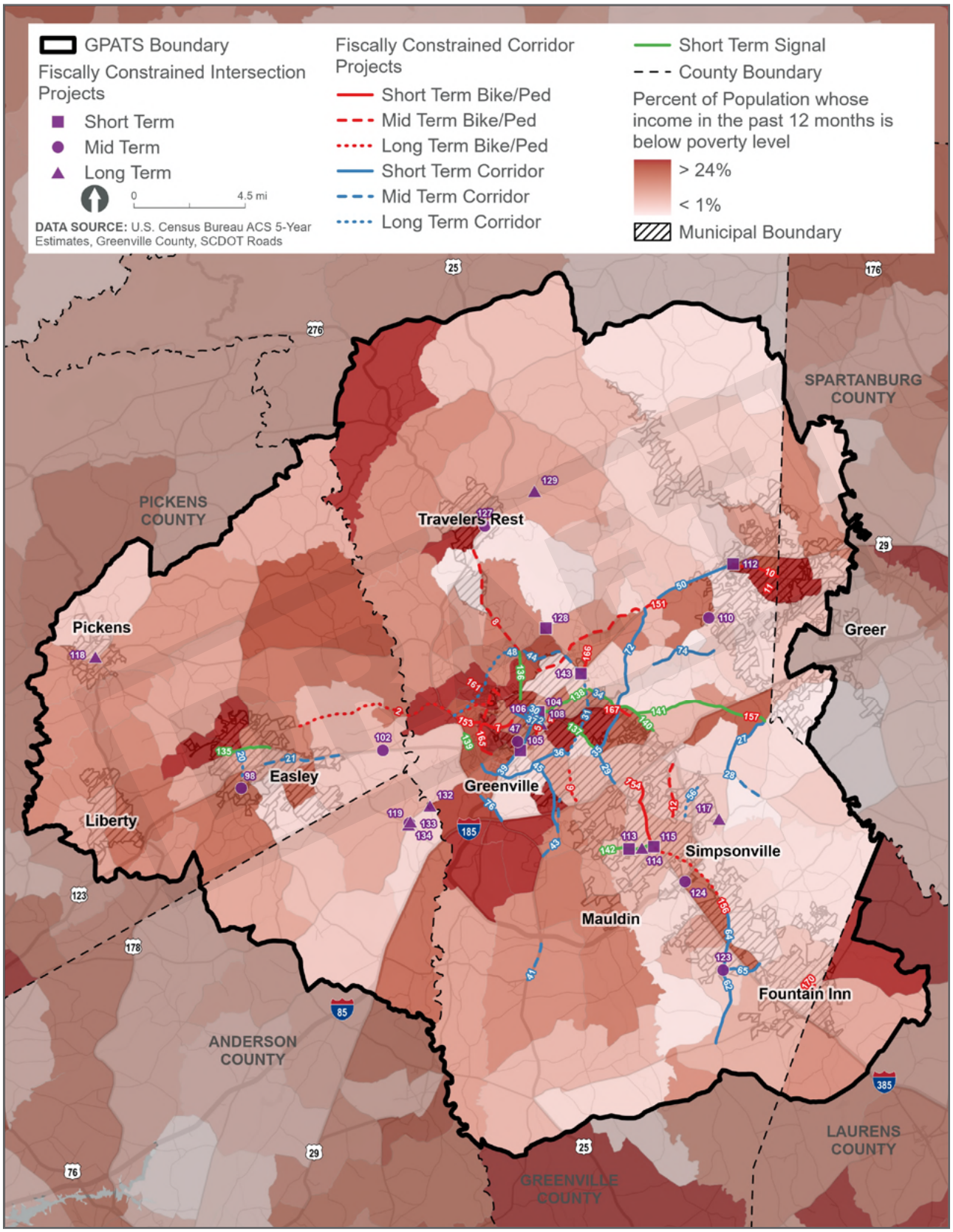


Figure 45 | Low Income Populations

CHAPTER 11
Federal Compliance

CHAPTER 11: FEDERAL COMPLIANCE

The *Horizon 2050 LRTP* has been developed in accordance with federal transportation planning requirements established by the Federal Highway Administration and Federal Transit Administration. These requirements ensure that the metropolitan planning process is continuous, cooperative, and comprehensive, while also emphasizing performance-based decision making and accountability. Federal law requires that LRTPs consider specific planning factors and incorporate measurable performance outcomes to guide investment decisions and track progress over time.

Federal Metropolitan Transportation Planning Factors

Federal regulations require that metropolitan planning organizations consider a set of planning factors as part of the transportation planning process. These factors, established under 23 CFR 450.306, provide a framework for evaluating transportation needs and guiding the development of strategies, projects, and investments.[12]

These planning factors are reflected throughout the *Horizon 2050 LRTP* and are integrated into the plan's goals, objectives, and project evaluation criteria. The degree to which each factor is addressed varies based on regional priorities, system needs, and the scale and complexity of transportation challenges within the planning area.

PLANNING FACTOR	WHAT IT MEANS
Economic Vitality	Support regional economic growth, productivity, and competitiveness
Safety	Reduce fatalities and serious injuries for all system users
Security	Improve system security and emergency preparedness
Mobility & Accessibility	Improve travel options and access for people and freight
Environment & Quality of Life	Protect the environment, conserve energy, and support livability
Connectivity	Improve connections between modes such as road, transit, bicycle, and freight
System Management	Improve operations and efficiency of the transportation system
System Preservation	Maintain and preserve existing infrastructure
Resilience & Reliability	Strengthen system reliability and reduce impacts from weather events
Travel & Tourism	Support regional tourism and recreational travel

Table 20 | Federal Planning Factors

[12] *Code of Federal Regulations. 23 CFR 450.306, Scope of the Metropolitan Transportation Planning Process 2026. https://www.ecfr.gov/current/title-23/chapter-I/subchapter-E/part-450/subpart-C/section-450.306*

Federal Performance Measures

Federal transportation legislation requires the use of a performance-based approach to planning and programming. Under this framework, state departments of transportation and metropolitan planning organizations establish performance targets and track progress toward national transportation goals

Federal performance measures are organized into several key categories established through rulemaking by the FHWA.[13] These categories can be seen in **Table 20**.

These performance measures are defined in federal regulations and are used to establish quantifiable metrics, targets, and reporting requirements. MPOs must coordinate with state and transit partners to set targets and incorporate them into planning documents, including the LRTP and TIP.

The *Horizon 2050 LRTP* supports a performance-based framework by aligning regional goals and investment priorities with these federal measures. By tracking system performance and progress toward targets, GPATS helps ensure that transportation investments deliver measurable outcomes related to safety, system condition, mobility, and environmental sustainability.

PERFORMANCE AREA	WHAT IT MEASURES
Safety (PM1)	Fatalities and serious injuries across all roadway users
Infrastructure Condition (PM2)	Pavement and bridge conditions on the National Highway System
System Performance (PM3)	Travel time reliability, delay, and freight movement efficiency
Congestion & Air Quality	Traffic congestion and emissions reduction in applicable areas
Transit Performance	Condition, reliability, and safety of transit vehicles and facilities

Table 21 | Performance Measures

[13] *US Department of Transportation Federal Highway Administration. TPM Guidance. 2026. https://www.fhwa.dot.gov/tpm/guidance/*

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SAFETY

Safety remains the highest transportation priority for both SCDOT and GPATS. Federal safety performance measures focus on reducing fatalities and serious injuries for all roadway users, including motorists, bicyclists, and pedestrians. Safety targets are developed using five-year rolling averages to account for year-to-year fluctuations in crash data.

The GPATS region accounts for approximately 10.3% of statewide fatalities and 12.2% of statewide serious injuries and non-motorized fatalities and serious injuries. The region's fatality and serious injury rates are currently higher than the statewide averages, highlighting the continued need for investments in roadway safety, intersection improvements, access management, multimodal facilities, and implementation of proven safety countermeasures.

PERFORMANCE MEASURE	SC BASELINE (2021–2025)	SC TARGET (2023–2027)	GPATS BASELINE (2021–2025)
Traffic Fatalities	1,064.4	1,055	105.8
Fatality Rate*	1.76	1.69	1.65
Serious Injuries	2,618.6	2,519	301.6
Serious Injury Rate*	4.34	4.04	4.72
Non-Motorized Fatalities & Serious Injuries	479	486	52.4

**Per 100 million vehicle miles traveled (SCDOT Safety Performance Targets)*

Table 23 | 2023–2027 Safety Performance Measures

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TRANSIT SAFETY

Transit safety performance measures track fatalities, injuries, reportable safety events, and system reliability for Greenlink fixed-route and demand-response services. The transit safety program seeks to minimize incidents while maintaining dependable service for transit riders. Monitoring these measures allows GPATS and Greenlink to identify trends, implement corrective actions, and improve overall transit system safety and reliability.

TRANSIT PROVIDER	MODE OF TRANSIT SERVICE	FATALITIES (TOTAL)	FATALITY RATE*	INJURIES (TOTAL)	INJURY RATE*	SAFETY EVENTS (TOTAL)	SAFETY EVENT RATE*	SYSTEM RELIABILITY**
Greenlink	Fixed Route	0	0.0	12	1.47	7	0.84	20,450
	Demand Response/ Paratransit	0	0.0	0	0.70	1	0.94	71,561

Rates are based on the unit per 100 thousand vehicle revenue miles
****Reliability is determined based on vehicle miles/failures***

Table 24 | 2022 Transit Safety Performance Measures

TRANSIT ASSET MANAGEMENT (TAM)

TAM measures assess the condition and useful life of transit vehicles, equipment, and facilities operated by Greenlink. Performance targets focus on maintaining vehicles and facilities in a state of good repair and replacing assets that have met or exceeded their useful life benchmarks. These measures help ensure that transit services remain safe, reliable, and efficient for users throughout the region.

ASSET CATEGORY	CLASS	PERFORMANCE MEASURE	2022 TARGET
Rolling Stock	Buses	% met or exceeded ULB	50%
	Trolley Buses	% met or exceeded ULB	100%
	Cutaway Buses	% met or exceeded ULB	14%
	Van	% met or exceeded ULB	0%
Equipment	SUV	% met or exceeded ULB	40%
	Van	% met or exceeded ULB	100%
	Truck	% met or exceeded ULB	83%
	Car	% met or exceeded ULB	100%
Facilities	100 W. McBee (Terminal)	% with a condition rating below 3.0 on TERM Scale	100%
	154 Augusta St (Maintenance Garage)	% with a condition rating below 3.0 on TERM Scale	0%

Table 25 | 2024 Transit Asset Management Performance Measures

INFRASTRUCTURE CONDITION

Infrastructure condition measures assess the state of repair of pavements and bridges along the NHS. These measures track the percentage of infrastructure in good and poor condition and help guide investment decisions related to preservation and maintenance. Maintaining transportation assets in a state of good repair remains a core objective of the LRTP and supports long-term system reliability and cost effectiveness.

	PAVEMENT (INTERSTATE)	PAVEMENT (NON-INTERSTATE NHS)	BRIDGES
SC Baseline (2023)	75.8% Good 0.2% Poor	38.8% Good 1.6% Poor	38.5% Good 4.3% Poor
SC 2-Year Targets	77% Good 2.5% Poor	36% Good 10% Poor	35% Good 6% Poor
SC 4-Year Targets	78% Good 2.5% Poor	38% Good 10% Poor	34% Good 6% Poor
GPATS Baseline (2023)	80.79% Good 0% Poor	38.65% Good 3.06% Poor	56.75% Good 11.57% Poor

Numbers represent the % of infrastructure element in good or poor condition

Table 26 | Infrastructure Condition Performance Measures

SYSTEM & FREIGHT RELIABILITY

System reliability measures evaluate how consistently travelers and freight operators can move throughout the transportation network. Federal requirements include measuring travel time reliability on Interstate and non-Interstate NHS routes as well as truck travel time reliability on designated freight corridors. Reliable travel conditions support regional economic competitiveness, improve mobility, and enhance freight movement throughout the Upstate. Because the GPATS region includes critical freight corridors such as I-85 and I-385, maintaining reliable travel times is particularly important for supporting manufacturing, logistics, and distribution industries.

	TRAVEL TIME RELIABILITY* (INTERSTATE)	TRAVEL TIME RELIABILITY* (NON-INTERSTATE NHS)	TRUCK TRAVEL TIME RELIABILITY** (TTTR)
SC Baseline (2021)	95.9%	95%	1.31
SC 2-Year Targets	89.1%	85%	1.45
SC 4-Year Targets	89.1%	85%	1.45
GPATS Baseline (2021)	85.2%	93.9%	1.57

Travel Time Reliability numbers represent the % of person-miles traveled that are reliable.
****TTR is determined by where truck travel reliability falls on the TTR Index.***

Table 27 | System and Freight Reliability Performance Measures

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APPENDICES

APPENDIX A: RANKED PROJECT LISTS

Bike & Pedestrian Ranked Project List

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
166	Stakeholder Feedback	Greenville County, Greenville	Pine Knoll Rd	Wade Hampton & Waddel Rd	S:35 P:0 M:16 E:10 C:4 G:15	80
10	Local Plans	Greenville County, Greer	Poinsett St	US 29 to N Line St	S:35 P:0 M:11 E:10 C:8 G:15	79
167	-	Greenville County, Greenville	Orchard Park	Haywood to Patewood	S:35 P:0 M:16 E:10 C:0 G:15	76
4	Greenville DTMP	Greenville County, Greenville	Greenline Connection off South Side of Laurens Rd	At Swamp Rabbit Trail	S:35 P:0 M:10 E:10 C:4 G:15	74
154	Stakeholder Feedback	Greenville County, Mauldin	Greenline SUP	CU-ICAR Downtown Mauldin	S:28 P:0 M:20 E:10 C:0 G:15	73
5	Greenville DTMP	Greenville County, Greenville	McDaniel Avenue Trail	McBee Ave to Ridgeland Dr	S:28 P:0 M:16 E:10 C:4 G:15	73
165	Stakeholder Feedback	Greenville County, West Greenville	Textile Cresent	Extend Current TAP Project from Easley Bridge Rd to Anderson Rd	S:28 P:0 M:16 E:10 C:4 G:15	73
7	Stakeholder Feedback	Greenville County, Greenville	Unity Park Connector	Unity Park to Village of West Greenville	S:35 P:0 M:12 E:10 C:0 G:15	72
161	Stakeholder Feedback	Greenville County	Moreview Greenway	Connect Blue Ridge Dr to East Marion with Path Along Moreview St	S:28 P:0 M:10 E:10 C:8 G:15	71
8	Local Plans	Greenville County, Greenville	US 276 (Poinsett Hwy)	Rutherford Rd & US 25	S:35 P:0 M:16 E:0 C:4 G:15	70
157	Stakeholder Feedback	Greenville County, Greer	Rocky Creek SUP	Pelham Rd at Beacon to Hwy 14	S:35 P:0 M:6 E:10 C:4 G:15	70
153	Stakeholder Feedback	Greenville County, Greenville	Orange Line SUP	Greenline to Whitehorse Rd Corridor	S:28 P:0 M:12 E:10 C:4 G:15	69
12	Interactive Comment Map	Greenville County, Mauldin	Miller Rd	Bridges Rd to Woodruff Rd	S:28 P:0 M:10 E:10 C:4 G:15	67
151	Stakeholder Feedback	Greenville County, Taylors	Orange Line SUP	Greenlink to Taylors	S:28 P:0 M:20 E:0 C:4 G:15	67

Table 28 | Bicycle & Pedestrian Ranked Project List

KEY

S = Safety & Security
M = Mobility & Accessibility
C = Culture & Environment
P = Systems Preservation & Efficiency
E = Economic Value
G = Growth & Development

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
170	Stakeholder Feedback	Greenville County, Fountain Inn	Hellams or Duckett to Downtown	SRT Ext	S:28 P:0 M:10 E:10 C:4 G:15	67
11	Local Plans	Greenville County, Greer	Pelham St	Mayfield St to S Main St	S:28 P:0 M:6 E:10 C:8 G:15	67
156	Stakeholder Feedback	Greenville County, Simpsonville	Mauldin to Simpsonville Swamp Rabbit Trail Ext	Downtown Mauldin to Simpsonville	S:35 P:0 M:16 E:0 C:0 G:15	66
6	Staff	Greenville County, Greenville	SRT Blue Line Gap	Cleveland St to Parkins Mill	S:28 P:0 M:10 E:10 C:0 G:15	63
2	Stakeholder Feedback	Pickens & Greenville Counties, Easley & Greenville	Doodle Trail Ext	Easley to Greenville	S:28 P:0 M:16 E:0 C:4 G:15	63
14	Stakeholder Feedback	Greenville County, Mauldin & Simpsonville	Swamp Rabbit Trail Ext	Bridgeway Station to Simpsonville	S:28 P:0 M:16 E:0 C:0 G:15	59
155	Stakeholder Feedback	Greenville County, Fountain Inn	Greenline SUP	Downtown Simpsonville to Dt FI	S:28 P:0 M:16 E:0 C:0 G:15	59
19	Interactive Comment Map	Greenville County	Northbound Ext of Swamp Rabbit Trail	Travelers Rest to Marietta	S:28 P:0 M:6 E:10 C:0 G:15	59
16	Staff	Greenville & Spartanburg Counties, Taylors & Greer	SRT Orange Line	Arcadia Dr to SC-80	S:14 P:0 M:16 E:10 C:4 G:15	59
18	Stakeholder Feedback	Greenville County, Travelers Rest	Pedestrian/Bicycle Bridge Over US 25	Downtown Travelers Rest to Commercial Area Along Benton Rd	S:35 P:0 M:6 E:0 C:0 G:15	56
149	Stakeholder Feedback	Greenville County, Greenville	Brushy Creek Shared Use Path	Pleasant Valley Rd to Blue Line SRT	S:21 P:0 M:6 E:10 C:4 G:15	56
17	CMP	Greenville County, Travelers Rest	Hwy 25	US 276/Poinsett Hwy to Locust Hill Rd	S:28 P:0 M:11 E:0 C:0 G:15	54
15	Interactive Comment Map	Greenville County, Simpsonville	Standing Springs Rd	Ashmore Bridge Rd to W Georgia Rd	S:21 P:0 M:6 E:10 C:0 G:15	52
152	Stakeholder Feedback	Greenville County, Travelers Rest	Gold Line SUP	YMCA to Saluda Confluence Park	S:21 P:0 M:6 E:10 C:0 G:15	52

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G = Growth & Development

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
3	Interactive Comment Map	Anderson & Pickens Counties, Easley & Powdersville	Doodle Trail Ext	Easley to Powdersville	S:28 P:0 M:6 E:0 C:0 G:15	49
160	Stakeholder Feedback	Greenville County, Greer	Wade Creek Connector	Connect New Words Creek Greenway to Wade Hampton at Walmart	S:14 P:0 M:6 E:10 C:4 G:15	49
1	Local Plans	Pickens County, Easley	Gilder Creek Multi-Use Trail	East Butler Rd to Corn Rd	S:14 P:0 M:6 E:10 C:0 G:15	45
9	Interactive Comment Map	Greenville County, Greer	S Tyger River Greenway Ext	Tyger River Greenway to Downtown Greer & Up to Lake Robinson	S:14 P:0 M:10 E:0 C:0 G:15	40

Corridor Ranked Project List

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
27	CMP	Greenville County, Five Forks	Hwy 14	Woodruff Rd to Batesville Rd	S:18 P:12 M:23 E:18 C:1 G:10	82
39	CMP	Greenville County, Greenville	Mills Ave/Church St	Henrydale Ave to Academy St	S:20 P:10 M:20 E:18 C:3 G:10	80
32	CMP	Greenville County, Greenville	Buncombe/North St & College St/Beattie	Butler Ave to Church St	S:20 P:12 M:20 E:16 C:1 G:10	79
35	CMP	Greenville County, Greenville	Haywood Rd	Laurens Rd to North St	S:20 P:12 M:20 E:16 C:0 G:10	78
21	CMP	Pickens County, Easley	Calhoun Memorial Hwy	Brushy Creek Rd to Hwy 153	S:20 P:12 M:15 E:20 C:0 G:10	77
40	CMP	Greenville County, Greenville	Stone Ave	Rutherford St to North St/I-385	S:20 P:10 M:20 E:16 C:1 G:10	77
29	CMP	Greenville County, Greenville	Laurens Rd/Main St	Woodruff Rd to Main St	S:20 P:12 M:18 E:16 C:1 G:10	77
64	CMP	Greenville County, Simpsonville	Main St	Curtis St to Fairview Rd	S:20 P:12 M:18 E:16 C:1 G:10	77

Table 29 | Corridor Ranked Project List

KEY

S = Safety & Security
P = Systems Preservation & Efficiency
M = Mobility & Accessibility
E = Economic Value
C = Culture & Environment
G = Growth & Development

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
62	CMP	Greenville County, Simpsonville	Fairview Rd	Main St to Hwy 418	S:20 P:12 M:16 E:16 C:1 G:10	75
37	CMP	Greenville County, Greenville	S-1077 Washington St	Trescott St to Pettigru St	S:20 P:12 M:13 E:18 C:3 G:10	75
36	CMP	Greenville County, Greenville	Faris Rd/ S. Washington Ave	Anderson Rd to Pleasantburg Dr	S:20 P:10 M:19 E:14 C:3 G:10	75
65	CMP	Greenville County, Simpsonville	Harrison Bridge Rd	Fairview Rd to Main St	S:20 P:12 M:18 E:14 C:1 G:10	75
34	CMP	Greenville County, Greenville	Pelham Rd	North St to Hudson Rd	S:20 P:12 M:15 E:16 C:1 G:10	74
72	CMP	Greenville County, Taylors	Howell/Edwards Rd	E North St to Wade Hampton Blvd	S:20 P:12 M:18 E:14 C:0 G:10	74
45	CMP	Greenville County, Greenville	Augusta St/Rd	Faris Rd to Pleasantburg Dr	S:20 P:12 M:13 E:16 C:3 G:10	73
74	CMP	Greenville County, Taylors	Brushy Creek Rd/ Old Spartanburg	Cunningham Rd to Batesville Rd	S:20 P:12 M:13 E:16 C:1 G:10	73
50	CMP	Greenville County, Greer	Wade Hampton Blvd	Ried School Rd to Buncombe Rd	S:20 P:9 M:14 E:18 C:1 G:10	73
30	CMP	Greenville County, Greenville	Academy St	College St to North St	S:20 P:12 M:13 E:16 C:1 G:10	72
41	CMP	Greenville County, Greenville	Augusta Rd	Sandy Springs Rd to I-185	S:18 P:7 M:17 E:18 C:1 G:10	71
43	CMP	Greenville County, Greenville	Augusta Rd/ Pleasantburg Dr	White Horse Rd to Mauldin Rd	S:20 P:12 M:20 E:16 C:1 G:2	71
44	CMP	Greenville County, Greenville	Pleasantburg Dr/ State Park Rd	Poinsett Hwy to Wade Hampton Blvd	S:20 P:12 M:18 E:18 C:1 G:2	71
76	CMP	Greenville County	White Horse Rd	Anderson Rd to I-85	S:20 P:12 M:18 E:8 C:3 G:10	70

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G = Growth & Development

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
28	CMP	Greenville County, Five Forks	Woodruff Rd	Hwy 14 to Batesville Rd	S:20 P:12 M:11 E:16 C:1 G:10	70
90	CMP	Greenville County, Greenville	I-85	US 25 to Roper Mountain Rd	S:20 P:10 M:18 E:10 C:1 G:10	69
31	CMP	Greenville County, Greenville	Pleasantburg Dr	Faris Rd to Wade Hampton Blvd	S:20 P:12 M:20 E:6 C:1 G:10	69
71	CMP	Greenville County, Taylors	Main St	Wade Hampton Blvd to Taylors Rd	S:18 P:12 M:11 E:16 C:1 G:10	68
56	Needs Assessment	Greenville County, Mauldin	East Butler Road	Bridges Rd to Woodruff Rd	S:20 P:5 M:15 E:16 C:1 G:10	67
20	CMP	Pickens County, Easley	Pendleton St	Main St to 5th St/ Walker Ellison Rd	S:18 P:12 M:8 E:16 C:3 G:10	66
48	Staff	Greenville County, Greenville	W. Blue Ridge Dr	White Horse Rd to Poinsett Hwy	S:25 P:5 M:8 E:16 C:1 G:10	66
73	CMP	Greenville County, Taylors	North St/Old Spartanburg Rd/ Brushy Creek Rd	Howell Rd to Taylors Rd	S:20 P:12 M:8 E:14 C:1 G:10	65
89	CMP	Greenville County, Greenville	I-385	East North St to I-85 Alternative	S:13 P:3 M:17 E:18 C:1 G:10	62
54	Interactive Comment Map	Greenville County, Mauldin	Bridges Rd	E Butler Rd to Holland Rd	S:23 P:5 M:9 E:14 C:1 G:10	62
46	Greenville DTMP	Greenville County, Greenville	Pete Hollis Blvd/ Buncombe St	Briggs Ave to College St	S:13 P:5 M:15 E:16 C:3 G:10	61
78	Staff	Greenville County	Fork Shoals Rd	Conestee Rd to W. Georgia Rd	S:18 P:5 M:12 E:16 C:0 G:10	61
93	Local Plans	Greenville County, Greenville	US 123 (Academy St)	Pendleton St and Washington Ave	S:13 P:5 M:13 E:18 C:1 G:10	60
55	Needs Assessment	Greenville County, Mauldin	Ashmore Bridge Rd	Fork Shoals to W Butler Rd	S:23 P:5 M:12 E:10 C:0 G:10	60

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
63	CMP	Greenville County, Simpsonville	Georgia Rd	Fork Shoals Rd to I-385	S:18 P:12 M:13 E:6 C:1 G:10	59
58	Stakeholder Feedback	Greenville County, Mauldin	Bridges Rd	I-385 to Hwy 14	S:23 P:5 M:7 E:14 C:0 G:10	59
26	CMP	Anderson & Pickens Counties, Easley & Powdersville	Hwy 153	Old Easley Bridge Rd to I-85	S:20 P:10 M:9 E:8 C:1 G:10	58
68	Needs Assessment	Greenville County, Simpsonville	SC Hwy 14	E Curtis St to Harts Ln	S:13 P:5 M:13 E:16 C:1 G:10	58
42	CMP	Greenville County, Greenville	Roper Mountain Rd	Woodruff Rd to Hwy 14	S:20 P:9 M:12 E:14 C:0 G:2	57
94	Interactive Comment Map	Greenville County, Greenville	I-185	White Horse Rd (US 25)	S:13 P:3 M:8 E:20 C:3 G:10	56
66	Needs Assessment	Greenville County, Simpsonville	Harrison Bridge Rd	Neely Ferry Rd to Fairview Rd	S:13 P:3 M:15 E:14 C:1 G:10	56
53	Interactive Comment Map	Greenville County, Mauldin	Hamby Drive	Forrester Dr to Miller Rd	S:20 P:5 M:5 E:14 C:1 G:10	56
83	Staff	Greenville County	Woodruff Rd	S. Bennetts Bridge Rd to Enoree River	S:10 P:5 M:9 E:18 C:1 G:10	53
33	CMP	Greenville County, Greenville	Pendleton St	Lois Ave to Main St	S:20 P:9 M:6 E:14 C:1 G:2	53
144	Stakeholder Feedback	Greenville County, Greenville	Richburg Rd	WHB to E. North St	S:18 P:5 M:3 E:14 C:1 G:10	51
92	CMP	Greenville County	I-85	Roper Mountain Rd to S-12	S:13 P:0 M:18 E:10 C:0 G:10	51
80	Staff	Greenville County	Hudson Rd	Pelham to Brushy Creek	S:10 P:3 M:13 E:14 C:0 G:10	51
79	Staff	Greenville County	Stallings Rd	Rutherford Rd to Reid School Rd	S:10 P:0 M:12 E:16 C:3 G:10	50

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
51	Interactive Comment Map	Greenville County, Mauldin	Log Shoals Rd	US 276 to Fork Shoals Rd	S:23 P:5 M:3 E:16 C:1 G:2	50
81	Staff	Greenville County	SC 418	Saluda River to Durbin Rd	S:10 P:5 M:3 E:20 C:1 G:10	50
69	Staff	Greenville County, Simpsonville	Hwy 14	Woodruff Rd to NE Main St (Simpsonville)	S:10 P:5 M:15 E:16 C:0 G:2	49
61	SC 81 Corridor Study	Anderson County, Powdersville	SC 81	Piedmont Rd to Wren School Rd	S:10 P:5 M:5 E:16 C:0 G:10	47
87	Staff	Pickens County	SC 8	St. Paul Rd to Anderson Hwy (SC 135)	S:10 P:5 M:6 E:14 C:1 G:10	46
85	Staff	Greenville County	Roper Mountain Rd	Roper Mtn Ext to Woodruff Rd	S:13 P:5 M:3 E:14 C:1 G:10	46
86	Staff	Greenville County	SC-253 (E. Mtn Crk/ Sandy Flat Rds)	State Park Rd to Locust Hill Rd	S:10 P:5 M:3 E:16 C:1 G:10	46
22	Needs Assessment	Pickens County, Easley	Old Easley Bridge Rd	SC 153 to US 123	S:10 P:5 M:10 E:8 C:3 G:10	46
84	Staff	Greenville County	Scuffletown Rd	Woodruff Rd to SC 418	S:10 P:3 M:6 E:16 C:0 G:10	45
38	CMP	Greenville County, Greenville	Dairy Dr	Ridge Rd to Confluence Outdoors	S:10 P:0 M:12 E:20 C:1 G:2	45
23	Staff	Pickens County, Easley	SC 153 Phase 3	Phase 2 to SC 183	S:10 P:5 M:3 E:14 C:3 G:10	45
75	Staff	Greenville County, Taylors	St. Mark Rd	E. Main (Taylors) to Locust Hill Rd	S:10 P:5 M:3 E:14 C:1 G:10	44
67	Needs Assessment	Greenville County, Simpsonville	Harts Ln	Hwy 14 to Jonesville Rd	S:8 P:0 M:10 E:14 C:0 G:10	42
91	CMP	Greenville County, Greer	I-85	Pelham Rd to Brockman McClimon Rd	S:13 P:0 M:13 E:4 C:1 G:10	41

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
60	Staff	Anderson & Greenville Counties, Piedmont	SC 86	SC 81 to SC 20	S:10 P:5 M:3 E:18 C:1 G:2	40
59	Stakeholder Feedback	Pickens County, Pickens & Liberty	US 178	Pickens to Liberty	S:10 P:5 M:3 E:16 C:3 G:2	39
148	Stakeholder Feedback	Anderson County, Piedmont	Major Rd From Hwy 86 to Hwy 81	From Hwy 86 to Hwy 81	S:8 P:0 M:3 E:8 C:0 G:10	29

Intersection Ranked Project List

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
143	Stakeholder Feedback	Greenville County, Greenville	Pleasantburg/WHB	Pleasantburg Rd at Wade Hampton Blvd	S:18 P:5 M:20 E:18 C:3 G:10	73
105	Greenville DTMP	Greenville County, Greenville	Augusta Street/Mills Ave	Church St	S:13 P:3 M:20 E:18 C:1 G:10	65
104	Greenville DTMP	Greenville County, Greenville	Academy St	Church St	S:10 P:5 M:15 E:18 C:1 G:10	59
115	Interactive Comment Map	Greenville County, Mauldin	US 276 (N Main St)	Owens Ln	S:15 P:5 M:13 E:14 C:1 G:10	58
112	Interactive Comment Map	Greenville County, Greer	Wade Hampton Blvd	W. Pointsett St	S:13 P:5 M:10 E:18 C:1 G:10	57
128	Local Plans	Greenville County, Travelers Rest	SC 253 (State Park Rd)	Altamont Rd	S:18 P:5 M:6 E:16 C:3 G:10	57
113	Interactive Comment Map	Greenville County, Mauldin	W Butler Rd	Fowler Cir. at Laurel Meadows Parkway	S:18 P:5 M:8 E:14 C:1 G:10	56
47	Haynie-Sirrine Neighborhood Plan	Greenville County, Greenville	Dunbar	At Augusta St	S:15 P:3 M:8 E:18 C:1 G:10	56
119	Interactive Comment Map	Anderson County, Powdersville	SC 81 (Anderson Rd)	SC 153	S:15 P:5 M:6 E:18 C:1 G:10	55

Table 30 | Intersection Ranked Project List

KEY

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
102	Stakeholder Feedback	Pickens County, Easley	US 123 at Hwy 124	US 123 at Hwy 124	S:15 P:5 M:5 E:18 C:1 G:10	55
127	Interactive Comment Map	Greenville County, Travelers Rest	US 25	State Park Rd	S:15 P:0 M:10 E:18 C:1 G:10	54
110	Interactive Comment Map	Greenville County, Greer	Brushy Creek Rd	Alexander Rd	S:13 P:0 M:13 E:16 C:1 G:10	54
98	Need Assessment	Pickens County, Easley	SC Hwy 8	West End School	S:15 P:5 M:6 E:16 C:1 G:10	53
124	Interactive Comment Map	Greenville County, Simpsonville	I-385	Old Stage Rd	S:18 P:5 M:1 E:18 C:1 G:10	53
123	Interactive Comment Map	Greenville County, Simpsonville	Harrison Bridge Rd	Fairview Rd	S:13 P:3 M:10 E:16 C:1 G:10	53
118	Needs Assessment	Pickens County, Pickens	SC 178	SC 183	S:15 P:3 M:3 E:18 C:3 G:10	52
108	Greenville DTMP	Greenville County, Greenville	Washington St	McBee Ave	S:13 P:5 M:6 E:16 C:1 G:10	51
132	Local Plans	Anderson County	SC 81 at Dunham Bridge Rd	Dunham Bridge Rd	S:15 P:5 M:4 E:14 C:3 G:10	51
114	Interactive Comment Map	Greenville County, Mauldin	Butler Rd	Ashmore Bridge Rd	S:10 P:5 M:10 E:14 C:1 G:10	50
106	Greenville DTMP	Greenville County, Greenville	Church St	E Coffee	S:13 P:0 M:7 E:18 C:1 G:10	49
117	Interactive Comment Map	Greenville County, Mauldin	Bethel Rd	Tanner Rd	S:15 P:5 M:1 E:16 C:1 G:10	49
129	Local Plans	Greenville County, Travelers Rest	Tigerville Rd	Jackson Grove Rd	S:15 P:5 M:1 E:16 C:1 G:10	49
133	Local Plans	Anderson County	SC 81 at McNeely Rd	McNeely Rd	S:15 P:5 M:3 E:14 C:1 G:10	49

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S = Safety & Security
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E = Economic Value
C = Culture & Environment
G = Growth & Development

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
134	Local Plans	Anderson County	SC 81 at Cely Ln	Cely Ln	S:15 P:5 M:3 E:14 C:1 G:10	49
125	Local Plans	Greenville County, Simpsonville	West Georgia Rd	East Standing Springs Rd	S:15 P:0 M:6 E:16 C:1 G:10	48
111	Interactive Comment Map	Greenville County, Greer	Dillard Rd	Gibbs Shoals Rd	S:15 P:5 M:1 E:14 C:1 G:10	47
131	Staff	Greenville County	Augusta	Old Augusta & Fork Shoals	S:0 P:5 M:16 E:14 C:1 G:10	46
96	Need Assessment	Pickens County, Easley	Brushy Creek Rd	Peason Rd	S:13 P:3 M:3 E:16 C:1 G:10	46
97	Need Assessment	Pickens County, Easley	Brushy Creek Rd	Sheriff Mill Rd	S:13 P:5 M:1 E:16 C:1 G:10	46
171	Stakeholder Feedback	Laurens County, Fountain Inn	Exit 22 I-385	Exit 22	S:8 P:3 M:8 E:16 C:1 G:10	46
126	Interactive Comment Map	Greenville County, Travelers Rest	US 25	Edwards St	S:15 P:0 M:3 E:16 C:1 G:10	46
168	Stakeholder Feedback	Greenville County, Fountain Inn	Exit 24 I-385	Exit 24	S:10 P:5 M:3 E:16 C:1 G:10	46
121	Stakeholder Feedback	Anderson County, Powdersville	Old Mill Rd	Three Bridges Rd/ Brushy Creek Rd	S:15 P:5 M:1 E:12 C:1 G:10	45
116	Interactive Comment Map	Greenville County, Mauldin	Bethel Rd	Bridges Rd	S:15 P:0 M:1 E:16 C:1 G:10	44
95	Interactive Comment Map	Pickens County, Easley	Fleetwood Dr	Wilbur St	S:13 P:5 M:3 E:10 C:3 G:10	44
103	Stakeholder Feedback	Greenville & Laurens Counties, Fountain Inn	SC 418/Cullivan St	Durbin Rd	S:13 P:0 M:3 E:16 C:1 G:10	43
100	Need Assessment	Pickens County, Easley	SC Hwy 9	At E 3rd Ave & S C St	S:13 P:3 M:3 E:12 C:1 G:10	42
99	Need Assessment	Pickens County, Easley	SC Hwy 8	Pope Field	S:15 P:0 M:1 E:14 C:1 G:10	42

KEY

S = Safety & Security
P = Systems Preservation & Efficiency
M = Mobility & Accessibility
E = Economic Value
C = Culture & Environment
G = Growth & Development

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ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
107	Greenville DTMP	Greenville County, Greenville	McDaniel Ave	Woodland Way & Univeristy Ridge	S:15 P:0 M:3 E:12 C:1 G:10	42
101	Need Assessment	Pickens County, Easley	Saluda Dam Rd	Olive Street/Pace Valley Rd	S:13 P:5 M:1 E:10 C:1 G:10	40
109	Haynie-Sirrine Neighborhood Plan	Greenville County, Greenville	Haynie St	Howe St	S:15 P:0 M:3 E:10 C:1 G:10	40
120	Stakeholder Feedback	Anderson County, Powdersville	SC 81 at Old Williamston Rd	SC 81 at Old Williamston Rd	S:18 P:0 M:1 E:6 C:1 G:10	36
130	Staff	Anderson County	Powdersville Rd	At Three Bridges Rd	S:13 P:0 M:1 E:10 C:1 G:10	35

Signal Ranked Project List

ID	SOURCE	LOCATION	NAME	TERMINI	GOAL SCORES	OVERALL SCORE
137	CMP	Greenville County, Greenville	Laurens Rd/Main St	Pleasantburg Dr to Woodruff Rd	S:20 P:12 M:18 E:16 C:3 G:10	78
136	CMP	Greenville County, Greenville	Poinsett Hwy	Stone Ave to Pleasantburg Dr	S:20 P:12 M:13 E:16 C:3 G:2	65
139	CMP	Greenville County, Greenville	Washington Ave	White Horse Rd to Easley Bridge Rd	S:20 P:12 M:11 E:14 C:3 G:2	62
138	CMP	Greenville County, Greenville	Park Ave/North St	Church St to Pleasantburg Dr	S:20 P:12 M:9 E:16 C:0 G:2	59
141	Needs Assessment	Greenville County, Greenville	Pelham Road	E North Street to Batesville Rd	S:20 P:12 M:6 E:16 C:0 G:2	56
142	CMP	Greenville County, Mauldin	W Butler Rd	Main St to Conestee Rd	S:20 P:12 M:6 E:14 C:1 G:2	55
135	CMP	Pickens County, Easley	Main St	Liberty Dr to Dennis Dr	S:10 P:12 M:6 E:18 C:1 G:2	49
140	CMP	Greenville County, Greenville	Roper Mountain Rd Ext	Pelham Rd to Roper Mountain Rd	S:18 P:7 M:6 E:14 C:0 G:2	47

Table 31 | Signal Ranked Project List

KEY

S = Safety & Security
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APPENDIX B: PROJECT PRIORITIZATION & SCORING TOOL

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INTRODUCTION

The purpose of this memorandum is to describe the inputs and methodology of the project scoring tool and prioritization approach. This tool and results support the prioritization effort as part of the GPATS Horizon 2050 Long-Range Transportation Plan (LRTP), corresponding to goals and objectives established in that effort.

The project scoring tool produces scores of prioritized projects by asset class using multi-criteria analysis and calculates scores for each goal as well as a total score across all goals for each project in each asset class. Project measures by asset class are scored to assess each project's alignment with each of the goals. Project measures are informed by data that was collected using publicly available spatial data summarized by project area and manual input. Geospatial data were transformed and translated to a common scale in the project scoring tool to reduce skew, maintain contrast, and ensure congruent apples-to-apples comparisons across project measures. Manual inputs were entered on this common scale.

Within the project scoring tool, a full list of scored and ranked projects by asset class are available in the "Interface" and "Score Summary" tabs. The User Quick Reference Guide section of this memo provides instructions on how to navigate and utilize these tabs.

Data informing the project scoring tool and the subsequent calculation of project scores represents aspects of the goals, including problems that have transportation-related solutions. The assumption is that analyzed projects will resolve the problems represented by the data and, for this reason, should be prioritized. Some measures are informed by manual entry to help properly characterize a project's alignment with a goal. Additionally, project readiness is not reflected in the scores or rankings produced. All project scores and rankings should be reviewed and discussed through the lens of what solutions projects may provide. Similarly, the project prioritization results should always be supplemented with implementation priority and complexity considerations in prioritization, funding, and implementation discussions.

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Scoring Tool Methodology and Inputs

As noted above, project measures were selected to evaluate each project's alignment with each of the goals established in the Horizon 2050 LRTP. To inform these project measures, geospatial data was gathered, summarized, and transformed. Manual entry was used to cover measures that didn't have publicly available data to inform scores (for example, the safety improvements measure tracked how well the project would improve safety and provide safety benefit and was represented by manual entry score). Within the project scoring tool, data are translated to a common scale for the purpose of congruent comparison. Scores for each project are calculated from these measures, weighted, and converted to a 1 to 100 scale for each goal and across all goals.

Horizon 2050 LRTP Goals

As part of the Horizon 2050 LRTP, GPATS identified six goals and guiding statements to support decision-making that align with both federal requirements and local priorities. These goals and guiding statements are listed in Table 1 and correspond with Chapter 3 of the Horizon 2050 LRTP. The prioritization process also adds to the score for emphasized projects or corridors, those that the public reported as important during public engagement meetings for the 2050 LRTP.

Table 1: Horizon 2050 LRTP Goals

Goal	Definition
Safety & Security	Promote a safe transportation system by reducing crashes, increasing reliability, and enhancing emergency response.
Systems Preservation & Efficiency	Extend the lifespans of transportation systems by promoting fiscal responsibility and prioritizing maintenance and operational efficiency.
Mobility & Accessibility	Create a transportation system that encourages biking, walking, and using public transit.
Economic Value	Enhance regional economic vitality by simplifying the movement of people and freight within and across the region.
Culture & Environment	Improve the area's quality of life by protecting and promoting its valued places and natural resources.
Growth & Development	Enhance travel efficiency by aligning transportation investments with land use planning.

Project Measures

Using the above goals listed in Table 1, the project team, in consultation with GPATS, identified project measures for each asset class to evaluate projects against each of the identified goals. For example, “Pavement Condition” is a project measure of the quality of roadway asphalt. This project measure is used with other measures to assess projects against the “Systems Preservation & Efficiency” goal for all asset classes. A full list of project measures for each asset class is provided in the “Inputs” tab of the attached prioritization tool. The User Quick Reference Guide section provides additional information on navigating the “Inputs” tab of the attached prioritization tool. In total, 14 unique project measures (GIS-based and Manual) were identified to assess projects by asset class against the six goals listed in Table 1. A crosswalk of goals, measures, the relevant asset category, and more information on data for the prioritization is detailed in the “Inputs” tab of the prioritization tool.

Table 2: Project Measures and Goals

Measure	Asset Category	Data Source Type	Definition
Safety and Security			
Safety Improvements	Corridors & Intersections	Manual	Safety Improvements: Project serves the purpose of improving safety and/or has safety benefits.
Traffic Crashes	All Asset Classes	GIS data	Traffic Crashes: Based on the crash severity – including fatal, injurious, and property damaging – and the occurrence of these types of crashes.
Systems Preservation and Efficiency			
Pavement Condition	All Asset Classes	GIS data	Pavement Condition: Measure of the quality of roadway asphalt.
TSMO	All Asset Classes	Manual	TSMO: Project improves system management capabilities
Mobility and Accessibility			
LoS Level of Service	Corridors & Intersections	GIS data	Level of Service (LoS): Existing/Future estimate of vehicle to capacity (V/C) ratio.

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Travel Reliability on the NHS	Corridors & Intersections	GIS data	Travel Reliability on the NHS: Current NPMRDS estimate of LOTTR.
Bicycle and Pedestrian Connections	All Asset Classes	Manual	Bicycle and Pedestrian Connections: Bicycle and pedestrian infrastructure included in project
Bus Service	All Asset Classes	Manual	Bus Service: Measure of bus service frequency in project corridor.
CMP Project	All Asset Classes	Manual	CMP Project: Project identified in CMP
Economic Value			
%Truck Usage	Corridors & Intersections	GIS data	Percentage Truck Usage: Measure the percentage of vehicles that are trucks traversing the roadway.
Cost	All Asset Classes	GIS data	Cost: Measures whether cost is expected to exceed Guideshare funding
Culture and Environment			
Poverty Measure	All Asset Classes	GIS data	Poverty Measure: MPO Poverty Measure (was Average Median Income (AMI) $60,040 as of 2020 5-year Est)
Floodplain and Wetlands	All Asset Classes	GIS data	Floodplain and Wetlands: Measures whether a project is expected to impact a floodplain or wetland area
Growth and Development			
Impacts to Built Environment	All Asset Classes	Manual	Impacts to Built Environment: Project compatibility with neighborhoods and business districts.
Emphasis			
Public Emphasis	All Asset Classes	Manual	Emphasis: These are projects or corridors that the public report as important during public engagement meetings for 2050 LRTP.

GIS Data Collection

Quantitative data informing project measures were gathered using a GIS overlay analysis. This overlay analysis used data layers from publicly available data sources including sources at the city, regional, and state level.. For the purpose of extracting and calculating project-level data from these sources, the team developed a set of buffers, filters, and assumptions. Information on each project measure as well as scoring keys (to translate raw data to scores) are provided in the “Inputs” tab of the attached prioritization tool.

GIS Data Translation to Scores

Data gathered from the GIS analysis is translated in the project prioritization tool to project measures and scores. These transformations occur through one of two methods: 1) scoring keys and 2) skew transformations and scaling.

Scoring keys (1) are utilized to translate raw data to scores; this ensures consistency and, where necessary, aggregates multiple data fields to inform a single project measure. For corridor, intersection, or signal projects,

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for example, data on existing and future vehicle-to-capacity (V/C) ratios were gathered. A scoring key was used to first score based on the existing V/C ratio, and for projects with low ratios, then score based on the future V/C ratio. All scoring keys are defined in the "Inputs" tab and by definition generate a score following the common scale (discussed further below). Translations are available beginning in column AA of the "GIS_Data" tab in the attached prioritization tool.

Skew transformations and scaling (2) are performed to reduce skew within project measures, ensuring a more even distribution and robust contrast between projects, and then translations are made to a common scale score. Two types of skew transformations are available in the tool, only one employed. Information about each of these transformation types is listed below and transformation selections for each project measure are available in the "GIS_DataScaling" tab of the attached prioritization tool:

- "None": No project measure skew transformation is applied because the data already exhibits a normal distribution or in the common scale. This means that there are no significant outliers and contrast between projects is maintained without this step.
- "Square Root": A square root transformation is performed to reduce the right-skew of the project measure range, where more values are clustered toward the upper end of the scale. This helps to maintain contrast for high values and enhances contrast for lower and mid-range values, improving the meaningful, analytical differences between projects. This transformation is not used in the current iteration of the prioritization tool.
- "Logarithmic": A logarithmic transformation is performed to reduce extreme right skew where project measures exhibits significant outliers. This helps to maintain contrast for high values and enhance contrast for lower and mid-range values, improving the meaningful, analytical differences between projects.

After performing the skew translations, measures are translated to a common scale (0 to 5) using even bin criteria created from the range of values in the transformed project measures. Project measures prior to this step exhibit a variety of units of measurement and magnitudes, creating an apples-to-oranges comparison problem and making any comparison between project measures nonsensical. For example, comparing (or adding or averaging) truck percentages (%) with traffic crashes (crash counts in project area) without first translating to a common scale, would lead to a false interpretation, weighting the truck percentage measure significantly lower than the traffic crash measure.

Importantly, translations to a common scale do not have a significant impact on contrast within project measures. Distributions are maintained such that the relative priority and importance across projects is preserved but project measures become comparable. Translations to a common scale are available for GIS-based data measures in the "GIS_DataScaling" tab of the attached prioritization tool and all result in scores ranged from 0 to 5.

Table 3: Summary of GIS-based Project Measures, Translations, and Scoring Keys

Measure	Asset Category	Data Translation to Score	Scoring Key
Traffic Crashes	All Asset Classes	Continuous data translated with logarithmic transformation and common scaling	5: High density of existing crashes 3: Medium density of existing crashes 0: Low density of existing crashes

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Pavement Condition	All Asset Classes	Continuous data translated with scoring key	5: Poor pavement condition (0-2.64). 3: Fair pavement condition (2.65-3.34). 0: Good pavement condition (3.35-5) / no data available because it's a nonexistent roadway.
LoS Level of Service	Corridors & Intersections	Continuous data translated with scoring key using existing and future estimate of vehicle-to-capacity (V/C) ratio.	Project addresses capacity issues in corridor where: 5: Existing V/C ratio is greater than 1.0. 4: Existing V/C ratio is between 0.8 and 1.0 V/C ratio. 3: No existing V/C over 0.8, but future V/C ratio is 1.0 or higher. 2: No existing V/C over 0.8, but future V/C ratio is between 0.8 and 1.0. 0: Existing and future V/C ratios less than 0.8.
Travel Reliability on the NHS	Corridors & Intersections	Continuous data translated with scoring key	Project addresses reliability issues in an NHS corridor where: 5: Existing LOTTR is greater than 1.5. 3: Existing LOTTR is between 1.25 and 1.5. 0: Existing LOTTR is less than 1.25.
%Truck Usage	Corridors & Intersections	Continuous data, logarithmic transformation and common scaling	5: 100th-75th Percentile. 3: 75th-50th Percentile. 0: 50th-0 Percentile.
Cost	All Asset Classes	Cost data translated to binary score	5: Less than or equal to one year of Guideshare funding by mode 0: Greater than one year of Guideshare funding by mode
Poverty Measure	All Asset Classes	Continuous data translated to with scoring key	5: Project improves access to area that meets threshold for low income. 0: Project does not improve access for low income area.
Floodplain and Wetland	All Asset Classes	Binary data translated to common scaling	5: Project does not touch a floodplain or wetland 0: Project touches a floodplain or wetland

Manual Scores

Some project measures are informed by manual entry to help properly characterize a project's alignment with a goal, usually due to lack of publicly available GIS-based data. Some manual inputs are informed by review of qualitative planning documents and project information or based on the assessment of a subject matter export. Manual inputs are entered directly as scores on the common scale (0 to 5), informed by qualitative scoring keys. Scoring keys for manual entry data are listed in the "Inputs" tab of the prioritization tool.

Table 4: Summary of Manual Project Measures and Scoring Keys

Measure	Asset Category	Scoring Key

Safety Improvements	Corridors & Intersections	5: Project purpose is safety 3: Project purpose is not primarily safety but would provide safety benefits 0: Project provides no safety benefits.
TSMO	All Asset Classes	5: Project includes new TSMO assets 3: Project upgrades existing TSMO assets 0: Project includes no TSMO elements
Bicycle and Pedestrian Connections	All Asset Classes	5: Project includes new Bike / Ped infrastructure that closes a system gap 3: Project upgrades or enhances existing bike / ped assets OR is a new bike / ped asset that does not close a gap 0: Project includes no Bike / Ped elements
Bus Service	All Asset Classes	5: Project improves transit service or amenities in a high frequency transit service corridor (headways of 30 minutes or less) 3: Project improves transit service in a transit corridor. 0: Project does not improve transit service.
CMP Project	All Asset Classes	5: Project is identified in the CMP. 0: Project is not Identified in the CMP.
Impacts to Built Environment	All Asset Classes	5: Street project enhances compatibility with neighborhoods through reduced speeds, less noise, or improved aesthetics (or other). 0: No data available because no one lives in the census block group.
Public Emphasis	All Asset Classes	5: Corridor or Project emphasized. 0: Corridor or Project not emphasized.

Calculation of Scores

The project scoring tool captures the weights entered for measures and goals to create an overall project score. Goals are described in the Horizon 2050 LRTP Goals section. Weights were discussed between GPATS and the South Carolina Department of Transportation (SCDOT). Table 5 presents weights as provided by GPATS and discussed with SCDOT. The weights for criteria discussed and provided were not a one-to-one match with project scoring input requirements, thus, these weights were mapped to measures used in the prioritization tool, shown in Table 5. The results of these translations are shown in Table 6. Measure weights can be changed on the “Interface” tab of the attached prioritization tool, described in the User Quick Reference Guide section.

Table 5: Goal Weights as Provided by GPATS

Criteria	Mapped GPATS Measures	Goal Weights			
		Bike/Ped	Corridor	Intersection	Signal
Traffic Volume and Congestion	LOS, Travel Reliability, TSMO	0%	35%	35%	35%

Located on a Priority Network	CMP	5%	25%	15%	15%
Public Safety	Safety Improvements, Traffic Crashes	35%	10%	25%	25%
Economic Development	Economic Development	10%*	7%	5%	5%
Truck Traffic	Percent Truck Usage	0%	10%	10%	10%
Financial Viability	Cost	10%	5%	5%	5%
Pavement Quality Index	Pavement Condition	0%	3%	0%	0%
Environmental Impacts	Poverty Measure, Floodplain and Wetlands	15%	5%	5%	5%
Alternative Transportation Solutions	Bicycle and Pedestrian, Bus Service	10%	0%	0%	0%
Consistency with Local Land Use Plans	Impacts to Built Environment	15%	0%	0%	0%

*For the Bike/Ped Asset class, the weights provided and discussed with SCDOT for the Economic Development criteria map to the Bicycle and Pedestrian and Bus Service measures in the tool, rather than the Economic Development measure.

Table 6: Measure Weights in the Prioritization Tool

		Measure Weights			
Measure	Asset Category	Bike/Ped	Corridor	Intersection	Signal
Safety Improvements	Corridors & Intersections	18%	13%	13%	13%
Traffic Crashes	All Asset Classes	18%	13%	13%	13%
Safety and Security					
Pavement Condition	All Asset Classes	0%	5%	5%	5%
TSMO	All Asset Classes	0%	7%	7%	7%
Systems Preservation and Efficiency					
LoS Level of Service	Corridors & Intersections	0%	7%	7%	7%
Travel Reliability on the NHS	Corridors & Intersections	0%	7%	7%	7%
Bicycle and Pedestrian Connections	All Asset Classes	10%	5%	5%	5%
Bus Service	All Asset Classes	10%	5%	5%	5%

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CMP Project	All Asset Classes	5%	5%	5%	5%
Mobility and Accessibility					
%Truck Usage	Corridors & Intersections	0%	10%	10%	10%
Cost	All Asset Classes	10%	10%	10%	10%
Economic Value					
Poverty Measure	All Asset Classes	8%	3%	3%	3%
Floodplains and Wetlands	All Asset Classes	8%	3%	3%	3%
Culture and Environment					
Impacts to Built Environment	All Asset Classes	15%	15%	15%	15%
Growth and Development					
Public Emphasis	All Asset Classes	0%	0%	0%	0%
Emphasis					

Scores for each goal by asset class are calculated as the average of project measures for that goal and asset class, then weighted by the Measure Weights defined in Table 6 and in the “Inputs” tab. Once scores are calculated for each goal, scores for goals and across all goals (overall project scores) are normalized to a scale of one to 100, for ease of understanding and interpretation.

In this methodology, a score of one is associated with the lowest possible score (zeros across all measures), and 100 represents the highest possible score (fives across all measures). Realized project scores fall between these two extremes.

Project measure scores, scores for each goal, and the total score across goals are summarized in the “ScoreSummary” and can also be seen in the “Interface” tab of the project scoring tool. The User Quick Reference Guide section of this memo provides detailed instructions on how to navigate and utilize these tabs.

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APPENDIX C:
ACOG TRAVEL DEMAND MODEL REVIEW

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Background

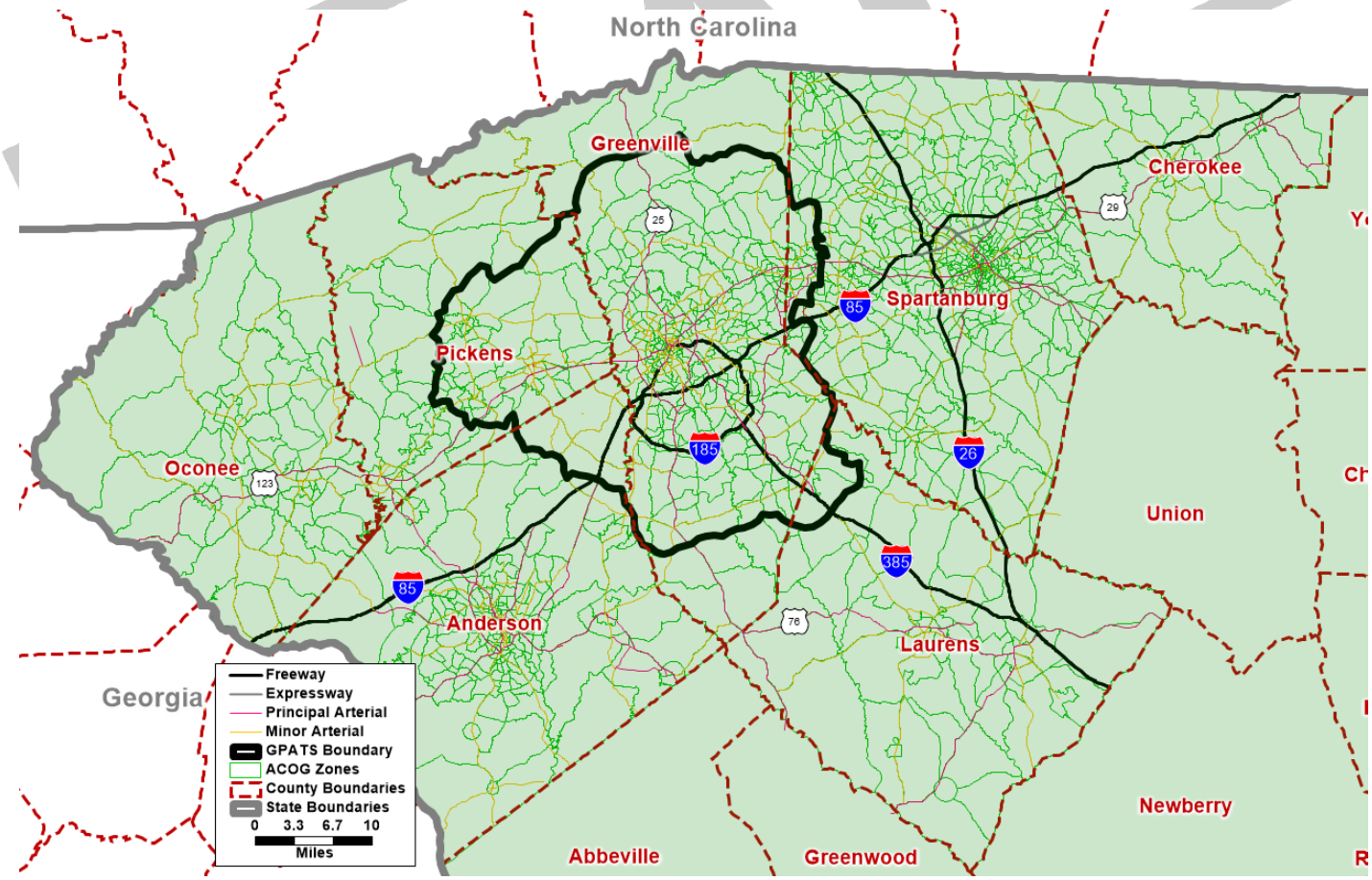
The ACOG (Appalachian Council of Governments) travel demand model (TDM) files were received from the Greenville-Pickens Area Transportation Study (GPATS) Metropolitan Planning Organization (MPO) and ACOG. The model, referred to as ARM (Appalachian Regional Model), was developed by CDM Smith in 2025 and includes a 2022 base year and 2050 forecast year. The ARM was developed to run in Version 9 of TransCAD and is the 2nd version of ARM.

HDR reviewed the ARM modeling procedures, inputs and outputs for the GPATS portion of the model in preparation for the GPATS Long-Range Transportation Plan (LRTP). The findings from that review are summarized in this memorandum.

Model Structure

The ARM model is a traditional trip-based TDM that includes the four standard steps of Trip Generation, Trip Distribution, Mode Choice, and Traffic Assignment. Please note that the Mode Choice procedure splits person trips into auto, transit and other trips using static percentages and not a logit procedure that can dynamically model transit trips that adjust for service and demographic changes giving it limited ability to model transit trips. The model represents a seven-county area with the GPATS MPO near the center as shown in **Figure 1**.

Figure 1 - GPATS MPO Boundary within ARMv2 Model



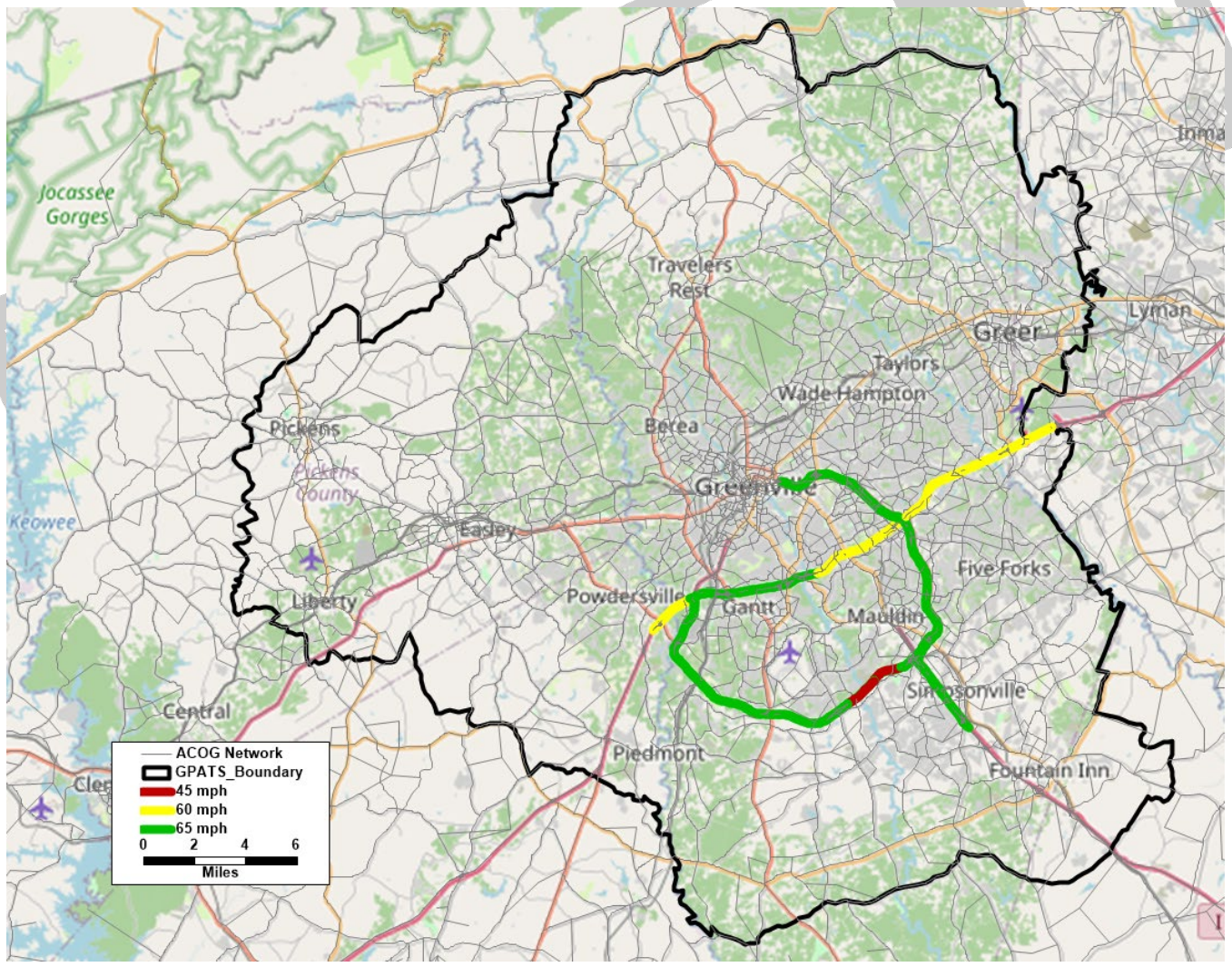
Road Network

The primary network inputs, including speeds, capacities, lanes, counts, and functional class were reviewed within the GPATS boundary. The “No-Build” future road projects were also identified and reviewed.

Speeds

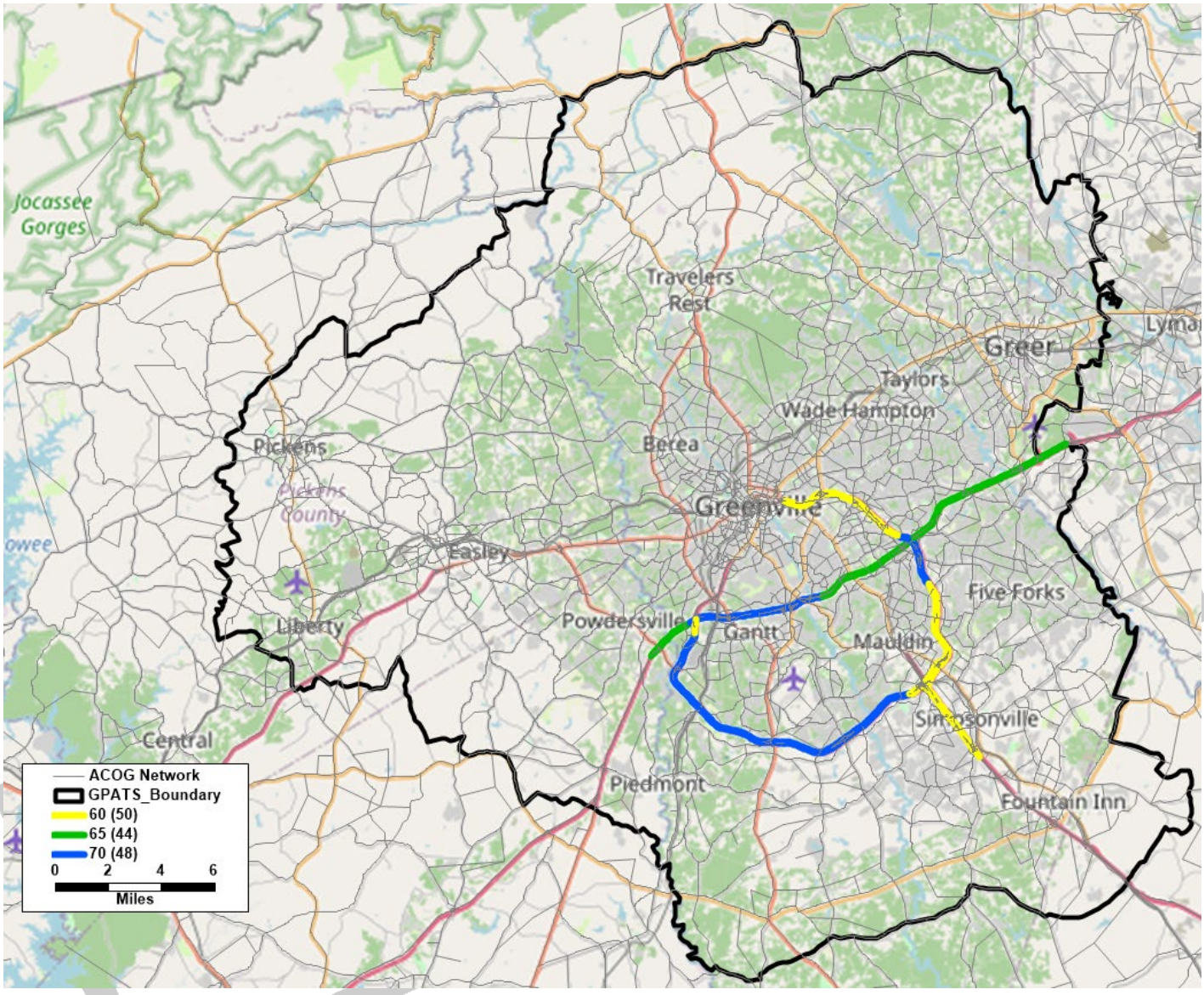
The speeds were reviewed for accuracy within the GPATS portion of the ARM. The input speeds used by the model were spot-checked by comparing with posted speed limit signs found on Google Street View. In most cases, the model input speeds matched the speed limit signs. When reviewing the speeds on the interstate, there was a uniform difference of 5 mph between the speeds posted (observed in Google Street View) and the speeds in the base_speed field on the ACOG network. This difference was only noticed on the interstates (I-85, I-185, and I-385). The real-world observed speeds are visualized in **Figure 2**, and speeds shown on the ACOG base_speed field are visualized in **Figure 3**. Note the 45 mph change in **Figure 2** is due to the toll booth (Southern Connector Toll road).

Figure 2 - Real World Observed Speeds



*Note the two links with a 45 mph speed link is due to the toll booth on I-185 (Southern Connector Toll Road).

Figure 3 - ACOG Base_Speed



Capacities

The model capacities and associated volume delay function coefficients used during highway assignment were determined based on SCDOT input according to the model documentation. These capacities were reviewed and compared to other TDMs and published daily planning model capacities from the 2009 Florida Department of Transportation Quality / Level-of-Service Handbook (FDOT QLOS). A comparison of the model capacities versus FDOT QLOS Level-of-Service E planning capacity values is shown in **Table 1**.

The ARM daily capacity values are consistently higher than the FDOT QLOS values, particularly on Principal Arterial roads. No changes to these capacities are recommended as an input to the model because the model has been calibrated using these values, but FDOT QLOS values were added to the network to show more congestion for mapping purposes.

Table 1 - ACOG Model Capacities Versus FDOT Quality Level-of-Service Handbook Capacities

Functional Class / Lanes	ACOG Model (Undivided-Divided)	FDOT QLOS
Freeway		
2	42,000	39,700
4	84,000	79,400
6	126,000	122,700
Principal Arterial		
2	31,000 - 35,650	17,500
4	62,000 - 71,300	38,600
6	93,000 - 106,950	58,100
Minor Arterial		
2	26,000 - 29,900	16,200
4	52,000 - 59,800	35,100
6	78,000 - 89,700	53,100
Collector		
2	17,000 - 19,550	14,900
4	34,000 - 39,100	31,900

The FDOT QLOS daily capacity values do not represent a maximum number of vehicles that can use the roadway in 24 hours. Instead, the capacity values represent the highest number of vehicles that can use the roadway to meet a particular Level-of-Service threshold. For example, during a 24-hour timeframe there are many hours that a road is underutilized but during peak hours it may be overutilized resulting in a lower Level-of-Service. The daily values used thus approximate a peak hour limitation on the roadway but can be compared to model daily volumes.

Future Road Network

The user can select various sets of future road projects to include in a future model run including EC (existing roadways and committed future road projects), LRP (fiscally constrained long-range plan road projects), SWM (projects included in the South Carolina DOT statewide model), and Vision (fiscally unconstrained future road projects). The EC and SWM projects together represent the “No Build” scenario projects, which are projects that are anticipated to be completed even if no fiscally-constrained dollars are allocated to them in the LRTP. **Figure 4** shows the locations of these projects in the GPATS portion of the TDM and **Table 2** provides a description of the projects.

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Figure 4 – "No Build" Future Road Projects

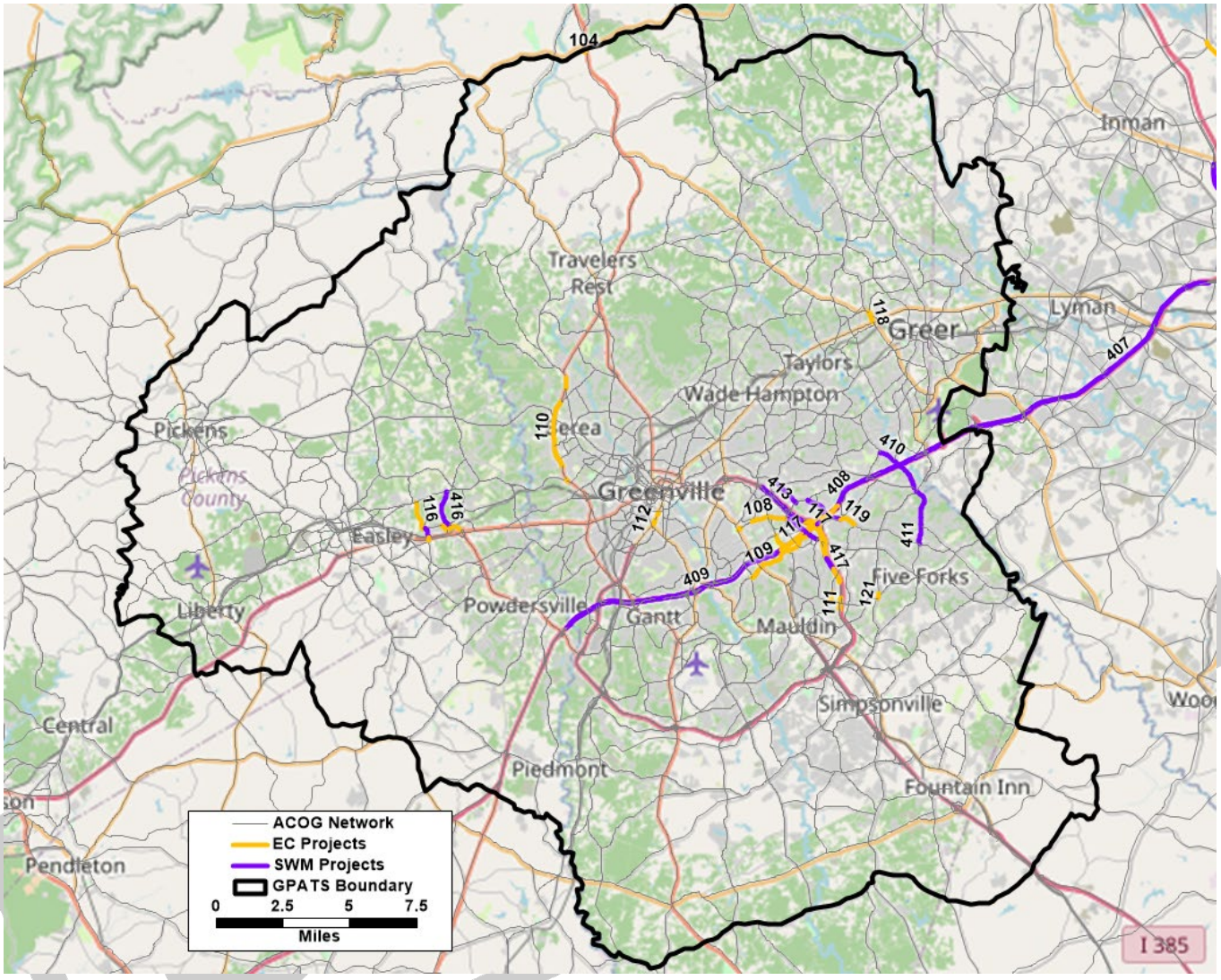


Table 2 - EC and SWM Future Road Projects in GPATS Area

Project Number	Project Group	Year	Road	Description
104	EC	2020	US 25/SC11 interchange	Add loop to interchange & turn lanes on SC11
106	EC	2020	S-23-434/Fairforest Way	Widen to 4 lanes
108	EC	2020	Woodruff Road	Widen to 5 lanes divided (with medians)
109	EC	2020	Millenium Blvd	New 4 lane divided
110	EC	2020	US 25 (White Horse Rd)	Widen to 7 lanes
111	EC	2020	I-385	Widen to 6 lanes
112	EC	2020	US 29 (Church St)	40 to 45 mph
113	EC	2020	Butler Road (S-107)	Widen to 4ln divided
114	EC	2020	Prince Perry Rd (S-135) / US 123	Intersection improvement
116	EC	2020	SC 153 Extension	Extension / New Construction of 2 lane road
117	EC	2020	I-385/I-85	New interchange
118	EC	2020	SC 101/290	Widen to 5 lanes
119	EC	2020	S-23-548	Widen to 3 lanes
120	EC	2020	S-23-326/127/Local Road	Widen to 4L w/ raised median
121	EC	2020	SC 14	Widen to 5 lanes
407	SWM	2025	I-85	Widen 1 lane/direction
408	SWM	2020	I-85	Widen 1 lane/direction
409	SWM	2025	I-85	Widen to 8 lanes
410	SWM	2025	Batesville Road (S-23-164/312)	3 Lane C&G
411	SWM	2022	Batesville Road (S-23-164/312)	3 Lane C&G
412	SWM	2025	Woodruff Road Parallel	4 Lane raised median
413	SWM	2050	I-385	Widen one lane in either direction
414	SWM	2020	S-23-547	Widen to 3 lanes
415	SWM	2020	S-23-548/183	Widen to 3 lanes
416	SWM	2020	Price Perry Rd/ Rock Springs Rd	Change from Undivided to Divided Highway
417	SWM	2050	I-385	Widen one lane in either direction

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Socioeconomic Data

Base year (2022) and horizon forecast year (2050) socioeconomic data was reviewed for reasonableness in the GPATS portion of the model using thematic mapping and spot-checking individual zones against aerial photos.

Base Year Socio Economic Data

Household and employment densities were calculated for each TAZ as shown in **Figure 5 and Figure 6**. Employment density is highest near the central business district and along major corridors including the interstates, Wade Hampton Boulevard, and Calhoun Memorial Highway while population is more evenly dispersed but primarily toward the eastern half of the GPATS boundary.

Figure 5 – Base Year Household Density

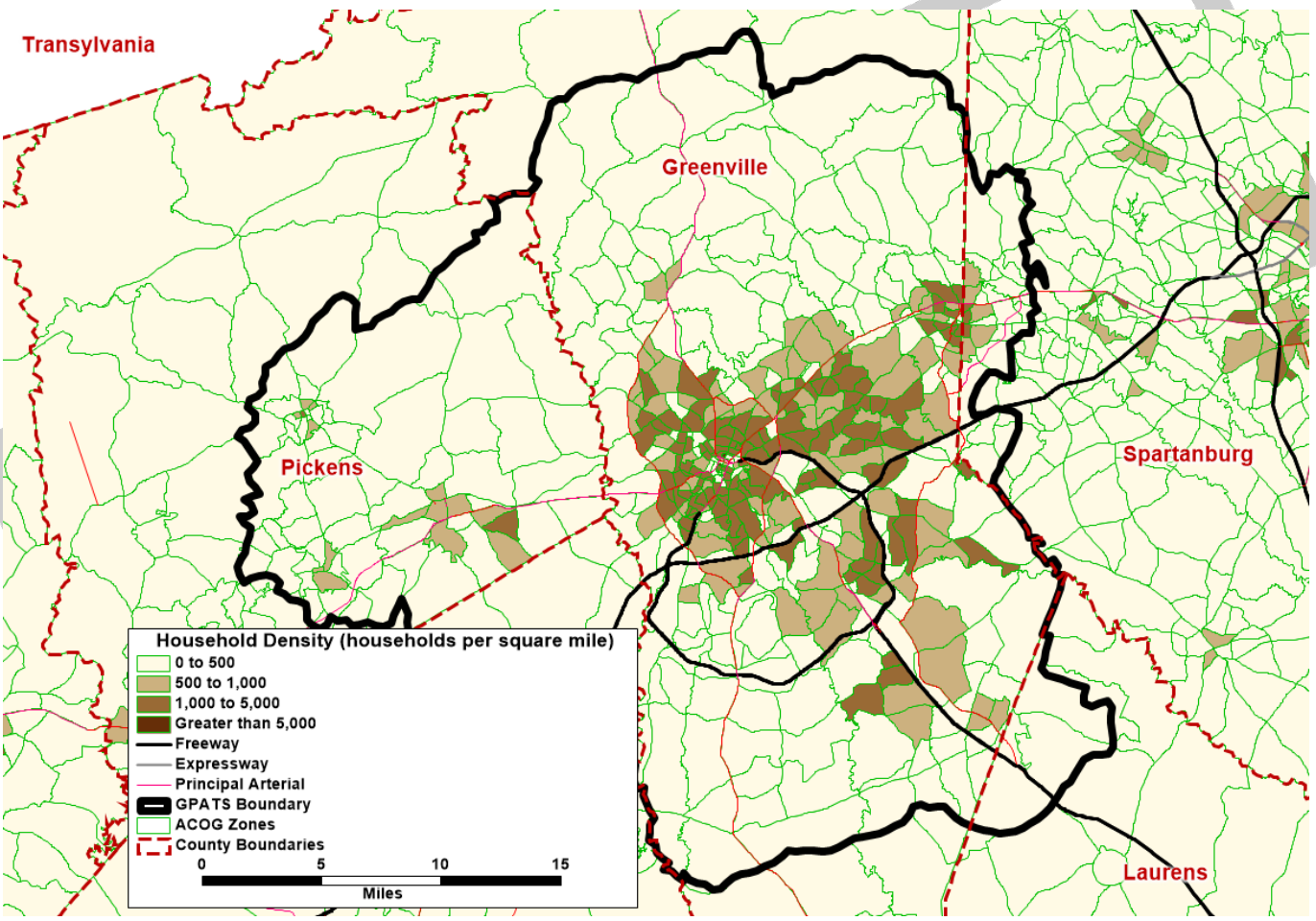
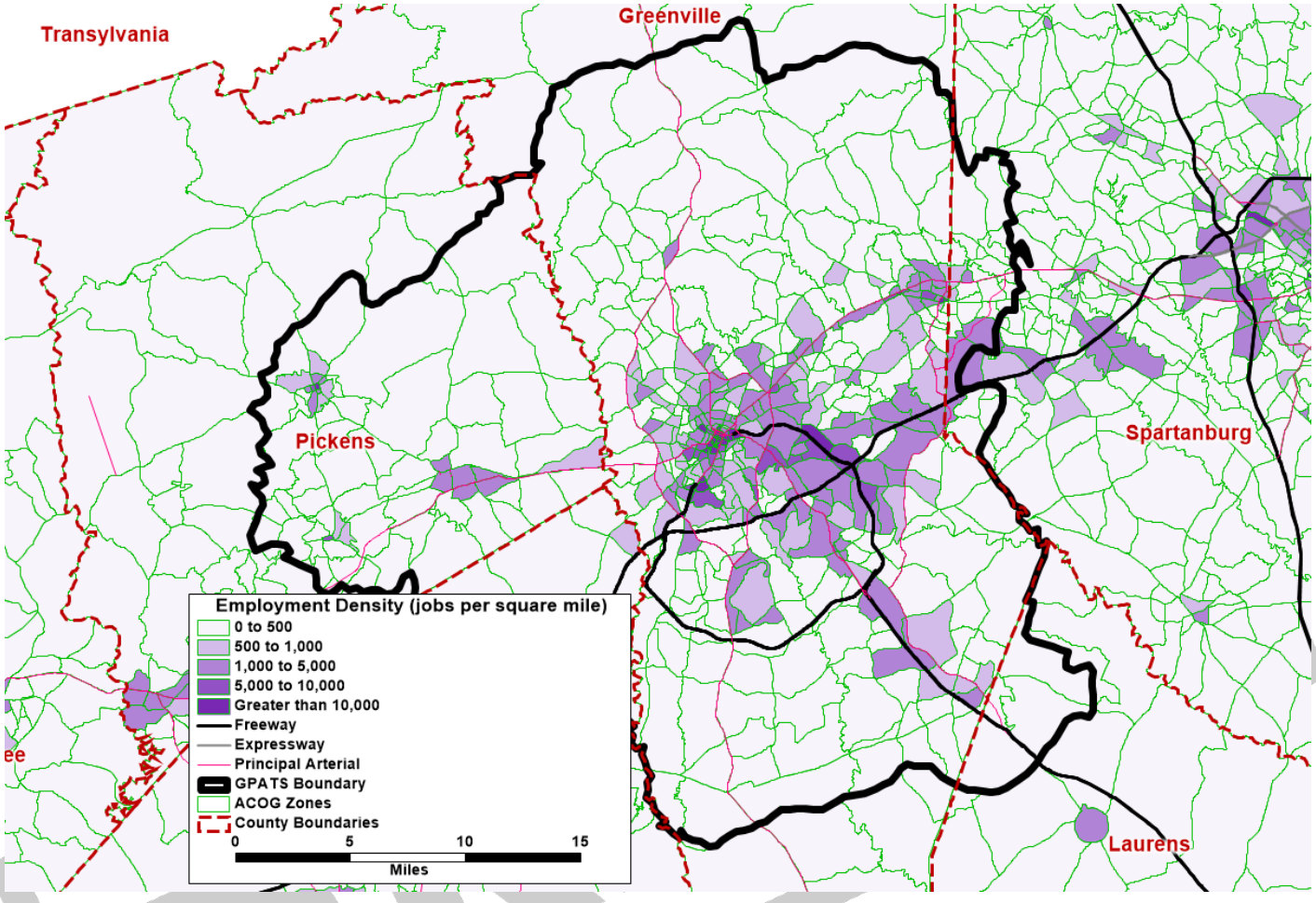


Figure 6 – Base Year Employment Density



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Socioeconomic Data Growth

Figure 7 and Figure 8 show the absolute growth in households and jobs from the 2022 model base year to 2050. Household growth is widely dispersed but more heavily concentrated outside of the I-185 / I-385 loops and near the periphery of the GPATS boundary. Employment growth is also widely dispersed throughout the GPATS boundary but is more heavily concentrated along interstate corridors.

Figure 7 – Household Growth (2022 to 2050)

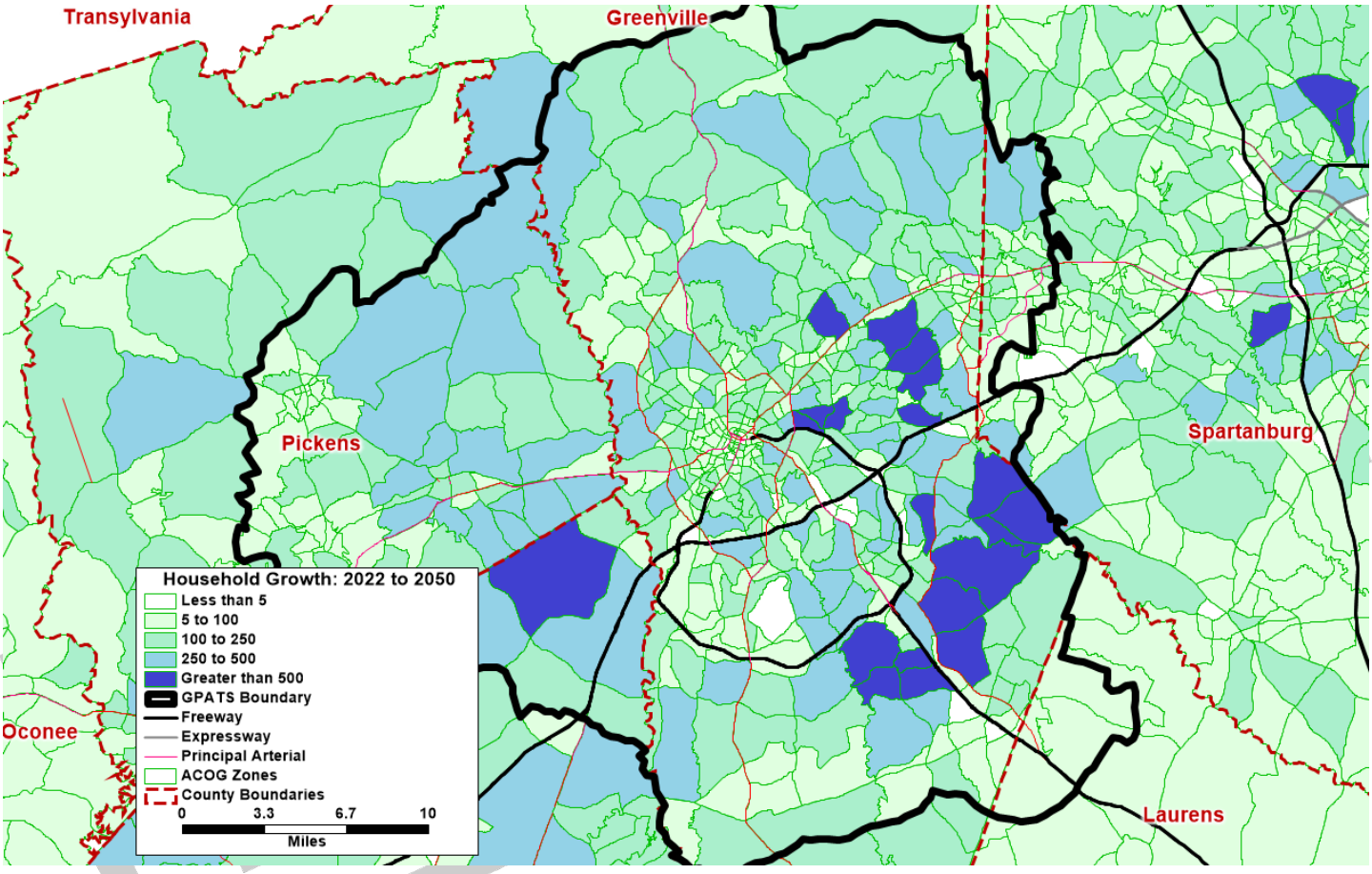


Figure 8 – Employment Growth (2022 to 2050)

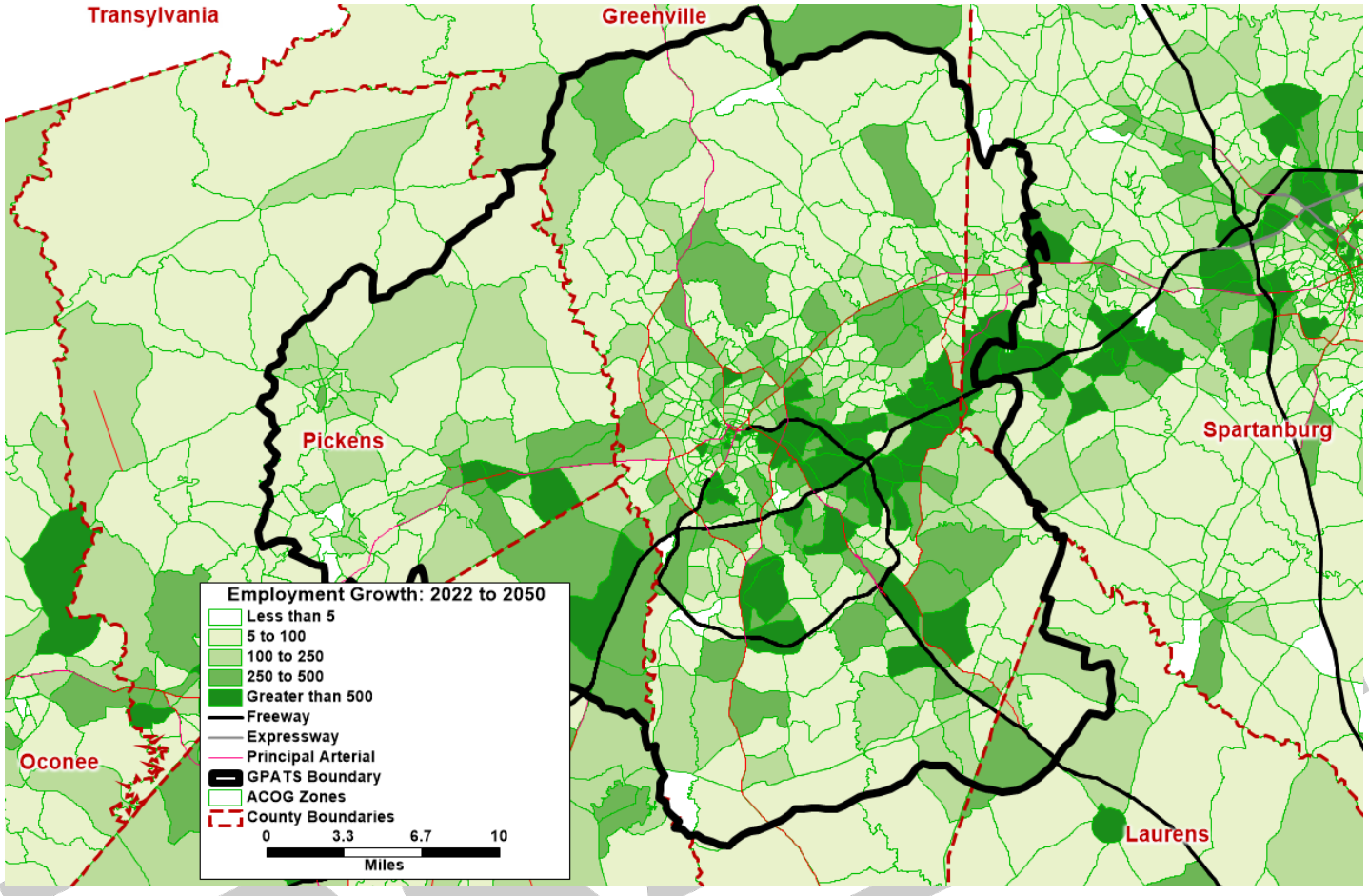


Table 3 summarizes both household and employment growth for the GPATS area and the entire model and includes a comparison with the previous model (2010-2045) annual growth as well as data from Census American Community Survey for the GPATS area. The forecasted household growth is more conservative than the previous model, but employment growth is more aggressive. For the GPATS MPO area only, the household growth is forecasted to be higher than the average for the entire model but employment growth is lower. Forecast household growth in the model is also more conservative than recent growth in the GPATS area according to the Census data. This suggests that the model predicts growth may slow compared to the most recent decade.

Table 3 – Compound Annual Growth Rate (CAGR) for Entire Model (2022-2050) and GPATS Area Only in Current (2022-2050) and Previous (2010-2045) Models and Census Data (2014-2025)

	Entire Model	GPATS Area Only	Previous Model Entire Model	Previous Model GPATS Area Only	GPATS Area Census Data
Households	0.95%	1.02%	1.14%	1.18%	1.53%
Employment	1.36%	1.22%	1.15%	1.14%	N/A

Outputs

Final model assignment results were reviewed for both the entire model area and the GPATS area only to try to identify large differences or any potential calibration improvements that could be made to the GPATS area.

Validation

The model-estimated volumes compared to counts were calculated for both the entire model and for the GPATS portion of the model. **Table 4** summarizes the results. Please note that the percentages for the entire model are nearly identical to the values shown in the model documentation but may differ because of slight differences in rounding or because of slight differences in the inputs being used for the model at the time that the original model documentation was prepared. Please also note that the model does not include any counts less than 1,000.

Both the percent RMSE and the volume error are similar for each volume group and generally within the benchmark thresholds defined in the model documentation with minor exceptions. For example, the volume error percentage for the GPATS Area in the 50,000-59,999 volume class is higher than for the entire model area and outside of the benchmark. Yet, this is because of a limited number of counts (8) compared to the number of counts in this volume class for the entire model area (22) which leads to more volatile results.

Table 4 – Percent RMSE and Volume Error by Volume Group for Entire Model and GPATS Area Only

	%RMSE			Volume Error		
Volume Class	Entire Model	GPATS Area Only	Benchmark*	Entire Model %Error	GPATS Area Only %Error	Benchmark*
>1,000-4,999	72%	81%	<= 100%	-1%	-2%	+/-25%
5,000-9,999	53%	56%	<= 45%	2%	2%	+/-25%
10,000-14,999	37%	38%	<= 35%	3%	-2%	+/-20%
15,000-19,999	36%	40%	<= 30%	6%	-10%	+/-20%
20,000-29,999	25%	29%	<= 27%	2%	-4%	+/-15%
30,000-49,999	17%	18%	<= 25%	4%	8%	+/-15%
50,000-59,999	13%	18%	<= 20%	5%	15%	+/-10%
60,000+	16%	16%	<= 19%	16%	16%	+/-10%
Overall	38%	37%	<= 45%	3%	2%	+/-5%

*Benchmark values obtained from ACOG Regional Travel Demand Model Update Report (ARMv2 build 20250808)

In terms of functional class, the percent RMSE is very similar for the entire model and just the GPATS area (**Table 5**).

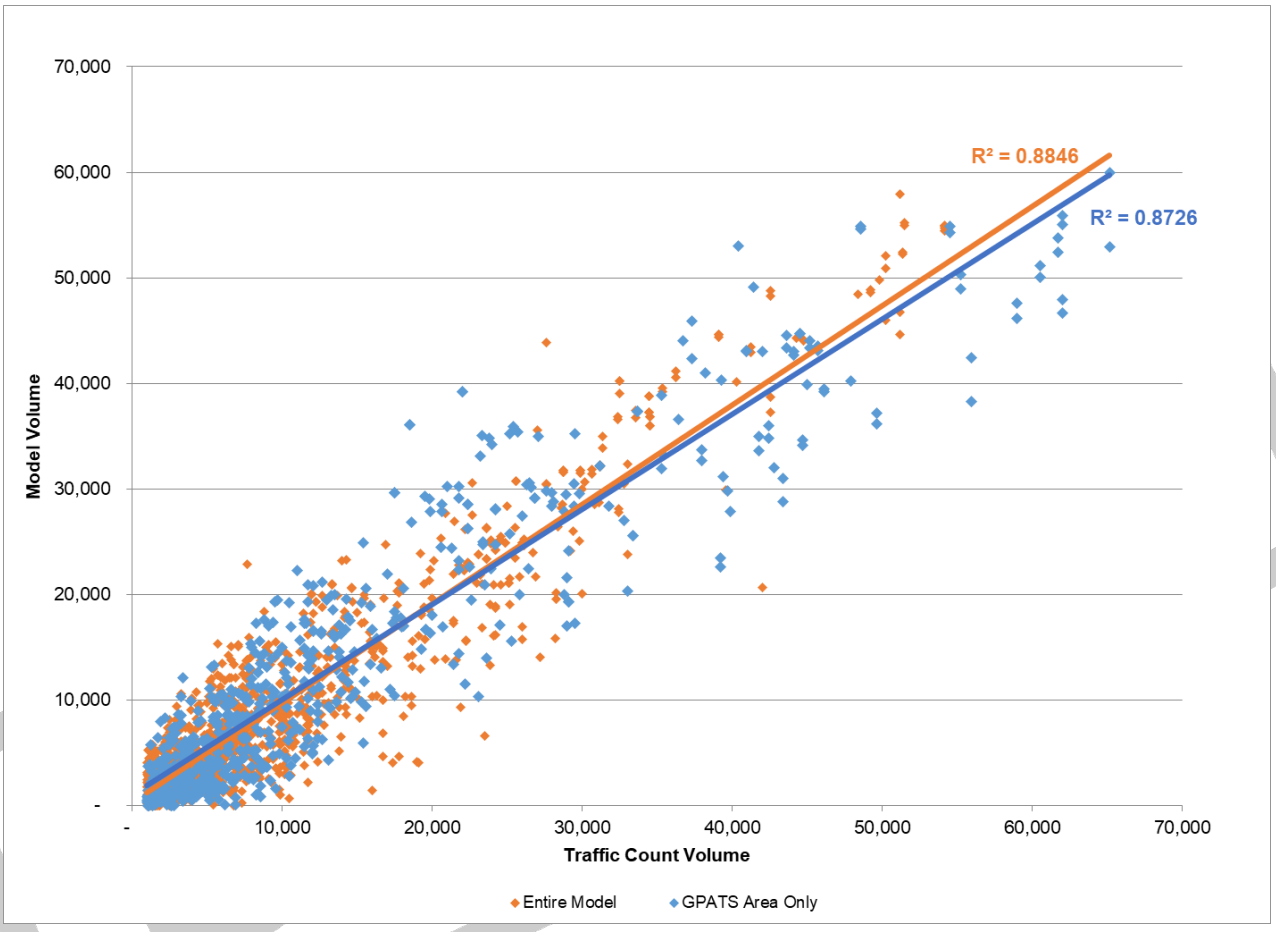
Table 5 – Percent RMSE by Functional Class for Entire Model and GPATS Area Only

Facility Type	Entire Model	GPATS Area Only
Freeway/Expressway	16.69%	18.88%
Principal Arterial	31.72%	28.64%
Minor Arterial	48.66%	43.75%
Collector	65.25%	59.85%
Total	38.01%	37.38%

A graphical comparison of the model assignment results compared to counts for the GPATS area versus the entire model area is shown in **Figure 9**. The R^2 values measure how well the trendlines fit the data. An R^2 of 1

would mean that the model-estimated volumes and the count data are a perfect match. The entire ARM model has an R^2 of 0.88 and the GPATS area only has an R^2 of 0.87 which both indicate an acceptable fit. The similar R^2 values suggests that there is not significantly more error within the GPATS boundary as compared to the rest of the model.

Figure 9 – Coefficient of Determination for Entire Model and GPATS Area Only



Level of Service

The model capacities and associated volume delay function coefficients used during highway assignment were determined based on SCDOT input according to the model documentation. Level-of-Service letter grades are calculated by the model script during a model run using the volume to capacity ratio for each roadway link. No changes were made to these model inputs, but initial Level-of-Service maps showed less congestion than anticipated.

The capacities were compared with other models and industry-standard values and ultimately updated to values consistent with the FDOT QLOS which ensures that the model volume to capacity ratios will display an approximated peak hour constraint. The lower FDOT QLOS capacities are rooted in the Highway Capacity Manual methodology and represent a better picture of peak hour conditions. The LOS letter grade thresholds were also updated to use more even and rounded volume-to-capacity ratio (V/C ratio) values. **Table 6** summarizes the alterations.

Table 6 – Level-of-Service Grade Alterations

Level-of-Service Grade	Original (V/C Ratio)	Revised (V/C Ratio)
A	0.00 – 0.50	0.00 – 0.60
B	0.50 – 0.75	0.60 – 0.70
C	0.75 – 1.00	0.70 – 0.80
D	1.00 – 1.15	0.80 – 0.90
E	1.15 – 1.35	0.90 – 1.00
F	Greater than 1.35	Greater than 1.00

The model output volumes were divided by the revised capacities to calculate revised V/C ratios. The updated LOS V/C ratio thresholds were then used to assign a letter grade for each road. **Figure 10** shows the 2022 base year and **Figure 11** shows the 2050 scenario with existing and committed projects (EC) and statewide model road projects (SWM).

Figure 10 – 2022 Base Model Revised Capacities Level-of-Service

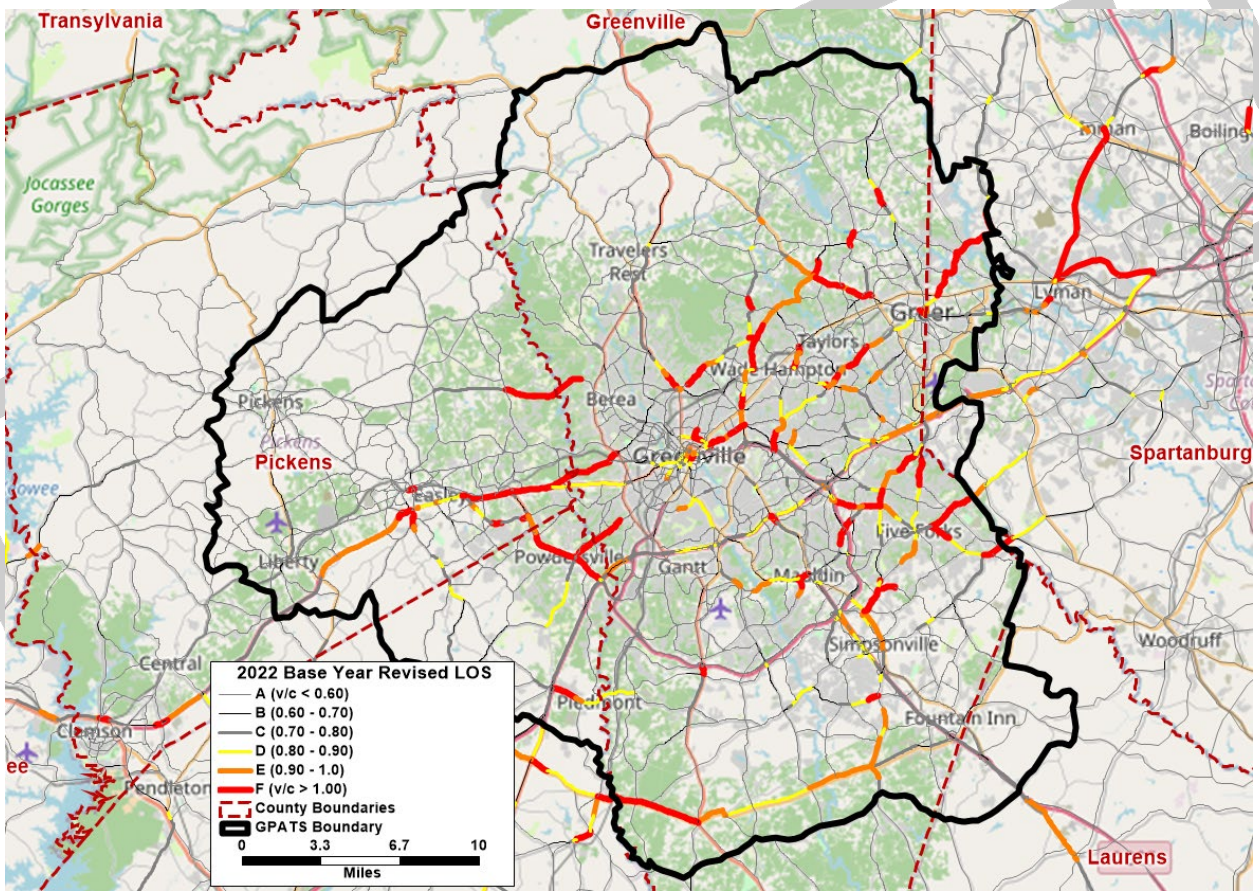
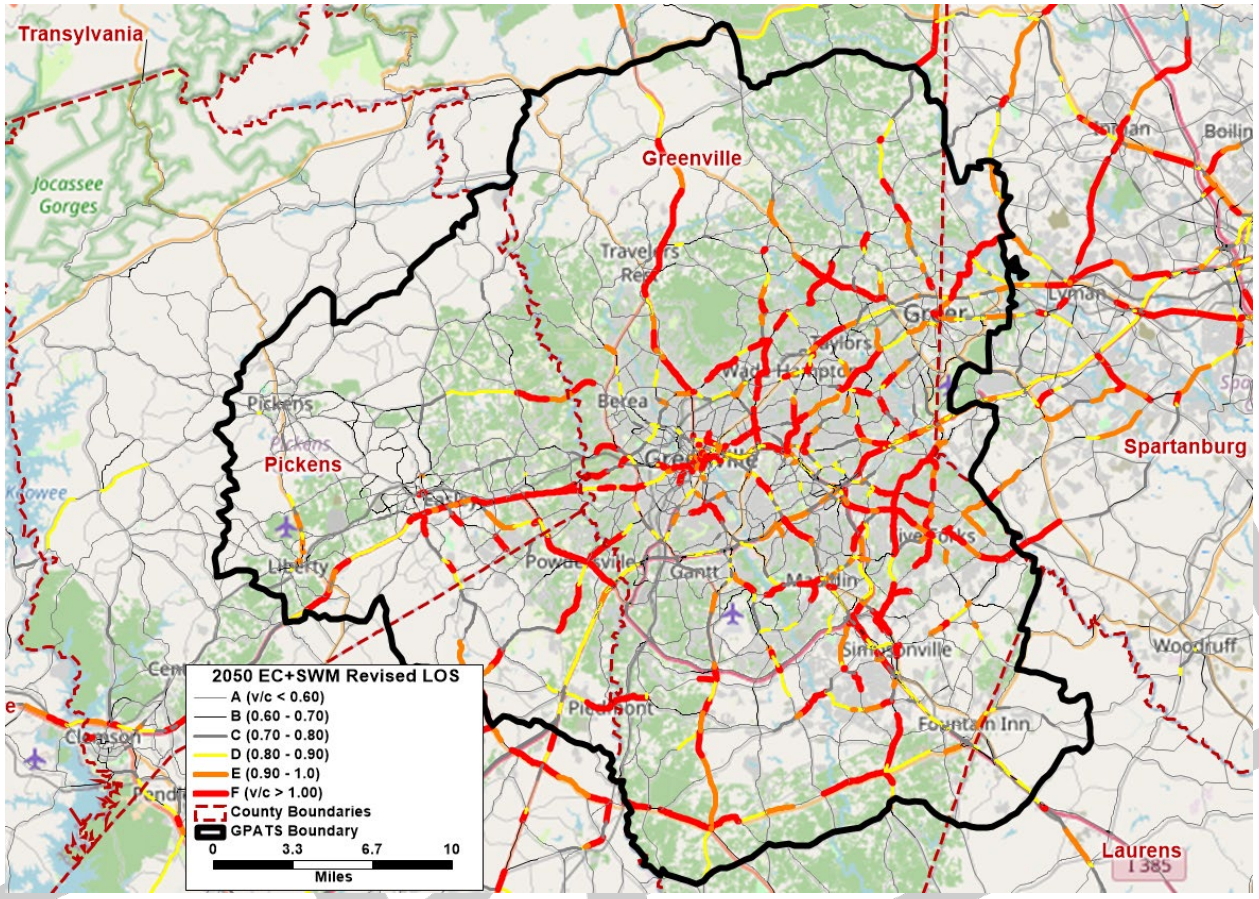
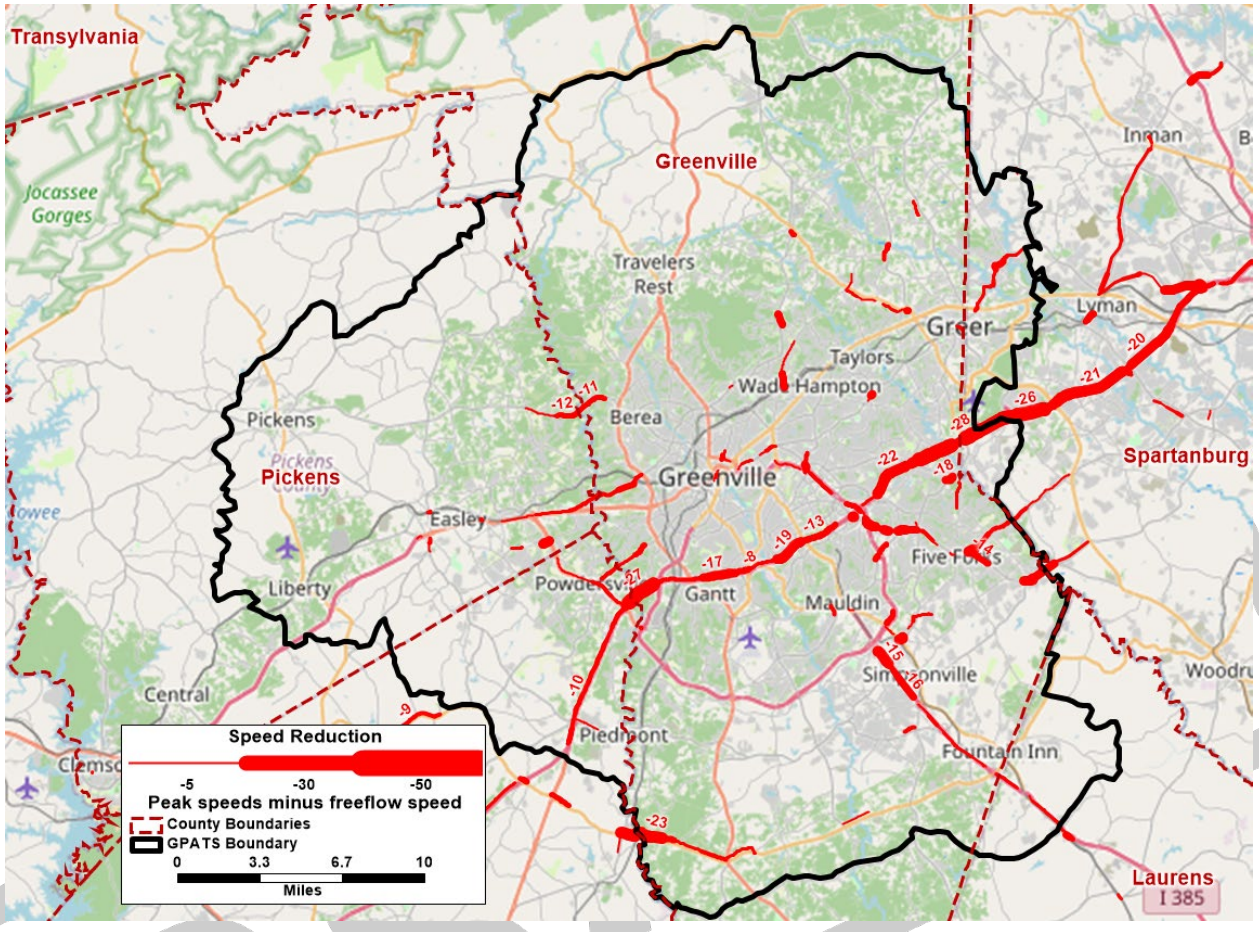


Figure 11 – 2050 EC + SWM Revised Capacities Level-of-Service



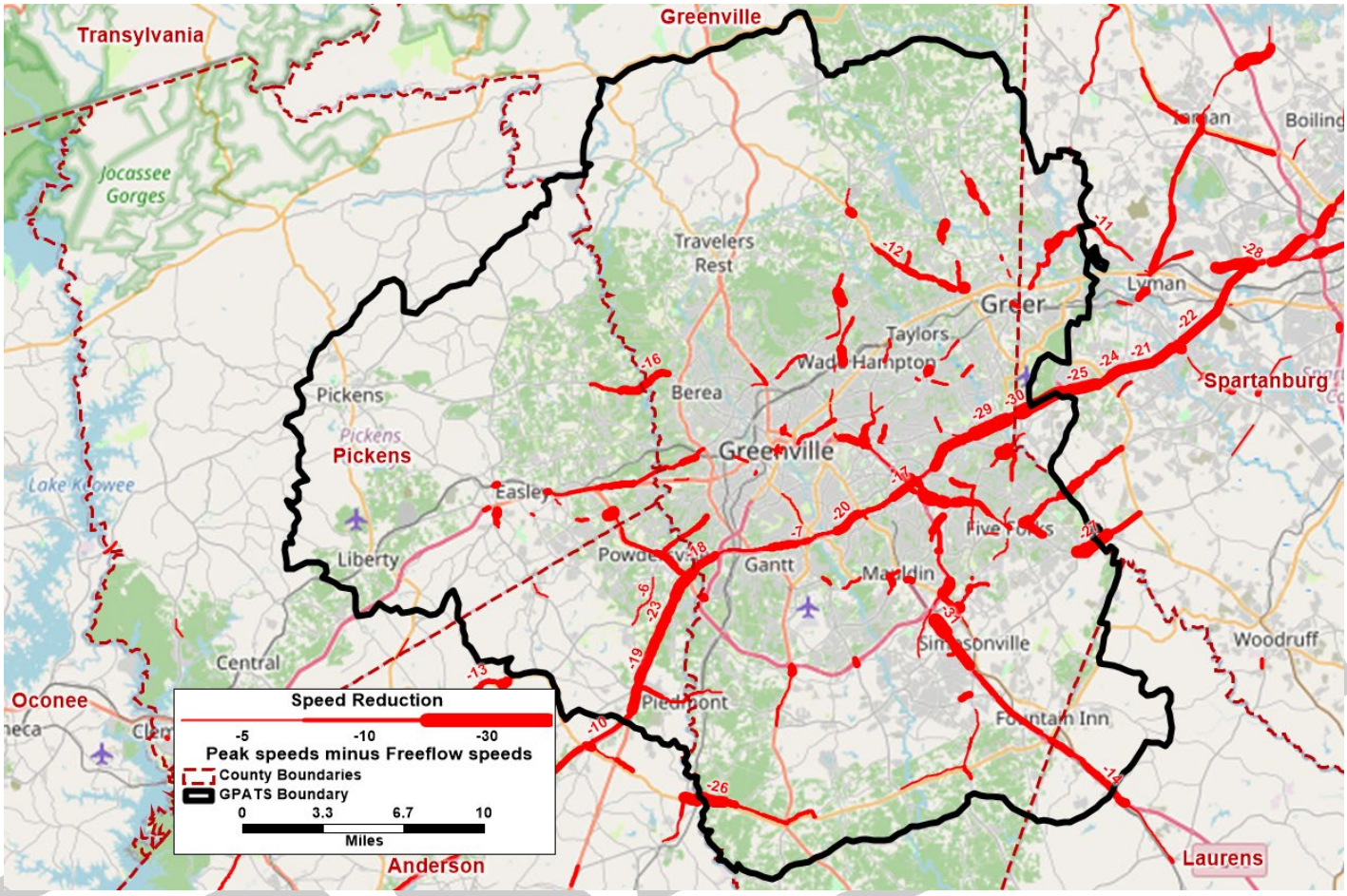
Another method to identify congestion is to find roads that have the largest decrease in speeds from freeflow conditions to the most congested peak time period. **Figure 12 and Figure 13** show the decrease in speeds from what is posted to the most congested peak. In both the base year and 2050, I-85 has the largest decrease in speed. Most other locations with the largest speed reductions are on other interstates and highways with arterial and collector roads not showing as frequent speed reductions.

Figure 12 - Average Speed Reduction from Posted to Peak Time Period Speeds in 2022 Base Scenario



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Figure 13 – Average Speed Reduction from Posted to Peak Time Period Speeds in 2050 EC + SWM Scenario



As a time period reasonableness check, each of the three time periods were compared to determine which time period had the slowest speeds (**Table 7**). The PM time period (4 - 7 pm) shows the most congestion, followed by the off-peak time period (9 am – 4 pm, 7 pm – 6 am). Typically, the AM time period (6 - 9 am) has more congestion in most communities. This may be a result of the household travel survey data sampled or the time period capacity factors used. While the time period distribution of trips likely has only a small impact on overall daily model volumes, it is recommended that the time period inputs be reviewed during the next model update.

Table 7 – Links with most Delay in GPATS area by Time Period

Time Period	Number of Links	Percent
AM Slowest	586	16%
PM Slowest	1738	46%
Off-Peak Slowest	933	25%
Same Speeds (no delay)	517	14%
Sum	3774	100%

Growth Summary

A summary of the growth in the model is shown in **Table 8**. Households and trips in the GPATS area grow by slightly more than the ARM model on the whole. Employment growth is higher than household growth for the entire model and the GPATS area only but because most trip purposes balance to household-generated productions, the trip growth more closely aligns with households. VMT typically grows more than households and trips in models because household growth tends to be highest on the fringes of the urban area and therefore trips must travel farther to reach city centers where there is the most employment activity. In the GPATS area, VMT growth is slightly *lower* than trip growth. This may be the case because the model has a large amount of employment growth near the fringes of the urban area, thus the model distributes a large number of trips to suburban employment centers in the future year making average trip lengths shorter. VHT typically grows faster than VMT growth because more congestion is expected in the future. Both the entire ARM model area and the GPATS area only suggest that to be the case.

Table 8 – Growth Summary for the Entire Model and the GPATS Area Only

	Entire Model			GPATS Area Only		
	2022	2050 EC+SWM	Growth	2022	2050 EC+SWM	Growth
Population	1,394,097	1,816,155	30%	646,926	859,640	33%
Households	535,852	697,743	30%	249,405	331,465	33%
Total Employment	688,452	1,004,170	46%	334,839	470,252	40%
Balanced Trips	4,899,229	6,424,582	31%	2,402,066	3,200,621	33%
VMT	39,026,614	52,762,590	35%	14,819,006	19,410,730	31%
VHT	835,101	1,178,504	41%	327,996	451,098	38%
Average Household Size	2.60	2.60		2.59	2.59	
Trips per Household	9.14	9.21		9.63	9.66	
Average Trip Speed	46.73	44.77		45.18	43.03	
Average Trip Length	7.97	8.21		6.17	6.06	
Average Trip Time	10.23	11.01		8.19	8.46	

Overall, the data indicate that both the GPATS area and the ACOG area on the whole are expected to grow at a moderate to high growth rate with more congestion expected in 2050 if only committed and statewide model projects are built.

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GPATS Horizon 2050

LONG-RANGE TRANSPORTATION PLAN

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