

# Executive Summary

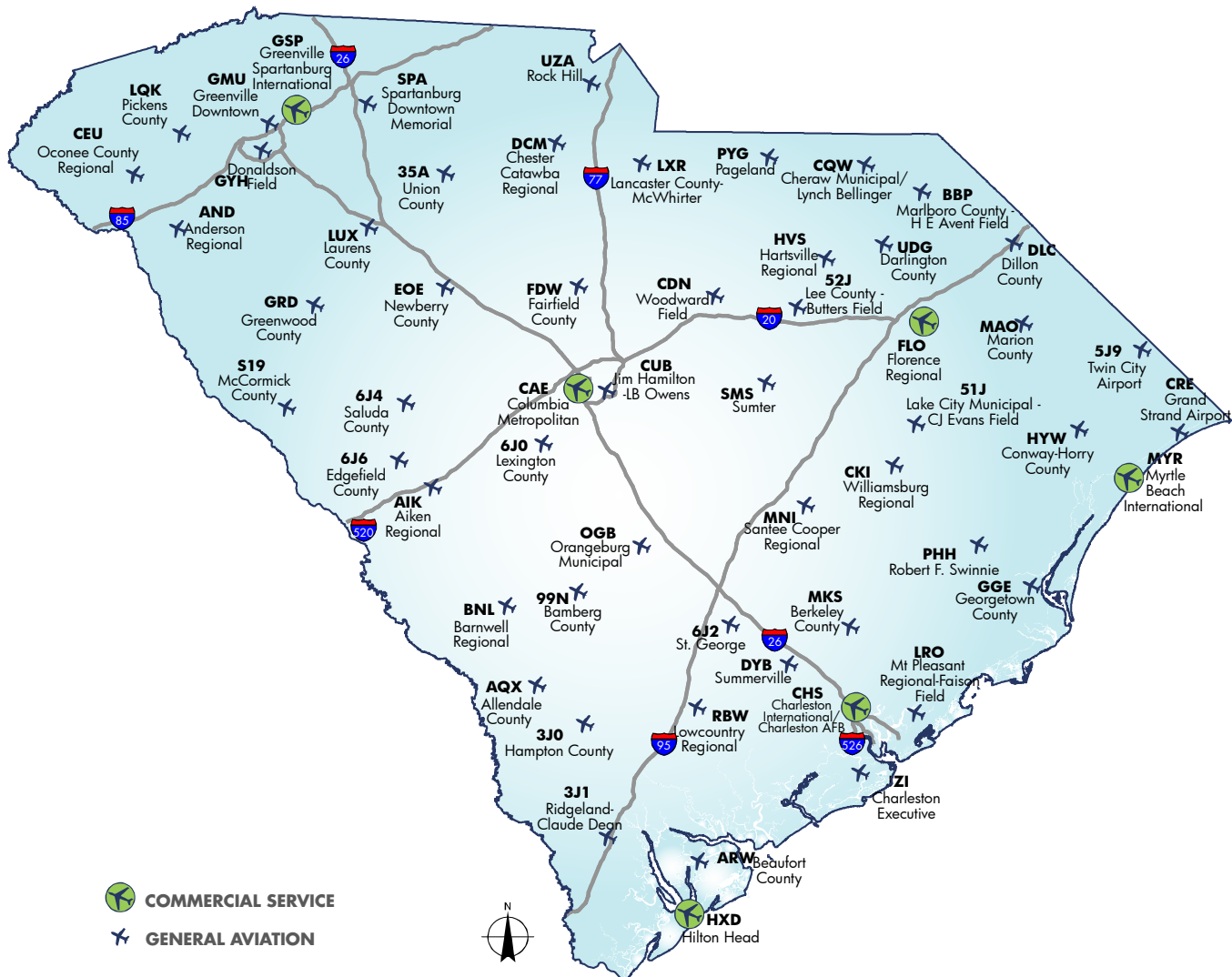




## OVERVIEW

South Carolina has a well-developed system of publicly owned commercial service and general aviation airports. Airports are essential to the state's transportation infrastructure and to many sectors of its diversified economy. To help guide the future development of South Carolina's airport system and to measure how that system contributes to the state's economy, the South Carolina Aeronautics Commission (SCAC) undertook comprehensive analyses to update its Statewide Aviation System Plan and Economic Impact Study.

Starting in the fall of 2016, SCAC, in partnership with the Federal Aviation Administration (FAA) and public airports in South Carolina, undertook steps to estimate the annual economic impact for all study airports and to identify how each airport should be developed to meet state objectives. Details on both studies can be obtained on SCAC's website: [www.scaeronautics.com](http://www.scaeronautics.com). This summary focuses on annual economic impacts associated with the state's public airport system. The summary also documents how aviation demand in South Carolina is expected to grow and how airports will need to be improved to meet established objectives for airport development and maintenance.





## STUDY RESULTS

SCAC's Statewide Economic Impact Study measured economic impacts associated with 51 public general aviation and six commercial airports. Statewide, total annual economic impacts from South Carolina's commercial and general aviation airports were estimated as follows:



This summary provides an overview of all airport-related economic impacts estimated in the SCAC study and of the process used to estimate the statewide annual economic impacts shown above.



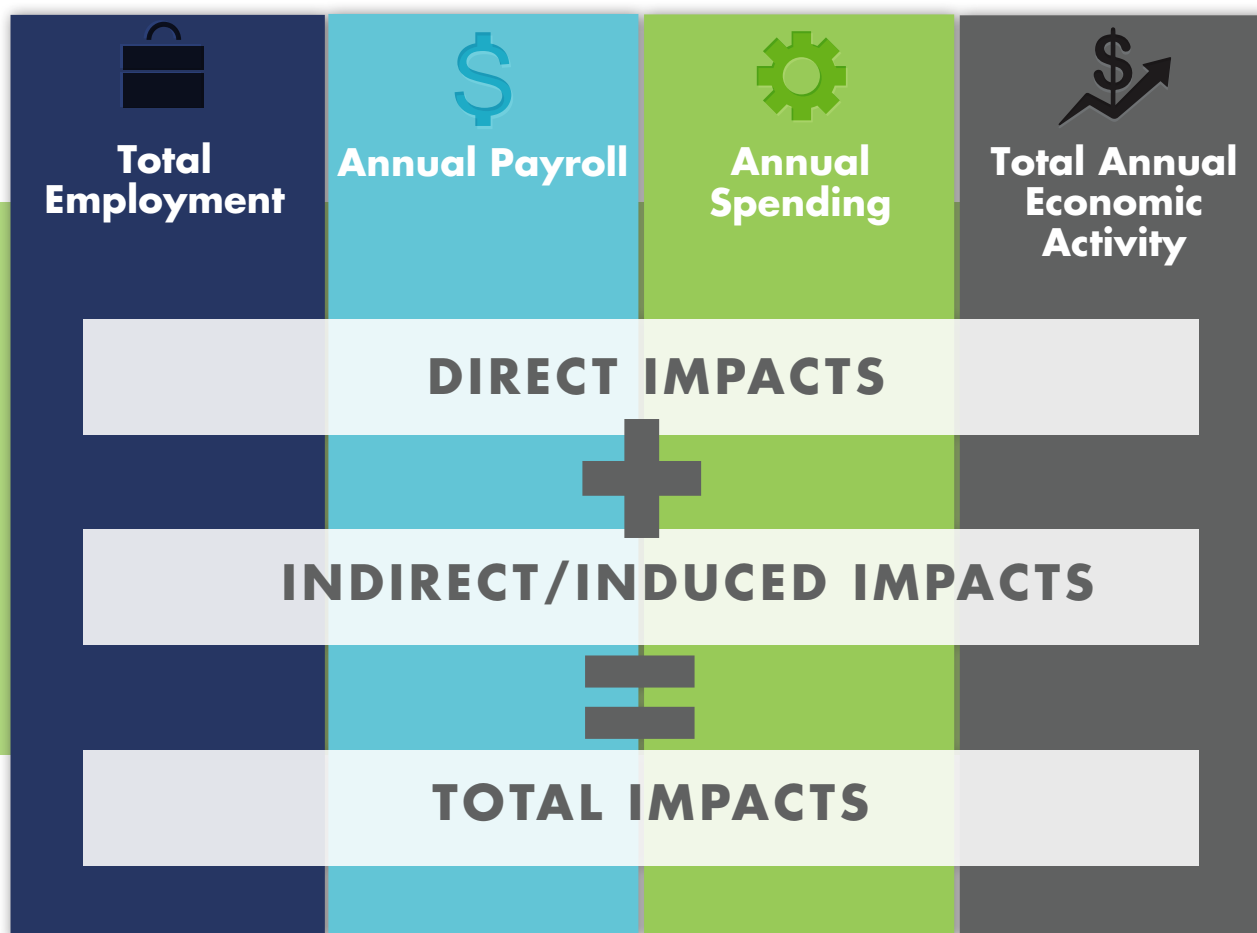


## APPROACH TO ESTIMATING ECONOMIC IMPACTS

Annual economic impacts for South Carolina’s airports were estimated using four measures: employment, payroll, spending, and economic activity. In this study, annual economic activity is the sum of annual payroll and annual spending. Economic impact studies, such as this, reflect a “snapshot” of conditions that exist at the time the study is conducted. The aviation industry is dynamic and constantly changing, and economic impacts fluctuate with change. The impacts reported in this summary offer evidence that South Carolina’s airports act as economic engines for their state and local economies, providing positive benefits year after year.

For each of the impact measures (employment, payroll, spending, and economic activity), the first step in the process was to collect direct impacts. Direct impacts presented in this report were collected specifically for this study through in-person meetings, phone interviews, and a variety of surveys.

IMPLAN, an FAA-recognized input/output econometric model, was used to estimate indirect and induced impacts. As direct impacts from the employment, payroll, spending, and economic activity categories enter South Carolina’s economy, direct impacts re-circulate, generating additional indirect and induced impacts through “multiplier” effects. Direct impacts, added to indirect and induced impacts, equal total annual economic impacts for all measures considered in this study.



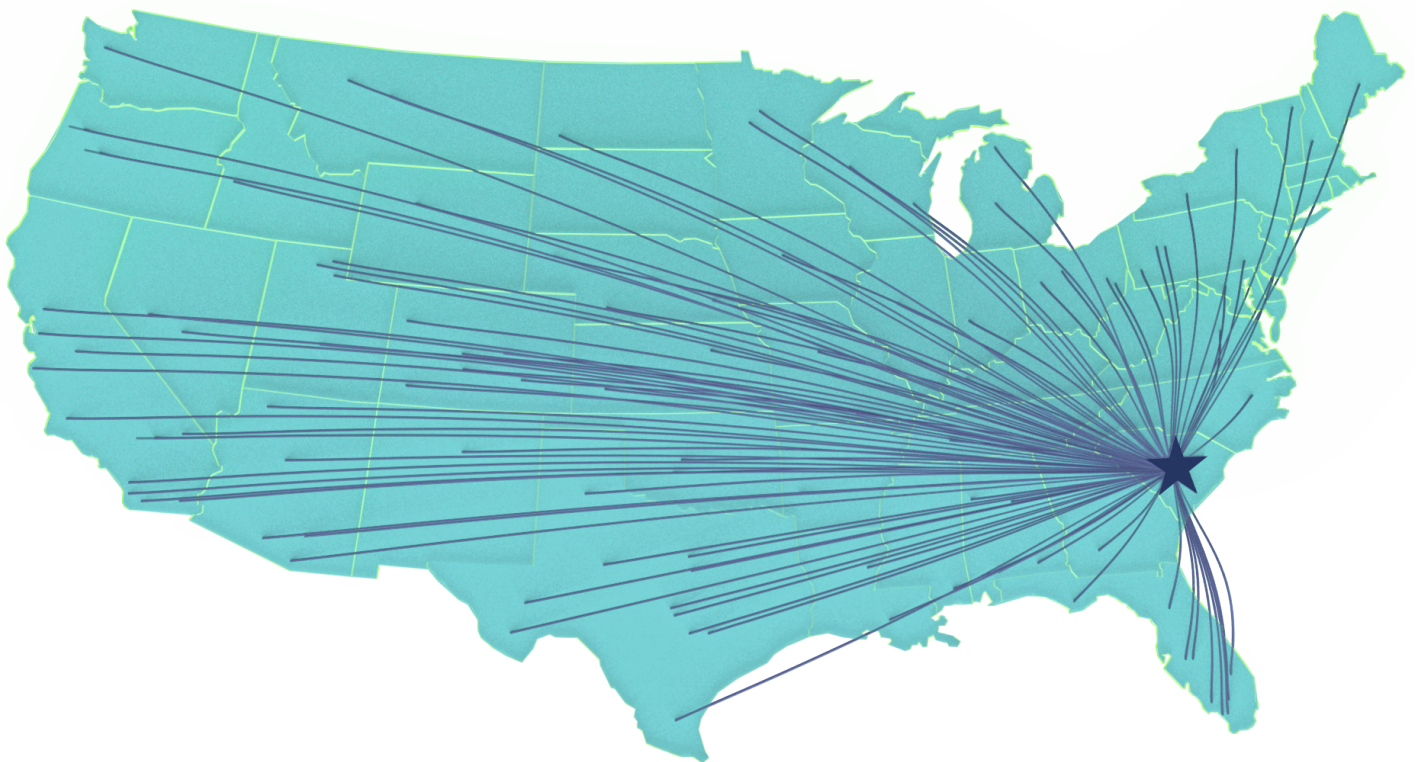


## ECONOMIC IMPACTS FROM SOUTH CAROLINA AIRPORTS

Annual economic impacts associated with six commercial and 51 public general aviation airports were estimated in SCAC's study. As applicable, annual economic impacts were estimated for each of the following:

- **Airport management**
- **Airport tenants**
- **Spending for capital projects**
- **Spending from visitors arriving on general aviation aircraft**
- **Spending from visitors arriving on a scheduled commercial airline flight**

The following sections provide information on total annual statewide economic impacts from each of these five categories.



*AIRPORTS IN SOUTH CAROLINA ARE IMPORTANT ECONOMIC ENGINES AND ESSENTIAL TO THE STATE'S TRANSPORTATION INFRASTRUCTURE. ACCORDING TO FAA FLIGHT RECORDS, ON ANY GIVEN DAY, COMMERCIAL AND GENERAL AVIATION AIRCRAFT ARE ARRIVING AND DEPARTING SOUTH CAROLINA AIRPORTS CONNECTING RESIDENTS, BUSINESSES, AND VISITORS ON A NON-STOP BASIS TO DESTINATIONS THROUGHOUT THE UNITED STATES, AS SHOWN ON THIS MAP.*

## TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM AIRPORT MANAGEMENT

Most of the 57 study airports have employees dedicated to the daily operation of an airport. In some instances, airport management employees are full-time; and in others, they are part-time or seasonal. Most airports in South Carolina are owned by a public municipality, such as a city or county. Consequently, many airports also have either full-time or part-time employees who support an airport's daily operation, without being located at the airport. Off-airport jobs are often found in categories such as maintenance, human resources, accounting, grants administration, and legal services. For some general aviation airports, the municipality owning the airport also functions as the Fixed Base Operator (FBO) providing services such as aircraft fueling.

In this study, for employment in all five impact categories, part-time and seasonal jobs were converted to full-time-equivalent jobs. This conversion was accomplished considering either the number of hours worked or the annual compensation for each less-than-full-time position.

The table here shows all annual impacts identified for the airport management function at South Carolina's general aviation and commercial airports. Annual economic activity, shown here, represents total annual airport spending for goods and services to operate the airport, plus annual payroll. Indirect and induced impacts were estimated using the IMPLAN model.

### TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM AIRPORT MANAGEMENT

	DIRECT	INDIRECT/INDUCED	TOTAL
EMPLOYMENT	707	667	1,374
PAYROLL	\$33,490,180	\$31,196,550	\$64,686,730
SPENDING	\$37,927,620	\$31,191,460	\$69,119,080
ECONOMIC ACTIVITY	\$71,417,800	\$62,388,010	\$133,805,810







## TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM AIRPORT TENANTS

Many of the airports in South Carolina have tenants or businesses that are engaged in the provision of aviation services, supporting aircraft, or providing services to airport customers. South Carolina airports have a wide range of on-airport aviation tenants. Examples include, but are not limited to, aircraft maintenance, aircraft charter and rental, commercial airlines, concessionaires, flight instructors, emergency medical operators, state and federal entities, and aircraft manufacturers.

The two largest tenants in the state are Boeing at Charleston International Airport and Lockheed Martin at Donaldson Field. Boeing has 6,943 direct employees and Lockheed Martin has 500. Donaldson Field has the highest annual economic

impact among all South Carolina general aviation airports, and Lockheed Martin is responsible for just under 70% of the airport's annual economic benefit. Some airport tenants only employ one or two individuals, while others employ hundreds.

Statewide, there are over 320 different aviation-related tenants located at the 57 study airports. Each tenant was contacted to secure information on activities at their host airport. Information gathered through this study was used to estimate the annual economic impact associated with each tenant. Total annual statewide economic impacts for all tenants operating at all study airports are shown here.

### TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM AIRPORT TENANTS

	DIRECT	INDIRECT/INDUCED	TOTAL
EMPLOYMENT	5,262	5,725	10,987
PAYROLL	\$273,065,330	\$222,111,610	\$495,176,940
SPENDING	\$640,231,360	\$462,149,850	\$1,102,381,210
ECONOMIC ACTIVITY	\$913,296,690	\$684,261,460	\$1,597,558,150

*NOTE: THESE IMPACTS DO NOT INCLUDE THOSE ASSOCIATED WITH THE BOEING COMPANY IN CHARLESTON*

## TOTAL ANNUAL ECONOMIC IMPACT FROM THE BOEING COMPANY - CHARLESTON

Boeing is a mainstay in the nation’s commercial airline industry. While the company’s corporate headquarters are located in Chicago and they have various locations throughout the United States, Charleston serves as one of the company’s primary sites for aircraft assembly. Charleston is the location for final assembly of Boeing’s 787 Dreamliner; and from Charleston, this plane is delivered to customers around the world.

Because of the scope and magnitude of this aviation tenant, its annual economic impacts are reported separately in SCAC’s study. A significant portion of Boeing operations are located at Charleston International Airport, but Boeing’s economic impacts, as estimated in SCAC’s statewide study, are shown separately from other aviation tenants, both statewide and airport-specific. Impacts for the Boeing Company, as reported here, include impacts from the company’s day-to-day operation as well as those associated with significant capital investment made by Boeing to house their operations at Charleston International Airport.

### TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM THE BOEING COMPANY

	DIRECT	INDIRECT/INDUCED	TOTAL
<b>EMPLOYMENT</b>	7,517	14,256	21,773
<b>PAYROLL</b>	\$991,062,310	\$526,957,310	\$1,518,019,620
<b>SPENDING</b>	\$1,808,459,500	\$852,639,010	\$2,661,098,510
<b>ECONOMIC ACTIVITY</b>	\$2,799,521,810	\$1,379,596,320	\$4,179,118,130

*NOTE: INCLUDES BOTH TENANT AND CAPITAL INVESTMENT IMPACTS*





## TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM CAPITAL INVESTMENT

Each year through federal, state, local, and private investment, airports in South Carolina undertake various capital improvement projects. These projects range from minor investments needed to accomplish runway maintenance to significant investment to build new runways and terminal buildings. When goods, materials, and services are purchased to implement capital projects, this spending supports employment and the payroll associated with the employment.

Economic impacts in this category have the propensity to change as capital investment spending at South Carolina airports often varies significantly year-to-year. An airport might complete a major project and then not undertake a project of similar magnitude for several years. If the economic impact snapshot takes place at a time of high capital investment, economic impacts will be higher than in a period when limited investment occurs.

To account for changes in annual capital investment, this study considered each airport’s average annual spending primarily for a multi-year historic period. Average annual spending was used to estimate economic impacts in this category for all South Carolina airports. Research completed to support SCAC’s study showed that on average, direct average capital investment (materials and labor) for all study airports has been about \$130 million. Using average annual capital investment, the IMPLAN model provides ratios to estimate employment and payroll supported by capital investment. Statewide average annual economic impacts in the capital investment category are shown here.

### TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM CAPITAL INVESTMENT

	DIRECT	INDIRECT/INDUCED	TOTAL
<b>EMPLOYMENT</b>	948	619	1,567
<b>PAYROLL</b>	\$45,642,710	\$26,746,470	\$72,389,180
<b>SPENDING</b>	\$133,414,450	\$86,348,800	\$219,763,250
<b>ECONOMIC ACTIVITY</b>	\$179,057,160	\$113,095,270	\$292,152,430

*NOTE: THESE IMPACTS DO NOT INCLUDE THOSE ASSOCIATED WITH THE BOEING COMPANY IN CHARLESTON*



## TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM GENERAL AVIATION VISITOR SPENDING

This study estimates that approximately 532,000 visitors to South Carolina arrive each year on general aviation aircraft. This estimate of annual general aviation visitors was derived using information supplied by study airports, FAA data, and SCAC input. Visitors come to South Carolina on general aviation aircraft for many reasons, including business trips, conventions, and personal/leisure travel.

For this study, airports and FBOs distributed surveys to visitors who arrive on general aviation planes. Responses to this survey helped to identify information on trip purpose, length of stay, and spending for lodging, food, ground transportation, retail purchase, and entertainment. Visitor spending patterns differ, and spending for business trips is different than that for leisure related travel. Visitor spending patterns also vary based on the relative size of the community the traveler is visiting. Surveys confirmed that many general aviation visitors stay only for the day or even a few hours. These shorter trips limit visitor spending, but day trips on general aviation planes support efficient business travel.

Visitor spending helps to support many jobs in the hospitality industry and the payroll associated with these jobs. Once direct annual general aviation visitor spending is estimated, the IMPLAN model provides information to estimate the number of jobs and the payroll that visitor spending supports. Statewide average annual impacts from general aviation visitor spending are shown here.

### TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM GENERAL AVIATION VISITOR SPENDING

	DIRECT	INDIRECT/INDUCED	TOTAL
<b>EMPLOYMENT</b>	<b>3,377</b>	<b>1,213</b>	<b>4,590</b>
<b>PAYROLL</b>	<b>\$87,810,860</b>	<b>\$49,946,330</b>	<b>\$137,757,190</b>
<b>SPENDING</b>	<b>\$228,613,540</b>	<b>\$161,517,590</b>	<b>\$390,131,130</b>
<b>ECONOMIC ACTIVITY</b>	<b>\$316,424,400</b>	<b>\$211,463,920</b>	<b>\$527,888,320</b>



## TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM COMMERCIAL VISITOR SPENDING

South Carolina has six airports that have scheduled commercial airline service. Airport records indicate that, combined, South Carolina’s commercial airports serve a total of 4.7 million boarding passengers or enplanements. Some of these enplanements are residents and some are visitors. The United States Department of Transportation (USDOT) estimates that more than 2.6 million visitors arrive annually in South Carolina on a commercial airline flight. Communities served by commercial airports in South Carolina are important destinations for business travelers, but the state also has some the nation’s and the world’s major tourist destinations.

South Carolina’s commercial airports helped to conduct surveys that collected information from visitors regarding their trip purpose, trip duration, and average spending per trip. Estimated spending patterns show that the roughly 2.6 million visitors to South Carolina who arrive on a commercial airline flight had annual spending of over \$4.1 billion. This estimate represents direct spending for lodging, food, ground transportation, entertainment, retail spending, and other purchases. As with spending associated with general aviation visitors, the IMPLAN model was used to identify jobs and payroll primarily in the state’s hospitality industry supported by commercial visitor spending. Total estimated annual economic impacts associated with commercial airline visitors are shown here.

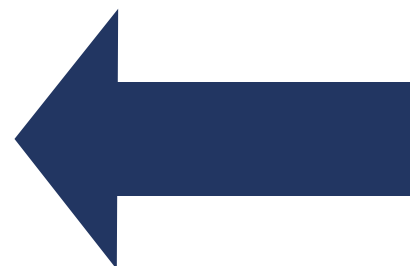
### TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FROM COMMERCIAL VISITOR SPENDING

AIRPORT NAME	EMPLOYMENT	ANNUAL PAYROLL	ANNUAL SPENDING	ANNUAL ECONOMIC ACTIVITY
CHARLESTON INTERNATIONAL AIRPORT	45,598	\$1,430,159,240	\$3,950,259,450	\$5,380,418,690
COLUMBIA METROPOLITAN AIRPORT	4,495	\$121,673,530	\$371,430,610	\$493,104,140
FLORENCE REGIONAL AIRPORT	194	\$4,509,960	\$14,746,180	\$19,256,140
GREENVILLE-SPARTANBURG INTERNATIONAL AIRPORT (ROGER MILLIKEN FIELD)	8,081	\$235,827,310	\$711,407,830	\$947,235,140
HILTON HEAD AIRPORT	626	\$21,305,110	\$59,455,450	\$80,760,560
MYRTLE BEACH INTERNATIONAL AIRPORT	23,474	\$688,803,990	\$2,003,376,340	\$2,692,180,330
<b>TOTAL FOR ALL COMMERCIAL AIRPORTS</b>	<b>82,468</b>	<b>\$2,502,279,140</b>	<b>\$7,110,675,860</b>	<b>\$9,612,955,000</b>

## SUMMARY OF TOTAL ANNUAL ECONOMIC IMPACTS FROM SOUTH CAROLINA AIRPORTS

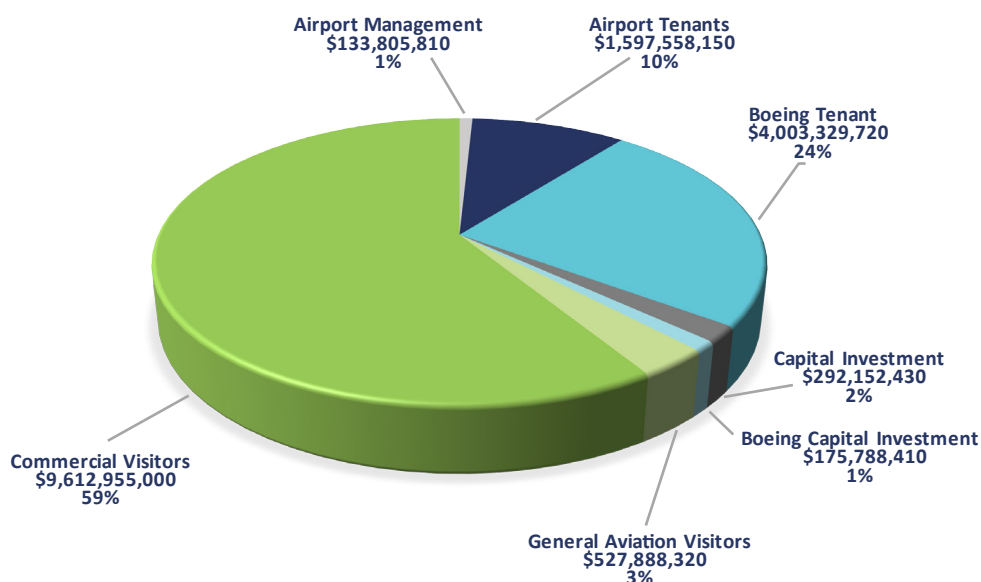
As discussed, the 57 public general aviation and commercial airports in South Carolina have economic impacts associated with one or more of the following categories: airport management, airport tenants, capital investment, general aviation visitor spending, and/or commercial visitor spending. The information below shows total annual statewide economic impacts for all five impact categories. When direct and indirect/induced impacts for all categories are considered, the South Carolina airports:

- Support a total of 122,759 jobs
- Support annual payroll estimated at \$4.8 billion
- Support annual spending estimated at \$11.5 billion



Subsequent pages of this summary show the estimated annual economic impact for each airport included in the SCAC analysis. It is important to remember that not all airports have activities that support impacts in each of the five categories analyzed in this research and the total impact, shown here, includes all direct, indirect, and induced impacts.

### TOTAL ANNUAL ECONOMIC ACTIVITY BY SECTOR OF CONTRIBUTION



**TOTAL ANNUAL ECONOMIC ACTIVITY: \$16,343,477,840**



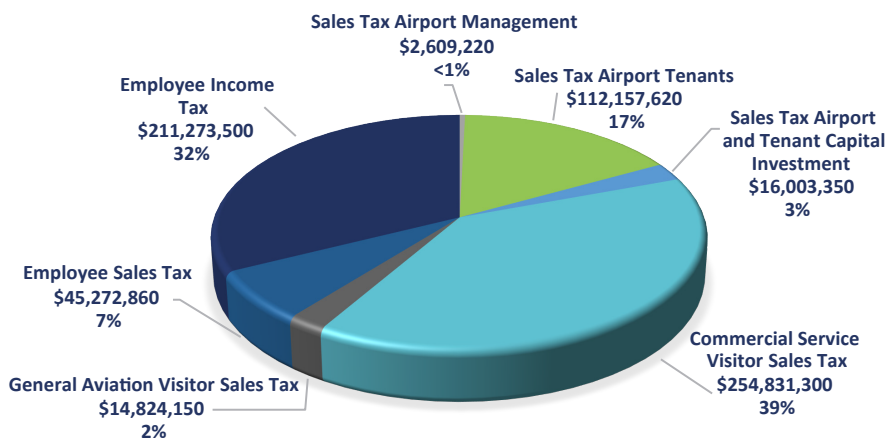


## STATE TAX REVENUES FROM AIRPORT-SUPPORTED ACTIVITIES

As documented in this summary, South Carolina airports have a significant annual economic impact. For all measures considered in SCAC’s analysis, this annual impact is estimated at \$16.3 billion. In addition, airports and the activities they support are also important contributors to state and local tax revenues. Aviation-related tax revenues are associated with sales tax events as well as state income tax payments. Airport-related taxable events include the following:

- When visitors come to South Carolina by air, they pay sales tax on their spending for lodging, food, rental cars, entertainment, and retail purchases.
- Airports and their tenants have annual purchases for supplies to operate their businesses; some of these annual purchases contribute to sales tax revenues.
- When capital improvement projects are implemented, purchases made for materials needed for construction are subject to sales tax.
- This study estimates that airport management, airport tenants, capital investment, and visitor spending at all 57 study airports supports a total of over 78,000 direct jobs. Each year, these employees spend a portion of their income on items subject to sales tax.
- The direct employees supported by South Carolina airports also pay state income tax.

When these taxable events are considered, it is estimated that airports and airport-supported activities contribute almost \$657 million in annual state and local tax revenues. It is important to note that this estimate is based only on direct economic impacts identified in this analysis. Tax revenues were not estimated for the portion of South Carolina’s estimated annual economic impact associated with indirect/induced impacts. Municipalities throughout the state also levy a property tax on aircraft; these taxes were not identified as part of this analysis and are not included in tax revenues documented here.



**TOTAL TAX REVENUES**  
**\$656,972,000**

## TOTAL ANNUAL AIRPORT ECONOMIC IMPACTS

CITY	AIRPORT NAME	TOTAL EMPLOYMENT	TOTAL ANNUAL PAYROLL	TOTAL ANNUAL SPENDING	TOTAL ANNUAL ECONOMIC ACTIVITY	TOTAL ANNUAL TAX REVENUE
CHARLESTON	CHARLESTON INTERNATIONAL AIRPORT	72,472	\$3,146,588,160	\$7,008,682,620	\$10,155,270,780	\$408,960,650
COLUMBIA	COLUMBIA METROPOLITAN AIRPORT	6,642	\$202,155,960	\$545,855,490	\$748,011,450	\$30,935,520
FLORENCE	FLORENCE REGIONAL AIRPORT	411	\$13,298,590	\$33,410,310	\$46,708,900	\$2,108,100
GREER	GREENVILLE-SPARTANBURG INTERNATIONAL (ROGER MILLIKEN FIELD)	10,317	\$325,861,360	\$894,906,920	\$1,220,768,280	\$48,921,860
HILTON HEAD ISLAND	HILTON HEAD AIRPORT	1,286	\$44,187,000	\$122,044,440	\$166,231,440	\$6,833,690
MYRTLE BEACH	MYRTLE BEACH INTERNATIONAL AIRPORT	25,781	\$778,878,690	\$2,193,821,310	\$2,972,700,000	\$119,872,710
<b>TOTAL COMMERCIAL SERVICE AIRPORTS</b>		<b>116,909</b>	<b>\$4,510,969,760</b>	<b>\$10,798,721,090</b>	<b>\$15,309,690,850</b>	<b>\$617,632,530</b>
AIKEN	AIKEN REGIONAL AIRPORT	178	\$5,286,030	\$19,699,640	\$24,985,670	\$1,051,640
ALLENDALE	ALLENDALE COUNTY AIRPORT	15	\$534,000	\$1,252,800	\$1,786,800	\$79,840
ANDERSON	ANDERSON REGIONAL AIRPORT	107	\$3,824,430	\$9,142,680	\$12,967,110	\$554,380
ANDREWS	ROBERT F. SWINNIE AIRPORT	6	\$242,180	\$618,170	\$860,350	\$34,720
BAMBERG	BAMBERG COUNTY AIRPORT	2	\$90,360	\$129,250	\$219,610	\$7,920
BARNWELL	BARNWELL REGIONAL AIRPORT	15	\$537,760	\$984,300	\$1,522,060	\$64,500
BEAUFORT	BEAUFORT COUNTY AIRPORT	110	\$3,928,920	\$8,595,860	\$12,524,780	\$512,500
BENNETTSVILLE	MARLBORO COUNTY AIRPORT - H E AVENT FIELD	9	\$286,910	\$905,320	\$1,192,230	\$52,120
BISHOPVILLE	LEE COUNTY AIRPORT-BUTTERS FIELD	6	\$256,930	\$484,550	\$741,480	\$33,830
CAMDEN	WOODWARD FIELD	61	\$2,535,470	\$4,775,610	\$7,311,080	\$304,170
CHARLESTON	CHARLESTON EXECUTIVE AIRPORT	434	\$14,539,430	\$40,087,520	\$54,626,950	\$2,362,200
CHERAW	CHERAW MUNICIPAL/LYNCH BELLINGER FIELD	14	\$533,900	\$1,410,290	\$1,944,190	\$85,060
CHESTER	CHESTER CATAWBA REGIONAL AIRPORT	49	\$1,685,600	\$3,495,660	\$5,181,260	\$218,560
CLEMSON	OCONEE COUNTY REGIONAL AIRPORT	94	\$3,277,160	\$7,620,120	\$10,897,280	\$453,360
COLUMBIA	JIM HAMILTON -LB OWENS AIRPORT	116	\$4,029,500	\$12,090,710	\$16,120,210	\$688,900
CONWAY	CONWAY-HORRY COUNTY AIRPORT	72	\$3,239,860	\$5,856,660	\$9,096,520	\$382,660
DARLINGTON	DARLINGTON COUNTY AIRPORT	34	\$1,535,300	\$2,996,120	\$4,531,420	\$203,800
DILLON	DILLON COUNTY AIRPORT	1	\$49,560	\$67,610	\$117,170	\$4,400
GEORGETOWN	GEORGETOWN COUNTY AIRPORT	157	\$5,070,860	\$14,430,880	\$19,501,740	\$804,350
GREENVILLE	GREENVILLE DOWNTOWN AIRPORT	547	\$24,975,210	\$43,871,670	\$68,846,880	\$2,695,320
GREENVILLE	DONALDSON FIELD	1,872	\$129,265,380	\$393,141,590	\$522,406,970	\$18,035,650
GREENWOOD	GREENWOOD COUNTY AIRPORT	54	\$2,119,210	\$5,598,250	\$7,717,460	\$289,290

## TOTAL ANNUAL AIRPORT ECONOMIC IMPACTS (CONTINUED)

CITY	AIRPORT NAME	TOTAL EMPLOYMENT	TOTAL ANNUAL PAYROLL	TOTAL ANNUAL SPENDING	TOTAL ANNUAL ECONOMIC ACTIVITY	TOTAL ANNUAL TAX REVENUE
HAMPTON	HAMPTON COUNTY AIRPORT	30	\$1,532,870	\$1,857,060	\$3,389,930	\$149,570
HARTSVILLE	HARTSVILLE REGIONAL AIRPORT	18	\$532,340	\$1,575,110	\$2,107,450	\$92,170
KINGSTREE	WILLIAMSBURG REGIONAL AIRPORT	18	\$751,970	\$2,388,640	\$3,140,610	\$146,730
LAKE CITY	LAKE CITY MUNICIPAL AIRPORT CJ EVANS FIELD	1	\$53,090	\$62,910	\$116,000	\$2,590
LANCASTER	LANCASTER COUNTY-MCWHIRTER FIELD	34	\$1,209,400	\$3,307,880	\$4,517,280	\$200,990
LAURENS	LAURENS COUNTY AIRPORT	18	\$703,840	\$1,453,570	\$2,157,410	\$92,060
LORIS	TWIN CITY AIRPORT	2	\$70,450	\$125,520	\$195,970	\$7,850
MANNING	SANTEE COOPER REGIONAL AIRPORT	15	\$459,630	\$1,643,860	\$2,103,490	\$88,830
MARION	MARION COUNTY AIRPORT	34	\$1,701,660	\$2,234,240	\$3,935,900	\$176,080
MCCORMICK	MCCORMICK COUNTY AIRPORT	1	\$55,850	\$39,270	\$95,120	\$3,610
MONCK'S CORNER	BERKELEY COUNTY AIRPORT	51	\$2,090,190	\$4,893,160	\$6,983,350	\$295,590
MOUNT PLEASANT	MT PLEASANT REGIONAL-FAISON FIELD	77	\$2,588,200	\$6,205,970	\$8,794,170	\$384,860
NEWBERRY	NEWBERRY COUNTY AIRPORT	36	\$1,471,130	\$4,085,140	\$5,556,270	\$241,620
NORTH MYRTLE BEACH	GRAND STRAND AIRPORT	385	\$12,334,580	\$31,173,930	\$43,508,510	\$1,824,820
ORANGEBURG	ORANGEBURG MUNICIPAL AIRPORT	44	\$1,558,770	\$3,812,550	\$5,371,320	\$220,300
PAGELAND	PAGELAND AIRPORT	5	\$195,360	\$498,670	\$694,030	\$32,110
PELION	LEXINGTON COUNTY AIRPORT	11	\$451,530	\$1,392,560	\$1,844,090	\$79,290
PICKENS	PICKENS COUNTY AIRPORT	61	\$2,091,620	\$4,667,700	\$6,759,320	\$285,760
RIDGELAND	RIDGELAND-CLAUDE DEAN AIRPORT	54	\$2,141,690	\$6,142,280	\$8,283,970	\$382,450
ROCK HILL	ROCK HILL/YORK CO/BRYANT FIELD	224	\$9,973,210	\$30,560,820	\$40,534,030	\$1,632,110
SALUDA	SALUDA COUNTY AIRPORT	6	\$180,120	\$428,580	\$608,700	\$28,310
SPARTANBURG	SPARTANBURG DOWNTOWN MEMORIAL AIRPORT	328	\$12,487,820	\$29,308,880	\$41,796,700	\$1,621,250
ST GEORGE	ST. GEORGE AIRPORT	3	\$95,310	\$192,370	\$287,680	\$10,600
SUMMERVILLE	SUMMERVILLE AIRPORT	44	\$1,603,900	\$4,010,280	\$5,614,180	\$234,460
SUMTER	SUMTER AIRPORT	120	\$5,631,230	\$11,467,390	\$17,098,620	\$767,200
TRENTON	EDGEFIELD COUNTY AIRPORT	2	\$50,070	\$88,170	\$138,240	\$4,970
UNION	UNION COUNTY, TROY SHELTON FIELD	15	\$568,620	\$1,040,800	\$1,609,420	\$61,840
WALTERBORO	LOWCOUNTRY REGIONAL AIRPORT	227	\$7,649,500	\$18,789,530	\$26,439,030	\$1,153,050
WINNSBORO	FAIRFIELD COUNTY AIRPORT	33	\$1,261,130	\$3,745,850	\$5,006,980	\$199,230
<b>TOTAL GENERAL AVIATION AIRPORTS</b>		5,850	\$279,339,040	\$754,447,950	\$1,033,786,990	\$39,339,470
<b>TOTAL ALL AIRPORTS</b>		122,759	\$4,790,308,800	\$11,553,169,040	\$16,343,477,840	\$656,972,000

## PLANNING FOR SOUTH CAROLINA'S AIRPORT SYSTEM

As documented, airports in South Carolina help support a significant economic impact estimated at a total of \$16.3 billion each year. This is an annual impact and one that will continue as long as South Carolina continues to have a healthy system of public general aviation and commercial service airports. To help ensure that South Carolina does have a first-class airport system that supports resident, business, and visitor needs, SCAC also updated their Statewide Aviation System Plan.

Results from the System Plan Update provide SCAC with a blueprint for maintaining and expanding, as needed, the state airport system so that airports can continue to be a key contributor to many facets of the state's economy.



**INVENTORY**



**FORECAST**



**SYSTEM  
EVALUATION**



**AIRPORT  
ROLES**



**FACILITY/  
SERVICE  
OBJECTIVES**



**COSTS**



**RECOMMENDED  
PLAN**



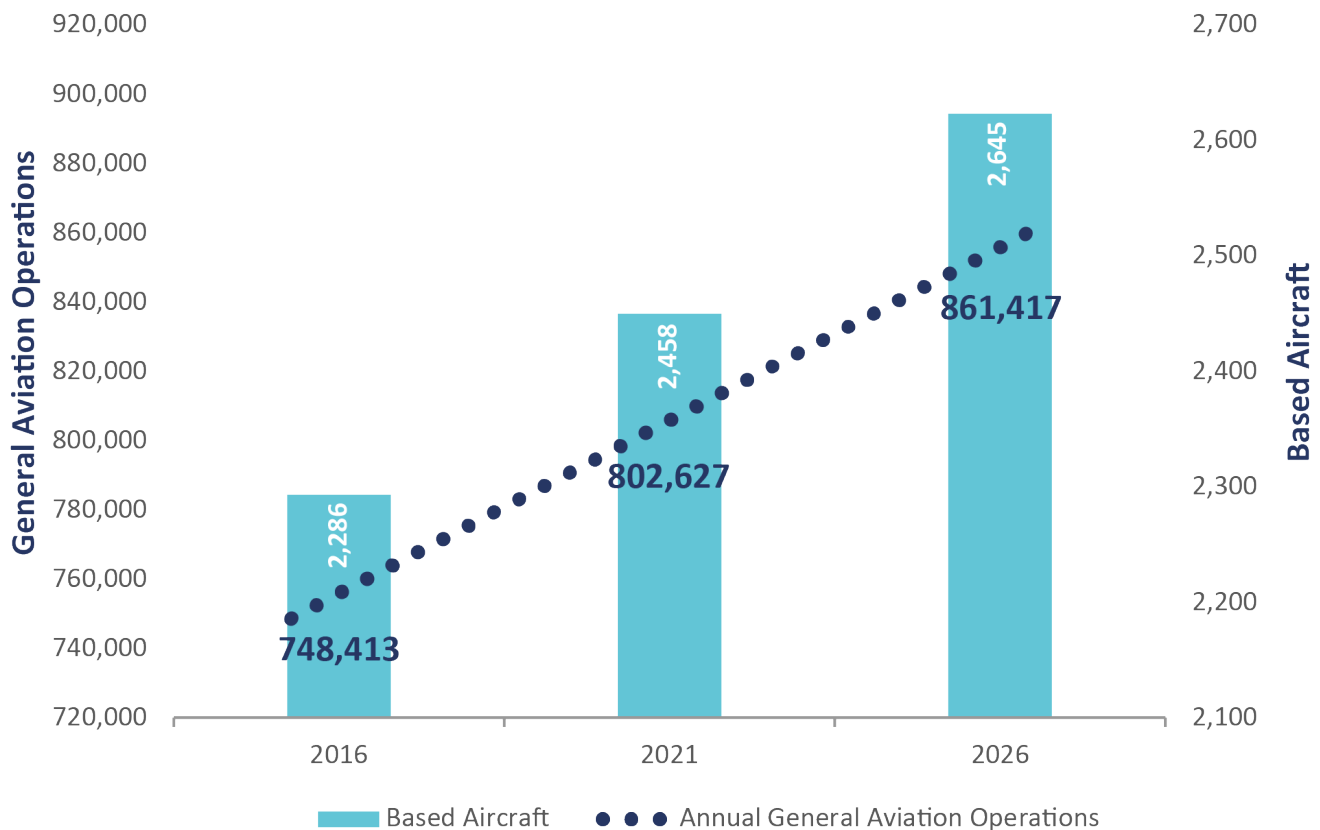


## GENERAL AVIATION ACTIVITY

General aviation refers to all segments of aviation that are not military or commercial. Over the past several years, general aviation activity, not just in South Carolina but throughout the United States, has declined. High costs for fuel, aircraft insurance, and securing a private pilot's license, along with several national economic downturns, all contributed to a contraction in general aviation demand.

All South Carolina airports serve general aviation activity, and tower counts at the busier airports confirm that general aviation operations fell between 2007 and 2014. More recently, however, tower activity shows general aviation demand is growing. A healthier U.S. economy and South Carolina's particularly strong state economy have supported this rebound. According to the FAA, business aviation is the fastest growing segment of the general aviation industry. South Carolina's diversified business base helps to support growth in general aviation demand.

For South Carolina's Aviation System Plan, projections of both based aircraft and annual general aviation operations were prepared. Average annual growth for these two demand components is expected to exceed the national average. Projecting general aviation in South Carolina is complicated. There are over 131 private-use airports in the state; many aircraft stored at these facilities also use facilities and services at the public airports. Also, South Carolina has many general aviation aircraft that are in the state on a seasonal basis. The system plan indicates that most South Carolina airports can expect some growth in general aviation activity over the next 10 years.

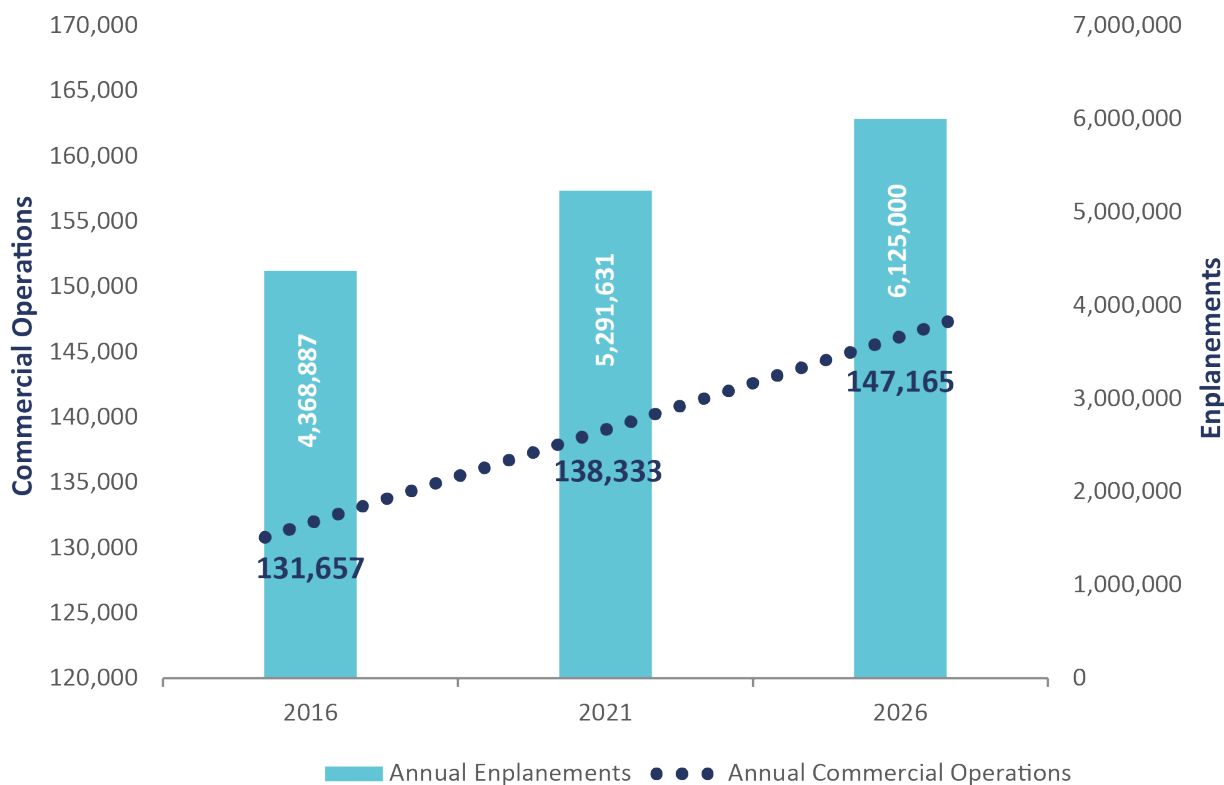




## COMMERCIAL AIRLINE ACTIVITY

Since SCAC last updated their state system plan in 2008, the number of network carriers providing scheduled passenger service has declined as Delta merged with Northwest, Continental merged with United, and US Airways merged with American. Not only are there fewer airline choices in some markets, but to be more profitable, carriers are flying larger planes with higher seating capacities. In some cases, 50-seat aircraft have been replaced with 100-seat aircraft; one airline departure has taken the place of two, leading to reduced flight frequency.

For the most part, South Carolina's commercial airports have held their own, and the six commercial airports have collectively experienced increasing passenger demand. Since carriers are using larger planes, and will continue to do so, fewer flights will carry as many or even more passengers. Commercial airline operations are expected to grow, but at a lower average annual rate than commercial passenger enplanements.



## SYSTEM PERFORMANCE

To evaluate South Carolina’s airport system, a series of performance measures were established. The measures are generally tied to how “accessible” certain features of the airport system are. The system evaluation task was conducted using drive-time analysis supported by a geographic information system (GIS). The evaluation process considered not only accessibility to South Carolina airports exhibiting certain characteristics, but also, according to FAA guidelines, considered accessibility provided by nearby airports in neighboring states. System accessibility reported in the accompanying chart considers both South Carolina and nearby airports.



SYSTEM PERFORMANCE MEASURE	SOUTH CAROLINA RESIDENT ACCESSIBILITY
30-Minute Accessibility South Carolina and Nearby Airports Meeting Medium Jet NBAA* Business Airport Characteristics	78%
60-Minute Accessibility to South Carolina and Nearby Commercial Airports	88%
90-Minute Accessibility to South Carolina and Nearby Commercial Airports	99%
30-Minute Accessibility to South Carolina and Nearby Airports with a 5,000-Foot Runway	83%
30-Minute Accessibility to a South Carolina or Nearby Airport with an Approach Supported by Vertical Guidance	89%
30-Minute Accessibility to a South Carolina or Nearby Airport with a Published Approach	92%
30-Minute Accessibility to Any South Carolina Airport or Nearby Airport	93%

\* NBAA = NATIONAL BUSINESS AIRCRAFT ASSOCIATION

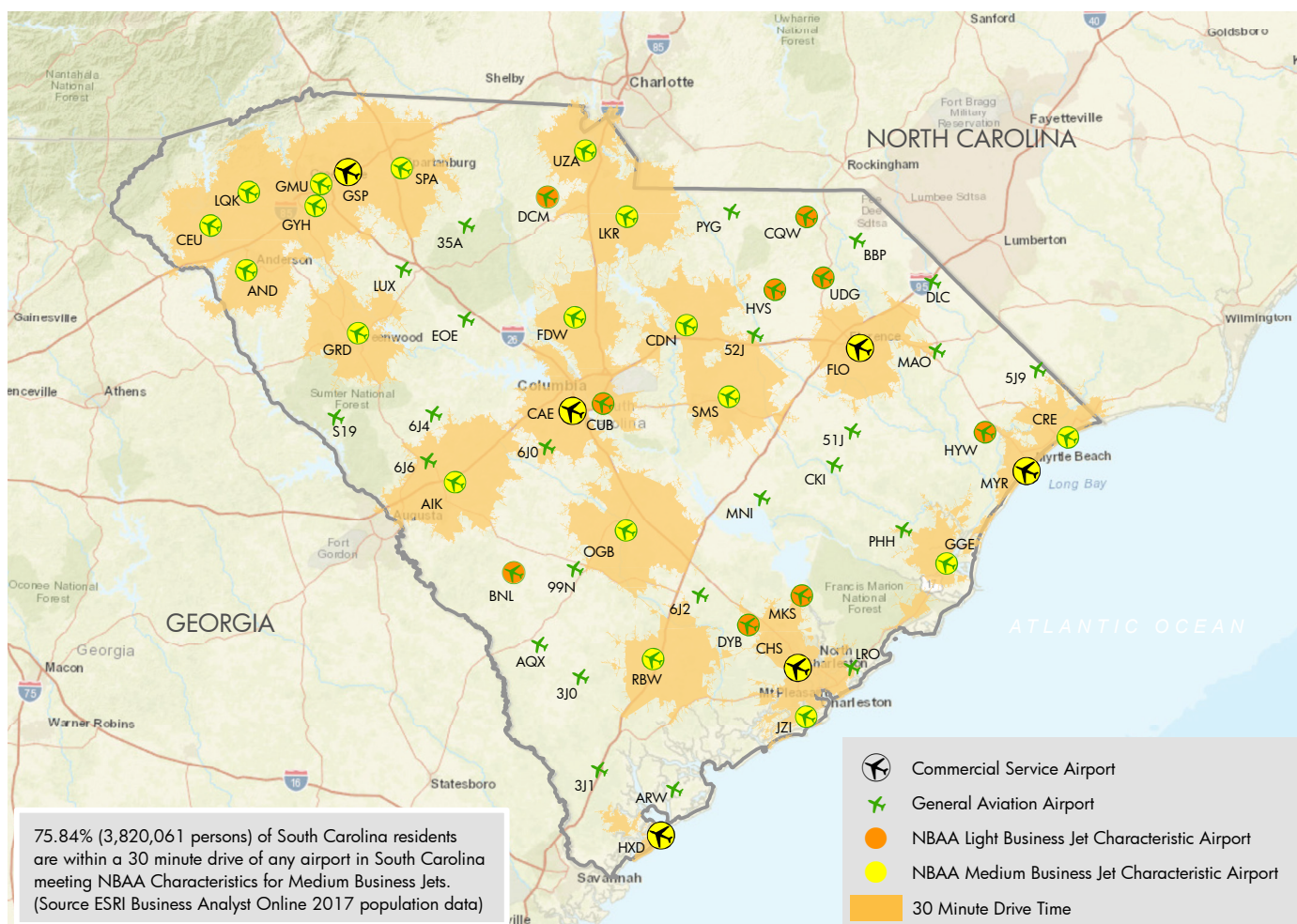


## ACCESSIBILITY TO BUSINESS AIRPORTS

One important measure considered as part of the system evaluation process was accessibility to airports exhibiting characteristics established by the National Business Aircraft Association (NBAA) for a “business” airport. The accessibility analysis considered airports equipped to meet the needs of medium weight business jets; 24 of the 57 South Carolina airports (42%) meet NBAA characteristics for accommodating medium jets. The system evaluation identified additional airports in South Carolina that meet NBAA business characteristics for accommodating light business jets. When both categories of the NBAA business airports are considered, 33 out of the 57 system airports (58%) support aircraft typically flown by business operators. The system is well-positioned to meet the needs of South Carolina and visiting businesses that rely on general aviation to improve their efficiency.

NBAA BUSINESS AIRPORT CHARACTERISTICS	
MEDIUM BUSINESS JETS	LIGHT BUSINESS JETS
Up to 50,000 lbs	Up to 25,000 lbs
Runway length 5,000 ft	Runway length 4,000 ft
Medium Intensity Runway Lighting	Medium Intensity Runway Lighting
Runway width 100 ft	Runway width 75 ft
AWOS	AWOS
ILS or LPV approach	ILS or LPV approach
Jet Fuel	Jet Fuel
FBO/aircraft maintenance	FBO/aircraft maintenance

### SELECT NBAA CHARACTERISTICS FOR BUSINESS AIRPORTS ACCOMMODATING MEDIUM & LIGHT BUSINESS JETS





## ACCESSIBILITY TO AIRPORTS WITH SCHEDULED COMMERCIAL AIRLINE SERVICE

Another important performance measure is accessibility to an airport with scheduled airline service. Commercial airline service is essential to businesses throughout the state, and South Carolina's leisure markets thrive because visitors have convenient air access. The commercial airline industry has experienced significant transformation, particularly when it comes to the consolidation of carriers classified as legacy or network carriers. At the same time these carriers have been consolidating, new ultra-low-fare carriers have been emerging.

In recent years, the airline industry in the United States has experienced unparalleled profitability. Much of the carriers' financial success is attributed to carriers exiting markets where profits and yields were low, while at the same time cutting back on the number of seats departing each airport. Fewer departing seats increases aircraft load factors leading to higher profits. Airlines continue to seek new avenues for increasing their profits, and some are abandoning smaller regional aircraft that seat 50 passengers in favor of larger aircraft seating up to 100 passengers.

At the same time airlines are pursuing strategies to increase their profits, the industry is facing a major commercial pilot shortage. Some industry analysts believe the pilot shortage in the commercial airline industry could reach 20,000 within the next ten years or sooner. Larger aircraft with higher seating capacities, coupled with a pilot shortage could portend issues for smaller commercial service airports, especially those served by a single carrier.

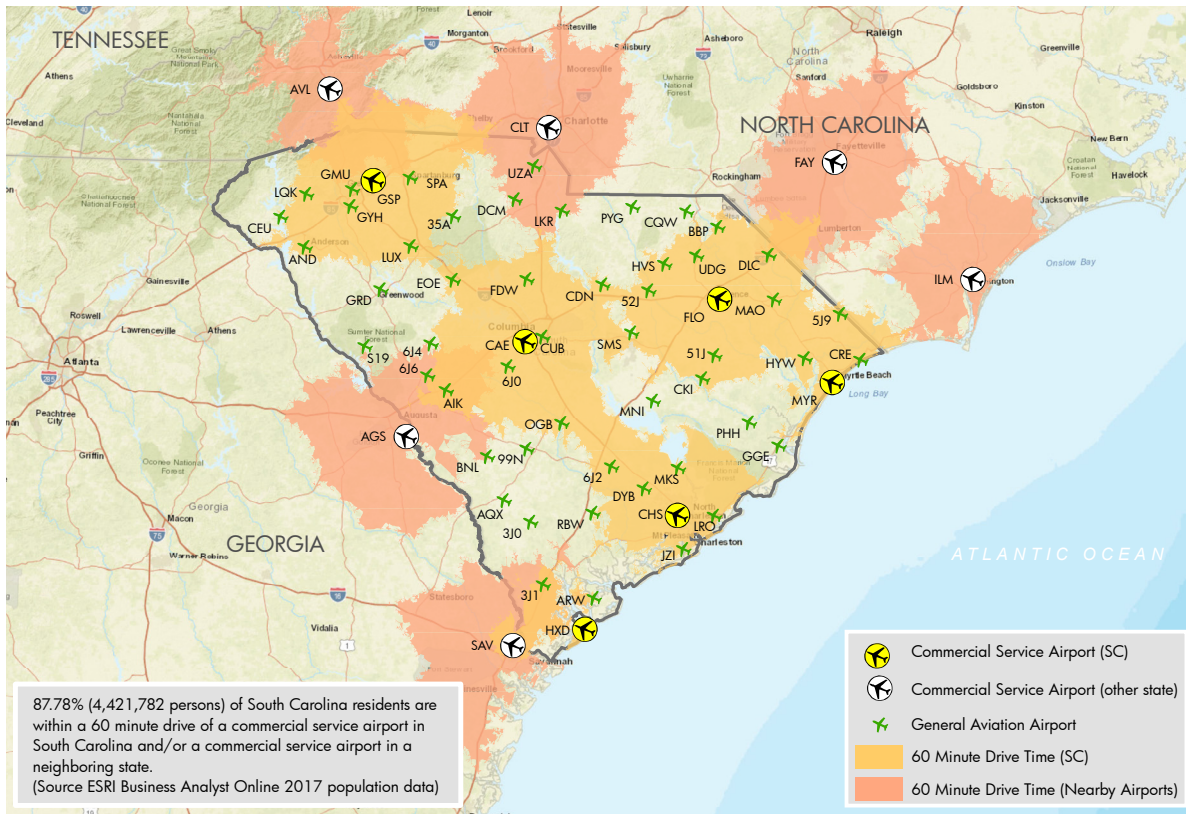
The map on the next page shows that about 88% of South Carolina's residents are within 60 minutes or less of an airport with commercial service. This accessibility rating is based on proximity to commercial airports in South Carolina as well as in nearby states. The map shows that at a 60-minute drive time, most commercial airports in South Carolina do not have overlapping service areas; the most significant service area overlap is between commercial airports serving Florence and Myrtle Beach.

What the mapping does not show is the dynamic exchange of air travelers between commercial airports both within and beyond the state. As the airport serving Myrtle Beach continues to add new airline service, it attracts more passengers associated with the market area for the Florence airport. Given the comparative scope and frequency of service at the commercial airports serving Charlotte, commercial airports in Greenville-Spartanburg, Columbia, and Florence all experience passenger diversion to this major hub with high volumes of non-stop domestic and international service. The commercial airport serving Savannah, Georgia attracts a high percentage of the air travelers destined for the Hilton Head market.

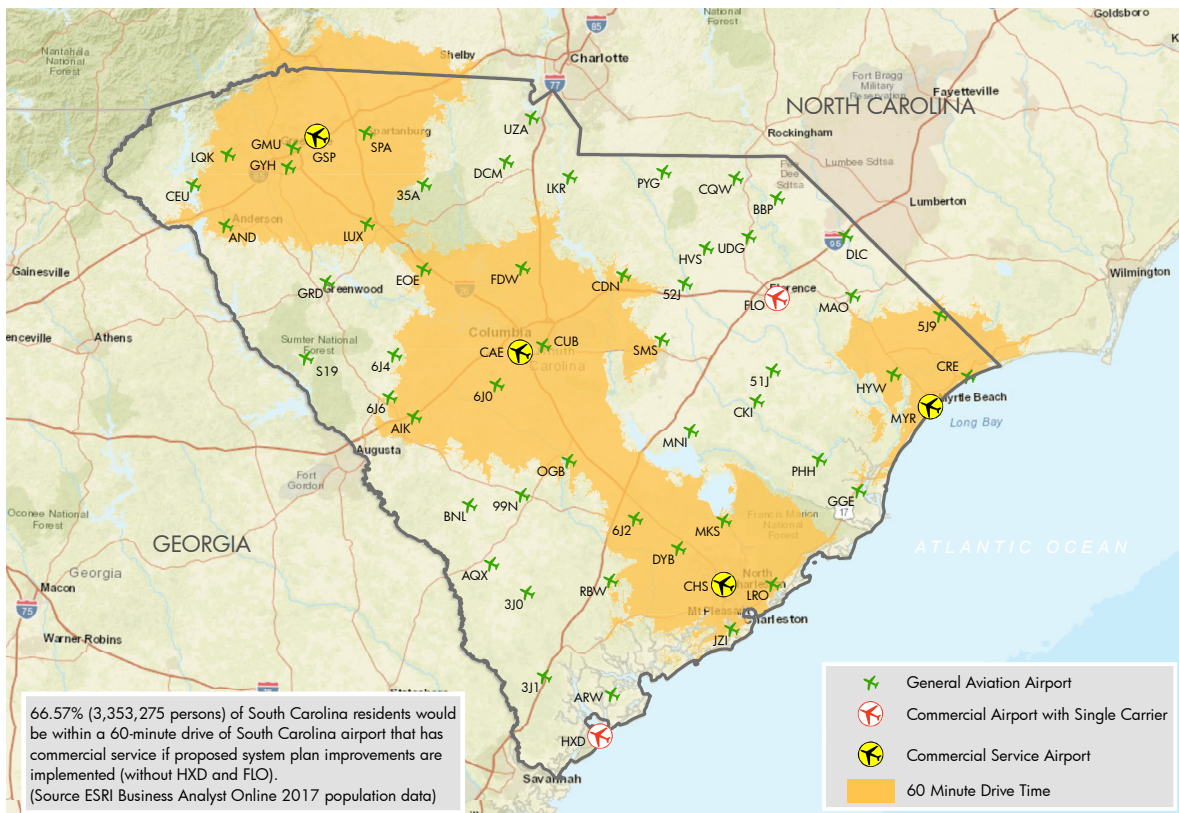
With anticipated increases in seating capacity of aircraft serving small commercial airports, considered within the context of the increasing shortage of commercial airline pilots, some in the industry fear that airports served by a single carrier could be vulnerable. The map on the next page shows what accessibility at a 60-minute drive time would look like without the two South Carolina airports that now have just one carrier. In a deregulated airline environment, there is very little any state can do to "protect" airline service. For all communities served by South Carolina's commercial airports, their best strategy for ensuring the future of commercial airline service is to use existing service at their local airport.



## 60-MINUTE ACCESSIBILITY TO SOUTH CAROLINA & NEARBY COMMERCIAL AIRPORTS



## 60-MINUTE SERVICE ACCESSIBILITY TO A SOUTH CAROLINA COMMERCIAL AIRPORT WITH MORE THAN ONE SCHEDULED CARRIER

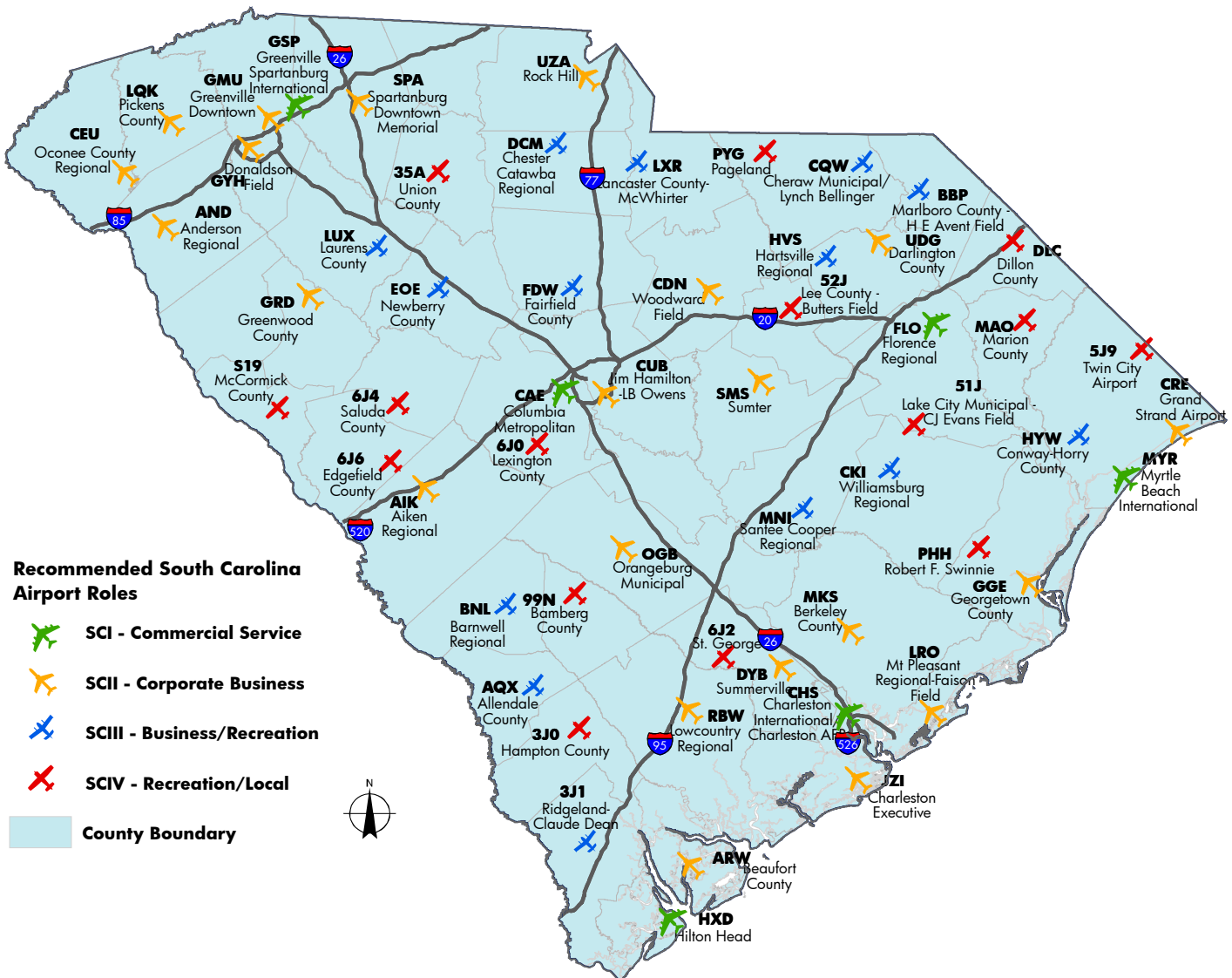




## RECOMMENDED STATE ROLES

To help guide planning for the South Carolina Airport System, all airports are assigned a “role” in the system. Airport roles are typically reflective of the types of planes and customers the airport serves, as well as the characteristics of the area where the airport is located. For this update to the State Aviation System Plan, airport roles assigned in 2008 were re-visited to see if they were still applicable. Triggers considered to determine if a role change was appropriate included federal roles assigned by the FAA, changes in airport activity and facilities, and anticipated employment growth in the airport’s market area. Recommended roles for the public airports are reflected in the map below.

AIRPORT NAME	CURRENT STATE ROLE	RECOMMENDED STATE ROLE
BEAUFORT COUNTY	SCIII	SCII
DARLINGTON COUNTY	SCIII	SCII
BERKELEY COUNTY	SCIII	SCII
LAURENS COUNTY	SCIV	SCIII
MOUNT PLEASANT REGIONAL	SCIII	SCII
ORANGEBURG MUNICIPAL	SCIII	SCII
OCONEE COUNTY	SCIII	SCII
RIDGELAND	SCIV	SCIII
GREENWOOD MUNICIPAL	SCIII	SCII

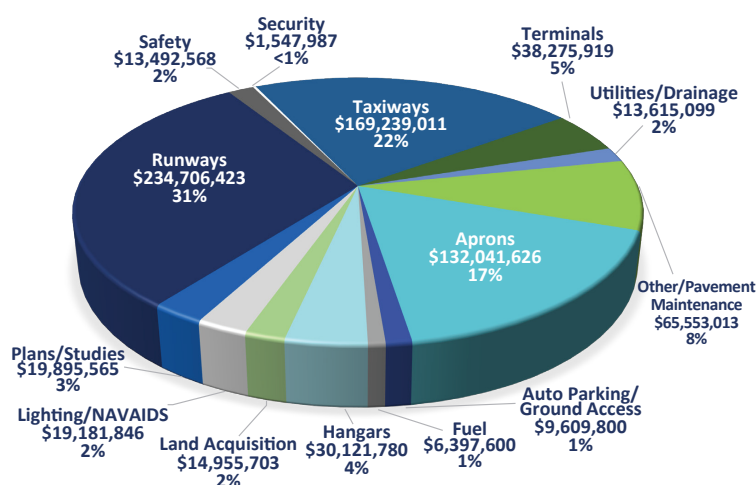


## SYSTEM NEEDS

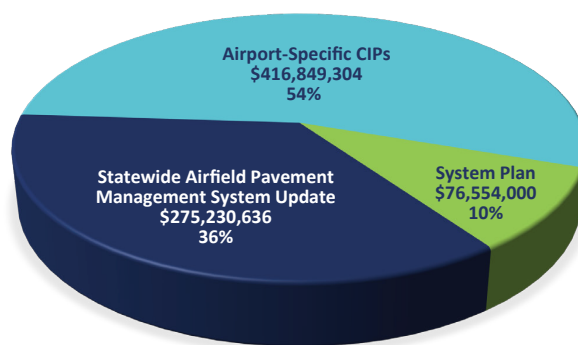
The system plan identified projects needed at each airport to help meet role-specific facility objectives. In addition, airports in South Carolina have their own individual capital improvement plans (CIPs) that identify development projects, equipment purchases, and other actions that require funding. Through another statewide planning effort, SCAC has also identified pavement maintenance and rehabilitation projects that are needed in the next few years to address the needs of the state's existing airport infrastructure. Funding needs shown here for the next five years are not all-inclusive, as there will undoubtedly be additional funding requirements that are not yet known. Estimated costs shown here indicate that to fully fund all known projects, maintenance needs, and equipment purchases, approximately \$768.6 million will be needed over the next five years.

The accompanying graphs show funding identified by plan and by type of project. It is worth noting that many individual airport CIPs also included projects that are needed to maintain and improve pavement at the system airports. This five-year funding need translates into a financial need of at least \$153.7 million per year for each of the next five years.

Last year, when other financial commitments are considered, SCAC had approximately \$2.3 million to apply to development needs at the airports in the state system. FAA funding, at an historic high, has averaged \$69 million per year over the past two years. This indicates that between state and FAA funding sources, in a best case scenario only \$71.3 million might be available to apply to the annual need of \$153.7 million, leaving a significant funding gap. In a worst case scenario, annual state and FAA funds could be just over \$37 million, leaving a more significant gap.



**COMBINED DEVELOPMENT COSTS (BY CATEGORY):**  
**\$768,633,940**



**COMBINED DEVELOPMENT COSTS (BY PLAN):**  
**\$768,633,940**



## SYSTEM BENEFITS

As SCAC's economic impact analyses have shown, annually the state's public general aviation and commercial airports are contributing an estimated \$16.3 billion to state and local economies throughout South Carolina. This annual benefit is significantly greater than the annual financial need for the system, estimated on a conservative basis to be approximately \$153.7 million. South Carolina airports are providing an economic benefit that far exceeds the anticipated financial need to maintain and develop the airport system. South Carolina's airports are well worth the investment!

## SUMMARY OF FINDINGS

- The five-year financial need for the system will be at least **\$768.6 million**.
- Estimated annual funds available from FAA and SCAC to meet annual financial needs have averaged from **\$71.3 million** to **\$37.3 million**, based on historic information. At these levels of funding, between **50% and 75%** of all investment needs will not be met. The average annual financial need will be **\$153.7 million**.
- **7%** of the state's employment relies on the airports.
- Annual economic impact for all airports considering direct, indirect & induced impacts is **\$16.3 billion**.
- Annual state & local airport tax revenue contributions on direct economic impacts is **\$657 million**.

### TOTAL STATEWIDE ANNUAL ECONOMIC IMPACTS FROM SOUTH CAROLINA AIRPORTS BY CATEGORY

	EMPLOYMENT	PAYROLL	SPENDING	ECONOMIC ACTIVITY
AIRPORT MANAGEMENT	1,374	\$64,686,730	\$69,119,080	\$133,805,810
AIRPORT TENANTS	10,987	\$495,176,940	\$1,102,381,210	\$1,597,558,150
BOEING	21,773	\$1,518,019,620	\$2,661,098,510	\$4,179,118,130
CAPITAL INVESTMENT	1,567	\$72,389,180	\$219,763,250	\$292,152,430
GENERAL AVIATION VISITORS	4,590	\$137,757,190	\$390,131,130	\$527,888,320
COMMERCIAL VISITORS	82,468	\$2,502,279,140	\$7,110,675,860	\$9,612,955,000
<b>TOTAL FOR ALL SOUTH CAROLINA AIRPORTS</b>	122,759	\$4,790,308,800	\$11,553,169,040	\$16,343,477,840







**SOUTH CAROLINA**  
AERONAUTICS COMMISSION

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*South Carolina*  
**& STATEWIDE AVIATION SYSTEM PLAN  
& ECONOMIC IMPACT REPORT**

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PREPARED BY: **JVIATION**<sup>®</sup>

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