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November 28, 2017

Mr. Keith R. Brockington
Transportation Planning Manager
Greenville County Department of Planning and Code Compliance
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Dear Mr. Brockington:

Fixing America's Surface Transportation (FAST) Act require certification of the transportation planning process in urbanized areas with a population over 200,000 at least once every four years. Certification reviews are conducted by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) with the objective of evaluating the transportation planning process. These reviews are also conducted with a goal to highlight good practices, exchange information, identify opportunities for improvements, and ensure that Federal regulatory requirements for transportation planning are being met.

FHWA and FTA conducted a formal Certification Review of the transportation planning process for the Greenville-Pickens Area Transportation Study on July 18-19, 2017. The cooperative transportation planning process as conducted by the South Carolina Department of Transportation, transit operators and local governments in the area was assessed and the findings are enclosed in the attached report. The purpose of this review is to determine the extent of compliance with regulatory requirements, recognize noteworthy practices, identify problem areas and provide assistance and guidance as appropriate.

As a result of this review process, FHWA and FTA ask the GPATS MPO incorporate the recommended technical improvements to the existing planning process. These findings are based on existing regulatory requirements and best practices, and State and local officials are strongly encouraged to take appropriate action. Please review the enclosed report and develop an action plan with associated deadlines for the noted corrective action and recommendations and submit to FHWA and FTA *by no later than February 28, 2018*.

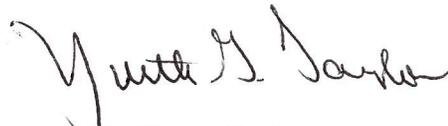
The Federal Review Team has evaluated and discussed the major transportation planning process components for the GPATS MPO and finds the transportation planning process meets the requirements of 23 USC 134 and 23 CFR 450 subpart C and is hereby certified.

Your participation and continued cooperation in this process is greatly appreciated. Please contact Ms. Yolanda Morris of the FHWA SC Division at (803) 253-3877 or Ms. Nicole Spivey of FTA at (404) 865-5609 with any questions that you may have regarding this process.

Sincerely yours,



for Emily O. Lawton
Division Administrator
Federal Highway Administration
Administration



Dr. Yvette Taylor
Regional Administrator
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Enclosure

cc:

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U.S. Department
of Transportation

Transportation Management Area Planning Certification Review

Federal Highway
Administration

Federal Transit
Administration

Greenville-Pickens Area Transportation Study (GPATS)



July, 2017

Summary Report



Table of Contents

1.0	EXECUTIVE SUMMARY	3
1.1	Previous Findings and Disposition.....	4
1.2	Summary of Current Findings	9
2.0	INTRODUCTION	11
2.1	Background.....	11
2.2	Purpose and Objective	12
3.0	SCOPE AND METHODOLOGY	12
3.1	Review Process.....	12
3.2	Documents Reviewed.....	13
4.0	PROGRAM REVIEW	15
4.1	Metropolitan Planning Area Boundaries	15
4.2	MPO Structure and Agreements.....	16
4.3	Unified Planning Work Program	19
4.4	Metropolitan Transportation Plan	21
4.5	Transit Planning.....	23
4.6	Transportation Improvement Program.....	26
4.7	Public Participation	27
4.8	Civil Rights (Title VI, EJ, LEP, ADA).....	29
4.9	Consultation and Coordination	30
4.10	Freight Planning.....	31
4.11	Environmental Mitigation/Planning Environmental Linkage	32

4.12	Transportation Safety	33
4.13	Transportation Security Planning	34
4.14	Nonmotorized Planning/Livability	35
4.15	Integration of Land Use and Transportation	35
4.16	Air Quality	36
4.17	Congestion Management Process / Management and Operations.....	37
5.0	CONCLUSION AND RECOMMENDATIONS.....	39
5.1	Commendations	39
5.2	Recommendations	39
5.3	Training/Technical Assistance	40
APPENDIX A - PARTICIPANTS		41
APPENDIX B - STATUS OF FINDINGS FROM LAST REVIEW		42
APPENDIX C – PUBLIC COMMENTS.....		47
APPENDIX D - LIST OF ACRONYMS.....		53

1.0 EXECUTIVE SUMMARY

Federal regulations require that the United States Department of Transportation (USDOT); specifically, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) – jointly review and evaluate the metropolitan transportation planning process of all Transportation Management Areas (TMA), which are defined as urbanized areas with populations of 200,000 or more every four years. The certification review is one of several methods used to assess the quality of how the designated Metropolitan Planning Organization is carrying out a continuing, cooperative, and comprehensive transportation planning process (i.e. 3-C process). The review is conducted to highlight good practices, identify opportunities for improvements and to ensure compliance with regulatory requirements. The Greenville-Pickens Area Transportation Study (GPATS) transportation planning process certification review took place on July 18-19, 2017.

The certification review process includes:

- A desk audit of information on transportation planning processes, activities, and significant products that result from these processes and activities.
- A site visit by a federal review team that includes opportunities for input and comment on the transportation process by members of the public, local elected officials, and providers of public transportation.
- The preparation and distribution of this report, which summarizes the observations and recommendations of the review team regarding transportation planning as currently practiced in the GPATS TMA region.

The primary focus of this review is to determine compliance with Federal transportation planning regulations and requirements and to establish the extent by which the Metropolitan Planning Organization (MPO), the State Department of Transportation, and the transit operators in the region work together in carrying out the planning process. The review also provides the opportunity for the MPOs to share its challenges, successes, and the actual experiences in carrying out the transportation planning process with the review team.

This report summarizes the observations of the review team and provides the basis of the recommendations, which are intended to improve the transportation planning process.

The review teams' observation includes three commendations and four recommendations. The commendations are areas where the GPATS has done particularly well and is meeting or exceeding the "state of the practice." Recommendations are items that are not necessarily regulatory requirements yet are still important technical improvements the MPO should consider incorporating.

1.1 Previous Findings and Disposition

The previous certification review for the GPATS urbanized area was conducted in 2013. The previous Certification Review findings and their disposition are provided in Appendix B and summarized as follows.

Corrective Actions

Corrective Action 1:

The TIP must be included without change, directly or by reference, in the STIP required under 23 U.S.C. 135. Inconsistencies between the two documents were noted during the desk audit and review. It is noted that any inconsistencies identified were the result of administrative changes to the STIP. The Review Team is reemphasizing the requirement that such actions result in consistency between the TIP and STIP. [Regulation Citation: 23 CFR 450.328(b)].

Disposition: Since the last review GPATS and SCDOT coordinate STIP/TIP transmittals with every STIP/TIP change to ensure the two documents mirror one another.

Corrective Action 2:

On an annual basis, the MPO, the State, and public transportation operator(s), no later than 90 calendar days following the end of the federal fiscal year, must develop a listing of projects (including investments in pedestrian walkways and bicycle transportation facilities and statewide program projects) for which funds under 23 U.S.C. or 49 U.S.C Chapter 53 were obligated in the preceding program year. [Regulation Citation: 23 CFR 450.334].

Disposition: GPATS publishes the Annual list of obligated projects for the public to view. The 2014-2016 document is currently posted on the GPATS website www.gpats.org/programs/tip

Corrective Action 3:

The MPO must develop and use a documented Public Participation Plan (PPP) that defines a process for providing citizens, affected public agencies, representatives of public transportation, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of bicycle and pedestrian facilities, representatives of the disabled, and other interested parties with an opportunity to be involved with the transportation planning process (23 CFR 450.316). GPATS needs to evaluate and update the PPP to include area consultation parties and specific outreach strategies and comment periods for MPO documents/products. The MPO must also develop and use a quantitative methodology for periodically reviewing the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process. [Regulation Citation: 23 CFR 450.316]

- In addition, please also incorporate the following for the PPP evaluation and update:
 - ♦ Detail how each of the MPOs products/documents will be taken out for public comment, how long the comment period will be for specific actions (updates, amendments, corrections, etc.)
 - ♦ Assign an update/review cycle to the “periodic” review for both the evaluation of effectiveness and an update for the PPP.
 - ♦ Explore untraditional outreach strategies including social media and advertising
 - ♦ Incorporate SCDOT Public Participation effort for statewide program projects into the Public Participation Process.

Disposition: The GPATS Public Participation Plan was updated to include the requirements outlined in 23 CFR 450.316. The Plan was approved September, 2013 and updated October, 2015.

Recommendations

Recommendation 1:

The Unified Planning Work Program (UPWP) should be updated to include deliverables in the task product description as well as a schedule and milestones for studies. These deliverables and milestones should also be reflected in the quarterly billing statements. Also, the introduction to the document should be updated to reflect recent census changes.

Disposition: The GPATS UPWP and quarterly reports includes deliverables, schedule, and milestones for each task product. The narrative includes the recent 2010 Census changes.

Recommendation 2:

The LRTP update is currently underway and the MPO plans to make several changes with this minor update. It is recommended the MPO also include the following:

- Incorporate all the new areas added by recent boundary expansion. This should include updating the horizon year, all elements, maps, model runs, project lists, and financial information not only to bring it up to date, but also to include all agencies and member governments. This includes updating the transit element to be inclusive of both Greenlink and CAT, also please list the transit projects in the document.
- This area is home to several industries as it is located on I-85, half way in between Atlanta and Charlotte. It is also home to a new inland port. Include

more of a freight emphasis that not only considers highway freight, but air and rail as well. Consider a mode split in model, FHWA and FTA understands this may not be a possibility for this minor update; however, this may be a useful tool for this area with the next plan update.

- Develop draft purpose and need statements to explain how the projects in the plan will be solutions to respective problems. This will assist in the transition from Planning to Preliminary Engineering.
- Form and utilize a Policymakers Subcommittee to use as a sounding board during to ensure the policy makers are well informed about the update and to facilitate early buy-in to stay on schedule.
- To date SCDOT has not released new Guideshare funding amounts; therefore, the MPO may need to make assumptions to ensure the plan is fiscally constrained. FHWA and FTA recommend assuming a historical average in the event the amounts have not been released by the time the MPO begins working on the financial element. The MPO can adjust later, as needed.
- Look at the potential performance management strategies and measures outlined in the draft Statewide Multi-modal Plan update and begin to align the LRTP with these measures and think about potential targets.

Disposition: The 2035 LRTP update included the recommendations made in the certification review report. The MPO is now in the process of updating the 2040 LRTP, which is a major update that will include more indebt data and analysis.

Recommendation 3:

Update the memorandum of understanding (MOU) between the transit providers and MPO to better define mutual responsibilities in carrying out the metropolitan transportation planning process. These responsibilities should be clearly defined in a written agreement that includes specific provisions for cooperatively developing and sharing information related to the development of financial plans that support the LRTP, TIP, and Annual Obligated List.

Disposition: A MOU outlining that GPATS serves as the intermediary between the Greenville and Clemson transit agencies was implemented September, 2014. It defines specific provisions for cooperatively developing and sharing information related to the development of financial plans that support the LRTP, TIP, and Annual Obligated List.

Recommendation 4:

Develop and implement a competitive Transportation Alternatives Program.

Disposition: GPATS developed a competitive TAP program May, 2013. GPATS receives on average about \$630,000 annually for Transportation Alternative projects, which is then applied for by local jurisdictions/municipalities/organizations within the MPO urbanized area. The projects are ranked in-house and go before GPATS Study Team for initial approval and ultimately Policy Committee for final approval. These projects are then placed into the TIP, Transportation Improvement Program.

Recommendation 5:

Continue to foster a healthy working relationship and environment of corporation with the MPO, State, and Transit agencies.

Disposition: The MPO continues to work very closely with, SCDOT, Greenville Transit Authority and Clemson Area Transit agencies. They are active Study Team participants and provide input on various GPATS planning processes including the LRTP and UPWP.

Recommendation 6:

Sign and date the Title VI Policy Statement and Title VI Standard Assurance by current Head of Agency.

Disposition: The Title VI Policy Statement and Title VI Standard Assurances were signed by the GPATS Executive Director and submitted to SCDOT.

Recommendation 7:

Revise procedures for processing complaints of discrimination from external parties (Title VI complaints). The MPO needs to develop a process where, Title VI complaints are documented locally, then forwarded for investigation and processing by SCDOT.

Disposition: The MPO has revised the Title VI procedures for processing complaints of decimation from external parties, which comprehensively describes how Title VI complaints are documented locally, then forwarded for investigation and processing by SCDOT.

Recommendation 8:

Identify a staff member as the point of contact for Title VI Compliance, the Review Team advised GPATS that training is available from SCDOT and FHWA and recommends they participate as it becomes available.

Disposition: The MPO has identified the GPATS' Transit Planner/Grants Manager as the point of contact for Title VI Compliance. They have participated in SCDOT and FHWA sponsored training.

Recommendation 9:

Expand on the Limited English Proficiency (LEP) document to develop a plan that includes an individualized assessment that balances the following four factors:

- The number or proportion of LEP persons served or encountered in the eligible service population;
- The frequency with which LEP individuals come in contact with the program, activity, or service;
- The nature and importance of the program, activity, or service provided by the program; and
- The resources available to the recipient and costs.

Disposition: The LEP document was updated March, 2015 to includes an individualized assessment that balances the four factors listed in the recommendation.

1.2 Summary of Current Findings

The current review found that the metropolitan transportation planning process conducted in the GPATS urbanized area **MEETS** Federal planning requirements.

As a result of this review, FHWA and FTA are certifying the transportation planning process conducted by South Carolina Department of Transportation (SCDOT), GPATS Metropolitan Planning Organization (MPO), Greenville Transit Authority (GTA), and Clemson Area Transit (CATbus). There are recommendations in this report that warrant close attention and follow-up, as well as areas that MPO is performing very well in that are to be commended.

Commendations:

- On occasion SCDOT and FHWA ask the Executive Director to present at statewide conferences or participate performance based programs working groups. The review team commends the Executive Director for his willingness to provide his time and expertise with state and federal initiatives while balancing a heavy workload.
- GPATS is being commended for being proactive with including PBPP processes in the LRTP update scheduled to be adopted October, 2017. This is one of the first efforts in the state to incorporate performance measures in a LRTP.
- The MPO is being commended for their countless efforts to ensure the public is engaged in the planning process in the MPO region. GPATS social media page includes specific themes five days a week for the public to better understand the purpose of the MPO and its decision-making processes. The LRTP update process used several techniques to ensure the public was informed and engaged. The meeting attendance and completed surveys exceeded past LRTP update public participation. These techniques and practices will be showcased as examples for other MPOs across the state and country.

Recommendations:

- The review team recommends the MPO enhance their coordination effects with the SPATS and ANATS MPOs for regional planning effects such as bicycle and pedestrian priorities, freight planning and congestion management. GPATS should also consider coordinating with the City of Greenville and Greenville County to implement transportation security planning process and procedures for the MPO area. +
- The review team recommends GPATS develop a policy document to oversee the special study process. This document should take care to address expectations and eligibility of PL funds; the primary activities of these funds to operate the MPO; the LPA process required of applicants; application cycles, scoring, and award processes; and, federal

procurement guidelines. The review team recommends the MPO consider revising the process for special studies for the GPATS area to more readily align with the goals of GPATS. Deliverables for the special studies must be added in detail with milestones to the UPWP once the policy committee has endorsed the project(s). The review team recommends GPATS update and comply with the requirements of a CMP so that it is utilized in decision making and to transition the MPOs overall planning program to performance based planning.

- The review team recommends GPATS work with SPATS, ANATS and the ACOG to update the MOU to define coordination roles for regional planning activities. In addition, the bylaws should be updated to reflect the jurisdictions added because of the 2010 Census and legislation requirements to include a transit representative. The Bylaws should also include comprehensive guidelines for the Study Team to ensure the meeting details are clear.

Details of the certification findings for each of the above items are contained in this report.

2.0 INTRODUCTION

2.1 Background

Pursuant to 23 U.S.C. 134(k) and 49 U.S.C. 5303(k), the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) must jointly certify the metropolitan transportation planning process in Transportation Management Areas (TMAs) at least every four years. A TMA is an urbanized area, as defined by the U.S. Census Bureau, with a population of 200,000 or more. After the 2010 Census, the Secretary of Transportation designated 183 TMAs – 179 urbanized areas over 200,000 in population plus four urbanized areas that received special designation. In general, the reviews consist of three primary activities: a site visit, a review of planning products (in advance of and during the site visit), and preparation of a Certification Review Report that summarizes the review and offers findings. The reviews focus on compliance with Federal regulations, challenges, successes, and experiences of the cooperative relationship between the MPO(s), the State DOT(s), and public transportation operator(s) in the conduct of the metropolitan transportation planning process. Joint FTA/FHWA Certification Review guidelines provide agency field reviewers with latitude and flexibility to tailor the review to reflect regional issues and needs. Consequently, the scope and depth of the Certification Review reports will vary significantly.

The Certification Review process is only one of several methods used to assess the quality of a regional metropolitan transportation planning process, compliance with applicable statutes and regulations, and the level and type of technical assistance needed to enhance the effectiveness of the planning process. Other activities provide opportunities for this type of review and comment, including Unified Planning Work Program (UPWP) approval, the MTP, metropolitan and statewide Transportation Improvement Program (TIP) findings, air-quality (AQ) conformity determinations (in nonattainment and maintenance areas), as well as a range of other formal and less formal contact provide both FHWA/FTA an opportunity to comment on the planning process. The results of these other processes are considered in the Certification Review process.

While the Certification Review report itself may not fully document those many intermediate and ongoing checkpoints, the “findings” of Certification the Review are, in fact, based upon the cumulative findings of the entire review effort.

The review process is individually tailored to focus on topics of significance in each metropolitan planning area. Federal reviewers prepare Certification reports to document the results of the review process. The reports and final actions are the joint responsibility of both the FHWA SC Division and FTA Region IV offices, and the content reflects the planning process reviewed. The MPO is responsible for addressing any findings with a corrective action plan.

To encourage public understanding and input, FHWA/FTA will continue to improve the clarity of the Certification Review reports.

2.2 Purpose and Objective

Since the enactment of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the FHWA and FTA, are required to jointly review and evaluate the transportation planning process in all urbanized areas over 200,000 population to determine if the process meets the Federal planning requirements in 23 U.S.C. 134, 40 U.S.C. 5303, and 23 CFR 450. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), extended the minimum allowable frequency of certification reviews to at least every four years.

GPATS is the designated MPO for the Greenville urbanized area. South Carolina Department of Transportation (SCDOT) is the responsible State agency and the Greenville Transit Authority (GTA or Greenlink) and Clemson Area Transit (CATbus) are the responsible public transportation operators. Current membership of the GPATS MPO consists of elected officials and citizens from the political jurisdictions in the MPO area. The study area includes all of Greenville County (with the city of Greenville as the largest population center), Pickens County, and Anderson County. New members were introduced after the 2010 census including a Clemson, Central, Norris, Pendleton, Williamston, Pelzer, and West Pelzer.

Certification of the planning process is a prerequisite to the approval of Federal funding for transportation projects in such areas. The certification review is also an opportunity to provide assistance on new programs and to enhance the ability of the metropolitan transportation planning process to provide decision makers with the knowledge they need to make well-informed capital and operating investment decisions.

3.0 SCOPE AND METHODOLOGY

3.1 Review Process

The initial certification review was conducted in 2013. A summary of the status of findings from the last review is provided in Appendix B. This report details the review, which consisted of a formal site visit and a public involvement meeting conducted on July 18, 2017.

Participants in the review included representatives of FHWA, FTA, SCDOT, Greenville Transit Authority, Clemson Area Transit, and GPATS MPO staff. A full list of participants is included in Appendix A.

A desk audit of current documents and correspondence was completed prior to the site visit. In addition to the formal review, routine oversight mechanisms provide a major source of information upon which to base the certification findings.

The certification review covers the transportation planning process conducted cooperatively by the GPATS, SCDOT, and public transportation operators. Background information, current status, key findings, and recommendations are summarized in the body of the report for the following subject areas selected by FHWA and FTA staff for on-site review:

- Metropolitan Planning Area Boundaries
- MPO Structure and Agreements
- Unified Planning Work Program
- Metropolitan Transportation Plan (MTP)
- Transit Planning
- Transportation Improvement Program (TIP)
- Public Participation Plan
- Title VI (Title VI, EJ, LEP, ADA)
- Consultation and Coordination
- List of Obligated Projects
- Freight Planning
- Environmental Mitigation/Planning Environmental Linkage
- Transportation Safety
- Transportation Security Planning
- Nonmotorized Planning/Livability
- Integration of Land Use and Transportation
- Travel Demand Forecasting
- Air Quality
- Congestion Management Process / Management and Operations

3.2 Documents Reviewed

The following MPO documents were evaluated as part of this planning process review:

- FY 2018-2019 Unified Planning Work Program
- FY 2014-2019 Transportation Improvement Program
- FY2017-2021 TIP Financial Spreadsheet
- 2035 Long-Range Transportation Plan
- Congestion Management Process
- Transit maps and documentation
- GPATS Public Participation Plan 2015
- GPATS Title VI/Environmental Justice Plan 2015

- Special Studies
- All Memorandum of Understanding's (transit agencies, MPOs and COGs)
- PL and SPR Agreements with SCDOT
- GPATS Bylaws
- List of Policy Committee membership with demographics
- Annual List of Obligated Projects
- Transportation Alternatives Program (TAP)

4.0 PROGRAM REVIEW

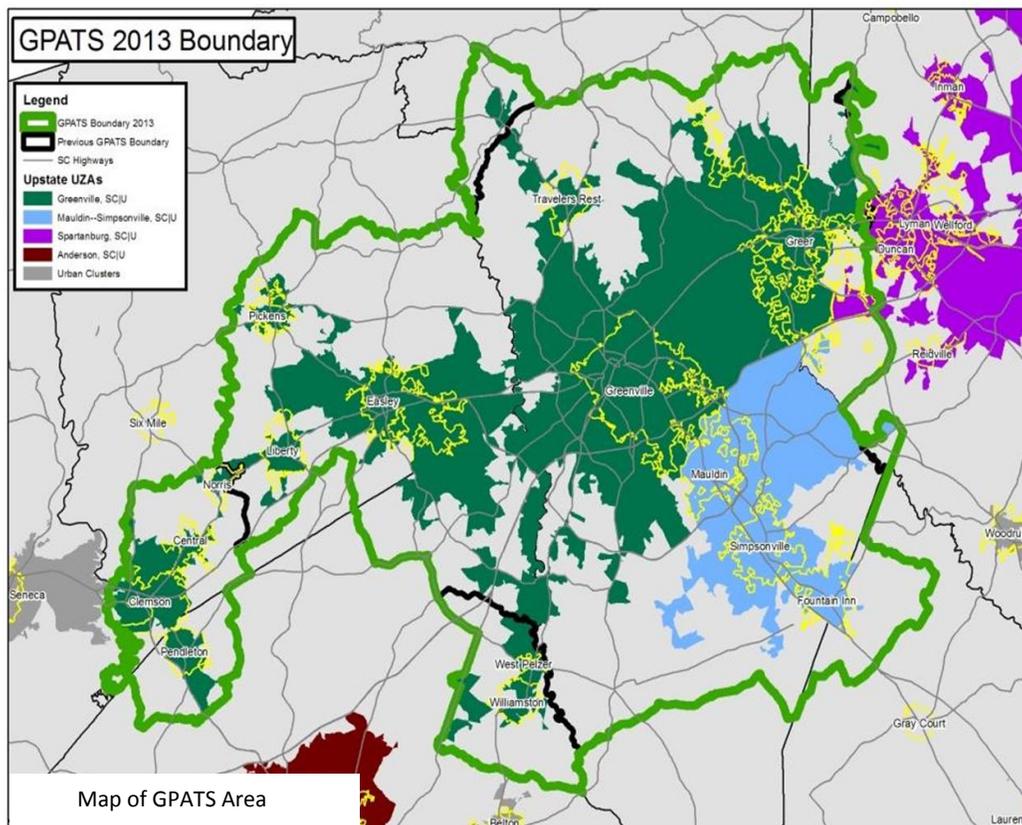
4.1 Metropolitan Planning Area Boundaries

4.1.1 Regulatory Basis

23 CFR 450.310 (d) TMA shall consist of: (i) Local elected officials; (ii) Officials of public agencies that administer or operate major modes of transportation in the metropolitan area, including representation by providers of public transportation; and (iii) Appropriate State officials. These responsibilities shall be clearly identified in written agreements among the MPO, the State, and the public transportation operator serving the MPA.

4.1.2 Current Status

MPO Official Name: Greenville-Pickens Area Transportation Study



GPATS makes up two urbanized areas (UZAs) including Greenville and Mauldin-Simpsonville that includes: Greenville, Pickens, Anderson, Spartanburg, and Laurens County. GPATS 16 municipalities include: Greenville, Greer, Mauldin, Simpsonville, Fountain Inn, Travelers Rest,

Easley, Liberty, Pickens, Clemson, Central, Norris, Pendleton, Williamston, Pelzer, and West Pelzer.

GPATS is one of 11 MPOs in the state of South Carolina. The MPO boundary is adjacent to the Spartanburg Area Transportation Study (SPATS) and Anderson Area Transportation Study (ANATS) MPO. It covers an area of 905 square miles and the population totals 667, 884 (ESRI Business Analyst 2017 population statistics). GPATS is one of the largest MPOs in the state in terms of funding and population.

4.2 MPO Structure and Agreements

4.2.1 Regulatory Basis

23 CFR 450.314 (a) Metropolitan planning agreements. (a) The MPO, the State(s), and the providers of public transportation shall cooperatively determine their mutual responsibilities in carrying out the metropolitan transportation planning process. These responsibilities shall be clearly identified in written agreements among the MPO, the State(s), and the providers of public transportation serving the MPA.

4.2.2 Current Status – GPATS History, Staff, Committees, transit operators, agreements, and Bylaws.

In 1964, the Greenville County Planning Commission was designated as the MPO and the county, city and state created the Greenville Area Transportation Study (GRATS) to comply with the Federal Highway Act of 1962. Because of the population growth patterns identified in the 2000 Census, the MPO was expanded to include portions of Pickens County, and the name was changed to the Greenville-Pickens Area Transportation Study (GPATS).

[GPATS Staff](#) - GPATS has three full time positions that are exclusively dedicated to transportation planning for the MPO study area:

The GPATS Executive Director, who also serves as the Transportation Planning Manager, oversees the development of various road and highway plans and projects, bicycle/pedestrian projects, and mass transit projects. The Executive Director participates in various committees and teams across the region to address varying transportation issues and innovative opportunities including, but not limited to, being a liaison to the GTA Board, the Greenville County Legislative Delegation, and being a point person for the Upstate in relation to future regional rail between Atlanta and Charlotte. Also on occasion SCDOT and FHWA ask the Executive Director to participate in statewide and federal efforts such as present at statewide

conferences or participate in working groups for performance based planning.

The GPATS Transit Planner/Grants Manager is responsible for overseeing GIS mapping for GPATS and FTA's Enhanced Mobility of Seniors and Individuals with Disabilities Program (FTA 5310 funds) to transit providers in Greenville's Urbanized Area. This position also serves on committees dealing with transit and air quality issues and is also the liaison between the GTA, CATbus, and local municipalities.

The Transportation Planner focuses primarily on bike and pedestrian infrastructure. Responsibilities also include overseeing the allocation of Transportation Alternative Program (TAP) funding to local jurisdictions within GPATS, assists with local alternative transportation projects, and collaborates with Safe Routes to School on local school safety assessments and studies. In addition, the Transportation Planner assists with the maintenance and update of the planning documents, maintains the GPATS website/social media, and manages public outreach.

The MPO includes three committees - Policy Committee; Study Team/Technical Committee; and Citizens Advisory Committee:

The Policy Committee is a forum for cooperative decision-making by elected and appointed officials of the local governments and transportation providers. The Policy Committee is responsible for taking into consideration the recommendations from the CAC and the Study Team when adopting plans or setting policy. The Policy Committee has final authority in the matters of policy and adoption of plans.

The Policy Committee consists of 29 voting members, including; (5) Legislative Delegation members from Greenville County, (2) Legislative Delegation members from Pickens County, (1) Legislative Delegation member from Anderson County, (5) County Council members from Greenville County, (2) County Council members from Pickens County, (6) Mayors from Greenville County municipalities (Cites of Greenville, Greer, Fountain Inn, Mauldin, Simpsonville, and Travelers Rest), (4) Mayors from Pickens County municipalities, (1) Mayor from Anderson County, (2) SCDOT Commissioners (District 3 and 4), and (1) Chair of the Greenville Transit Authority.

New members were introduced after the 2010 Census including a Mayor representing Pelzer, West Pelzer, and Williamston picked by the jurisdictions and new representation in Pickens County for Clemson, Pendleton, and Pickens. The members from each County and Municipality are determined by population.

The Policy Committee also has seven non-voting members that serve based on their respective position. These members are the: Manager of Development Services & Transportation Planning, Greenville County Planning and Code Compliance, the Chair of Anderson County Planning Commission, the Chair of Greenville County Planning Commission, the Chair of Pickens County Planning Commission, the Chair of Anderson County Legislative Delegation

Transportation Committee, the Chair of Greenville County Legislative Delegation Transportation Committee, and the Chair of Pickens County - County Transportation Committee (CTC).

The Study Team includes staff from federal, state, local agencies and other associations who have technical knowledge of transportation and/or planning. The team functions to ensure the involvement of all relevant departments, advisory agencies, and multi-modal transportation providers involved in the planning process and subsequent implementation of plans. The committee evaluates transportation plans and projects based on whether they are technically warranted and financially feasible.

The Citizens Advisory Committee (CAC) is a group of individuals who were appointed by GPATS and represent a wide range of backgrounds and interests. They are volunteers who are interested in transportation issues and have agreed to serve as liaisons between the public, GPATS staff, and elected officials to encourage additional public involvement in plans and projects.

The major transit operators are the GTA and the CATbus. Staff serves on the GTA Transit Development Committee and attends GTA monthly board meetings. GPATS acts as the direct recipient of FTA 5310 funds and Bus and Bus Facilities Program (FTA 5339 funds) and allocated funding to GTA/Greenlink and CATbus.

GPATS operating agreements and Bylaws together document how the continuing, comprehensive, and cooperative (3C planning process) will occur. They include:

- Metropolitan planning (PL) funds agreement with SCDOT;
- Transit memorandum of understanding (MOU) between GPATS, GTA, and CATbus outlining that GPATS serves as the intermediary between the GTA and CATbus transit agencies.
- Memorandum of Agreement (MOA) between GPATS, SPATS, and Application Council of Government (ACOG). This agreement is for the coordination of operations and planning between jurisdictions;
- GPATS Bylaws, updated 2013 outlines the Policy Committee's process and procedures.

Because of the 2010 US Census data, the MPO shares a boundary with ACOG and the ANATS and SPATS MPOs. It was discussed during the review that MPOs and COG should define coordination roles for regional planning activities. Examples of regional planning activities can include freight planning and the congestion management planning. These regional planning roles should be reflected in the MOA.

The GPATS bylaws define the process and procedures for the Policy Committee, however, it does not outline meeting details such as proxy "rules" or what constitutes a quorum. It also is

not very clear on meeting details such as comprehensive guidelines for the GPATS Study Team. For example, it's uncertain how members are selected, when meetings are held, and how often the committee meets. The bylaws should also reflect any U.S. Census boundary changes or legislation changes to include a transit representative.

4.2.3 Findings

Commendation:

On occasion SCDOT and FHWA ask the Executive Director to present at statewide conferences or participate performance based programs working groups. The review team commends the Executive Director for his willingness to provide his time and expertise with state and federal initiatives while balancing a heavy workload.

Recommendation:

The review team recommends GPATS work with SPATS, ANATS and the ACOG to update the MOU to define coordination roles for regional planning activities. In addition, the bylaws should be updated to reflect the jurisdictions added because of the 2010 Census and legislation requirements to include a transit representative. The Bylaws should also include comprehensive guidelines for the Study Team to ensure the meeting details are clear.

4.3 Unified Planning Work Program

4.3.1 Regulatory Basis

23 CFR 450.308 sets the requirement that planning activities performed under Titles 23 and 49 U.S.C. be documented in a UPWP. The MPO, in cooperation with the State and public transportation operator, shall develop a UPWP that includes a discussion of the planning priorities facing the MPA and the work proposed for the next one- or two-year period by major activity and task in sufficient detail to indicate the agency that will perform the work, the schedule for completing the work, the resulting products, the proposed funding, and sources of funds.

4.3.2 Current Status

The UPWP identifies the transportation planning activities carried out by GPATS. The UPWP provides updates on the GPATS public involvement process, program administration, systems management and coordination, and transportation plans and studies. These activities are

implemented using GPATS Planning (PL) funding. GPATS currently receives approximately \$619,000 in PL funding annually.

The UPWP for the GPATS MPO is developed biennially and documents major transportation planning and related activities within the GPATS Study Area for the two-year planning period. Input is sought from representatives of all modes during the UPWP update period. GPATS staff is responsible for developing the work program items for GPATS operations that address the needs of the jurisdictions within the region. The UPWP is developed in coordination with representatives from the SCDOT, the GTA, and other local governmental agencies. The UPWP is reviewed and approved by the GPATS Policy Committee, SCDOT, and FHWA.

GPATS provides quarterly reports to SCDOT, which include the budget and project status for the planning activities. GPATS is adequately addressing its planning priorities and completing the activities identified in the UPWP on schedule. The review team did note that timeliness of reporting and UPWP development was important to keep the MPOs work activities eligible for maximum federal participation.

GPATS staff has attempted to address a sizeable carryover balance over the past seven years by making PL funds not earmarked toward regional planning initiatives available for local transportation studies within the region on an annual basis through a scoring process. This involves a general project scoring based on a comparison of the presented project scope to the planning factors outlined in 23 CFR 450. Once ranked, if the needs of the applicants are greater than the resources available, staff develops several funding scenarios that are then presented to the study and policy committees for endorsement. The result for the last cycle was that the available balance was evenly split between all five applicants, greatly underfunding the requests. When pressed on what was then delivered, GPATS staff stated that either 1) the funding gap was bridged by the applicant; or, 2) the project was descoped by the applicants to match the available funds. Descoping is the predominant practice, however, these descoped projects are never re-evaluated or scored. In addition, none of these projects are ever sent to FHWA for eligibility determination, nor can it be easily ascertained if the projects follow the appropriate local public agency procurement processes for architectural and engineering services.

While the review team sees the benefit in having special studies for the GPATS area, the review team recommends the MPO consider revising in the current process. For example, the scoring process should be reevaluated to be more aligned with the goals of the GPATS organization. These studies shouldn't simply have a transportation nexus; they should also align with and further regional transportation planning goal for GPATS. These projects when selected, become deliverables of the MPO, therefore they must comply with applicable Federal laws. Additionally, the deliverables for the studies must be added in detail with milestones to the UPWP once the policy committee has endorsed the projects. The review team also

recommends that GPATS consider developing a policy document to oversee this process if this is a practice the MPO plans to continue in the future.

4.3.3 Findings

Recommendation:

The review team recommends GPATS develop a policy document to oversee the special study process. This document should take care to address expectations and eligibility of PL funds; the primary activities of these funds to operate the MPO; the LPA process required of applicants; application cycles, scoring, and award processes; and, federal procurement guidelines. The review team recommends the MPO consider revising the process for special studies for the GPATS area to more readily align with the goals of GPATS. Deliverables for the special studies must be added in detail with milestones to the UPWP once the policy committee has endorsed the project(s).

4.4 Metropolitan Transportation Plan

4.4.1 Regulatory Basis

23 CFR 450.324 Development and content of the metropolitan transportation plan (a) The metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date. In formulating the transportation plan, the MPO shall consider factors described in § 450.306 as the factors relate to a minimum 20-year forecast period.

23 U.S.C. 134(c), (h) & (i) and 23 CFR 450.324 set forth requirements for the development and content of the Metropolitan Transportation Plan (MTP). Among the requirements are that the MTP address at least a 20-year planning horizon and that it includes both long and short range strategies that lead to the development of an integrated and multi-modal system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand.

The MTP is required to provide a continuing, cooperative, and comprehensive multimodal transportation planning process. The plan needs to consider all applicable issues related to transportation system development, such as land use, employment, economic development, natural environment, housing and community development.

23 CFR 450.324(d) requires the MPO to review and update the MTP at least every four years in air quality nonattainment and maintenance areas and at least every 5 years in attainment areas

to reflect current and forecasted transportation, population, land use, employment, congestion, and economic conditions and trends.

Under 23 CFR 450.324(g), the MTP is required, at a minimum, to consider the following:

- Projected transportation demand
- Existing and proposed transportation facilities
- System performance measures, targets and report
- Operational and management strategies
- Congestion management process
- Capital investment and strategies to preserve transportation infrastructure and provide for multimodal capacity
- Transportation and transit enhancement activities, including consideration of intercity buses
- Design concept and design scope descriptions of proposed transportation facilities
- Potential environmental mitigation activities
- Pedestrian walkway and bicycle transportation facilities
- A financial plan

4.4.2 Current Status

The MTP, or Long Range Transportation Plan (LRTP) update, titled *Horizon2040*, is scheduled to be adopted by the Policy Committee October, 2017. The LRTP has involved comprehensive stakeholder and public participation efforts designed to identify the region's transportation needs, priorities, and vision for the next 20 years.

Though GPATS collected information and input from all regional jurisdictions, state, local and federal partners, the update focused extensively on public outreach to gather a compilation of important projects region wide. There were nine public meetings held and comments were compiled and documented. In addition to these meetings, GPATS conducted two surveys: one an online MetroQuest survey and a statistically valid survey conducted by an outside firm on GPATS behalf. Over thirty-five thousand data points were collated over all. These data points were combined with the results of a preliminary transportation demand model to create draft recommendations. All input was collated and ranked using South Carolina General Assembly Act 114 (ACT 14) criteria.

[Incorporating performance based planning in the LRTP](#) – The cornerstone of Moving Ahead for Progress in the 21st Century's (MAP-21) and Fixing America's Surface Transportation (FAST) Act highway programs is to transform transportation decision making toward performance and outcome-based results. SCDOT will invest resources in projects to achieve individual targets that collectively will make progress toward national goals. GPATS is also responsible for developing their LRTP through a performance-driven, outcome-based approach to planning.

The GPATS LRTP update will include preliminary performance-based planning and programming (PBPP) processes to meet federal requirements. These requirements include tracking specific safety measures and setting targets to meet the unique planning needs of the MPO, one of the first in the state and before the February, 2018 implementation date.

4.4.3 Findings

Commendation:

GPATS is being commended for being proactive with including PBPP processes in the LRTP update scheduled to be adopted October, 2017. This is one of the first efforts in the state to incorporate performance measures in a LRTP.

4.5 Transit Planning

4.5.1 Regulatory Basis

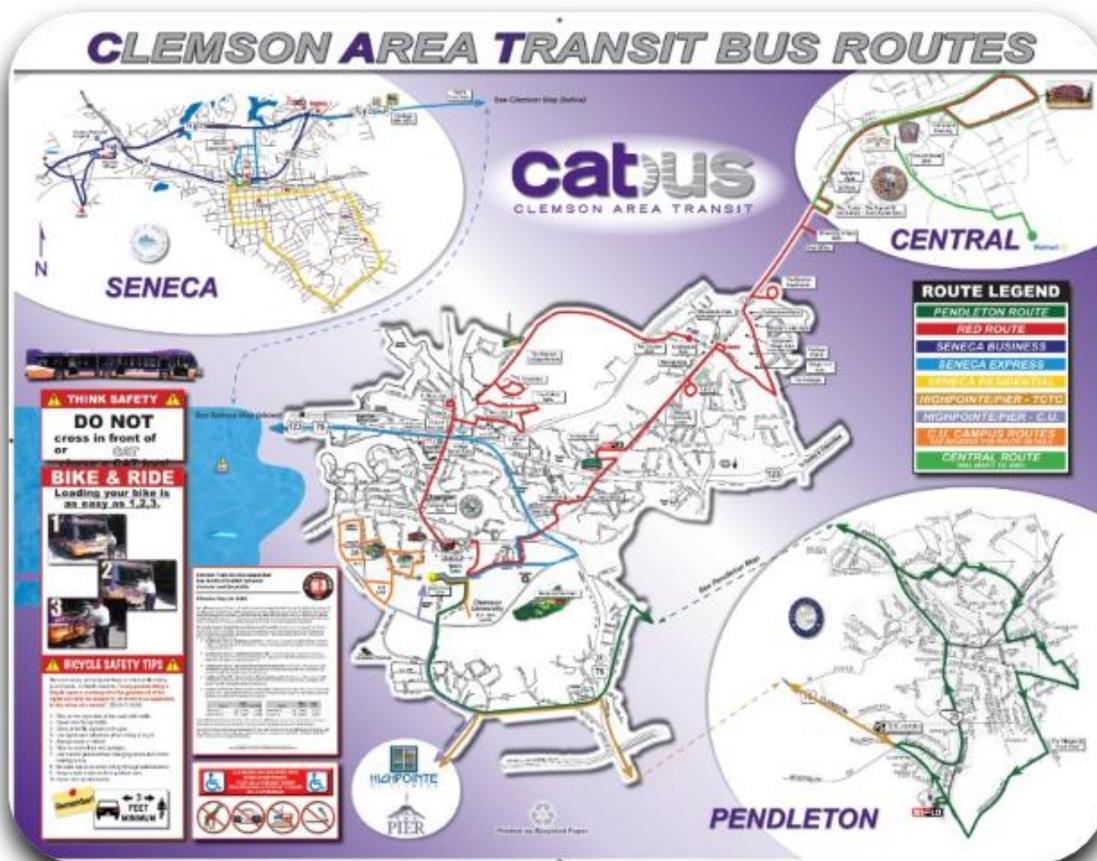
49 U.S.C. 5303 and 23 U.S.C. 134 require the transportation planning process in metropolitan areas to consider all modes of travel in the development of their plans and programs. Federal regulations cited in 23 CFR 450.314 state that the MPO in cooperation with the State and operators of publicly owned transit services shall be responsible for carrying out the transportation planning process.

4.5.2 Current Status

GPATS, as designated by the governor or the governor's official designee in accordance with the planning process, is the Designated Recipient (DR) of the FTA Urbanized Area Formula Funds for the Greenville UZA. As the DR, GPATS is responsible for "receiving and apportioning" funding for the Urbanized Area Formula Program from the mass transit account of the highway trust fund. The funding amounts are made available by Congress and apportioned by FTA to authorized agencies. Each fiscal year, FTA apportions urbanized area funds to states and designated recipients according to a statutory formula using the latest available U.S. decennial census data and other information reported by the Bureau of the Census and the National Transit Database.

There are currently two transit agencies operating within GPATS's region: CATbus [Clemson Area Transit](#) and GTA (or Greenlink) [Greenlink](#). CATbus and GTA are also authorized "direct recipient(s)" of FTA formula funds. Meaning CATbus and GAT are eligible entities authorized by a GPATS, the designated recipient, to receive Urbanized Area Formula Program funds directly from FTA.

CATbus is a public service provided fare-free by Clemson University, the City of Clemson, the Town of Central, the Town of Pendleton, the City of Seneca, the South Carolina Department of Transportation, and the Federal Transit Administration.

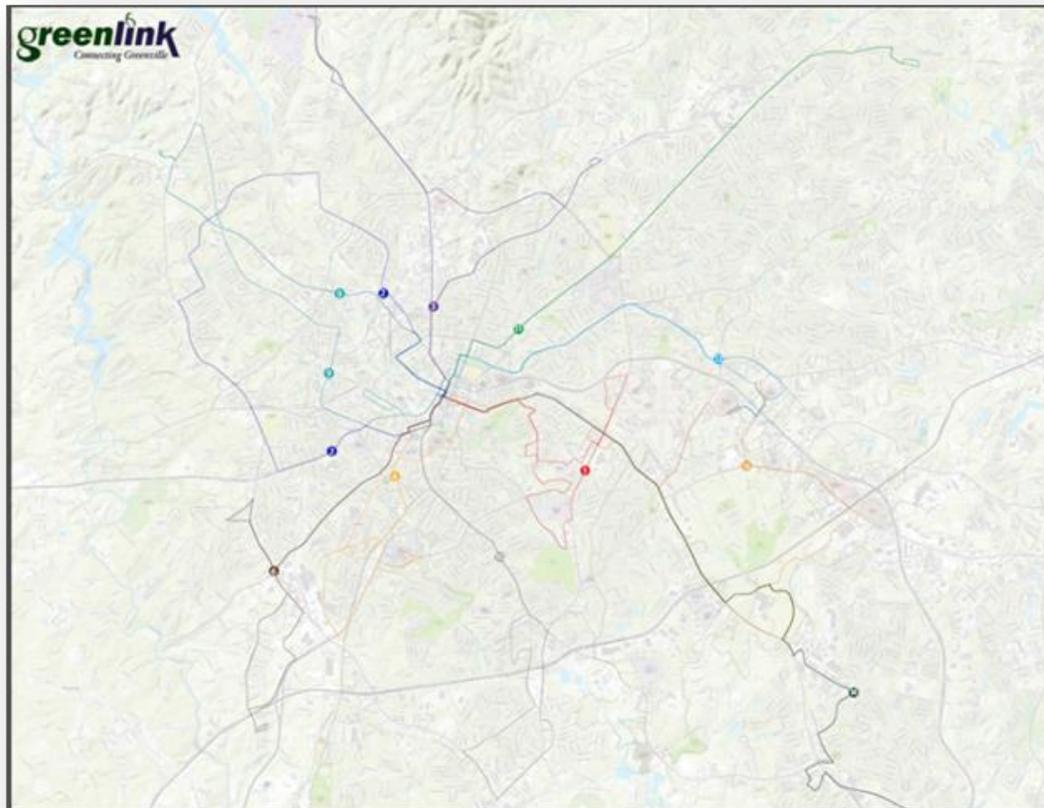


The CATbus system is made of nine routes serving the areas of the City of Clemson, Town of Pendleton and Town of Seneca. The Hendrix Center, located on the campus of Clemson University, serves as the system's hub.

To ensure comprehensive access to transportation, all CATbus buses are equipped to accommodate individuals with disabilities. Audio and Video Surveillance is also available on each CATbus bus for passengers' safety and security. CATbus in partnership with the City of Seneca operates the only all-electric zero emission fleet in the United States. Providing current and potential system users the most up-to-date system information is available through the free "Where's My Bus" real-time bus locator (App). The CATbus app provides users the options to track bus movement by stop, route and address.

CATbus recently completed (May 2017) the [Clemson Reimagining Study](#). The study's main objective was to assess current and potential routes, fleet deployment, service delivery options, and future capital needs with the goal of increasing ridership and operational efficiency. Study conclusions were based on; online survey, public meeting, literature review, and stakeholder interviews. For additional details the complete Clemson Reimagining Study is available on the CATbus website.

GTA under contract, operates public transit system "Greenlink" in Greenville, South Carolina. The Greenville Transit Authority is governed by the seven-member Board.



Greenlink currently operates 11 fixed routes covering the City and County of Greenville. All buses operated by Greenlink are equipped with a bike rack and accessible for mobility devices. Greenlink, also provides ADA paratransit service (Greenville Area Paratransit - GAP).

Greenlink riders have multiple payment options when purchasing Passes and Fares:

- Single ride and transfer tickets purchased at bus fare box – Cash Only
- Day Pass and 20-Ride Punch Passes made be purchased at information booth located at the Transit Center – Cash, VISA or MasterCard

Bus Advertising, Bike Lockers, Passenger Orientation (Greenlink Rider's Guide), Paratransit Information, General Rider Information and a Downtown Trolley route are some of the Services offered by Greenlink. Greenlink connects with current and potential riders via multiple social media platforms; Facebook, Twitter, YouTube and Instagram.

4.5.3 Findings

GPATS meets the FTA requirements for the transit.

4.6 Transportation Improvement Program

4.6.1 Regulatory Basis

23 U.S.C. 134(c), (h) & (j) set forth requirements for the MPO to cooperatively develop a Transportation Improvement Program (TIP). Under 23 CFR 450.324, the TIP must meet the following requirements:

- Must cover at least a four-year horizon and be updated at least every four years.
- Surface transportation projects funded under Title 23 U.S.C. or Title 49 U.S.C., except as noted in the regulations, are required to be included in the TIP.
- List project description, cost, funding source, and identification of the agency responsible for carrying out each project.
- Projects need to be consistent with the adopted MTP.
- Must be fiscally constrained.
- The MPO must provide all interested parties with a reasonable opportunity to comment on the proposed TIP.

4.6.2 Current Status

While only required every four years, the GPATS state of the practice requires a new TIP to be approved every three years, which is compatible with the STIP development and approval process used by the SCDOT. The TIP is developed cooperatively between the Policy Committee, Study Team, SCDOT, and the public. GPATS fiscally constrained TIP includes 5 years of transportation projects including federally and locally funded projects.

At the time of the review, the MPO could not produce a full TIP document and referred the review team to a final spreadsheet with a TIP window of FY 2017-FY2021. The spreadsheet

lacked many federally required TIP components and was not fiscally constrained (projects planned outweighed GPATS financial capacity). This was of concern to the review team as it is a core responsibility of the MPO to develop and deliver a compliant TIP document. This obligation is not only a requirement of FHWA and FTA, but is a commitment to the public, is necessary for successful project delivery, and a contractual obligation to SCDOT.

The GPATS MPO was able to produce a satisfactory TIP document following the site visit for this review, but prior to the publication of this report. This document is fiscally constrained, contains adequate project descriptions, and has been out for public comment. The FY 17-21 GPATS TIP was approved on August 22, 2017. The newly approved TIP meets all federal requirements.

4.6.3 Findings

The GPATS meets the requirements for the TIP.

4.7 Public Participation

4.7.1 Regulatory Basis

23 UCS 134 and 49 U.S.C. 5303, require a Metropolitan Planning Organization (MPO) to provide adequate opportunity for the public to participate in and comment on the products and planning processes of the MPO. The requirements for public involvement are detailed in 23 CFR 450.316(a) and (b), which require the MPO to develop and use a documented participation plan that includes explicit procedures and strategies to include the public and other interested parties in the transportation planning process.

Specific requirements include giving adequate and timely notice of opportunities to participate in or comment on transportation issues and processes, employing visualization techniques to describe metropolitan transportation plans and TIPs, making public information readily available in electronically accessible formats and means such as the world wide web, holding public meetings at convenient and accessible locations and times, demonstrating explicit consideration and response to public input, and a periodically reviewing of the effectiveness of the participation plan.

4.7.2 Current Status

The MPO utilizes several techniques and strategies to include the public and other interested parties with information about GPATS plans, programs, and other MPO related news and updates. These techniques are outlined in the 2015 Public Participation Plan (PPP). For

example, the GPATS website, which recently received a complete overhaul, provides the public easy access to MPO information and opportunities to provide comments. The website also has a calendar for upcoming Study Team and Policy Committee meetings. This is helpful for the public and committee members to know when and where meetings are held. The review team suggest the MPO take it a step further and include supporting documents for upcoming meetings and previous meeting agendas.

Staff also utilizes social media pages for the public to better understand the purpose of the MPO and its decision-making processes by featuring transportation related information themes five days a week. The daily themes include:

- Monday - Articles about transportation or related events.
- Tuesday - “Transit Tuesday” focuses on local transit agencies and local transit news.
- Wednesday - Bicycle/Pedestrian day provides facts, events, and bike/ped trail maps in the GPATS region.
- Thursday – “Traffic Dash Thursday” keeps the public up to date on local transportation projects in the area.
- Friday “Did you Know Friday” provides interesting facts about all aspects of transportation planning.

The MPO also uses local television networks and newspapers to provide information and education about the role of the MPO and how the public can get involved in the planning process.

GPATS works with local groups, such as the Hispanic Alliance, to ensure individuals in the Limited English proficiency (LEP) community receive timely information. Staff also attends local events and continues to find nontraditional techniques to reach diverse communities.

In addition, the GPATS LRTP update focused extensively on public outreach. The MPO used several techniques to ensure the public had opportunities to participate in the process. GPATS held several public meetings, conducted surveys, used widespread email and mailing list. Throughout the entire update process the MPO gathered public input that totaled over 35,000 data points. This successful method was recognized by the Association of Metropolitan Planning Organizations (AMPO) earlier this year and GPATS was invited to present the strategies used at the 2017 National Fall AMPO conference.

GPATS information links:

- GPATS website (www.gpats.org)
- Facebook page (www.facebook.com/GPATSSC)
- Twitter page (www.twitter.com/GPATSSC)

4.7.3 Findings

Commendation:

The MPO is being commended for their countless efforts to ensure the public is engaged in the planning process in the MPO region. GPATS social media page includes specific themes five days a week for the public to better understand the purpose of the MPO and its decision-making processes. The LRTP update process used several techniques to ensure the public was informed and engaged. The meeting attendance and completed surveys exceeded past LRTP update public participation. These techniques and practices will be showcased as examples for other MPOs across the state and country.

4.8 Civil Rights (Title VI, EJ, LEP, ADA)

4.8.1 Regulatory Basis

Title VI of the Civil Rights Act of 1964, prohibits discrimination based upon race, color, and national origin. Specifically, 42 U.S.C. 2000d states that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” In addition to Title VI, there are other nondiscrimination statutes that afford legal protection. These statutes include the following: Section 162 (a) of the Federal-Aid Highway Act of 1973 (23 U.S.C. 324), Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973/Americans with Disabilities Act (ADA) of 1990. ADA specifies that programs and activities funded with Federal dollars are prohibited from discrimination based on disability.

Executive Order #12898 (Environmental Justice) directs federal agencies to develop strategies to address disproportionately high and adverse human health or environmental effects of their programs on minority and low-income populations. In compliance with this Executive Order, USDOT and FHWA issued orders to establish policies and procedures for addressing environmental justice in minority and low-income populations. The planning regulations, at 23 CFR 450.316(a)(1)(vii), require that the needs of those “traditionally underserved” by existing transportation systems, such as low-income and/or minority households, be sought out and considered.

Executive Order # 13166 (Limited-English-Proficiency) requires agencies to ensure that Limited English proficiency persons are able to meaningfully access the services provided consistent with and without unduly burdening the fundamental mission of each federal agency.

4.8.2 Current Status

The GPATS Policy Committee adopted the Title VI program document titled *Title VI Plan – Environmental Justice* (Title VI Plan or the Plan) June, 2015. The SCDOT Title VI Coordinator has been working with GPATS to ensure the Plan includes all the required Title VI and Civil Rights Act regulatory authorities and assurances.

At the time of the review there have not been any Title VI complaints filed regarding the MPO or the transportation planning process. Similarly, for the Americans with Disabilities Act (ADA) accessibility and para-transit operations, no complaints have been filed.

4.8.3 Findings

The GPATs meets the requirements for Title VI and Environmental Justice.

4.9 Consultation and Coordination

4.9.1 Regulatory Basis

23 U.S.C. 134(g) & (i)(5)-(6) and 23 CFR 450.316(b-e) set forth requirements for consultation in developing the MTP and TIP. Consultation is also addressed specifically in connection with the MTP in 23 CFR 450.324(h) and in 23 CFR 450.324(g)(10) related to environmental mitigation.

In developing the MTP and TIP, the MPO shall, to the extent practicable, develop a documented process that outlines roles, responsibilities, and key decision points for consulting with other governments and agencies as described below:

- Agencies and officials responsible for other planning activities (State, local, economic development, environmental protection, airport operations, or freight)
- Other providers of transportation services
- Indian Tribal Government(s)
- Federal land management agencies

4.9.2 Current Status

GPATS consults and coordinates with stakeholders in developing the TIP and LRTP. For example, during the initial stages of the LRTP update the MPO distributed questionnaires and met with numerous local, state, and private stakeholders. These discussions led to travel

demand model and socio-economic demographic projections for prioritizing projects and developing policies.

In addition, GPATS coordinated with SCDOT to conduct a safety data workshop to provide crash data that will be considered to identify performance targets and projects for the LRTP update.

Although these efforts are beneficial and necessary, the review team would like to see the MPO enhance their regional planning coordination efforts with MPOs and COGs in the upstate region. Examples of regional planning activities can include freight planning, congestion management planning or bicycle and pedestrian priorities. In addition, the MPO should also consider coordinating transportation security planning with the both the City of Greenville and Greenville County offices as they both already have plans and procedures in place the MPO could use.

4.9.3 Findings

Recommendation:

The review team recommends the MPO enhance their coordination effects with the SPATS and ANATS MPOs for regional planning effects such as bicycle and pedestrian priorities, freight planning and congestion management. GPATS should also consider coordinating with the City of Greenville and Greenville County to implement transportation security planning process and procedures for the MPO area.

4.10 Freight Planning

4.10.1 Regulatory Basis

The MAP-21 established in 23 U.S.C. 167 a policy to improve the condition and performance of the national freight network and achieve goals related to economic competitiveness and efficiency; congestion; productivity; safety, security, and resilience of freight movement; infrastructure condition; use of advanced technology; performance, innovation, competition, and accountability, while reducing environmental impacts.

23 U.S.C. 134 and 23 CFR 450.306 specifically identify the need to address freight movement as part of the metropolitan transportation planning process.

In addition, the FAST Act requires USDOT/FHWA to establish a National Highway Freight Network (NHFN) to strategically direct Federal resources and policies toward improved

performance of the NHFN. This network is the focus of funding under the National Highway Freight Program (NHFP) and a significant funding target under the (FASTLANE) Grants Program.

4.10.2 Current Status

During the review the SCDOT Multimodal Freight Manger provided an overview of the states' National Highway Freight Network critical urban and critical rural freight corridors (CUFC and CRFC respectively). They provided a summary of why CUFCs and CRFCs are important and how they are designated. They also explained how the designation of CRFCs and CUFCs will increase the State's NHFN, allowing expanded use of NHFP formula funds and FASTLANE Grant Program funds for eligible projects on I-85, which is on the primary highway freight system.

Freight is a major component to transportation planning in the GPATS area. Multimodal freight movement has tremendously increased due to large manufacturers locating to the region. The Greer Inland Port opened in October 2013, extending the Port of Charleston's reach 212 miles inland to Greer, S.C. The region's highway freight corridors include I-85, I-185, I-385, US-25, US-29, US-76, US-123, SC-8, SC-153, and SC-418.

GPATS is in the process of developing a regional freight plan. The plan will evolve through collaboration among policymakers, planners, and stakeholders. This plan will be a partnership between the SPATS and ANATS MPOs and the Appalachian COG that will establish freight needs and strategies for action.

4.10.3 Findings

The GPATs meets the requirements for Freight Planning.

4.11 Environmental Mitigation/Planning Environmental Linkage

4.11.1 Regulatory Basis

23 U.S.C. 134(d) and 23 CFR 450.324(g)(10) requires environmental mitigation be set forth in connection with the MTP. The MTP is required to include a discussion of types of potential environmental mitigation activities for the transportation improvements and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan.

23 U.S.C. 168 and Appendix A to 23 CFR Part 450 provide for linking the transportation planning and the National Environmental Policy Act (NEPA) processes. A Planning and Environmental Linkages (PEL) study can incorporate the initial phases of NEPA through the consideration of

natural, physical, and social effects, coordination with environmental resource agencies, and public involvement. This will allow the analysis in the PEL study to be referenced in the subsequent NEPA document once the project is initiated, saving time and money with project implementation.

4.11.2 Current Status

The goal for environmental mitigation is to ensure the MPO considers potential environmental issues, constraints, and impacts when adopting the LRTP or subsequent updates. Consideration is also given to how identified impacts might be mitigated. To forecast the wetland mitigation needs for the future in GPATS, SCDOT has taken the newly developed E-STIP and any known local/county projects and input them into a new GIS Data tool to determine potential wetland impacts using available GIS data. Based on these predicted impacts, SCDOT evaluates the amount of credits available at wetland banks that service the area where the project is located to determine if there are enough available credits or if additional wetland mitigation will be needed. Using this tool, the SCDOT has determined areas where there will be shortages of wetland mitigation within the next five years and is in the process of developing solutions to meet these shortages.

4.11.3 Findings

The GPATs meets the requirements for Environmental Mitigation and Planning Environmental Linkages.

4.12 Transportation Safety

4.12.1 Regulatory Basis

23 U.S.C. 134(h)(1)(B) requires MPOs to consider safety as one of ten planning factors. As stated in 23 CFR 450.306(a)(2), the planning process needs to consider and implement projects, strategies, and services that will increase the safety of the transportation system for motorized and non-motorized users.

In addition, SAFETEA-LU established a core safety program called the Highway Safety Improvement Program (HSIP) (23 U.S.C. 148), which introduced a mandate for states to have Strategic Highway Safety Plans (SHSPs). 23 CFR 450.306 (4)(iv) requires the metropolitan transportation planning process should be consistent with the SHSP, and other transit safety and security planning.

4.12.2 Current Status

GPATS coordinated with SCDOT to conduct a safety data workshop. This workshop provides crash data analysis for the MPO region. The workshop also gave information on how the crash data can be used to identify projects for the LRTP and what countermeasure might be applicable.

4.12.3 Findings

The GPATs meets the requirements of transportation safety planning.

4.13 Transportation Security Planning

4.13.1 Regulatory Basis

23 U.S.C. 134(h)(1)(C) requires MPOs to consider security as one of ten planning factors. As stated in 23 CFR 450.306(a)(3), the Metropolitan Transportation Planning process provides for consideration of security of the transportation system.

The regulations state that the degree and consideration of security should be based on the scale and complexity of many different local issues. Under 23 CFR 450.324(i), the MTP should include emergency relief and disaster preparedness plans and strategies and policies that support homeland security, as appropriate.

4.13.2 Current Status

To date GPATS has not specifically considered the security of the transportation system for motorized and non-motorized users as outlined in the Planning Factors. It was discussed during to MPO can achieve this by utilizing resources already available. For example, evacuation routes are available on the 511 Traveler site (<http://www.511sc.org/>) along with traffic cameras and information for SC road conditions. Also, Greenville City Council adopted a Multi-Hazard Mitigation Plan (PDF), which was required by the Federal Emergency Management Agency (FEMA). There are other plans and programs already adopted by the City of Greenville the MPO can consider. The review team will provide other examples and ideas to help GPATS meet the requirements for Transportation Security Planning.

4.13.3 Findings

The review team will provide other examples and ideas to help GPATS meet the requirements for Transportation Security Planning.

4.14 Nonmotorized Planning/Livability

4.14.1 Regulatory Basis

23 U.S.C. 217(g) states that bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each MPO under 23 U.S.C. 134. Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities.

23 CFR 450.306 sets forth the requirement that the scope of the metropolitan planning process "will increase the safety for motorized and non-motorized users; increase the security of the transportation system for motorized and non-motorized users; and protect and enhance the environment, promote energy conservation, improve the quality of life.

4.14.2 Current Status

The 2040 LRTP update includes chapters for all transportation modes, including bicycle and pedestrian infrastructure. The bicycle and pedestrian chapter provides useful information for existing and proposed bicycle and pedestrian facilities and recommendations for design standards to increase safety and access to these users.

4.14.3 Findings

The GPATs meets the Nonmotorized Planning/Livability requirements.

4.15 Integration of Land Use and Transportation

4.15.1 Regulatory Basis

23 U.S.C. 134(g)(3) encourages MPOs to consult with officials responsible for other types of planning activities that are affected by transportation in the area (including State and local planned growth, economic development, environmental protection, airport operations, and

freight movements) or to coordinate its planning process, to the maximum extent practicable, with such planning activities.

23 U.S.C. 134 (h)(1)(E) and 23 CFR 450.306(a)(5) set forth requirements for the MPO Plan to protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

4.15.2 Current Status

There are County and City wide land use plans in the area, but not one encompassing the entire region of GPATS at once. These plans are maintained by their local jurisdictions and are reviewed every five years and updated either every ten years or as needed. State and Local land use plans for growth and economic development are gathered and utilized as a part of the travel model and socioeconomic profiles when developing the LRTP.

4.15.3 Findings

The GPATs meets the Integration of Land Use and Transportation requirements.

4.16 Air Quality

4.16.1 Regulatory Basis

The air quality provisions of the Clean Air Act (42 U.S.C. 7401) and the MPO provisions of Titles 23 and 49 require a planning process that integrates air quality and metropolitan transportation planning, such that transportation investments support clean air goals. Under 23 CFR 450.324(n), a conformity determination must be made on any updated or amended transportation plan in accordance with the Clean Air Act and the EPA transportation conformity regulations of 40 CFR Part 93. A conformity determination must also be made on any updated or amended TIP, per 23 CFR 450.326(a).

4.16.2 Current Status

Over the past several years, the issue of air quality has become a major concern in the nation and state of South Carolina. GPATS is still in attainment follow changes and monitors regional stations for changes that could impact our attainment status.

4.16.3 Findings

The GPATs meets the Air Quality requirements.

4.17 Congestion Management Process / Management and Operations

4.17.1 Regulatory Basis

23 U.S.C. 134(k)(3) and 23 CFR 450.322 set forth requirements for the congestion management process (CMP) in TMAs. The CMP is a systematic approach for managing congestion through a process that provides for a safe and effective integrated management and operation of the multimodal transportation system. TMAs designated as non-attainment for ozone must also provide an analysis of the need for additional capacity for a proposed improvement over travel demand reduction, and operational management strategies.

23 CFR 450.324(g)(6) requires the MTP include Management and Operations (M&O) of the transportation network as an integrated, multimodal approach to optimize the performance of the existing transportation infrastructure. Effective M&O strategies include measurable regional operations goals and objectives and specific performance measures to optimize system performance.

4.17.2 Current Status

Although a CMP is required in every TMA, federal regulations are not prescriptive regarding the methods and approaches used to implement a CMP. This flexibility concludes different metropolitan areas face different conditions regarding traffic congestion and may have different visions of how to deal with congestion. Although GPATS congestion levels may be perceived to be acceptable, it is still required and beneficial that the region have an updated integrated management and operations process for the multimodal transportation system. The information provided for the desk audit demonstrated limited and dated evidence of data and analysis of current conditions that will support informed decision making to enhance mobility of persons and goods.

The CMP should consider data such as freight movement, emergency evacuation, sustainability and safety. The Congestion Management Process Guidebook provides detailed information. https://www.fhwa.dot.gov/planning/congestion_management_process/cmp_guidebook/cmpguidebk.pdf

4.17.3 Findings

Recommendations:

The review team recommends GPATS update and comply with the requirements of a CMP so that it is utilized in decision making and to transition the MPOs overall planning program to performance based planning.

Proposed FHWA/FTA Technical Assistance: Office of Operations provides resources, information and training in a variety of formats. <https://ops.fhwa.dot.gov/> Performance-based Planning and Programming was held in Columbia, SC July 24 2017.

5.0 CONCLUSION AND RECOMMENDATIONS

The FHWA and FTA review found that the metropolitan transportation planning process conducted in the GPATS urbanized area MEETS Federal planning requirements.

5.1 Commendations

The following are noteworthy practices that the GPATS MPO is doing well in the transportation planning process:

- On occasion SCDOT and FHWA ask the Executive Director to present at statewide conferences or participate performance based programs working groups. The review team commends the Executive Director for his willingness to provide his time and expertise with state and federal initiatives while balancing a heavy workload.
- GPATS is being commended for being proactive with including PBPP processes in the LRTP update scheduled to be adopted October, 2017. This is one of the first efforts in the state to incorporate performance measures in a LRTP.
- The MPO is being commended for their countless efforts to ensure the public is engaged in the planning process in the MPO region. GPATS social media page includes specific themes five days a week for the public to better understand the purpose of the MPO and its decision-making processes. The LRTP update process used several techniques to ensure the public was informed and engaged. The meeting attendance and completed surveys exceeded past LRTP update public participation. These techniques and practices will be showcased as examples for other MPOs across the state and country.

5.2 Recommendations

The following are recommendations that would improve the transportation planning process:

- The review team recommends the MPO enhance their coordination effects with the SPATS and ANATS MPOs for regional planning effects such as bicycle and pedestrian priorities, freight planning and congestion management. GPATS should also consider coordinating with the City of Greenville and Greenville County to implement transportation security planning process and procedures for the MPO area.
- The review team recommends GPATS develop a policy document to oversee the special study process. This document should take care to address expectations and eligibility of

PL funds; the primary activities of these funds to operate the MPO; the LPA process required of applicants; application cycles, scoring, and award processes; and, federal procurement guidelines. The review team recommends the MPO consider revising the process for special studies for the GPATS area to more readily align with the goals of GPATS. Deliverables for the special studies must be added in detail with milestones to the UPWP once the policy committee has endorsed the project(s).

- The review team recommends GPATS update and comply with the requirements of a CMP so that it is utilized in decision making and to transition the MPOs overall planning program to performance based planning.
- The review team recommends GPATS work with SPATS, ANATS and the ACOG to update the MOU to define coordination roles for regional planning activities. In addition, the bylaws should be updated to reflect the jurisdictions added because of the 2010 Census and legislation requirements to include a transit representative. The Bylaws should also include comprehensive guidelines for the Study Team to ensure the meeting details are clear.

5.3 Training/Technical Assistance

The following training and technical assistance is recommended to assist the MPO with improvements to the transportation planning process:

Office of Operations provides resources, information and training in a variety of formats.

<https://ops.fhwa.dot.gov/>

APPENDIX A - PARTICIPANTS

The following individuals were involved in the GPATS urbanized area on-site review:

- Yolanda Morris, Transportation Planner, FHWA South Carolina Division
- Jessica Hekter, Planning, Air Quality, & Right of Way Programs Manager
FHWA South Carolina Division
- Jody McCullough, Transportation Planner, FHWA Headquarters
- Nicole Spivey, Community Planner, FTA Region IV
- Keith Brockington, Executive Director/ Transportation Planning Manager, GPATS
MPO
- Asangwua Ikein, Transit Planner/Grants Manager, GPATS MPO
- Brennan Hansley, Transportation Planner, GPATS MPO
- Mike Sullivan, Planning Manager, SCDOT
- David Burgess, Public Transit Planner, SCDOT
- Diane Lackey, Multimodal Planning Manager, SCDOT
- Carrington Murray, Intern, SCDOT
- Moses Washington, Intern, SCDOT
- Colleen Dang, Intern, SCDOT
- Nicole McAden, Marketing and Public Affairs Specialist, Greenlink
- Alex John, Transit Planning and Grants Coordinator, Greenlink
- Heather Lollis, Transit Planning Coordinator, Clemson Area Transit
- Visitors
 - Dyke Spencer, Powdersville Water Authority
 - Fred Payne, Greenville County Council

APPENDIX B - STATUS OF FINDINGS FROM LAST REVIEW

One of the priorities of each certification review is assessing how well the planning partners in the area have addressed corrective actions and recommendations from the previous certification review. This section identifies the corrective actions and recommendations from the previous certification conducted in 2013 and summarizes discussions of how they have been addressed.

Corrective Actions

Corrective Action 1:

The TIP must be included without change, directly or by reference, in the STIP required under 23 U.S.C. 135. Inconsistencies between the two documents were noted during the desk audit and review. It is noted that any inconsistencies identified were the result of administrative changes to the STIP. The Review Team is reemphasizing the requirement that such actions result in consistency between the TIP and STIP. [Regulation Citation: 23 CFR 450.328(b)].

Disposition: Since the last review GPATS and SCDOT coordinate STIP/TIP transmittals with every STIP/TIP change to ensure the two documents mirror one another.

Corrective Action 2:

On an annual basis, the MPO, the State, and public transportation operator(s), no later than 90 calendar days following the end of the federal fiscal year, must develop a listing of projects (including investments in pedestrian walkways and bicycle transportation facilities and statewide program projects) for which funds under 23 U.S.C. or 49 U.S.C Chapter 53 were obligated in the preceding program year. [Regulation Citation: 23 CFR 450.334].

Disposition: GPATS publishes the Annual list of obligated projects for the public to view. The 2014-2016 document is currently posted on the GPATS website www.gpats.org/programs/tip

Corrective Action 3:

The MPO must develop and use a documented Public Participation Plan (PPP) that defines a process for *providing citizens, affected public agencies, representatives of public transportation, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of bicycle and pedestrian facilities, representatives of the disabled, and other interested parties with an opportunity to be involved with the transportation planning process (23 CFR 450.316)*. GPATS needs to evaluate and update the PPP to include area consultation parties and specific outreach strategies and comment periods for MPO documents/products. The MPO must also develop and use a quantitative methodology for periodically reviewing the effectiveness of the

procedures and strategies contained in the participation plan to ensure a full and open participation process. [Regulation Citation: 23 CFR 450.316]

- In addition, please also incorporate the following for the PPP evaluation and update:
 - ♦ Detail how each of the MPOs products/documents will be taken out for public comment, how long the comment period will be for specific actions (updates, amendments, corrections, etc.)
 - ♦ Assign an update/review cycle to the “periodic” review for both the evaluation of effectiveness and an update for the PPP.
 - ♦ Explore untraditional outreach strategies including social media and advertising
 - ♦ Incorporate SCDOT Public Participation effort for statewide program projects into the Public Participation Process.

Disposition: The GPATS Public Participation Plan was updated to include the requirements outlined in 23 CFR 450.316. The Plan was approved September, 2013 and updated October, 2015.

Recommendations

Recommendation 1:

The Unified Planning Work Program (UPWP) should be updated to include deliverables in the task product description as well as a schedule and milestones for studies. These deliverables and milestones should also be reflected in the quarterly billing statements. Also, the introduction to the document should be updated to reflect recent census changes.

Disposition: The GPATS UPWP and quarterly reports includes deliverables, schedule, and milestones for each task product. The narrative includes the recent 2010 Census changes.

Recommendation 2:

The LRTP update is currently underway and the MPO plans to make several changes with this minor update. It is recommended the MPO also include the following:

- Incorporate all the new areas added by recent boundary expansion. This should include updating the horizon year, all elements, maps, model runs, project lists, and financial information not only to bring it up to date, but also to include all agencies and member governments. This includes updating the transit element to be inclusive of both Greenlink and CAT, also please list the transit projects in the document.

- This area is home to several industries as it is located on I-85, half way in between Atlanta and Charlotte. It is also home to a new inland port. Include more of a freight emphasis that not only considers highway freight, but air and rail as well. Consider a mode split in model, FHWA and FTA understands this may not be a possibility for this minor update; however, this may be a useful tool for this area with the next plan update.
- Develop draft purpose and need statements to explain how the projects in the plan will be solutions to respective problems. This will assist in the transition from Planning to Preliminary Engineering.
- Form and utilize a Policymakers Subcommittee to use as a sounding board during to ensure the policy makers are well informed about the update and to facilitate early buy-in to stay on schedule.
- To date SCDOT has not released new Guides share funding amounts; therefore, the MPO may need to make assumptions to ensure the plan is fiscally constrained. FHWA and FTA recommend assuming a historical average in the event the amounts have not been released by the time the MPO begins working on the financial element. The MPO can adjust later, as needed.
- Look at the potential performance management strategies and measures outlined in the draft Statewide Multi-modal Plan update and begin to align the LRTP with these measures and think about potential targets.

Disposition: The 2035 LRTP update included the recommendations made in the certification review report. The MPO is now in the process of updating the 2040 LRTP, which is a major update that will include more indebt data and analysis.

Recommendation 3:

Update the memorandum of understanding (MOU) between the transit providers and MPO to better define mutual responsibilities in carrying out the metropolitan transportation planning process. These responsibilities should be clearly defined in a written agreement that includes specific provisions for cooperatively developing and sharing information related to the development of financial plans that support the LRTP, TIP, and Annual Obligated List.

Disposition: A MOU outlining that GPATS serves as the intermediary between the Greenville and Clemson transit agencies was implemented September, 2014. It defines specific provisions for cooperatively developing and sharing information related to the development of financial plans that support the LRTP, TIP, and Annual Obligated List.

Recommendation 4:

Develop and implement a competitive Transportation Alternatives Program.

Disposition: GPATS developed a competitive TAP program May, 2013. GPATS receives on average about \$630,000 annually for Transportation Alternative projects, which is then applied for by local jurisdictions/municipalities/organizations within the MPO urbanized area. The projects are ranked in-house and go before GPATS Study Team for initial approval and ultimately Policy Committee for final approval. These projects are then placed into the TIP, Transportation Improvement Program.

Recommendation 5:

Continue to foster a healthy working relationship and environment of corporation with the MPO, State, and Transit agencies.

Disposition: The MPO continues to work very closely with, SCDOT, Greenville Transit Authority and Clemson Area Transit agencies. They are active Study Team participants and provide input on various GPATS planning processes including the LRTP and UPWP.

Recommendation 6:

Sign and date the Title VI Policy Statement and Title VI Standard Assurance by current Head of Agency.

Disposition: The Title VI Policy Statement and Title VI Standard Assurances were signed by the GPATS Executive Director and submitted to SCDOT,

Recommendation 7:

Revise procedures for processing complaints of discrimination from external parties (Title VI complaints). The MPO needs to develop a process where, Title VI complaints are documented locally, then forwarded for investigation and processing by SCDOT.

Disposition: The MPO has revised the Title VI procedures for processing complaints of decimation from external parties, which comprehensively describes how Title VI complaints are documented locally, then forwarded for investigation and processing by SCDOT.

Recommendation 8:

Identify a staff member as the point of contact for Title VI Compliance, the Review Team advised GPATS that training is available from SCDOT and FHWA and recommends they participate as it becomes available.

Disposition: The MPO has identified the GPATS' Transit Planner/Grants Manager as the point of contact for Title VI Compliance. They have participated in SCDOT and FHWA sponsored training.

Recommendation 9:

Expand on the Limited English Proficiency (LEP) document to develop a plan that includes an individualized assessment that balances the following four factors:

- The number or proportion of LEP persons served or encountered in the eligible service population;
- The frequency with which LEP individuals come in contact with the program, activity, or service;
- The nature and importance of the program, activity, or service provided by the program; and
- The resources available to the recipient and costs.

Disposition: The LEP document was updated March, 2015 to includes an individualized assessment that balances the four factors listed in the recommendation.

APPENDIX C – PUBLIC COMMENTS

Greenville Pickens Area Transportation Study (GPATS) Certification Review

(Please Print)

NAME: (Please / one)

Mr.

Mrs.

Ms.

Mr. & Mrs.

Dan Roberts

ADDRESS: 535 Mahaffey Rd, Greer SC 29651

Street/Route

City

State

Zip Code

E-Mail (optional): robertsdan@charter.net

COMMENTS:

I attended the large-scale initial kickoff public meeting of GPATS Long Range Plan. Keith Brockington and his GPATS team did an exceptional job with very effective visual tools to illustrate and collect feedback via maps and other media. The team is very knowledgeable, professional and approachable. I feel their effectiveness is diminished due to powerful developers and wealthy large-tract landowners who exert political power that cause deviation from GPATS and SC DOT plans, especially for the SC 14 widening and closure of Smith Road.

Mail Comments To:

Ms. Yolanda Morris
Federal Highway Administration
1835 Assembly St., Suite 1270
Columbia, SC 29201



From: FPayne@greenvillecounty.org
To: [Morris_Yolanda \(FHWA\)](mailto:Morris_Yolanda@FHWA); [Spivey_Nicole.T \(FTA\)](mailto:Spivey_Nicole.T@FTA); [Hekter_Jessica \(FHWA\)](mailto:Hekter_Jessica@FHWA); [Mccullough_Jody <FHWA>](mailto:Mccullough_Jody@FHWA); BurgessDA@scdot.org; [Mike.Sullivan; jackeydm.scdot.org](mailto:Mike.Sullivan@jackeydm.scdot.org)
Cc: kbrockington@greenvillecounty.org; Hanslev_Brennan; [Lawton_Emily \(FHWA\)](mailto:Lawton_Emily@FHWA); Gucker_Paula
Subject: GPATS Cert Review - Final Payne comments re Greenville County, Autonomous Electric Vehicle (AEV) Deployment Options, and VW Electrify America Proposal attached
Date: Thursday, July 20, 2017 11:34:52 PM
Attachments: [VW-ElectrifyAmerica-3rdNarrativeWsupport letters.pdf](#)
[ATT00001.htm](#)

Ms Yolanda Morris,

Thank you for the opportunity to meet with you and your colleagues during the GPATS Certification Review sessions yesterday. As requested, I am sending these comments for your Certification Review Committee files.

I am very proud of our GPATS planning staff who manage what seems to be a very active agenda, in a very effective manner. Keith Brockington is a true professional.

I appreciate your allowing me to sit in on several sessions, ask some questions, and speak to your group yesterday. I spoke primarily to express some personal frustrations with two issues that we really can't change: 1) a slow, deliberate process for solving massive transportation challenges that seems to lag behind the rapidly changing technology that is seeking advanced transport solutions; and 2) political boundaries that restrict us in addressing mobility issues that cover wider regions.

I am pleased that Greenville and our nearby counties are working with Federal, State and local groups to address some of these broader issues. Two upcoming conferences suggest potential.

1) Sep 7-8, FHWA will sponsor, NACo will coordinate, and Greenville will host a Roadway Safety Peer Exchange.

2) Oct 18, the 10 counties of Upstate SC, thru the Upstate SC Alliance and Ten at the Top, will host a Regional Transportation Summit to discuss goals and planning for the future with keynote speaker, Carla Bailo discussing potential for transportation that

has 3 Zeros: *0 accidents/* deaths; *0 pollution/* emission; & *0 stress/* full access.

Yesterday, I shared brief info about Greenville's exciting developments regarding our Autonomous Electric Vehicle (AEV) plans. Today, I want to document detailed info to help you know our Deployment Options re automated electric (A-Taxi) shuttles using Automated Connected Electric Shared (ACES) technologies.

PUBLIC PRIVATE PARTNERSHIPS (PPP)

Greenville County has developed a consortium of PPP that enables Greenville to be a

new center for autonomous electric vehicle (AEV) testing and deployment.

Key partners helping promote innovation & economic development focused on deploying AEV using a public private consortium w/Greenville County & City include:

- Carolinas Alliance 4 Innovation (CA4I) is a nonprofit public benefit corporation whose

mission is to promote innovative solutions in transportation, infrastructure and

engineering for economic development. C4AI is seeking funds to deploy A-Taxi shuttles

on public roads in selected Greenville districts and to match a GAVP \$2M challenge.

- Global Autonomous Vehicles Partnership (GAVP) has offered a \$2M matching grant

challenge for implementation of AVs in Greenville. GAVP is a non-profit whose vision is,

“Making autonomous vehicles the primary form of ground transportation by 2040

Safeguarding people, unleashing trillions of dollars in productivity and helping to save

the planet.”

- Robotic Research, LLC (RR) can deploy two autonomous electric vehicles (AEV) from

Ft. Bragg to Greenville in summer 2017. RR is a specialized engineering firm committed

to finding innovative, cost-effective solutions in the areas of robotics, intelligent control,

sensor processing and specialized computer programming. Robotic Research engineers

design, develop, and test state-of-the-art autonomous mobility software, and is the

initial A-Taxi technology partner. Robotic Research brings validated vehicles from Ft Bragg and will help us deploy and ramp up quickly in Greenville - and move from a CU-ICAR research campus to a high-income Verdae district, and to low-income Parker zip code areas in West Greenville.

- Verdae Development, Inc, a master planned urban community in Greenville, committed

\$1M to build a mobility center in Verdae to link A-Taxi routes with existing multi-modal transportation options.

- Clemson University’s International Center for Automotive Research (CU-ICAR) campus

is the location for the initial A-Taxi deployment and its faculty and staff is a major

Research & Development asset.

- Greenville County and City Councils each passed resolutions in summer 2016 in

support of Greenville “as a pilot site for the research, development, testing and deployment of multi-modal, intelligent, automated transportation systems and management technologies initiatives. We have applied for several public and private

grants to help deploy automated, electric vehicles.

IMPLEMENTATION PHASES: 0, 1, and 2

PHASE 0: Robotic Research developed an innovative AEV solution that has been implemented under a contract with the military at Fort Bragg, NC to transport wounded warriors to medical appointments at the base hospital. With the recent good news that these wounded warriors are being healed as research

goals are completed, the need for this service at Ft. Bragg has ended. Robotic Research will implement this technology in Greenville as “phase 0” of the A-taxi program, with a schedule to start prior to any

USDOT grant award. A route starting at CU-ICAR and adjacent Millennium Drive will be

implemented by fall 2017 using two automated electric Cushman 6-passenger vehicles

that were proven at Ft. Bragg.

PHASE 1: Leveraging the success from phase 0, expand service to the Verdae Area

adjacent to the CU-ICAR campus. More capable climate controlled AE vehicles will be

procured for this phase (4 to 6 A-Taxis). The upscale residents of Verdae will begin developing a business case for this transportation option by mid- 2018.

PHASE 2: This phase expands deployment to partner with Greenville County Emergency Medical Services (EMS) to provide non-emergency medical transportation (NEMT) to

disabled, elderly, low-income, and other transport disadvantaged people. The vehicles

will be based near Legacy Early Middle College Charter High School and serve residents

within the Parker zip code (among the lowest 10% of incomes in America). Citizens will

be picked up at their residences and delivered to healthcare appointments, screenings,

rehabilitation, exercise or other daily activity needs. Piedmont Health Foundation has

found that lack of transportation is a key barrier to economic success in our community.

Deployment is expected by late 2018, with 4-6 additional A-Taxis. In addition to important health benefits, the county the County EMS will generate significant cost

savings using NEMT adapted A-Taxi vehicles since the current ambulance & paramedic

service currently costs the county an average of \$450 for each trip.

DATA ANALYSIS

During the entire operational period, the system will be subjected to data gathering and

analysis to document actual improvements in safety, efficiency, system performance

and return on investment. We will rely on reports generated by the nSight™ data collection system for key parts of these performance measures. In addition, the frequent inspections, automated self-monitoring systems and other good practices and

technologies associated with A-Taxi vehicles and systems will be observed for lessons-learned related to improving infrastructure management,

reducing maintenance costs, prioritizing investment decisions and ensuring a state of good repair. This oversight and ongoing evaluation effort will generate useful lessons learned for Greenville as well as for other locations with an interest in deploying automated vehicles.

For more information on this AEV deployment plan, contact Fred Payne, [864-884-8899](tel:864-884-8899)

(cell) or FPayne@greenvillecounty.org.

You may also be interested in reviewing a recent proposal to VW/ Electrify America package (see attached narrative and support letters). It has a plan for installing fast charge stations and engaging local dealers in "showcase" events with EVs and AEVs. Since 79% of current automated vehicles use electric powertrain, we will promote EV usage, with a high AV/EV correlation - and a need for EV charging infrastructure that the \$2.4M VW grant will make Greenville and SC a world-class model for AEV deployment.

Best wishes!

As civil servants,

Fred

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APPENDIX D - LIST OF ACRONYMS

ACT 114: South Carolina General Assembly Act 114
ADA: Americans with Disabilities Act
AMPO: Association of Metropolitan Planning Organizations
ANATS: Anderson Area Transportation Study
CFR: Code of Federal Regulations
CMP: Congestion Management Process
CTC: County Transportation Committee
DR: Designated Recipient
DOT: Department of Transportation
EJ: Environmental Justice
FAST: Fixing America's Surface Transportation Act
FHWA: Federal Highway Administration
FTA: Federal Transit Administration
FTA 5310 funds: Federal Transit Administration's Section 5310 Capital Assistance Program
FY: Fiscal Year
HSIP: Highway Safety Improvement Program
ITS: Intelligent Transportation Systems
LEP: Limited English Proficiency
MAP-21: Moving Ahead for Progress in the 21st Century
MOA: Memorandum of Agreement
MOU: Memorandum of Understanding
MPA: Metropolitan Planning Area
MPO: Metropolitan Planning Organization
MTP: Metropolitan Transportation Plan
PL: Metropolitan Planning Funds
SCDOT: South Carolina Department of Transportation
SHSP: Strategic Highway Safety Plan
SPATS: Spartanburg Area Transportation Study
STIP: State Transportation Improvement Program
TDM: Travel Demand Management
TIP: Transportation Improvement Program
TMA: Transportation Management Area
U.S.C.: United States Code
UPWP: Unified Planning Work Program
USDOT: United States Department of Transportation



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